

# MINUTES

## Project Team Meeting

### KY 1426 Transportation Study Pike County

KYTC Central Office  
Frankfort, Kentucky  
September 19, 2007  
10:00 AM

A project team meeting for the KY 1426 Transportation Study in Pike County was held at 10 a.m. on Wednesday, September 19, 2007, in Frankfort, Kentucky. The purpose of the meeting was to discuss the project purpose and history, the scope of work, the preliminary data collected, relevant project issues, and public involvement. Participants in the meeting included the Kentucky Transportation Cabinet (KYTC) Central Office, the KYTC District 12 Office, the KYTC Geotechnical Branch, and the consultant firm, Wilbur Smith Associates (WSA). Meeting attendees included the following persons:

Jim Wilson	KYTC Central Office, Planning
Steve Ross	KYTC Central Office, Planning
Brad Eldridge	KYTC Central Office, Highway Design
Sean House	KYTC Geotechnical Branch
Christian Wallover	KYTC Geotechnical Branch
Michael Blevins	KYTC Geotechnical Branch
Kevin Damron	KYTC District 12, Preconstruction
John Michael Johnson	KYTC District 12
Joe Stanley	KYTC District 12
Darold Slone	KYTC District 12, Operations
Charles Neeley	KYTC District 12, Traffic
Brad Johnson	Wilbur Smith Associates
Bill Gulick	Wilbur Smith Associates
Len Harper	Wilbur Smith Associates

A summary of the key components and discussion items for this meeting is provided below.

#### **1. Welcome and Introduction**

Jim Wilson began the meeting, welcoming the participants and introducing the project team members in attendance. He emphasized the fast pace nature of the project.

## **2. Purpose**

Brad Johnson briefly outlined the purpose of the project: (1) Maintenance/operations measures and/or reconstruction to correct or mitigate recurring rockfall problems along KY 1426 between KY 1460 and Combs Avenue. (2) Traffic operational and/or minor reconstruction measures to improve traffic flow at the intersections of KY 1426 with KY 1460 (Chloe Road) and Summit Drive, including access/egress to the Pikeville Elementary School.

## **3. Project History**

Kevin Damron briefly discussed the history of the project. He discussed the long history of the rockfall problem on KY 1426. In 2007, rocks fell onto KY 1426 which resulted in its closure. The KYTC Maintenance Department also makes regular visits to the project site to clean up debris from the rock face. The City of Pikeville received \$250,000, independent of this study, from the Commonwealth to find ways to mitigate the rockfall. Summit Engineering, the city's on-call consultant, has decided to wait until this study is finished before proceeding with their project.

Mr. Damron then talked about the Chloe Creek Road and Summit Drive intersections with KY 1426. The two intersections are very close in proximity which results in increased congestion and accidents. Although both the intersection and rockfall issues have been previously looked at, an additional study was needed due to all the project constraints (ex. terrain, McCoy Cemetery, Pikeville Civic Center, Pikeville Elementary School, queues from school, Proximity of KY 1426 to the rock wall, fire station proximity, etc.). Reliable cost estimates will also be needed for the upcoming KYTC Six-Year Highway Plan.

## **4. Scope of Work**

Brad Johnson discussed the scope of work, noting that the KYTC Geotechnical Office would provide WSA with all the needed Geotechnical analysis. WSA will use this analysis to further develop three alternatives to mitigate the rockfall problem on KY 1426.

A tiered evaluation approach will be used for developing alternatives at the intersection. Up to six initial alternatives will be developed by WSA. WSA and the KYTC will screen these six alternatives and select two to be further developed and analyzed by WSA.

The traffic impacts for all alternatives will be evaluated.

This project has an accelerated schedule. WSA will provide the final recommendations and cost estimates by the end of November 2007, in order to advance potential projects into the next KYTC Six-Year Highway Plan. *Note: KYTC District 6 will provide WSA with Right of Way and Utility cost estimates.*

## **5. Preliminary Data**

Brad Johnson and Bill Gulick presented an overview of the preliminary exhibits. The study area was discussed and it was noted that the project area map did not include the new school access road off Summit Drive. The sensitivity and location of the steep terrain, fire department, civic center, Dorsey's, Cemetery, Summit Engineering building, etc. were discussed more extensively. It was noted that the fire department was aware of the study and is willing to sell their Right of Way if needed.

Brad Johnson presented some preliminary traffic volumes, level of service, and crash data maps. The preliminary data showed the intersections performing adequately at a LOS C. The largest single traffic generator during the peak periods come from Pikeville Elementary. Approximate 2,000 foot queues exist during parent pick up and drop off. The queue currently sets on a school access road and must be accommodated in the proposed alternatives. There are some above average crash segments in this project area. WSA will further analyze the crash data to find possible causes. The preliminary nature of this traffic and crash data was noted.

## **6 and 7. Project Issues & Alternative Concepts**

Bill Gulick facilitated a round table discussion of the project issues. The large footprint of this project and its potential for scope creep was noted. In order to complete the project within budget and on schedule, it is important to stay within the scope focusing on rockfall mitigation and the congestion at the intersections.

The following were some additional comments:

- School Access Road: The approximate 2,000 foot queue must be accommodated. The recommended project must replace their access with an improvement that is as good or better than what they currently have.
- KY 1426 Rockfall:
  - The KYTC Geotechnical office will analyze the rockfall and work with WSA to come up with workable alternatives.
  - Representatives from the KYTC Geotechnical Branch will participate in a field review (the week of October 24, 2007) with WSA and District 12 to help develop alternatives.
  - Catchment systems will be looked at as possible alternatives.
  - The Cemetery will affect any potential rock cuts in this area.
  - The aesthetics of any catchment system must be considered.
  - WSA will provide the KYTC Geotechnical Branch with cross sections along KY 1426.
  - The rockwall sets very close to KY 1426 roadway edge. Realigning KY 1426 will have to be looked at. If realignment is needed the flood zones will have to be located. There is also an interest in placing utilities below ground.
- Chloe Creek Road/KY 1426 and Summit Drive/KY 1426 Intersections:

- There is a potential to decrease level of service if the two intersections are combined into one.
- The steep grade of Summit Drive is one design challenge that must be considered.
- There is a creek between Chloe Creek Road and Summit Drive.
- The Pikeville Civic Center is located on the corner of Huffman Avenue and KY 1426. A pedestrian/bus drop-off was intended along KY 1426, but hasn't been completed. Need to confirm if this will be completed at a later time.
- There is very steep terrain on either side of Summit Drive and Chloe Creek Road that presents a challenge in expanding the intersections to include additional lanes.
- A roundabout does not seem practical at this location because of the diameter needed.
- The Pikeville Fire Department has a fire station and training facility between Chloe Creek Road and Summit Drive on KY 1426. They are willing to sell their Right of Way if needed.
- A split intersection was not seen as a good option because of signal timing inefficiencies.
- Through traffic from Summit Drive to Huffman Avenue was higher than expected. It was explained that motorists are likely traveling to Hambley Boulevard and dispersing from there.

## **8. Public Involvement**

Brad Johnson discussed the public involvement. There will be one meeting with the local officials and key stakeholders. After this meeting there will be one public meeting. Both of these will be held near the end of the project to provide the local officials, stakeholders, and the public with an opportunity to provide input on the proposed alternatives.

The meeting was adjourned around 11:30 a.m.

**AGENDA**  
**Project Team Meeting**  
**KY 1426 Transportation Study**  
**Pike County**

**September 19, 2007**

- |                                     |                                |
|-------------------------------------|--------------------------------|
| <b>1. Welcome and Introductions</b> | <b>KYTC</b>                    |
| <b>2. Purpose of Meeting</b>        | <b>KYTC</b>                    |
| <b>3. Project History</b>           | <b>KYTC</b>                    |
| <b>a. Origin</b>                    |                                |
| <b>b. Purpose</b>                   |                                |
| <b>c. Group Discussion</b>          |                                |
| <b>4. Review of the Agenda</b>      | <b>Wilbur Smith Associates</b> |
| <b>5. Scope of Work</b>             | <b>Wilbur Smith Associates</b> |
| <b>a. Tasks</b>                     |                                |
| <b>b. Responsible parties</b>       |                                |
| <b>c. Schedule</b>                  |                                |
| <b>6. Preliminary Data/Exhibits</b> | <b>Wilbur Smith Associates</b> |
| <b>a. Study Area</b>                |                                |
| <b>b. Hourly Volumes and LOS</b>    |                                |
| <b>c. Highway Crashes</b>           |                                |
| <b>7. Project Issues</b>            | <b>Group Discussion</b>        |
| <b>a. Study Area</b>                |                                |
| <b>b. Local Issues</b>              |                                |
| <b>c. Project Goals</b>             |                                |
| <b>d. Geotechnical Concerns</b>     |                                |
| <b>e. Environmental Justice</b>     |                                |
| <b>8. Alternative Concepts</b>      | <b>Group Discussion</b>        |
| <b>a. Rockfall along KY 1426</b>    |                                |
| <b>b. Intersection Improvements</b> |                                |
| <b>9. Public Involvement</b>        | <b>Group Discussion</b>        |
| <b>a. Special groups</b>            |                                |
| <b>b. Tasks</b>                     |                                |
| <b>c. Schedule</b>                  |                                |
| <b>10. Q &amp; A</b>                | <b>Group Discussion</b>        |
| <b>ADJOURN</b>                      | <b>KYTC</b>                    |

# MINUTES

## Meeting

### KY 1426 Transportation Study Pike County

KYTC District 12 Office  
Pikeville, Kentucky  
October 2, 2007  
11:30 AM

A meeting for the KY 1426 Transportation Study in Pike County was held at 11:30 a.m. on Tuesday, October 2, 2007, in Pikeville, Kentucky. The purpose of the meeting was to discuss the Rockfall along KY 1426 in Pikeville. Participants in the meeting included the Kentucky Transportation Cabinet (KYTC) District 12 Office, the KYTC Geotechnical Branch, the consultant firm Geobrugg and the consultant firm, Wilbur Smith Associates (WSA). Meeting attendees included the following persons:

Kevin Damron	KYTC District 12, Preconstruction
Keith Damron	KYTC District 12, Planning
John Michael Johnson	KYTC District 12
Sean House	KYTC Geotechnical Branch
Christian Wallover	KYTC Geotechnical Branch
Michael Blevins	KYTC Geotechnical Branch
Darold Slone	KYTC District 12, Operations
Frank Amend	Geobrugg
Bill Gulick	Wilbur Smith Associates
Len Harper	Wilbur Smith Associates

A summary of the key components and discussion items for this meeting is provided below.

#### **1. Welcome and Introduction**

Kevin Damron began the meeting, welcoming the participants and introducing the project team members in attendance. He emphasized the Rockfall as being the primary purpose of the meeting.

#### **2. Project History**

Kevin Damron briefly discussed the history of the project. He discussed the long history of the rockfall problem on KY 1426. In 2007 rocks fell onto KY 1426 which resulted in its closure. The KYTC Maintenance Department also makes regular visits to the project site to clean up debris from the rock face.

### 3. Rockfall

Wilbur Smith Associates (WSA) provided aerial and topographic mapping of the project area. The primary area of concern is North of the rock cut where Dorsey's sits and South of the KY 1426/Town Mountain Road split, with the majority of rockfalls occurring around Sta. 70+00. When rockfalls occur they tend to be shale. The falling chunks of shale can get large in size. KYTC maintenance routinely visits the project area to clear rocks.

On average there is 16 feet between the edge of the northbound driving lane and the rockwall. At the outer corners of the project area this space decreases to 12 or 13 feet. Curb and gutter could be added to this portion of KY 1426 to achieve maximum spacing between the roadway and rockwall. With this type of spacing and rockwall slope, Frank Amend from Geobruug North America recommended two types of catchment systems: (1) Catchment Fence/Barrier and (2) Catchment Drape.

The KYTC Geotechnical staff agreed to perform a rockfall analysis to help substantiate these catchment systems as reliable options. With this analysis Geobruug will formulate reliable cost estimates.

Discussion items about the two recommended catchment systems were as follows:

- There is no access road to the top of the rockwall. This makes the Catchment Drape more difficult to install.
- Maintenance routinely visits the project site to clear rocks. Adding a drape or barrier catchment system will reduce maintenance work and costs at the project site. The rocks will be contained in a catchment area away from the road, reducing the number of trips required by maintenance and allowing them to clear the rocks as time permits.
- Installation cost of the catchment systems are about 125 percent of the material cost.
- A drape catchment system will have to extend 6 feet over the crest of the rockwall.
- Some sort of combined curb, gutter and concrete barrier will probably need to be constructed along the KY 1426 northbound edge of road to: (1) keep cars from parking on this side of the road and (2) allow the catchment fence to extend higher up the rockwall.
- If curb and gutter is added to the northbound portion of KY 1426, a sidewalk may not be needed.
- Access behind a catchment barrier system will have to be provided to allow maintenance to clear the rock build up.

WSA will look at benching as the third alternative for the rockfall. WSA will provide the KYTC Geotechnical office with the heights of the sandstone along the project area. The KYTC Geotechnical office will then formulate the

recommended bench depths and lift heights. WSA will take these recommendations and formulate a cost estimate for this alternative.

#### **4. Intersection**

After the rockfall field visit, Mr. Gulick and Mr. Harper met with the KYTC District 12 staff about the KY 1426 intersections with KY 1460 (Chloe Creek Road) and Summit Drive. To help insure that WSA was on a track that would produce a reasonable set of alternatives, Mr. Gulick suggested several control parameters: 1) School queue, (2) Remain cost conscience to insure a fundable project, (3) Stay out of the Civic Center boundary and (4) Reduce the project footprint. District 12 staff agreed with these parameters.

The meeting was convened around 3:30 p.m.



## MINUTES

### Second Project Team Meeting

### KY 1426 Transportation Study Pike County

KYTC District 12 Office  
Pikeville, Kentucky  
October 17, 2007  
10:00 AM

A project team meeting for the KY 1426 Transportation Study in Pike County was held at 10 a.m. (local time) on Wednesday, October 17, 2007, in Pikeville, Kentucky. The purpose of the meeting was to evaluate the Alternatives developed by WSA. Participants in the meeting included the Kentucky Transportation Cabinet (KYTC) Central Office, the KYTC District 12 Office, the consultant firm Summit Engineers, and the consultant firm Wilbur Smith Associates (WSA). Meeting attendees included the following persons:

Keith Damron	KYTC District 12, Planning
William Cuzzort	KYTC District 12, Planning
Kevin Damron	KYTC District 12, Preconstruction
John Michael Johnson	KYTC District 12, Preconstruction
Dewey Sammons	KYTC District 12, Preconstruction-Utilities
Joe Stanley	KYTC District 12, Operations
Charles Neeley	KYTC District 12, Traffic
Greg Couch	KYTC District 12, Traffic
Gina Bartley	KYTC District 12, Right-of-Way
Mary Westfall-Holbrook	KYTC District 12, Construction
Jim Wilson	KYTC Central Office, Planning
Brad Eldridge	KYTC Central Office, Highway Design
Matt Williams	Summit Engineers
Michael Hill	Summit Engineers
Brad Johnson	Wilbur Smith Associates
Bill Gulick	Wilbur Smith Associates
Len Harper	Wilbur Smith Associates

A summary of the key components and discussion items for this meeting is provided below. These minutes follow the agenda outline which is attached.

#### 1. Welcome and Introduction

Keith Damron began the meeting, welcoming the participants and asking for formal introductions from all attendees. He emphasized the fast pace nature of the project.

## **2. Purpose of the Meeting**

The purpose of the meeting was to evaluate the Alternatives developed by WSA.

## **3. Review of Existing Conditions**

Mr. Johnson discussed the existing traffic, operational, and crash history data collected and analyzed by WSA. He noted the volume of traffic on KY 1426 (9,000+ ADT) and KY 1460 (7,000+ ADT). He also noted the high crash segment on KY 1426 between KY 1460 and Summit Drive.

Mr. Gulick discussed the overall controlling parameters/features for the rockfall and the KY 1426/KY 1460 (Chloe Creek Road) and KY 1426/Summit Drive intersections.

Mr. Johnson completed this discussion topic by noting that WSA was in the process of completing a GIS-based environmental footprint.

## **4. Purpose and Need of Project**

The project team agreed that the overall purpose of the project was to address the safety and congestion issues along KY 1426. Though both the rockfall and intersections influence safety and congestion along the corridor, the two projects are not necessarily linked. A more refined purpose and need statement would need to be developed. The project team agreed to have one general statement of project purpose and need and then develop two separate, more defined purpose and need statements for each of the two defined projects.

The project team agreed that the overall focus of this project should be placed on the rockfall.

## **5. Proposed Rockfall Alternative**

The existing rock cut is from the 1950's. The rockfall area of concern is along KY 1426 between Combs Avenue and the area where Dorsey's Restaurant sits. History and maintenance reports show that rockfalls are common along this stretch of KY 1426, but rockfalls with "large" rocks are not so common. Maintenance routinely visits the project site to clean up rockfall debris.

Mr. Gulick discussed the three rockfall alternatives developed by WSA:

1. Alternative A: Rockwall Benching
  - \$6 million construction cost estimate.
  - Would require right-of-way acquisition and a more in depth environmental review process, which could significantly delay the timeline of the project.
  - Would not require moving KY 1426.
  - Would require approximately 400,000 cubic yards of rock excavation and 40,000 cubic yards of common excavation.

- The rock benches for this method would not daylight out until the top of the mountain.
  - Once WSA provides the KYTC with the amount and location of the right-of-way acquisition required, the KYTC District 12 office will estimate its cost.
2. Alternative B: Rockfall Fence
    - \$1.2 million construction cost estimate.
    - This method would not require right of way acquisition or movement of KY 1426.
    - Maintenance would not have as much room to maneuver when cleaning up rock debris behind the fence. This is estimated to be approximately 11 feet.
  3. Alternative C: Rockfall Drape
    - \$1.8 million construction cost estimate.
    - Would require right-of-way acquisition and a more in depth environmental review process, which could significantly delay the timeline of the project.
    - Would not require moving KY 1426.
    - Would require clearing and grubbing of the mountain side where the drape is to be placed. This needs to be completed prior to the drape contractor completing their work.
    - There is potential for cost creep due to the uncertainties related to right-of-way acquisition, clearing and grubbing, installation, and varying tie down points above the top of the rockwall.
    - Once WSA provides the KYTC with the amount and location of the right-of-way acquisition required, the KYTC District 12 office will estimate its cost.

There was a discussion as to what the validity and repercussions were to realigning KY 1426. The following question was raised: can KY 1426 be realigned far enough away from the rockwall so any future rockfalls would not land on the roadway itself? Field review and maintenance reports show that KY 1426 would need to be offset a minimum of 60 feet to prevent rockfall debris from bouncing or falling onto the roadway. This would require major realignment of the roadway, major utility relocations, modifying or replacing two bridge structures, filling and mitigating the adjacent stream, and right-of-way acquisitions that would include the relocation of several businesses. With these facts, the project team decided this was not a viable alternative.

Mike Hill, representing the City of Pikeville, noted that City officials would be concerned with the aesthetics of each alternative.

Mr. Gulick noted that Alternative B was recommended by the KYTC Geotechnical Branch and product vendor. The project team agreed that Alternative B (Rockfall Fence) was the preferred alternative. The project team then agreed that local

official, key stakeholder, and public input was needed before any alternative was selected for further evaluation.

## **6. Proposed Intersection Alternatives**

The existing KY 1426/KY 1460 (Chloe Creek Road) and KY 1426/Summit Drive intersections each perform individually at a LOS C. The close proximity of the “T” shaped intersection at KY 1426 and KY 1460 and the full intersection at 1426 and Summit Drive cause the system as a whole to experience congestion along the corridor. There is also a high crash segment along KY 1426 between KY 1460 and Summit Drive.

Mr. Gulick discussed the six intersection alternatives developed by WSA:

1. Alternative 1:

- \$3.1 million preliminary construction cost estimate.
- Combines the two existing intersections along KY 1426 into one.
- Requires a large culvert (> 200 feet).
- Requires a bridge for Summit Drive.
- Requires purchase of the entire Fire Station complex.

2. Alternative 2:

- \$2.7 million preliminary construction cost estimate.
- Combines the two existing intersections along KY 1426 into one.
- Requires a large culvert (>200 feet).
- Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
- Congested left turn for drivers turning onto KY 1460 from the School Access Road.
- Protects the Fire Station, but takes the training facility.

3. Alternative 3:

- \$1.9 million preliminary construction cost estimate.
- Creates two “T” intersections along KY 1426.
- Congested left turn for drivers turning onto KY 1460 from Summit Drive.
- Protects the Fire Station, but takes the training facility.

4. Alternative 4:

- \$2.1 million preliminary construction cost estimate.
- Creates two “T” intersections along KY 1426.
- Limited internal storage between the two “T” intersections (KY 1426 & Huffman and KY 1426 & KY 1460) generates poor operations when compared to the other alternatives.
- Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
- Takes the entire Fire Station complex.

- Congested left turn for drivers turning onto KY 1460 from the School Access Road.
5. Alternative 5:
- \$2.3 million preliminary construction cost estimate.
  - Combines the two existing intersections along KY 1426 into one.
  - Requires KY 1460 to have a sharp 100 to 150 foot radius. This is not safe for a 45 mph 7,000+ ADT rural collector roadway. Common practice standards from KYTC suggest a minimum radius of 600 feet.
  - Compromises KY 1460 by turning it into an approach road to the School Access Road.
  - Requires a large culvert (>200 feet).
  - Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
  - Protects the Fire Station, but takes some of the training facility.
6. Alternative 6:
- \$2.0 million preliminary construction cost estimate.
  - Creates two “T” intersections along KY 1426.
  - Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
  - Congested left turn for drivers turning onto KY 1460 from the School Access Road.
  - Protects the Fire Station, but takes some of the training facility.
  - Alternative 6A would widen KY 1460 along its current alignment and would be less costly than Alternative 6.

Mr. Johnson then discussed the traffic operational concerns for each alternative. Network delay, delay per vehicle, and stops were presented in tabular format to the project team as a comparison tool. Alternative 4 was the only alternative that didn't show improvement over the existing condition during both the AM and PM peak periods. The inefficiency of the signal phasing due to the close proximity of the two “T” intersections causes the system to fail more quickly than the other intersections.

Specific to the AM peak period, multiple alternatives had degrading performance when compared to the existing condition. The primary reason was the queue backup created by school traffic. It is required to make either a left turn or right turn onto KY 1460 at an unsignalized intersection. One suggestion would be to consider a police officer controlling traffic during school peak. This improvement will be evaluated.

Based on the current design of Alternatives 3 and 6, vehicles would be able to queue up between intersections. Once volume exceeds the storage capacity between intersections, the timing of the intersections would need to be re-evaluated, most likely degrading the operations of the intersection at a quicker

pace when compared to a combined intersection. The drawback to the combined intersection is the expandability of the intersection given its close proximity to the rockwall, civic center, and former river bed.

The project team agreed that Alternative 5 was not a viable alternative because of the radius of curve along KY 1460. To achieve an acceptable curve radius, it would need to be pushed into the rockwall. This was seen as a fatal flaw. The project team then agreed that local official, key stakeholder, and public input was needed before any other alternatives were selected for further evaluation.

## **7. Discussion by Project Team**

This was discussed as part of agenda items 5, 6, and 8.

## **8. Next Steps**

The project team agreed that the next step was to get the local officials and the key stakeholder input on the rockfall and intersection alternatives. Furthermore, the District agreed to meet with City of Pikeville and Pikeville School Board officials prior to the Local Officials Meeting to get their preliminary thoughts on the alternatives. Following the public involvement process, the project team will select two to three intersection alternatives to move forward in the process for further evaluation and final recommendations.

The meeting was adjourned around 1:00 p.m.

**AGENDA**  
**KYTC Project Team Meeting**  
**KY 1426 Transportation Study**  
**Pike County**

**KYTC District 12 Office**  
**Pikeville, Kentucky**  
**October 17, 2007**  
**10 a.m. EDT**

- |  |   |
|--|---|
| <b>1. Welcome and Introductions</b>          | <b>KYTC</b>                                       |
| <b>2. Purpose of Meeting</b>                 | <b>KYTC</b>                                       |
| <b>3. Review of Existing Conditions</b>      | <b>Wilbur Smith Associates</b>                    |
| <b>a. Traffic and LOS</b>                    |   |
| <b>b. Crash History</b>                      |   |
| <b>c. Geometric Deficiencies</b>             |   |
| <b>d. Environmental Overview</b>             |   |
| <b>4. Purpose and Need of Project</b>        | <b>Wilbur Smith Associates</b>                    |
| <b>5. Proposed Rockfall Alternatives</b>     | <b>Wilbur Smith Associates</b>                    |
| <b>a. Review of Alternatives</b>             |   |
| <b>b. Cost Estimates</b>                     |   |
| <b>c. Evaluation of Alternatives</b>         |   |
| <b>d. Recommendations</b>                    |   |
| <b>6. Proposed Intersection Alternatives</b> | <b>Wilbur Smith Associates</b>                    |
| <b>a. Review of Alternatives</b>             |   |
| <b>b. Traffic Analysis</b>                   |   |
| <b>c. Cost Estimates</b>                     |   |
| <b>d. Evaluation of Alternatives</b>         |   |
| <b>e. Recommendations</b>                    |   |
| <b>7. Discussion by Project Team</b>         | <b>KYTC District 12/<br/>Division of Planning</b> |
| <b>8. Next Steps</b>                         | <b>KYTC/WSA</b>                                   |
| <b>a. Tier 2 Evaluation</b>                  |   |
| <b>b. Local Officials/Public Meeting</b>     |   |
| <b>9. Adjourn</b>                            | <b>KYTC</b>                                       |

# MINUTES

## Stakeholders Meeting

### KY 1426 Transportation Study Pike County

Pikeville Fire Department Training Center  
Pikeville, Kentucky  
November 8, 2007  
2:00 p.m. Local Time

A stakeholders meeting for the KY 1426 Transportation Study in Pike County was held at 2 p.m. Local Time on Thursday, November 8, 2007, in Pikeville, Kentucky. The purpose of the meeting was to discuss the project purpose and history, the alternatives developed and stakeholder concerns. Participants in the meeting came from local stakeholder groups, the Kentucky Transportation Cabinet (KYTC) District 12 Office, and the consultant firm, Wilbur Smith Associates (WSA). Meeting attendees included the following persons:

Franklin Justice	Pikeville Mayor
Jerry Green	School Superintendent
Buddy Beeler	Pikeville School Board
Billy Rowe	Pikeville School Board
Donovan Blackburn	Pikeville City Manager
Gene Davis	Pikeville City Commissioner
Ronald Conn	Pikeville Fire Department, Fire Chief
Eddie Greenhill	Pikeville Fire Department, Fire Marshal
Bill Webb	Chloe Ridge Homeowners, President
James Hamilton	Resident
Gary Johnson	Resident
John Rasnick	Summit Building Owner
Jack Sykes	Summit Engineering, President
Michael Hill	Summit Engineering
Mark Westhill	Summit Engineering
Danl Hall	KYTC District 12
Keith Damron	KYTC District 12
Kevin Damron	KYTC District 12
John M. Johnson	KYTC District 12
Peggy Rasnick-Justice	KYTC District 12
Libby Carty	KYTC District 12
Diana Elswick	KYTC District 12
Willard Cuzzort	KYTC District 12
Charles Neeley	KYTC District 12
Jim Wilson	KYTC Central Office, Planning



Steve Ross

KYTC Central Office, Planning

Len Harper

Wilbur Smith Associates

Brad Johnson

Wilbur Smith Associates

Bill Gulick

Wilbur Smith Associates

A summary of the key components and discussion items for this meeting is provided below, following the agenda outline.

### **1. Welcome and Introduction**

Keith Damron began the meeting, welcoming the participants. He talked about the fast pace nature of the project and stressed that it was a planning study, not a design project. Mr. Damron then had everyone in attendance introduce themselves.

### **2. & 3. Purpose**

Bill Gulick briefly outlined the purpose of the project: to improve safety and reduce congestion along the Bypass Road. The purpose of this meeting was to get local input on the developed alternatives and input on any other concerns.

### **4. Project Description**

To meet the purpose stated above, two fundamental goals must be met: (1) alleviate the rockfall impacts on Bypass Road and (2) improve traffic flow at the Bypass Road/Chloe Creek Road Intersection and Bypass Road/Summit Drive Intersection. It was originally thought, that by addressing either one of these goals you would inherently have to address the other. Further analysis has shown that this is not necessarily the case. You could, and probably should meet the outlined purpose and subsequent goals with two independent solutions.

### **5. Proposed Rockfall Alternatives**

The existing rock cut is from the 1950's. The rockfall area of concern is along KY 1426 between Combs Avenue and the cut area immediately north of Dorsie's Restaurant. History and maintenance reports show that rockfalls are common along this stretch of KY 1426, but rockfalls with "large" rocks are not so common. Maintenance routinely visits the project site to clean up rockfall debris.

Mr. Gulick discussed the three rockfall alternatives developed by WSA:

#### **1. Alternative A: Benching**

- Total Cost = \$7.96 million
  - Construction Cost = \$7.40 million.
  - Right of Way Cost = \$0.02 million.
  - Utility Cost = \$0.54 million.
- Would require approximately 10.1 acres of right-of-way acquisition and a more in depth environmental review process, which could require a longer timeline for the project.

- Would not require moving KY 1426, but probably would require it to be closed during periods of construction.
  - Would require approximately 550,000 cubic yards of excavation.
  - The rock benches for this method would not daylight out until the top of the mountain.
2. Alternative B: Barrier
- Total Cost = \$1.25 million
    - Construction Cost = \$1.20 million.
    - Right of Way Cost = \$0.00 million.
    - Utility Cost = \$0.05 million.
  - This method would not require right of way acquisition or movement of KY 1426.
  - Maintenance would have limited space to maneuver when cleaning up rock debris behind the fence. This is estimated to be approximately 11 feet.
3. Alternative C: Drape
- Total Cost = \$2.06 million
    - Construction Cost = \$2.00 million.
    - Right of Way Cost = \$0.01 million.
    - Utility Cost = \$0.05 million.
  - Would require approximately 3.3 acres of right-of-way acquisition and a more in depth environmental review process, which could require a longer timeline for the project.
  - Would not require moving KY 1426.
  - Would require clearing and grubbing of the mountain side where the drape is to be placed.
  - There is potential for cost creep due to the uncertainties related to right-of-way acquisition, clearing and grubbing, installation, and varying tie down points above the top of the Rockwall.

There was a discussion as to what the validity and repercussions were to realigning KY 1426. The following question was raised: can KY 1426 be realigned far enough away from the Rockwall so any future rockfalls would not land on the roadway itself? Field review and maintenance reports show that KY 1426 would need to be offset a minimum of 60 feet to prevent rockfall debris from bouncing or falling onto the roadway. This would require major realignment of the roadway, major utility relocations, modifying or removing one bridge structure, filling and mitigating the adjacent stream, and right-of-way acquisitions that would include the relocation of several businesses. With these facts, the project team decided this was not a viable alternative.

Additional questions and discussion items:

- Q: How much consideration was given to the rockfall area south of Dorsie's Restaurant, in front of the cemetery?  
A: Geotechnical experts examined the Rockwall along the bypass between Summit Drive and where KY 1426 and KY 1460 split. It was

determined that the primary area of concern was between Combs Avenue and the area where Dorsie's restaurant sits.

- Q: How tall will the barrier need to be in Alternative B?  
A: 19 feet.
- Q: What is the distance between the edge of the driving lane and the barrier in Alternative B?  
A: 3 feet.
- Q: How will the 3 feet effect driver safety?  
A: History shows that this could potentially increase fender binders but should reduce the potential for fatal accidents.
- Q: What about the safety of the maintenance workers clearing rock debris between the Rockwall and the barrier in Alternative B?  
A: Maintenance workers currently have to clear rock debris from this location so there is not an increased risk from that stand point. Although they are barricaded between the Rockwall and the barrier, they are also protected from Bypass traffic.
- Q: What about the maintenance costs of Alternative A, B and C?  
A: Maintenance costs have only been looked at from a comparison standpoint. The major maintenance cost is that associated with the removal of rockfall debris. This debris must currently be removed when a rockfall occurs. The given Alternatives canalize the rock but still require maintenance to remove it, only now it can be done on a periodic basis rather than an emergency basis.
- Q: Will the drape in Alternative C work with large rockfalls?  
A: Yes.
- Q: Are the performance of all the Alternatives the same?  
A: Functionally yes.
- Q: What about Aesthetics?  
A: This was discussed, but not considered a controlling parameter during the Alternatives evaluation process.
- Q: Does the benching from Alternative A effect the cemetery?  
A: It is possible. At this level of detail, this cannot be substantiated and would require further study.

## **6. Proposed Intersection Alternatives**

The existing KY 1426/KY 1460 (Chloe Creek Road) and KY 1426/Summit Drive intersections each perform individually at a LOS C. The close proximity of the "T" shaped intersection at KY 1426 and KY 1460 and the full intersection at 1426 and Summit Drive cause the system as a whole to experience congestion along the corridor. There is also a high crash segment along KY 1426 between KY 1460 and Summit Drive.

Mr. Johnson discussed the seven intersection alternatives developed by WSA:

1. Alternative 1:
  - Total Cost = \$7.73 million
    - Construction Cost = \$3.10 million.

- Right of Way Cost = \$2.91 million.
    - Utility Cost = \$1.72 million.
  - Combines the two existing intersections along KY 1426 into one.
  - Requires a large culvert (> 200 feet).
  - Requires a bridge for Summit Drive.
  - Requires 5.6 acres of right of way acquisition.
2. Alternative 2:
- Total Cost = \$6.63 million
    - Construction Cost = \$2.70 million.
    - Right of Way Cost = \$2.21 million.
    - Utility Cost = \$1.72 million.
  - Combines the two existing intersections along KY 1426 into one.
  - Requires a large culvert (>200 feet).
  - Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
  - Congested left turn for drivers turning onto KY 1460 from the School Access Road.
  - Requires 4.5 acres of right of way acquisition.
3. Alternative 3:
- Total Cost = \$6.18 million
    - Construction Cost = \$1.90 million.
    - Right of Way Cost = \$2.56 million.
    - Utility Cost = \$1.72 million.
  - Creates two “T” intersections along KY 1426.
  - Congested left turn for drivers turning onto KY 1460 from Summit Drive.
  - Requires 4.6 acres of right of way acquisition.
4. Alternative 4:
- Total Cost = \$7.46 million
    - Construction Cost = \$2.10 million.
    - Right of Way Cost = \$3.64 million.
    - Utility Cost = \$1.72 million.
  - Creates two “T” intersections along KY 1426.
  - Limited internal storage between the two “T” intersections (KY 1426 & Huffman and KY 1426 & KY 1460) generates poor operations when compared to the other alternatives.
  - Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
  - Congested left turn for drivers turning onto KY 1460 from the School Access Road.
  - Requires 4.5 acres of right of way acquisition.
5. Alternative 5:
- Total Cost = \$7.71 million

- Construction Cost = \$2.00 million.
    - Right of Way Cost = \$3.99 million.
    - Utility Cost = \$1.72 million.
  - Creates two “T” intersections along KY 1426.
  - Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
  - Congested left turn for drivers turning onto KY 1460 from the School Access Road.
  - Requires 4.4 acres of right of way acquisition.
6. Alternative 6:
- Total Cost = \$5.33 million
    - Construction Cost = \$1.50 million.
    - Right of Way Cost = \$2.11 million.
    - Utility Cost = \$1.72 million.
  - Creates two “T” intersections along KY 1426.
  - Widens KY 1460 but preserves its alignment.
  - Requires a 40 to 60 foot radius and 16 percent grade on Summit Drive.
  - Congested left turn for drivers turning onto KY 1460 from the School Access Road.
  - Requires 3.9 acres of right of way acquisition.
7. Alternative 7:
- Total Cost = \$4.16 million
    - Construction Cost = \$0.95 million.
    - Right of Way Cost = \$1.49 million.
    - Utility Cost = \$1.72 million.
  - Keeps Summit Drive at same location.
  - Realigns the School Access Road to connect to KY 1460.
  - Widens KY 1460 but preserves its alignment.
  - Congested left turn for drivers turning onto KY 1460 from the School Access Road.

Mr. Johnson then discussed the traffic operational concerns for each alternative. He noted that network delay, delay per vehicle, and number of stops were analyzed as a comparison tool. Alternative 4 was the only alternative that didn't show improvement over the existing condition during both the AM and PM peak periods. The inefficiency of the signal phasing due to the close proximity of the two “T” intersections causes the system to fail more quickly than the other intersections.

A long school queue makes AM peak hour performance measures increase and skews alternative evaluations. The alternatives showed operating conditions degrading below existing conditions. This is because each alternative is routing the school traffic through an unsignalized intersection. In particular, left-turn movements at the School Access Road experience significant delay. Gains in system performance are offset by increased delay at the School Access Road.

One suggestion would be to consider a police officer controlling traffic during school peak. This improvement will be evaluated.

Based on the current design of Alternatives 3, 5, 6 and 7, vehicles would be able to queue up between intersections. Once volume exceeds the storage capacity between intersections, the timing of the intersections would need to be re-evaluated, most likely degrading the operations of the intersection at a quicker pace when compared to a combined intersection. The drawback to the combined intersection is the expandability of the intersection given its close proximity to the Rockwall, civic center, and former river bed.

All the Alternatives include a proposed left turn lane south of the Bypass Road/Huffman Avenue Intersection.

Mr. Johnson ended his presentation by showing the SimTraffic simulations of the alternatives.

Additional discussion items:

- Representatives from the Chloe Ridge development preferred Alternative 7. A longer drive, potential 4-way stop, and the drive to Pikeville Elementary were cited as reasons for not preferring other alternatives.
- The City Commissioner's office was in favor of Alternative 1.
- Representatives from the school board:
  - Concerned with sight distance for the drivers turning onto KY 1460 if the School Access Road is connected to it.
  - Concerned with the potential backup on KY 1460 if the School Access Road is connected to it.
  - Q: Do all the alternatives replace the existing queue storage on the School Access Road.  
A: Yes.

## **7. Discussion by Project Team**

This was discussed as part of agenda items 5 and 6.

## **8. Next Steps**

Keith Damron reminded everyone that this was a planning study. He thanked everyone for coming and for the input they provided. Their input will be used in conjunction with the public input to help refine and narrow down the Alternatives. The official study should be finished in the early parts of 2008 but the goal is to have Alternatives and reliable cost estimate finalized by December for inclusion into the KYTC six year planning process. Keith Damron then thanked everyone for coming and invited everyone to stick around for the public meeting at 5 p.m. local time.

The meeting was adjourned around 4:00 p.m. local time.

**RESOLUTION SUPPORTING THE SELECTION BY THE PIKEVILLE CITY  
COMMISSION FOR THE ALTERNITIVES TO THE CHLOE CREEK  
INTERSECTION REALIGNMENT AND THE BY-PASS ROCK-FALL AND TO  
ASK THE KENTUCKY TRANSPORTATION CABINET TO SUPPORT  
THE CITY OF PIKEVILLE SELECTION**

WHEREAS, Kentucky Route 1426 is located in the City of Pikeville and is known and traveled as the Pikeville Bypass Road & Route 1460 is known and traveled as the Chloe Road.

WHEREAS, the City of Pikeville recognizes that Chloe Road and By-pass intersection carries over 11,000 cars through this intersection daily. The By-pass Road has several operational and safety concerns with major rock-falls. This creates a very dangerous situation for the over 240,000 people that consider the City of Pikeville their service area along with our school children who travel this route daily.

WHEREAS, the congestion in the duel intersections of Chloe Road and Huffman Ave compounded with the Pikeville Elementary School and Summit Hills traffic creates major congestion and safety issue which has resulted in numerous delays and accidents. Many times the school is forced to start late delaying educational requirements. This is a burden on our community which puts the safety and education needs of our children first.

WHEREAS, the Pikeville Fire Station that is the primary safety mechanism that provides fire and EMT services for the City of Pikeville is located at the corner of Chloe – By-pass intersection. At times response to calls are delayed due to having to maneuver through the major congestion of this intersection.

WHEREAS, for the reasons mention above and after many meetings, debates and considerations the Mayor and City Commissioners endorses **Alternative 1** of KY 1426 Intersection realignment. Furthermore the Mayor and City Commissioners also endorse **Alternative B** of the KY 1426 Rock-fall alternative. The commission feels the alternatives they have selected would be the most economical and reasonable ways to address the issues that exist.

NOW, THEREFORE, BE IT RESOLVED the City of Pikeville fully endorses the Alternatives they have selected, outlined and attached to this resolution and asks the Kentucky Department of Transportation to support this request of the Commission.

Passed this 12<sup>th</sup> day of November, 2007.

Commissioner James Carter moved for the adoption of the foregoing resolution.

Commissioner Barry Chaney seconded the motion.

Upon roll call, the votes were as follows:

	<u>YES</u>	<u>NO</u>
FRANK JUSTICE, II MAYOR	<u>/</u>	<u>---</u>
GENE DAVIS, COMMISSIONER	<u>/</u>	<u>---</u>
DALLAS LAYNE, COMMISSIONER	<u>/</u>	<u>---</u>
JIMMY CARTER, COMMISSIONER	<u>/</u>	<u>---</u>
BARRY CHANEY, COMMISSIONER	<u>/</u>	<u>---</u>

The Mayor declared the within resolution adopted.

  
\_\_\_\_\_  
FRANK JUSTICE, II MAYOR

ATTESTED:

  
\_\_\_\_\_  
KAREN HARRIS, CITY CLERK



**SUMMARY**  
**Public Involvement Meeting**

Bypass Road (KY 1426) Transportation Study  
Pikeville, Kentucky

Pikeville Fire Department  
November 8, 2007 from 5:00-7:00 PM Eastern Time

A public involvement open house meeting was held on Thursday, November 8, 2007, from 5:00 p.m. to 7:00 p.m. at the Pikeville Fire Department in Pikeville, Kentucky. The purpose of the meeting was to update the public on the status of the project, present the rockfall and intersection alternatives, and seek their feedback. The following Kentucky Transportation Cabinet (KYTC) and consultant staff were in attendance:

Libby Carty	KYTC, Highway District 12
Keith Damron	KYTC, Highway District 12
Kevin Damron	KYTC, Highway District 12
Diana Elswick	KYTC, Highway District 12
John M. Johnson	KYTC, Highway District 12
Steve Ross	KYTC, Central Office, Division of Planning
Jim Wilson	KYTC, Central Office, Division of Planning
Bill Gulick	Wilbur Smith Associates
Brad Johnson	Wilbur Smith Associates
Len Harper	Wilbur Smith Associates

The format of this meeting was informal from 5:00 P.M. to 7:00 P.M. Eastern Time. Upon arrival, attendees were greeted at the door and asked to sign the attendance list. At this station, attendees were given a study information sheet with a study area map and description of the project. They were also provided a survey questionnaire.

The meeting room was arranged with a series of maps showing the proposed three (3) rockfall alternatives, proposed seven (7) intersection alternatives and two (2) summary boards that compared the rockfall and intersection alternatives. In addition there was a station displaying traffic simulations of the seven intersection alternatives and a station where all of the material could be viewed on a PowerPoint presentation, which looped continuously throughout the meeting. KYTC and consultant staff members were available throughout the room to answer questions and discuss issues.

A total of approximately 55 persons, including the project team, registered their attendance at the two-hour session. Questions and comments received during the meeting included the following:

- What are the impacts to the businesses along KY 1426 during construction of the rockfall alternatives? Most likely the barrier and drape alternatives will require one lane to be closed for one construction season. Access to businesses would be maintained. The benching alternative would take longer and may require additional lanes to be closed, particularly during blasting periods. Between the three alternatives, the barrier would result in the least amount of disturbance to the businesses along this portion of KY 1426.
- How effective will the rockfall catchment systems (drape and barrier) be? They are designed to hold back 90% or more of potential rockfalls.

- How were the outer edges of the rockfall area determined? History and maintenance reports were used to determine the length of the project area.
- Other comments received about the rockfall alternatives:
  - A few people believed the rockfall benches were more aesthetically appealing than the rockfall barrier and rockfall drape.
- Do any of the alternatives impact the cemetery? The rockfall benching alternative is the only alternative that could potentially impact the cemetery. Additional analysis is needed before a determination can be made. The intersection alternatives were designed to not impact the cemetery.
- Which intersection alternatives increase the driving time between the Chloe Ridge neighborhood and the Pikeville Medical Center? Alternative seven is the only alternative that does not modestly increase this distance.
- If the school traffic is redirected to KY 1460, what is the harm in leaving Summit Drive's access to KY 1426? As the traffic demand increases you lose the ability to run these signals efficiently. This increases the overall delay to the system, particularly along the Bypass.
- Other comments received about the intersection alternatives:
  - Any intersection alternative that does not eliminate a signal on the Bypass was not thought to be an overall improvement.
  - Adding a northbound left turn lane on KY 1426 at the Huffman Avenue Intersection was thought to be a good idea no matter which alternative was selected.

The meeting displays will be available at the KYTC District offices and additional public comments may be submitted. The public meeting information and comments received will be included in the official meeting record.

The meeting closed at 7:00 p.m.

# MINUTES

## Third Project Team Meeting

### KY 1426 Transportation Study Pike County

KYTC Central Office  
Frankfort, Kentucky  
January 30, 2008  
12:30 PM

A project team meeting for the KY 1426 Transportation Study in Pike County was held at 12:30 p.m. (local time) on Wednesday, January 30, 2008, in Frankfort, Kentucky. The purpose of the meeting was to discuss the public input, the tier 2 analysis performed by WSA and possible study recommendations. Participants in the meeting included staff from the Kentucky Transportation Cabinet (KYTC) Central Office, the KYTC District 12 Office and the consultant firm Wilbur Smith Associates (WSA). Meeting attendees included the following persons:

Keith Damron	KYTC District 12, Planning
Kevin Damron	KYTC District 12, Preconstruction
Jim Wilson	KYTC Central Office, Planning
Brad Eldridge	KYTC Central Office, Highway Design
Steve Ross	KYTC Central Office, Planning
Bill Gulick	KYTC Central Office
Robert Brown	KYTC Traffic Operations
Brad Johnson	Wilbur Smith Associates
Len Harper	Wilbur Smith Associates

A summary of the key components and discussion items for this meeting is provided below. These minutes follow the agenda outline which is attached.

#### **1. Welcome and Introduction**

Keith Damron began the meeting, welcoming the participants and asking for formal introductions from all attendees. He noted that this would be the last project team meeting.

#### **2. Purpose of the Meeting**

The purpose of the meeting was to look at the results from the public meeting, discuss the additional analysis performed by WSA, and agree to a set of alternative recommendations.

### **3 & 4. Review of Rockfall & Intersection Alternatives**

Mr. Johnson briefly discussed the Rockfall and Intersection Alternatives. Everyone from the project team was familiar with these Alternatives so not much discussion was warranted.

### **5. Public Meeting Survey Results**

A stakeholders meeting was held at 2:00 pm Local Time on Thursday, November 8, 2007 at the Pikeville Fire Department in Pikeville, Kentucky. This meeting was followed by a public involvement open house from 5:00 p.m. to 7:00 p.m. at the Pikeville Fire Department in Pikeville, Kentucky. WSA gathered the comments and survey results from these meetings and presented this information to the group. The following is a summary of those results:

- The majority of people surveyed said KY 1426, KY 1460 and the School Road should be improved. They also felt the intersections of KY 1426 & KY 1460 and KY 1426 & Summit Drive should be improved.
- 8 out of 13 people felt Summit Drive should not be improved.
- When asked about the existing problems in the study area; the surveys revealed the rockfall as being the biggest concern. The surveys also showed congestion, narrow lanes and safety as being major concerns.
- Preferred alternatives:
  - When asked which intersection alternative they liked the best, Alternative 7 was the preferred alternative on 12 of the 19 surveys.
  - When asked which rockfall alternative they liked the best, Alternative A (Benching) was the preferred alternative on 10 of the 17 surveys. Alternative B (Barrier) was the preferred alternative on the other 7 surveys.
- The Mayor and City Commissioners endorsed Alternative 1 as the preferred alternative to improve the intersections in question and Alternative B as the preferred alternative to fix the rockfall in question. The commission felt the alternatives they selected would be the most economical and reasonable way to address the issues that exist.

It should be noted that the public involvement open house was heavily attended by an organized group from the Chloe Ridge Development Home Owners Association. The Chloe Ridge Development sits at the top of Summit Drive.

### **6. Tier 2 Evaluation**

The Tier 2 Evaluation focused on the intersection alternatives, specifically looking at additional crash and operations analysis. The crash analysis was reviewed, specifically at the high crash segment along KY 1426 at and between the KY 1460 and Summit Drive intersections. WSA found that 21 of the 27 accidents in this segment involved two or more vehicles and resulted in a variety of crash types. Of these accidents, 18 occurred during dry conditions. This suggests that reducing the number of stops and reducing conflict points has the potential to improve crash occurrences at this location.

WSA evaluated the proposed left turn lane on KY 1426 at the Huffman Avenue intersection and presented the findings. They found that the left turn lane gave the study area a 5 to 6 percent reduction in system delay. If the proposed intersection alternatives were completely constructed, you achieve an additional 5 to 10 percent reduction in system delay. This leads to the conclusion that the intersection alternatives get about a third to a half of their derived operational benefit from the \$200,000 to \$300,000 left turn lane. This turn lane would also have the potential to reduce crashes shown to occur at this intersection. It was suggested that WSA look at a way to quantify the crash reduction potential of adding a left turn lane.

Additional operations analysis was also conducted on the AM traffic volumes. When these AM volumes were initially looked at, the traffic simulation models showed the overall operations performance getting worse for the majority of the alternatives. A deeper look at the school traffic showed that the majority of the school traffic does not use KY 1460, but instead come from KY 1426 and Huffman Avenue. If the School Access Road is realigned to "T" with KY 1460, a good portion of that traffic is now being forced to use KY 1460. When you combine this school traffic with the KY 1460 morning rush hour traffic there is a negative effect on the overall traffic operations of the study area. WSA evaluated the intersection with a signal to simulate a traffic cop at the intersection, but this provided little system benefit.

## **7. Study Recommendations**

After careful consideration of all the parameters, public input, analysis and project issues, the Project Team recommended Alternative B as the preferred rockfall alternative. While constructing the barrier it is recommended that a northbound left turn lane be added to KY 1426 at the Huffman Avenue intersection. Adding this turn lane would also require some additional overlay and restriping.

Due to the current state budgetary concerns, the Project Team has decided not to recommend an intersection alternative at this time, but instead would recommend Alternatives 1 and 7 be evaluated in more detail at a future date as funding becomes more readily available. At which time special consideration should be given to the school traffic and its direct impact on traffic operations within the study area.

## **8. Project Priorities**

Correction of the rockfall was identified as the top priority. As previously stated, the Project Team recommends Alternative B. In order to eliminate the possibility of multiple disruptions to KY 1426, the proposed northbound left turn lane could be added to KY 1426 at the Huffman Avenue intersection at the same time as the rockfall alternative is constructed. Otherwise it would be considered the second project priority.

As traffic increases and at which time funding becomes available Alternatives 1 and 7 should be evaluated further.

### **9. Potential Issues**

Two additional questions were asked concerning the crash analysis. What is the quantitative safety benefit of the left turn lane on KY 1426? What time of day are the accidents occurring along the high crash segment and what can be inferred from this?

WSA will take a deeper look at these questions and include the findings in the report.

### **10. Group Discussion**

Most of the group discussion occurred as each topic was presented. No additional discussion was warranted.

### **11. Next Steps**

WSA will address the project teams concerns and continue writing the report. The Draft Report will be provided to the Project Team for review in February.

The meeting was adjourned around 2:30 p.m.

**AGENDA**  
**KYTC Project Team Meeting**  
**KY 1426 Transportation Study**  
**Pike County**

**KYTC Central Office**  
**Frankfort, Kentucky**  
**January 30, 2008**  
**12:30 p.m.**

- |  |   |
|--|---|
| <b>1. Welcome and Introductions</b>                  | <b>KYTC</b>                                       |
| <b>2. Purpose of Meeting</b>                         | <b>KYTC</b>                                       |
| <b>3. Review of Rockfall Alternatives</b>            | <b>Wilbur Smith Associates</b>                    |
| <b>4. Review of Intersection Alternatives</b>        | <b>Wilbur Smith Associates</b>                    |
| <b>5. Public Meeting Survey Results</b>              | <b>Wilbur Smith Associates</b>                    |
| <b>6. Tier 2 Evaluation</b>                          | <b>Wilbur Smith Associates</b>                    |
| <b>a. Crash Analysis</b>                             |   |
| <b>b. Operations Analysis (incl. Left-Turn Only)</b> |   |
| <b>7. Study Recommendations</b>                      | <b>Wilbur Smith Associates</b>                    |
| <b>8. Project Priorities</b>                         | <b>Wilbur Smith Associates</b>                    |
| <b>9. Potential Issues</b>                           | <b>Wilbur Smith Associates</b>                    |
| <b>10. Group Discussion</b>                          | <b>KYTC District 12/<br/>Division of Planning</b> |
| <b>11. Next Steps</b>                                | <b>KYTC/WSA</b>                                   |
| <b>12. Adjourn</b>                                   | <b>KYTC</b>                                       |