

**APPENDIX C
PROJECT TEAM
MEETING MINUTES**



Architecture

Engineering

Construction

MEETING MINUTES

Project: US 41A (Green Street) Scoping Study
Item Number 02-140.00
Purpose: Project Team Meeting #1,
Place: Kentucky Transportation Cabinet (KYTC) District 4 Conference Room,
 Elizabethtown, Kentucky
Meeting Date: May 30, 2008 10:30 am EST
Prepared By: Doug Heberle
In Attendance:

Kevin McClearn	KYTC – D2
C.D. Palmer	KYTC – D2
Nick Hall	KYTC – D2
J.R. Ham	KYTC – CO
Greg Curtis	Qk4
Tom Springer	Qk4
Doug Heberle	Qk4

INTRODUCTIONS: Tom Springer opened the first Project Team Meeting by asking the attendees to introduce themselves. An agenda and a folder containing handouts were given to all the attendees.

STATUS OF STUDY: Tom Springer and Doug Heberle then presented a power point and provided descriptions of the project study area, scope of work, and schedule. The project proposes a two way left turn lane on US 41A from US 60 to US 41 in Henderson, a distance of about 4 miles. The study will examine alternatives to address both current and future safety needs and congestion issues.

OTHER PROJECTS: Two projects in the study area were acknowledged as were their relationships to this project. These other projects are KYTC Items Nos: 2-126 (currently under construction) and 2-966 (under construction in approximately 12-15 months). 2-126 is reconstruction of US 60 from KY 425 to US 41A in West Henderson to alleviate traffic flow problems. The design of 2-126 is a 5-lane section with on-road designed 3-foot wide bike lanes, and curb and gutter with sidewalks. 2-966 is to widen US 41A at KY 136 for a left turn lane. KYTC provided Qk4 with the plans sheets for these two projects and the available as-built sheets for US 41A.

EXISTING CONDITIONS: Doug reviewed the handouts describing the existing conditions of the area. The study area is a high crash corridor. Maps of the study area portraying the existing conditions such as Average Daily Traffic (ADT) counts, crash data, roadway conditions, and environmental conditions were provided to the Project Team members. Doug Heberle and Tom Springer presented a photo tour of the study area, which illustrated the character of the downtown, parking situations, and some potential problem areas. Other similar studies done in Henderson were the Green Street Corridor Study in 1999 and the Evansville Congestion Management System Study in July 2004. The recommendations proposed in the Green Street Corridor Study were reviewed and it was determined that most likely they were not implemented. KYTC will check and advise at the next Project Team Meeting whether or not these recommendations have been addressed.

PROJECT ISSUES AND GOALS: The issues for this project were defined as:

- US 41A is a highly congested highway that operates at a less than desirable level of service. Several intersections with US 41A including US 60, KY 136, KY 351, and others are not adequate due to safety deficiencies and congestion issues.
- 2007 ADT ranged from 19,600 to 30,100, with 9% trucks.
- In the study area, US 41A exhibits the characteristics of a high crash corridor, with two fatalities from 2003 to 2007.
- Many businesses, homes, and historic properties abut the existing rights-of-way
- Many utilities are located adjacent to the existing rights-of-way. It was noted that for Item 2-966, the utility relocation costs for this one intersection improvement were \$1.1 million, which was more than construction.
- Railroad track overpass is a major choke point to be addressed
- There are many misaligned intersections along the corridor in the study area.

The Project Goals were defined as:

- Address highway capacity and growth needs and congestion in Henderson County
- Improve safety

ALTERNATIVES

In addition to studying adding a center turn lane to US 41A, Qk4 was also requested to identify low-cost, practical solutions to the corridor that would be implemented cheaper and easier than adding a 5th lane.

Because bicycle lanes have been included in the design of Item 2-126; therefore, they will be considered for the US41A corridor.

Within the final report, long-term concepts, such as one-way couplets with Elm Street, bypasses, and others need to be addressed even if they are not advanced.

Design options to allow left-turn storage at an intersection may be considered. One example in Evansville was provided, which shifts all traffic to the right lane, and then left-turn traffic can enter into a protected area and wait to turn without blocking through traffic.

NEXT STEPS:

- Develop alternative concepts
- Send Resource Agency Coordination material to David Martin at KYTC CO, with an email carbon copy to J.R. Ham.
- KYTC will contact Green River ADD regarding the EJ report.
- KYTC will provide Qk4 with signal timing information.

- Qk4 will contact EMPO regarding the availability of traffic forecasts, and if none are available from them, then Qk4 will contact Scott Thompson at Division of Planning.

END OF MINUTES

File Id: 07403.000

File Name: PTM 1 Meeting Minutes 5-30-08

Agenda
US 41A (Green Street)
Item # 02-140.00
Scoping Study
Project Team Meeting # 1

Date: May 30, 2008
Time: 10:30 a.m.
Location: KYTC District 4, Elizabethtown, KY

1. Introductions
2. Status of Study
 - a. Study Area
 - b. Scope of Work
 - c. Schedule
3. Other Projects in Area
 - a. 2-126 (Reconstruct US 60 from KY 425 to US 41A to alleviate traffic flow problems)
 - b. 2-966 (Widening of US 41A at KY 136 in Henderson to construct left turn lane)
4. Existing Conditions
 - a. Photo Tour of Area
 - b. Review Traffic, Crash, and HIS Information
 - c. Other Studies:
 - Evansville Congestion Management System Study, July 2004
 - Green Street Corridor Study
5. Discuss Project Goals and Issues
6. Next Steps
 - a. Develop Preliminary Alternative Concepts
 - b. Resource Agency Coordination
 - c. Preliminary alternatives to be presented at next Project Team Meeting

**US 41A Green Street, Scoping Study
Project Team Meeting 1
Item No. 02-140.00
May 30, 2008**

KYTC, D4 Conference Room, Elizabethtown, KY

NAME	REPRESENTING	PHONE #	EMAIL
KEVIN McCLEARN	KYTC - D2	270-824-7080	Kevin.McClearn@ky.gov
C.D. PALMER	KYTC - D-2	270-824-7080	C.D.PALMER@ky.gov
Nick Hall	KYTC - D2	270-824-7080	nick.hall@ky.gov
Greg Curtis	QK4	812-454-3097	gcurtis@gk4.com
J.R. HAMA	KYTC - CA	502-564-7183	James.HAM@ky.gov
Doug Heberle	QK4	502-992-2929	dheberle@gk4.com
Tom Springer	QK4	502-992-2891	tspringer@gk4.com

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Architecture

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MEETING MINUTES

Project:	US 41A (Green Street) Scoping Study	
Item Number	02-140.00	
Purpose:	Project Team Meeting #2,	
Place:	Kentucky Transportation Cabinet (KYTC) District 4 Conference Room, Elizabethtown, Kentucky	
Meeting Date:	February 26, 2009 10:30 am EST	
Prepared By:	Doug Heberle	
In Attendance:	George Phelps	KYTC – D2
	Everett Green	KYTC – D2
	Nick Hall	KYTC – D2
	David Martin	KYTC – CO
	Jill Asher	KYTC – CO
	Bruce Siria	Qk4
	David Kratt	Qk4
	Kirk Reinke	Qk4
	Tom Springer	Qk4
	Doug Heberle	Qk4

INTRODUCTIONS: Doug Heberle opened the second Project Team Meeting by asking the attendees to introduce themselves and sign the sign-in-sheet. An agenda and handouts were given to all the attendees. The project proposes a two way left turn lane on US 41A from US 60 to US 41 in Henderson, a distance of about 4 miles. The study examines alternatives to address both current and future safety needs and congestion issues.

PROJECT ISSUES AND GOALS: The issues for this project were defined as:

- US 41A is a highly congested highway that operates at a less than desirable level of service. Several intersections with US 41A including US 60, KY 136, KY 351, and others are not adequate due to safety deficiencies and congestion issues.
- 2007 ADT ranged from 19,600 to 30,100, with 9% trucks
- In the study area, US 41A is a statistically high crash corridor, with two fatalities from 2003 to 2007
- Many businesses, homes, and historic properties abut the existing rights-of-way
- Many utilities are located adjacent to the existing rights-of-way
- Railroad track overpass is a major choke point to be addressed
- There are many offset intersections along the corridor in the study area

The Project Goals were defined as:

- Address highway capacity and growth needs and congestion in Henderson County
- Improve safety

STATUS OF STUDY: Doug Heberle then presented an overview of the existing conditions of the study area and described the five sections into which the project has been divided. The five sections of the study area are as follows:

Section 1: US 60 to KY 136 (Sand Lane): (MP 13.2 – MP 14.5)

Section 2: KY 136 (Sand Lane) to Washington Street: (MP 14.5 – MP 15.6)

Section 3: Washington Street to 3rd Street: (MP 15.6 – 15.9)

Section 4: 3rd Street to 5th Street: (MP 15.9 – MP 16.2)

Section 5: 5th Street to 14th Street: (MP 16.2 – MP 17)

The proposed 86' wide typical section was presented and reviewed. The typical section matches the adjacent section of US 41A to the south that has been recently let for construction, and includes four 11-foot travel lanes, 1 14-foot wide center turn lane, 3-foot bikes lanes on both sides and a 2-foot gutter, and 5-foot sidewalks on both sides. A matrix was also presented that showed the phased costs of the widening alternatives for the left, middle, and right, with respect to the existing alignment.

ALTERNATIVES: Only three of the five sections of the study area were considered to be widened. Those sections are 1, 2, and 5. Section 3 is currently five lanes and Section 4 contains a railroad overpass that would have to be rebuilt in order to widen the roadway underneath. Maintenance of rail traffic would be problematic and very costly; therefore reconstruction of this section is not recommended at this time. Phased planning cost estimates and ROW impacts were presented for widening to the left, middle, and right of Sections 1, 2, and 5. Large maps of the project study area that highlighted widening alternatives (left, middle, and right) as well as historic and potentially historic properties. Elements of the proposed typical section were discussed. KYTC District 2 indicated that they were willing to consider making modifications to reduce costs and impacts if and when more detailed studies of the these alternatives are warranted.

In addition to studying the addition of a center turn lane to US 41A, Qk4 also identified low-cost, practical solutions to the corridor that could be implemented more expeditiously and cost effectively than adding a center turn-lane lane. The primary focus for these improvements is at several project area intersections.

- 1) **MLK Ave. /Dixon St. at Green Street:** Currently there are no left-turn lanes on MLK or Dixon to facilitate left turns onto Green Street. The traffic signal is a single phase. The CRF is 2.7.

Recommendation: Consider split phase signal at this offset intersection.

- 2) **Clay Street at Green Street:** This unsignalized and offset intersection has a high critical crash rate factor (2.9) with a higher-than-normal occurrence of “angle” crashes.

Recommendation: Conduct warrant study for possible signal at this offset intersection. If warranted, consider split phase timing.

- 3) **Washington Street at Green Street:** Both approaches of Washington Street have left-turn lanes, but no left-turn signal phases. Washington Street is slightly offset, but a left-turn signal is preferable to a split-phase signal. The CRF is 2.7

Recommendation: Evaluate traffic signal timing for consideration of a left-turn signal phase.

- 4) **First Street at Green Street:** All four approaches have a left-turn lane. This is not an offset intersection. Currently, only northbound Green Street has a left-turn phase at this intersection. The CRF is 2.75.

Recommendation: Evaluate traffic signal phasing/timing for possible additional left-turn signal phases on the other three approaches.

- 5) **Second Street at Green Street:** Southbound Green Street has a left-turn lane and signal phase; northbound Green Street has a left-turn lane and signal head, apparently for left turns, but no left-turn phase (at 11:30 a.m.). Also, westbound Second Street has a left-turn lane and phase, but eastbound Second has a "left-and-thru" lane with no left-turn signal phase. The CRF is 3.6.

Recommendation: Evaluate traffic signal timing to identify if there is a need for a left-turn phase at eastbound Second Street, which would necessitate restriping "left-and-thru" lane to "left only", but through volumes may be too high to justify a left only. The signal timing evaluation should include analysis of whether Green Street gets too much green time relative to Second Street.

- 6) **Fifth Street at Green Street:** Fifth Street has left-turn lanes, but no left-turn signal phase. The CRF is 3.9.

Recommendation: Evaluate traffic signal timing for consideration of a left-turn signal phase.

- 7) **Tenth Street at Green Street:** This unsignalized and offset intersection has a high critical crash rate factor (2.2). In addition, there is a significant lack of channelized access east of 10th Street.

Recommendation: Conduct warrant study for possible signal at this offset intersection. If warranted, consider split phase timing.

- 8) **Twelfth Street at Green Street:** Twelfth Street currently has both split phase signal and left-turn arrows, but there are no left-turn lanes on either Twelfth Street approach at Green Street. This intersection is significantly offset (70' from centerline to centerline).

Recommendation: Determine the reasoning for the synchronized dual combination structure of the split phase signal and left-turn green arrow.

- 9) **Fourteenth Street at Green Street:** It appears that 14th Street may be a "backdoor exit" to Green Street and access for hospital traffic. There are currently no turning lanes on any approaches at this intersection.

Recommendation: A signal warrant analysis at 14th Street may be advisable (unless KYTC has done one in the last year or so).

Running speed on Green Street appears to be free flow of about 40 mph. Currently, the posted speed limit is 35 mph. The free flow speed of 40 mph on Green Street should be reduced due to the abundance of un-channelized side access. This might also help mitigate crash problems in the vicinity of the railroad underpass.

Recommendation: Reduce the posted speed limit to 30 mph, and enforce it.

Miscellaneous immediate and low cost applications:

- Utility pole delineation with reflective tape
- Speed limit markings on the pavement
- Electronic Speed Displays

ALTERNATIVE CONCEPTS CONSIDERED BUT NOT ADVANCED: It was noted that two other alternative concepts were considered but are not recommended for advancement: one-way couplets and a “road diet” (i.e., reducing the road from four lanes to three). The one-way couplets would require the conversion of Elm Street to a one-way facility. Elm Street is currently a divided roadway with a raised landscaped median through a residential area, and is offset at some intersections. For these reasons it would not provide an optimum situation to be a one way street. Regarding the road diet, research indicates that only roads with a maximum volume of 850 vph have been successful in improving traffic flow after a reduction of lanes. For US 41A the approximate peak hour volumes are 1,900 to 3,000 vph. Therefore this option is not recommended.

NEXT STEPS: First, the District 2 staff, including Kenny Potts, Branch Manager for Engineering Support, will review the low-cost, practical solutions recommendations from QK4. After this internal review, the project team will present the preliminary alternatives (widening options and short-term options) with the proposed typical sections to the stakeholders and public officials in Henderson, tentatively planned for Monday, April 13, 2009. A preliminary list of stakeholders will be developed by Qk4 and forwarded to KYTC to complete and/or review at their discretion. The goal of this meeting is to discuss the goals of the project, existing conditions, both long-term and short-term options, and to get the stakeholders input on the long term options, and their prioritization of the short-term options. In the meantime, KYTC District-2 will review the cost estimate assumptions Qk4 developed. QK4 will also provide digital copies of the widening alternatives to George Phelps in District 2.

It was also determined that after the initial meeting with local officials, KYTC will initiate coordination with Resource Agencies.

END OF MINUTES

Agenda
US 41A (Green Street)
Project Team Meeting # 2
Item No. 02-140.00
February 26, 2009
KYTC D4 Conference Room, Elizabethtown, KY

Date: February 26, 2009
Time: 10:30 a.m.
Location: KYTC District 4, Elizabethtown, KY

1. Introductions
2. Status of Study
 - a. Preliminary Widening Alternatives and Constraints
3. Project Recommendations
 - a. Long-Term Widening Recommendations
 - a. 5 Sections
 - b. Typical Section
 - c. 3 Options
 - b. Short-Term Improvements
 - a. Priority Sections
 - b. Spot Improvements
 - c. Operational Improvements
4. Other Projects in Area
 - a. 2-126 (Reconstruct US 60 from KY 425 to US 41A to alleviate traffic flow problems)
 - b. 2-966 (Widening of US 41A at KY 136 in Henderson to construct left turn lane)
5. Next Steps
 - a. Resource Agency Coordination
 - b. 2 meetings with local officials



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MEETING MINUTES

Project: US 41A (Green Street) Scoping Study
Item Number 02-140.00
Purpose: Project Team Meeting #3,
Place: Kentucky Transportation Cabinet (KYTC) District 2 Conference Room,
 Madisonville, Kentucky
Meeting Date: August 5, 2009 10:00 am CST
Prepared By: Doug Heberle
In Attendance:

Kevin Gentry	KYTC – D2
George Phelps	KYTC – D2
Kevin McClearn	KYTC – D2
Kenny Potts	KYTC – D2
Everett Green	KYTC – D2
J.R. Ham	KYTC – CO
Tom Springer	Qk4
Doug Heberle	Qk4

INTRODUCTIONS:

Doug Heberle opened the third Project Team Meeting by reviewing the outcomes of the last project team meeting and the local officials meeting. An agenda and handouts were given to all the attendees. The project proposes a two way left turn lane on US 41A from US 60 to US 41 in Henderson, a distance of about 4 miles. The study examines alternatives to address both current and future safety needs and congestion issues.

PROJECT ISSUES AND GOALS:

The issues for this project were defined as:

- US 41A is a highly congested highway that operates at a less than desirable level of service. Several intersections with US 41A including US 60, KY 136, KY 351, and others are not adequate due to safety deficiencies and congestion issues.
- 2007 ADT ranged from 19,600 to 30,100, with 9% trucks
- In the study area, US 41A is a statistically high crash corridor, with two fatalities from 2003 to 2007
- Many businesses, homes, and historic properties abut the existing rights-of-way
- Many utilities are located adjacent to the existing rights-of-way
- Railroad track overpass is a major choke point to be addressed
- There are many offset intersections along the corridor in the study area

STATUS OF STUDY:

Tom Springer and Doug Heberle presented an overview of the study area and described the five sections into which the project has been divided, as follows:

Section 1: US 60 to KY 136 (Sand Lane): (MP 13.2 – MP 14.5)

Section 2: KY 136 (Sand Lane) to Washington Street: (MP 14.5 – MP 15.6)

Section 3: Washington Street to 3rd Street: (MP 15.6 – 15.9), existing 5 lane section

Section 4: 3rd Street to 5th Street: (MP 15.9 – MP 16.2), railroad overpass

Section 5: 5th Street to 14th Street: (MP 16.2 – MP 17)

Section 4 contains the rail road overpass. Since the last meeting, Qk4 was asked to produce a planning level cost estimate to rebuild the railroad overpass over US 41A near the intersection of 4th Street. A schematic and profile was presented that illustrated the necessary run-around track that would run parallel to the existing track 2,900 feet, thereby providing an opportunity to reconstruct the railroad overpass that spans US 41A. This plan also includes two other railroad overpasses over Ingram Street and Elm Street. Under this plan, the existing track would be abandoned once the construction of the new overpasses and track was complete. The total cost estimate for this project is \$7,300,000.

The existing (2007) and future (2030) ADT, LOS, and percentage of truck traffic on US 41A in the study area were also discussed.

ALTERNATIVES:

Phased planning cost estimates and ROW impacts were presented for widening to the left, middle, and right of Sections 1, 2, 4, and 5. Large maps of the project study area that highlighted widening alternatives (left, middle, and right) as well as historic and potentially historic properties. Elements of the proposed typical section were discussed.

Points discussed regarding the cost estimates:

The current reconstruction project of US 60, that ties into the southern terminus of the study area, is experiencing increased utility costs due to unknown utilities in the ROW that are being encountered during the construction. It is therefore recommended to increase the utility cost for this project (the specific amount will be provided by KYTC D2) because similar conditions are anticipated of US 41A reconstruction.

It was decided that engineering costs be increased from 10% to 22% of construction cost.

The project team revisited why bicycle lanes are not practical on US 41A: ROW is restricted, relocation and ROW costs would increase significantly if bicycle lanes were installed, high traffic volumes on this corridor, coupled with the un-controlled access and numerous curb cuts, make bicycle activity hazardous, and there is an ample parallel streets grid network with significantly less traffic volume that could better accommodate bicycle lanes. Qk4 was asked to research if there is a local bicycle plan for the community of Henderson, and what, if anything, it says about the US 41A corridor.

The segments of US 41A were prioritized for reconstruction. They are listed below in order of priority:

1. Section 5: highest traffic volume, most commercial land uses, high left turn volume.
2. Section 1: provides logical terminus with the current reconstruction of US 60, no restrictions due to the presence of historic properties.
3. Section 2: mostly residential land uses and there are historic property issues to be addressed.
4. Section 4: is the lowest priority due to the extremely high cost of the reconstruction of the rail road overpass that is necessary to widen US 41A underneath.

ALTERNATIVE CONCEPTS CONSIDERED BUT NOT ADVANCED:

It was noted that two other alternative concepts were considered but are not recommended for advancement: one-way couplets and a “road diet” (i.e., reducing the road from four lanes to three). The one-way couplets would require the conversion of Elm Street to a one-way facility. Elm Street is currently a divided roadway with a raised landscaped median through a residential area, and is offset at some intersections. For these reasons it would not provide an optimum situation to be a one way street. Regarding the road diet, research indicates that only roads with a maximum volume of 850 vph have been successful in improving traffic flow after a reduction of lanes. For US 41A the approximate peak hour volumes are 1,900 to 3,000 vph. Therefore this option is not recommended.

In addition to studying other alternatives to widening US 41A, Qk4 also identified low-cost, solutions to the corridor that could be considered to improve the flow and safety of US 41A. Such options included adjustment to the existing traffic standards. Upon KYTC review, it was recommended that these short term improvements be provided to District 2 staff for further consideration and not included in the Final Report.

NEXT STEPS:

Qk4 will obtain utility costs from Kevin McClearn and distribute the updated cost spreadsheet, and provide it to Kevin to have D2 staff review and finalize the figures.

END OF MINUTES

Agenda
US 41A (Green Street)
Project Team Meeting # 3
Item No. 02-140.00
August 5, 2009
KYTC D2, Madisonville, KY

Date: August 5, 2009
Time: 10:00 a.m.
Location: KYTC District 2, Madisonville, KY

1. Introductions
2. Future ADT and LOS
3. Status of Resource Agency Coordination Feedback
4. Recommended Alternatives:
 - a) Review of Railroad Overpass Reconstruction
 - b) Select Preferred Short-Term Alternatives
 - c) Select Recommendations for the Planning Study

Handouts:

Current and Future ADT & LOS

Railroad Relocation Estimate Sheet

Widening Alternatives Cost Estimates

Ranked Short Term Alternatives from Local Officials Meeting

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