

52 AND COUNTY LINE ROAD INTERSECTION IMPROVEMENTS

Preliminary Engineering and Environmental Studies

PUBLIC OUTREACH NEWSLETTER - APRIL 2022

THANK YOU TO EVERYONE WHO PARTICIPATED!

This newsletter provides an update on the Illinois Department of Transportation's (Department) preliminary engineering and environmental studies for the US Route 52 and County Line Road Phase I Study and presents the results from the Virtual Public Outreach. The purpose of this Virtual Public Outreach was to provide an overview of the study process and schedule, present the preferred roundabout intersection alternatives, and obtain public input.

The study website received 993 views and 106 comments between February 2, 2022 and March 23, 2022. The outreach efforts provided the study team with valuable insights to help move the project forward. Visit the project website at www.US52countylinerd.com to view detailed exhibits and learn more about the project's process.



STUDY AREA

The study area is located along US 52 in Troy Township (Will County) and Seward Township (Kendall County) near the Villages of Shorewood and Minooka. US 52 is a major east-west highway owned by the Illinois Department of Transportation and provides connections to Interstate 55 and the City of Joliet to the east. Major north-south roadways near the study include Ridge Road to the west and Illinois Route 59 to the east. Interstate 80 is also located just south of the study area. The study focuses on potential improvements at the US 52 and County Line Road intersection and the adjacent roadway segments that lead into the intersection.

US 52 is classified as a minor arterial within the study limits. The posted speed limit for US 52 is 55 miles per hour east and west of County Line Road, with an advisory posting of 50 miles per hour through the curve at the intersection. The typical section of US 52 consists of one 13-foot travel lane in each direction with two-foot paved shoulders. US 52 has a rural typical section, meaning that there is an open drainage system consisting of roadside ditches.



COMMENTS AND QUESTIONS

During the Virtual Public Outreach comment period, the public was given the opportunity to provide comments via mail, email, and the project website. Comments and questions received were primarily related to the following topics:

- » Intersection challenges and safety
- » High vehicle and truck traffic volumes
- » Preferred roundabout intersection alternative
- » High travel speeds
- » Other US 52 corridor improvements

Steps the design team is taking to incorporate this feedback into the study are described below. All comments received during the official Virtual Public Outreach comment period can be found on the project website.

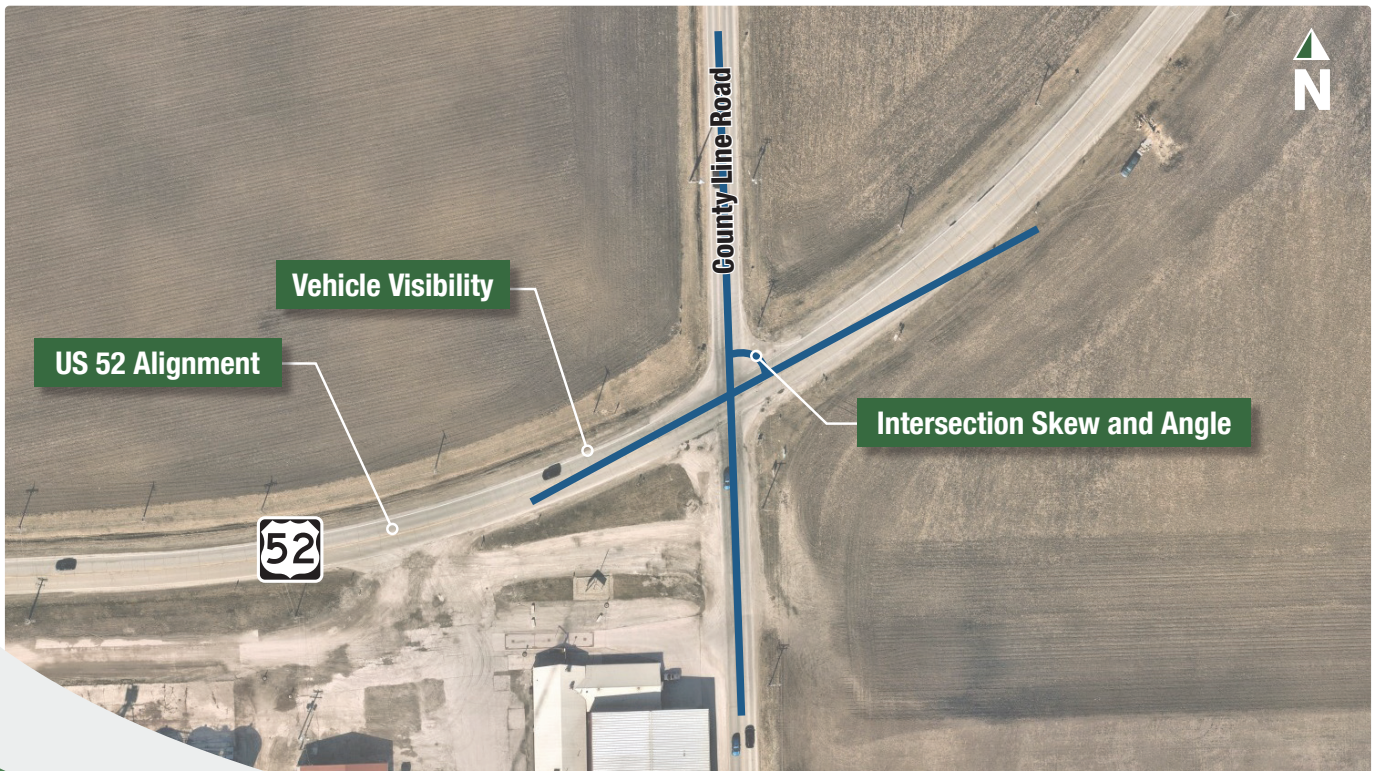


INTERSECTION CHALLENGES AND SAFETY

Comments expressed concerns about the intersection safety, curve along US 52, intersection angle and visibility that is limited by crops along US 52.

During the study’s alternative development process, the study team evaluated the existing intersection. These two roads cross each other at a sharp angle, known as skew. The combination of the skew and curvature along US 52 both being undesirable conditions are major factors in this intersection experiencing a higher-than-average occurrence of crashes.

During the six years in which the data was analyzed, 105 crashes occurred, including a fatal crash in 2019. Most of the crashes were angle crashes, which are one of the most severe crash types. The intersection of US 52 at County Line Road is identified as Safety Tier Critical by the Department. Critical is the highest level of concern on the rating scale. This safety tier designation, in addition to concerns related to the high rate of crash occurrence and the existing intersection configuration, were key aspects of the study that guided the development of the preferred intersection traffic control alternative.



The study team developed and evaluated the traffic signal and roundabout alternative with a primary goal of addressing safety concerns and reducing potential for crashes in the future. The evaluation of the alternatives indicated that a traffic signal is not feasible and cause additional safety issues. The roundabout intersection is the only feasible alternative that can mitigate the intersection challenges and address the safety issues. The preferred roundabout alternative will be carried forward to the next stage of the study and ultimately to design.

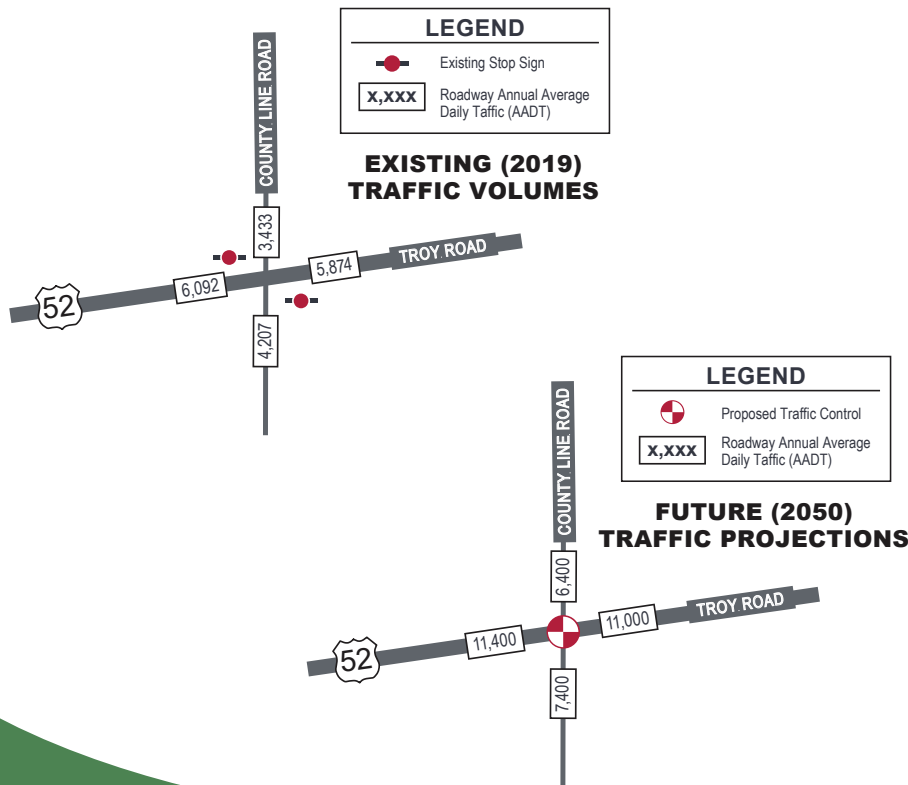


HIGH VEHICLE AND TRUCK TRAFFIC VOLUMES

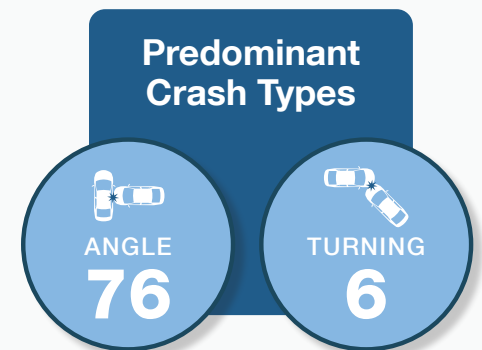
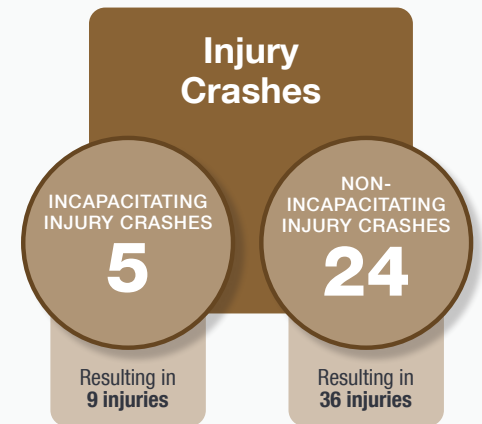
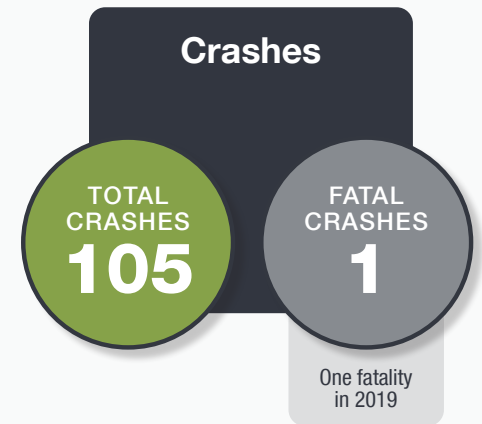
The corridor experiences high truck traffic and the traffic volumes are expected to grow. Several comments expressed concerns about the truck traffic, farm vehicles and the ability of the proposed intersection design to accommodate large vehicles.

As part of this study, traffic data was collected and analyzed to understand existing travel patterns and operations of the US 52 and County Line Road intersection. The results of this analysis guided the development of the alternatives evaluated for improvements to the intersection. The study area is expected to continue to see substantial growth in the future, with a near-doubling of traffic volumes expected over the next 30 years. The proposed intersection improvements will be designed to accommodate truck traffic, farm vehicles and future traffic growth.

The preferred roundabout traffic control alternative will effectively accommodate the anticipated traffic volumes and future growth with a design year of 2050. Modern roundabouts can efficiently handle large volumes of traffic at safe speeds, reducing the overall delay experienced by drivers. The proposed roundabout will be designed to accommodate large truck and farm vehicles.



Crash Analysis: 2014-2019



2020 Safety Tier Assessment – Critical



PREFERRED ROUNDABOUT INTERSECTION ALTERNATIVE

Comments indicated concerns about the suitability of a roundabout intersection as the preferred alternative in lieu of a traffic signal intersection.

The study’s alternative development process determined that a roundabout intersection is the only feasible and safe alternative to address concerns associated with the existing intersection. It will be safer than a signal and reduce fatal and severe injury crashes significantly in comparison to a signalized intersection. A roundabout intersection also improves driver’s sight lines with lighting and effectively reduces vehicular speeds through the intersection, allowing the anticipated high volumes of vehicle and truck traffic to safely maneuver through the intersection.

A modern roundabout is one of the most effective tools that engineers have available to enhance safety at an intersection. There is a substantial reduction in potential conflict points between vehicles when compared a signalized intersection – 32 vs. 8. Additionally, the conflict points that remain are less dangerous, with slower traffic moving in the same direction resulting in only minor sideswipe-type collisions. The primary advantage over a signalized intersection is the elimination of the most



severe crash types, such as left-turns, angle, and head-on collisions.

An analysis was conducted using the Federal Highway Administration’s Highway Safety Manual to evaluate anticipated crash reduction for the two traffic control options. The analysis showed that a roundabout intersection will reduce total and injury crashes by 82%, whereas a signalized intersection would only be expected to reduce total crashes by 56% and injury crashes by 64% when compared to the existing condition.

Two roundabout concepts are being considered at this stage of the study. The first concept maintains the intersection at its existing location. A second concept would relocate the intersection to the north by realigning the approaches on US 52. Both concepts will be evaluated individually and then compared to each other to identify the best location for the new roundabout. The design team will consider safety implications, operational metrics, and impacts to surrounding properties to select a preferred design concept.



HIGH TRAVEL SPEEDS

Several comments expressed concerns about the high travel speeds along US 52 and the ability of the proposed intersection design to accommodate vehicles moving at high speeds.

The study team recognizes the high vehicular and truck speeds experienced along the corridor. A change in posted speed limit on a roadway requires additional traffic studies to warrant an increase or decrease. It is also important that the posted speed limit is not abruptly changed along a corridor. No change in posted speed limit is being considered along the corridor.

Roundabout intersections are very effective at controlling travel speeds at an intersection. The approaches to the roundabout are designed with geometry that causes traffic to slow down upon approach, entry in to the circular intersection, and exit. This is in contrast to a signalized intersection, where not only do vehicles proceed through the intersection at full speed on a green signal, but it is also a common driver behavior to increase speed on approach to a green or amber signal to avoid “missing the light”. Additional safety measures implemented with roundabouts include advanced warning signage, carefully designed sight lines, and installation of street lighting.



OTHER CORRIDOR IMPROVEMENTS

During the course of the public outreach, several comments were made referring to other improvements needed at locations in the vicinity of this intersection, but outside the limits of the Department's current Phase I Study.

The Department understands that there is a separate project being led by the Kendall County Highway Department to install a new traffic signal at the intersection of US 52 and Ridge Road, located approximately 0.75 miles west of the limits of this study. An additional study is being considered by IDOT to evaluate potential drainage improvements near the intersection of US 52 and Baltz Road, just east of the study limits. Those projects are separate and independent from this Phase I Study.



COMMUNITY ADVISORY GROUP (CAG) MEETING SUMMARY

Meeting #1

The study's first CAG meeting was held virtually on Wednesday July 14, 2021. The presentation included an overview of the study and the Context Sensitive Solutions (CSS) process, an introduction to the project and its schedule, a facilitated discussion, summary of previous countermeasures implemented, and improvement concepts that were considered for the intersection. Study area residents and representatives from various Townships, Municipalities, School Districts, Fire Districts, and businesses were in attendance to share their thoughts related to the existing transportation, environmental and community related issues.

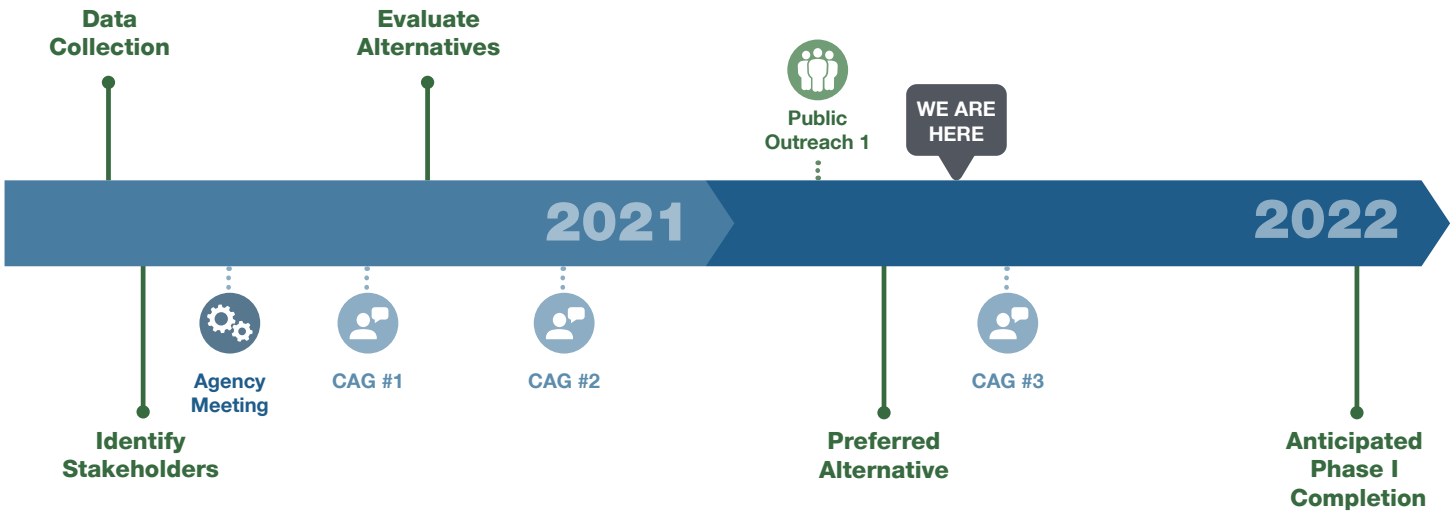
CAG members expressed concerns including safety related to poor sight lines at the intersection due to the curve, angle of intersection, and crops in the vicinity, and high vehicle speeds through the intersection. Two other major concerns expressed were traffic flow backups during evening peak periods and pedestrian and bike access within the study area. These identified concerns were considered and became part of the overall problem statement that was developed and presented at the second CAG meeting.

Meeting #2

The study's second CAG meeting was held virtually on Wednesday October 20, 2021 to present a summary of CAG meeting #1 and improvement concepts that were evaluated for the intersection. The Problem Statement developed for the project was also presented. Intersection concepts presented included a signalized and roundabout intersection. The challenges and safety concerns associated with the signalized intersection alternative were discussed in detail. Attendees were informed that the signalized intersection is not a feasible alternative because it will result in new safety problems, and the roundabout alternative will be carried forward for additional evaluation.

During the presentation, CAG members expressed concerns about the lack of enforcement at the intersection, County Line Road being used to bypass the congestion on Ridge Road, congestion during peak hours, and a potential project to signalize the Ridge Road at US 52 intersection. Traffic impacts to the I-80 construction projects on roadways in the region was also a concern for local officials. Strong support for the roundabout intersection alternative was expressed by the Village of Shorewood.

PROJECT SCHEDULE



NEXT STEPS

Following the Virtual Public Outreach, the next steps will include further evaluation of the preferred alternative based on input received during this public outreach period and development of a preferred improvement plan to illustrate the proposed roundabout design. The study team will also meet with the Community Advisory Group again in Summer 2022 to present the preferred roundabout design and anticipated impacts.



STAY INVOLVED

Public comments are encouraged and welcomed at any time during this study. Questions and comments can be submitted to the study team via the following methods:



Email us at
info@us52countylinerd.com



Sign up for updates or send comments via the study website at www.US52countylinerd.com



Mail a letter to:

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