



Groundbreaking by Design.

MEETING MINUTES

Project: Science Hill Railroad Crossing Scoping Study
Pulaski County, Kentucky
Item No. 8-9010.00

Purpose: Project Team Meeting No. 1

Place: Videoconference
KYTC Central Office, Frankfort
KYTC District 8, Somerset
Lake Cumberland ADD, Russell Springs

Meeting Date: October 16, 2018
1:30 PM EDT

Prepared By: Qk4, Inc.

In Attendance:

| Name | Representing | Email |
|-------------------|-------------------------------------|--|
| Tamra Wilson | KYTC District 8 CDE | Tamra.Wilson@ky.gov |
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Mikael Pelfrey opened the meeting by welcoming the group, introducing attendees. He explained the meeting purpose: to provide an overview of existing conditions and preliminary alternatives in advance of the Local Officials/Stakeholders (LO/S) meeting next Thursday, October 25 at 10:00 AM.

Rebecca reviewed the existing conditions information presented in the slides. Everyone agreed the first group exercise, similar to that used for the US 27 Alternatives Study, worked well and should be used again for the upcoming LO/S meeting.

Regarding the working draft purpose and need, 24-hour count data showed local rail crossings blocked for a maximum of 12 minutes. Overall, each train averaged three minutes blocking traffic, with three crossings taking over five minutes. Counts showed trains carry 80-130 cars each, or are roughly 0.75 to 1.25 miles in length assuming 50 feet per car. Qk4 will contact Norfolk-Southern to see if they can provide additional information about their operations regarding train frequency, speeds, delay, etc.

The following comments were received during the existing conditions discussion:

- Slide 8 should show “up to 12 minutes” based on the 24-hour count; it will generate discussion among attendees, particularly among school transportation representatives and emergency responders. The slide serves as a prompt to spark this discussion.
- Qk4 will provide the clearance for the pictured underpass at Smith Vaught Road.
- Qk4 will provide information about the two fatality crashes during the analysis period.
- Slide 16 green text should be revised to clarify the project team is looking to narrow the current range of 9-10 alternatives down to 3-4 to present to the public early next year. The project team will use existing and expected future conditions, a comparison of alternatives, and LO/S input to accomplish this goal. Next week, we are seeking input to identify the top 3-5 alternatives preferred by each attendee. If alternatives are eliminated from further consideration, solid rationale for dismissal should be documented.
- Slide 17 labels for urban and rural templates should be switched. Sidewalks are assumed on both sides of the new route to present a worst case scenario; this can be amended however the project team prefers.

Tom provided an overview of the preliminary alternative concepts, which can functionally be grouped into North, Middle, and South categories. Segments of each numbered alternative can be swapped into others; for example, any alternative showing a connection to Yellow Jacket Way could be modified to connect to KY 635 instead. An earlier meeting with Science Hill Elementary found school officials do not prefer alternatives that connect to Yellow Jacket Way; however, they understood all preliminary concepts would be presented for LO/S consideration. Terrain combined with the 23-foot clearance over the rail tracks drive the engineering considerations; several concepts require steep grades and/or reconstruction of large sections of KY 1247.

The following comments were received during the alternatives discussion:

- How do right-of-way costs for rural versus urban areas compare? District 8 will provide costs; estimates vary based on the specific development.
- Qk4 should identify representative grades around town to help make the discussion more relatable. For example, what is the grade at Mill Hill or at other steep crossings locally? How does this relate to the proposed overpasses in build alternatives?
- Qk4 should be prepared to share information regarding build traffic forecasts. LO/S will be interested to know how traffic will change at each crossing under different scenarios. It should be clear which crossings are closed in which scenario. Also, specify that the forecast represents approximately 2 hours of delay over a 24-hour period – not a train blocking the local crossings for an unusually long time.
- An extension of Alternative 5 to address Mill Hill may be an attractive option.

The team discussed the proposed matrix format to gather LO/S preferences on North, Middle, and South Alternative concepts. It is important to understand why they like/dislike specific elements. The team should ask attendees to rank their preferences. There should also be a way to capture input if someone wants to suggest a different alternative than has been presented already. Approximately 28 individuals were invited to the LO/S meeting.

A brief discussion about funding followed. KYTC can use Section 130 funding, which typically amounts to \$7,500 per crossing closed and requires a 50/50 match from the railroad. Funds are awarded to whatever entity owns the road that closes (e.g. City or County) and can be used for a broad range of safety improvements. Further, Norfolk-Southern may opt to award additional grant money.



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MEETING MINUTES

Project: Science Hill Railroad Crossing Scoping Study
Pulaski County, Kentucky
Item No. 8-9010.00

Purpose: Project Team Meeting No. 2

Place: Videoconference
KYTC Central Office, Frankfort
KYTC District 8, Somerset

Meeting Date: November 26, 2018
9:30 AM EST

Prepared By: Qk4, Inc.

In Attendance:

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|-------------------|-------------------------------------|--|
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**videoconference*

Tom Clouse kicked off the meeting by stating the purpose is to refine the range of alternatives, from 12 to 3-4 to present to the public in January 2019. To aid in this process, Qk4 provided handouts that included an agenda and matrix. KMZ maps displayed on screen also facilitated the comparison process. After introductions, the following items were discussed:

- Initial concepts identify approximate impacts and construction costs; these were presented to local officials/stakeholders (LO/S) in October to collect feedback.
- To provide a thorough range of options for consideration, at least one alternative from each geographic group should advance.

Discussion items related to screening the alternatives are summarized below (the attached matrix compares costs and impacts):

Southern Concepts:

Alternatives 3 and 3A both begin at the KY 1247 railroad crossing, run south roughly parallel to the tracks, and meet US 27 approximately 700 feet or 1,900 feet south of the US 27 bridge over the railway. Neither requires a new bridge; the closing of five existing railroad crossings is proposed with either option. These are the most expensive alternatives shown; the detour distance was not preferred based on LO/S input. The main differences between alternatives are right-of-way impacts and the US 27 intersection.

- The southern terminus for Alternative 3 at US 27 may result in sight distance concerns. A survey would be necessary to make this determination, but based on field observations, sight distance appears limited by the proximity of the elevated roadway/bridge with guardrail over the railway and the intersection. Options to improve US 27 or shift the traffic signal from the KY 1247 intersection were both discussed but dismissed. Alternative 3A avoids this concern but is more expensive.
- The team originally discussed a concept to run the new route beneath US 27 using the railroad bridge to create a right-in/right-out intersection for northbound traffic. A retaining wall would be required to get clearance; coordination with the railroad regarding their right-of-way would be necessary. This concept was not developed further.
- The northern segment of Alternative 3A results in more earthwork but fewer parcel impacts. Alternative 3 is less expensive to construct.
- The team agreed to advance the **southern section of Alternative 3A** because it intersects US 27 with better sight distance. It was noted that more ephemeral streams were impacted with this section. The **northern section of Alternative 3** was advanced because it splits fewer farms, has fewer affected parcels, and has lower construction costs. The actual alignment would be optimized during future design stages if advanced.

While KYTC is unable to provide funding for private at-grade crossing closures, Norfolk Southern does.

Middle Concepts:

Alternative 7 begins near the water tower, bridges the railroad tracks and KY 1247, then connects to US 27 at Frog Hollow Road. Alternative 6 is closer to downtown; it bridges the railroad and KY 1247 then connects to KY 635 Main Street. Alternative 7 assumes the KY 635 Main Street crossing remains open; it would not carry much traffic but requires fewer relocations. As it provides better functionality, including a good connection for emergency services, and does not route additional traffic onto Frog Hollow Road, **Alternative 6** was advanced over Alternative 7.

Northern Concepts:

At the LO/S meeting, attendees indicated a strong preference for options that terminate at KY 1247 instead of US 27 or KY 635. This generally results in a shorter project with fewer costs and impacts. Accordingly, Qk4 revised two initial alternatives to address this input.

- Alternative 1 Revised improves Mill Hill but is shifted north of Alternative 1 to minimize impacts to the existing mill itself and its future expansion. It still requires relocating Science Hill Christian Church (SHCC) but requires no reconstruction of KY 1247 and has a lower construction cost than the original Alternative 1 concept. In addition it spans the railroad at an optimum location where the railroad is in a cut. SHCC stated Alternative 1 as previously presented left them no room to expand.
- Alternative 2 is challenging due to the elevations and requires reconstruction of a large portion of KY 1247. It was not recommended to advance.

- Alternative 4, which extended Alternative 5 to US 27 at Yellow Jacket Way, was eliminated based on LO/S concerns about impacting school traffic.
- Alternative 5 is the shortest alternative considered and least expensive. It was intended to avoid relocating SHCC but takes a lot of their property. A retaining wall is needed to avoid cemetery impacts. As shown, the westernmost cemetery driveway connection to North Stanford Street would be severed but this could likely be adjusted.

[Follow-up note: Based on project team meeting comments, Alternative 5 Revised was developed to move the roadway farther away from Science Hill Cemetery, thereby permitting access to both existing driveways (necessary due to one-way traffic through the cemetery). This shift eliminates the need for retaining walls, but impacts SHCC similarly to Alternative 1 Revised.]

- Alternative 8 Revised bridges the railroad tracks and KY 1247 then turns south to tie to KY 635 Main Street opposite Frog Hollow Road, providing an indirect connection back to KY 1247. As Frog Hollow Road is not designed to accommodate the increased traffic volume, Alternatives 8 and 8 Revised were eliminated.
- Alternative 9 bridges the railroad tracks and KY 1247 with a connection to US 27 at Yellow Jacket Way. It was eliminated based on LO/S concerns about impacts to school traffic.

The team discussed the merits of Alternatives 1 Revised and 5, both of which cross the tracks in a cut section to minimize grades and costs. Generally, Alternative 1 Revised was favored as it improves Mill Hill, a local safety concern. However, Alternative 5 is shorter and less expensive. The team agreed to present both **Alternative 1 Revised** and **Alternative 5 Revised** to the public.

- While Alternative 1 Revised costs more than Alternative 5 Revised, both are less expensive than the Southern concepts.
- Because it bypasses Mill Hill, Alternative 1 Revised solves an everyday problem instead of only adding benefit when a train blocks the local crossings.
- No connection from Alternative 1 Revised to KY 635 by the mill is shown; it would require extensive reconstruction due to the elevation difference. It may be possible to add a driveway to the mill from the new route.

The **Molen St connection** combines with Northern or Middle concepts to provide a connector for Norwood-Mt Zion properties when their crossing is blocked. This option should also be presented to the public.

Public Meeting

The team also discussed logistics for the upcoming public meeting.

- The survey should be structured to determine which geographic area makes the most sense (i.e., North, Middle, or South). If a north alternative is preferred, respondents will be asked their preference between Alternative 1 and 5.
- Measures to advertise the public meeting were discussed. A variable message sign along KY 635 would notify regional motorists, though this may be less effective than other measures. A targeted postcard mailing was suggested or targeting/boosting a post through Facebook. Ads could be placed in the Pulaski and Casey County newspapers. A blurb in the local church newsletters/bulletins might reach a wide audience as well. The survey will be available online in addition to paper versions at the meeting.
- The survey should ask where people live and how they heard about the meeting.
- Boards for the meeting should show centerlines, disturb limits, and right-of-way but designate that designs are preliminary and subject to change. Qk4 should prepare one overview map of the full

study area (including the Molen St Connector) with detailed boards for each of the four alternatives moving forward. It should be noted that the alternative names will be changed prior to the public meeting.

- Qk4 will conduct a benefit/cost analysis on three alternatives: 1 Revised, 6, and 3/3A. District 8 will provide the right-of-way and utility costs. Costs should be presented at the public meeting but not the results of the benefit/cost analysis.
- A LumenRT graphic to illustrate the alternatives would be nice but may be more appropriate in a future design phase. It was not included in the scope of work.
- District 8 will coordinate with local churches to check their availability to host the public meeting (5-7 PM) with a LO/S meeting earlier in the day. Target dates were January 24, 29, or 31.
- Materials for the resource agency mailing should be developed simultaneously. KYTC will coordinate the mailing list. Agencies are typically given 4-6 weeks to respond.

Qk4 reached out to the County Attorney to see if additional data is available regarding train blockages. KYTC may have to make a formal open records request. A nearby business owner on Ware Road (north of the study area) may also have additional data; Qk4 will contact him.



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MEETING MINUTES

Project: Science Hill Railroad Crossing Scoping Study
Pulaski County, Kentucky
Item No. 8-9010.00

Purpose: Project Team Meeting No. 3

Place: KYTC District 8, Somerset
KYTC Central Office, Frankfort - Videoconference

Meeting Date: March 25, 2019
10:00 AM EDT

Prepared By: Qk4, Inc.

In Attendance:

| Name | Representing |
|------------------|-------------------------------------|
| Tamra Wilson | KYTC District 8 CDE |
| Joe Gossage | KYTC District 8 Project Development |
| Jeff Dick | KYTC District 8 Planning |
| Jami West | KYTC District 8 Environmental |
| Shane McKenzie | KYTC CO Planning |
| Mikael Pelfrey | KYTC CO Planning |
| Steve Ross | KYTC CO Planning |
| Steve DeWitte | KYTC CO Planning |
| Jeremy Edgeworth | KYTC CO Planning |
| Lindsay Hoskins | KYTC CO Environmental |
| Allen Rust | KYTC CO Utilities & Railroad |
| Kasey Hoskins | Lake Cumberland ADD |
| Tom Clouse | Qk4, Inc. |
| Annette Coffey | Qk4, Inc. |
| Rebecca Thompson | Qk4, Inc. |
| Jeremy Lukat | Qk4, Inc. |

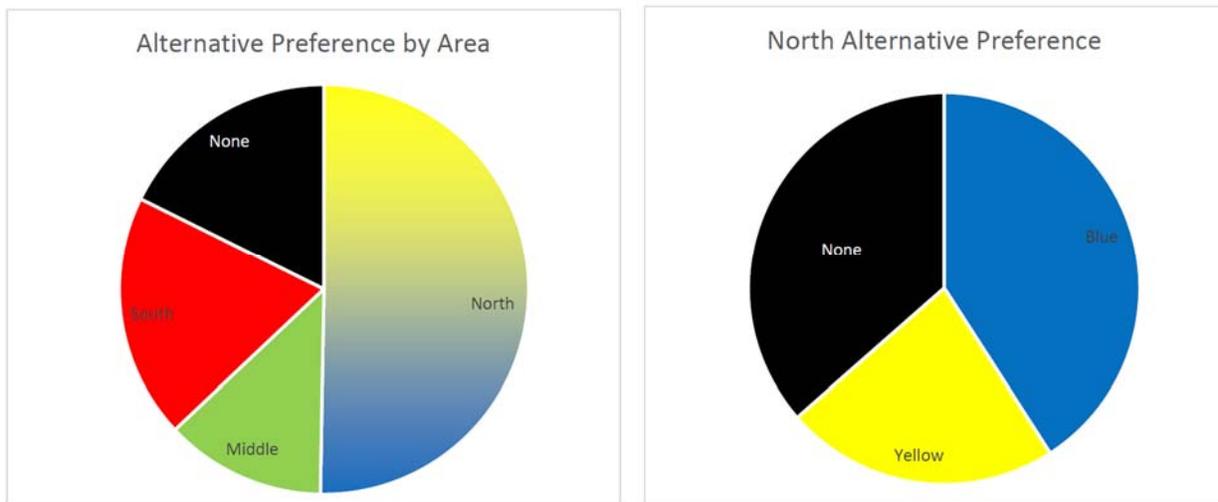
The purpose of this meeting is to review the project purpose, stakeholder input, and alternatives to wrap up the study.

One of the agency letters received suggested eliminating safety from the project purpose and need as the proposed alternatives do not address high crash locations, which occur primarily along US 27. While correcting existing crash concentrations is not explicitly part of the improvements, safety is still a core metric.

- Improved emergency response times/reliability are a key consideration; general statistics about fire/ambulatory response times improving emergency outcomes could be incorporated if available.

- Crash modification factors to eliminate at-grade rail crossings are published. Despite low historic crash rates at these specific crossings, their existence produces a risk of future crashes. FRA publishes predictive crash rates that could be incorporated as supporting data.
- Although KSP crash data does not highlight Mill Hill as a high crash location, locals believe that more crashes occur than are being reported. One possible explanation is that local responders pull errant motorists out of the ditch more frequently than police records show.
- Additional data may be available from the ongoing court case, the Science Hill fire department, and/or the local school. Qk4 and District 8 will explore these contacts to supplement data received from the Open Records request.
- For clarity, language about the existing crossings should be included in the purpose statement.

The team reviewed input received from the public survey effort. In total, 181 surveys were returned. Access and reliability were the core needs identified, followed by safety at Mill Hill. Almost 88% of respondents believe an improved connection is warranted. When asked which alternative is preferred, Northern options were favored, fairly well divided between Blue and Yellow. The Molen Street Connector, Mill Hill, and sidewalks were all favored for inclusion as well.



Follow-up conversations with the Science Hill Christian Church confirmed that leadership prefer to be relocated rather than remain at their current site but be impacted to a degree that compromises operation, functionality, and future expansion. However, this feeling doesn't appear to be unanimous among church membership, as several members feel emotionally attached to the site, building, history, etc.

Replies from 17 resource agencies were received and summarized in the handout. Most include form letters with common suggestions for mitigation measures. Norfolk-Southern indicated they would like to coordinate as the project advances; District 8 has reached out to the provided contact.

The team reviewed cost estimates prepared for the build alternatives, ranging from \$6 to \$12 million. The current Six Year Plan budget includes \$9.6 million in RRS funding. Preliminary cost estimates were compared to estimated travel time savings to compute a benefit-cost ratio, but resulted in ratios less than 1.0. This resulted in much discussion among the project team. It was concluded that due to multiple project benefits beyond those which can be numerically quantified in the analysis (e.g. reliability, improved emergency response times, etc.), the benefit cost analysis did not fairly represent the project's value/viability.

Finally, the team discussed what recommendations the study should include. It is important to clearly identify the pros/cons of each alternative. District 8 suggested the Northern alternatives advance to design as these

are most preferred by the general public, local officials, and emergency responders. They also have lower costs and fewer residential relocations than the longer alternatives farther south.