

Appendix K
Project Team
Meeting Minutes



MEETING MINUTES

Groundbreaking by Design.

Project: KY 194/KY 632
Corridor Planning Study
Pike County

Purpose: Project Team Meeting #1

Place: KYTC/D-12 Office - Pikeville

Meeting Date: March 26, 2014 (10:00 a.m.)

Prepared By: Tom Clouse

Attendees:	Mary Westfall–Holbrook	KYTC	maryw.holbrook@ky.gov
	Mark A Westfall	KYTC D-12 Planning	mark.westfall@ky.gov
	Samuel Hale	KYTC D-12 PD	samuel.hale@ky.gov
	Mikael Pelfrey	KYTC C.O. Planning	mikael.pelfrey@ky.gov
	Chris James	KYTC D-12 PD	chris.james@ky.gov
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	Darold Slone	KYTC D-12 PD&P	darold.slone@ky.gov
	Jamie Pinson	BSADD	jamie.pinson@big sandy.org
	Jonathon Reynolds*	KYTC CO Planning	jonathon.reynolds@ky.gov
	Jay Balaji*	KYTC CO Planning	Jayalakshmi.Balaji@ky.gov
	Tom Springer	QK4	tspringer@qk4.com
	Tom Clouse	QK4	tclouse@qk4.com
	Annette Coffey	QK4	acoffey@qk4.com

*videoconference

Following introductions, Mark Westfall kicked off the meeting with a summary of the work completed to date, including meetings with stakeholders and the early delivery of the initial phase of this project. Mr. Westfall explained that QK4 was asked to divide the 23 +/- mile project into five mile sections with passing lanes every five miles. He also noted that the early January submittal of Section 1 was a success, and explained that Section 1 was included in the current version of the Highway Plan, with Design financed with “SPP” funds.

Annette Coffey addressed the project team, identifying the Purpose and Need of the project as improving safety, mobility, and connectivity on KY 194 & KY 632 from US 119 to Phelps in Pike County. She lead the project team through a presentation that provided an overview of the Scope of Work, a detailed look at existing conditions, as well as design options. Issues addressed in Ms. Coffey’s study of existing conditions include: areas of limited sight distance, horizontal and vertical alignment deficiencies, slope instabilities, eight areas of high crash rates (four on KY 194 & four on KY 632) – including the observation that 55% of crashes occur on wet pavement & 73% occur in curves, guardrail deficiencies, lack of passing opportunities, and Levels of Service analyses. The design options include a full reconstruction of both KY 194 and KY 632 with a design speed of 55 mph, or spot improvements with a design speed of 40 mph. Each option includes 12-foot lanes with six-foot shoulders. The Draft study is due by November 2014.

Tom Springer spoke briefly about known environmental concerns such as stream impacts, wetlands, archaeology, potentially historic homes and cemeteries, mine portals, old gas stations, bats (Indiana, Grey, and Long Eared), and potential environmental justice issues.

Ms. Coffey then led a detailed discussion of Section 1. She discussed the impacts that Kellogg's and McCoy Elkhorn Coal Corporation had on this segment. She stated that Kellogg's employed 370 people, and that McCoy Elkhorn Coal had 300-500 trucks/day entering this location.

The planning level construction cost estimate presented to the District was approximately \$11.7M. The District asked for the following changes to be made to the cost estimate:

- 1) Increase the estimated bridge cost/sf from \$80 to \$120 (adds approximately \$500,000).
- 2) Increase the earthwork cost/cy from \$5 to \$6 on the Reconstruction alternate due to manner that material must be handled, and the proximity of the work to the existing road (adds approximately \$773,000).
- 3) Increase the MOT cost from \$43,000 to \$150,000 (adds \$107,000)
- 4) Remove the right of way and utility cost estimates.
- 5) Add a line in the estimate specifically for In Lieu Fees.
- 6) Remove utility estimate as that estimate was provided by District 12.

The total revised construction cost would be about \$13,200,000 + contingencies.

Other issues discussed were concerns over blasting near the deep mine locations, a check of traffic generators for possible issues such as sight distance, and the investigation the use of high friction surface just west of Kellogg's & the curve near Mile Point 3 on section number 3.

Also, the following minor corrections in traffic volumes were made for Sections 2, 3, and 4:

- Sections 2 and 3: 2013 and 2040 traffic volumes are 4,900 and 6,400 vehicles per day, respectively.
- Section 4: 2013 and 2040 traffic volumes are 3,000 and 4,500 vehicles per day, respectively.

Paxton Weddington with District 12, will provide Qk4 with the locations for skid resistant pavement - and he would like to add the bridge replacement in Kimper to the spot improvements. This bridge continually presents issues for District 12.

The Project Team Meeting concluded at 11:55 am following a review of the agenda and goals for the afternoon's Stakeholders' Meeting. A copy of the slides from the project team presentation is attached.



MEETING MINUTES

Groundbreaking by Design.

Project: KY 194/KY 632 Pike County
Corridor Planning Study

Purpose: Stakeholders' Meeting #1

Place: KYTC/D-12 Office - Pikeville

Meeting Date: March 26, 2014 (1:30 p.m.)

Prepared By: Tom Clouse

Attendees:

Mary Westfall – Holbrook	KYTC	maryw.holbrook@ky.gov
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Samuel Hale	KYTC D-12 Proj. Dev.	samuel.hale@ky.gov
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Mikael Pelfrey	KYTC C.O. Planning	mikael.pelfrey@ky.gov
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Randy Potter	KY Berwind Land	rmpotter@suddenlinkmail.com
Terry R Adkins	KY Berwind Land	tadkins@suddenlinkmail.com
H Frank Hatcher	Pike County Fiscal Court	
Jimmy Kiser	Pike County Fiscal Court	jkiser@setel.com
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Liz Harlow	Ross Harris Group	lharlow@rossharrisgroup.com
Joey Tackett	Ross Harris Group	
Charles O Carlton	Pike County Fiscal Court	charles.carllton@ky.gov
Daniel Thacker	Pike County Fiscal Court	daniel.thacker@ky.gov
Mag. Hilman Dotson	Pike County Fiscal Court	
Jerry Layne		
Annette Coffey	QK4	acoffey@qk4.com
Tom Springer	QK4	tspringer@qk4.com
Tom Clouse	QK4	tclouse@qk4.com

Following introductions, Mark Westfall presented the project and asked those present for their input and indicated that meetings had previously been held with McCoy Elkhorn and Kellogg's.

Pike County Judge Wayne Rutherford then presented crash data along this section of road being studied, and stated that he felt improvements on this section of road were long needed. He reported that 402 injuries and 9 fatalities had occurred on this section of road. He felt that the people of Phelps were isolated, and they have to travel on unsafe roads. He told of the contribution that coal from this region has made to Kentucky's general fund, and advocated the use of "coal to roads."

Annette Coffey then told the group that the project was in the initial phase of work – the data collection phase where existing conditions are inventoried. She indicated that a future public meeting would be held in addition to this meeting.

Tom Springer asked everyone to list any and all issues or concerns that they have with this corridor, and place each one on a post it note. He later collected the notes while Ms. Coffey presented the existing conditions in more detail to the committee.

Following the presentation, Mr. Springer then summarized the issues written on the post it notes. Those issues include: entrances, blind curves, deep ditches, flooding, no shoulders, slow moving trucks causing congestion, issues with trucks entering and exiting the roadway, the need for three lane passing opportunities, turn lanes at Kellogg's, possible high friction surface, the potential to utilize coal seams and leave the existing road in place, the need for jobs, the ability to use "coal to roads" to fund construction, the "community is due" because of the large amount of coal that has been removed from this area, and issues with utilities – including the comment that the location of water lines is critical.

A question was asked about bypassing existing KY 194 beginning at US 119, then proceeding along a new alignment either north or south of the existing roadway, connecting back to existing KY 194 near the Kellogg's Plant. This option was previously discussed with the District 12 staff, and it was dismissed from consideration due to the impacts on the operation of the existing interchange, the potential for a new interchange construction, impacts to mining operations, and increased project costs due to additional excavation required.

The Stakeholder's meeting concluded at 3:30 PM.

POST MEETING

The crash statistics presented at this meeting warranted clarification. Judge Rutherford's crash statistics were queried from the Kentucky State Police's (KSP) Collision Statistics based on KY 194 in its entirety in Pike County (not just the corridor study area) and for a date range of January 1, 2009 to March 15, 2014. For analysis purposes, Qk4 utilized crash statistics from KSP from January 1, 2010 to December 31, 2012. This would explain the difference in what was presented. The below is a summary.

	Qk4 (January 1, 2010 to December 31, 2012) Corridor Study Area	Data from KSP queried by Qk4 (January 1, 2009 to March 15, 2014) All of KY 194 in Pike County	Judge Rutherford's Statistics (January 1, 2009 to March 15, 2014) Assumed All of KY 194 in Pike County
Total	195	686	683
PDO	123	415	414
INJURIES	70	263	261
FATALITIES	2	8	8



Groundbreaking by Design.

MEETING MINUTES

Project: KY 194/KY 632 from US 119 to KY 194 in Phelps

Purpose: Project Team Meeting -10:00 A.M.

Place: KYTC District 12 Office – Pikeville

Meeting Date: July 2, 2014

Prepared by: Tom Springer

Attendees:

Samuel Hale	KYTC D12	samuel.hale@ky.gov
Mikael Pelfrey	KYTC C.O. Planning	mikael.pelfrey@ky.gov
Mark Westfall	KYTC D12 Planning	mark.westfall@ky.gov
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Kevin Martin	KYTC C.O. Design	kevin.martin@ky.gov
Chris James	KYTC D12 Design	chris.james@ky.gov
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Joe Jacobs	Big Sandy ADD	Joe.Jacobs@bigsandy.org
Larry W. Ginthum	QK4	lginthum@qk4.com
Tom Clouse	QK4	tclouse@qk4.com
Annette Coffey	QK4	acoffey@qk4.com
Tom Springer	QK4	tspringer@qk4.com

Following introductions, Mark Westfall provided an overview of project status, noting the last meeting was to review the traffic analysis, existing conditions, and Section 1 alignment, impacts, and costs.

Annette Coffey led the meeting, beginning with a review of the previous meetings and future steps. The next milestone will be August 20, 2014 to confirm final alignments, costs, and recommended priorities. The alternatives presented at this meeting include complete reconstruction, followed by spot improvements.

The traffic operations were noted; that the current Levels of Service (LOS) is D, and in the future design year (2040) build LOS would remain D because of the percent time following other vehicles as calculated in the Highway Capacity Manual. However, according to the Highway Capacity Manual, the average travel speed would only increase by 4 to 5 mph in places. The build alternatives include passing lane options and warranted right and left turn lane locations. Mikael Pelfrey noted the volume/capacity volumes are notably low, and that the purpose of the project is to improve safety.

The corridor is divided into Sections 1-5, from east to west. The handout maps, tables, and cost estimates are presented by these sections:

- Section 1: US 119 to the beginning of Item Number 12-281.00
- Section 2: End of Item Number 12-281.00 to KY 632/KY 194 intersection
- Section 3: KY 632/KY 194 intersection to KY 1758
- Section 4: KY 1758 to KY 3419
- Section 5: KY 3419 to KY 194 in Phelps.

Mikael asked that the milepoint on the Section 3 exhibit at the KY 194/KY 632 intersection be changed to MP 0.000.

In addition to the overall reconstruction alternatives, spot improvements which included high friction pavement, high crash locations, bridge replacement costs, and guardrail replacement have been estimated for the corridor.

Larry Ginthum provided an overview of the total reconstruction alignments by section.

The typical section for the full reconstruction follows the design for KYTC Item Number 12-281.00: two, 12-ft lanes and 6-ft paved shoulders, with 1.2:1 backslopes, a 55 MPH design speed, an 8% maximum superelevation.

Since Section 1 was discussed in detail during the previous meeting, this meeting focused on Sections 2-5, as follows:

FULL RECONSTRUCTION

SECTION 2

Section 2 begins at the end of KYTC Item Number 12-281.00, near MP 22.000. Two alternatives were studied: First, bridging over Johns Creek (twice) and the CSX Railroad Spur and under the coal conveyor (tube) through High Ridge Mining Company property and second, cutting through the mountain south of the High Ridge Mining facility. Another alternative was studied to avoid High Ridge mining's assets but not advanced because of the excessive additional excavation (7 million cubic yards) and impacts to a major transmission line and tower. Therefore, the alternative advanced stays closer to the existing corridor, even though it crosses John's Creek twice and would go under a coal conveyor (tube). Efforts were made to minimize relocations and stream impacts. The alignment includes two at-grade crossings of the railroad and would be slightly north of Kimper Elementary School. This section ended at a KY 632. The bridge structures were assumed to be \$120/sf, which was increased from \$80/sf presented at PTM #1. Additional Section 2 features include:

- 3.99 miles in mountainous terrain
- Left turn lanes to Varney Branch and Kimper Elementary School at Sta. 300+70
- Bridge over Johns Creek at Sta 306+00
- At-grade RR crossings at Sta. 307+50 and 360+00

- Long tangent between Sta. 314+00 and Sta. 331+00 provides EB and WB passing opportunity
- On existing alignment from Sta. 360+00 to Sta. 390+00 to the end of Section 2
- Right and left turn lanes to KY 194
- Steepest grade is 4% from mountain cut at Sta 348+50 eastward
- 11,346,000 CY Excavation, 27,900 SF Bridges
- Estimated Cost: \$90,520,000 (50% earthwork)

Mikael asked what would happen to the current road if a road off alignment is built. It is hoped the road would be turned over to the county for maintenance. Annette Coffey stated that Qk4 could document how many miles of road would be abandoned by each section.

SECTION 3

Section 3 begins east of KY 194 in Kimper and includes several bridges over John's Creek. Portions are off alignment, but much of it follows the existing alignment. A passing lane is provided at MP 3.00, just east of Mining Road. The proposed WB passing lane begins at MP 3.50. Section 3 ends near Long Branch Road (KY 1758). This section includes current high crash location (MP 3.0) with a reverse curve that is along a rock face. Additional Section 3 features include:

- 3.79 miles in mountainous terrain (MP 0.20 to MP 4.00)
- Bridges over KY 632, Johns Creek, and Railroad at Sta. 406+00
- Bridges over Johns Creek at Sta 431+00 and 436+00
- Culvert at Sta. 481+00 near Gabriel Branch
- EB passing lane from Sta 517+00 to 542+50, WB from Sta 529+00 to 555+00
- Steepest grade is 3.1% through mountain at beginning
- 5,745,000 CY Excavation, 14,400 SF Bridges
- Estimated \$53,261,000 (43% is earthwork)

SECTION 4

Section 4 is the longest section, extending from MP 4.20 to MP 10.50. At the beginning of the section there are two options: Alt 4A-1 (0.83 mile) follows the existing alignment while Alt 4A-2 (0.98 mile) runs behind and to the north of the homes adjacent to KY 632. Between Options 4A and 4B there are no proposed improvements because it is currently a 3 to 4-lane section in front of the KYTC Maintenance Garage (two lanes each direction with passing lanes in each direction. Near MP 10.5 the Norfolk-Southern (NS) railroad is located on the north side of KY 632, a stream on the south side, and several houses south of the stream. The RR track is used to load engines, not for transporting coal. Option 4B-2 is off of the existing roadway to avoid many of these impacts and straightens several curves. However, both have considerable impacts and constructions concerns. Option 4B-2 would be easier to maintain traffic during construction.

Additional Section 4 features include:

- Begins east of KY 1758 (Long Branch road)
- Section 4A ends at existing EB passing section Sta. 742+00
- Option 4B-1 (1.6 miles) follows existing alignment, Option 4B-2 (1.6 miles) long tangent crossing KY 632 and crosses behind houses
- Ends east of KY 3419 (Smith Fork Road)
- Steepest grade is 6.6% on Option 4A-1 at the tie to existing Sta 742+00 (near the KYTC Maintenance Garage, 3,002,700 CY Excavation, 186,000 CF)
- Culvert (4 on 4B-2)
- Cost \$42,242,800 (28% is earthwork)

Chris James asked if some sections could be left in place and the future road just tie into the existing roadway, as a measure to save cost. The objective of the planning study however, was to look at a rebuild for the corridor with 12-foot lanes. Therefore this was not studied, but it is an option that could be examined in the future and can be noted in the Planning Study. Most of this section remains on the existing alignment, and proposes widening away from the existing stream to minimize stream impacts. Part of Qk4's charge with this project was to stay off of the railroad right of way. However, KYTC noted they would investigate whether or not the railroad right of way would be available.

It was also noted that the stream east of the divide near the Maintenance Facility is called Peter Creek.

SECTION 5

Section 5 continues from KY 3419 near MP 10.50 to Phelps at approximately MP 14.00. Two options were studied near the schools. Option 5B (1.13 miles) goes behind the school complex and would use existing KY 632 as frontage road to the schools. The other alignment, 5A, follows the existing alignment in front of Phelps High School (0.91 miles), would bridge Peter Creek and would traverse under the NS RR. This option would widen the road in front of the school complex. One benefit of Option 5B would be to avoid the RR crossing. The construction cost estimate for 5B is \$9.8 million, vs. \$17 million for widening in front of the school. Widening in front of the school includes a few structures, cutting into a mountain, and retaining wall along the creek.

East of the schools, passing lanes are proposed for each direction. As the alignment approaches Phelps the alternative crosses the railroad and the creek to avoid a number of relocations. The alignment follows the existing road to the termini in Phelps, and includes a left turn lane (LTL) for EB traffic. The LTL may require widening the existing bridge.

Additional Section 5 features include:

- Option 5A bridges over Johns Creek at Sta 965+00 and under the railroad at Sta 975+00
- Left and right turning lanes provided into Phelps High School and Elementary School for Option 5A

- Channel change required from Sta 995+00 to Sta 1005+00
- EB and WB passing lanes provided from Sta 1000+00 to Sta 1030+00
- Bridge over Johns Creek and railroad at Sta 1067+00
- Left turn lane provided at KY 194
- Steepest grade is 5.0% on Option 5B (behind school)
- 4,411,000 CY Excavation
- Cost \$49,906,500 (35% is earthwork)

The total cost estimate for Total Reconstruction for Sections 1 through 5 is estimated to be \$256M. This amount does not include shoulder widening in Section 1 just east of US 119 (Spot 1).

SPOT IMPROVEMENTS

The spot improvements address high crash locations along the corridor. The design criteria used for these spots includes a 40 MPH design speed, 12-foot lanes, 6-foot shoulders, a minimum 444-foot radius, 8% superelevation, and 1.2:1 cut slopes.

Section 1 - Three options were studied and presented at the previous meetings:

- **Spot 1** - Provide for 4-foot shoulders from approximately 18.06 where the US 119 ramp improvements stopped to MP 18.68 where Section 1 begins. The estimated cost is nearly \$4.1M.
- **Spot 2** - Improve sight distance at Bevins Branch Road. The estimated total cost is \$1.4M.
- **Spot 3** - Provide for improved access to Kellogg Pikeville Plant. This alignment is shifted north to address drainage issues and provide for a right turn lane at the westernmost entrance and a right and left turn lane at the easternmost employee parking entrance and also improve sight distance. The total estimated cost is \$4.3M

Section 2 - Two options were studied:

- **Spot 4** - (MP 22.40 to MP 23.00) is to widen the horseshoe curve in place. It is about 0.63 mile in length with an estimated construction cost of \$5 million (37% is earthwork). This is a high crash location and an area with shoulder failure. Crashes may be minimized with high friction pavement. Most of the crashes were due to losing control in the curve, and many were during wet weather conditions.
- **Spot 5** - (MP 24.00 to MP 25.00) is 0.97 mile in length, and is a high crash location (many during wet weather) with shoulder failure also. Rock walls and mine portals are in the corridor. This requires a long bridge over John Creek, and then a culvert to transition back to the existing roadway. This would eliminate the shoulder failure in this section. The spot was extended east to improve sight distance approaching Kimper Elementary School from the west. When a driver is sitting at the Kimper

Elementary school entrance and looks west to travel KY 194, there is a rise that makes it difficult to see an oncoming vehicle. The cost estimate is \$10.3 million (26% earthwork, 21% bridge).

Chris James asked if the typical section were reduced to 11-foot lanes with 4-foot shoulder would reduce costs. Larry estimated it could reduce costs about 10 to 15%. This may be an option if these spot improvements advance to the design phase.

Section 3 – Three options were studied

- **Spot 6** - (MP 0.10 to MP 0.56) is a 0.5 mile long curve reconstruction, with a cost estimate of about \$5.6 million with nearly 50% being for earthwork.
- **Spot 7** - (MP 1.38 to MP 1.91) improves two curves near the Huff Processing Plant and their coal stock pile location. This proposed alignment widens to the north for about 0.5 mile. The cost estimate is over \$3.6 million (35% earthwork).
- **Spot 8** - (MP 2.70 to MP 3.20) removes a reverse curve. The existing westbound approach to this spot has a passing lane that ends in a curve, just before a rock wall. This spot has been mentioned by multiple stakeholders as a problem area. A proposed alignment is restricted by the CSX railroad and Upper John's Creek on the south side of the road. The cost estimate is \$5.2 million (43% earthwork).

Section 4 – One option was studied

- **Spot 9** - (MP 5.30 to MP 5.70) would widen KY 632 through a reverse curve. The widening would be to the north to minimize impacts to the stream. The cost estimate is \$2.2M (21% earthwork). While the critical crash rate factor is greater than 1.0, only 8 crash reports were recorded. High friction pavement may reduce these crashes. As in all Spot Improvement options studied, shoulder failure is another safety concern.

Section 5 – One option was studied

- **Spot 10** - (MP 11.50 to MP 12.00) is at the Phelps school complex. The proposed spot improvement uses the existing KY 632 alignment and introduces turning lanes (left and right) to the High School and the Elementary School. The total cost estimate is \$3.2 million. A retaining wall would be needed to avoid impacts to Peter Creek, and ultimately minimize impacts to the parking lot for the complex. In lieu fees of \$381,000 would be eliminated with the use of said retaining wall.

Further Discussion

Sam Hale noted that the spot improvements meet the objectives of the study--which is to improve safety--as well as the more costly total reconstruction. Chris James requested that the spots and/or sections be prioritized, as any improvements would take many years (decades) to be realized.

Prioritization

At the next meeting slated for the middle of August, Qk4 will recommend priorities to advance from this study. It was noted that KYTC Item Number 12-281.00 is in the right of way acquisition, and the intentions are to advance that curve revision to construction. It was discussed that while Section 1 is being advanced in the current approved Highway Plan. Qk4 recommends KYTC consider the following short term safety projects:

- Installing high friction pavement at high crash locations
- Upgrading existing guardrail (locations provided to D-12 staff) end treatments
- Spot 8 in Section 3 would most likely be the next priority.

At the end of the meeting Chris James asked if QK4 would provide the cost estimates by Design, Right of Way, Utility and Construction phases for programming purposes.

Meeting Minutes



Groundbreaking by Design.

Project: KY 194/KY 632 Corridor Study Pike County
Purpose: Project Team Meeting #3
Place: KYTC District 12 Office - Pikeville
Meeting Date: August 26, 2014
Prepared By: Annette Coffey

Attendees:

Joe Jacobs	Big Sandy ADD	Joe.Jacobs@bigsandy.org
Mikael Pelfrey	KYTC C.O. Planning	Mikael.pelfrey@ky.gov
Eileen Vaughan	KYTC C.O. Planning	Eileen.Vaughan@ky.gov
Mark Westfall	KYTC	Mark.westfall@ky.gov
Paxton Weddington	KYTC	Paxton.weddington@ky.gov
Mary Westfall-Holbrook	KYTC	Maryw.holbrook@ky.gov
Ron Slone	KYTC	Ronald.slone@ky.gov
Chris James	KYTC	Chris.james@ky.gov
Samuel Hale	KYTC	Samuel.hale@ky.gov
Greg Couch	KYTC D12	Greg.couch@ky.gov
Bruce Siria	QK4	Bsiria@qk4.com
Tom Clouse	QK4	Tclouse@qk4.com
Annette Coffey	QK4	Acoffey@qk4.com

Mark Westfall opened the meeting at 9:05 a.m. explaining this meeting is the third of three project team meetings. The purpose of this meeting is for Qk4 to present recommended priorities for the KY 194/KY 632 corridor to the Project Team and to conclude the study. Mr. Westfall turned the meeting over to Annette Coffey. Each team member was provided: a spreadsheet with cost estimates for total reconstruction, a spreadsheet with cost estimates for spots improvements, methodology for establishing priorities, and an exhibit illustrating the priorities. Qk4 also received a geotechnical overview for the corridor from KYTC on August 25, and provided a copy to the Project Team.

Ms. Coffey began with a review of the project study to date. The following is a quick bulleted summary:

- Notice to Proceed was January 15, 2014
- Delivered the first section from US 119 to just east of Kellogg (tying into Municipal's 12-281.00 project) on January 6, 2014
- Purpose of the project is to improve safety, increase mobility, and provide for better connectivity

- The corridor study was to address one 55 mph total reconstruction alignment and spot improvements at a minimum 40 mph design.
- The typical section was 12 foot lanes and 6 foot paved shoulders with 1.2:1 cut slopes.
- To manage the length, the corridor was broken into five (5) sections.
- Current ADT is between 3000-6000 vpd
- According to the Highway Capacity Manual capacity calculations, widening of KY 194/KY 632 will improve safety, but will marginally improve travel speed.
- Turning movements at 8 locations revealed left and right turn lanes were warranted at various locations and those were incorporated into the alignment. Additional turning lanes were added, however, they may not always have met warrants.
- There were 8 spots that presented with a CCRF (Critical Crash Rate Factor) > 0.9. Most of those crashes are in curves, and many on wet pavement.
- There have been meetings representatives of McCoy Elkhorn, Kellogg Pikeville Plant, High Ridge Mining, Revelation Energy, two additional Stakeholder meeting together with two Project Team Meetings
- \$255 million cost for total reconstruction of corridor with over 11 miles left to potentially “give back” to the county for maintenance.
- Spot improvements included:
 - High friction pavements (range from \$135,000 to \$237,000)
 - Guardrail replacement (\$380,000)
 - Bridge replacement projects (range from \$371,000 to \$742,000)
 - 40 mph spot improvements (range from \$1,492,000 to \$11,100,000)
- A draft report is due the end of September and a final report the end of December 2014.

Today's meeting is the final “alternative review.”

Bruce Siria presented data to assist the Project Team in determining priorities. The number of crashes relative to the cost of the total reconstruction or spot improvement, and Stakeholder and Project Team input were the driving forces behind priorities. He stated that he didn't focus on horizontal or vertical curvature in ranking priorities but examined the costs per spot improvement and the number of crashes to develop "cost per crash.”

Using the Highway Safety Manual, and a representative segment of the corridor, Mr. Siria shared that the number of crashes could potentially be reduced by about 50% with proposed improvements.

The priorities were presented and followed this basic order:

- From MP 18.68 to MP 20.98 to Item Number 12-281.00 near Deskins Branch – the only Total Reconstruction alternative recommended
- High Friction pavement – relatively inexpensive and effective
- Spot 8 – MP 2.70 to MP 3.20 a curve that is in a transition from a WB passing lane with a crash history
- Functionally Obsolete Bridge replacements ranking the first priority with the D-12 maintenance issue
- Remaining spots considering crashes

If monies became available for total reconstruction of the corridor it is recommended to continue east with Section 2 then 3, 4, and 5 in that order. Section 2 might need to be broken into two construction sub-sections.

DISCUSSION

Priorities

- Sam Hale questioned why structures were so high on priority list. Mr. Siria explained that they were relatively low cost improvements and is narrow.
- Clarification of the footnote at the bottom of the spot improvements spreadsheet was requested. Paxton questioned validity of "maintenance issues" at bridge near Kemper Elementary. The maintenance issues were provided by KYTC District 12, the footnote was to note that if Section 2 Spot 5 is selected for improvement, KYTC may want to also extend the project to include the bridge over John's Creek at MP 25.16. This extends the Spot Improvement only 1000 feet and takes care of a maintenance issue (this was sent via email following the meeting).
- Chris James asked if there was talk with board of education about closing school. He stated that if school is going to be there a while, the school may rank higher, but is twice the cost. Mr. Westfall stated that the school was contacted but did not participate.

Cost Estimates

- Mr. James asked how in lieu fees were determined. Sam Hale said the in lieu fee rates were just raised to \$600-\$650 per linear foot. Mr. James suggested using a placeholder for in lieu fees for waste areas also (perhaps \$500,000-\$750,000). Mr. Hale suggested that Qk4 get with John Michael Johnson to get a cost/lineal foot for waste areas for a small, medium and large project in District 12 and perhaps as a placeholder to use a ratio of those in lieu fees and cubic yards to this corridor. Mr. Westfall said that a footnote could be added to the cost estimates regarding the in lieu fees for waste areas.
- Mr. James also asked if a lesser typical section was studied for the spot improvements. Ms. Coffey replied that the scope of work stated that the typical section would be 12-foot lanes and 6-foot paved shoulders for spot improvements. However, it would probably save at least 15%.

Other

Mr. Westfall stated that he checked on a rumor that Kellogg is scaling back their operations and they stated that they were not.

In closing, Mr. Westfall suggested the team take information presented today, review it and make any comments back to him the next week.

Meeting adjourned at 10:25.



MEETING MINUTES

Project: KY 194/KY 632

Purpose: Stakeholder’s Meeting #2 – 1:30 P.M.

Place: KYTC District 12 Office – Pikeville

Meeting Date: July 2, 2014

Prepared by: Annette Coffey

Attendees:

Mikael Pelfrey	KYTC C.O. Planning	mikael.pelfrey@ky.gov
Mark Westfall	KYTC D12 Planning	mark.westfall@ky.gov
Ron Slone	KYTC D12	ronald.slone@ky.gov
Eileen Vaughan	KYTC C.O. Planning	eileen.vaughan@ky.gov
Chris James	KYTC D12 Design	chris.james@ky.gov
Kevin Martin	KYTC C.O. Design	kevin.martin@ky.gov
Liz Harlow	Berkeley Energy	lharlow@rossharrisgroup.com
Doug Tackett	Pike Co. Emergency Mgmt.	dougTackett@pike911.org
Hilman Dotson	Pike Co. Fiscal Court	
Joe Jacobs	Big Sandy ADD	Joe.Jacobs@bigsandy.org
Tom Clouse	QK4	tclouse@qk4.com
Larry W. Ginthum	QK4	lginthum@qk4.com
Tom Springer	QK4	tspringer@qk4.com
Annette Coffey	QK4	acoffey@qk4.com

Following introductions, Mark Westfall provided an overview of project status, noting the last meeting was to review the traffic analysis, existing conditions, and Section 1 alignment, impacts and costs. Mr. Westfall also noted that the only portion of this corridor with funding in the budget is the westernmost section, Section 1, from the Kellogg Plant to just east of KY 119.

Annette Coffey led the meeting, providing a brief project history, future steps, and meeting objectives, which are to review the alternatives through the entire corridor and receive input from the attendees. She also explained that what is going to be presented will be subject to change in the next phase of the project(s), alignments will likely shift, however, there had to be a base alignment to develop cost estimates.

The traffic forecast for the year 2040 indicate that a two-lane roadway is all that is needed, and that the existing and future year (design year 2040) build Levels of Service (LOS) is "D," or less than

desirable. According to the calculations from the Highway Capacity Manual, the average travel speed will only increase in some places 4 to 5 miles mph. The stated goal of the project is to improve safety, and mobility, from US 119 to Phelps.

Magistrate Dotson asked if we had considered building a new road along the ridge since a reconstruction would still operate at LOS D, and only increase the average travel speed 4 to 5 mph. He noted that the coal companies would be willing to partner with KYTC, especially as the coal industry is currently slower than it has been. Sam Hale responded that during the future design stage, various alignments would be considered, including one or more on new alignment. Sam noted that the objective of this current study is to look at what it would take to rebuild the existing road. The information from this study could be used as a baseline and comparison for "ridge top" alignments in the future. Sam also noted that a partnership with the coal companies for a road on new alignment could be explored in the future, even if it is just for small portions of the corridor.

Annette Coffey provided an overview of the corridor, noting there is an alternative to reconstruct the entire corridor, as well as construct spot improvements. She provided an overview of the cost estimate tables, and the table of likely impacts. It is designed that stretches of the old road that are left due to new reconstruction could be turned over to the county for maintenance.

Larry Ginthum provided an overview of the alternatives by Section:

The typical section for the full reconstruction follows the design for KYTC Item Number 12-281.00 with two 12-ft lanes and 6-ft paved shoulders.

FULL RECONSTRUCTION

SECTION 2

Section 2 begins at the end of KYTC Item Number 12-281.00 project, near MP 22.0. Two alternatives were studied: First, bridging over Johns Creek twice, the CSX Railroad Spur and under the coal conveyor (tube) through High Ridge Mining Company property and second, cutting through the mountain south of the High Ridge Mining facility. Another alternative was studied to avoid High Ridge mining's assets but was not advanced because of the excessive additional excavation (7 million cubic yards) and impacts to a major transmission line and tower. Therefore, the alternative advanced stays closer to the existing corridor, even though it crosses John's Creek twice and would go under a coal conveyor (tube). Efforts were made to minimize relocations and stream impacts. The alignment includes two at-grade crossings of the railroad track and would be slightly north of Kimper Elementary School. This section ended at a KY 632. Additional items features included:

- 3.99 miles in mountainous terrain
- Left turn lanes to Varney Branch and Kimper Elementary School at Sta. 300+70
- Bridge over Johns Creek at Sta 306+00
- At-grade RR crossings at Sta. 307+50 and 360+00
- Sta. 314+00 and Sta. 331+00 provides EB and WB passing opportunity

- On existing alignment from Sta. 360+00 to Sta. 390+00 to the end of Section 2
- Right and left turn lanes to KY 194
- 11,346,000 CY Excavation, 27,900 SF Bridges
- Estimated Cost: \$90,520,000 (50% earthwork)

SECTION 3

Section 3, begins east of KY 194 in Kimper and includes several bridges over John's Creek, portions are off alignment, but much of it follows the existing alignment. A passing lane is provided at MP 3.00, just east of Mining Road. The proposed WB passing lane begins at MP 3.50. Section 3 ends near Long Branch Road (KY 1758). This section includes a current high crash location (MP 3.0) with a reverse curve that is along a rock face.

Additional Section 3 features include:

- 3.79 miles in mountainous terrain (MP 0.20 to MP 4.00)
- Bridges over KY 632, Johns Creek, and Railroad at Sta. 406+00
- Bridges over Johns Creek at Sta 431+00 and 436+00
- Culvert at Sta. 481+00 near Gabriel Branch
- EB passing lane from Sta 517+00 to 542+50, WB from Sta 529+00 to 555+00
- Steepest grade is 3.1% through mountain at beginning
- 5,745,000 CY Excavation, including 14,400 SF Bridges
- Estimated Cost \$53,261,000 (43% is earthwork)

SECTION 4

Section 4 is the longest section, extending from KY 1758 (MP 4.20) to KY 3419 (MP 10.50). At the beginning of the section there are two options: Alt 4A-1 (0.83 mile) follows the existing alignment while Alt 4A-2 (0.98 mile) runs behind and north of the homes adjacent to KY 632. Between options 4A and 4B there are no proposed improvements because it is currently a 3 to 4-lane section in front of the KYTC Maintenance Garage (two lanes with passing each direction). Alternative options 4B-1 and 4B-2 occurs between MP 8.5 and MP 10.5. Near MP 10.5 is the Norfolk-Southern (NS) railroad on the north side of KY 632, a stream on the south side, and several houses south of the stream. The RR track is used to load engines, not for transporting coal, and has a couple of trains per week. . Option 4B-2 is off the existing roadway to avoid many of these impacts and straightens several curves. However, both have considerable impacts and constructions concerns.

Option 4B-2 would be easier to maintain traffic during construction.

Additional Section 4 features include:

- Section 4A ends at existing EB passing section Sta. 742+00
- Option 4B-1 (1.6 miles) follows existing alignment, Option 4B-2 (1.6 miles) long tangent crossing KY 632 and crosses behind houses
-

- Steepest grade is 6.6% on Option 4A-1 at the tie to existing Sta 742+00(near the KYTC Maintenance Garage).
- 3,002,700 CY Excavation
- Cost \$42,242,800 (28% is earthwork)

SECTION 5

Section 5 continues from KY 3419 near MP 10.50 to Phelps at approximately MP 14.00. Two options were studied near the schools. Option 5B (1.13 miles) goes behind the school complex and would use existing KY 632 as frontage road to the schools. The other alignment, 5A follows the existing alignment in front of Phelps High School (0.91 miles), would bridge Peter Creek and would traverse under the NS RR. This option would widen the road in front of the school complex. One benefit of Option 5B would be to avoid the RR crossing. The construction cost estimate for 5B is \$9.8 million, vs. \$17 million for widening in front of the school. Widening in front of the school includes a few structures cutting into a mountain and retaining wall along the creek. Magistrate Dotson stated that there were several cemeteries behind the schools, and he also asked if the schools had any sports complexes planned behind the schools. Mr. Westfall will call the schools.

East of the schools, passing lanes are proposed for each direction. As the alignment approaches Phelps the alternative crosses the railroad and the creek to avoid a number of relocations. The alignment follows the existing road to the termini in Phelps, and includes a left turn lane (LTL) for EB traffic. The LTL may require widening the existing bridge.

Additional Section5 features include:

- Option 5A bridges over Johns Creek at Sta 965+00 and under the railroad at Sta 975+00
- Left and right turning lanes provided into Phelps High School and Elementary School for Option 5A
- Channel change required from Sta 995+00 to Sta 1005+00
- EB and WB passing lanes provided from Sta 1000+00 to Sta 1030+00
- Bridge over Johns Creek and railroad at Sta 1067+00
- Left turn lane provided at KY 194
- Steepest grade is 5.0% on Option 5B (behind school)
- 4,411,000 CY Excavation
- Cost \$49,906,500 (35% is earthwork)

TOTAL RECONSTRUCTION ESTIMATE FOR SECTIONS 1-5 = \$256m (does not include shoulder widening just east of US119, Section 1 – Spot 1).

SPOT IMPROVEMENTS

The spot improvements address high crash locations along the corridor. The design criteria used for these spots includes a 40 MPH design speed, 12-foot lanes and 6-foot shoulders.

Section 1 - Three options were studied and presented at the previous meetings:

- **Spot 1** - Provide for 4-foot shoulders from approximately 18.06 where the US 119 ramp improvements stopped to MP to MP 18.68 where Section 1 begins. The estimated cost is nearly 4.1M.
- **Spot 2** - Improve sight distance at Bevins Branch Road and has a total estimated cost of \$1.4.
- **Spot 3** - Provide for improved access to Kellogg Pikeville Plant with a right turn lane into the easternmost and westernmost entrances. Also, a wb left turn lane was estimated for the easternmost employee entrance. The total cost for Spot 3 is \$4.3M.

Section 2 - Two options were studied:

- **Spot 4** - (MP 22.40 to MP 23.00) is to widen the horseshoe curve in place. It is about 0.63 mile in length with an estimated construction cost of \$5 million (37% is earthwork). This is a high crash location and an area with shoulder failure. Crashes may be minimized with high friction pavement. Most of the crashes were due to losing control in the curve, and many were during wet weather conditions.
- **Spot 5** - (MP 24.00 to MP 25.00) is 0.97 mile in length, and is a high crash location (many during wet weather) with shoulder failure also. Rock walls and mine portals are in this part of the corridor. This requires a long bridge over John Creek, and then a culvert to transition back to the existing roadway. This would eliminate the shoulder failure in this section. The spot was extended east to improve sight distance approaching Kimper Elementary School from the west. When a driver sitting at the KY 194 entrance to Kimper Elementary school and looks west to travel KY 194, there is a rise that makes it difficult to see an oncoming vehicle. The cost estimate is \$10.3 million (26% earthwork, 21% bridge).

Section 3 – Three options were studied

- **Spot 6** - (MP 0.10 to MP 0.56) is a 0.5 mile long curve reconstruction, with a cost estimate of about \$5.6 million with nearly 50% being for earthwork.
- **Spot 7** - (MP 1.38 to MP 1.91) improves two curves near the Huff Processing Plant and their coal stock pile location. This proposed alignment widens to the north for about 0.5 mile. The cost estimate is over \$3.6 million (35% earthwork).
- **Spot 8** - (MP 2.70 to MP 3.20) removes a reverse curve. The existing westbound approach to this spot has a passing lane that ends in a curve, just before a rock wall. This spot has been mentioned by multiple stakeholders as a problem area. A proposed alignment is restricted by the CSX railroad and Upper John's Creek on the south side of the road. The cost estimate is \$5.2 million (43% earthwork).

Section 4 – One option was studied

- **Spot 9** - (MP 5.30 to MP 5.70) would widen KY 632 through a reverse curve. The widening would be to the north to minimize impacts to the stream. The cost estimate is \$2.2M (21% earthwork). While the critical crash rate factor is greater than 1.0, only 8 crash reports were recorded. High friction pavement may reduce these crashes. As in all Spot Improvement options studied, shoulder failure is another safety concern.

Section 5 – One option was studied

- **Spot 10** - (MP 11.50 to MP 12.00) is at the Phelps school complex. The proposed spot improvement uses the existing KY 632 alignment and introduces turning lanes (left and right) to the High School and the Elementary School. The total cost estimate is \$3.2 million. A retaining wall would be needed to avoid impacts to Peter Creek, and ultimately minimize impacts to the parking lot for the complex.

Magistrate Dotson asked what the budget was for the first section. Chris James noted that in the 2014 Final Highway Plan, KYTC Item Number 12-198.00 from US 119 ramp (MP 17.951) near Smith's Farm Bottom (CR 1458) to Deskins Branch Culvert (MP 20.00), shows a total cost of \$18M. The costs are broken down with \$2M slated for design in FY 2015, with right of way and utilities scheduled for FY 2017 and construction 2019. Item Number 12-281.00 (MP 21.30 to MP 22.00) has \$8.3 million programmed for construction for FY 2014.

Magistrate Dotson reiterated that during future phases, coordination with the coal companies could be beneficial to both them and the KYTC. However, the programmed reconstruction for Section 1 would occur along the existing alignment as planned.

The next steps would be a final alignment review in August, a draft report by September 30, 2014 and a final report at the end of November 2014.

The meeting concluded at 3:00.