

PROJECT TEAM MEETING NO. 1
Item No. 06-446.00
Mall Road Interchange Connector Scoping Study
Boone County

Thursday, August 1, 2019 – 10:00 AM
KYTC District 6 – Covington
KYTC Central Office by Video Link

In Attendance:

Mike Bezold	KYTC District 6 Project Dev.
Carol Callan-Ramler	KYTC District 6 Program Mgmt
Nikki Hill	KYTC District 6 Planning
Stacey Hans	KYTC District 6 Staff Assistant
Ellen Gregory	KYTC District 6 Design
Scott Gabbard	KYTC District 6 Design
Dane Blackburn	KYTC District 6 Planning
Steve DeWitte	KYTC CO Planning
Tonya Higdon	KYTC CO Planning
Mikael Pelfrey*	KYTC CO Planning
Steve Ross	KYTC CO Planning
Scott Thomson*	KYTC CO Planning
Jayalakshmi Balaji	KYTC CO Planning
Elizabeth Niemann	KYTC CO Planning
Jacob Huber	KYTC CO Planning
Matt Lawson	KYTC CO Planning
David Souleyrette	KYTC CO Planning
Kevin Sandefur	KYTC CO Design
Robert Koehler	OKI
Jeff Thelen	NKADD
Rebecca Thompson	Qk4
Jeremy Lukat	Qk4

**by videoconference*

Mike Bezold opened the meeting, and after attendee introductions, provided a brief overview of the study. Rebecca Thompson presented the existing conditions data, working from the attached slides. Three state-maintained routes (US 42, KY 237, and KY 842) plus Mall and Cayton Roads in Florence are identified as study routes. A new connector is proposed—from the Mall Road interchange with I-71/I-75 to KY 237—to relieve congestion and safety issues along US 42 through improved east-west connectivity.

There have been several previous studies in the vicinity and a number of other transportation projects are under construction. The OKI model used includes every project with identified construction funds in its network. Current lane widths are 11 – 12 feet throughout, with an ongoing construction project on KY 237 widening the existing two-lane section. US 42 and KY 237 are classified as urban principal arterials; KY 842 and Mall Road are urban minor arterials. Sidewalks run along US 42, KY 842, and the improved section of KY 237. The 2019 Bike/Ped Plan for the City of Florence identifies multiuse path needs along the remaining study routes. The Transit Authority of Northern Kentucky (TANK) is updating their network plan, with the potential to expand community service from the new Florence hub.

Crash records in the study area from 2014–2018 show 1,110 crashes with no fatalities and 128 injury collisions. The predominant crash type is rear end (51%). Analysis identified six segments and eight 0.1-mile spots having high Critical Crash Rate Factors (CCRF), suggesting crashes happening with greater frequency than may be attributed to random occurrence. For comparison, safety data from the SHIFT 2020 process were mapped, which were developed utilizing

Highway Safety Manual methodology. Both analyses showed consistent, above average crash rates along US 42 and Mall Road.

Two crashes with bicycles and four pedestrian strikes were reported in the dataset, three clustered at the US 42/Mall Road intersection. The following map identifies their locations. Three pedestrian crashes and one bicycle crash resulted in injuries.



Environmentally, red flag constraints within the project boundary include Lincoln Woods Park, AM Yealey Elementary School, homes, and a grass airstrip off KY 842 that may no longer be active. The Navy Recruiting Station off Mall Road is not environmentally protected but could pose unique challenges. Cross-referencing previous studies for adjacent projects will provide additional information about potential historic resources. Due to the density of housing and proximity of the conceptual corridor of the connector, noise mitigation could be warranted at the Paddock Club Apartments, Villages of Florence, and Boone Valley Estates subdivision. Also noise-sensitive, the park and school could be an issue depending on usage, as could any non-relocated homes abutting a new connector.

Traffic analyses are ongoing. Preliminary model results have been received from OKI. The microsimulation model (Vissim, version 10) is under development. Qk4 will set up an in-person coordination meeting with the KYTC's Modal Branch in the coming weeks to discuss assumptions, calibration, and preliminary results in greater detail. Preliminary model results show 16,000 to 28,000 vehicles per day (vpd) using a new three-lane connector, and 22,000 to 32,000 vpd using a five-lane connector.

- No recent turning movement counts are available for the US 42/KY 842 intersection, currently under construction.
- OKI's new ABM model was used for the preliminary traffic analysis.
- Obtaining third-party origin/destination data was originally discussed during the scoping process. As these data are built into the OKI model calibration process, additional data were not purchased for the contract. This should be documented as part of the Forecast Report.
- Background household growth assumptions were reviewed. Adjusting growth assumptions in TAZ 2209 and 2151 to reflect the Reykamp development may be warranted. Qk4 will coordinate with OKI. The slide 29 graphic should be revised to colorize TAZ by anticipated growth levels.
- Microsimulation may not be warranted for a standard planning study but the intent is to move into the design process this fall. Therefore a microsimulation model is under development.
- The three-lane concept should be carried forward into the preliminary design process before that option is formally dismissed. The No Build Alternative should be carried forward as well.

The preliminary corridor shown has not been designed, only roughly sketched in: the curve at the western end should not be seen as an intentional design feature. Following a review of the draft Purpose and Need Statement, the meeting wrapped up with a review of next steps:

- Qk4 will provide a summary of the meeting, including a PDF copy of the slides shown.
- Qk4 will continue to build the Vissim model and set up a coordination meeting with the KYTC Modal Branch in the coming weeks.
- Resource agency coordination will occur after the second Project Team Meeting.
- Qk4 will run 3- and 5-lane templates along the conceptual corridor to estimate costs and impacts.
- The second Project Team Meeting will be scheduled for October.

PROJECT TEAM MEETING NO. 2
Item No. 06-446.00
Mall Road Interchange Connector Feasibility Study
Boone County

Wednesday, November 20, 2019 at 1:00 PM
KYTC District 6, Covington
KYTC Central Office by Video Link

In Attendance:

Mike Bezold	KYTC District 6 Project Dev.
Bob Yeager	KYTC District 6 CDE
Nikki Hill	KYTC District 6 Planning
Stacey Hans	KYTC District 6 Staff Assistant
Sharon James	KYTC District 6 Environmental
Ellen Gregory	KYTC District 6 Design
Scott Gabbard	KYTC District 6 Design
Dane Blackburn	KYTC District 6 Planning
Matt Yeager	KYTC Utilities
Kyle Rust	KYTC Right-of-Way
Steve DeWitte	KYTC CO Planning
Tonya Higdon	KYTC CO Planning
Mikael Pelfrey*	KYTC CO Planning
Jayalakshmi Balaji*	KYTC CO Planning
Elizabeth Niemann	KYTC CO Planning
Jacob Huber*	KYTC CO Planning
Scott Schurman	KYTC CO Environmental
Kevin Sandefur	KYTC CO Design
Robert Koehler	OKI
Jeff Thelen	NKADD
Albert Zimmerman	Qk4
Rebecca Thompson	Qk4
Jeremy Lukat	Qk4

**by videoconference*

Mike Bezold opened the meeting and, after attendee introductions, provided a brief overview of the study.

Jeremy Lukat and Rebecca Thompson presented the updated traffic analysis. Results from OKI's 2040 model were projected to 2045, relying on Vissim microsimulation to calculate performance metrics. The new connector would carry an estimated 14,000-26,000 vehicles per day (vpd) in the three lane scenario or 21,000-32,000 vpd in the four/five lane scenario. US 42 volumes decrease by 6,000-7,000 vpd in the three lane scenario or 9,000-10,000 vpd in the four/five lane scenario compared to the 2045 No-Build volumes. Qk4 will submit the draft *Traffic Forecast Report* for review/comment later this week.

Level of Service (LOS) results show the majority of left turns to/from US 42 operate at LOS E or F during both peak hour scenarios today with queues overrunning available storage lengths in many locations. Mainline US 42 through movements are mostly LOS C or better in the AM scenario, suggesting queues clear the lights each signal cycle. Qk4 will reexamine the microsimulation model, adjusting nodes to account for upstream delays. Current model runs show the system failing in the 2045 No-Build PM peak but improved under either build scenario. **Table 1** summarizes travel times by direction; the final report should focus on travel time or volume-to-capacity ratios instead of individual turn movement LOS results.

Table 1: Travel Time by Direction and Scenario

Scenario	AM	PM
Existing Eastbound	231 sec	239 sec
Existing Westbound	244 sec	270 sec
No-Build Eastbound	349 sec	266 sec
No-Build Westbound	319 sec	1,538 sec
3-Lane Build Eastbound	220 sec	260 sec
3-Lane Build Westbound	259 sec	359 sec
5-Lane Build Eastbound	218 sec	218 sec
5-Lane Build Westbound	219 sec	327 sec

Albert Zimmerman reviewed the build alternatives, which share a centerline. Preliminary designs are based on an urban collector route, with a 45 mph design speed west of KY 842 and a 35 mph design speed to the east. The easternmost section is the same in both scenarios with the Connector Road intersection functioning as a right-in/right-out. In the three-lane scenario, Surfwood Drive remains in place as a frontage road for homes on its north side. In the four/five-lane scenario, driveways tie to the new alignment and function as right-in/right-out connections; a retaining wall or U-turn bulb-outs could be added during future design phases. In the four/five-lane scenario, dual lefts from southbound KY 237 are likely warranted; the cost estimate will be adjusted to reflect this change.

Either build alternative costs around \$25 million with 23-26 residential relocations. At nearly \$15 million, right-of-way is the largest component of project costs.

The team discussed potentially shifting the alignment south to minimize residential relocations. Lincoln Woods Park and the Paddock Club apartment complex may experience greater impacts if shifted; these details can be refined during subsequent design phases. The alternatives shown are preliminary and subject to change; they were used as a representative baseline to calculate preliminary costs and impacts but do not represent a preferred alternative.

Supplemental environmental information since the first project team meeting shows four known archaeological sites in the vicinity. While none are within the preliminary footprint, this suggests a strong probability to encounter other deposits in undisturbed soils. Census data assembled by NKADD shows demographic trends within study area geographies. The block group containing the bulk of relocations exhibits higher concentrations than the county for the five reference populations studied: minority, low-income, elderly, disability, and limited English proficiency.

Steve DeWitte will coordinate the upcoming resource agency mailing. The team discussed recipients; District 6 will reach out to the City of Florence. Elected officials should be removed from the distribution list. The detail level of alternatives as shown during the meeting are appropriate for the mailing. A disclaimer (Preliminary/Subject to Change) should be added to the drawings.

The team discussed the adequacy of the traffic data. Is there value to examining a TSM alternative along US 42? Mike explained that decades of previous US 42 studies—including engineering work for the intersections improvements at Mall Road, KY 842, and KY 237—affirm that six-laning US 42 is necessary to provide adequate capacity. Therefore, this study was scoped to focus on a representative parallel route.

Action Items:

1. Qk4 will submit the draft *Traffic Forecast Report* for review/comment; submitted 11/21.
2. Qk4 will adjust nodes in microsimulation model to account for upstream delays; revised results in attached diagrams.
3. KYTC to send resource agency mailing; sent on December 2nd.
4. Draft report due 12/20.