Appendix E:

Project Team Meeting Summaries

Meeting Minutes

TO: Mikael Pelfrey
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Frankfort, KY 40622

Carol Callan-Ramler
Co-Project Manager
KYTC District 6
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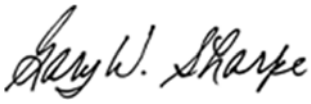
Covington, KY 41017

Deanna Mills
Co-Project Manager
KYTC Central Office
200 Mero Street
Frankfort, KY 40622

FROM: Gary W. Sharpe
Project Manager
Palmer Engineering



DATE: June 30, 2017

SUBJECT: KY 1303 Turkeyfoot Road Scoping Meeting

A Scoping Meeting for the KY 1303, Turkeyfoot Road project was held at the KYTC District 6 Office in Covington, Kentucky on June 16, 2017 at 9:30 A.M. EST. The following individuals were in attendance:

Mikael Pelfrey	KYTC – Central Office Planning
Carol Callan-Ramler	KYTC – District 6 Planning
Deanna Mills	KYTC – Central Office Planning
Robert Yeager	KYTC – District 6
Mike Bezold	KYTC – District 6 Project Dev.
Matt Arlinghaus	KYTC – District 6 Engr Support
Daniel Menetrey	KYTC – District 6 Planning
Scott Thomson	KYTC – Central Office Planning
Neela Saha	KYTC – Central Office Planning
Stacee Hans	KYTC – District 6 Environmental
James Minckley	KYTC – District 6 Traffic
Brooke Collins	KYTC – District 6 Traffic
Andrew Rohne	OKI
Xu Zhang	University of Kentucky
Eileen Vaughan (via teleconference)	KYTC – Central Office Planning
Lynn Soporowski (via teleconference)	KYTC – Central Office Planning
Tonya Higdon (via teleconference)	KYTC – Central Office Planning
Stephen Sewell	Palmer Engineering
Gary Sharpe	Palmer Engineering
Will Conkin	Palmer Engineering
Ashley McLain	Palmer Engineering

Bob Yeager (District 6) welcomed everyone to the meeting while Carol Callan-Ramler (District 6) noted that the purpose of the meeting was to discuss the scope of work for the Planning Study along Turkeyfoot Road, including the Thomas More Parkway and Town Center Boulevard intersections. After introductions, Mikael Pelfrey provided an overview of how the corridor was identified as a project – approximately 40 studies were scored, similar to the ongoing SHIFT process. The Turkeyfoot Road study was #7 on the list, selected as one of the top three under the statewide planning services upset limit of $250,000. The study was the top project identified in District 6.

Project Background and Study Area

Carol, with assistance from others in the District, provided a description of the area, and known issues along the corridor. Several District 6 staff live in the area and travel the corridor regularly. Will Conkin (Palmer Engineering) also lives near the project and uses the corridor regularly. Comments included:

- The project area includes Crestview Hills Mall, Thomas More College, a hospital, an office park, and residential areas.
- Turkeyfoot Road leads to the City of Independence, which generates a lot of traffic along the corridor.
- The project was identified in the Kenton County Transportation Plan, and as an UPL project that needed funding.
- CMAQ funds were used to improve the interchange with I-275 in the mid-2000s. This included adding a northbound right turn lane along Turkeyfoot Road onto the I-275 EB ramp, and a second left turn lane to go WB.
- Traffic backs up along the I-275 EB off ramp down to mainline I-275.
- It is difficult to get in and out of Town Center Boulevard and Thomas More Parkway during peak hours.
- There is considerable weaving in the northbound direction along Turkeyfoot Road.
- There is insufficient storage for left turns along Turkeyfoot Road.
- Queues for Thomas More Parkway Intersection extend beyond Barnwood Drive.
- There is a greenspace area next to the Thomas More baseball field. Thomas More College is actively seeking a development for this area, and has already contacted D6 concerning what access may be possible at this location. Full access would likely not be granted, but a right-in/right-out may be granted.
- In the PM peak, cars at Villa Madonna Drive cannot get through the Thomas More Parkway light in one cycle of the light.
- The right most lane along northbound Turkeyfoot Road is overloaded with cars turning onto I-275 EB.
- Crestview Hills has requested a right turn lane at NB Turkeyfoot Road/Thomas More Parkway.
- A project along Thomas More Parkway was just completed using SNK funds. The project extended the turn lane along Thomas More Parkway past Centerview Boulevard. The final surface and striping was completed about a month ago.
- Horsebranch Road appears to be an alternate route for traffic in the area, as it has some of the highest traffic volume for a non-state maintained road.
- Ambulances can use Horsebranch Road to get to the Hospital.

Real Time Data – Parallel Study

Xu Zhang, representing Mei Chen (University of Kentucky), discussed that the Turkeyfoot Road corridor can be studied as part of an ongoing research project at the University of Kentucky. The program will run parallel to the Planning Study being completed by Palmer Engineering. The program is a SHRP II grant that uses real time data from Google roads. Ultimately the results from this reliability study will be compared to the microsimulation results from Palmer and may be used for validation of study findings.

Available Studies in Project Area

The 2014 Kenton County Transportation Plan identified a couple of projects within the project area. The Turkeyfoot Road project was identified as part of a larger project, but for funding purposes, the Turkeyfoot Road project was extracted as a separate study.

The 2005 Turkeyfoot Road Corridor Traffic Operations Analysis, completed by OKI, was used to develop previously discussed CMAQ projects that constructed turn lanes along Turkeyfoot Road. Due to projects constructed after this report, and changes in traffic, this study is no longer up to date, but still may be used as a resource.

There are three PIF projects in the area that are outcomes from the Kenton County Transportation Plan. These include PIF 06 059 D1303 5.30 (increase safety and reduce congestion for northbound KY 1303 at Thomas More Parkway), PIF 06 059 D1303 6.00 (improve safety and reduce congestion along KY 1303 from Dudley Road to US 25, including multi-modal needs), and PIF 06 059 D1303 9.00 (improve safety and reduce congestion at the KY 1303 intersections of Town Center Boulevard and Thomas More Parkway, including multi-modes). PIF 06 059 D1303 9.00 is representative of the current planning study.

Tasks

Carol Callan-Ramler will serve as the District 6 Project Manager for this study, Deanna Mills will serve as the Central Office Project Manager, and Gary Sharpe will serve as Palmer Engineering Project Manager. All three project managers shall be copied on all project correspondence.

The scope of work was reviewed, and in addition to the Scope of Work Meeting Minutes provided, the following items were discussed:

- Palmer Engineering will use Miovision to conduct turning movement counts at the intersections listed below. Setting the Miovision out Tuesday and picking them back up 48 hours later on Thursday is preferred. Signal timing data for these coordinated intersections has also been requested. Counting unmet demand will be necessary.
    - Turkeyfoot Road / Dudley Road
    - Turkeyfoot Road / Barnwood Drive
    - Turkeyfoot Road / Thomas More Parkway
    - Turkeyfoot Road / Town Center Boulevard
    - Turkeyfoot Road / I-275 EB Ramps
    - Turkeyfoot Road / I-275 WB Ramps

While not specifically addressed during the meeting, it was later discussed that consideration should be given to collecting turning movement data at the Turkeyfoot Road intersections with College Park Drive (connectivity to both sides of KY 1303 and nearby roads, has a TANK stop at the intersection, and lies within the queue area of unmet demand) and Villa Madonna Drive (lies within the queue area of unmet demand).

- The counts will be completed in mid-September which allows counts to include school traffic and to not be impacted by the upcoming 60 day Brent Spence bridge closure. Electronic copies of all counts shall be provided to the Division of Planning.
- Three years of crash data (January 2014-December 2016) will be used for the study.
- Microsimulations will be conducted using VISSIM. The specific version of VISSIM to be used will be coordinated with the KYTC Division of Planning Modeling staff. VISSIM model files shall be provided to the Division of Planning.
- OKI will use their activity based model (and checking with their traditional model) to provide traffic forecasting data. To update the model, Palmer Engineering will provide OKI with the 48 hour mio-vision count data. OKI will then run the model and provide ADT information for traffic forecasting report. Palmer will use the ADT information to develop turning movement data and prepare the traffic forecasting report. Shapefiles of OKI results shall be provided to the Division of Planning.
- Palmer Engineering will provide the turning movement data to UK for their parallel study. Otherwise, all data will be kept separate between the two studies.
- Bluetooth data will be collected for critical weave destinations. The following movements will be collected:
    - I-275 EB ramp to Thomas More Parkway
    - Thomas More Parkway to I-275 WB ramp
    - Thomas More Parkway to Town Center Boulevard
    - I-275 WB to Thomas More Parkway
- Pedestrian usage was discussed. Not a lot of pedestrians use the corridor for commuting purposes, but more for recreational purposes. OKI can provide recent pedestrian data collected near Dudley Road (south of the project corridor).
- Resource agency mailings will be completed by Central Office after alternatives have been developed (following the 2nd Project Team meeting).
- The Purpose and Need statement will be constantly evolving.
- The environmental overview is anticipated to be straight forward. There is a chapel, near the pond at Thomas More, that is historic. This chapel has been moved to this location, but is still likely to be deemed historic.
- The hours for the Environmental Overview shall be submitted to Scott Schurman, and copy Stacee Hans.
- The socioeconomic study will be completed by the Northern Kentucky Area Development District. The study area will need to encompass any alternatives that will be considered. Palmer Engineering will develop a study area map to be approved by both Central Office and District 6. The official request for the socioeconomic study will then be forwarded to the NKY ADD by Charlie Spalding with KYTC (ADD coordinator). The project team estimated that an area of 1000 ft in width should be acceptable for the study.

- The geotechnical review will be comprised of a literature review and a database mapping search. For this project a line item will be included in the hours submittal, and will not be routed through the geotechnical branch.
- Palmer will contact Joe Espelage for dgn's concerning the Thomas More lane extension
- Palmer will provide Carol Callan-Ramler with an ftp site for her to upload dgn's on the CMAQ project that constructed turn lanes along Turkeyfoot Road.
- District 6 will provide Right of Way and Utility estimates.
- Three alternatives will be developed for the study:
    1) A No Build alternative.
    2) An alternative that re-aligns Town Center Boulevard with Thomas More Parkway.
    3) A spot improvement alternative that maintains the existing Town Center and Thomas More configurations, but provides benefit to the corridor. This alternative may have several facets, and include things such as additional turn lanes, optimized signal timing, closing/revising access points, etc.
- The project team discussed that the goal for the study is to provide a set of options, not recommendations, that can be used to improve the corridor. Pros/Cons will be identified for each option, as well as estimated costs. It is important that the study analyzes limits of the corridor, and does not extend to include revisions to the I-275 ramps. The goal of the study is to provide affordable options that can be constructed in a timely manner. This project is not to result in options that require an Interchange Modification Study. However, modifications to the interchange may be suggested as long term solutions for additional study to improve the corridor.
- In addition to the study appendices listed, the Division of Planning has requested documentation of model development, final simulation models, and counts in electronic format.
- The following potential stakeholders were identified in the meeting, but others will be included as the study evolves. The NKY ADD will also help identify local officials and stakeholders.
    - Crestview Hills
    - EMS
    - Mall
    - Medical Office Buildings Community
    - Thomas More College
    - 5 Seasons
    - Kenton County
    - City of Edgewood
    - Tri-Ed
    - St. Elizabeth Hospital
    - Local Elected Officials (including Diane St. Onge)

Schedule

The following milestones were discussed:

- Microsimulation Model Review Submittal – November 30, 2017
- First Project Team Meeting (AM) & Local Official/Stakeholder Meetings – Existing Conditions (PM) – December 15, 2017
- Second Project Team Meeting – Development of Alternatives – March 15, 2018
    - Resource Mailing by Central Office will occur after this meeting. Typically 30 days are allowed for comments.
- Second Local Official/Stakeholders Meeting – Presentation of Alternatives – May 1, 2018
    - A Public Meeting will not be included with this project
- Third Project Team Meeting – Local Officials Feedback/Prioritization and Recommendation – June 1, 2018
- Draft Report – July 1, 2018
- Final Report – September 1, 2018

TURKEYFOOT ROAD (KY 1303)

INTERSTATE 275

TOWN CENTER BLVD

THOMAS MORE PARKWAY

FRATERNITY COURT

COLLEGE PARK DRIVE

VILLA MADONNA DRIVE

TURKEYFOOT ROAD

BARNWOOD DRIVE

1303

DUDLEY ROAD

0′ 400′ 800′ 1600′

Meeting Minutes

TO: Mikael Pelfrey
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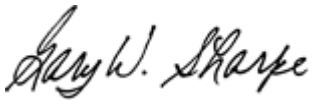
FROM: Gary W. Sharpe
Senior Project Manager
Palmer Engineering



DATE: February 19, 2018

SUBJECT: KY 1303 Turkeyfoot Road Corridor Planning Study
Project Team Meeting

A Project Team Meeting for the KY 1303, Turkeyfoot Road Corridor Planning Study was held at the KYTC District 6 Office in Covington, Kentucky on December 13, 2017 at 10:30 A.M. EST. The following individuals were in attendance:

Carol Callan-Ramler	KYTC District 6 Planning
Deanna Mills	KYTC Central Office Planning
Scott Thomson	KYTC Central Office Planning
Robert Yeager	KYTC District 6 Chief District Engineer
Mike Bezold	KYTC District 6 Project Development
Stacee Hans	KYTC District 6 Environmental
James Minckley	KYTC District 6 Engineering Support
Robert Franxman	KYTC District 6 Project Delivery & Preservation
Samantha Skiles	KYTC District 6 Design
Brandon Seiter	KYTC District 6 Design
Nikki Hill	KYTC District 6 Planning
Andrew Rohne	OKI
Bob Koehler	OKI
Jeff Thelen	NKADD
Stephen Sewell	Palmer Engineering
David Lindeman	Palmer Engineering
Will Conkin	Palmer Engineering
Gary Sharpe	Palmer Engineering

Bob Yeager welcomed everyone to the meeting and to District 6. Carol Callan-Ramler provided a brief overview of the project and briefly discussed goals and objectives for the Project Team Meeting and the Local Officials / Stakeholders Meeting to be held at 1:30 pm on December 13, 2017 at the Crestview Hills City Building.

Gary Sharpe then led the group in a discussion of the purpose of the project and the goals for the project. The purpose of the project was presented as *Improve safety and mobility along Turkeyfoot Road (KY 1303) between Barnwood Drive and the eastbound ramps of I-275 to Turkeyfoot Road.* The primary goals of the project are to *develop improvement strategies that reduce the potential for crashes and reduce travel delays.*

Three display maps were proposed for the Local Officials / Stakeholders Meeting. These included the following:

- Existing Roadway Geometry / Traffic Conditions
- Existing Utilities
- Crash History

Discussions then evolved to the goals and expectations from the Local Officials / Stakeholders Meeting. Initial discussions addressed the project background – *How did we get here? Have we exhausted all options with previous projects such as the Congestion Mitigation project that added a northbound turn lane along Turkeyfoot Road onto the I-275 EB ramp, and a second left turn lane to go Westbound.* Additional comments included the following:

- The intent of the Local Officials / Stakeholders meeting is to present information concerning existing conditions and obtain feedback from Local Officials and Stakeholders that the information presented accurately described the existing conditions.
- Ask Local Officials / Stakeholders to ***confirm*** the problem areas and not move directly to providing recommendations for solutions.
- Of 45 statewide planning projects identified by the 12 Districts, this project was among the top priorities. However, at the time, no additional funding is provided. The current funding constraints should be described to Local Officials and Stakeholders.

The Local Officials / Stakeholders Meeting also will include an opportunity for participants to identify problem areas and to mark those areas on *blank page maps* for the project areas. The focus of this exercise was to *identify / confirm* problem areas. Many will try to move directly to proposing solutions when the objective of the first Local Officials / Stakeholders meeting is to confirm existing conditions and identify problem areas. The purpose of this study will be to recommend improvement options with cost estimates that can be used to identify priorities for future projects. The results of these discussions resulted in some minor revisions for the Questionnaire that was to be provided to the Local Officials and Stakeholders.

The meeting then evolved to a discussion of the PowerPoint Presentation that was to be presented at the Local Officials / Stakeholders Meeting. Modifications to the PowerPoint presentation were made for improved clarification for information presented. A copy of the revised PowerPoint Presentation is included with this meeting report.

Discussions concerning the PowerPoint presentation focused on the AVI clips from the VISSIM microsimulations that were embedded in the microsimulations. The PowerPoint presentation also included a summary of peak-hour travel times which were derived from the microsimulations. The microsimulations were calibrated on the basis of field measured travel times. Discussions also involved variations between peak hour and non-peak hour travel times. Signal timing was discussed and it was noted that signal timing as provided by District 6 was used with the microsimulations. Scott Thomson discussed reaction times used in VISSIM and noted that previous VISSIM stimulations used 0.1 seconds and that a study suggested 0.5 seconds as the 50th percentile reaction time. Scott Thomson complimented the use of Bluetooth data to estimate origin/destinations. The team felt that queues beyond Villa Madonna were too short. Scott suggested that the reaction times and/or acceleration rates should be adjusted to affect queues. Scott also noted that truck rates are too high. The vehicle speed colors are not chromatic and need a legend to clarify. Scott offered travel time data in one-second intervals, which was collected prior to the meeting. It was discussed that changing the reaction times might influence the queue lengths at some locations along the corridor. Scott Thomson also indicated a desire to look further at the vehicle acceleration and deceleration rates. *Since the AVI clips of the microsimulation were embedded in the PowerPoint presentation for Local Officials / Stakeholders, Gary Sharpe discussed/described the vehicle speed colors during the presentation.*

Scott Thomson also noted that the software default values may not accurately reflect actual field conditions. Deanna Mills and Scott had driven the corridor several times prior to this meeting and recorded measured acceleration rates; Scott requested that the field-recorded acceleration rates be utilized in place of the default rates. The team agreed that the difference would not be discernable to Local Officials and Stakeholders, but it is preferable to use calibrated, project-specific rates when available. The use of calibrated rates will ensure that simulations more accurately reflect real conditions. *At the Local Officials / Stakeholder Meeting, it was generally agreed that the microsimulations as presented reasonably represented conditions throughout the corridor.*

During the presentation to the Local Officials and Stakeholders, the colors of vehicles indicated the degree of congestion, i.e. green vehicles are moving freely whereas red vehicles are moving but not as freely as desired. The Local Officials and Stakeholders were asked to confirm that queue lengths shown in the microsimulations accurately reflect their perception.

The OKI Regional Traffic Model will be used to determine appropriate traffic growth rates. Possible changes in retail facilities, housing, Thomas More College operations, and St. Elizabeth Hospital operations along the corridor and how / if these should be considered during traffic forecasting were discussed. The Traffic Forecast Report is anticipated from OKI during February 2018. OKI suggested any changes to the model based on perceived changes in land / property use along the corridor should be very carefully considered.

The meeting concluded with a reiteration that the primary goal for the Local Officials / Stakeholders Meeting was to confirm that the *safety and congestion issues had been accurately identified.* If potential solutions were suggested by Local Officials / Stakeholders, then it would be important to determine the reason behind the solution.

A summary of the results from the Local Officials Meeting held on December 13, 2017 will be presented in a separate meeting report. A follow-up meeting was held on January 16, 2018 to review comments received from Local Officials and Stakeholders. This meeting was attended by the following:

Carol Callan-Ramler	KYTC District 6 Planning
Mikael Pelfrey	KYTC Central Office Planning (teleconference)
Deanna Mills	KYTC Central Office Planning (teleconference)
Robert Yeager	KYTC District 6 Chief District Engineer
Stacee Hans	KYTC District 6 Environmental
Will Conkin	Palmer Engineering
Gary Sharpe	Palmer Engineering

The specifics for responses from Local Officials and Stakeholders will be summarized in more detail in a separate report. However, in general, the specific problems with traffic operations – long queues and delays – especially during peak hours were confirmed from comments received. The conditions illustrated by the microsimulations also were generally confirmed from comments by Local Officials and Stakeholders.

Additional follow-up discussions and meetings also were held in order to refine the results of the microsimulations based on field run vehicle acceleration and deceleration curves provided by the KYTC. Stephen Sewell and Scott Thomson worked together directly in making these refinements. Concurrence in the refined microsimulation modeling was ultimately concluded in a meeting with Stephen Sewell and Scott Thomson on January 25, 2018. With the completion of the model refinements and receipt of traffic forecast data, work can now begin on modeling the No-Build alternate for future year traffic and preparing for microsimulation of potential alternative scenarios. The results of updated Traffic Measures of Effectiveness are presented in the attached Updated Matrix (1/12/2018).

Work now will progress toward development of alternative improvement scenarios with the objective for a second project team meeting in mid-March 2018.

Attachments:

1. Turkeyfoot Road (KY 1303), Traffic Measures of Effectiveness, Updated Matrix, 1/12/2018
2. Revised PowerPoint Presentation as presented to Local Officials and Stakeholders on December 13, 2017

TURKEYFOOT ROAD
KY 1303, Kenton County
Scoping Study
Barnwood Drive (MP 5.085) to I-275 (MP 5.797)

Project Team Meeting
December 13, 2017

Agenda

1. Introductions / Opening Comments

2. Project Purpose – ***Improve safety and mobility along Turkeyfoot Road (KY 1303) between Barnwood Drive and the eastbound ramps of I-275.***

3. Project Goals – ***Develop improvement strategies that reduce the potential for crashes and reduce travel delays.***

4. Overview of Presentation Materials – Local Officials / Stakeholders Meeting (December 13, 2017)

    a. Displays
        i. Existing Roadway / Traffic Conditions

        ii. Existing Utilities

        iii. Crash History Map

        iv. *Blank Page* Map for Comments

    b. PowerPoint Presentation

    c. Traffic Analyses – Existing Conditions -- Measures of Effectiveness
        i. Travel Times
        ii. Delay / Level of Service
        iii. Queue Lengths

    d. PowerPoint Presentation

5. Meeting Logistics – Local Officials / Stakeholders Meetings
    a. Crestview Hills City Building
    b. 1:30 pm to 3:30 pm (open for set-up at 12:30 pm)
    c. Opening Comments – Mikael Pelfrey / Carol Callan-Ramler
    d. Presentations – Palmer Engineering

6. Geotechnical Overview

7. Environmental Overview

8. Additional Discussions

Turkeyfoot Road (KY 1303)
Traffic Measures of Effectiveness
Updated Matrix
1/12/2018

Travel Times

			2017 AM		2017 PM	
Map Nodes	**From**	**To**	**Time (min:sec)**	**Volume (vph)**	**Time (min:sec)**	**Volume (vph)**
1 to 5	I-275 EB	Thomas More Pkwy	4:43	414	3:31	236
1 to 6	I-275 EB	Dudley Road	4:25	165	5:01	473
3 to 5	I-275 WB	Thomas More Pkwy	6:00	194	4:43	106
3 to 6	I-275 WB	Dudley Road	5:16	386	6:01	647
6 to 2	Dudley Road	I-275 EB	3:06	364	5:05	195
6 to 4	Dudley Road	I-275 WB	2:25	695	4:04	534

Maximum Queue Lengths

Location	**2017 AM (ft)**	**2017 PM (ft)**
NB Turkeyfoot at Thomas More Pkwy (Thru Movement)	908	2293
SB Turkeyfoot at Thomas More Pkwy (Left Turn)	675	301
NB Turkeyfoot at Town Center Blvd (Thru Movement)	557	783
SB Turkeyfoot at Town Center Blvd (Thru Movement)	809	1206
SB Turkeyfoot at I-275 EB Ramps (Thru Movement)	873	981
EB I-275 Off-Ramp (Right Turn)	1078	1322

Level of Service/Delay

	2017 AM		2017 PM	
Signalized Intersection	**LOS**	**Delay (sec)**	**LOS**	**Delay (sec)**
Barnwood Drive	B	14	B	14
Thomas More Parkway	F	166	F	103
Town Center Blvd	D	40	E	78
I-275 EB Ramps	F	105	F	142
I-275 WB Ramps	D	46	D	45

Turkeyfoot Road (KY 1303) Scoping Study

Barnwood Dr. (MP 5.085)
to
I-275 (MP 5.797)

KENTUCKY TRANSPORTATION CABINET

December 13, 2017

Palmer ENGINEERING

Opening Comments ~~ KYTC

- Introductions
- Project Purpose and Need:
  - *Improve safety and mobility within the Corridor*
- Project Goals:
  - *Develop improvement strategies that reduce the potential for crashes and reduce travel delays*
- *We Need Your Input*
  - *Questionnaire*
  - *Discussions*

Questionnaire

- We Need Your Feedback
  - Does our representation of the existing conditions reflect your knowledge of the study corridor?
  - What do you perceive to be the problems and the problem areas (congestion, travel times, crashes)?

Displays ~~ Existing Conditions

- Roadway / Traffic
- Crash History
- Utilities

Existing Roadway Conditions

- Lane, Shoulder, and Median Configuration
- Turning Movements
- Origin – Destination Movements
- Access Points
- Accommodations for Bicycles and Pedestrians
- Geometry not meeting current standards

Existing Roadway Conditions

Existing Utilities

- Water
- Natural Gas
- Overhead Utilities
- Underground Electric
- Communications – Fiber, TV, Telephone
- Storm Sewer
- Sanitary Sewer
- Right of Way / Property

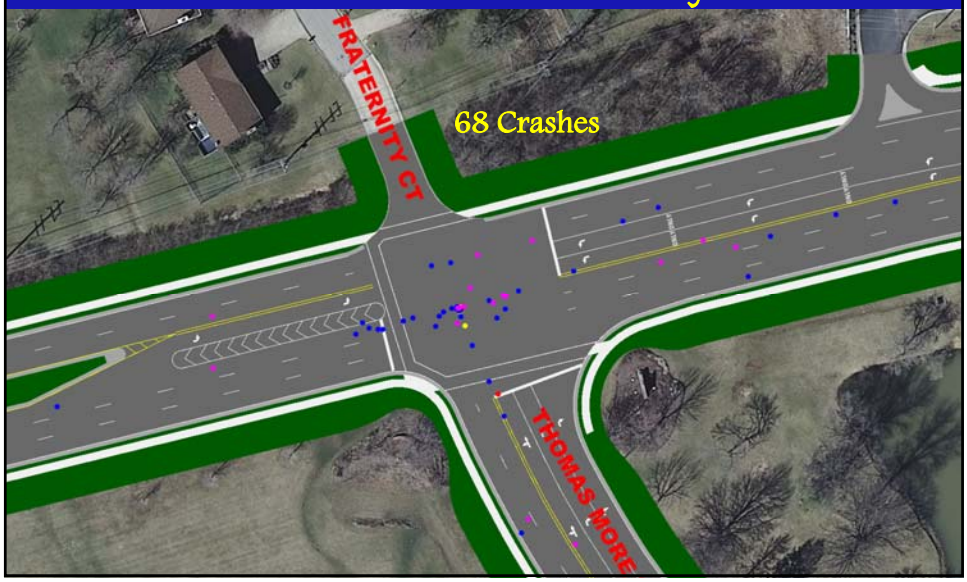
Existing Utilities

Crash Histories

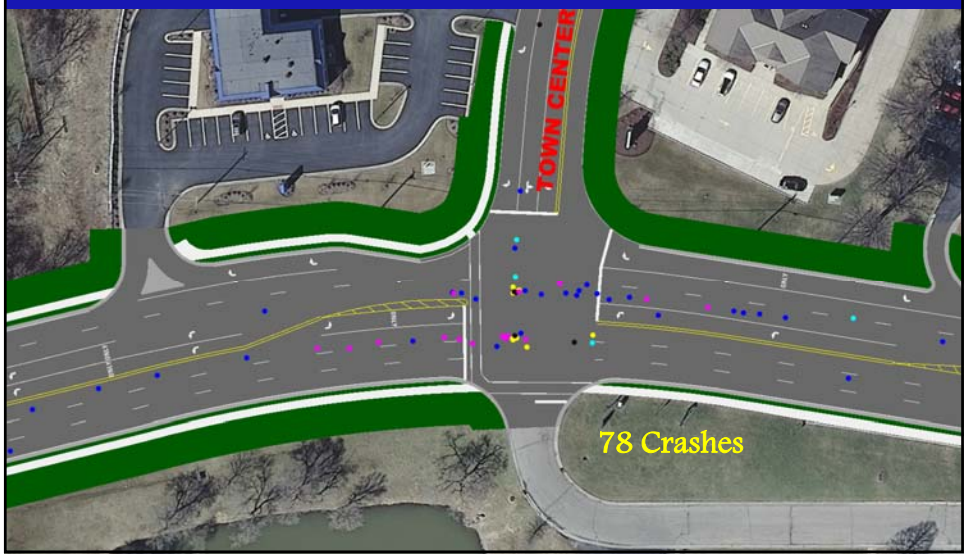
- *January 2014 to December 2016*
  - *290 Reported Crashes (1 fatality)*
    - *63% Rear End 16% Sideswipe 10% Angle*
    - *0% Pedestrian <3% Truck/Transit Involved*

Crash Histories

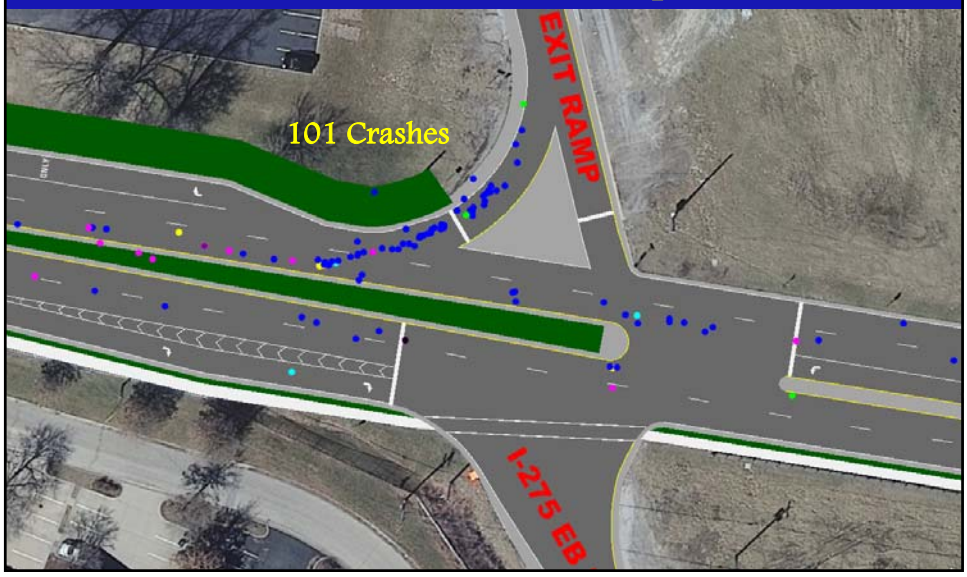
Thomas More Parkway



Crash Histories
Town Center Blvd



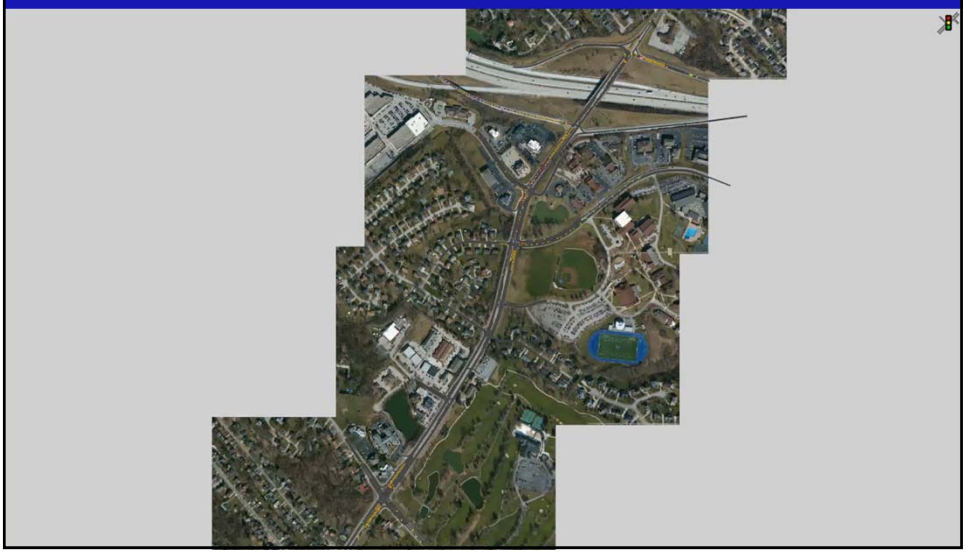
Crash Histories
I-275 EB Off-Ramp



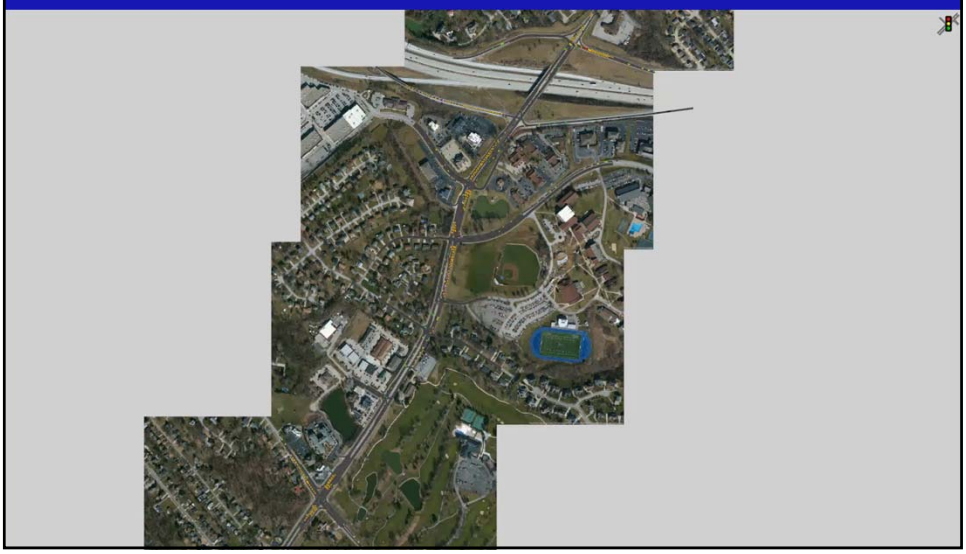
Traffic Analyses

- Traffic Counts – *video count methodology*
  - *24 Hour Count – October 3, 2017*
  - *Identification of critical traffic weaving operations*
- Calibrated with field run travel times
- Operational Characteristics
  - *Travel Times*
  - *Queue Lengths (back-ups)*
  - *Delay / Level of Service*

Microsimulations Morning Peak Hours



Microsimulations
Evening Peak Hours



Traffic Analyses

Travel Times

Map Nodes	From	To	2017 AM Time (min:sec)	2017 AM Volume (vph)	2017 PM Time (min:sec)	2017 PM Volume (vph)
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3 to 5	I-275 WB	Thomas More Pkwy	7:15	194	4:49	106
3 to 6	I-275 WB	Dudley Road	5:58	386	5:47	647
6 to 2	Dudley Road	I-275 EB	2:46	364	3:49	195
6 to 4	Dudley Road	I-275 WB	2:19	695	3:20	534

Maximum Queue Lengths

Location	2017 AM (ft)	2017 PM (ft)
NB Turkeyfoot at Thomas More Pkwy (Thru Movement)	780	988
SB Turkeyfoot at Thomas More Pkwy (Left Turn)	670	240
NB Turkeyfoot at Town Center Blvd (Thru Movement)	374	872
SB Turkeyfoot at Town Center Blvd (Thru Movement)	819	728
SB Turkeyfoot at I-275 EB Ramps (Thru Movement)	804	1000
EB I-275 Off-Ramp (Right Turn)	1613	1705

Level of Service/Delay

Signalized Intersection	2017 AM LOS	2017 AM Delay (sec)	2017 PM LOS	2017 PM Delay (sec)
Barnwood Drive	B	14	B	14
Thomas More Parkway	F	166	F	103
Town Center Blvd	D	40	E	78
I-275 EB Ramps	F	105	F	142
I-275 WB Ramps	D	46	D	45

Next Steps

- Traffic Forecasting
  - *February 2018*
- Develop Alternatives and Cost Estimates
  - *December 2017 to March 2018*
  - *Refinement of Alternatives and Cost Estimates (April 2018)*
- Local Officials / Stakeholders Meeting
  - *May 2018*
- Final Report
  - *August 2018*

Questions / Discussion

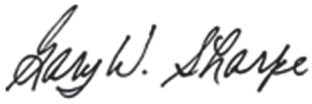
Meeting Minutes

TO: Mikael Pelfrey
KYTC Central Office
200 Mero Street
Frankfort, KY 40622

Carol Callan-Ramler
Co-Project Manager
KYTC District 6
421 Buttermilk Pike
Covington, KY 41017

Deanna Mills
Co-Project Manager
KYTC Central Office
200 Mero Street
Frankfort, KY 40622

FROM: Gary W. Sharpe
Senior Project Manager
Palmer Engineering



DATE: May 9, 2018

SUBJECT: KY 1303 Turkeyfoot Road Corridor Planning Study
Project Team Meeting

A Project Team Meeting for the KY 1303, Turkeyfoot Road Corridor Planning Study was held at the KYTC District 6 Office in Covington, Kentucky, on May 2, 2018 at 9:30 A.M. EST. The following individuals were in attendance:

Carol Callan-Ramler	KYTC District 6 Planning
Deanna Mills	KYTC Central Office Planning
Mikael Pelfrey	KYTC Central Office Planning
Anthony Norman	KYTC Central Office Planning
Randy Turner	KYTC Central Office Design
Robert Yeager	KYTC District 6 Chief District Engineer
Mike Bezold	KYTC District 6 Project Development
Mike Yeager	KYTC District 6 Planning
James Minckley	KYTC District 6 Engineering Support
Stephen Sewell	Palmer Engineering
Will Conkin	Palmer Engineering
Gary Sharpe	Palmer Engineering

Carol Callan-Ramler welcomed everyone to the meeting and provided the project background prior to meeting attendees introducing themselves.

Gary Sharpe then led the group in a discussion of the purpose and the goals for the project. The team confirmed that the purpose and goals of the project are the following:

Improve safety and mobility along Turkeyfoot Road (KY 1303) between Barnwood Drive and the eastbound ramps of I-275 to Turkeyfoot Road.

The primary goals of the project are to *develop improvement strategies that reduce the potential for crashes and reduce travel delays.*

Will Conkin reviewed the crash data along the corridor using a kmz file. The team identified several critical locations with high numbers of crashes. These locations were a primary focus in the development of alternative strategies for the Planning Study. The team agreed that this information would be beneficial to depict graphically in the report. The corridor crash analysis will be completed for the study and could show that collision issues are continuous along the corridor due to the close spacing of the crashes. The team suggested using pictures and tables to convey this information.

The team was presented two alternatives for discussion at the meeting:

- Alternative 1 was an ultimate solution that aligned intersections.
- Alternative 2 was a series of low-cost spot improvements that would provide an immediate benefit.

Alternative 1 Discussion Items:

- Revise the alternative to close the TGI Fridays and Coldwell Banker right-in access points.
- Discussed providing a connection from the new access road to the neighborhood but decided to first get input from stakeholders.
- Discussed signalizing College Park Drive due to the redistribution of traffic to this location but determined that it would still be below the signal warrant.
- Add signal locations to the maps.
- Denote which parcels are anticipated to be acquired as part of the alternative.
- Discussed closing the last 100' of existing Town Center Drive so that a connection to Turkeyfoot is not provided. The team discussed this alternative but no definite decision was made. Eliminating this connection would increase the traffic volume at the new intersection and providing a connection to the new access point is likely to be difficult due to the grade differential.
- Eliminating the right-in access points would allow for the dual left turn lanes at Thomas More Parkway to be extended and provide for additional storage.
- Team discussed that bike lanes would not be included on this route because of the high volume of traffic and no connectivity to other facilities.

Alternative 2 Discussion Items:

- The team discussed closing the TGI Friday entrance. It was decided to close the entrance but to leave the Coldwell Banker entrance open because of the difficulty of making left turns into the site from Town Center Drive.
- A SPUI was discussed at the Thomas More Intersection but was eliminated from further discussion because of potential impacts and grade challenges.

Typical Section

- Leave the lane width at 12 feet for this study but in Phase 1 Design, lane widths will likely be changed to 11-foot lanes because of minimal capacity differences between 12-foot lanes and 11-foot lanes.

Comparison Matrix

- KYTC and Palmer will confirm that $350/LF is a reasonable estimate for the gas line replacement.
- Add a contingency line to the Comparison Matrix for 30%.
- The team discussed whether an IMS would be required to add lanes near the ramp termini. A discussion with FHWA will be required and KYTC will coordinate.
- A suite of improvement options may be a good method for presenting potential improvement scenarios to stakeholders – i.e., from lowest cost to highest cost.

Stakeholders Meeting

- Show the benefit cost improvements for the alternatives.
- The team requested that the alternative numbering be reversed so that the low-cost improvements are Alternative 1 and the ultimate solution is Alternative 2. *Future presentation materials will be modified to reflect the revised numbering scenario. The Traffic Measures of Effectiveness and Comparison Matrix (revised to show 30% contingency) included herein do not reflect a revised numbering scenario.*
- Combine both alternatives so that an ultimate solution can be presented to the team (Alternative 3).
- Present the alternatives to the stakeholders but recommendation of improvements will be based on project team evaluation.
- Show PM simulations of only Alternative 3 at stakeholder meeting.
- Need to have an alternative that is fundable for the meeting.
- Try to schedule meeting for 1st or 2nd week of June.

The team discussed that Saint Elizabeth traffic volumes will not be significant and that the growth rate will cover any additional vehicles that will be added.

Gary informed the team that the Geotechnical Overview has been completed and that the Environmental Overview will be resubmitted if there are no additional comments.

Attachments:

1. Turkeyfoot Road (KY 1303), Traffic Measures of Effectiveness
2. Turkeyfoot Road (KY 1303), Typical Section
3. Turkeyfoot Road (KY 1303), Comparison Matrix (revised to show 30% contingency line)

Turkeyfoot Road (KY 1303)
Traffic Measures of Effectiveness
Updated Matrix
5/1/2018

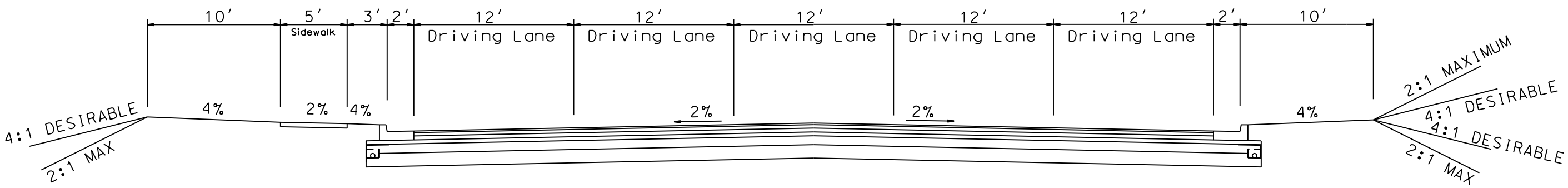
Travel Times			Existing		Alternative 1				Alternative 2			
			2017 AM	2017 PM	2017 AM	2017 PM	2040 AM	2040 PM	2017 AM	2017 PM	2040 AM	2040 PM
Map Nodes	From	To	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)
1 to 5	I-275 EB	Thomas More Pkwy	4:43	3:31	3:15	4:20	5:35	5:30	2:38	8:20	5:51	6:20
1 to 6	I-275 EB	Dudley Road	4:25	5:01	2:35	4:09	4:03	5:30	2:22	5:50	4:30	4:50
3 to 5	I-275 WB	Thomas More Pkwy	6:00	4:43	3:38	5:45	7:23	7:40	2:35	3:35	2:55	3:53
3 to 6	I-275 WB	Dudley Road	5:16	6:01	2:48	5:06	7:26	7:20	3:22	2:36	3:20	4:44
6 to 2	Dudley Road	I-275 EB	3:06	5:05	4:18	5:26	9:08	5:48	3:57	4:44	4:18	6:50
6 to 4	Dudley Road	I-275 WB	2:25	4:04	3:30	4:53	7:47	6:20	4:07	3:36	4:14	7:40

Maximum Queue Lengths	Existing		Alternative 1				Alternative 2			
Location	2017 AM (ft)	2017 PM (ft)	2017 AM (ft)	2017 PM (ft)	2040 AM (ft)	2040 PM (ft)	2017 AM (ft)	2017 PM (ft)	2040 AM (ft)	2040 PM (ft)
NB Turkeyfoot at Thomas More Pkwy (Thru Movement)	908	2293	993	929	1125	2458	742	1515	3612	3266
SB Turkeyfoot at Thomas More Pkwy (Left Turn)	675	301	911	1213	1209	1218	646	334	645	471
NB Turkeyfoot at Town Center Blvd (Thru Movement)	557	783	128	112	181	1799	586	622	608	1723
SB Turkeyfoot at Town Center Blvd (Thru Movement)	809	1206					698	507	816	546
SB Turkeyfoot at I-275 EB Ramps (Thru Movement)	873	981	576	1620	1884	1364	482	1030	1505	1367
EB I-275 Off-Ramp (Right Turn)	1078	1322	116	1774	1821	1821	384	593	565	469

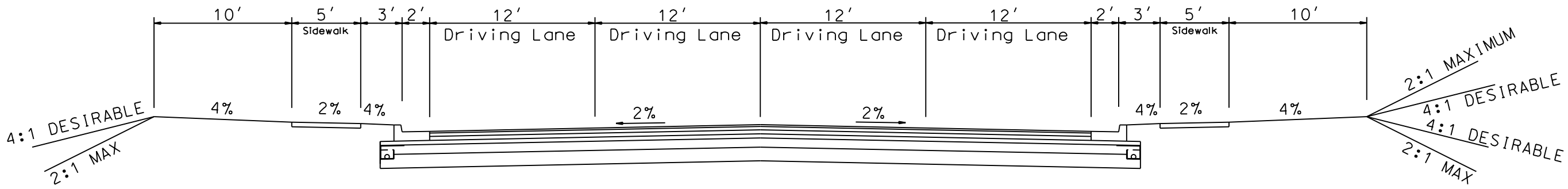
Level of Service/Delay	Existing				Alternative 1				Alternative 2			
	2017 AM		2017 PM		2040 AM		2040 PM		2040 AM		2040 PM	
Signalized Intersection	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Barnwood Drive	B	14	B	14	C	32.5	C	20	C	33	C	20
Thomas More Parkway	F	166	F	103	F	339	F	249	E	75	D	54
Town Center Blvd	D	40	E	78	C	32*	F	183*	D	52	F	120
I-275 EB Ramps	F	105	F	142	F	256	F	314	F	129	F	172
I-275 WB Ramps	D	46	D	45	D	41	F	82	D	41	F	82

COUNTY OF	ITEM NO.	SHEET NO.
KENTON	-	R2

TYPICAL SECTIONS



RELOCATED THOMAS MORE PARKWAY
NORMAL SECTION



RELOCATED TOWN CENTER BOULEVARD
NORMAL SECTION

NOT TO SCALE

TURKEYFOOT ROAD (KY 1303)
TYPICAL SECTIONS
THOMAS MORE AND TOWN CENTER

Turkeyfoot Road (KY 1303), Kenton County

Project Team Meeting, May 2, 2018

	Existing	Alternative #1	Alternative #2
	Current Conditions	Re-Alignment	Improvement Options
Length (ft.)	3,390	3,390	3,390
Design Speed (mph)	45	45	45
Minimum SSD 360 FT Criteria	350 FT	350 FT	350 FT
Number of Signalized Intersections	5	4	5
Earthwork Fill (cu yd.)	0	484,375	13,167
Right of Way			
Number of Parcels	0	8 R + 10 C	0 R + 1 C
Right of Way Acquisition (AC)	0	7.439	0.057
Residential Takings	0	4	0
Neighborhood Impact	NONE	MED	LOW
Maintenance of Traffic Impacts	NONE	HIGH	MED
Utility Impacts	NONE	HIGH	LOW
Costs			
Construction	$0	$6,807,078	$1,898,315
30% Contingency	$0	$2,042,123	$569,495
Right of Way	$0	$3,855,111	$28,604
Utilities	$0	$702,600	$135,000
Total	$0	$4,557,711	$163,604

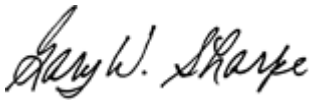
Meeting Minutes

TO: Mikael Pelfrey
KYTC Central Office
200 Mero Street
Frankfort, KY 40622

Carol Callan-Ramler
Co-Project Manager
KYTC District 6
421 Buttermilk Pike
Covington, KY 41017

Deanna Mills
Co-Project Manager
KYTC Central Office
200 Mero Street
Frankfort, KY 40622

FROM: Gary W. Sharpe
Senior Project Manager
Palmer Engineering



DATE: September 11, 2018

SUBJECT: KY 1303 Turkeyfoot Road Corridor Planning Study
Miscellaneous Team Meeting – Assessment of Project Benefits – July 2, 2018

A miscellaneous Project Meeting was held for the KY 1303, Turkeyfoot Road Corridor Planning Study on July 2, 2018 at 10:00 A.M. EST at the District 6 Offices. The purpose of the meeting was to discuss methodologies for assessment of benefits to be used in determination of project benefit-cost analyses.

The following individuals attended the meeting:

Carol Callan-Ramler	KYTC District 6 Planning
Deanna Mills	KYTC Central Office Planning
Scott Thomson	KYTC Central Office Planning
Mikael Pelfrey	KYTC Central Office Planning (via Tele-conference)
James Minckley	KYTC District 6 Traffic
Will Conkin	Palmer Engineering
Gary Sharpe	Palmer Engineering

The following components of project benefits were discussed:

- Reduction in Crashes
- Reduction in Travel Time
- Reduction in Delays

Possible methodologies for estimating the dollar values (benefits) associated with reducing crashes were discussed first. The use of 3-year crash data was discussed in the context of whether it

represents the true average of crash occurrences over a longer analysis period. It was noted that all analyses presented throughout the study had been predicated upon 3-year data and not adjusted (as shown in the attached document). The benefit of the crash reductions will be calculated similar to the SHIFT process for 5 years. The Project Team also decided not to adjust the crash frequency and ultimately agreed that the assessment of benefits associated with a reduction of crashes should be based on 3-year crash data. Will Conkin presented a document (attached) summarizing the proposed methodology for estimating benefits associated with reducing crashes. The group concurred in the use of this methodology with the modification that all estimates of crash reductions should be based on 3-year crash period analyses.

The methodology for estimating benefits for reductions in travel times and delays was discussed next. It was discussed that there is not a specific methodology for determining the benefits associated with reduced travel times and delays that could be directly applicable to this project. The methodology used in SHIFT was discussed, as were methodologies presented in NCHRP 722, Volume 2 and *FHWA Work Zone Road User Costs: Concept and Application* (FHWA-HOP-12-005). Ultimately it was agreed to use the methodology presented in the latter document, with information concerning vehicle occupancy from the OKI model. Information from the microsimulations will be used to determine the specific values for travel time reductions and delays. Data from the literature was to be used to validate the computed value of travel time for the Turkeyfoot Road Corridor.

Finally, the discussion evolved to how benefits should be presented to stakeholders. It was ultimately decided that the values for reduced travel times and reduction in crashes would be presented at the Stakeholder Meeting but that dollar values associated with these benefits would not be presented.

Attachments:
1. Agenda; Meeting to Discuss Assessment of Project Benefits, Turkeyfoot Road, KY 1303 Scoping Study, July 2, 2018
2. Methodology for Estimating Benefits for Reduction in Crashes, July 2, 2018

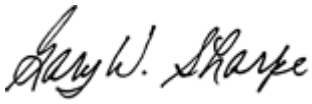
Meeting Minutes

TO: Mikael Pelfrey
KYTC Central Office
200 Mero Street
Frankfort, KY 40622

Carol Callan-Ramler
Co-Project Manager
KYTC District 6
421 Buttermilk Pike
Covington, KY 41017

Deanna Mills
Co-Project Manager
KYTC Central Office
200 Mero Street
Frankfort, KY 40622

FROM: Gary W. Sharpe
Senior Project Manager
Palmer Engineering



DATE: September 7, 2018

SUBJECT: KY 1303 Turkeyfoot Road Corridor Planning Study
Project Team Meeting No. 3 – July 11, 2018

A Project Team Meeting was held for the KY 1303, Turkeyfoot Road Corridor Planning Study on July 11, 2018, at 10:00 A.M. EST at the District 6 Offices. The following individuals attended the meeting:

Carol Callan-Ramler	KYTC District 6 Planning
Steve Ross	KYTC Central Office Planning
Deanna Mills	KYTC Central Office Planning
Steve DeWitte	KYTC Central Office Planning
Neela Saha	KYTC Central Office Planning
Anthony Norman	KYTC Central Office Planning
Robert Yeager	KYTC District 6 Chief Engineer
Mike Bezold	KYTC District 6 Project Development
Brandon Seiter	KYTC District 6 Design
Nikki Hill	KYTC District 6 Planning
Stacee Hans	KYTC District 6 Environmental
Stephen Sewell	Palmer Engineering
Will Conkin	Palmer Engineering
Gary Sharpe	Palmer Engineering

Carol Callan-Ramler welcomed everyone and advised that the purpose of the meeting was to review and (if necessary) make appropriate modifications to materials for the upcoming Stakeholders Meeting. Carol briefed the group concerning expectations for the Stakeholders Meeting as a basis for review of the meeting materials. She also announced that the project had been funded for preliminary engineering and environmental assessment for the next biennium of the Six Year Highway Plan. It was further noted that

the project in the next biennium would extend from Dudley Road to US 25/US 42/US 127 (Dixie Highway), which extends beyond the limits of this study.

Gary Sharpe then used the PowerPoint Presentation proposed for the Stakeholders Meeting as a basis for reviewing the meeting materials. The PowerPoint and Display Boards included the following:

- Alternative A included six (6) spot improvements that could be implemented individually or in combination.
- Alternative B is a more extensive improvement scenario that included relocating Town Center Boulevard and Thomas More Parkway as well as other improvements. Alternative B involved shifting the location of both Thomas More Parkway and Town Center Boulevard. All improvements included with Alternative A also are included in Alternative B.

Stephen Sewell presented a summary of traffic operational analyses in the context of the alternative improvement strategies that were presented. Will Conkin described analyses associated with estimating the potential for reducing crashes.

After the review of the meeting materials, the following action items were noted:

- No changes were made to the display boards and presentation of alternatives
- Minor editorial changes were made to the Questionnaire in the context of the way that some questions were formulated
- The Traffic Measures of Effectiveness Matrix was revised to use a different color scheme for illustration of results and to show 2040 No-Build conditions
- The Summary of Impacts Matrix was revised to include showing a change in travel time minutes
- Minor modifications were made to the PowerPoint Presentation to reflect the above-noted modifications.

Attachments:

1. Revised Questionnaire – Turkeyfoot Road, KY 1303 Scoping Study, July 11, 2018
2. Revised PowerPoint Presentation, July 11, 2018
3. Revised Turkeyfoot Road (KY 1303), Traffic Measures of Effectiveness, Updated Matrix, July 11, 2018
4. Revised Turkeyfoot Road (KY 1303), Summary of Impacts Matrix, Updated July 11, 2011

TURKEYFOOT ROAD
KY 1303, Kenton County
Scoping Study
Barnwood Drive (MP 5.085) to I-275 (MP 5.797)
Local Officials / Stakeholders Meeting
July 11, 2018

Questionnaire -- We *Need Your Input*

Name: _____

Affiliation: _____

1. How frequently do you travel the Study Corridor – Turkeyfoot Road between Barnwood and the eastbound ramps of I-275? ____ Daily ____ Weekly ____Other: _____

2. What causes you to travel the Turkeyfoot Corridor? Check *all* that apply.
   a. Travel to & from your home ____
   b. Travel to and from work ____
   c. Shopping ____
   d. Healthcare – business ____
   e. Healthcare - patient ____
   f. School ____
   g. Other ____

3. When a funded project is established, would you like to remain a stakeholder? ____Yes ____No

4. Please provide your comments in regard to each of the following improvement options. Additional space for comments is provided at the end of this questionnaire:

   Alternative A: Spot Improvements / Lower Cost Options

   (1) Add right-turn lane to exit ramp – I-275 eastbound -- Concur _____Yes _____No
   Comments_____
   _____
   _____

   (2) Eliminate right-in entrance to Fridays -- Concur _____Yes _____No
   Comments_____
   _____
   _____

   (3) Add right-turn lane on Turkeyfoot Road from I-275 eastbound ramp to existing Town Center Boulevard -- Concur _____Yes _____No
   Comments_____
   _____
   _____

   (4) Eliminate access from Fraternity Court to Turkeyfoot Road (KY 1303) -- Concur _____Yes _____No
   Comments_____
   _____
   _____

(5) *Restrict left turns to Turkeyfoot Road southbound from Villa Madonna --* Concur _____Yes _____No
Comments_____
_____
_____

(6) *Add right-turn lane on Turkeyfoot Road northbound to Thomas More Parkway --* Concur _____Yes _____No
Comments_____
_____
_____

Alternative B: Realign Town Center Boulevard and Thomas More Parkway

(1) *Realign Town Center Boulevard and Thomas More Parkway --* Concur _____Yes _____No
Comments_____
_____
_____

(2) *Add lane to Turkeyfoot southbound from I-275 eastbound ramp to just beyond relocated Town Center Boulevard --* Concur _____Yes _____No
*Comments*_____
_____
_____

(3) *Make access to existing Town Center Boulevard right-in / right-out --* Concur _____Yes _____No
Comments_____
_____
_____

(4) *Make frontage road from Turkeyfoot Road to Thomas More Parkway right-in / right-out at Turkeyfoot Road --* Concur _____Yes _____No
Comments_____
_____
_____

(5) *Extend frontage road / backage road to reconnect with Thomas More Parkway --* Concur _____Yes _____No
Comments_____
_____
_____

All Spot Improvements from Alternative A are proposed to be included with Alternative B. Comments are provided for Alternative A above.

Optional Information:

Telephone: _____

E-Mail: _____

Additional Space for Comments

Turkeyfoot Road (KY 1303) Scoping Study

Barnwood Dr. (MP 5.085)
to
I-275 (MP 5.797)

KENTUCKY TRANSPORTATION CABINET

July 11, 2018

Palmer ENGINEERING

Opening Comments ~~ KYTC

- Introductions
- Project Purpose and Need:
  - *Improve safety and mobility within the Corridor*
- Project Goals:
  - *Develop improvement strategies that reduce the potential for crashes and reduce travel delays*
- *We Need Your Input*
  - *Questionnaire*
  - *Discussions*

Crash Histories – Revisited from First Meeting

- *January 2014 to December 2016*
  - *290 Reported Crashes (1 fatality)*
    - *63% Rear End 16% Sideswipe 10% Angle*
    - *0% Pedestrian <3% Truck/Transit Involved*

Questionnaire

- We Need Your Feedback
  - Provide comments regarding Alternatives presented
    - Alternative A:
      - Spot Improvements / Low Cost Options
    - Alternative B:
      - Realign Town Center Boulevard with Thomas More Parkway
      - Alternative A spot improvements

Displays – Alternatives

- Alternative A –
  - Spot Improvements / Low Cost Options

- Alternative B –
  - Relocate Town Center Boulevard
  - Alternative A Spot Improvements

Alternative A
Spot Improvements / Low Cost Options

1. Add Right Turn lane to Exit Ramp at I-275 eastbound
2. Eliminate Right-In Entrance to Fridays
3. Add Right-Turn Lane on Turkeyfoot Road from I -275 eastbound ramp to existing Town Center Boulevard
4. Eliminate Access to Turkeyfoot Road from Fraternity Court
5. Restrict Left Turns from Turkeyfoot Road to Villa Madonna
6. Add Right Turn Lane for Northbound Turkeyfoot Road to Thomas More Parkway

Alternative A
Spot Improvements / Low Cost Options

Alternative B – Realign Town Center Boulevard with Thomas More Parkway

1. Realign Town Center Boulevard with Thomas More Parkway
2. Add Lane to Turkeyfoot Road from I-275 eastbound Ramp to just beyond Town Center Boulevard
3. Make Existing Town Center Parkway Right-In / Right-Out
4. Make Frontage Road from Turkeyfoot Road to Thomas More Parkway Right-In / Right-Out at Turkeyfoot Road
5. Extend Frontage road / Backage Road to Reconnect with Thomas More Parkway
6. Include All Spot Improvements from Alternative A

Alternative B – Realign Town Center Boulevard with Thomas More Parkway

Opportunities for Reducing Crashes

- *Alternative A – Spot Improvements / Low Cost Options*
  - *8% crash reductions per year*
- *Alternative B – Realign Town Center Boulevard with Thomas More Parkway*
  - *19% crash reductions per year*

Summary of Opportunities for Reducing Crashes

Villa Madonna Drive Improvements	
Improvement	Crash Reduction Per Year Alternative A
	Crashes
Right-In Right-Out	2

Thomas More Parkway & Town Center Blvd Intersection Realignment	
Improvement	Crash Reduction Per Year Alternative B
	Crashes
Realign Thomas More Pkwy & Town Center Blvd	10

I-275 EB Exit Ramp	
Improvement	Crash Reduction Per Year Alternative A
	Crashes
Add Right Turn Lane to Ramp	6

Alternative	Crash Reduction Per Year	Percent Crash Reduction Per Year
Alternative A	8	8%
Alternative B	18	19%

Traffic Micro-Simulations

- Existing (2017)
  - AM
  - PM
- No Build (2040)
  - AM
  - PM
- Alternative A
  - 2017 – AM & PM
  - 2040 – AM & PM
- Alternative B
  - 2017 – AM & PM
  - 2040 – AM & PM

Traffic Micro-Simulations – 2040 PM

Traffic Micro-Simulations Summary of Results

Turkeyfoot Road (KY 1303)
Traffic Measures of Effectiveness
Updated Matrix
7/11/2018

Travel Times			Existing		No Build		Alternative A				Alternative B			
			2017 AM	2017 PM	2040 AM	2040 PM	2017 AM	2017 PM	2040 AM	2040 PM	2017 AM	2017 PM	2040 AM	2040 PM
Map Nodes	From	To	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)
1 to 3	I-275 EB	Thomas More Pkwy	4:43	3:31	9:36	9:48	3:23	2:33	2:58	2:25	2:39	2:57	5:01	4:40
1 to 6	I-275 EB	Dudley Road	4:25	5:01	9:15	13:00	2:35	3:26	2:51	4:26	2:30	3:20	3:32	4:54
2 to 5	I-275 WB	Thomas More Pkwy	6:00	4:43	8:40	7:42	4:13	3:36	4:07	5:49	3:35	2:43	5:14	5:46
3 to 6	I-275 WB	Dudley Road	5:26	6:01	9:07	9:51	4:00	4:42	4:16	7:46	2:39	2:23	5:46	6:04
6 to 2	Dudley Road	I-275 EB	2:25	4:04	9:27	13:02	2:20	5:29	4:18	4:52	3:02	2:55	2:52	3:46
6 to 4	Dudley Road	I-275 WB	3:06	5:03	6:40	15:47	2:22	7:27	5:22	6:23	4:05	4:10	2:58	4:07
	TOTAL TRAVEL TIME ALL VEHICLES (VMT)		15,100	23,183	29,527	51,695	14,248	22,529	25,185	37,367	13,950	18,769	22,551	35,585

Maximum Queue Lengths	Existing		No Build		Alternative A				Alternative B			
Location	2017 AM (ft)	2017 PM (ft)	2040 AM	2040 PM	2017 AM (ft)	2017 PM (ft)	2040 AM (ft)	2040 PM (ft)	2017 AM (ft)	2017 PM (ft)	2040 AM (ft)	2040 PM (ft)
NB Turkeyfoot at Thomas More Pkwy (Thru Movement)	908	2259	1044	3921	708	2809	3755	3191	954	724	916	1063
SB Turkeyfoot at Thomas More Pkwy (Left Turn)	675	303	551	613	618	263	631	414	373	412	1045	1144
NB Turkeyfoot at Town Center Blvd (Thru Movement)	557	793	442	812	597	1047	614	1647				
SB Turkeyfoot at Town Center Blvd (Thru Movement)	909	1226	911	2091	716	493	912	531				
SB Turkeyfoot at I-275 EB Ramps (Thru Movement)	873	981	1977	2324	519	1026	1675	1310	557	647	1272	685
[illegible]	1078	1322	2820	1705	385	736	952	455	232	229	726	979

Level of Service/Delay	Existing				Alternative A				Alternative B			
	2017 AM		2017 PM		2040 AM		2040 PM		2040 AM		2040 PM	
Signalized Intersection	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Summary ~~ Travel Time Reductions

- Alternative A
  - Relative to Existing ~~ 2017
    - 5.6% reduced travel time ~ AM
    - 2.8% reduced travel time ~ PM
  - Relative to No Build – 2040
    - 14.8% reduced travel time – AM
    - 29.0% reduced travel time – PM
- Alternative B
  - Relative to Existing ~~ 2017
    - 8.3% reduced travel time ~ AM
    - 19.0% reduced travel time ~ PM
  - Relative to No Build – 2040
    - 23.6% reduced travel time – AM
    - 32.5% reduced travel time – PM

Comparison Matrix
Alternative A & Alternative B

Turkeyfoot Road (KY 1303), Kenton County

Project Team & Stakeholders Meetings, July 11, 2018

	Existing Current Conditions As - Is	Alternative #A Spot Improvements Lower Cost Solutions	Alternative #B Realign Town Center w/Thomas More Pkwy
Length (ft.)	3,390	3,390	3,390
Design Speed (mph)	45	45	45
Minimum SSD 360 FT Criteria	350 FT	350 FT	350 FT
Number of Signalized Intersections	5	5	4
Earthwork Fill (cu yd.)	0	7,199	484,375
Right of Way			
Number of Parcels	0	0 R + 1 C	8 R + 10 C
Residential Relocations	0	0	4
Right of Way Acquisition (AC)	0	0.057	7.439
Neighborhood Impact	NONE	LOW	MED
Maintenance of Traffic Impacts	NONE	MED	HIGH
Utility Impacts	NONE	LOW	HIGH
Costs			
Construction	$0	$2,034,000	$7,552,000
30% Contingency	$0	$610,000	$2,266,000
Right of Way	$0	$29,000	$3,855,000
Utilities	$0	$0	$703,000
Total	$0	$2,673,000	$14,376,000
Percent Crash reduction Per Year		8%	19%
Percent Reduced Travel Time			
Relative to Existing 2017 AM		5.6%	8.3%
Relative to Existing 2017 PM		2.8%	19.0%
Relative to No-Build 2040 AM		14.8%	23.6%
Relative to No-Build 2040 PM		29.0%	32.5%

Next Steps

- Complete Draft Study Report –September 2018
- Final Report – October 2018

Questions / Discussion

Turkeyfoot Road (KY 1303)
Traffic Measures of Effectiveness
Updated Matrix
7/11/2018

Travel Times			Existing		No Build		Alternative A				Alternative B			
			2017 AM	2017 PM	2040 AM	2040 PM	2017 AM	2017 PM	2040 AM	2040 PM	2017 AM	2017 PM	2040 AM	2040 PM
Map Nodes	From	To	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)	Time (min:sec)
1 to 5	I-275 EB	Thomas More Pkwy	4:43	3:31	9:36	8:48	3:23	2:33	2:58	2:25	2:39	2:57	5:01	4:40
1 to 6	I-275 EB	Dudley Road	4:25	5:01	9:15	11:00	2:35	3:26	2:51	4:26	2:30	3:20	3:32	4:54
3 to 5	I-275 WB	Thomas More Pkwy	6:00	4:43	8:40	7:42	4:13	3:36	4:07	5:49	3:35	2:43	5:14	5:46
3 to 6	I-275 WB	Dudley Road	5:16	6:01	8:07	9:51	4:00	4:42	4:16	7:46	2:10	2:23	5:46	6:04
6 to 2	Dudley Road	I-275 EB	2:25	4:04	6:27	13:02	2:20	5:29	4:18	4:52	3:02	2:55	2:52	3:46
6 to 4	Dudley Road	I-275 WB	3:06	5:05	6:40	15:47	2:22	7:27	5:22	6:23	4:05	4:10	2:58	4:07
TOTAL TRAVEL TIME ALL VEHICLES (MIN)			15,100	23,183	29,527	52,695	14,248	22,529	25,135	37,367	13,850	18,769	22,551	35,585

Maximum Queue Lengths	Existing		No Build		Alternative A				Alternative B			
Location	2017 AM (ft)	2017 PM (ft)	2040 AM	2040 PM	2017 AM (ft)	2017 PM (ft)	2040 AM (ft)	2040 PM (ft)	2017 AM (ft)	2017 PM (ft)	2040 AM (ft)	2040 PM (ft)
NB Turkeyfoot at Thomas More Pkwy (Thru Movement)	908	2293	1644	3921	708	2809	3755	3191	954	724	916	1063
SB Turkeyfoot at Thomas More Pkwy (Left Turn)	675	301	551	613	618	263	631	414	373	412	1045	1144
NB Turkeyfoot at Town Center Blvd (Thru Movement)	557	783	442	812	597	1037	614	1647				
SB Turkeyfoot at Town Center Blvd (Thru Movement)	809	1206	811	2091	716	493	812	531				
SB Turkeyfoot at I-275 EB Ramps (Thru Movement)	873	981	1977	2324	519	1026	1475	1310	557	647	1272	685
EB I-275 Off-Ramp (Right Turn)	1078	1322	1820	1701	380	718	552	455	211	223	726	970

Level of Service/Delay	Existing				Alternative A				Alternative B			
	2017 AM		2017 PM		2040 AM		2040 PM		2040 AM		2040 PM	
Signalized Intersection	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Barnwood Drive	B	14	B	14	C	33	C	20	C	33	C	20
Thomas More Parkway	F	166	F	103	E	75	D	54	F	97	F	125
Town Center Blvd	D	40	E	78	D	52	F	120				
I-275 EB Ramps	F	105	F	142	F	129	F	172	F	129	F	172
I-275 WB Ramps	D	46	D	45	D	41	F	82	D	41	F	82

Turkeyfoot Road (KY 1303), Kenton County

Project Team & Stakeholders Meetings, July 11, 2018

	Existing	Alternative A	Alternative B
	Current Conditions	Spot Improvements	Realign Town Center
	As - Is	Lower Cost Solutions	& Thomas More Pkwy
Length (ft.)	3,390	3,390	3,390
Design Speed (mph)	45	45	45
Minimum SSD 360 FT Criteria	350 FT	350 FT	350 FT
Number of Signalized Intersections	5	5	4
Earthwork Fill (cu yd.)	0	7,199	484,375
Right of Way			
Number of Parcels	0	0 Res + 1 Com	8 Res + 10 Com
Residential Relocations	0	0	Potential
Right of Way Acquisition (AC)	0	0.057	7.439
Utility Impacts	NONE	LOW	HIGH
Costs			
Construction	$0	$2,034,000	$7,552,000
30 % Contingency	$0	$610,000	$2,266,000
Right of Way	$0	$29,000	$3,855,000
Utilities	$0	$0	$703,000
Total	**$0**	**$2,673,000**	**$14,376,000**
Percent Crash reduction Per Year		8%	19%
Travel Time Reduction			
Relative to Existing 2017 AM		852 min (5.6%)	1,250 min (8.3%)
Relative to Existing 2017 PM		654 min (2.8%)	4,414 min (19%)
Relative to No-Build 2040 AM		4,392 min (14.8%)	6,976 min (23.6%)
Relative to No-Build 2040 PM		15,328 min (29%)	17,110 min (32.5%)