

APPENDIX C: Meeting Summaries

- 1. Steering Committee Meeting No. 1**
- 2. Steering Committee Meeting No. 2**
- 3. Steering Committee Meeting No. 3**
- 4. Postcard for Community Survey**
- 5. Community Survey Results**
- 6. Public Meeting Flyer**
- 7. Public Meeting Results**

Smallhouse Road Study

Kickoff Meeting

Draft Meeting Minutes

Attendees

| Date | November 16, 2022 | Attendees | Organization / Employment |
|-------------|-------------------------------------|-----------------|---------------------------------|
| Time | 1:00 PM (Central Time) | Karissa Lemon | BG-WC MPO |
| Location | CCPC Conference Room | Ben Peterson | CCPC of Warren Co. |
| Facilitator | Lindsay Walker, HMB Project Manager | Jacob Merriman | CCPC of Warren Co. |
| | | Ben Hunt | KYTC District 3 |
| | | Kyle Hunt | City of Bowling Green |
| | | Melissa Cansler | City of Bowling Green |
| | | Josh Moore | Warren Co Dept. of Public Works |
| | | Brad Johnson | HMB |
| | | Jarrod Johnson | HMB |
| | | Lindsay Walker | HMB |
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Agenda

- Introductions
- Study Background
- Roadway Information
- Identified Nearby Projects
- Traffic
- Safety
- Community
- Next Steps

Agenda

✓ Introduction

As the consultant project manager, Lindsay Walker with HMB Professional Engineers, Inc. welcomed everyone to the meeting. She facilitated introductions for participants. She then began a presentation and discussion using an ArcGIS StoryMap.

✓ Study Background

Information was presented on the background and purpose of the study, goals, and schedule for tasks and milestones.

✓ Roadway Information

The presentation included existing roadway information for Smallhouse Road and the other study area roadways regarding functional classification, ownership, speed limits, number of lanes, lane width, shoulder width, horizontal and vertical grade, turn lanes, access control, freight networks, bicycle and pedestrian facilities, and transit facilities.

- It was noted that the GIS speed limit shown on GIS mapping was inaccurate. The corridor showed that the 30-mph section began near Elrod Road and ended at Cave Mill Road. However, the 30-mph speed limit continues north past Campbell Lane.
 - HMB had conducted two speed studies along the roadway and found travelers were actually going in the mid-40s mostly with a few traveling in the 50s. It was noted that law enforcement is sparse in monitoring the speed in the study area and that the 'radar enforced' signs in the southern portion of the study area's 35 mph section were mostly for encouragement only to drive the speed limit.
- It was noted there is no edgeline striping in the county owned section, and it would be difficult to have both edgeline and centerline striping due to the pavement width.
- There is little to no shoulder which was mentioned as being partly due to utilities.
- The vertical grades into and out of the park were noted as steep and as a 'roller coaster'.
- It was noted there is a more updated bike/ped map than the one presented showing work done recently. HMB will search for the updated map or request from BG-WC MPO. The GIS manager for the city was noted to be Kyle Bearden if HMB needs to request information about updating any GIS layers.
- The lack of sidewalks in most areas in the study area was discussed and said to be due to the age of the neighborhoods.
- It was noted that the transit map presented is out of date. HMB will search for an updated version and request the new version from the city if needed.
 - It was noted that transit ridership has declined since COVID.

Right of Way was presented based on available GIS data from the Warren County PVA parcels. An approximation of 60 total feet was presented, however it was discussed that this varies throughout the corridor and is more likely 50 feet in the county section. It was noted that this was a very old road and parcels may be inaccurate as shown. The BG-WC MPO will search to find more accurate

parcel information such as plats to spot-check some of the parcels as shown and relay the information to HMB.

Study area utilities including electric, water, sewer, and gas and oil lines were shown based on available GIS information from sources such as BRADD and WRIS. The difference in providers due to the city-county line throughout the corridor was noted.

Environmental resources were presented including streams and wetlands, flood zones, sinkholes and karst, farmland classification, cultural resources, critical and endangered species, and environmental justice.

- There are no streams crossing the corridor, but there is a lake at Basil Griffin Park with some nearby wetlands. There is a 100-year flood zone near the lake and one small area just north of Grider Pond Road. The entire area is in a major karst potential area with sinkholes located along or crossing the corridor. There are no cultural/ historic resources in the study area. Environmental justice indexes (EJScreen) from the EPA were shown including people of color, low income, and others. It was noted that the 95-100% percentile low income shown for Shawnee Estates could be due to student housing.
- Additional review and a more in-depth evaluation, including geotechnical data, will be completed as the study progresses and initial potential roadway connections are identified.

✓ **Identified Nearby Projects**

Identified nearby projects were presented and based on data collected from:

- KYTCs identified SHIFT Project CHAFs
- KYTC 2022 Active Highway Plan
- BG-WC MPO Unified Planning Work Program (Fiscal Year 2023)
- BG-WC MPO Metropolitan Transportation Plan (2045)
- Bicycle and Pedestrian Master Plan (2022)
- BG-WC Comprehensive Plan Focus (2030)

The project team noted a few projects and developments that may impact the study and warranted further discussion. The first includes a project for a new interchange to I-165 (Natcher Parkway) at Elrod Road. According to the project team, this project's status has been sporadic over time. It was noted that if this project does not get included within the next two years, it will likely not happen. The Phase 1 Design has already been completed by KYTC. The design includes a three-lane template for Smallhouse Road in its project limits with a new roundabout. The project team requested that HMB include the project in our study recommendations and include a *with* interchange and *without* interchange option. HMB will request more information about the details of the interchange project from KYTC.

There is a greenways project almost completed on Smallhouse Road north of the study area up to Scottsville Road. It is an eight-foot path along the eastern side of Smallhouse Road and was completed up to near 14th Avenue at the time of this meeting. Another project that includes a greenway is Item No. 3-80201/3-80212 along Cave Mill Road through the study area which will address congestion, safety, and mobility and include an eight-foot shared-use path. This project has a construction year of 2027. The path is located along a larger interconnection of shared-use paths called "The Loop" that is planned to go around Bowling Green and includes already constructed, funded, and proposed facilities. It was noted that a roundabout would be

preferred at Smallhouse Road along the new Cave Mill Road project. HMB will provide the counts from this study to the project team so they can conduct a roundabout warrant analysis.

Another project noted was widening along Three Springs Road, Item No. 3-8818. This project was stated to include a roundabout at Smallhouse Road. Turning movement counts were conducted in August 2021 for the intersection with Smallhouse Road. KYTC will provide these to HMB for use in this study. This project has a construction year of 2025.

A large development was noted west of I-165 that was just recently completed and may impact traffic. A development on the southern leg of the Elrod Road roundabout was noted with a pre-construction meeting soon. A large development on the farm where the Bowling Green VORTAC airport beacon is located was on the docket for a re-zoning approval at the CCPC meeting the day after this meeting. HMB will determine the results of that meeting and coordinate with CCPC to potentially include the development in the study. The development was noted to be a residential neighborhood, and if approved, the developers would pay for and construct a new roundabout into the new site at the bend of the road east of the existing roundabout at Elrod Road. The site would potentially have a through route with no driveways connecting Laurelstone Lane in the north to Three Springs Road.

HMB will continue to coordinate with the project team to make sure these projects are included in the study and align with the study recommendations.

✓ **Traffic**

Existing traffic volumes were presented. The traffic nearly doubles past Elrod Road to the north and continues to grow as it goes further north towards Campbell Lane. Nearby developments and projects will be reviewed to include in future traffic forecasting. The corridor includes two signals, one roundabout, and a stop-controlled intersection. However, current construction projects may change that to three roundabouts and one signal at Campbell Lane.

✓ **Safety**

Public crash records were obtained through the Kentucky State Police for the entire study area were obtained for a five-year span from September 2017 through August 2022. These were displayed as a heat map (showing densities of crash locations), by manner of collision clusters (showing amounts as varying sizes), and by detailed manner of collision and injury severity. An additional layer called the Level of Service of Safety, which compares similar roadways to give a 1 through 4 rating of safety, was provided by KTC and shown for KA severity crashes (Fatal and Serious Injury). The majority of crashes occurred near intersections and steep curves, with rear-ends being the bulk of the intersection related crashes.

It was noted that the roundabout at Elrod Road was completed in October 2020. HMB will consider that in order to analyze crashes near that intersection. HMB will collect detailed crash reports to better understand the crashes to assist in the safety evaluation. HMB may need to request the detailed records from KYTC.

✓ **Community**

HMB presented points of interest within the study area such as schools, shops, parks, industry, etc. There is one school near the study area (William H. Natcher Elementary) and Basil Griffin Park at the south of the study area. HMB showed a demo of travel time mapping displaying the various walk-time radii from the school and park in 5, 10, and 15 minute increments. This was shown as a potential tool to use when determining where bicycle and pedestrian facilities may be most helpful. A heat map showing the bicycle and pedestrian users of the app Strava was presented. It showed that people are currently using the corridor to bike / walk as well as the surrounding roads, notably Grider Pond Road and Elrod Road and the neighborhood east of Smallhouse Road and south of Cave Mill Road.

The format and length of a community survey was discussed. It was noted that it may be a good time to go ahead and get a survey out as soon as possible since there is already public engagement for the re-zoning of the development listed previously. It was discussed that Every Door Direct Mailing by USPS would be utilized to send postcards with a link to a short survey. The survey will collect feedback from the community to determine needs and priorities for the study. HMB will produce a post card and survey and refine it in coordination with the Steering Committee before sending. Some discussion on when to release the survey resulted in the survey being open as soon as possible and through the holidays. It was noted that it would be good to collect feedback from all users of the roadway and not just those that live on the roadway. It was also noted that previous engagement showed that residents do not see this roadway as the collector road that it is. It was noted that it is important to see what the community wants, which may not be widening, and understand the reasons behind why they might express concern over changes.

✓ **Next Steps**

Next steps were presented which include:

- Coordinate with Steering Committee on any additional information including:
 - GIS mapping for bicycle / pedestrian existing and planned facilities
 - GIS mapping of transit facilities
 - PVA plats / parcel information (County / City)
 - KY 884 / Smallhouse Road turning movement count (KYTC)
 - Natcher Parkway Interchange at Elrod Road (Item No. 3-8707) project information (KYTC)
 - Crash record narratives for fatal / severe crashes (KYTC)
 - Rezoning outcome for Smallhouse Road residential development (CCPC)
- Prepare and distribute community survey (HMB)
- Prepare technical analyses (HMB)
- Identify range of improvement options (HMB)

The meeting adjourned at approximately 2:30 PM (Central Time).

Note: Green font indicates HMB has received info following meeting.

Smallhouse Road Study

Project Team Meeting No. 2

Attendees

| Date | January 24, 2023 | Attendees | Organization / Employment |
|-------------|-------------------------------------|-----------------|---------------------------------|
| Time | 2:00 PM (Eastern Time) | Karissa Lemon | BG-WC MPO |
| Location | CCPC Conference Room | Ben Peterson | CCPC of Warren Co. |
| Facilitator | Lindsay Walker, HMB Project Manager | Ben Hunt | KYTC District 3 |
| | | Joe Plunk | KYTC District 3 |
| | | Kyle Hunt | City of Bowling Green |
| | | Melissa Cansler | City of Bowling Green |
| | | Josh Moore | Warren Co Dept. of Public Works |
| | | Brad Johnson | HMB |
| | | Jarrod Johnson | HMB |
| | | Lindsay Walker | HMB |
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Agenda

- Introductions / Welcome
- Study Review (where we are in schedule)
- Community Survey Results
- Existing Conditions (Intersection Operations & Safety); BLOS & PCI
- Traffic Forecast (Interchange study results; List of Identified & Committed Projects; Land use changes)
- Draft Improvement Concepts
- Preparation for Public Meeting
- Next Steps

Introductions / Welcome

The meeting began on time at 2:00 PM (Eastern), 1:00 PM (Central). An agenda was provided to attendees. The meeting was turned over to Lindsay Walker, Project Manager with HMB Professional Engineers, Inc. She proceeded to present information relevant to the agenda topics and request discussion / input / feedback on each. Summary notes related to each agenda topic is provided below.

Study Review

The study schedule was shared with the project team. The study is progressing on schedule with a draft report scheduled for late March / April.

Community Survey Results

- HMB requested feedback on the effectiveness of mailed postcards.
 - Pretty good response from postcards typically, example: sidewalk program, pre-design open house.
 - Usually more condensed to an area whereas this study is larger/ broader.
- Request to go back and correlate the responses of people that said they lived along the corridor as to whether they would be okay with widening/taking ROW.
- BG-WC MPO said they had about 15 people contact the office regarding the study.
- One person that lives on the corner of Cave Mill / Campbell Lane was concerned and wanted to continue to be informed.
- Would like to have the Story Map so they can go back and review.
- The City of Bowling Green requested email contacts for schools / churches for use on their Cave Mill design project.

Existing Conditions

- HMB requested information about the proposed roundabout at Three Springs Road by KYTC. It is expected to be a single lane roundabout. It has not been designed yet, but for study purposes should be assumed as an intersection modification. KYTC does not anticipate this design changing even if development to the north is approved and a thoroughfare through that development is built.
- HMB requested information about the status of a large development near Elrod Road.
 - CCPC: It did get denied. The developers will almost certainly come back with an updated plan with a slightly lower density. Probably going to get rid of the 8-plexes, may do 4 unit patio-style, but there will most likely be some type of multi-family housing whether it is townhomes or something else. Assume density will likely change from 10 units / acre to 7 units / acre.
- Striping
 - Public Works: Problem throughout county, there are guidelines to follow. Only looking at doing restriping during resurfacing projects but the striping/surface is something they want to stay informed on coming out of this study.
- Intersections
 - HMB prepared and displayed the operational results including LOS, Delay, and Queue Lengths. The City of Bowling Green requested for HMB to send those along to assist them in the design process. HMB noted that further investigation may be needed through full simulations to confirm from a system perspective queue lengths are not being under-reported.
 - Cave Mill Road
 - The City of Bowling Green is doing a project along Cave Mill Road. At this intersection, would like to consider a roundabout here, but AADT probably too high for single lane. A dual-lane roundabout would need to go south due to underground AT&T utilities. KYTC noted that if the improvements occur within ROW, usually

make the utility company pay for impacts. The City of Bowling Green has not had good luck with that happening. Minimum improvements should look at extending turn lanes.

- Elrod Road
 - Need to revise the crashes to take out the ones associated with the previous configuration before it became a roundabout or at least differentiate between the two time periods.
 - County is planning to add lighting and improve striping/signing to the roundabout.

Preparations for Public Meeting

- HMB requested input regarding the time frame for sending out notification. Consensus was two to two and a half weeks out so people do not forget.
- BG-WC MPO requested changes to the flyer which included changes to the time to 5:30 to 7 PM CT, some of the font styling, and including accessibility language for Title VI regulations. Also change church location callout to “Meeting Location”.
- BG-WC MPO has an existing email list of over 500 contacts. Can send notification to this group.
- HMB inquired about the use of VMBs.
 - CCPC highlighted the effectiveness of them by stating that when they have asked attendees how they found out about public meeting, majority of them saw the VMB.
 - The City of Bowling Green stated they have some they can use instead of KYTC’s.
 - County has some too and can help with placement.
 - Location of VMB was discussed; settled on one being on corner of Three Springs Road, one by Grider Pond, and one on corner of Campbell Lane. The City and County will coordinate on final placement.
- HMB inquired if there were any additional organizations to inform of public meeting. BG-WC MPO requested to add Calvary Baptist Church to list.
- City of Bowling Green has their own social meeting coordinator (Debbie) and can assist with advertising the meeting.
- HMB asked for input on when to close the survey. Settled on closing the survey two weeks after the meeting and noted the first survey was four weeks due to the holiday.
- HMB presented a draft plan for the Public Meeting and asked for input on the format.
 - KYTC said they usually do a presentation, no Q&A, but attendees can ask questions at the boards in the room afterwards.
 - BG-WC MPO said they usually does a 15-minute Q&A.
 - The City of Bowling Green said they are on board with whatever HMB feels appropriate for this style of meeting and pointed to the previous style of meeting for the Downtown Fountain Square project that Lindsay helped organize.
- The group consensus was to do stations only and have one be an informative / overview station.
- CCPC talked about Audio/Visual difficulties at some churches, however BG-WC MPO said the meeting location has a separate meeting room.
- HMB will use wayfinding signs for attendees to find the right door to go into once arriving.
- Comment made about corridor / intersection sheets being too much info for public. HMB will have easier to digest information for the meeting.

Draft Improvement Concepts

- Several treatment types were noted related to lowering the speed on Smallhouse Road.
 - The City of Bowling Green does not allow speed tables or speed humps.
 - 45 mph target speed too high, likely 35 max.

- Bike Lanes: Need street cleaning which is not frequent enough for them to be usable. Need separation for them to work unless a street cleaning program is part of our recommendation which is not likely to happen.
 - CCPC: Bike lanes are expected from people moving to Bowling Green from other areas, not liked by the locals. Want to attract workforce to the area. Primarily only used by the students currently.

Traffic Forecast

- Bowling Green is estimated to be the second fastest growing city behind Lexington, will add 75,000 people by 2050.
- No decision yet if the Three Springs Road connector through the development will be public or private, but confident there will be a development there in the coming years.
 - 6/8 units per acre, but we should go with 7.
 - We need to assume this property develops along with the airport beacon property, both at 7 units/acre. Also assume farm near proposed Elrod Rd interchange develops, but would be lower density at 3 units/acre.
- KYTC mentioned that they would like to see some reliability / travel time summaries. Stated that Smallhouse Road sometimes used instead of other roadways because it is a more reliable route.
- Discussion about not widening too much to lose character, 'If you build it they will come' effect. Agreed likely would never be more than 3 lanes, whether 2+1 or a TWLTL. May change template based on the section of Smallhouse Road.

Next Steps

- **Provide StoryMap link for meeting to attendees.**
- **Provide Existing Conditions Intersection Summary Sheets to attendees.**
- **Update Public Meeting Flyer per comments from the meeting.**
- **Provide email contacts to the City of Bowling Green for nearby churches and schools.**
- **Schedule Project Team Meeting #3.**
- **Prepare for Public Meeting.**

The meeting ended at approximately 3:45 PM (Eastern) or 2:45 (Central).

Smallhouse Road Study

Project Team Meeting No. 3

Attendees

| Date | March 30, 2023 | Attendees | Organization / Employment |
|-------------|-------------------------------------|-----------------|---------------------------------|
| Time | 2:00 PM (Central Time) | Karissa Lemon | BG-WC MPO |
| Location | CCPC Conference Room | Ben Peterson | CCPC of Warren Co. |
| Facilitator | Lindsay Walker, HMB Project Manager | Ben Hunt | KYTC District 3 |
| | | Kyle Hunt | City of Bowling Green |
| | | Melissa Cansler | City of Bowling Green |
| | | Josh Moore | Warren Co Dept. of Public Works |
| | | Brad Johnson | HMB |
| | | Jarrold Johnson | HMB |
| | | Lindsay Walker | HMB |
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Agenda

- Introductions / Welcome
- Study Review (where we are in schedule)
- Public Meeting Overview and Survey Results
- Traffic Forecast
- Improvement Concepts Refined
- Cost-Benefit Analysis
- Next Steps

Introductions / Welcome

The meeting began a few minutes after 3:00 PM (Eastern), 2:00 PM (Central). An agenda was provided to attendees. The meeting was turned over to Lindsay Walker, Project Manager with HMB Professional Engineers, Inc. She proceeded to present information relevant to the agenda topics and request discussion / input / feedback on each. Summary notes related to each agenda topic is provided in the following sections.

Study Review / Schedule

The study schedule was shared with the project team. The study is progressing on schedule with a draft report scheduled for late April. HMB will present the study process and outcomes to the Bowling Green-Warren County MPO Technical Advisory and Policy Committees following the conclusion of the study. These committees meet in even numbered months (i.e. next meeting is end of April 2023). To allow time for review and comments from the project team, it was determined that the presentation should be given during the June 2023 meetings.

For evaluation / inclusion in the SHIFT prioritization process, the MPO requested information regarding improvements to their high priority segment – Smallhouse Road from Campbell Lane to Cave Mill Road.

Public Meeting Overview and Survey Results

HMB provided electronic copies via email prior to the project team meeting for review. A brief overview was given of public meeting statistics and collected input from the meeting and online survey. The public meeting had 217 attendees, while the online survey had 83 responses. The online survey response rate declined sharply after several days following the meeting. The MPO asked if the response rate in our experience was normal. HMB noted that the response rate is very dependent on follow-up and reminders to the public. In general, the team was pleased with the interest in the study and amount of input.

Traffic Forecast

Discussion on growth rates – Bowling Green has the highest population growth in state (2.5% county-wide, 5-6% in the south). Agreement that we do not want to widen every road to accommodate the growth but need to provide alternative routes. Disappointed the southwest parkway was not finished, using too low / conservative growth may be the cause for things like that not moving forward. Noted major flow of traffic from the south / Plano that use Three Springs Road to Smallhouse Road. May need to build what is needed now and justify improvements as additional growth is predicted. Ideally the amenities should be placed where the people are, not make people drive to them.

To assist HMB with developing the project traffic forecast, the Kentucky Transportation Cabinet modeled three scenarios (Existing, No Build, and Build with Elrod Road interchange). The Build scenario included a parallel route to Smallhouse Road south of Elrod Road. Traffic forecast volumes include both Smallhouse Road and the parallel route to understand full demand south of Elrod Road.

Improvement Concepts Refined

Spot Improvements

- Discussion about options and how they would like to see them presented in the report. Table format is fine with recommended improvements highlighted.
- HMB will continue to work on refining concept drawings for large-scale improvements.
- For the Campbell Lane Prohibit Left Turn option, Publix may be going into that area. This study could be a tool to have Publix or other developers create the connection from Campbell Lane to Western Street or other improvements.
- Need to check if there are any operational performance differences between single lane and mini roundabout. Check if mini-roundabout has maximum traffic allowed per guidelines. Check KYTC roundabout design guidelines. May want the mini-roundabouts to be single-lane instead due to the through traffic on Smallhouse Road. Need to define what the mini-roundabout would look like and how the center island would be constructed.
- Lighting in the works for Elrod Road as well as enhanced signing.
- Discussion on the existing roundabout at Elrod Road and knowing what they know now about driver expectations / behavior following installation, if there is anything they would change. Tried to make it a more 'rural' roundabout. There was a comment that roundabouts are inherently not rural but

more residential. Looking at installing plantings in center – will help with reducing visual through sight-distance. Also noted they would have made it a little wider.

- Discussion about the roundabout cost estimates that they seem low. A single-lane currently being constructed is ~\$800,000. Although that is a single-lane roundabout, not mini-roundabout. Check / refine cost estimates.
- Shawnee Way would be good with a roundabout since it is difficult to turn out due to platooning vehicles and limited sight distance.
- The project team likes the approach with low-cost safety improvements to the curves / spots south of Elrod Road. These will be beneficial in the short-term and allow for future modifications depending on decisions made on the transportation network.

Corridor Improvements

- The project team agreed for the northern section to be a transition from an urban to rural section with the TWLTL (from Campbell Lane to Cave Mill Road, then potentially down to Grider Pond / Elrod Rd). HMB will provide information on transitions.
- In addition to the TWLTL, the project team agreed with the recommendation of a wide sidewalk or shared use path (SUP) on one side of roadway with buffer. For sections of roadway like this section with limited width, 8' is acceptable for the sidewalk / SUP. South of Elrod Road, HMB proposed to provide a SUP with buffer for future potential widening and / or improvements to the transportation network. Runners / bikers have requested pavement instead of concrete. The transition from paved to concrete provides visual differentiation from the more urban portion of Smallhouse Road north of Campbell Lane.
- As noted during the public meeting, an additional recommendation will be to move mailboxes from one side of the road to the appropriate side with that house. This was part of the project on the section north of Campbell Lane.

Next Steps

- **Refine Concept Layouts (Spot and Corridor as Identified at Meeting)**
- **Provide Cost Estimates as Appropriate.**
- **Prepare Draft Document**
- **Prepare Presentation for MPO Committee Meetings**

The meeting ended at approximately 4:30 PM (Eastern) or 3:30 PM (Central).



Smallhouse Road Study US 231 (Campbell Lane) to KY 884 (Three Springs Road)

PRSR STD
U.S. POSTAGE
PAID
CITY, STATE
PERMIT NO. XXX

The Bowling Green and Warren County Metropolitan Planning Organization (BG-WC MPO) is conducting a study on Smallhouse Road from US 231 (Campbell Lane) to KY 884 (Three Springs Road). The study will consider safety, capacity, access, and bicycle / pedestrian needs along the corridor to determine future short-term and long-term solutions. Study goals include:

- *Provide necessary safety, capacity, access management, and bicycle / pedestrian improvements for all users into the future.*
- *Recommendations for major intersections along the corridor, including, but not limited to, Campbell Lane (US 231), Cave Mill Road, Grider Pond, Elrod Road, and KY 884 (Three Springs Road).*
- *Have minimal right-of-way impacts.*

Currently the project team is in the beginning stages of the study. At this time we are reaching out to the community to solicit input on the desire and needs for improvements to Smallhouse Road. We would like input on what you think are the needs / issues along the corridor as well as what you would like to see for improvements along Smallhouse Road and at the intersections.

The survey will close on **Friday, January 13, 2023**. At that time the project team will compile the collected information for use in conjunction with technical analysis to develop a set of draft improvement concepts.

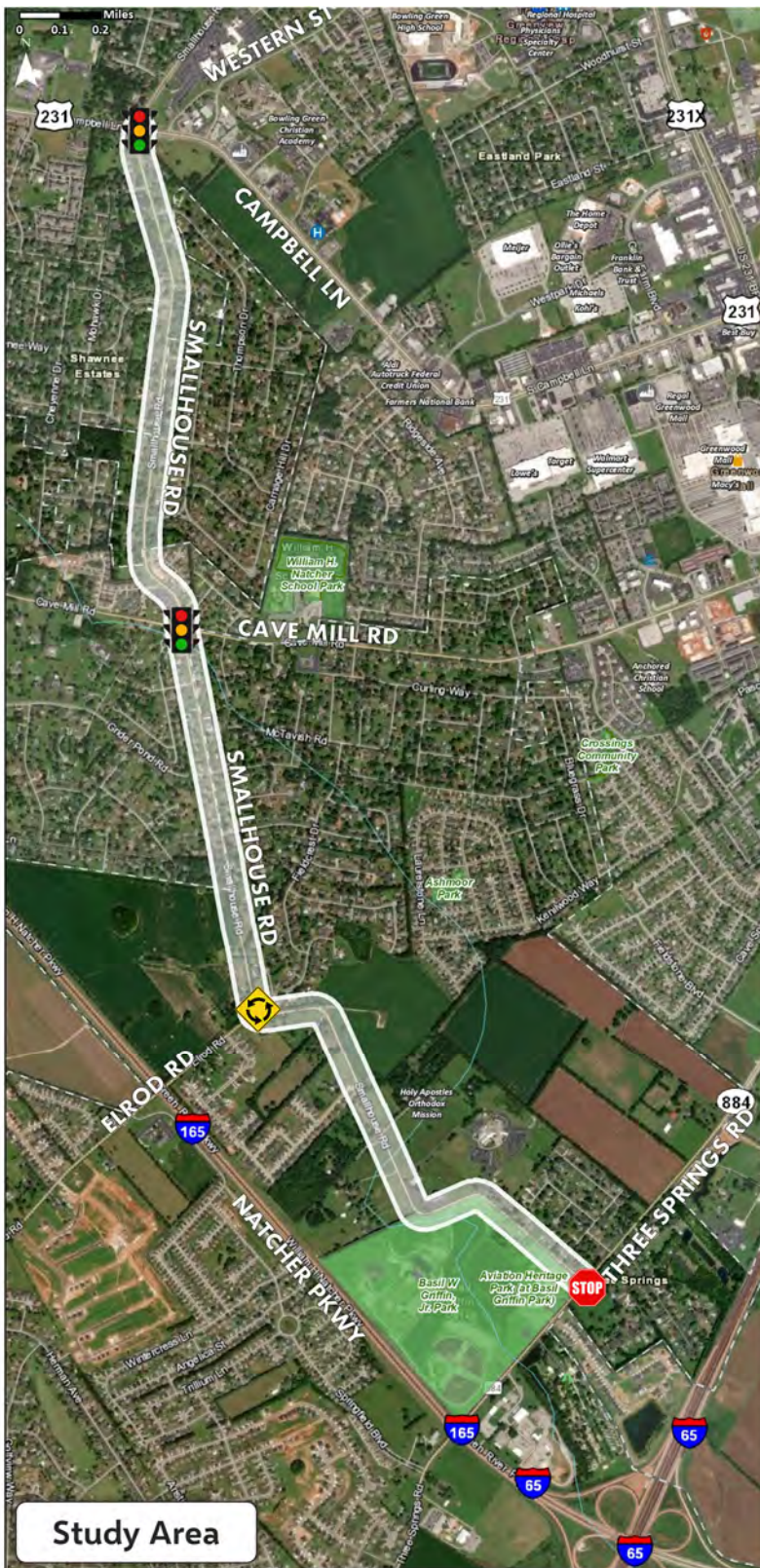
A public meeting will be held in a location convenient to the corridor in February 2023 to provide additional study information and collect feedback on draft concepts. The overall completion date for the study is April 2023, and a final report will be posted on the BG-WC MPO website. *If assistance is needed due to limited English proficiency or a disability, or information is needed in another language, please contact (270) 842-1953. Si se necesita información en español comuníquese con (270) 842-1953.*

*****ECRWSEDDM****

Local Postal Customer

Use the link or QR Code below
to access the online survey:
<https://arcg.is/1a0XDC>





Questions?

Comments?

Concerns?

For Additional Information,
Please Visit:

www.bgareampo.org

Or

Contact the MPO at

Phone:
270.842.1953

Email:
Karissa.Lemon@bgky.org



Community Survey Response Rate



Total records



Total participants



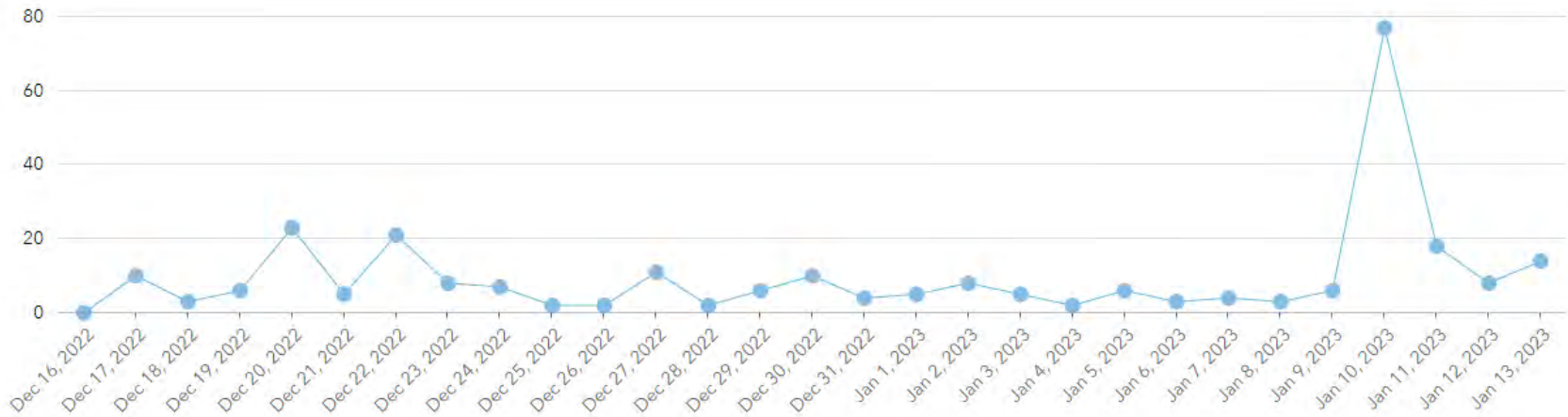
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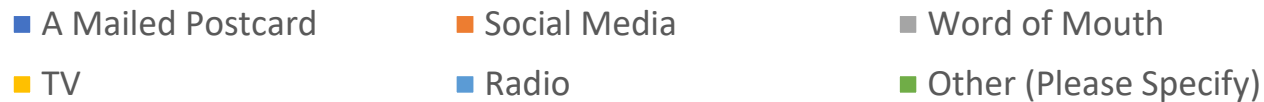
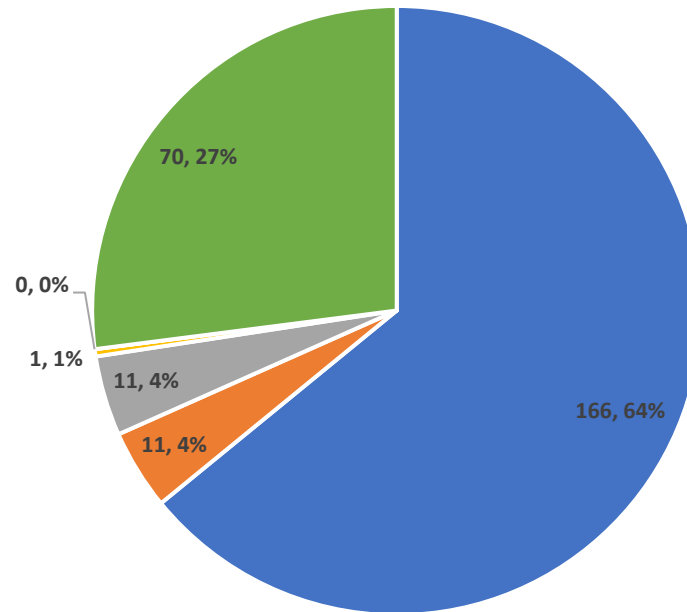
Last submitted On 1

Surveys count: 280 (total: 280)

12/16/22 - 1/13/23



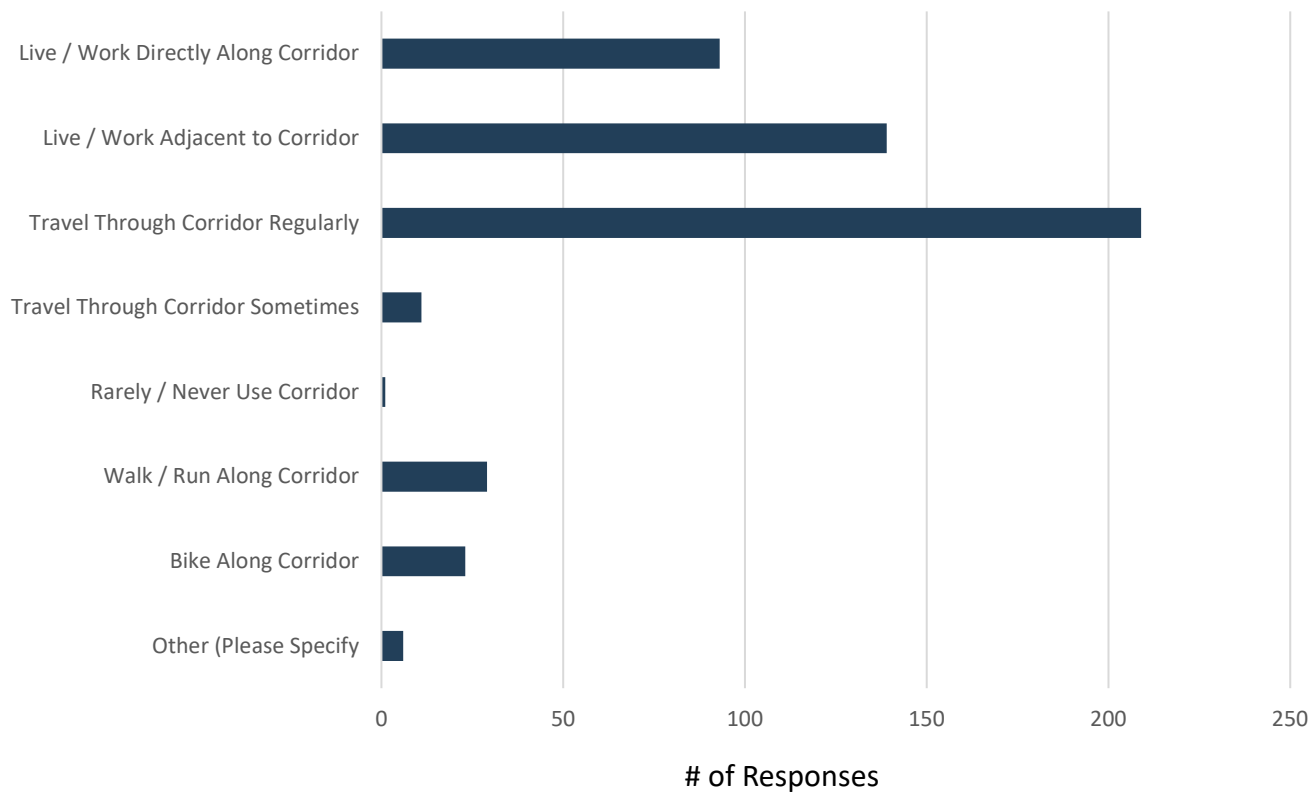
How did you find out about this study and survey?



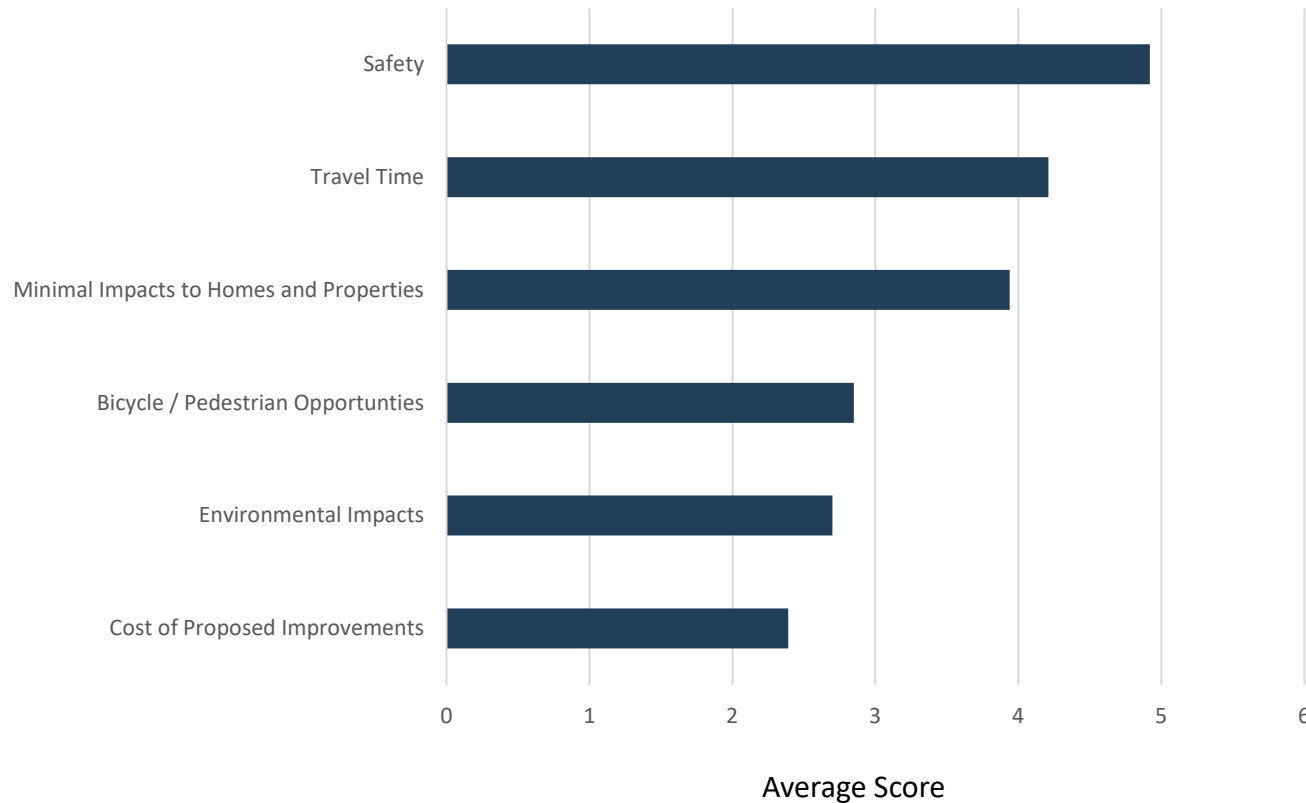
Other Responses:

- Email / Text from School (Natcher Elementary School)
- CCPC Email / Newsletter
- Living Hope Baptist Church

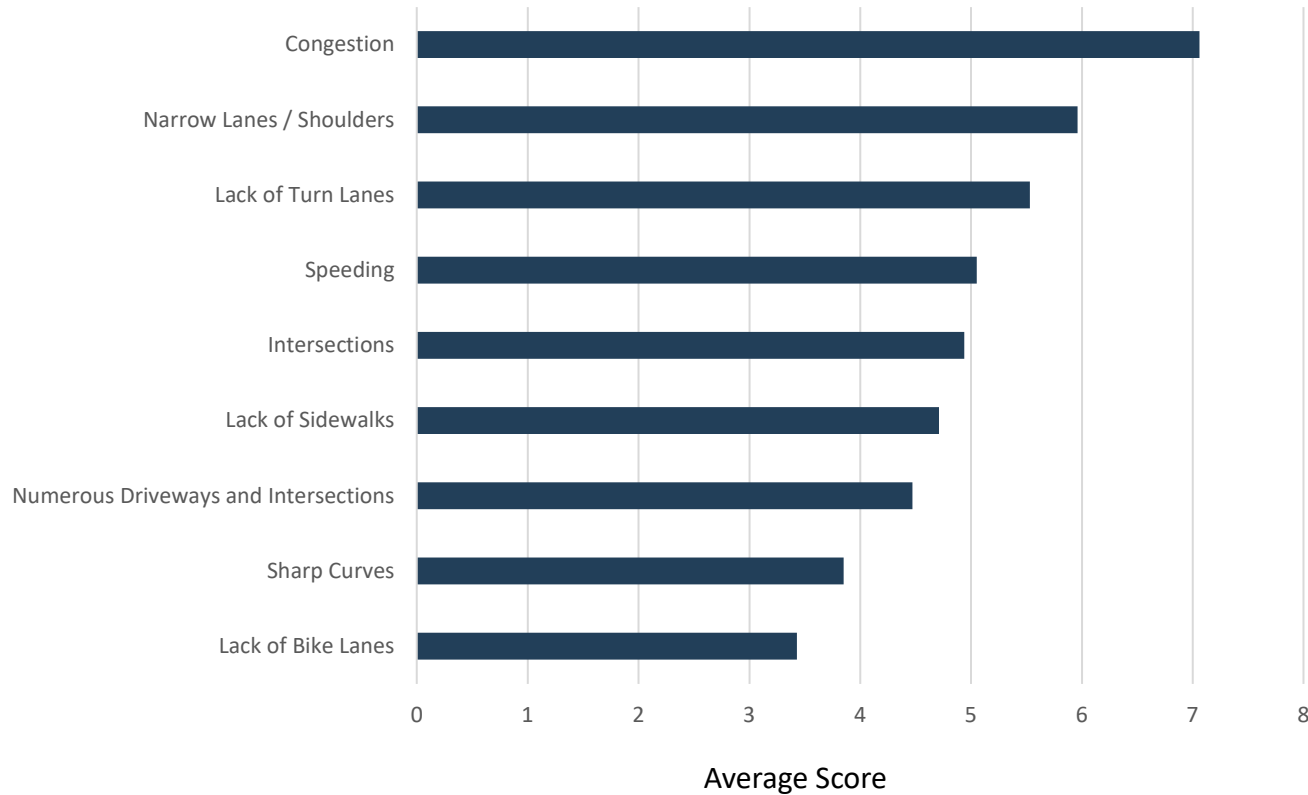
How do you use this section of Smallhouse Road?



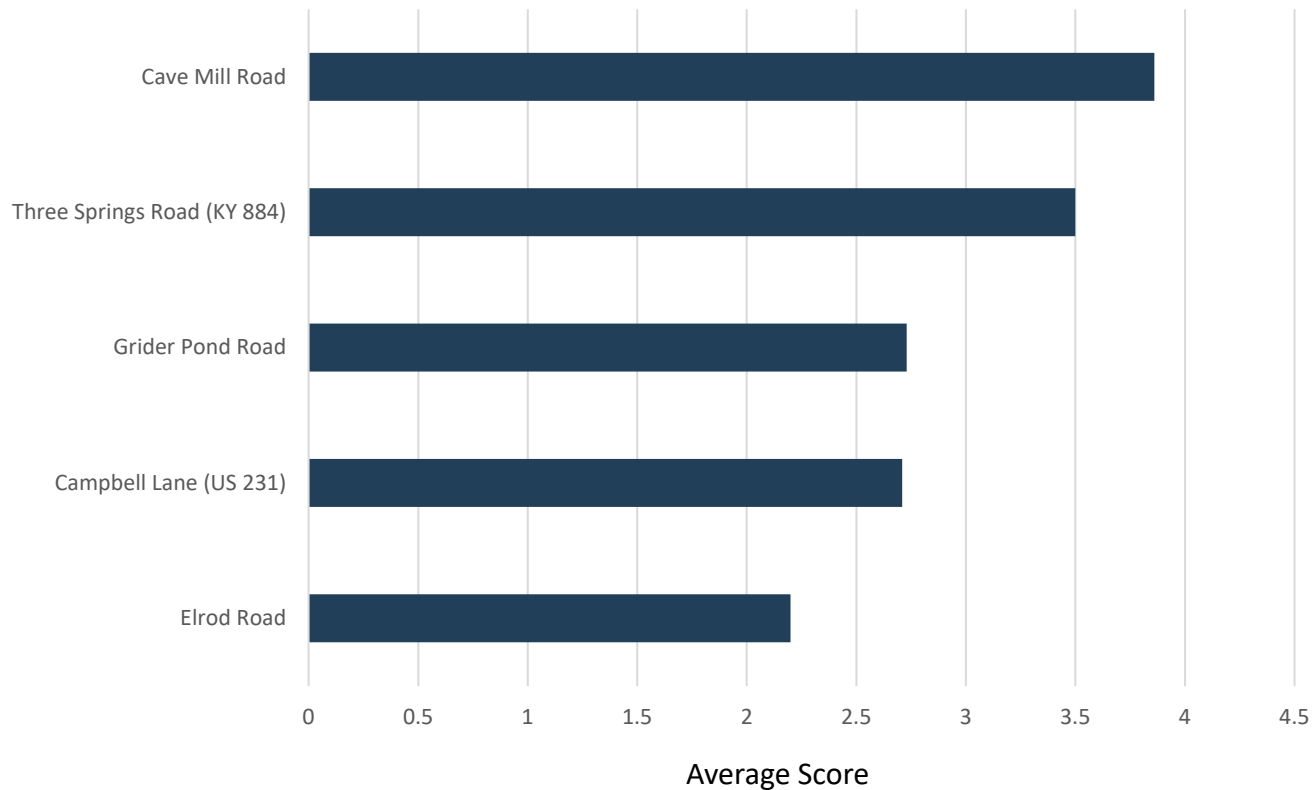
What criteria are most important to you?



What are your biggest concerns for the corridor?

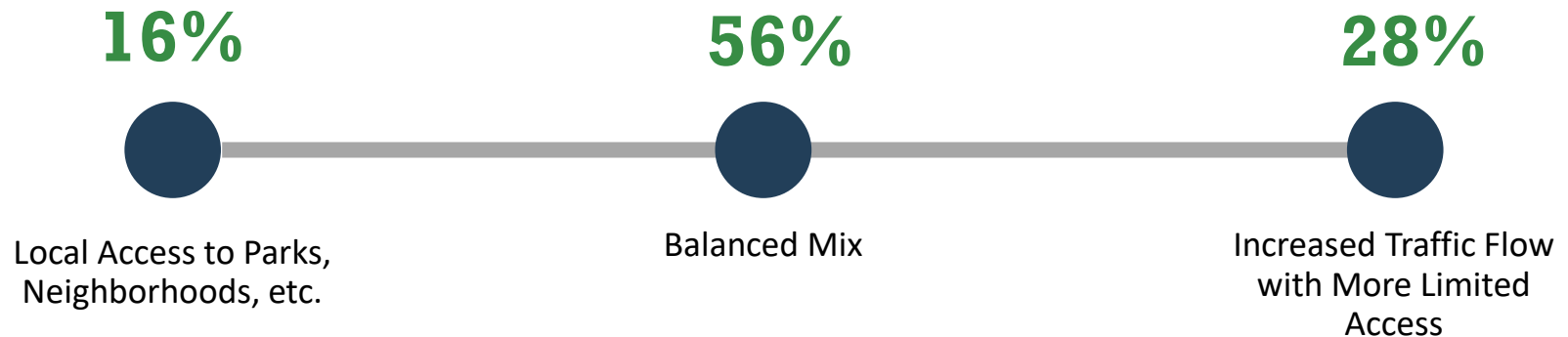


Of the following intersections within the study area, which ones do you have the most concern over?



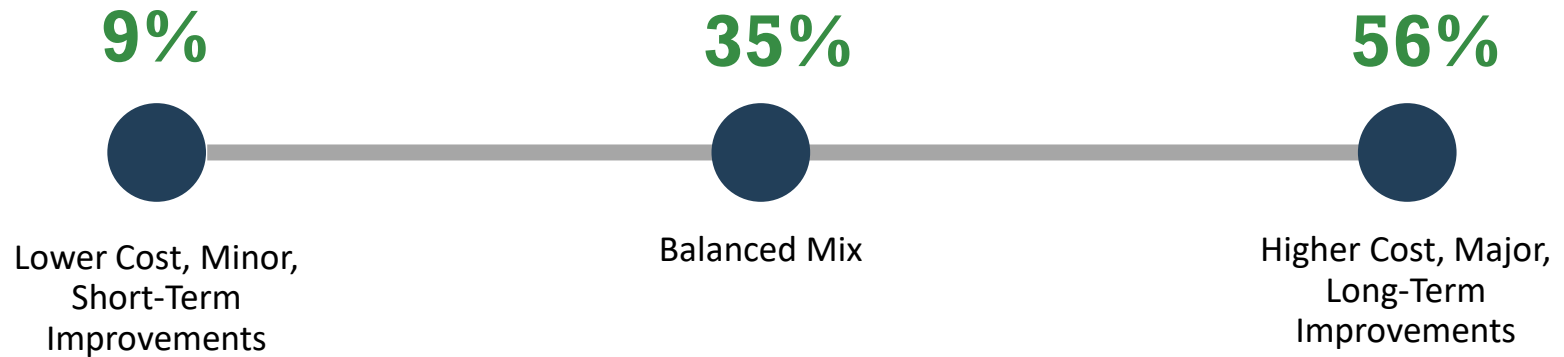
Tradeoffs: Smallhouse Road Corridor Improvements Should....

Provide Better Traffic Flow or Local Access?



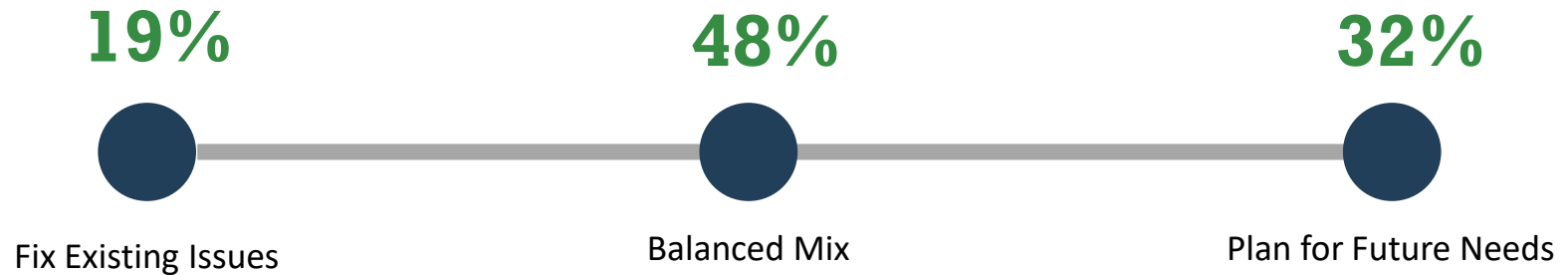
Tradeoffs: Smallhouse Road Corridor Improvements Should....

Be Lower Cost with Minor Improvements or Larger Cost with Major Improvements?



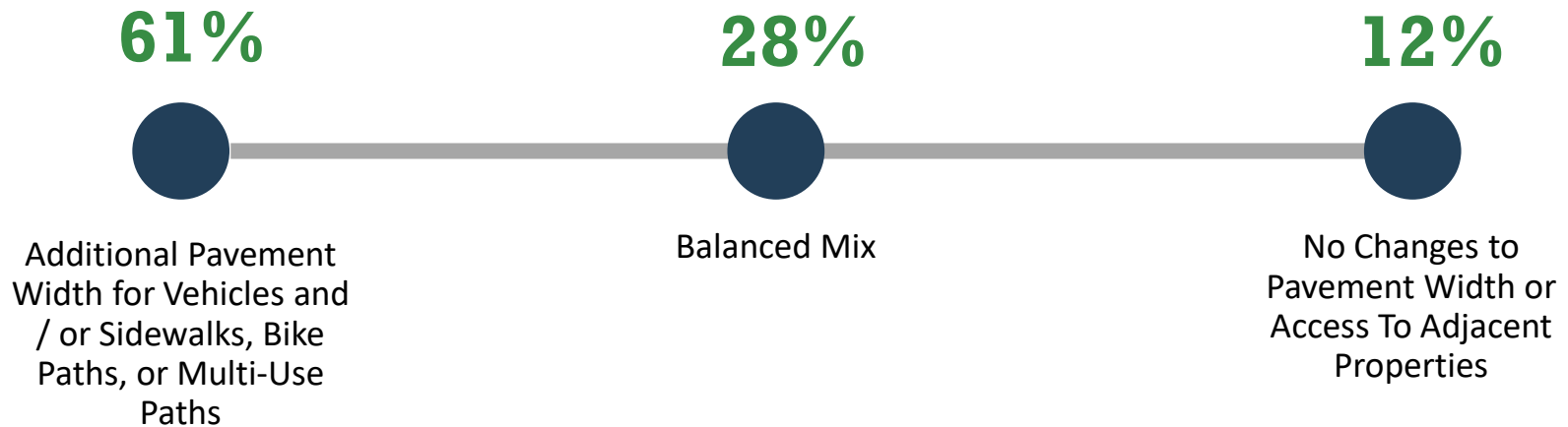
Tradeoffs: Smallhouse Road Corridor Improvements Should....

Fix Issues or Plan for Future Needs?



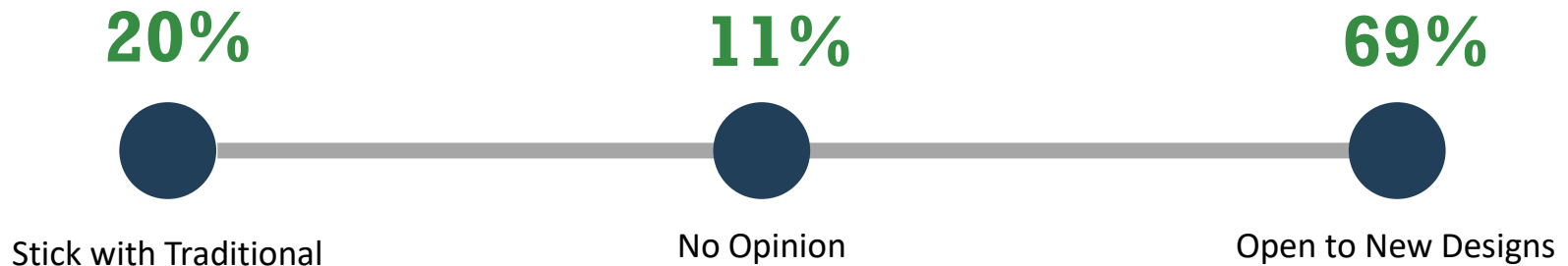
Tradeoffs: Smallhouse Road Corridor Improvements Should....

Allow More Width for Transportation or Be Left As Is?



Tradeoffs: Smallhouse Road Corridor Improvements Should....

Use Traditional Intersection Layouts or Consider New Designs? (Roundabouts for Example)



Additional Comments Summary

• Additional Comments

Word cloud



- Congestion and delay for turning vehicles at intersections (34 comments)
 - Three Springs (20 comments); Cave Mill (10 comments); Grider Pond (3 comments); Cave Mill (1 comment)
- Limit further development that would impact Smallhouse Road – Address issue at zoning level (16 comments)
- Multimodal needs (i.e. bike accommodation / sidewalks) (14 comments)
- Speeding is a noted issue (13 comments)
- Several people expressed dislike of roundabouts (5 comments) as well as provided input on needed improvements to existing Elrod Road Roundabout – signing, lighting, speeding, need education

Smallhouse Road Study

US 231 (Campbell Lane) to KY 884 (Three Springs Road)

PUBLIC MEETING ANNOUNCEMENT

Monday, February 20, 2023

5:30 PM to 7:00 PM

(stop by anytime!)

Meet at Holy Spirit Catholic Church
(4754 Smallhouse Road)

The Bowling Green and Warren County Metropolitan Planning Organization (BG-WC MPO) is conducting a study on Smallhouse Road from US 231 (Campbell Lane) to KY 884 (Three Springs Road). The study is considering safety, capacity, access, and bicycle / pedestrian needs along the corridor to determine future short-term and long-term solutions.

A public information meeting will be held on February 20, 2023. The meeting will be open-house style format and highly interactive to provide attendees information on study progress as well as to collect feedback on potential improvement concepts.

A summary of the Community Survey conducted in December / January will be included for viewing. Other exhibits include traffic operations and safety analysis, conceptual options for both corridor and intersection improvements, and visual / hands-on activities for input.

Additional study information and updates can be viewed under Resources on the MPO's website at: www.bgareampo.org

*For questions please contact the MPO at:
Phone: 270-842-1953
Email: Karissa.Lemon@bgky.org*

If assistance is needed due to limited English proficiency or a disability, or information is needed in another language, please contact (270) 842-1953. Si se necesita información en español comuníquese con (270) 842-1953.



Public Meeting Summary

When: February 20, 2023 from 5:30 – 7:00 PM (Central Time)

Where: Holy Spirit Catholic Church

- 217 attendees (not including project team members)
- 42 (~20% with addresses directly on Smallhouse Road)

Advertisement Methods:

- Email to Community Survey respondents that provided an email address
- Variable message signs (3)
- MPO website / mailings
- Email to local schools / churches
- Media – WKBO [Planning organization to hold public meeting on Smallhouse Road study \(wbko.com\)](https://www.wbko.com)



Online Survey Summary



Total records



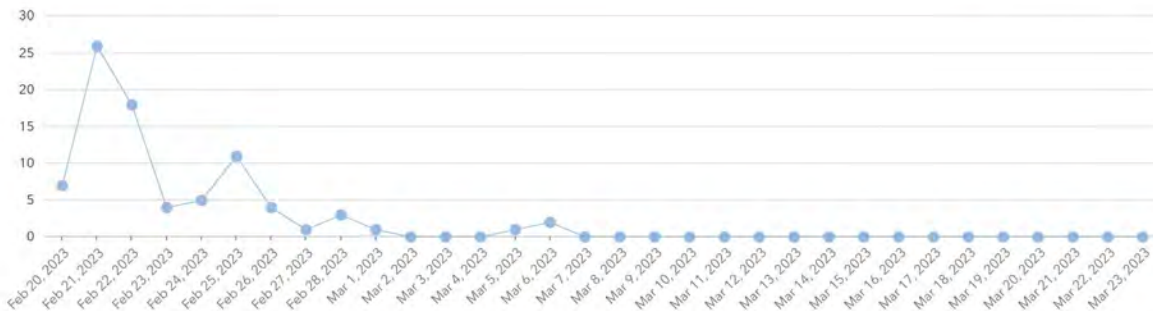
First submitted On



Last submitted On

Surveys count: 83 (total: 83)

2/20/23 - 3/23/23



Hide table

Other response Empty categories Sort

| Answers | Count | Percentage |
|------------------------|-------|------------|
| Roadside Message Board | 30 | 36.14% |
| Social Media | 23 | 27.71% |
| Email | 0 | 0% |
| Word of Mouth | 11 | 13.25% |
| TV | 0 | 0% |
| Radio | 0 | 0% |
| Other (Please explain) | 9 | 9.64% |

Answered: 72 Skipped: 11

Additional Comments:

- *Smallhouse Road needs to be straightend between roundabout and Three Springs Road*
- *Trim old branches hanging over Smallhouse Road*
- *Requests to make corridor safer for pedestrians and bicyclists*
- *Connection to the parkway is needed as a longer-term solution*
- *Comments for and against roundabouts at various intersections – overall theme is improvements are needed at all study intersections*

1

Smallhouse Road at Campbell Lane


Spot 1 - Campbell Lane (Online Results)



Draft Improvement Concepts

Concept: Extend NB Right Turn Lane


Info: Queue Length in AM > Available Storage
Primary crash type is rear-end (5 of 10 for approach)
Level of Service E for right turns (Scale = A to F)



| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 75 | 0 |
| (100%) | (0%) |

Concept: Extend WB Right Turn Lane


Info: Queue Length in PM > Available Storage
Primary crash type is rear-end (16 of 28 for approach)
Level of Service C for right turns (Scale = A to F)



| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 58 | 0 |
| (100%) | (0%) |

Concept: Add Backplates to Signal Heads with Retroreflective Borders


Info: Primary crash type is rear-end (89 of 151 total)
FHWA Countermeasure = 15% reduction in all crashes



| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 41 | 1 |
| (98%) | (2%) |

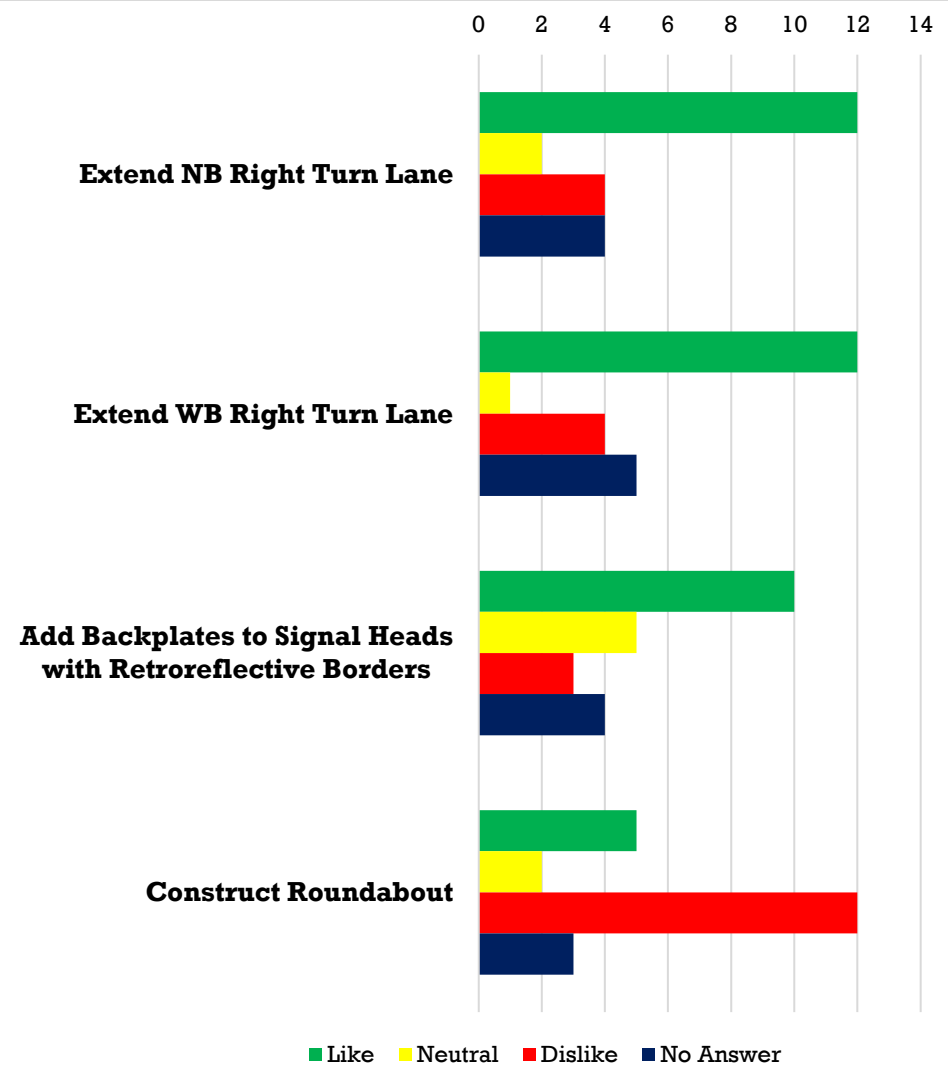
Concept: Construct Roundabout

Info: Helps reduce speeds on approaches serving as a traffic calming measure
FHWA Countermeasure = 78% reduction in fatal and injury crashes (22 of 151 injury crashes ; no fatal)



| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 46 | 115 |
| (29%) | (71%) |

Other:



2

Smallhouse Road at Cave Mill Road

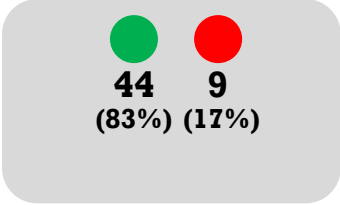


Spot 2 - Cave Mill Road (Online Results)

Draft Improvement Concepts

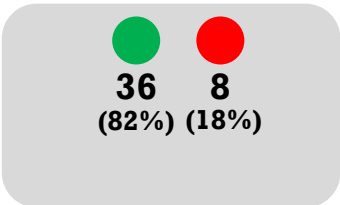
Concept: Extend WB Right Turn Lane

Info: Queue Length in AM equal to available storage
Primary crash type is rear-end (8 of 10 for approach)
Level of Service C for right turns (Scale = A to F)



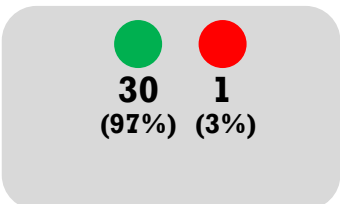
Concept: Extend SB Right Turn Lane

Info: Queue Length in PM equal to available storage
One rear-end and one angle crash on approach
Level of Service C for right turns (Scale = A to F)



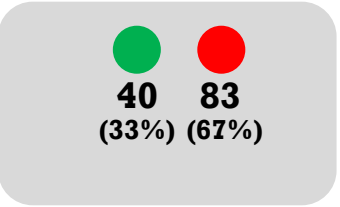
Concept: Add Backplates to Signal Heads with Retroreflective Borders

Info: Primary crash type is rear-end (56 of 112 total)
FHWA Countermeasure = 15% reduction in all crashes



Concept: Construct Roundabout

Info: Helps reduce speeds on approaches serving as traffic calming measure
FHWA Countermeasure = 78% reduction in fatal and injury crashes (16 of 112 injury crashes ; no fatal)



Other:



3

Smallhouse Road at Grider Pond Road

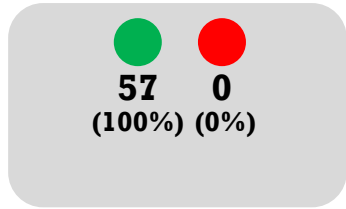
Spot 3 - Grider Pond Road (Online Results)



Draft Improvement Concepts

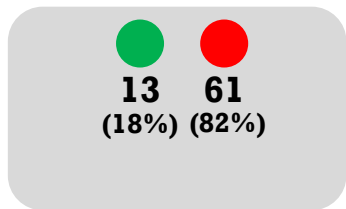
Concept: Add SB Left Turn Lane

Info: Warranted per KYTC Turn Lane Calculations
 Primary crash type is rear-end (3 of 6)
 FHWA Countermeasure = 28-48% reduction in all crashes



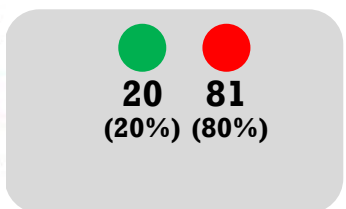
Concept: Construct Mini-Roundabout

Info: Smaller size to limit right of way impacts
 Has mountable central and splitter islands
 Helps reduce speeds on approaches serving as a traffic calming measure

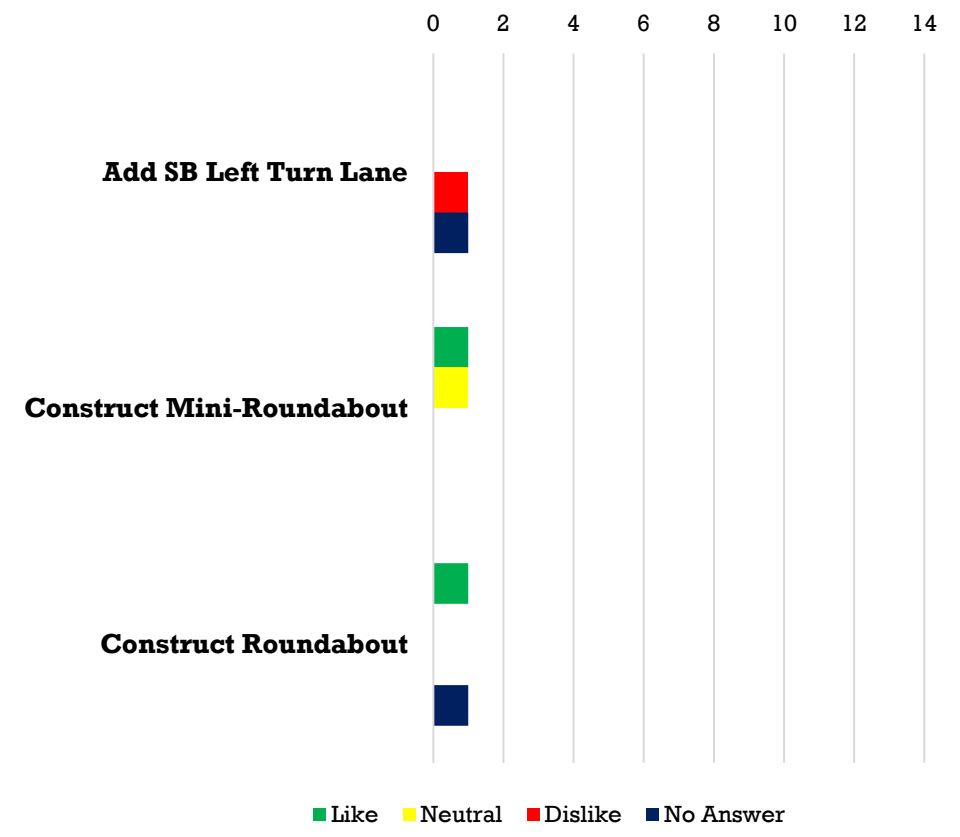


Concept: Construct Roundabout

Info: Room for larger vehicles in travel lane
 Larger size will impact right of way
 Helps reduce speeds on approaches serving as a traffic calming measure



Other:



Like Neutral Dislike No Answer

4

Smallhouse Road at Elrod Road

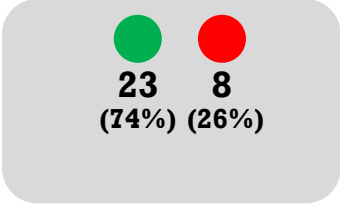
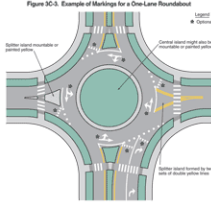
Spot 4 - Elrod Road (Online Results)



Draft Improvement Concepts

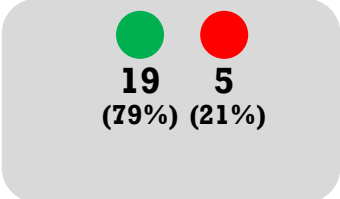
Concept: Reduce Speed with Additional / Enhanced Pavement Markings

Info: Optional lane-use arrows / pavement markings may help with direction and use
Multiple comments in Community Survey about navigation and speeding



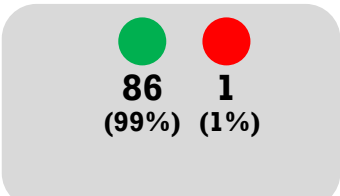
Concept: Enhanced Signing

Info: Optional signing may help with direction and use
Multiple comments in Community Survey about navigation and speeding



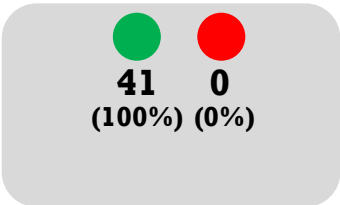
Concept: Add Lighting

Info: 4 of 13 crashes were at dusk or night
FHWA Countermeasure = 33-38% reduction in nighttime crashes



Concept: Add Edge Rumble Strips

Info: Multiple crashes not reported resulted in property damage (fence) from running off road
FHWA Countermeasure = 16% reduction in run-off road crashes



Other:

Reduce Speed with Additional / Enhanced Pavement Markings

Enhanced Signing

Add Lighting

Add Edge Rumble Strips



■ Like ■ Neutral ■ Dislike ■ No Answer

5

Smallhouse Road at Three Springs Road

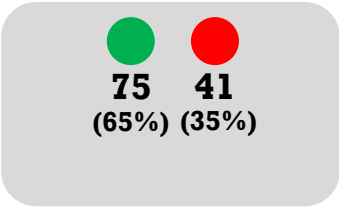
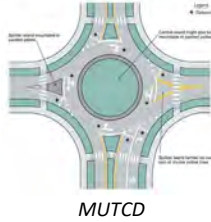


Spot 5 - Three Springs Road (Online Results)

Draft Improvement Concepts

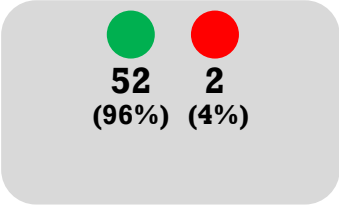
Concept: Construct Roundabout

Info: Primary crash type is rear-end / angle
8 injury crashes over past 5 years
Currently in design phase with KYTC
FHWA Countermeasure = 82% reduction in fatal and injury crashes

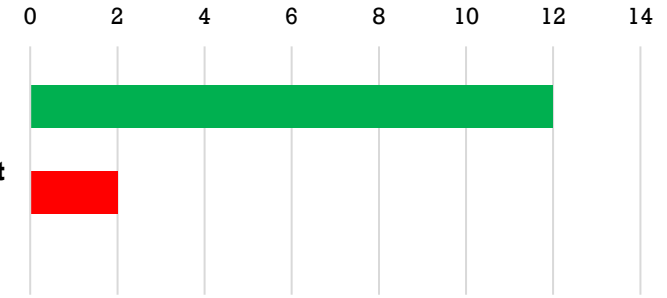


Other: Add Signal

Info: Added as a post-it note



Construct Roundabout



■ Like ■ Neutral ■ Dislike ■ No Answer

6

Smallhouse Road at Shawnee Way

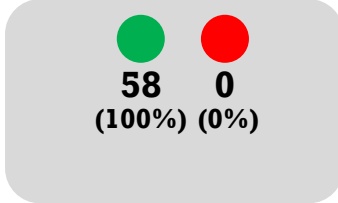
Spot 6 - Shawnee Way (Online Results)



Draft Improvement Concepts

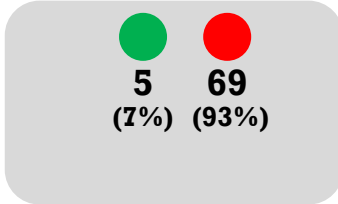
Concept: Add Separate NB Left Turn Lane

Info: Community Survey input included 3 comments about frequent crashes and lack of turn lanes
6 of 9 crashes were rear-end crashes

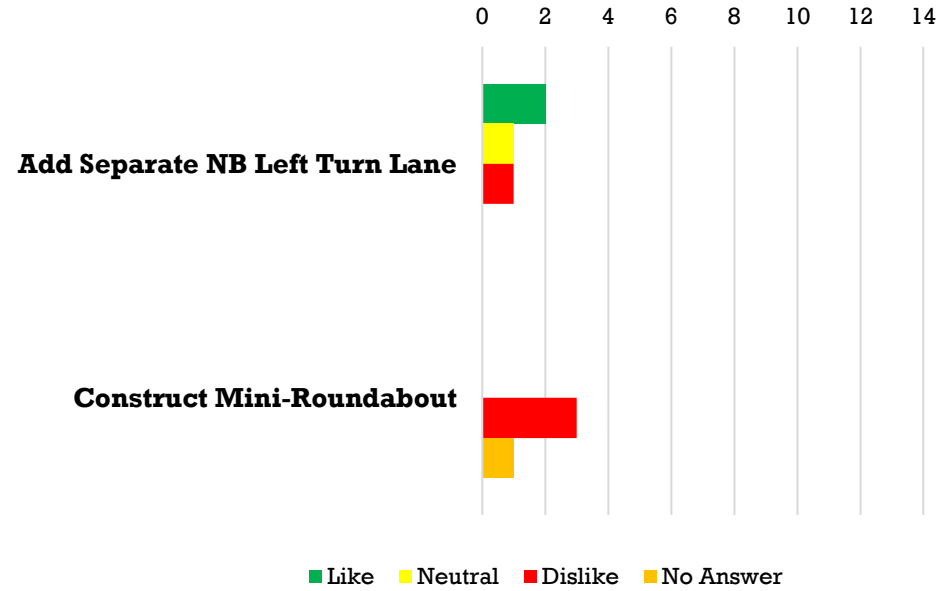


Concept: Construct Mini-Roundabout

Info: Smaller size to limit right of way impacts
Has mountable central and splitter islands
Helps reduce speeds on approaches as a traffic calming measure



Other:





Smallhouse Road at Curve Near Cave Mill Road



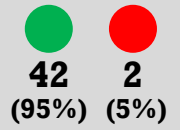
Spot 7 – Curve Near Cave Mill Road (Online Results)



Draft Improvement Concepts

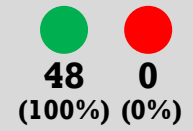
Concept: Add Chevron Signage / Enhanced Signage

Info: Horizontal Curve Class E (Scale = A to F)
Community Survey input noted this was a sharp curve, speeding is an issue and there is heavy traffic



Concept: Pavement Friction Management

Info: 5 of 8 crashes on wet roadway conditions
FHWA Countermeasure = 48% reduction in injury crashes at horizontal curves



Other:

No Online Responses



Smallhouse Road at Curve Near Elrod Road

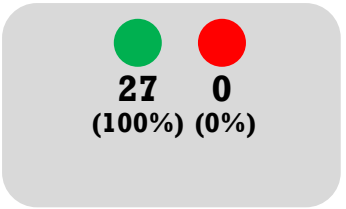
Spot 8 - Curve Near Elrod Road (Online Results)



Draft Improvement Concepts

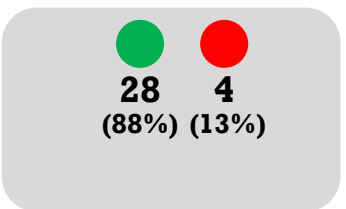
Concept: Add Chevron Signage

Info: Horizontal Curve Class E (Scale = A to F)
5 sideswipe crashes
7 of 9 crashes on wet roadway conditions



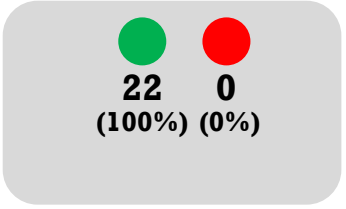
Concept: Tree Trimming to Improve Sight Distance

Info: Countermeasure = approximately 20% reduction in crashes. Benefit depends on distance of tree trimming / removal



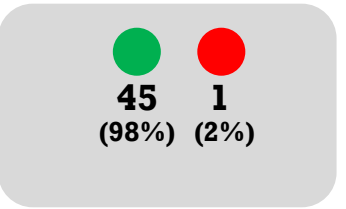
Concept: Pavement Friction Management

Info: 7 of 9 crashes on wet roadway conditions
FHWA Countermeasure = 48% reduction in injury crashes at horizontal curves



Concept: Geometric Improvements (Realignment / Flatten Curve / Increase Clear Zone)

Info: Sharp curve with no room for recovery
FHWA Countermeasure = 8% - 44% reduction in all crashes depending on the extent of improvements



Other:





Smallhouse Road at Curves by Basil Griffin Park



Spot 9 - Curves by Basil Griffin Park (Online Results)



Draft Improvement Concepts

Concept: Enhanced Signage

Info: Horizontal Curve Class F (Scale = A to F)
3 single vehicle & 3 angle crashes
4 of 7 crashes on wet roadway conditions



28 (100%)
0 (0%)

Concept: Pavement Friction Management

Info: 4 of 7 crashes on wet roadway conditions
FHWA Countermeasure = 48% reduction in injury crashes at horizontal curves



21 (100%)
0 (0%)

Concept: Geometric Improvements (Realignment / Flatten Curve / Increase Clear Zone)

Info: Sharp curve with no room for recovery
FHWA Countermeasure = 8% - 44% reduction in all crashes depending on the extent of improvements



35 (100%)
0 (0%)

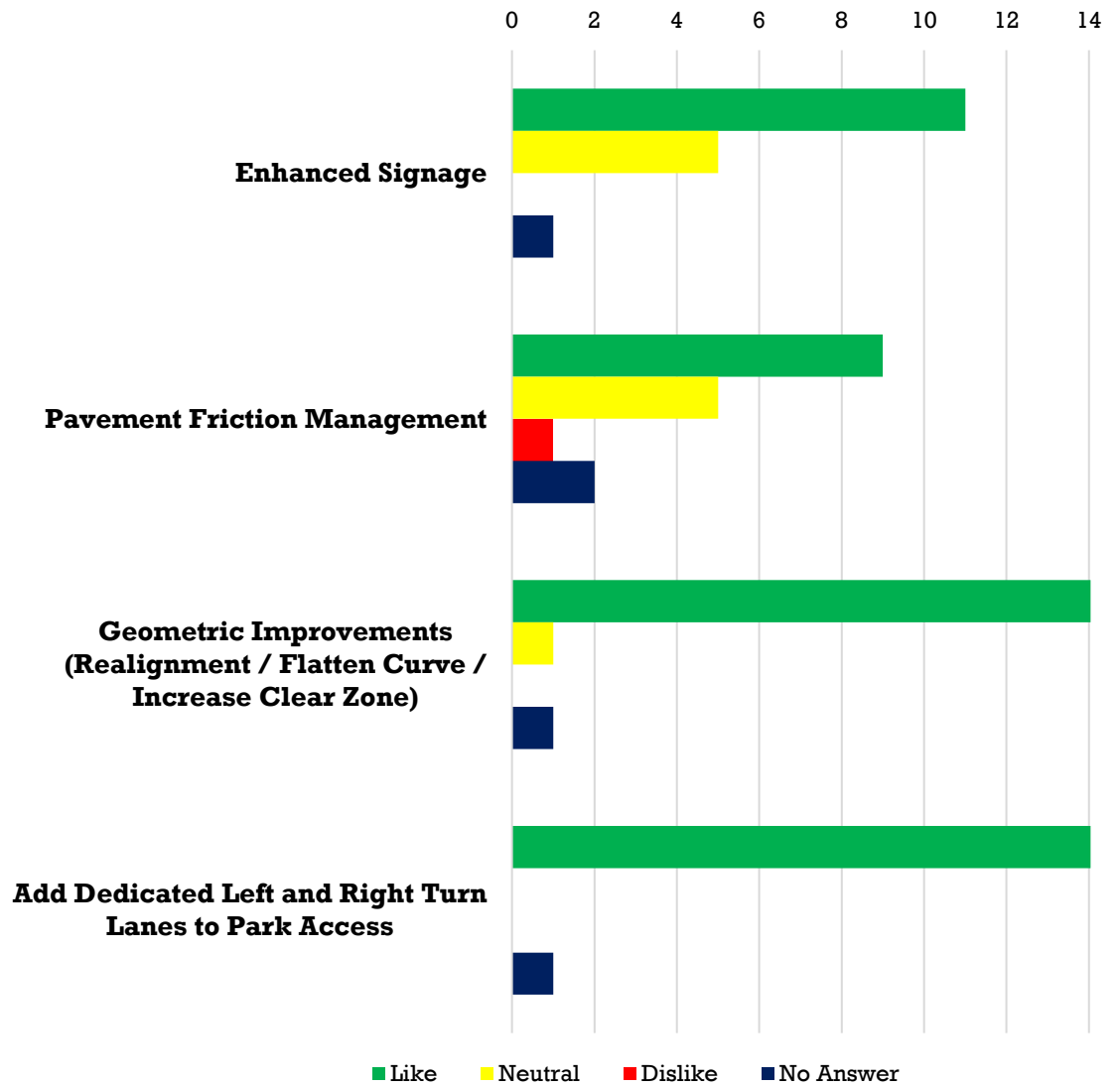
Concept: Add Dedicated Left and Right Turn Lanes to Park Access

Info: 4 of 7 crashes angle or turn-related
FHWA Countermeasure = reductions in all crashes between 28% - 48% for left turn lane installation and 14 - 26% for right turn lane installation



52 (78%)
15 (22%)

Other:



Legend: Like (Green), Neutral (Yellow), Dislike (Red), No Answer (Dark Blue)

Corridor Treatments: Pedestrian / Bicycle Options



● Like ● Dislike

Corridor Treatments: Pedestrian / Bicycle Options



| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 2 | 69 |
| (3%) | (97%) |
| % Total: 1% 17% | |
| <u>Online Survey</u> | |
| Corridor 1: 3 (5%) | |
| Corridor 2: 3 (5%) | |

Existing (~ 20')



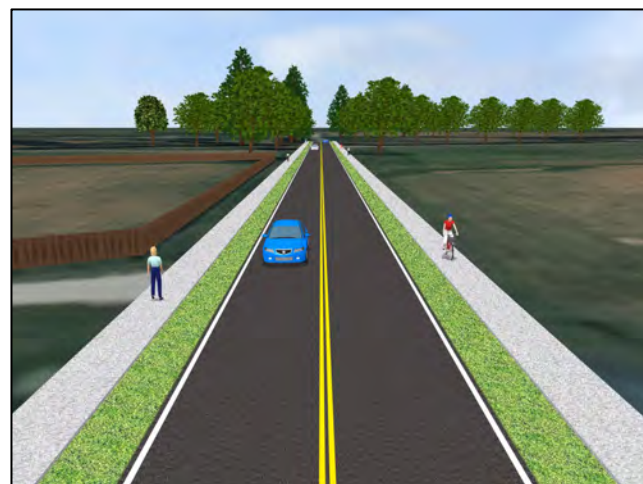
| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 8 | 62 |
| (11%) | (89%) |
| % Total: 3% 15% | |
| <u>Online Survey</u> | |
| Corridor 1: 2 (3%) | |
| Corridor 2: 3 (5%) | |

Striped Bicycle Lanes (~32')



| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 105 | 27 |
| (80%) | (20%) |
| % Total: 37% 7% | |
| <u>Online Survey</u> | |
| Corridor 1: 10 (16%) | |
| Corridor 2: 10 (16%) | |

Shared-Use Path on One Side with Buffer (~36')



| | |
|--------------------------------------|------------------------------------|
| ● | ● |
| 13 | 64 |
| (17%) | (83%) |
| % Total: 5% 16% | |
| <u>Online Survey</u> | |
| Corridor 1: 5 (8%) | |
| Corridor 2: 6 (10%) | |

Sidewalk on Both Sides with Buffers (~40')

Corridor Treatments: Pedestrian / Bicycle Options



● **103**
 (88%)

● **14**
 (12%)

% Total: **37%** **4%**

Online Survey
 Corridor 1: 24 (38%)
 Corridor 2: 20 (32%)



● **8**
 (10%)

● **70**
 (90%)

% Total: **3%** **17%**

Online Survey
 Corridor 1: 10 (16%)
 Corridor 2: 8 (13%)

Center Turn Lane, Sidewalk on One Side with Buffer (~43')

Center Turn Lane with Striped Bicycle Lanes (~44')



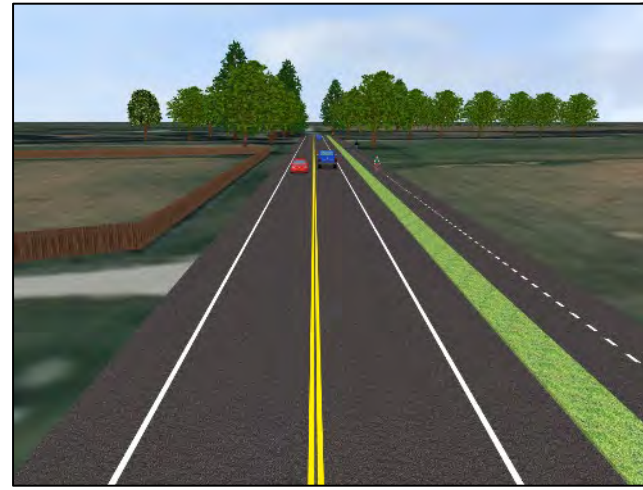
● **14**
 (18%)

● **64**
 (82%)

% Total: **5%** **16%**

Online Survey
 Corridor 1: 6 (9%)
 Corridor 2: 7 (11%)

Center Median with Shared-Use Path on One Side with Buffer (~46')



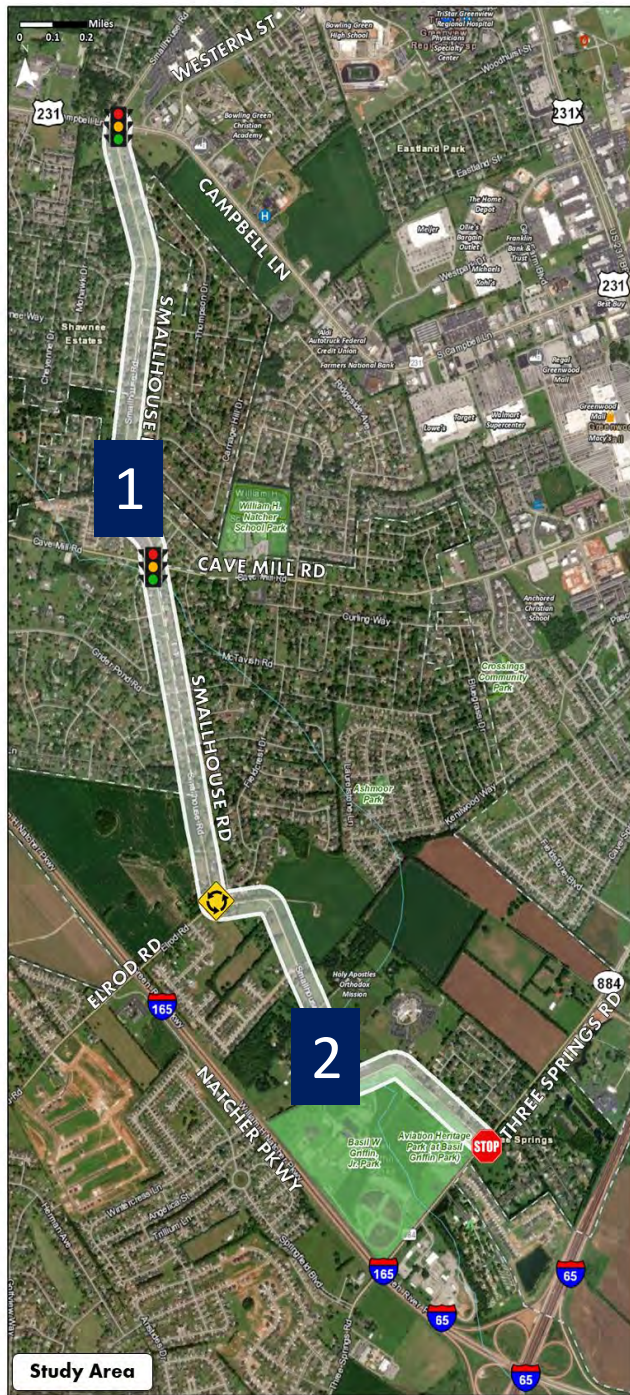
● **29**
 (46%)

● **34**
 (52%)

% Total: **10%** **8%**

Online Survey
 Corridor 1: 3 (5%)
 Corridor 2: 4 (6%)

Wider Shoulders, Shared-Use Path on One Side with Buffer (~46')



Corridor Treatments: Speed Reduction Options

Posted Speeds = 30 – 35 mph

Majority Observed Speeds = 36-50 mph



Data Source: www.ite.org



● 15 ● 2

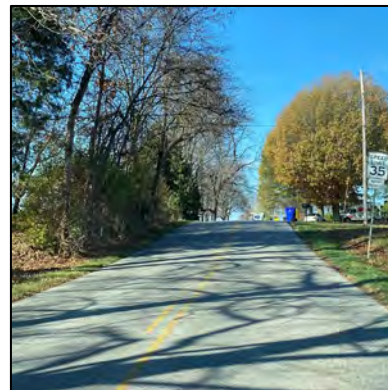
Education

Radar Speed Sign

● 9 ● 3

● 0 ● 14

● 14 ● 2



Enforcement

Narrow Lanes (9')

Traffic Calming

Sticker Key



Like



Dislike

Note: Graphics are for conceptual purpose. During a design phase exact widths, material (i.e. asphalt / concrete), and drainage treatment (i.e. curb & gutter / ditch) would be determined.

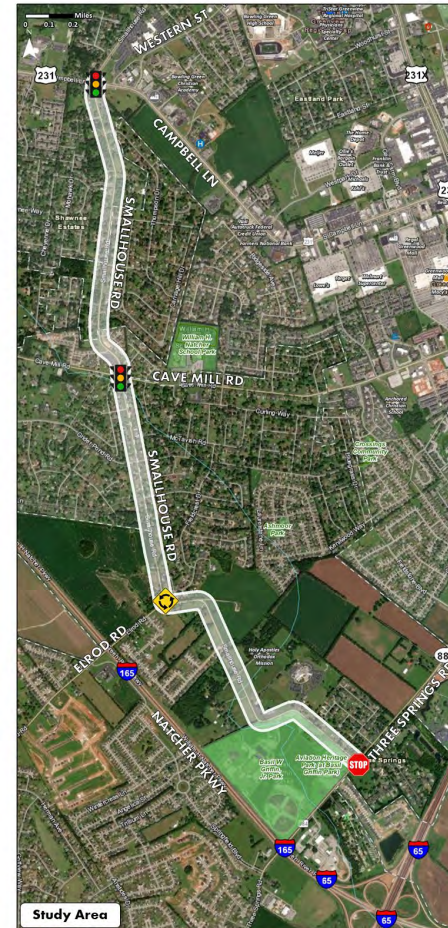
Sticker Key



Like



Dislike



Note: Graphics are for conceptual purpose. During a design phase exact widths, material (i.e. asphalt / concrete), and drainage treatment (i.e. curb & gutter / ditch) would be determined.