



Groundbreaking by Design.

MEETING MINUTES

Project: KY 321 Corridor Study (#12-80116) and School Connector (#12-80250)
Johnson County

Purpose: Project team status update

Place: MSTeams

Meeting Date: May 26, 2023

Prepared By: Qk4

Participants:

Mary Westfall-Holbrook	KYTC D12
Charlie Dale	KYTC D12
Sam Hale	KYTC D12
Doug Wright	KYTC D12
Jason Siwula	KYTC Deputy SHE
Steve De Witte	KYTC CO Planning
Dave Heil	KYTC CO Planning
Catherine Davis	KYTC CO Planning
Patrick Perry	KYTC CO Design
Taylor Kelly	Qk4
Rebecca Thompson	Qk4
Jeremy Lukat	Qk4
Courtney Evans	Qk4
Steven Trevino	Qk4

Item No. 12-80250 School Connector

The team met to discuss potential access to the new Johnson County High School campus, located on the hilltop above/behind WalMart. A series of preliminary options were developed in April, with refined concepts including planning-level costs and traffic operations presented today. Four potential connections remain, summarized in **Figure 1** and **Table 1**.

Highland: Highland is the most expensive option but corresponds to the connector studied in the 2020 traffic impact statement. It's contained entirely on school-owned parcels. A two-way stop at US 23 and a signalized Green-T intersection were modeled with 2023 traffic volumes; additional configurations could be considered if this concept advances. The team agreed to **dismiss** the Highland connection from further consideration based on costs; combining traffic from both schools is also not ideal.

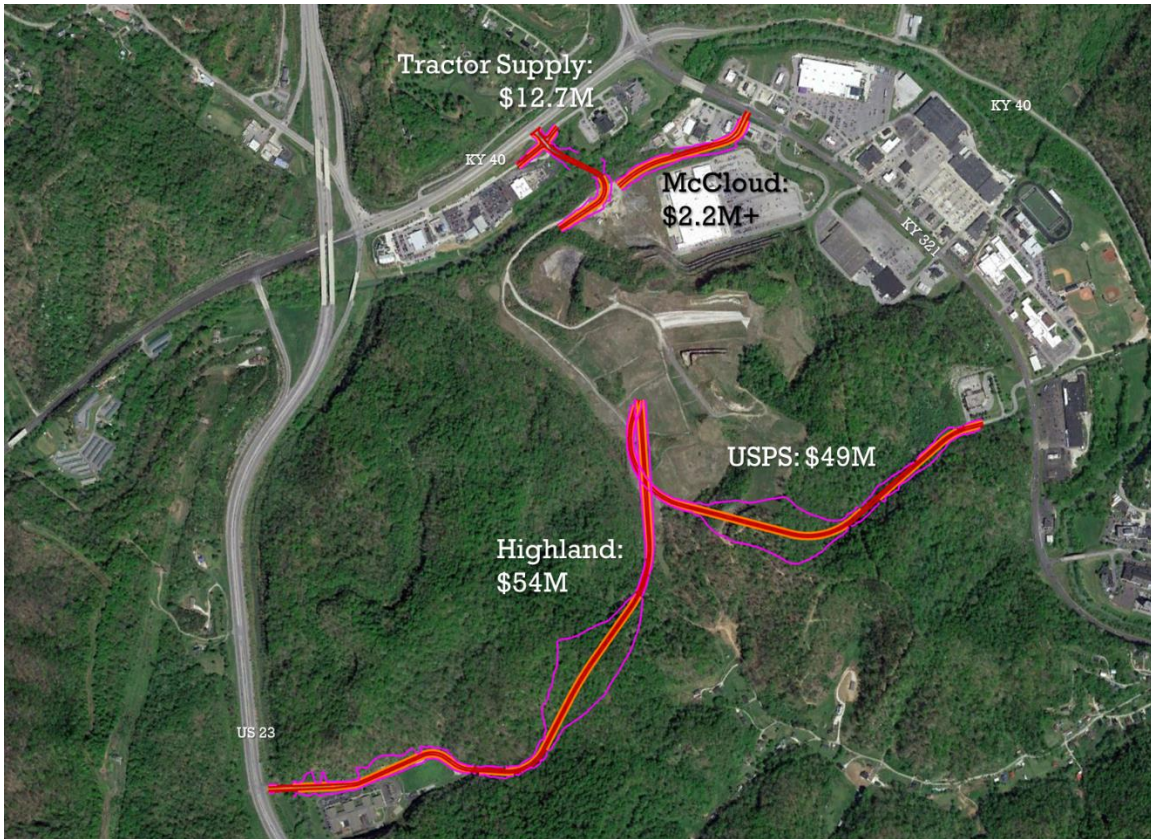


Figure 1: Current Options for School Connectors with Construction Estimates

Table 1: Comparative Metrics for School Connectors

	Length	Min Radius	Max Grade	Cut (CU YD)	Fill (CU YD)	Design Speed
Highland	5,682 ft	198 ft	10.00%	1.6 M	5k	25
Tractor Supply	1,352 ft	154 ft	7.66%	26k	15k	25
USPS	4,001 ft	587 ft	9.97%	1.6 M	21k	45
McCloud	1,310 ft	214 ft	6.18%	19k	2k	25

Tractor Supply: Grades were flattened from initial models to match the internal roadway grades at the school. This is the least expensive option considered. The intersection with KY 40 was simulated as a two-way stop control or coordinated signal; other configurations could be considered moving forward.

- Concerns were raised about the weave from the SB KY 321 right turn to make a left onto the school driveway. Roughly 100 cars make the SB right in the AM peak hour, with about 40% assumed to head to the school. Qk4 shared a video of the AM peak simulation, which shows maximum queue lengths of 250 ft for the WB left.
- When the KY 40/KY 321 intersection was constructed with federal funds, the intent was to have no access points within 1,200 feet. The intersection by Tractor Supply and the courthouse was left over from construction with the properties developing later, but may not have ever been formally permitted.

- Qk4 will divide the costs between KYTC (to the bridge) and school property. The current estimate includes both pieces.

USPS: Grades were refined to create a “land bridge” over the gas line, decreasing costs and impacts. Costs are similar to the Highland option. Operationally, retiming the existing signal provides adequate capacity for anticipated volumes.

- The school does not own the parcel behind the post office. Around 7.5 acres of additional right-of-way would be needed.

The team agreed to **dismiss** the USPS connection from further consideration based on costs.

McCloud: This option follows the existing roadbed but the closely spaced intersection with KY 321/Walmart is not ideal for increased traffic. A series of roundabouts along KY 321 were examined to tweak performance, but the tight weave between McCloud and Walmart still limits capacity. With school traffic, right turns from McCloud are over capacity (Level of Service F) in both peak hours.

- Does the Walmart roundabout provide adequate space for a truck u-turn?
- Qk4 will explore other variations to improve operations: shifting McCloud north or creating a combined “peanut-style” roundabout encompassing both McCloud and Walmart.
- Existing utilities adjacent to the roadway are another concern.
- Lefts from McCloud should not be allowed today. That intersection has the highest crash rate of any of the study intersections: 50 crashes during 2018-2022.
- Would the school increase pedestrian demand along the corridor?
- Would a combination of the Tractor Supply and McCloud connections provide benefit?

Another connection option tying to KY 40 at the BP (between car dealerships) was suggested. Qk4 will run a quick template through this area to see if the grades and disturb limits are viable.

Once the school connection concepts are a bit further defined, District 12 will reach out to the superintendent to discuss options. However, the school discussion should remain separate from the scoped 12-80116 corridor coordination with a larger group of local officials and stakeholders.

Item No. 12-80116 KY 321 Corridor Study

Qk4 also presented the traditional existing conditions information associated with the 12-80116 corridor study. A similar slide deck will guide future meeting discussions with local officials and stakeholders.

The study represents an update of a 2012 planning effort, which was intended to relieve congestion and improve safety for both motorists and pedestrians. At that time, 26 build concepts were considered, eventually recommending 5-lane widening, adding/extending turn lanes, and parallel roadway connections. Other planned projects in the vicinity include three design projects along KY 40, a flood wall around the courthouse, and the school connector.

- Milepoint limits shown for Item No. 12-80100 should extend to 9.8 instead.
- There is an ongoing planning study along US 460 between Salyersville and Paintsville.
- As part of the 2024 SHIFT process, the Area Development District sponsored 12-80250 and the KY 40 design projects and District 12 sponsored 12-80116.

KY 321 is an urban minor arterial and listed on the KY Highway Freight Network. It has two to three 12-foot travel lanes with varying width shoulders. All curves and grades meet current common practice guidelines. The posted speed limit is 45 mph though travel time runs show speeds of 25-30 mph is more likely during the peak hours. There are two bridges in the study area, both in fair condition. Strava heat maps show little pedestrian or cyclist activity along the existing corridor, which provides few links for other modal users.

- There is sidewalk along the KY 2378 (James Trimble Blvd.) bridge to the adjacent café. Residents from the nearby senior high rise used to ride their scooters over the bridge then continue up KY 321 on the roadway; some still do, which is a safety concern.
- The KY 40 design projects will look at sidewalks as space allows, particularly west of Teay's Branch Road. The 2012 study considered a bridge—for pedestrians, if not vehicles—connecting over to KY 40. A similar build concept was scoped as part of the 2023 study as well.

There were 255 crashes along the study section of KY 321 during 2018-2022, plus 40 along KY 40. There was one fatality: an angle crash near KY 40/Teays Branch Road where a car hydroplaned. Along KY 321, 50% of crashes are rear ends, followed by angle crashes (23%). The intersections with McCloud (50 crashes), the Walmart driveway (35), and the former Kmart driveway (35) have the highest crash concentrations of study area intersections. The entire study corridor has an elevated Level of Service of Safety.

Year 2023 volumes along the study portion of KY 321 range from 11,000-13,000 with historic counts showing a negative growth trend. Signalized intersections operate at LOS C or better overall during peak hours, with numerous left turn movements at LOS E. The current statewide travel demand model projects 0.5% annual growth for Johnson County but begins to decrease looking at a smaller study area. The first meeting with local officials/stakeholders will include a review of employment and household growth projections to confirm/refine model projections before recommending a growth rate.

The next major milestone for the corridor study is to reach out to local officials/stakeholders. Charlie will take the lead in developing an invitation list and work with Qk4 to schedule the meeting, following conversations with the superintendent about the school connector.

End of Minutes



Groundbreaking by Design.

MEETING MINUTES

Project: KY 321 Corridor Study (Item No. 12-80116)
Johnson County

Purpose: First Local Officials/Stakeholders (LO/S) Meeting

Place: Johnson County Courthouse
230 Court Street, Paintsville

Meeting Date: October 31, 2023

Prepared By: Qk4

Participants:

Phillip Wheeler	State Senator
Mark McKenzie	County Judge/Executive
Bill Runyon	Paintsville Mayor
Jessica Click	Commissioner
Judy Daniel	County Economic Development
Gary McClure	Emergency Management
Regina McClure	Johnson County
Michael Endicott	Johnson County Attorney
Bob Pack	Paintsville Utilities
Matt Spradlin	Paintsville Utilities
Leisha Maynard	Citizens Bank
Dewey Bocook	Bocook Engineering
Charlie Dale	KYTC D12
Chris James	KYTC D12
Steve De Witte	KYTC CO Planning
Dave Heil	KYTC CO Planning
Rebecca Thompson	Qk4
Eunice Holland	Qk4

Charlie Dale welcomed attendees and gave a brief overview of the study, updating an effort completed in 2012. Two meetings with this group will occur: today, reviewing the existing conditions to discuss transportation needs then in early 2024 to discuss potential solutions.

The study represents an update of a 2012 planning effort, which was intended to relieve congestion and improve safety for both motorists and pedestrians. At that time, 26 build concepts were considered, eventually

recommending 5-lane widening, adding/extending turn lanes, and parallel roadway connections. Other planned projects in the vicinity include three design projects along KY 40, a flood wall around the courthouse, and a new connector for the hilltop high school.

Existing Conditions Overview

KY 321 is an urban minor arterial and listed on the KY Highway Freight Network. It has two to three 12-foot travel lanes with varying width shoulders. All curves and grades meet current common practice guidelines. The posted speed limit is 45 mph though travel time runs show speeds of 25-30 mph are more likely during peak hours. There are two bridges in the study area, both in fair condition. Strava heat maps show little pedestrian or cyclist activity along the existing corridor, which provides few links for other modal users.

There were 255 crashes along the study section of KY 321 during 2018-2022, plus 40 along KY 40. There was one fatality: an angle crash near KY 40/Teays Branch Road where a car hydroplaned. Along KY 321, 50% of crashes are rear ends, followed by angle crashes (23%). The intersections with McCloud (50 crashes), the Walmart driveway (35), and the former Kmart driveway (35) have the highest crash concentrations of study area intersections. The entire study corridor has an elevated Level of Service of Safety, indicating more crashes are occurring than expected based on traffic volumes and the roadway type.

Year 2023 volumes along the study portion of KY 321 range from 11,000-13,000 with historic counts showing a negative growth trend. Signalized intersections operate at Level of Service (LOS) C or better overall during peak hours, with several movements from cross-streets at LOS E.

Group Discussion

Throughout the presentation, the group discussed the existing corridor, its users, area needs, and anticipated growth patterns. Key discussion items are noted below.

- From a funding perspective, what is needed to move the project forward?
The team will have a better understanding at the next meeting, once we develop build concepts and can start discussing recommended solutions with cost estimates.
- The intersection with McCloud is a safety concern. The city requested a signal but KYTC denied the application. The approach opposite lines up and could serve additional development.
- There is no great source to estimate how many bicyclists and pedestrians are using the corridor. It's common to see someone walking or using a motorized scooter along the corridor—day or night. Serving these groups was a recurring theme in the 2012 study and remains a priority today. Qk4 pulled data from Strava (recreational biking/running app) and StreetLight (limited accuracy in rural areas) and will confirm if any volumes were recorded during the March 2023 turning movement counts. Big Sandy ADD may also have data available. *[Follow-up Note: No counts are available through BSADD and video footage from March did not pick up any pedestrians.]* Creating safe, connected spaces for all users is a critical corridor need.
- Relocating the school and improving KY 40 will both help pull traffic away from congested KY 321. The KY 40 projects are a priority for the County, who pushed to pursue a federal grant.
- Current plans for the hilltop school campus show the high school opening for the 2026 school year. The middle school may shift to the current high school building with the current middle school building eventually serving as training and administrative space. The hilltop campus is four times larger than the current property so there is room to eventually relocate all the facilities to the hilltop. KYTC is designing

an access point, tying to KY 40 near Tractor Supply. This will be part of the No-Build scenario for the planning study.

- The KY 40 curve near the hospital is dangerous, especially with people speeding.
- There is more congestion between Save-A-Lot and McDonalds because there are fewer driveways in this stretch for people to filter to/from adjacent businesses. Moving trucks to US 23 helped with congestion.
- Several additional businesses have opened this year since the March traffic counts were completed, including Hobby Lobby and TJ Maxx. Ulta just announced a Paintsville location as well. A medical clinic is moving into the former Kmart. ARH is also expanding. Employment projections for the plaza area should show positive growth.
- Keeping improvements within existing right-of-way is important to avoid impacts to adjacent businesses.
- Sewer expansions along US 23 north and south are also likely to increase commercial and residential development.
- Safety on KY 321 is also critical as this corridor provides access to the hospital—in town and for surrounding counties.

End of Minutes



MEETING MINUTES

Groundbreaking by Design.

Project: KY 321 Corridor Study
Item No. 12-80116, Johnson County

Purpose: Project Team Meeting

Place: KYTC District 12 & MSTeams

Meeting Date: February 26, 2024

Prepared By: Qk4

Participants:

Mary Westfall-Holbrook	KYTC D12
Charlie Dale	KYTC D12
Sam Hale	KYTC D12
Doug Wright	KYTC D12
Steve De Witte	KYTC CO Planning
Dave Heil	KYTC CO Planning
Brent Sweger	KYTC CO Planning
Ben Coomes	KYTC CO Design
Rebecca Thompson	Qk4
Jeremy Lukat	Qk4
Courtney Evans	Qk4
Steven Trevino	Qk4
Eunice Holland	Qk4

Charlie provided an overview of the planning study then Rebecca reviewed the existing conditions information from the previous coordination meeting. The study represents an update of a 2012 planning effort, which was intended to relieve congestion and improve safety for both motorists and pedestrians. At that time, 26 build concepts were considered, eventually recommending 5-lane widening, adding/extending turn lanes, and parallel roadway connections. Alongside the current planning study, KY 40 improvements are being designed, a floodwall near the courthouse is under construction, and a new connector to the hilltop school campus is advancing—each influencing future transportation needs.

KY 321 is an urban minor arterial with two to three 12-foot lanes with varying width shoulders. All curves and grades meet current common practice guidelines. The posted speed limit is 45 mph though travel time runs show speeds of 25-30 mph are more likely during the peak hours. There are no dedicated bicycle or pedestrian facilities. There were 255 crashes along the study section of KY 321 during 2018-2022, primarily rear ends (50%) and angle crashes (23%). Intersections with McCloud (50 crashes), the Walmart driveway (35), and the former Kmart driveway (35) have the highest crash concentrations. Year 2023 daily volumes along the study portion of KY 321 range from 11,000-13,000 with signalized intersections operating at Level of Service (LOS) C or better overall during peak hours but numerous left turn movements from cross-streets at LOS E. With a 1% annual growth rate projected, 2045 No-Build ADT's increase to 13,700-16,200 vpd.

The majority of meeting discussions focused on the range of Build concepts:

The **No-Build Concept** assumes no geometric changes but optimizes signal timing along the corridor. Signals are coordinated today. Just optimizing signals shows decent operational benefits, despite increased volumes.

The **Five-Lane Concept** grew from the 2012 study. It assumes five lanes from KY 40 to the US Post Office (milepoint [MP] 7.987) and three lanes from US Post Office to James Trimble Boulevard (MP 7.715) with curb/gutter and a 5-foot sidewalk running the entire length of the improved section. At least three retaining walls are needed to minimize impacts.

- While there is a good amount of right-of-way along KY 321, underground utilities complicate improvements and increase costs.
- Much of the terrain on the west side is rock, particularly in front of former Kmart.
- The retaining wall in front of the bank stays, even though it is not called out in the KMZ as a new wall.
- Local leaders are unlikely to support consolidating access points or restricting turn movements. McCloud Street will likely require a barrier wall to discourage people turning left.
- An additional retaining wall may be needed in front of the schools as the slope there is already 2:1.

The **Shared Use Path** is 8 feet wide, meandering along the east side of the existing alignment to minimize impacts to utilities and adjacent properties. The profile is assumed to follow the existing roadway alignment. There would be no operational benefits for traffic, but bike/ped mobility was an emphasis in discussions with local officials.

A **Frontage Road** east of KY 321 provides an opportunity to consolidate access points to adjacent developments, either via right-in/right-out (RIRO) intersections or full closures, routing drivers to major intersections at signals for access. Similar concepts were explored in the 2012 study.

- Drivers got confused at the Walmart intersection, trying to decide which movements must yield prior to the current signal/stripping configuration. This intersection tends to control corridor operations with the longest observed delays/queues.
- Local leaders are unlikely to support consolidating access points or restricting turn movements.
- The new frontage road would be a city street.
- Alone, the frontage road may not provide as many benefits but it could combine with other options.

A **3 Roundabout** scenario replaces signals at KY 40, Walmart, and McDonalds with roundabouts to reduce stops/delays and improve safety. However, it does result in greater impacts to adjacent properties as the intersection footprints must increase to accommodate truck turns. Interim driveways would become RIROs or entirely eliminated.

- Elevation changes across the KY 40/KY 321 intersection today. If a high-speed roundabout advances at this location, it would assume total reconstruction with details determined during future design stages.

Summary tables in the attached slides compare corridor-level operations between these Build scenarios. The remaining Build concepts focus on individual intersections:

At **McCloud Street** (MP 8.602), southbound striping today stops abruptly, switching from two 12-foot thru lanes to a single 20-foot lane with no advance warning. Turn lanes appear shortly after the lane drop. A quick hit striping solution was recommended to clarify movements and create a RIRO to address elevated crash trends.

- There is an elevated crash rate to help justify a change, even if local development proponents will not support restricting access.
- People have considered solutions at this location before without a clear recommendation.

A standalone **Walmart Roundabout** operates at LOS C or better during both peak hours and reduces conflict points. However, there are property impacts, including the adjacent bank ATM and parking area. The frontage road from McCloud Street would no longer connect to the Walmart driveway. McCloud Street becomes a RIRO in this scenario as well.

- Traffic analyses focus on AM and PM peak hours; off-peak operations will also be a concern for locals.

Three intersections warrant **right turn lanes** based on current traffic volumes: northbound at Taco Bell (opposite the Walmart driveway, MP 8.537), northbound at McDonalds (MP 8.231), and northbound to the high school (MP 8.100). Three others were recommended in 2012 but do not meet current warrants.

Next steps in the planning process include producing cost estimates then coordinating with local officials/stakeholders. Qk4 will provide KMZ files to District 12 to request right-of-way and utility phase estimates; District 12 will review proposed unit cost assumptions. The team agreed all Build concepts should be shared with local officials/stakeholders, even though some are unlikely to garner support.

End of Minutes



Groundbreaking by Design.

MEETING MINUTES

Project: KY 321 Corridor Study (Item No. 12-80116)
Johnson County

Purpose: Second Local Officials/Stakeholders (LO/S) Meeting

Place: Johnson County Courthouse
230 Court Street, Paintsville

Meeting Date: April 18, 2024

Prepared By: Qk4

Participants:

Mark McKenzie	County Judge/Executive
Bill Runyon	Paintsville Mayor
Jessica Click	Commissioner
Judy Daniel	County Economic Development
Regina McClure	Johnson County
Michael Endicott	Johnson County Attorney
Edgar Pack	Paintsville Fire Department
Bob Pack	Paintsville Utilities
Matt Spradlin	Paintsville Utilities
Charlie Dale	KYTC D12
Same Hale	KYTC D12
Chris James	KYTC D12
Dave Heil	KYTC CO Planning
Rebecca Thompson	Qk4
Eunice Holland	Qk4
Courtney Evans	Qk4

Charlie welcomed attendees and gave a brief overview of the study. This is the second stakeholder meeting, intended to discuss the Build concepts the project team has developed. At the planning stage, it is important to consider a broad range of potential solutions to weigh benefits, costs, and impacts and to support future decisions.

The study represents an update of a 2012 planning effort, which was intended to relieve congestion and improve safety for both motorists and pedestrians. At that time, 26 build concepts were considered, eventually recommending 5-lane widening, adding/extending turn lanes, and parallel roadway connections.

Existing Conditions Recap

KY 321 is an urban minor arterial with two to three 12-foot travel lanes and varying width shoulders. There are six signals in the study area. The posted speed limit is 45 mph though travel time runs show speeds of 25-30 mph are more likely during peak hours.

There were 255 crashes along the study section of KY 321 during 2018-2022. Overall, 50% of crashes are rear ends, followed by angle crashes (23%). The intersections with McCloud (50 crashes), the Walmart driveway (35), and the former Kmart driveway (35) have the highest crash concentrations of study area intersections.

Year 2023 volumes along the study portion of KY 321 range from 11,000-13,000 vehicles per day (vpd) with historic counts showing a negative growth trend. Signalized intersections operate at Level of Service (LOS) C or better overall during peak hours, with several movements from cross-streets at LOS E. The statewide model was refined to reflect growth patterns discussed at the last meeting, showing a 1% annual growth rate or 13,700-16,200 vpd by 2045. These volumes were modeled; optimizing signal timing/phasing, operations at signals improves compared to the existing conditions despite the increased traffic.

Build Concepts

Build concepts represent a wide range of options, from large-scale corridor reconstruction options to smaller safety improvements at a single intersection. Rebecca presented each concept, its traffic or safety benefits, costs, and impacts. Any option to advance would be refined through future design efforts, which is likely to change the footprint, costs, etc. as details are added.

- The 2012 study recommended a **five-lane** typical section with a sidewalk, which was updated for fresh consideration. This option assumes five lanes from KY 40 to the post office then four lanes from the post office to James Trimble Boulevard. This improves travel time along KY 321 and reduces delay at major intersections and fits within existing right-of-way. Costs are estimated at \$12 million.
- A meandering **shared use path** on the east side provides a safe facility for bikes and pedestrians but would not impact traffic operations. The limits stretch from the existing sidewalk at James Trimble Boulevard to the north end of the Plaza commercial strip. Costs are estimated at \$6 million with some new right-of-way acquisition impacting nearby parking areas.
- Defining a **frontage road** through the Plaza lots lets drivers access multiple destinations without returning to KY 321 between trips. Left turns at interim driveways could be eliminated to improve safety but this would increase delay and travel time overall. Costs are estimated at \$4 million with impacts to existing parking lots.
- A series of **three roundabouts** improves safety and reduces delays but would have more impacts on nearby properties. This option assumes the KY 321 signals at KY 40, Walmart, and McDonalds are replaced with roundabouts. Costs are estimated at \$21 million.
- The KY 321/**McCloud** intersection has the most crashes anywhere in the study area. A striping option could be completed within existing pavement to clarify movements and improve safety for minimal costs. It does require the eastbound McCloud approach change to a right-in/right-out.
- A **roundabout** at the KY 321/Walmart intersection improves safety and reduces delay but would eliminate the frontage road link that exists today and impact the adjacent bank property.
- Northbound **right turn lanes** could be considered to Taco Bell, McDonalds, and the central school driveway based on 2045 traffic projections. With the new high school under construction, this location is likely a lower priority than others.

Group Discussion

Throughout the presentation, the group discussed the existing corridor and Build concepts. Key discussion items are noted below.

- The north section of the frontage road (Hardees to Pizza Hut) is a city street but the south is private.
- Fire trucks would still need the ability to turn left from McCloud. If the striping option advances, KYTC could consider plastic bollards or mountable median to discourage lefts but preserve flexibility for the fire department.
- The Walmart intersection does not provide much space to queue eastbound left turning vehicles. Losing the option to turn left from McCloud is a concern; drivers would have to turn right from McCloud, turn right at the Walmart signal, drive to the hilltop then back down to the signal to make a left.
- There is a single entrance to Walmart. A second connection to the old Kmart would increase accessibility. Property owners opposed a connection in the past, but with the new medical facility in the former retail space, opinions may have changed. There are buried utilities between these lots that will increase costs. Qk4 will examine costs/impacts and document this option in the study report.
- Extending a second southbound lane to the old Kmart entrance should be considered. With the adjacent gas line and supporting infrastructure, costs and impacts would be relatively high.
- Roundabouts are not supported.
- The City/County could pursue TAP funding (opens May 1) for the shared use path. There are several federal grant opportunities that could be considered. The County will contact Big Sandy ADD to request bike/ped counts.
- The 2024 Highway Plan is signed. It shows design funds (\$1.7 million) in the biennium, with right-of-way, utility, and construction funding for KY 321 in the out years.

Polling Exercise

Following group discussions, three informal poll questions collected overall opinions about the Build concepts presented.

Seven participants were asked if any long-term solutions should be eliminated. Everyone selected the Three Roundabouts option to dismiss, with the Frontage Road and Five Lane/Sidewalk also receiving opposition. Results are shown in **Figure 1**.

Another question asked if there any short-term options that should be eliminated. All seven participants agreed the Walmart roundabout should be dismissed and three opposed the right turn lane to the school driveway. No one selected McCloud striping, Taco Bell Right, or McDonalds Right to be eliminated.

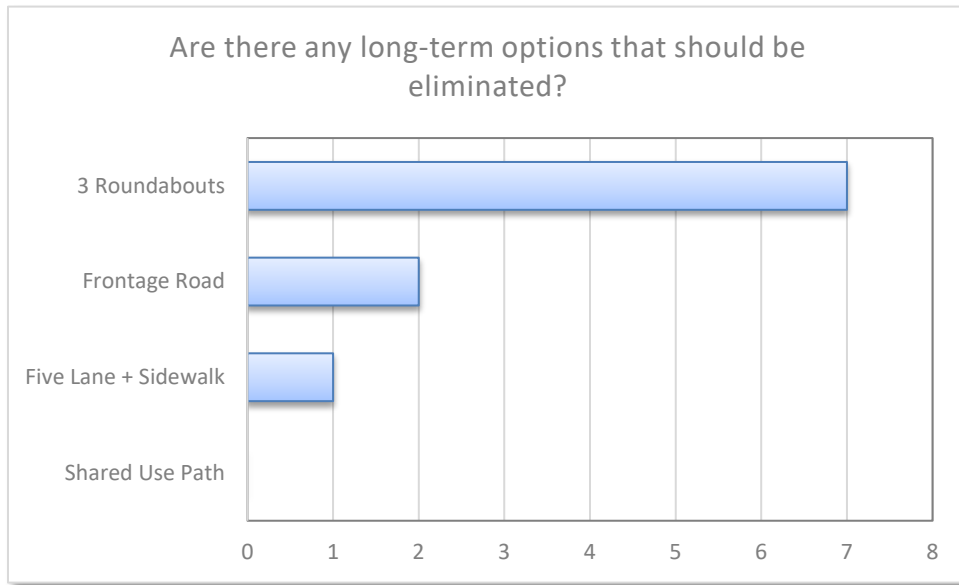


Figure 1

A final question asked participants to rank their priorities from most to least important. Shown in **Figure 2**, retiming the signals received the most support, followed by restriping McCloud, and right turn lanes to Taco Bell and McDonalds.

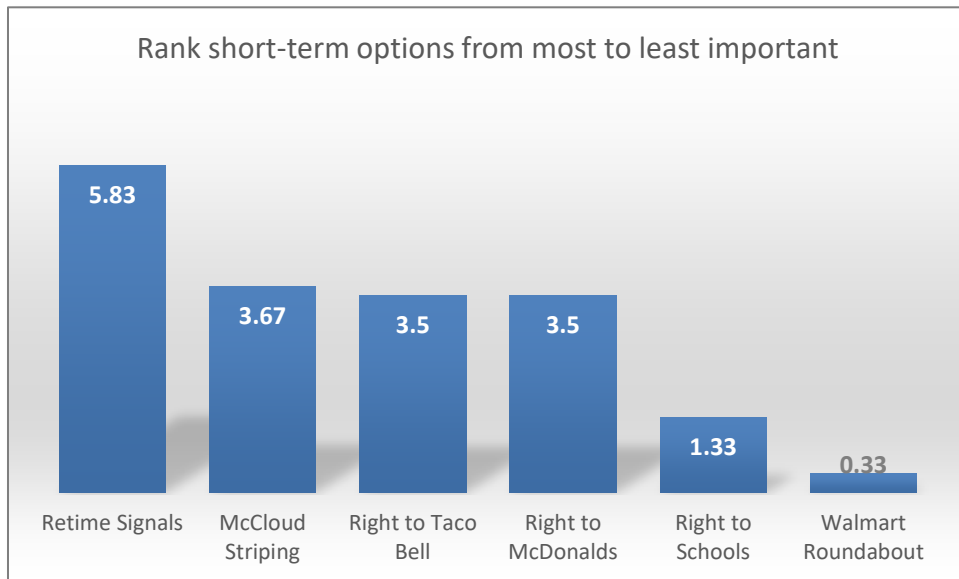


Figure 2

End of Minutes



MEETING MINUTES

Groundbreaking by Design.

Project: KY 321 Corridor Study
Item No. 12-80116, Johnson County

Purpose: Project Team Meeting

Place: KYTC District 12 & MSTeams

Meeting Date: June 12, 2024

Prepared By: Qk4

Participants:

Mary Westfall-Holbrook	KYTC D12
Charlie Dale	KYTC D12
Sam Hale	KYTC D12
John Michael Johnson	KYTC D12
Chris James	KYTC D12
Tracy Wright	KYTC D12
Dave Heil	KYTC CO Planning
Jay Balaji	KYTC CO Planning
Connor Schurman	KYTC CO Planning
Patrick Perry	KYTC CO Design
Ben Coomes	KYTC CO Design
Rebecca Thompson	Qk4
Courtney Evans	Qk4
Eunice Holland	Qk4

Charlie provided an overview of the planning study then Rebecca reviewed the existing conditions and Build concepts. The study represents an update of a 2012 planning effort. Alongside the current planning study, KY 40 improvements are being designed, a floodwall near the courthouse is under construction, and a new connector to the hilltop school campus is advancing—each influencing future transportation needs. The 2024 Highway Plan shows \$1.8 million in design funds in FY 2025.

Build concepts were defined and presented to local officials and stakeholders at a meeting in April.

No-Build assumes no geometric changes but optimizes signal timing along the corridor. Signals are coordinated today. Just optimizing signals shows decent operational benefits, despite increased volumes.

The **Five-Lane Concept** assumes five lanes from KY 40 to the US Post Office and three lanes from US Post Office to James Trimble Boulevard with curb/gutter and a 5-foot sidewalk running the entire length.

A **Shared Use Path** is 8 feet wide, meandering along the east side of the existing alignment to minimize impacts to utilities and adjacent properties. The County applied for a TAP grant in June to advance the path.

A **Frontage Road** east of KY 321 provides an opportunity to consolidate access points to adjacent developments, either via right-in/right-out (RIRO) intersections or full closures, routing drivers to signals for access. Locals did not favor solutions that would restrict access to KY 321; without consolidating entrances, there are few benefits with this option.

A **3 Roundabout** scenario replaces signals at KY 40, Walmart, and McDonalds with roundabouts to reduce stops/delays and improve safety. However, it does result in greater impacts to adjacent properties as the intersection footprints must increase to accommodate truck turns. Interim driveways would become RIROs or entirely eliminated. Locals strongly opposed any solution involving roundabouts.

The remaining Build concepts focus on individual intersections:

At **McCloud Street** (MP 8.602), southbound striping today stops abruptly, switching from two 12-foot thru lanes to a single 20-foot lane with no advance warning. Turn lanes appear shortly after the lane drop. A quick hit striping solution was recommended to clarify movements and create a RIRO to address elevated crash trends. A fire station relies on this intersection for access.

A standalone **Walmart Roundabout** smooths traffic flow and reduces conflict points. Again, locals strongly opposed any solution involving roundabouts.

Three intersections warrant **right turn lanes** based on current traffic volumes: northbound at Taco Bell (opposite the Walmart driveway, MP 8.537), northbound at McDonalds (MP 8.231), and northbound to the high school (MP 8.100). With the school campus shifting to a new location, the turn lane to the high school is likely less critical.

During the April meeting, the County Judge asked the team to explore a new alignment connection between Walmart and the new Kings Daughters clinic (former Kmart), which results in 11% grade and impacts to the 10-inch gas pipeline and other utilities.

Qk4 prepared benefit-cost ratios for Build concepts, summarized in **Table 1**. Benefits for the shared-use path are difficult to estimate without known demands or a crash history; qualitative benefits include health, safety, economic, environmental elements, and more.

Table 1: Cost/Benefit Comparison for Build Concepts

Costs & Benefits	DRUC Cost	Benefit Types	BCA
No-Build (Optimize Signals)	\$30,000	Time Savings, Safety	300+
Five-Lane + Sidewalk	\$12.3 million	Time Savings, Safety	1.1
Shared Use Path	\$5.9 million	Quality of Life, Equity, Access, Safety, Economic, etc.	Qualitative
3 Roundabouts	\$21.3 million	Time Savings, Safety	0.7
McCloud Striping	\$50,000	Safety	40+
Taco Bell Right	\$250,000	Safety	0.4
McDonalds Right	\$250,000	Safety	0.3
JCHS Right	\$350,000	Safety	0.8

The remainder of the meeting discussion focused on recommendations and priorities.

- Retiming signals and restriping McCloud are low-cost, quick hit solutions that provide sizeable benefits.
- Based on past coordination, the locals seem to prefer an improved KY 40 to divert thru traffic from KY 321 over widening KY 321 itself. Widening the corridor is a long-term, low priority.
- The County is seeking a TAP grant to implement a shared use path, suggesting a high/short-term local priority.
- Will the planning study define purpose and need for Build concepts? A bullet description of key factors will be included on project sheets.
- Solutions should balance traffic and safety needs; data seems to suggest elevated crash rates are a higher concern than traffic delays. The entire study corridor is Level of Service of Safety 3/4 for severe crashes. Despite local opposition, access management and roundabouts would improve safety. For consistency, an access management solution incorporating roundabouts should be considered a long-term, low priority rather than dismissed.
- Improvements at the Walmart intersection are needed, whether this involves a roundabout or not. Options are constrained by the gas line, adjacent businesses, and terrain.
- Perhaps a single roundabout would be more palatable than multiple? In close proximity to a signal, you lose the uninterrupted flow benefits and traffic can queue up into the intersection.
- Though costs and impacts are similar, BCAs for right-turn lanes vary based on volumes and crash patterns. The Taco Bell and McDonalds right turn lanes are short- and medium-term priorities, respectively.
- Big picture, planning/zoning controls to inform large scale land use patterns would benefit the region.

Qk4 will submit the draft report for review in July.

End of Minutes