

APPENDIX J

Project Team, Local Officials/Stakeholder, and Public Meetings

	PDF Pages
Project Team Meeting No. 1.....	2
Local Officials Meeting No. 1.....	156
Public Meeting No. 1.....	181
Preliminary Alternatives Discussion	189
Project Team Meeting No. 2.....	194
Local Officials/Stakeholders Meeting No. 2.....	236
Public Meeting No. 2.....	269
Project Team Meeting No. 3.....	273

Project Team Meeting No. 1



Groundbreaking by Design.

MEETING MINUTES

Project: Outer Loop Corridor Study
3rd Street Road to National Turnpike
Jefferson County, KY

Purpose: Project Team Meeting No. 1 – Existing Conditions

Place: KYTC, District 5, Louisville

Meeting Date: October 12, 2017
9:30 a.m. EDT

Prepared By: Qk4

Attendees:

Chris Allen	KYTC – D5 Planning
Mikael Pelfrey	KYTC – CO Planning
Tom Hall	KYTC – D5 Planning
Judi Hickerson	KYTC – D5 Planning
Tom Wright	KYTC – D5 PD&P
Lindsay Ashby	KYTC – D5 Environmental
Pat Matheny	KYTC – D5 Design
Jason Richardson	KYTC – D5 Permits/HSIP
Lynn Soporowski	KYTC – CO Planning
Larry Chaney	KIPDA
Andy Rush	KIPDA
Steve Ross*	KYTC – CO Planning
Tonya Higdon*	KYTC – CO Planning
Balaji, Jayalakshmi *	KYTC – CO Planning
Jill Asher*	KYTC – CO Highway Design
Tom Springer	Qk4, Inc.
Jeremy Lukat	Qk4, Inc.
Andy Gilley	Qk4, Inc.
Annette Coffey	Qk4, Inc.

***videoconference**

Each project team member was provided a packet (Attachment A) containing:

- An agenda,
- Existing (2017) Peak Hour Traffic Operations, AADT and Truck %
- Environmental Overview,
- 2014-2016 Crash Data: (three exhibits)
 - Crash Type and Manner of Collision
 - High Crash Locations
 - Intersections
- Draft Need

Following introductions, Annette identified the project corridor as the 2.54-mile stretch of Outer Loop from 3rd Street Road to National Turnpike, and reviewed existing conditions in the project area (Attachment B).

Introductions, Study Schedule, Project History, Current/Future Funding

The following were comments regarding the presentation:

- **Project Goals:** Lynn requested “improve freight movement” be added to the list.
- **Project Scope and Schedule:** Mikael noted the draft report is due in October 2018.
- **Project History and Other Projects in the Area:** Referenced Project Identification Forms (PIF), the District Transportation Plan (DTP) ranking, and the current SHIFT ranking (which ranks this corridor 39th). Other project-related discussion included the following:
 - Highway Safety Improvement Program (HSIP)—Planned improvements include turn lanes at Outer Loop and New Cut Road. Tom Hall requested Qk4 revisit the cost estimates to assess potential impacts to the New Cut Road bridge. Jason updated the team regarding HSIP projects: both right-turn lanes at New Cut Road are being advanced, but will not include widening the bridge on New Cut Road or restricting turns at the gas station.
 - KIPDA High Crash Intersections—Two of the top 40 high crash intersections in the KIDPA region are in this corridor.
 - Freight Generators in KIPDA Traffic Analysis Districts—Tom Wright stated more warehouses were under construction to the west and along National Turnpike. The area is developing rapidly with warehouses and other logistic-based businesses. Activities include the Renaissance Business Park developing to full build out east of the study area; and the Louisville International Airport (LIA) Master Plan, included a proposed interchange on KY 841 (Gene Snyder) between I-65 and National Turnpike for which the LIA is pursuing a federal Infrastructure For Rebuilding America (INFRA) grant to fund the project.
 - 2008 3rd Street Road Transportation Area Study—Johnsons Quality Day Care 2 causes traffic issues on 3rd Street Road. Improvements were proposed in the study,

but none have been implemented. Qk4 will determine whether these traffic issues are still a problem.

- New Cut Road/Taylor Boulevard Corridor Study—This Louisville Metro visioning study recommended changes to New Cut Road to provide narrower lanes, a raised median, bike lanes, sidewalks, and landscaping.
- KIPDA Projects, Highway Plans, and PIFs—District 5 staff identified projects that should not be committed projects in KIDPA's traffic model, including: (1) a future five-lane 3rd Street Road, which was recommended in a planning study but is not in the current Highway Plan and is unlikely to be realized; (2) a road diet for New Cut Road; and (3) KIPDA #1938, National Turnpike road diet. The model will include a scenario with and without a new interchange with KY 841. Andy Rush said the model will be modified to include only committed projects. Qk4 will include an "E+C" (Existing plus Committed) exhibit in the corridor study report.
- Current Funding—Improvements to Outer Loop between 3rd Street Road and National Turnpike are not funded in the current Highway Plan. The PIF total cost estimate for improvements is \$26,470,000.

Existing Conditions:

- **Systems:** Outer Loop is a Minor Arterial, a State Secondary Road, and, on the Kentucky Freight network and is rated for 80,000 pounds.
- **Roadway Characteristics:** Outer Loop is considered flat terrain and has two 11-foot lanes with 10- to 11-foot shoulders (one to three feet paved), a 45 MPH posted speed limit, access by permit, numerous access points, a several substandard vertical alignments, and railroad traffic.
- **Crash History:**
 - Crash analysis identified five high-crash 0.1-mile spots (>1.0 CCRF) and three additional spots approaching the high-crash threshold (0.9 to 1.0 CCRF). Several crashes included multiple vehicles. At New Cut Road many crashes were the result of vehicles entering and exiting an adjacent gas station or other access points. Data used to identify high-crash spots did not include crashes in parking lots. Qk4 will determine the number of crashes involving trucks. NOTE: Following the meeting Qk4 investigated 2014-2016 "truck" crashes along Outer Loop in the study area. Thirteen crashes included:
 - Four truck tractor and semi-trailer
 - Four truck single unit
 - One truck and trailer
 - Four buses
 - Between 2014 and 2016, three fatalities occurred within the study area:
 1. Westbound at 3rd Street Road-lost control

2. Westbound just north of Afterglow Drive (high rate of speed)
3. Crossed centerline near Als Way

In the past few weeks, another fatality happened at Nash Road and Outer Loop.

- Tom Hall and Jason said the New Cut Road intersection was restriped in 2014 and yellow back plates installed on the signal heads, after which crashes reduced for a while but appear to have increased recently.
- Two Outer Loop locations with wide shoulders near Wilshire Boulevard and Tolls Lane are often used for passing. Neither location has a CCRF greater than 1.0.
- No bicycle, pedestrian or railroad strikes were reported between 2014 and 2016.
- **Traffic Operations:** The volume to capacity (v/c) Ratio and level of service (LOS) data are included in Attachment A. The major intersections issues are in the PM peak hour at National Turnpike and New Cut Road. Qk4 showed pictures of traffic driving into the opposing travel lanes to access turn lanes at National Turnpike. Large trucks have also been seen making these movements. A comment was made to capture in traffic forecasts that traffic and development may grow west of National Turnpike.
- **Travel Time:**
 - The traffic data collected included 24-hour turning movements by class and travel times along the corridor from 3rd Street Road to Air Commerce Drive. The peak hour travel times were used in the peak hour microsimulation model. Few through trips were from 3rd Street Road to National Turnpike; most exited on an intersecting roadway. PM travel time from 3rd Street Road to National Turnpike was about nine minutes.
 - Jeremy presented a traffic simulation of the corridor that included new counts (including trucks) and was calibrated with the Miovision travel times. Everyone agreed this represented the existing traffic conditions.
 - Tom Wright asked if coordination with UPS personnel had occurred, since they spend a significant amount of effort in trip planning. Andy said travel patterns were discussed with the LIA. Lynn previously provided truck data from UPS.
- **Structures:** None are functionally obsolete or structurally deficient. The Outer Loop bridge is considered narrow by District 5 staff (27.167 feet curb-to-curb).
- **Bike Routes:** Lynn stated the Strava heat map showed portions of New Cut Road and 3rd Street Road as heavily used bicycle routes.
- **Transit:** Larry requested the team or a representative meet with TARC staff since they are planning an east-west route to serve this area. Per the LIA meeting, TARC has applied for a federal Congestion Mitigation and Air Quality Improvement (CMAQ) grant to include an east-west route along Outer Loop.
- **Pedestrian Safety:** The pedestrian crossing on 3rd Street Road near Johnsons Quality Day Care 2 creates safety issues. Based on the KYTC and Metro Louisville standard drawings, the four signalized intersections with Outer Loop—3rd Street Road, Walmart West Entrance,

New Cut Road, and National Turnpike—have non-ADA compliant elements. Examples include but are not limited to lack of detectable warnings, five-foot landing areas, reachable pedestrian buttons, and five-foot sidewalk widths.

Environmental Overview

- **Geotechnical Overview** noted New Albany Shale near 3rd Street Road. In addition, the project corridor's subgrade is likely to be wet and will necessitate treatment during construction. Utilities are located throughout the corridor. Ponding water and the 100-year floodplain can cause long-term issues with utilities. Special consideration should be given both to utilities left in place and to active and new utilities to prevent collection of water. Following this meeting, the KYTC will conduct utility coordination and provide maps with accompanying legends.
- **Resources** include wetlands, floodplains, potential hazmat sites, dedicated mitigation sites, a jet fuel pipeline, gas transmission line, major overhead utilities, threatened and endangered bat habitat, and a few community resources including churches and schools. During the environmental overview process, coordination with resource agencies produced the following information:
 - U.S. Army Corps of Engineers (USACE)—Database may be dated and not identify old mitigation sites that did not require permits (old preservation sites). Several old mitigation projects were KYTC's sites. The USACE suggested contacting the KYTC to check their records, and using Google Maps to search for undeveloped area that, if forested, may be potential mitigation sites.
 - Kentucky Division of Fish and Wildlife Resources (KDFWR)—Identified three federally protected species (least tern, piping plover, and northern long-eared bat) within 10 miles of the project site; and the state-listed Louisville crayfish within one mile. Tree clearing may require payment to the Imperiled Bat Conservation Fund. The KDFWR also provided recommendations for stream impact avoidance/mitigation and best management practices for stream construction.
 - Metropolitan Sewer District (MSD)—Redwing met with an MSD representative to review their mapping of the corridor. No significant concerns were identified. Listed below are items discussed:
 - Water Resources, LLC stormwater basin is located on the south side of Southern Ditch and west of National Turnpike.
 - A 72-inch diameter pipe beneath Outer Loop, along the east side of Northern Ditch, ties to a 10-foot diameter pipe along the south side of Southern Ditch.
 - Walmart Mitigation Site has a private pump station and a shallow, seven-inch sewer line along the south side of Outer Loop. Both are located within the right-of-way.

- Floodplain mitigation, at a 1.5:1 ratio, may be required for fill placed within the 100-year floodplain. Credits can be purchased from the Water Resources, LLC basin.
- Kentucky State Nature Preserves Commission—Submitted a report of 31 occurrence records in Jefferson County.

Socioeconomic Overview

- Provided by KIPDA, the overview noted high concentration of low-income, minority, older persons greater than 65, and households with disabled people; a high percentage of zero-vehicle households; and a high percentage of persons with limited English proficiency. In summary, environmental justice (EJ) populations will be a concern. Lynn asked if there was a prevailing language if not English. NOTE: The requested information was not provided in the KIPDA study.

Future Growth

- Information regarding UPS was provided by Lynne. Qk4 and KYTC staff met with LIA and Louisville Metro personnel to obtain growth data. Warehouses are being built in the northwest quadrant of the KY 841 and New Cut Road interchange (south of Outer Loop). LIA and Louisville Metro noted TAZ 315, the Renaissance Park, will have significantly more jobs than was previously shown. KIPDA's traffic model has updated jobs as a result of this meeting.
- A large tract of land south of Outer Loop, east of New Cut Road, is owned by Waste Management and is a potential environmental mitigation site. Qk4 will contact Waste Management to learn of their plans for the site.

Draft Purpose and Need (P&N) Statement

Qk4 provided information to support identifying the following categories in the P&N Statement: safety, mobility, access, and other modes. Mikael suggested some of the safety elements, such as drainage and the areas of crest curves be moved to a roadway deficiencies category. Jill cautioned the use of the word deficiencies, because a design speed less than 50 mph now has only two controlling criteria: design speed and design load (structure capacity).

Discussion of Local Officials/Stakeholders (LO/S) and Public Meeting No. 1

- District 5 will research public meeting location options, such as the Lassiter Middle School or the Baptist Temple located along the corridor.
- Two Existing Conditions display sets will be used.
- Judi requested a display board defining level of service and examples of each be provided.
- Survey Monkey will be employed. Qk4 will use an easier domain name so it could possibly be placed on a variable message sign.

- LO/S membership may include representatives of Waste Management, TARC, Lassiter Middle School, Miller Transportation, Walmart, LIA, the new warehouses, Johnsons Quality Day Care 2, Metro Council, Metro Planning, Metro Public Works, railroad, fire department(s), Metro Police, MSD, USACE, UPS (Lynne has a point of contact for UPS), and others identified during the study process. KIDPA will assist in the list development.
- Schedule: the LO/S meeting target date is November 28 or 30 with alternative dates December 5 or 7.

Public Meeting Outreach

The public meeting will be open house format. Notification options may include Facebook boosts, electronic survey using Survey Monkey, webpage (www.fixouterloop.com online), online registration for a gift card (to attract website “hits”), Louisville Chamber of Commerce Young Professionals meeting/contact, Twitter, QR code linking to Survey Monkey, a flyer about the public meeting and how to access the survey, and variable message signs.

Qk4 will develop survey questions. A suggestion was made to have iPads with Survey Monkey at the public meeting,

Next Steps:

The immediate next steps are:

- Prepare meeting minutes
- Identify Local Officials/Stakeholders
- Prepare for Public Meeting No. 1
- Investigate improvement alternatives: long-term and short-term
- Develop traffic simulations for two build alternatives

End of Minutes

**Outer Loop (KY 1065) Corridor Study
3rd Street Road (KY 907) to National Turnpike (KY 1020)
Jefferson County**

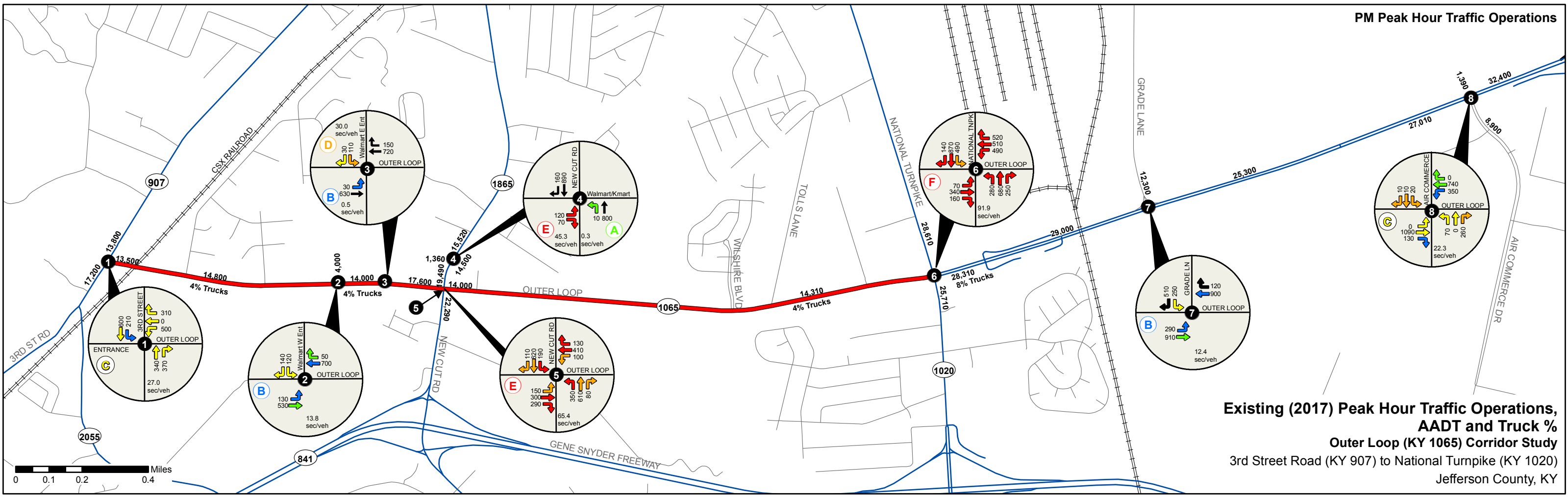
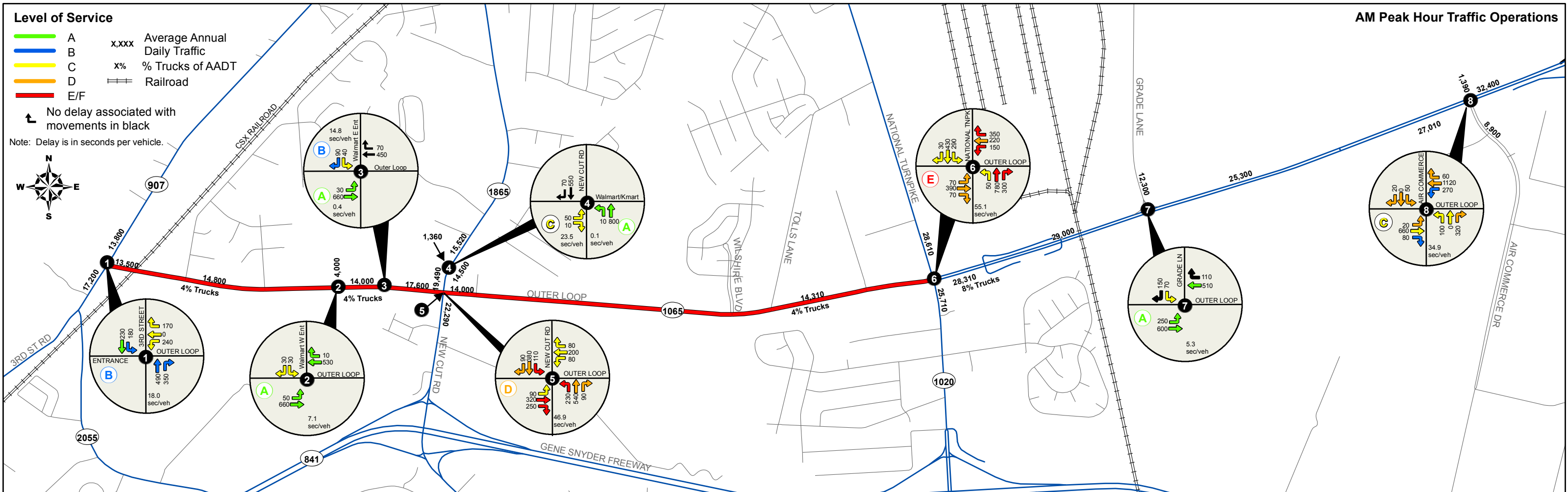
**Project Team Meeting No. 1
District 5 Office – Louisville, KY**

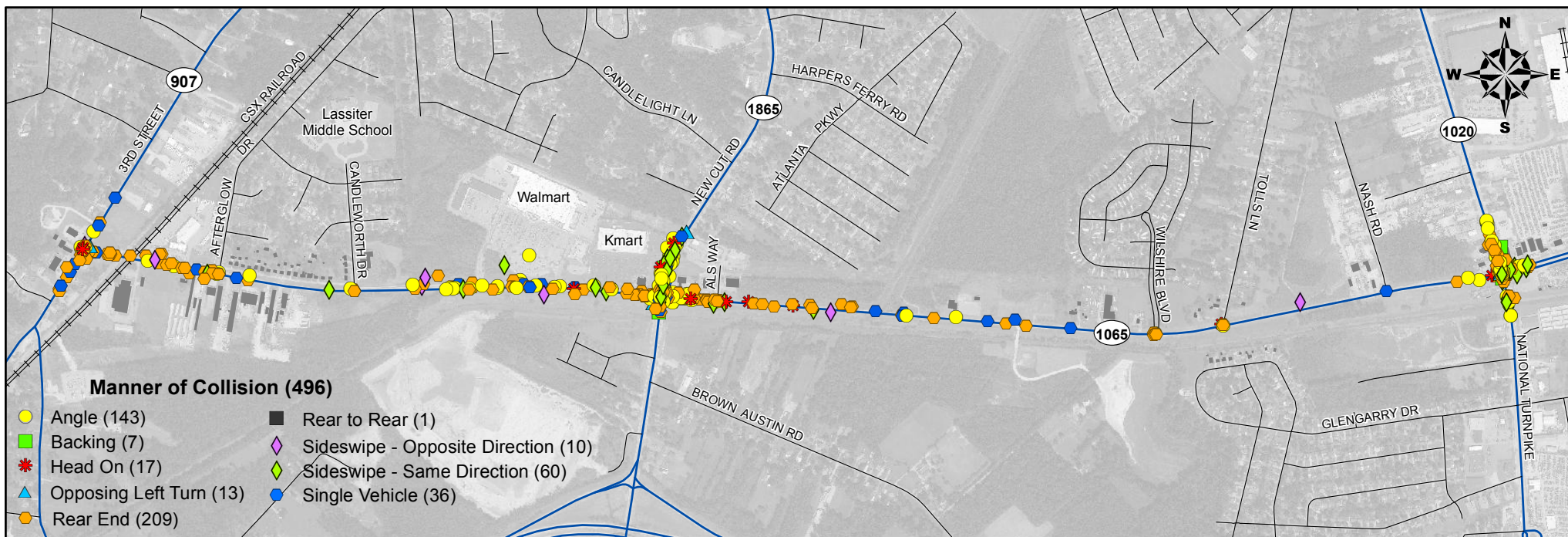
**October 12, 2017
9:30 AM EDT**

MEETING AGENDA

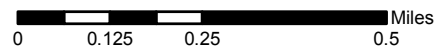
- I. Introductions
- II. Study Schedule
- III. Project History
- IV. Current/Future Funding
- V. Existing Conditions
- VI. Environmental Overview
- VII. Socioeconomic Study
- VIII. Future Growth
- IX. Draft Purpose and Need
- X. Discussion of Local Officials/Public Meeting No. 1
- XI. Public Meeting Outreach
- XII. Next Steps



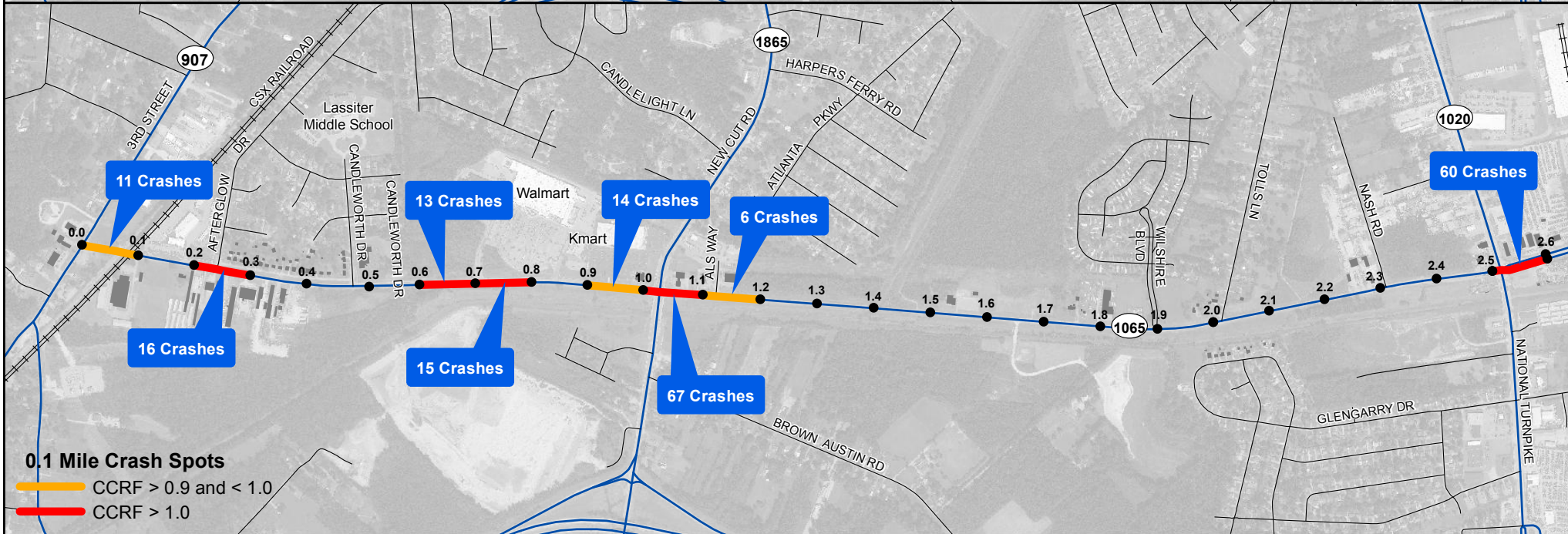
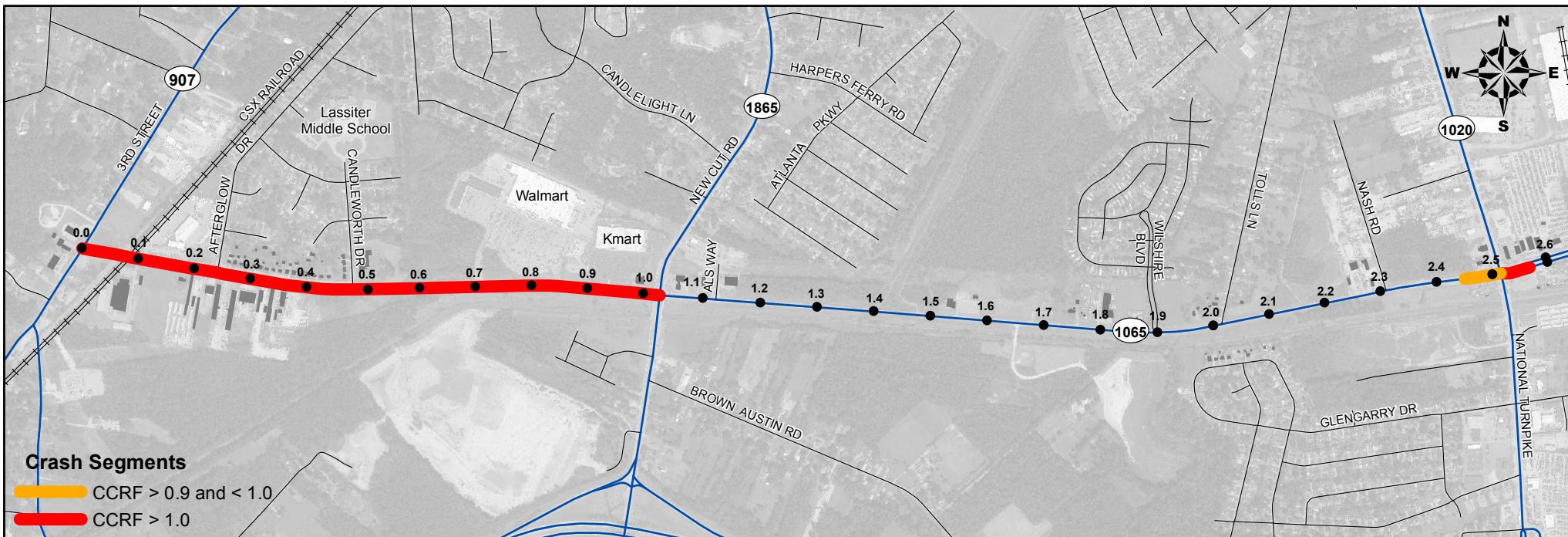




January 1, 2014 - December 31, 2016 Crash Data



Crash Data 2014-2016
Outer Loop (KY 1065) Corridor Study
 3rd Street Road (KY 907) to National Turnpike (KY 1020)
 Jefferson County, KY

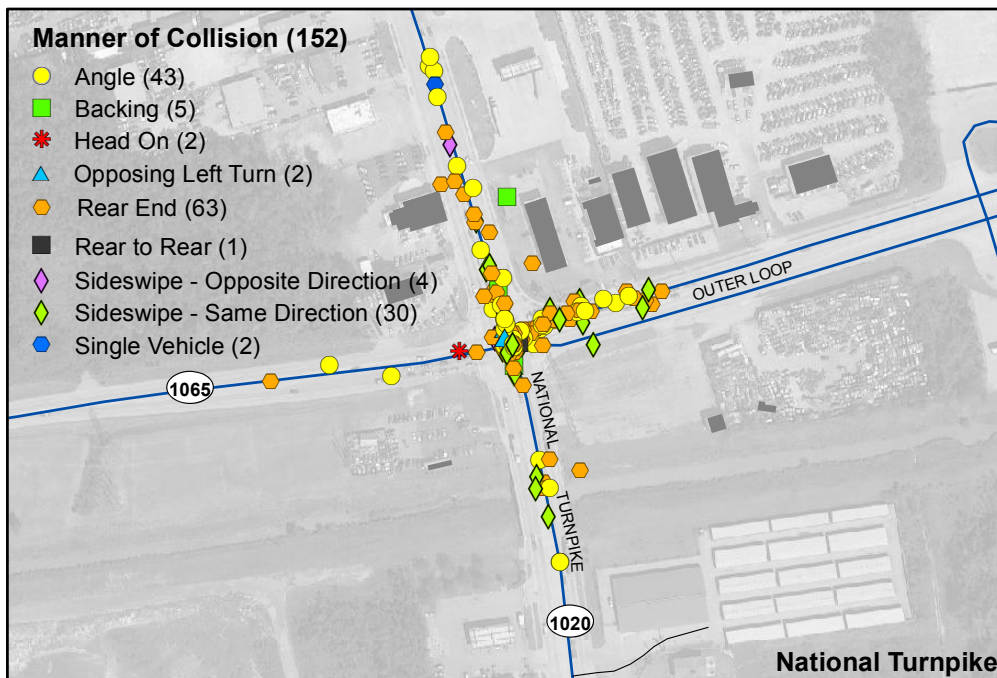
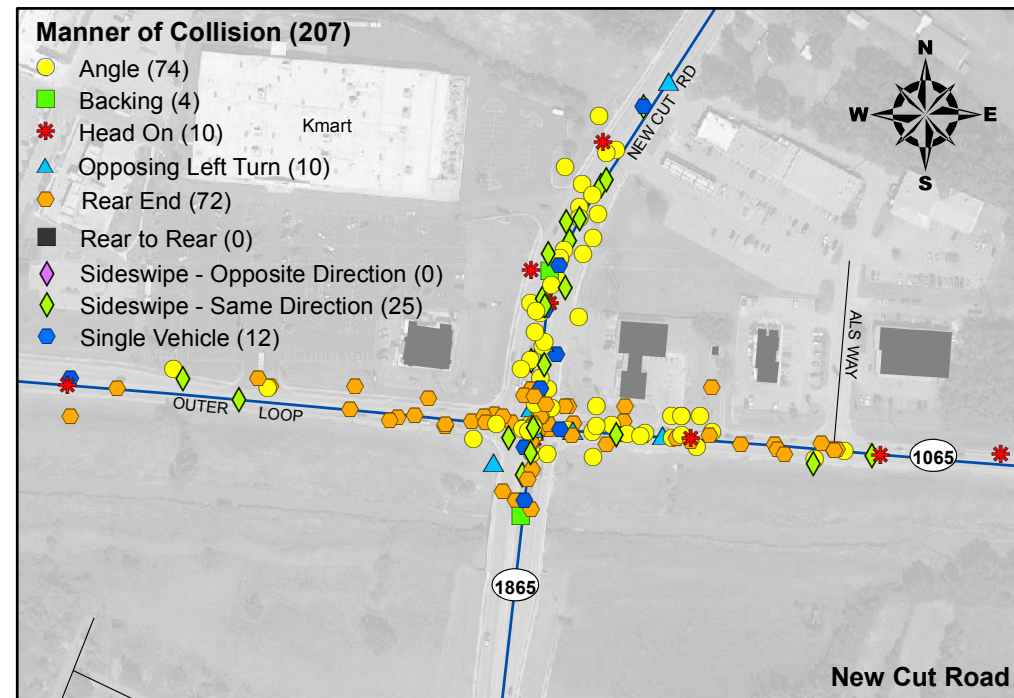
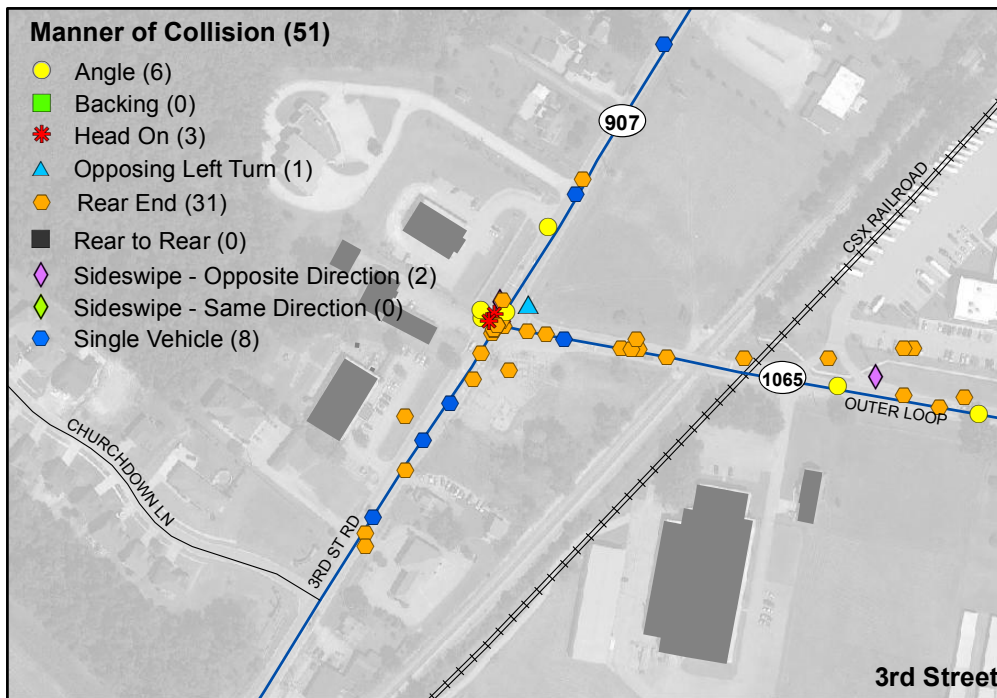


January 1, 2014 - December 31, 2016 Crash Data

Note: CCRF (Critical Crash Rate Factor) = A CCRF of 1.0 or greater may indicate crashes are happening due to circumstances not attributed to random occurrence.

0 0.125 0.25 0.5 Miles

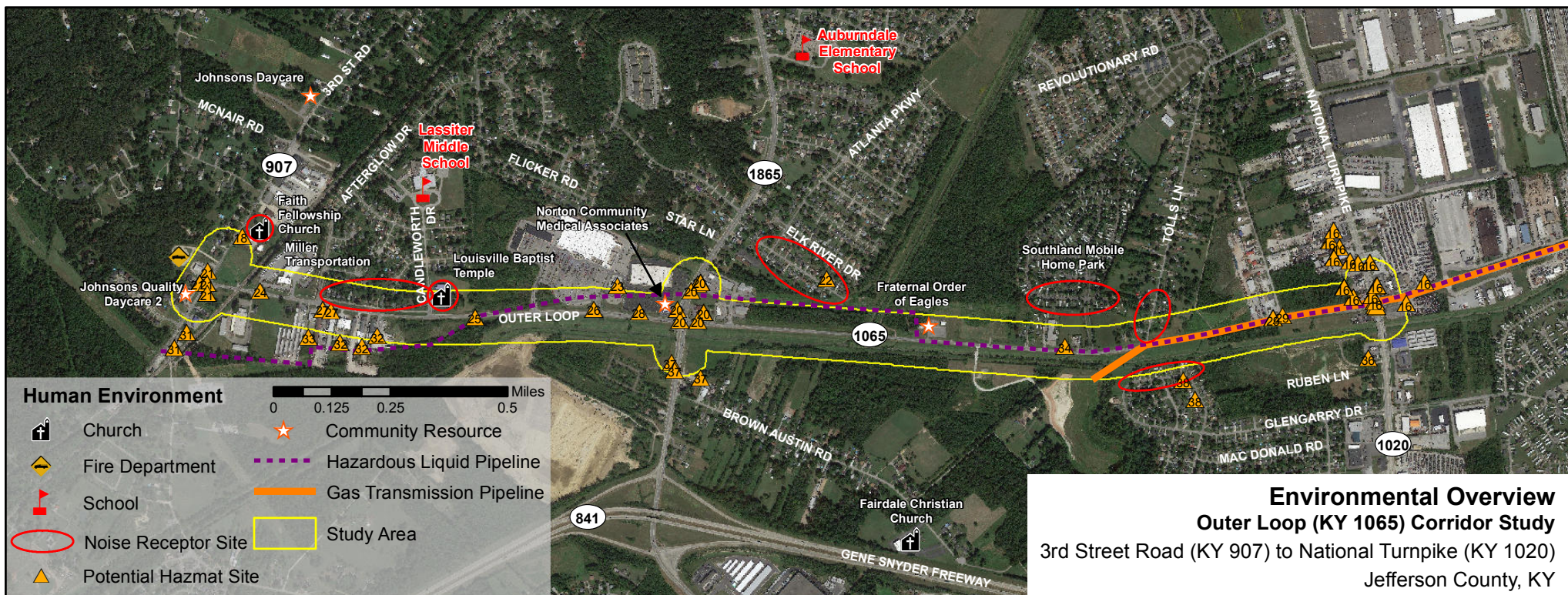
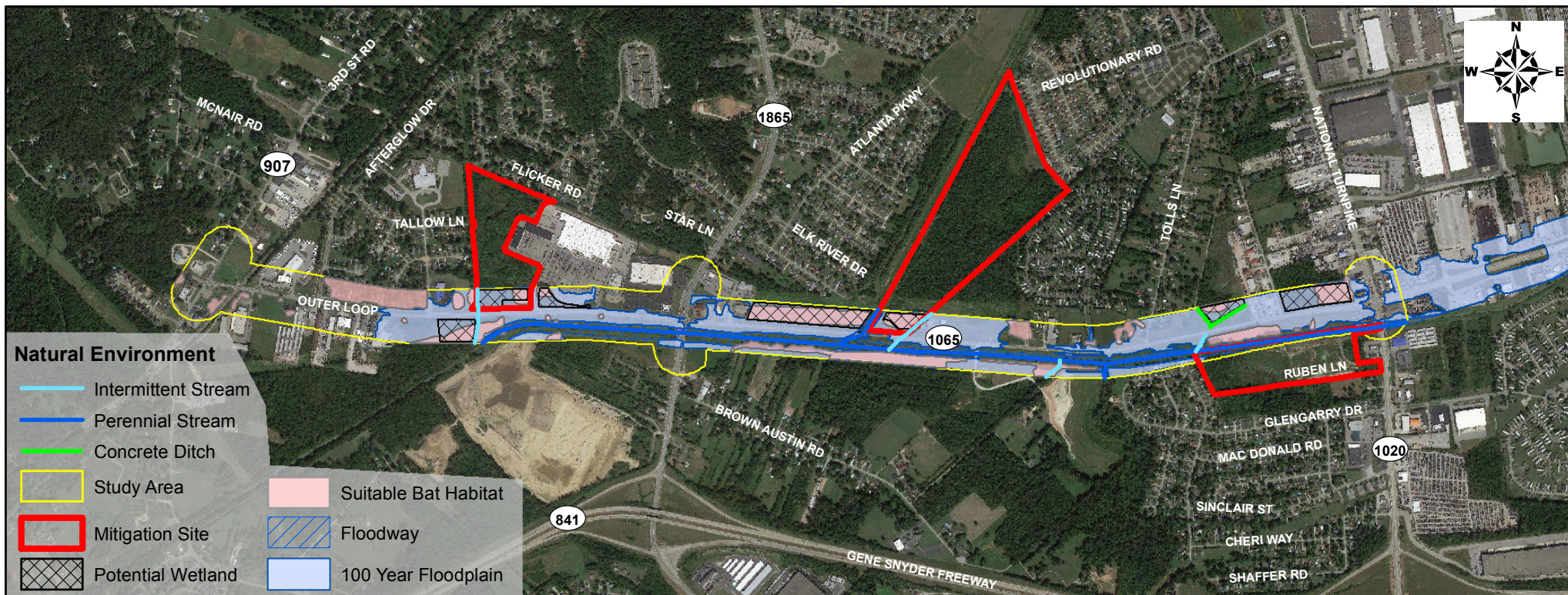
Crash Data 2014-2016
Outer Loop (KY 1065) Corridor Study
 3rd Street Road (KY 907) to National Turnpike (KY 1020)
 Jefferson County, KY



January 1, 2014 - December 31, 2016 Crash Data

0 0.025 0.05 0.1 Mile

Crash Data 2014-2016
Outer Loop (KY 1065) Corridor Study
 3rd Street Road (KY 907) to National Turnpike (KY 1020)
 Jefferson County, KY



Need



From 3rd Street Road to National Turnpike

Safety

- 5 high crash locations with a CCRF >1.0
- 3 high crash location CCRF approaching 1.0
- Motorists using Outer Loop shoulders for passing in two locations
- Motorists at National Turnpike westbound using the opposing travelway and median to reach left turn lanes.
- Crest curve on 3rd Street southbound at Outer Loop does not meet minimum stopping sight distance.
- Drainage issues and ponding of water in front of Walmart
- No yellow signal back plates for 3rd Street Road and New Cut intersections
- Much of the corridor is in the 100-year floodplain

Mobility

- Three intersections operating at LOS E or F in the current year.
- Travel Speeds are less than the 45 mph posted speed limit (30-37 mph)
- Spillback of intersection turn lanes into through traffic on WBL 3rd Street Road; NBL at New Cut Road ; and WBL and SBL at National Turnpike.
- Three movements have v/c Ratio > 1.0 indicating at capacity.
- Outer Loop is currently operating at LOS E.
- Mean peak hour travel times are between 5.01 (AM) to 8.76 (PM).

Access

- Access to businesses are in the intersection influence areas, motorists attempting left turns crossing 3 lanes of traffic causing angle crashes.

Other Modes

- Lack of sidewalk connectivity in the corridor
- Major intersections are not ADA accessible
- Some sidewalks are less than minimum 5 feet, some broken, and impassible
- No bicycle facilities – Bicycle Comfort Index is E
- Lack of east-west transit opportunities/routes

Outer Loop Corridor Study

Project Team Meeting No. 1

October 12, 2017

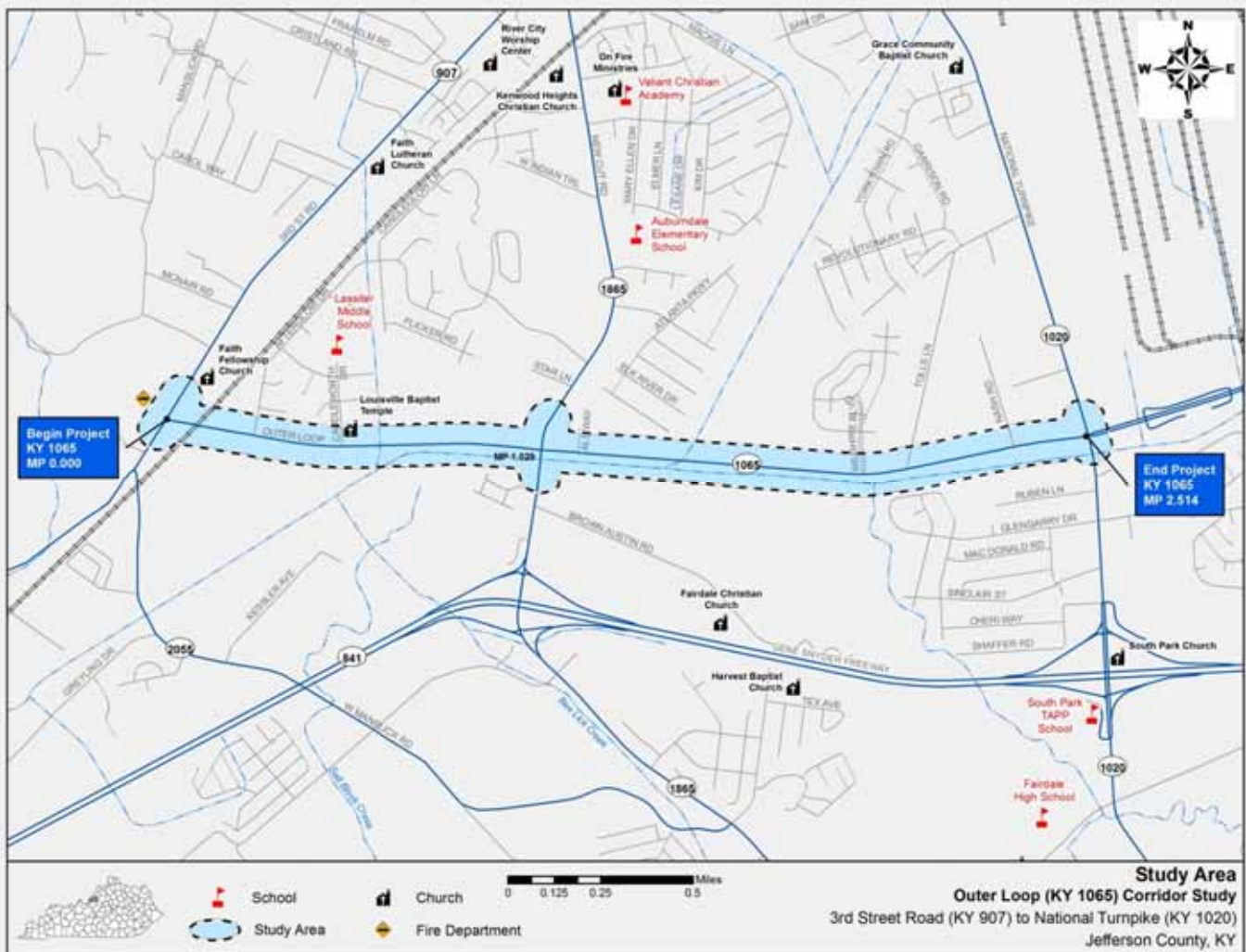
Existing Conditions

Prepared for:



Study Area

From 3rd Street Road to National Turnpike



Study Purpose and Goals



From 3rd Street Road to National Turnpike

Study Purpose

Improve **safety**, **access**, and **mobility** for all modes of travel on Outer Loop.

Draft Goals

- Improve congestion
- Improve safety for motorists, bicyclists and pedestrians
- Improve access to transit
- Avoid and/or minimize environmental impacts.

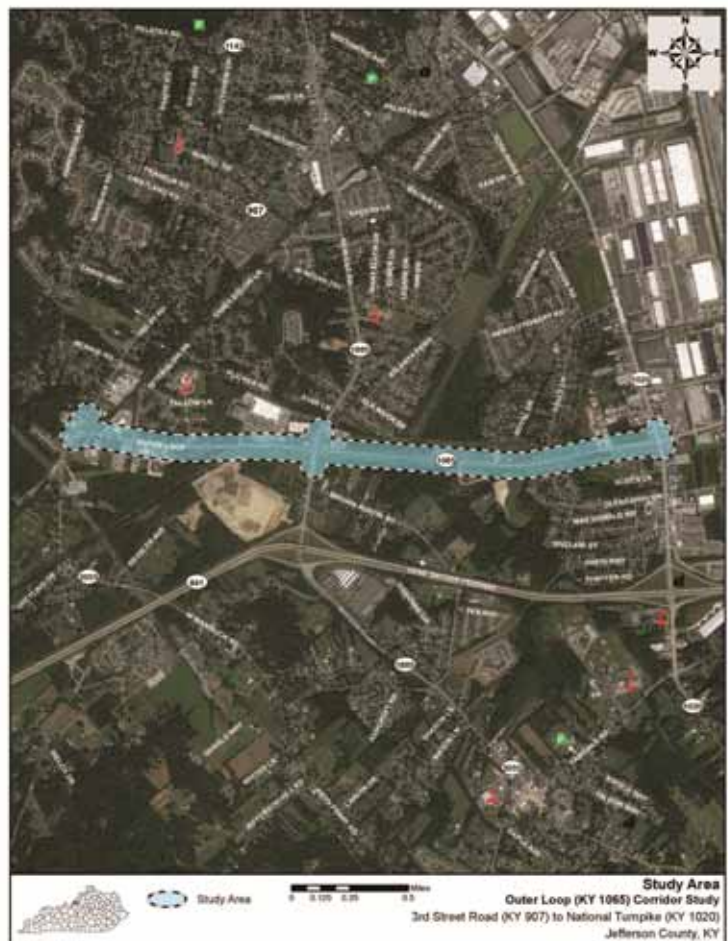


Scope of Work



From 3rd Street Road to National Turnpike

- Project History
- Existing Conditions
- Geotechnical Issues
- Environmental Issues
- Existing/Future Traffic Operations
- Crash History
- Local Officials and Public Involvement
- Environmental Overview
- Short - and Long-Term Alternatives and Intersection Analysis
- Report



Schedule



From 3rd Street Road to National Turnpike



Project History

Project History



From 3rd Street Road to National Turnpike

Prior Studies or Identified Projects

1. KIPDA REGION'S TOP 40 KENTUCKY
(Bullitt Co., Jefferson Co., Oldham Co.)
HIGH CRASH INTERSECTIONS (2009-2011)
 1. 2017 HSIP Study Preliminary Priority List
 2. 3rd Street Road / ST. Andrews Church Road Area
Transportation Study- Jefferson County
 3. New Cut/Taylor Boulevard Corridor Study
 4. 2015 Traffic Impact Study for Air Commerce Drive
 5. LIA Master Plan
 6. Renaissance Development Plan
 7. Louisville Metro Demographic and Economic Projections
2040
 8. Project Identification Forms (PIFS)
 9. Current Highway Plan



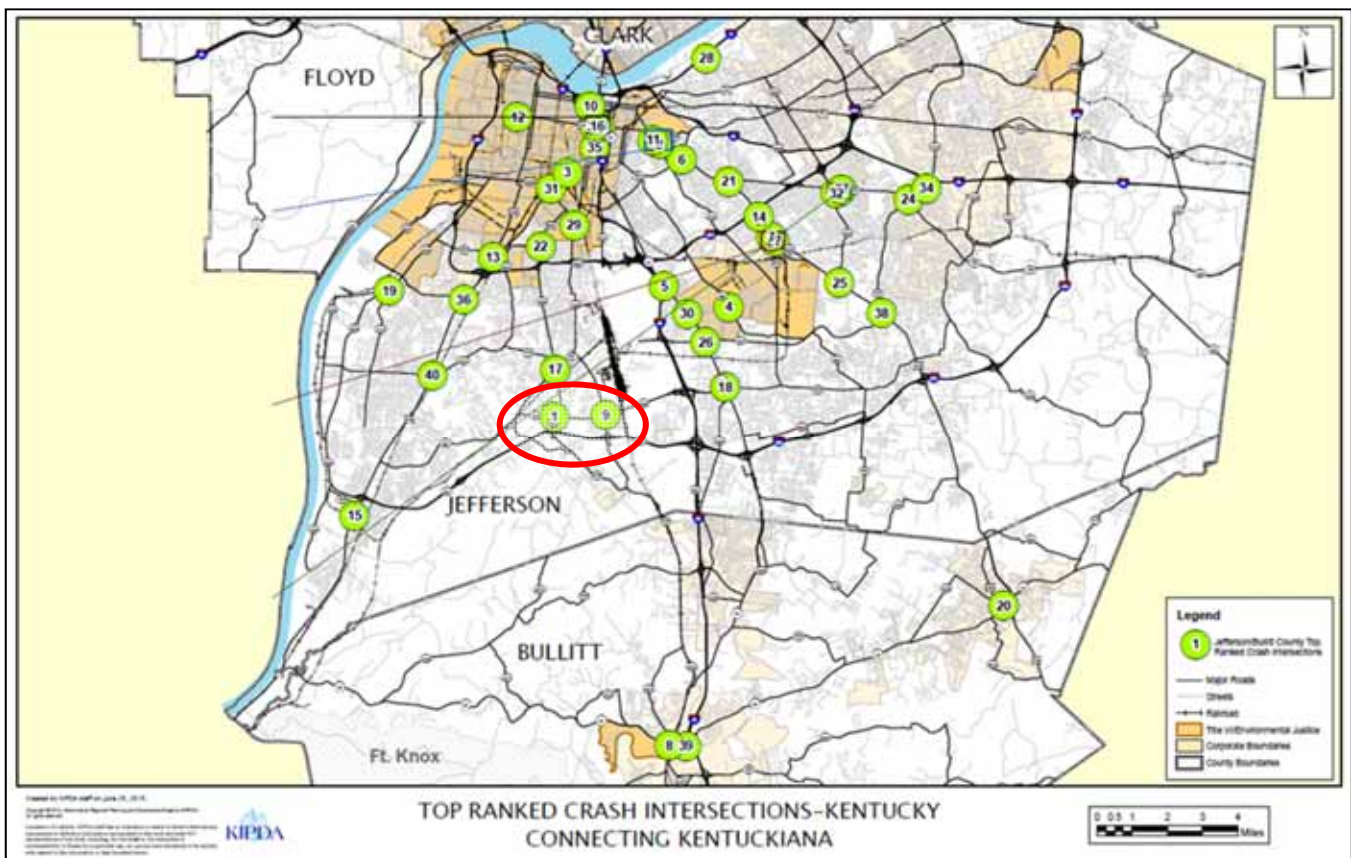
Project History



From 3rd Street Road to National Turnpike

KIPDA REGION'S TOP 40 KENTUCKY (Bullitt Co., Jefferson Co., Oldham Co.) HIGH CRASH INTERSECTIONS (2009-2011) List of 40 Intersections

- ✓ #1 - Outer Loop/ New Cut Road Intersection – 169 Crashes
- ✓ #9 - Outer Loop/National Turnpike – 109 Crashes



Project History continued



From 3rd Street Road to National Turnpike

KIPDA Transportation Analysis Districts (TADs)

- **40012**
- **40014**



Project History continued



From 3rd Street Road to National Turnpike

TAD 40012

Jefferson Crash (100+, 1/10 mile)

● 300 - 461

● 200 - 299

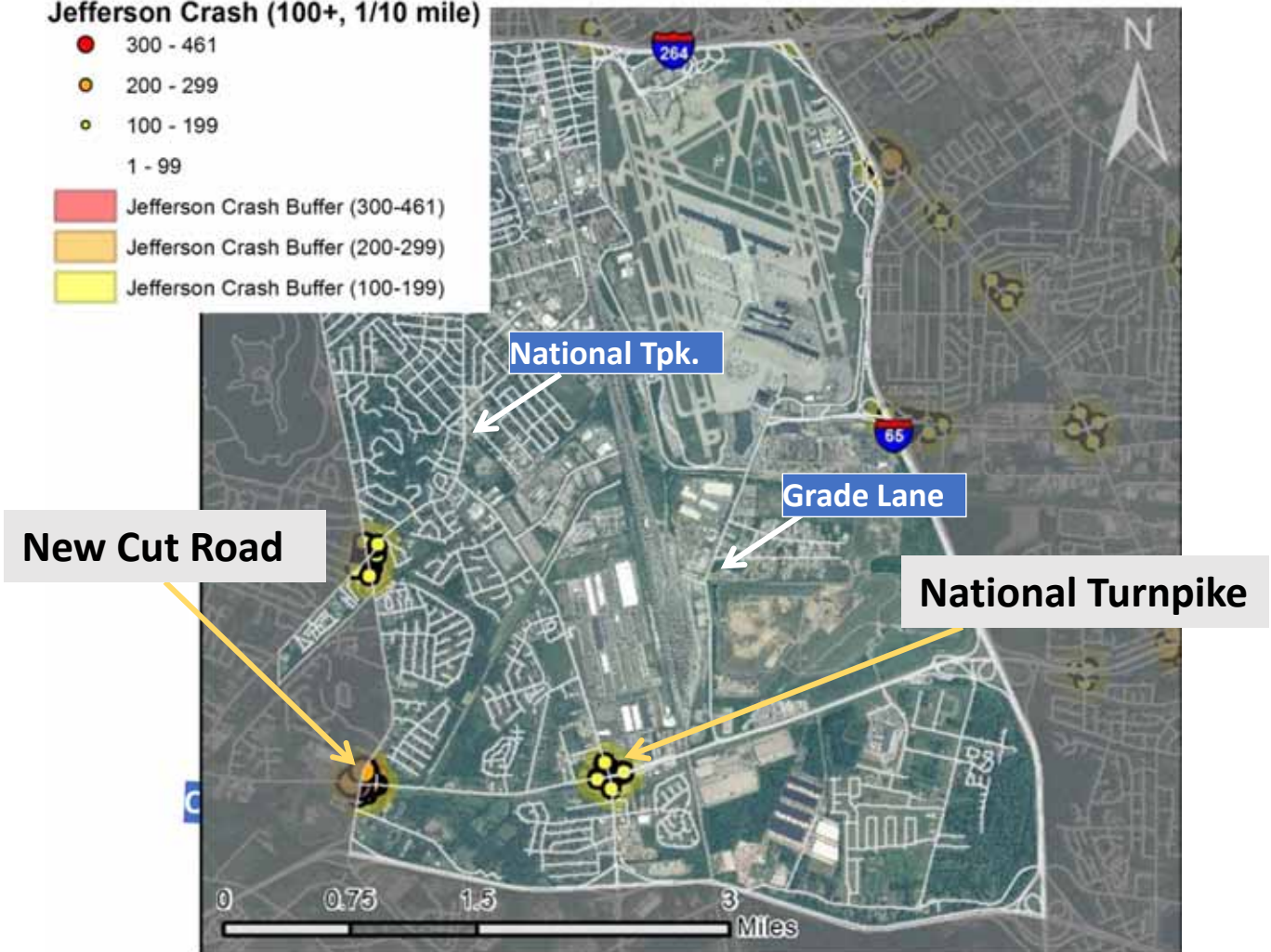
● 100 - 199

1 - 99

Jefferson Crash Buffer (300-461)

Jefferson Crash Buffer (200-299)

Jefferson Crash Buffer (100-199)



Project History continued



From 3rd Street Road to National Turnpike



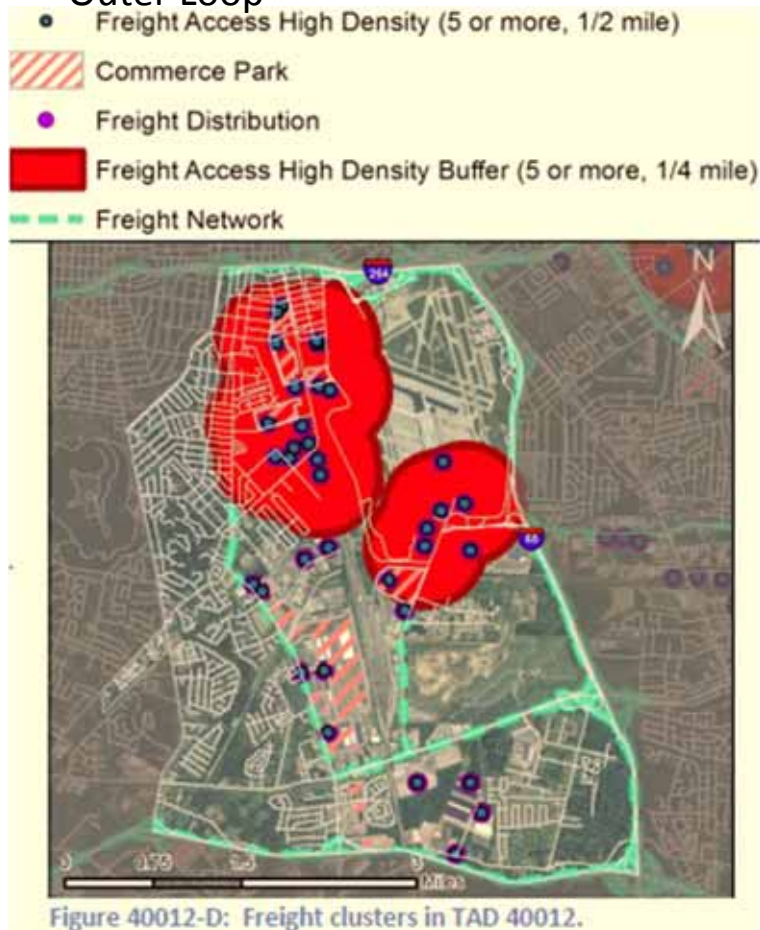
2030 Level of Service TAD 40012

Freight Generators



From 3rd Street Road to National Turnpike

- 35 freight generators in TAD 40012
- 23 are located in two clusters
- CSX
- Louisville International Airport (SDF)
- Ford Motor Assembly Plant
- UPS World Port
- Forecasted congestion LOS E and F for:
 - I-264
 - I-65
 - Third Street Road
 - Outer Loop



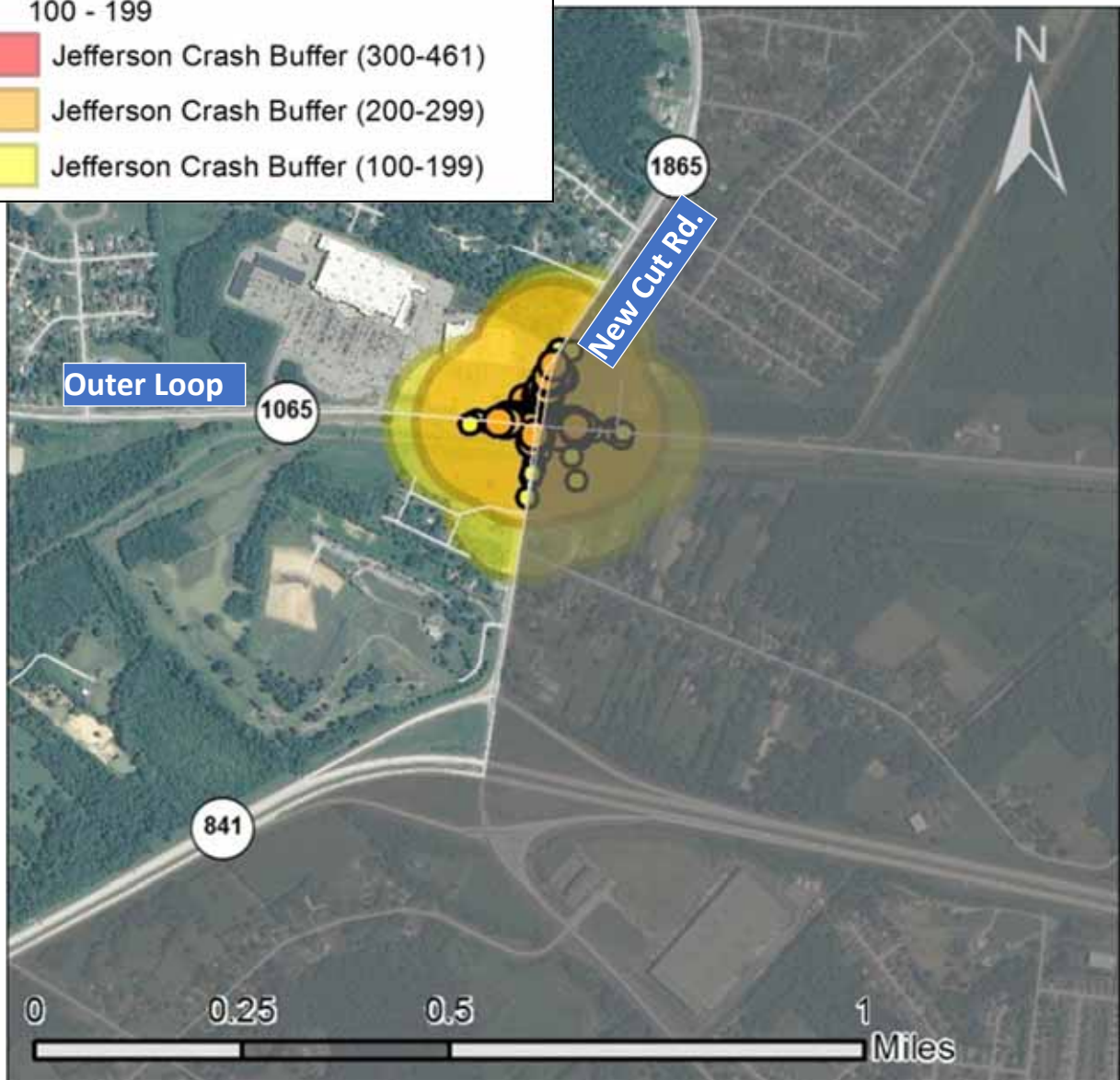
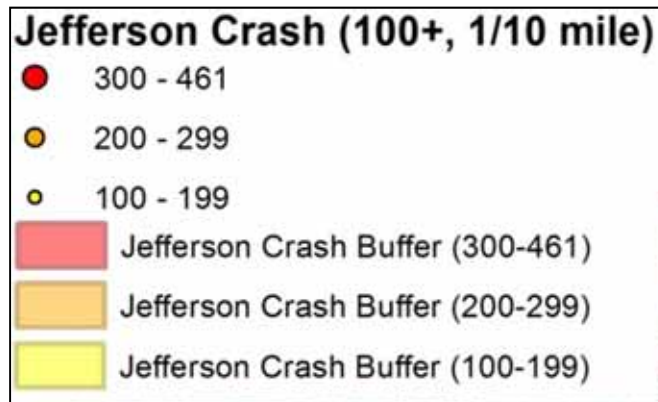
Source: KIDPA

Project History continued



From 3rd Street Road to National Turnpike

TAD 40014



Project History continued



From 3rd Street Road to National Turnpike

Project Identification Forms (PIFS)

- ✓ **05 056 D0907 46.00:** Improve safety and reduce congestion along 3rd Street Road) from Dixie Highway to New Cut Road including bicycle and pedestrian modes.
 - ✓ Ranked #36 in 2015 Districtwide Transportation Plan (DTP).
 - ✓ Sponsored by the KIPDA MPO in the 2018 Highway Plan Prioritization process.
- ✓ **05 056 D1065 49.00:** Improve safety, access, and mobility for all modes along Outer Loop from 3rd Street Road to National Turnpike.
 - ✓ Ranked #29 in 2013 DTP & #46 in 2015 DTP,
 - ✓ Sponsored by District 5 in the 2018 Highway Plan Prioritization process, and ranked #39 in Jefferson County by District 5 during this process.

Construction:

SCH YEAR	SCH FUND	PLAN YEAR	ITEMNO
2021			

Original Estimate:

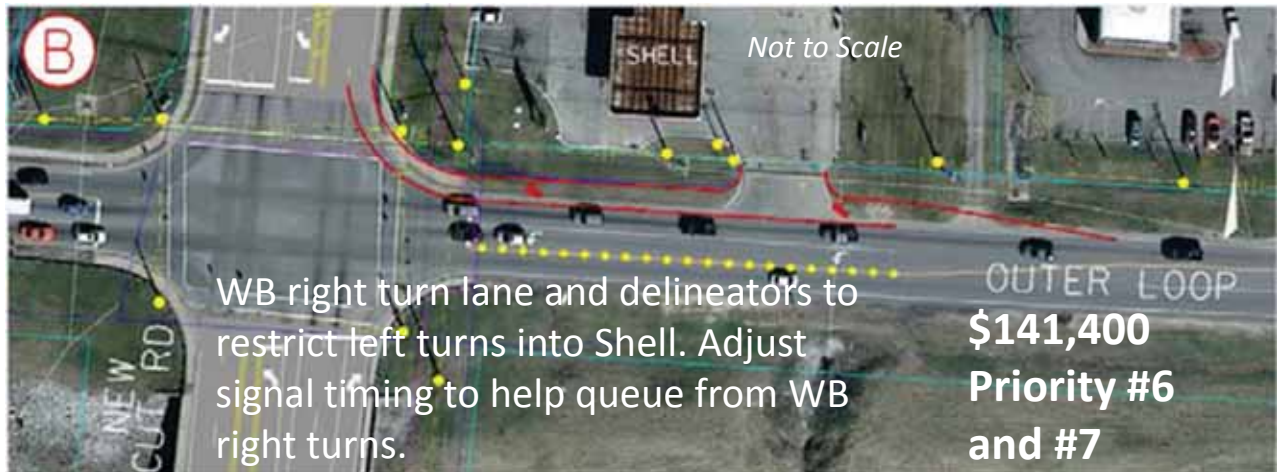
Planning:	\$250,000.00
Design:	\$2,300,000.00
Right of Way:	\$400,000.00
Utilities:	\$4,000,000.00
Construction:	\$18,620,000.00
Total Cost:	\$26,470,000.00

Project History continued



From 3rd Street Road to National Turnpike

2017 HSIP Preliminary Priority List Recommendations





LEGEND

- REHABILITATED NORTH RE-DEVELOPMENT AREA
- CHURCHES PROPERTY
- PROPERTY OWNED BY UNBUILT/STANDARD FACTORY
- SOLD PROPERTY
- REHABILITATED GAS PIPELINE
- EXISTING STREET OR ROAD
- REHABILITATED STREET
- EXISTING BOUNDARY
- SALE PENDING

AREAS AND THEIR SQUARE FOOTAGES AND ACREAGE ARE APPROXIMATE.

1. 1,210,968 SQ. FT. = 27.8 AC.*	10. 383,328 SQ. FT. = 8.8 AC.*
2. 1,083,177 SQ. FT. = 27.3 AC.*	11. SOLD
3. SOLD	12. COMBINED WITH 11
4. 256,928 SQ. FT. = 5.9 AC.*	13. 1,485,396 SQ. FT. = 34.1 AC.
4a. SOLD	14. COMBINED WITH 13
5. SOLD	15. 398,281 SQ. FT. = 9.1 AC.*
6a. SOLD	15a. SOLD
6b. SOLD	16. COMBINED WITH 13
7. SOLD	17. 500,940 SQ. FT. = 11.5 AC.*
8. 413,820 SQ. FT. = 9.5 AC.*	18. 95,032 SQ. FT. = 2.2 AC.*
8. COMBINED WITH 11	19. 181,694 SQ. FT. = 4.2 AC.*

* SUBJECT TO FINAL SURVEY

EXHIBIT A

LOUISVILLE RENAISSANCE ZONE CORPORATION

Not to Scale

LOUISVILLE
RENAISSANCE BOND COOPERATION

EXHIBIT A

Keywords: *depression, mood, mood disorder, mood disorder diagnosis, mood disorder treatment, mood disorder symptoms, mood disorder risk factors, mood disorder prevalence, mood disorder incidence, mood disorder etiology, mood disorder pathophysiology, mood disorder epidemiology, mood disorder clinical presentation, mood disorder differential diagnosis, mood disorder management, mood disorder prognosis, mood disorder research, mood disorder clinical practice, mood disorder patient care, mood disorder health care, mood disorder public health, mood disorder social issues, mood disorder cultural issues, mood disorder legal issues, mood disorder ethical issues, mood disorder policy issues, mood disorder education, mood disorder training, mood disorder continuing education, mood disorder professional development, mood disorder career development, mood disorder life, mood disorder death, mood disorder bereavement, mood disorder grief, mood disorder loss, mood disorder trauma, mood disorder stress, mood disorder coping, mood disorder resilience, mood disorder self-help, mood disorder support groups, mood disorder community resources, mood disorder mental health services, mood disorder mental health care, mood disorder mental health system, mood disorder mental health policy, mood disorder mental health research, mood disorder mental health education, mood disorder mental health training, mood disorder mental health professional development, mood disorder mental health career development, mood disorder mental health life, mood disorder mental health death, mood disorder mental health bereavement, mood disorder mental health grief, mood disorder mental health loss, mood disorder mental health trauma, mood disorder mental health stress, mood disorder mental health coping, mood disorder mental health resilience, mood disorder mental health self-help, mood disorder mental health support groups, mood disorder mental health community resources, mood disorder mental health mental health services, mood disorder mental health mental health care, mood disorder mental health mental health system, mood disorder mental health mental health policy, mood disorder mental health mental health research, mood disorder mental health mental health education, mood disorder mental health mental health training, mood disorder mental health mental health professional development, mood disorder mental health mental health career development, mood disorder mental health mental health life, mood disorder mental health mental health death, mood disorder mental health mental health bereavement, mood disorder mental health mental health grief, mood disorder mental health mental health loss, mood disorder mental health mental health trauma, mood disorder mental health mental health stress, mood disorder mental health mental health coping, mood disorder mental health mental health resilience, mood disorder mental health mental health self-help, mood disorder mental health mental health support groups, mood disorder mental health mental health community resources*

1. *Journal of the American Medical Association*, 1997; 277: 1033-1038.

100	100	100	100
100	100	100	100

The recommended improvement was to add dual left turns with a protected eastbound/westbound left turn phase at the intersection with Outer Loop.

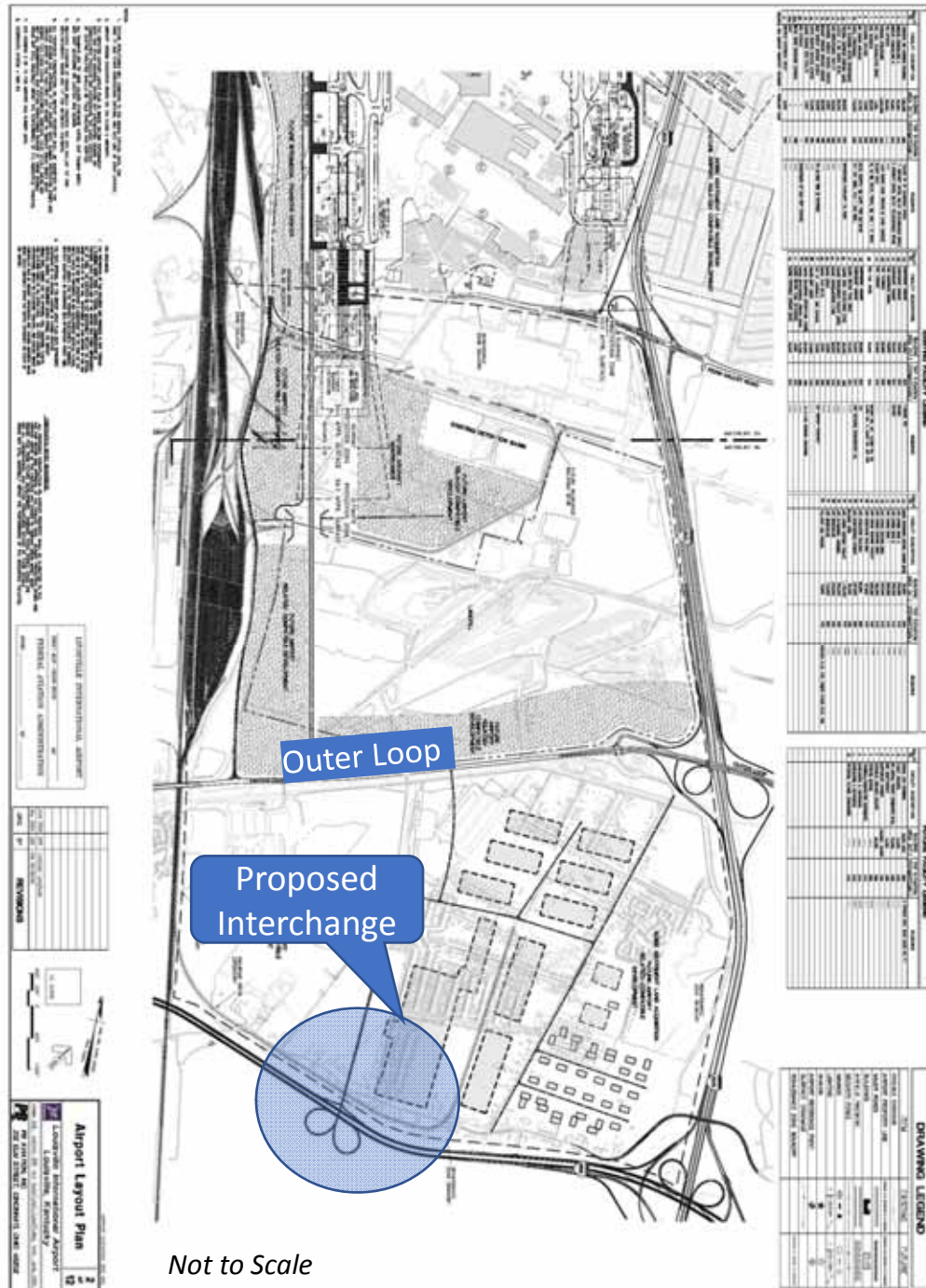




Airport Plan with New Gene Snyder Interchange



From 3rd Street Road to National Turnpike



3rd Street Road / St. Andrews Church Road Area Transportation Study- Jefferson Co.



From 3rd Street Road to National Turnpike

Study Purpose

- Evaluate existing traffic conditions
- Identify improvements to reduce congestion and improve safety short-term (10 years)
- Prioritize major projects long-term (2030).



3rd Street Road

- #1 Johnson's Day Care Entrance Revisions
 - Add bus only entrance
 - Make improvements to existing entrance
- #1 and # 7 3rd Street Road sidewalks in study area



3rd Street Road / St. Andrews Church Road Area Transportation Study- Jefferson Co.



From 3rd Street Road to National Turnpike



#10 Add right turn lanes at New Cut Road



3rd Street Road / St. Andrews Church Road Area Transportation Study- Jefferson Co.



From 3rd Street Road to National Turnpike



#15 Add right turn lane from Eastbound Outer Loop to southbound New Cut Road and widen bridge over Pond Creek



New Cut Road /Taylor Boulevard Corridor Study



From 3rd Street Road to National Turnpike

- Zone change to commercial (C-2)
- Possible development similar to the Summit NW side of exiting interchange
- Reconfigure New Cut Road between Palatka Road and Gene Snyder Freeway to provide two 10-foot lanes in each direction, 8-foot planted median, a **5-foot bicycle lane in each direction**, 4-foot planted tree lawns, and **5-foot sidewalks** on both sides of the road.
- Access management plan
- Bus shelters at key locations
- Streetscape amenities
- Landscaping along New Cut Road



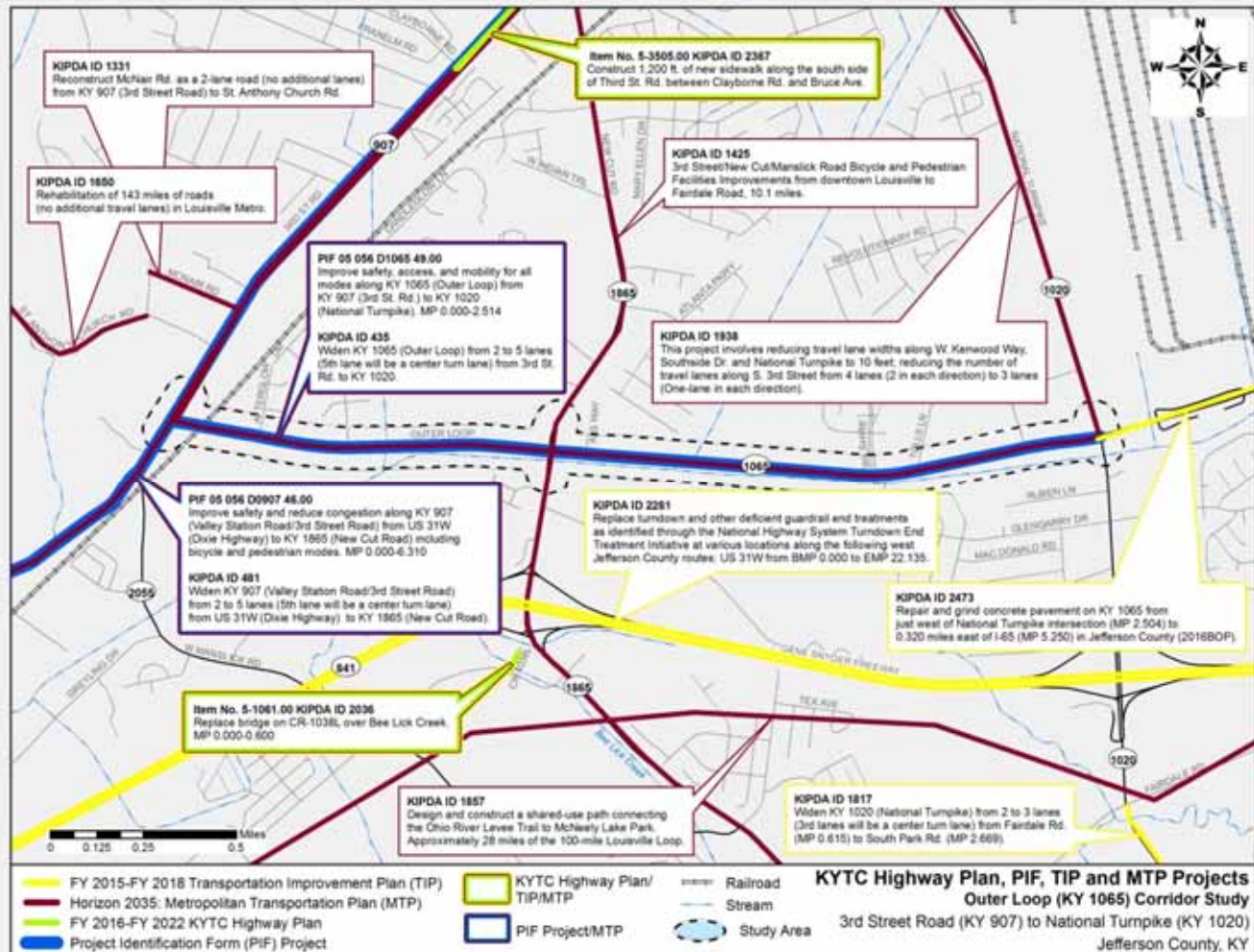
Top map shows the existing zoning for the southern section of the study area from just north of Outer Loop to the Gene Snyder. Bottom map illustrates the recommended zoning changes to the parcels to C-2.



Highway Plan, PIF, and KIPDA Projects

From 3rd Street Road to National Turnpike

✓ Project not in the current Highway Plan



Committed:

1. **KIPDA ID 1650** – Louisville Metro project. The estimated open to traffic date is 2020. KYTC D5 would assume this project should be open to the public by at least 2025. **Committed.**
2. **KIPDA ID 2036** – KYTC project. Letting scheduled for February 2018. **Committed.**
3. **KIPDA ID 2281** – KYTC project. **Completed.**
4. **KIPDA ID 2367** – Louisville Metro project that utilizes Safe Routes to School funding. KYTC D5 would assume that this project should be open to the public by 2023. **Committed.**
5. **KIPDA ID 2473** – KYTC project. KYTC D5 is working on securing funding to repair this section of roadway. **Committed.**



Existing Conditions

Existing Conditions



From 3rd Street Road to National Turnpike

Existing Conditions

The corridor's transportation infrastructure was identified with respect to the **existing highway conditions, traffic operations and safety issues**

- System/Classification/Truck Designation
- Existing Roadway Characteristics
- Existing Traffic Volumes
- Travel Speeds
- Capacity Analysis
- Crash Analysis/Safety Issues
- Existing Structures
- Bicycle/Pedestrian Accommodations
- Environmental Overview



Systems



From 3rd Street Road to National Turnpike

Federal System: Minor Arterial (Urban)

State Road System: State Secondary System

KY Freight Network: Tier 3 500-4000 ADTT

KIPDA Freight Network – National Turnpike to New Cut Road

AAA Weight Classification – Rated 80,000 pounds



Roadway Characteristics

Roadway Characteristics



From 3rd Street Road to National Turnpike

- Flat Terrain
- Number of Lanes 2 (3 approaching National Turnpike)
- Lane Width 11 feet
- Shoulder Width 10-11 feet (1-3 feet paved)
- 45 mph Posted Speed
- Access by Permit
- Access Points
 - 3rd Street Road to New Cut Road – 22
 - New Cut Road to National Turnpike - 15
- Horizontal Alignment
 - Curves appear to meet minimum radius.
- Vertical Alignment
 - Curve does not meet Stopping Sight Distance
 - 1 crest curve on 3rd Street Road (MP 4.680).
 - 1 grade does not meet guidelines - (maximum 6%)
 - MP 0.019-MP 0.052 (8%).
 - Curve does not meet Headlight Sight Distance
 - 1 sag curve near 3rd Street Road (MP 0.052).



Existing Traffic Volumes

Traffic Count Locations



From 3rd Street Road to National Turnpike

24-hour turning movement counts (Miovision) for the following intersections:

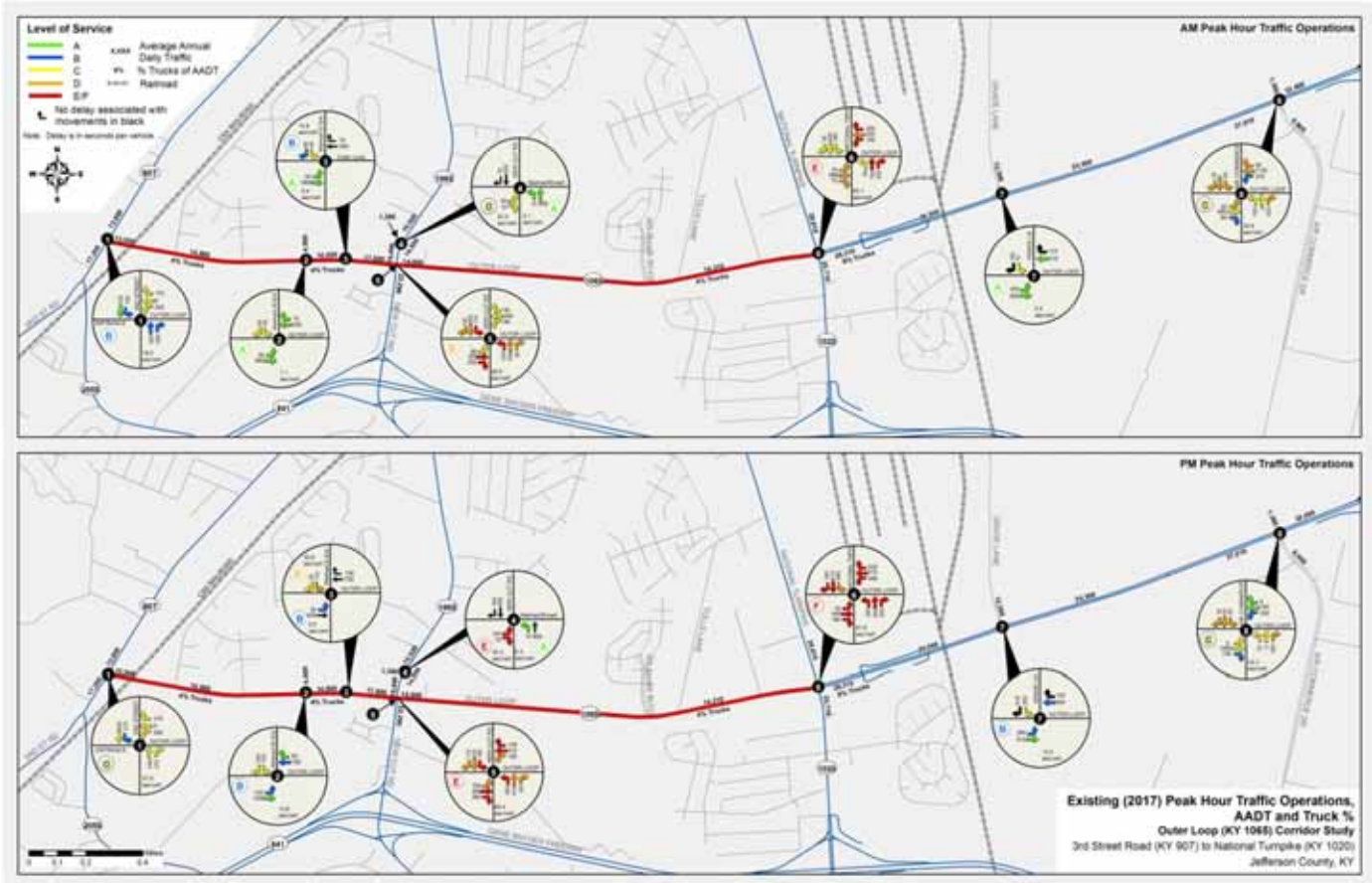
1. Outer Loop/3rd Street Road
2. Outer Loop/ Walmart West Entrance
3. Outer Loop/ Walmart East Entrance
4. New Cut Road/Walmart/Kmart Entrance
5. Outer Loop/Air Commerce Drive



Existing (2017) Traffic Operations



From 3rd Street Road to National Turnpike



- ✓ 2 Outer Loop intersections operate at LOS E or F in PM peak hour
 - ✓ New Cut Road
 - ✓ National Turnpike
- ✓ Outer Loop – operates at LOS E
- ✓ v/c Ratios are between 0.47-0.61
- ✓ AADT – 14,000-17,600
- ✓ 4% Trucks



Outer Loop Level of Service/V/C – 2017



From 3rd Street Road to National Turnpike

SECTION DESCRIPTIONS		2017 No Build							
		AM	PM	AM	PM	AM	PM	AM	PM
Beginning Description	Ending Description	LOS	LOS	PTSF OR DENSITY	PTSF OR DENSITY	ATS	ATS	V/C Ratio	V/C Ratio
3rd Street Road	Walmart Signalized West Entrance	E	E	81.2	85.8	32.2	30.5	0.47	0.55
Walmart Signalized West Entrance	New Cut Road	E	E	80.8	86.0	34.9	33.7	0.45	0.57
New Cut Road	National Turnpike	E	E	74.9	88.5	37.1	32.7	0.34	0.61
4-Lanes									
National Turnpike	Grade Lane	B	B	11.4	17.7			0.30	0.47

LOS – Level of Service

PTSF – Percent Time Spent Following

ATS – Average Travel Speed

v/c – Volume to Capacity Ratio

Density – Multilane Highways measured in passenger cars per mile per lane



2017 Peak Hour Intersection Capacity



Outer Loop Int.	AM Delay	AM Peak Hour LOS	AM Issues	v/c > 1.0	PM Delay	PM Peak Hour LOS	PM Issues	v/c > 1.0
3 rd Street Road	18.0	B			27.0	C	NBR*	
Walmart W Entrance	7.1	A			13.8	B		
Walmart E Entrance	0.4 14.8	A - EB B - SB			0.5 30.0	B - EB D - SB		
New Cut Road/Kmart Entrance	23.5 0.1	C - EB A - NB			45.3 0.3	E - EB A - NB		
New Cut Road	46.9	D	NBL – LOS E SBL – LOS E*		65.4	E	NBL – LOS F* SBL – LOS E EBT – LOS E WBT – LOS E	NBL EBL-0.974
National Turnpike	55.1	E	WBR – F WBL – E NBT – E NBR – E	WBR – 1.069	91.9	F	All but SBL operate at E or F WBL* SBL*	WBT – 1.015 WBR – 1.269
Grade Lane	5.0	A			12.4	B		
Air Commerce Drive**	34.9	C			22.3	C		

Note 1: Delay is in seconds per vehicle

Note 2: Free flow approaches are not reported.

Note 3: red indicates less than acceptable operations.

***Spillback into through lanes**

****With westbound dual lefts from Outer Loop and dual rights out of Air Commerce Drive.**



Mean Peak Travel Times and Trips



AM Peak Hour 7-8 PM Peak Hour 5-6		Cumulative Peak Hour Travel Time (minutes)			
Point	Intersection	<u>AM</u> <u>EB</u>	<u>AM</u> <u>WB</u>	<u>PM</u> <u>EB</u>	<u>PM</u> <u>WB</u>
5	3rd St Rd	0.00	5.01	0.00	7.33
4	Walmart Signal	0.95	3.54	1.68	5.17
3	New Cut Rd	2.80	2.61	5.26	3.98
2	National Turnpike	5.41	0.00	8.76	0.00

AM Peak Hour 7-8 PM Peak Hour 5-6		Cumulative # of Trips			
Point	Intersection	<u>AM</u> <u>EB</u>	<u>AM</u> <u>WB</u>	<u>PM</u> <u>EB</u>	<u>PM</u> <u>WB</u>
5	3rd St Rd	0	105	0	246
4	Walmart Signal	35	69	87	168
3	New Cut Rd	96	29	155	103
2	National Turnpike	134	0	205	0

Traffic Simulation

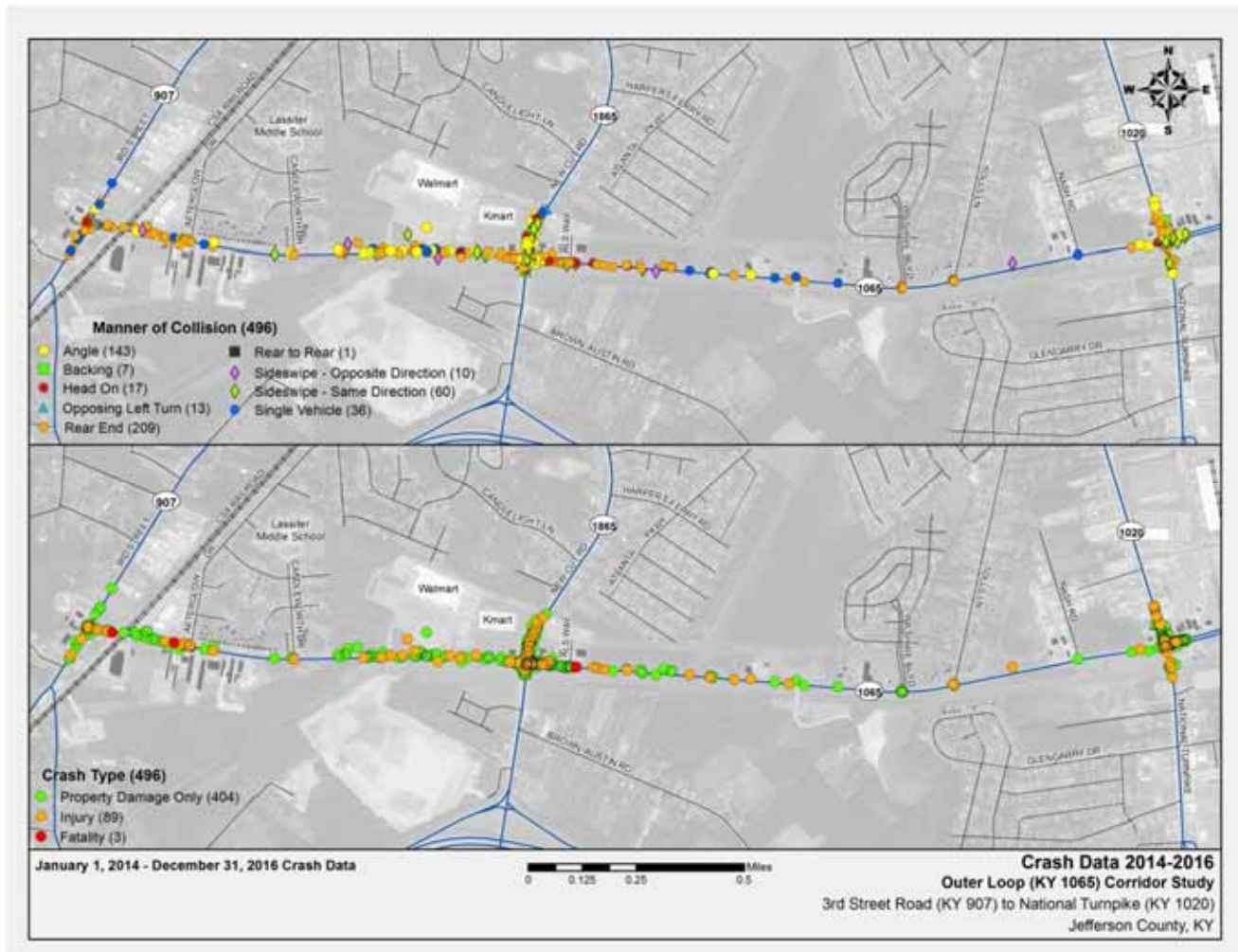
Crash History

Crash History



From 3rd Street Road to National Turnpike

Manner of Collision and Crash Type

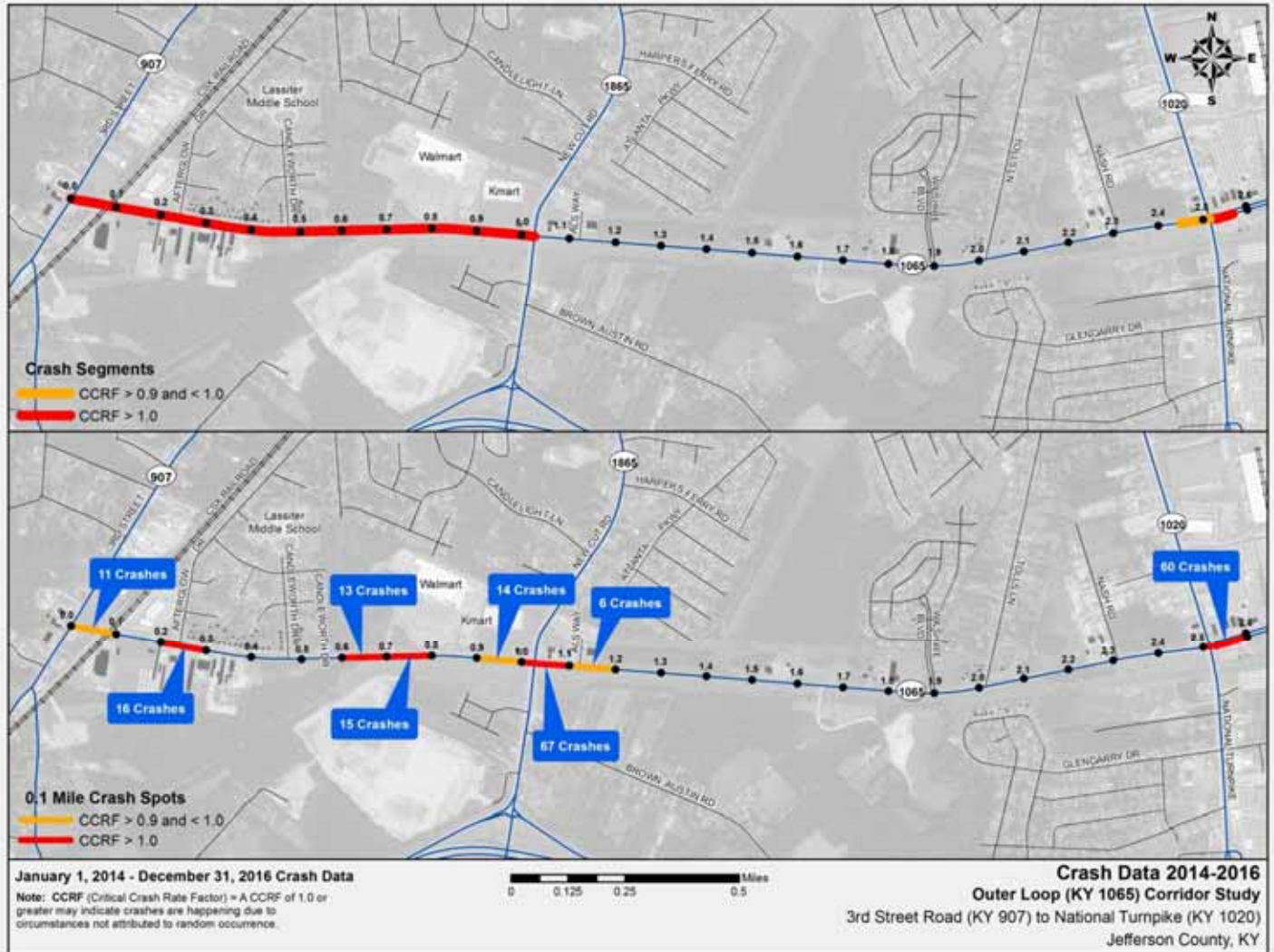


- No bicycle crashes
- No pedestrian crashes



High Crash Spots

From 3rd Street Road to National Turnpike



0.1-Mile High Crash Summary



From 3rd Street Road to National Turnpike

Begin MP	End MP	Fatal	Injury	PDO	Total	Funct. Class Rate	Actual Total Rate	Critical Rate	Critical Crash Rate Factor	Summary
0.0 3 rd Street Rd.	0.1	1	3	9	13	0.52	0.99	1.07	0.93	9 Rear ends including 21 vehicles; 2 @ RR Crossing; 1 Lost control alcohol & speed 1 Right turn sideswipe 1 Crossover 1 Erratic driver FATALITY
0.2 West of Afterglow Drive	0.3 East of Afterglow Drive	1	5	10	16	0.52	1.22	1.07	1.14	9 of 13 rear ends (8 at Afterglow Dr.) 3 Ran off road (1 fatality) 3 Failure to yield to r/w 1 Collision due to emergency vehicle
0.6 Walmart West Entrance	0.7	0	2	13	15	0.52	1.15	1.07	1.07	6 rear ends including 18 units 1 Failure to yield from Walmart 3 Left turns in front of 2 Sideswipe
0.7	0.8 Walmart East Entrance	0	4	13	17	0.52	1.30	1.07	1.21	5 Left from Walmart 7 Rear End 1 Left from Kmart 1 Ran off Road on cell phone 1 Deer
0.9	1.0	0	2	12	14	0.52	1.04	1.06	0.98	7 Rear End (1 drinking) 2 Hydroplaned 2 Right out of Walmart 1 Passed in gore area 1 Failed to yield out of 175 OL 1 Left out of Kmart
1.0 West of New Cut Road	1.1 East of New Cut Road	0	11	56	67	0.52	4.98	1.06	4.68	26 Rear End 6 Turns out of Circle K 5 Left turns from gas station (1 Shell) 5 Failure to yield green/flashing yellow 5 Ran Red light 3 Left turns from Business 4 Left turns from private Drive 3 Left turns (1 waived out)
1.1	1.2	1	2	11	14	0.52	1.04	1.06	0.98	7 Rear end -1 high water; 1 bus 4 injuries 2 Rear End near Als Way 2 (1 turning right into) 1 Sideswipe turning into parking lot 2 Swerved around drivers reckless 1 Crossed Centerline Head on crash
2.5 West of National Turnpike	2.6 East of National Turnpike	0	5	56	61	0.67	2.07	1.07	1.92	26 rear end 11 switching lanes 8 Thorntons gas station turning left Other - used center median to pass and reach Left turn lane.

Kentucky Transportation Center Research Report — KTC-17-22/KSP2-17-1F



Railroad Crossing 344019T



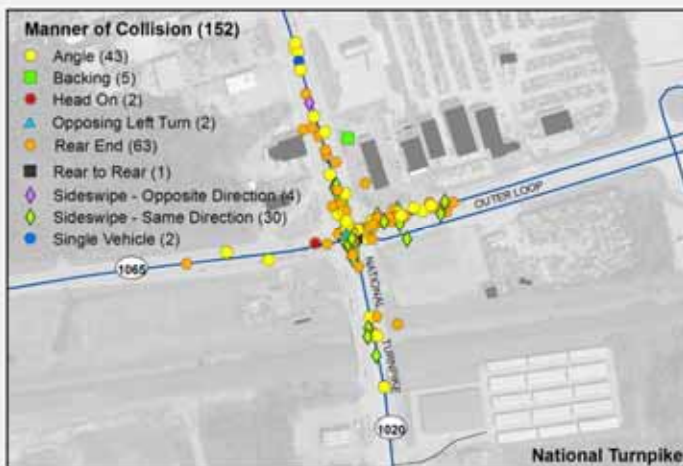
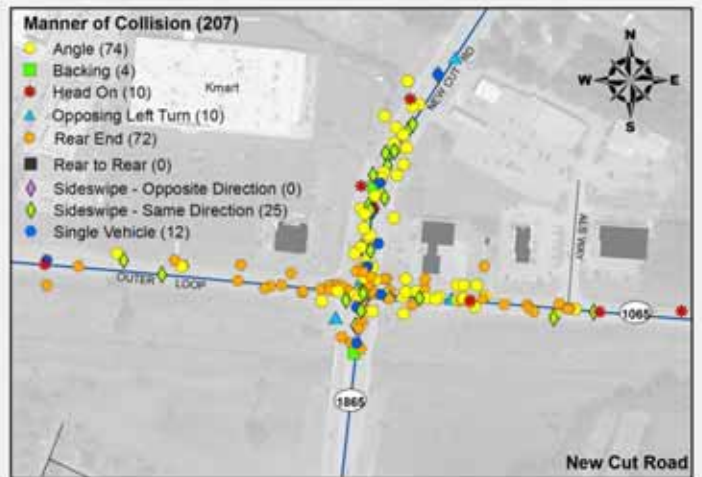
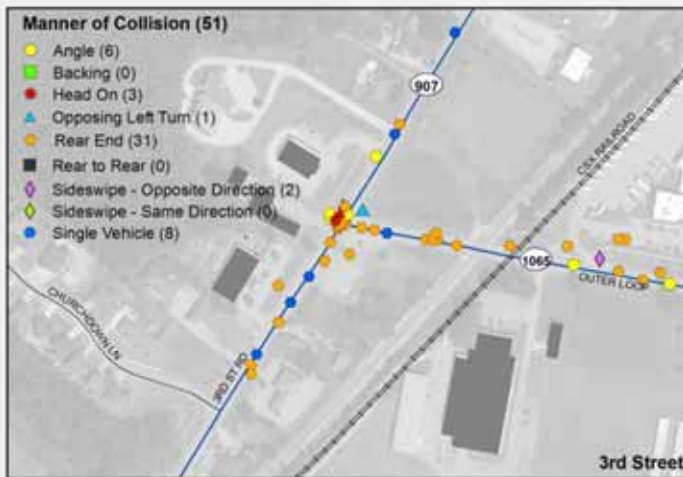
From 3rd Street Road to National Turnpike

- 4 reported
 - 1985
 - 1989
 - 1993
 - 2003
- None in the timeframe of crash history
- Recent crash June 29, 2017
 - Dark
 - Vehicle – 20 mph
 - Went around gate
 - No injuries

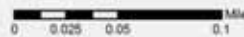


Intersection Crashes

From 3rd Street Road to National Turnpike



January 1, 2014 - December 31, 2016 Crash Data



Crash Data 2014-2016
Outer Loop (KY 1065) Corridor Study
 3rd Street Road (KY 907) to National Turnpike (KY 1020)
 Jefferson County, KY



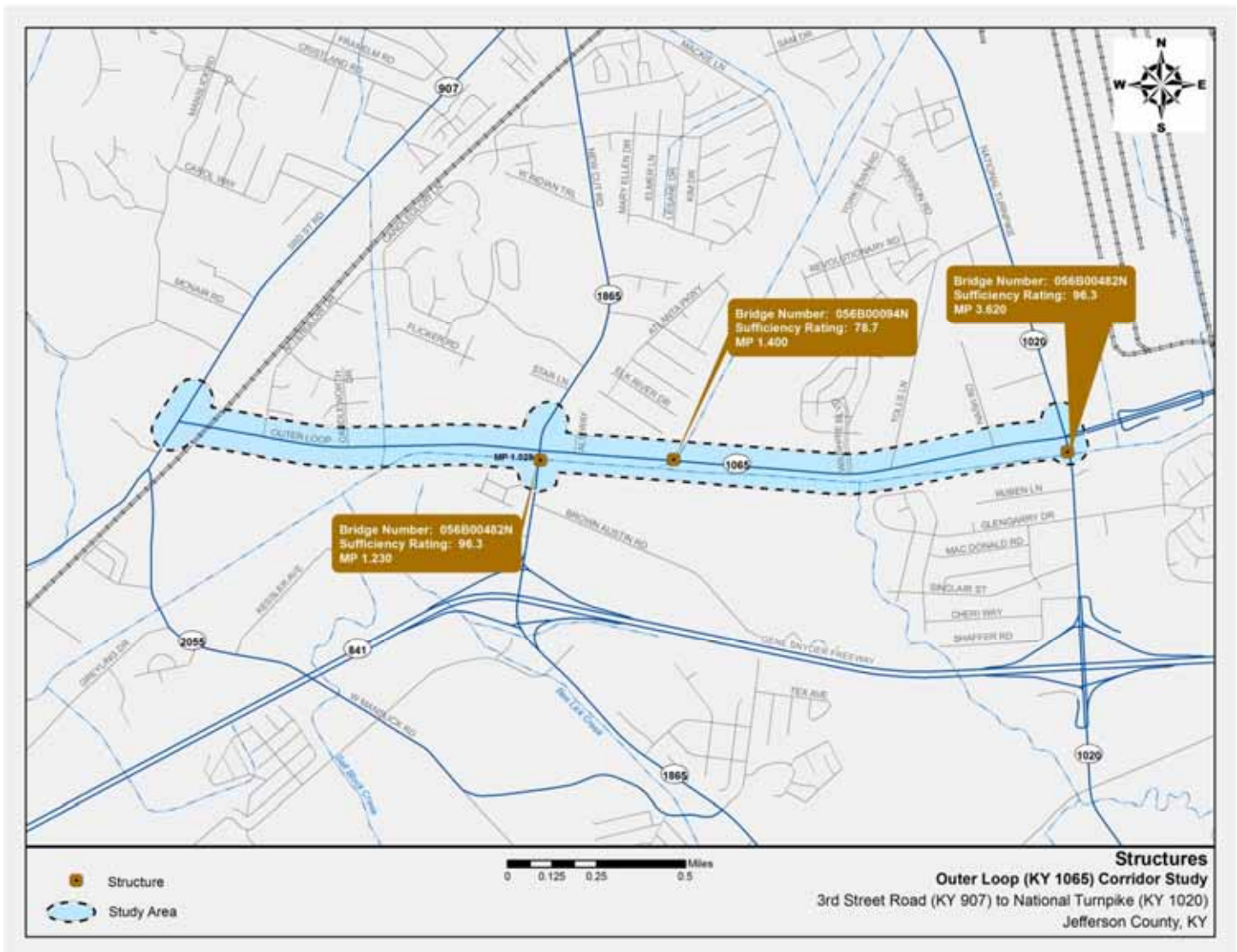
Existing Structures

Structures

From 3rd Street Road to National Turnpike



None structurally deficient or functionally obsolete



Structures



From 3rd Street Road to National Turnpike

Bridge No.	056B00094N	056B00482N	056B00418N
Route	Outer Loop (KY 1065)	New Cut Road (KY 1865)	National Turnpike (KY 1020)
MP	1.400	1.230	3.620
Features Intersected	Northern Ditch	Southern Ditch	Southern Ditch
Location	0.30 mile east of New Cut Road	0.1 mile south of Outer Loop (KY1065)	200 feet south of Outer Loop (KY 1065)
Year Built	1954 (2011 Reconstructed)	2003	1989
Description	5 Span Concrete Tee Beam	3 Span Prestressed concrete continuous Stringer/Multi-beam or Girder	Span Prestressed concrete continuous Box Beam or Girders – Single or Spred
Length (ft.)	215.0	173.0	133.0
Width (ft. Curb To Curb)	27.167	83.000	76.833
Sufficiency Rating	78.7	96.3	94.5
Last Inspection Date	5/24/2016	3/16/2016	3/16/2016
Approach Roadway (ft.)	29.856	83.000	74.0
Skew (degrees)	45	5	0
Horizontal Clearance (ft.)	27.167	83.000	76.833
Structurally Deficient (Yes or No)	No	No	No
Functionally Obsolete (Yes or No)	No	No	No
Inventory Rating	44 Tons	1LFR	48 Tons
Operating Rating	66 Tons	84.7 Tons	80 Tons
Posting	No Restriction	No Restriction	A Open No Restriction
Structural Evaluation			
Deck	7	7	6
Superstructure	7	7	7
Substructure	6	7	6
Channel	6	7	7



New Cut Road



From 3rd Street Road to National Turnpike



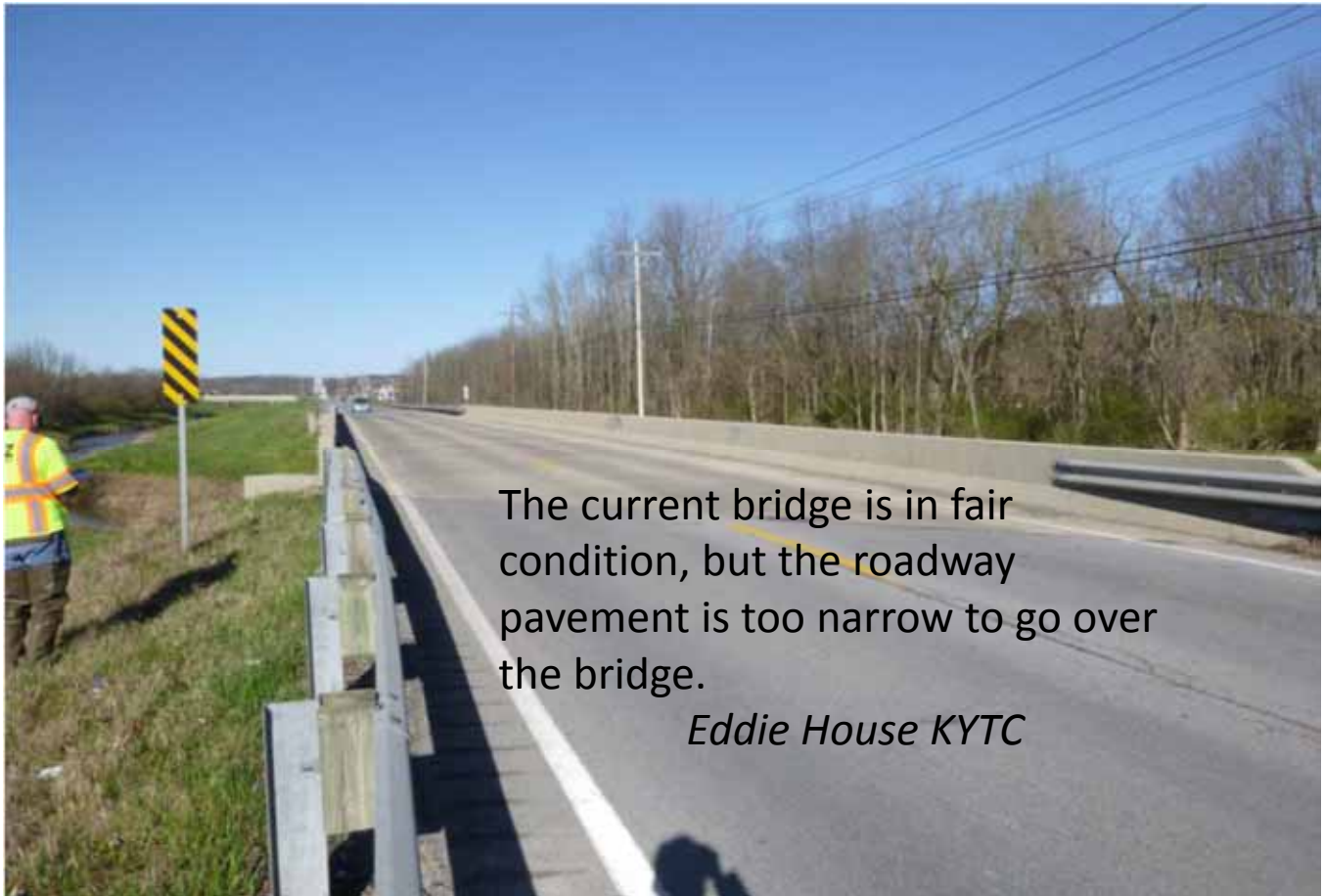
New Cut Road



Outer Loop



From 3rd Street Road to National Turnpike



National Turnpike



From 3rd Street Road to National Turnpike



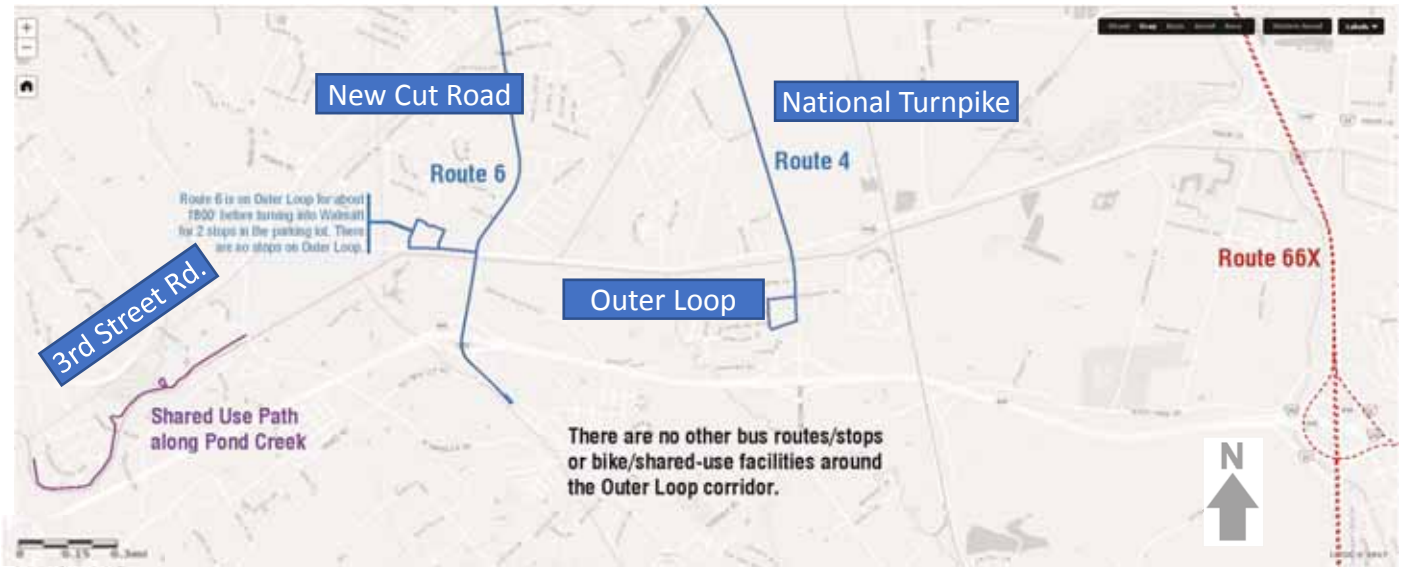
Other Modes

Transit



From 3rd Street Road to National Turnpike

Existing TARC ROUTES AND SHARED USE PATHS



Source: LOJIC Online Map

Existing Bike/Ped Facilities



From 3rd Street Road to National Turnpike



Source: KIPDA and LOJIC

Cornerstone 2020 - Metro



From 3rd Street Road to National Turnpike

Core Graphic 13

Bikeways

Adopted: June 20, 2013

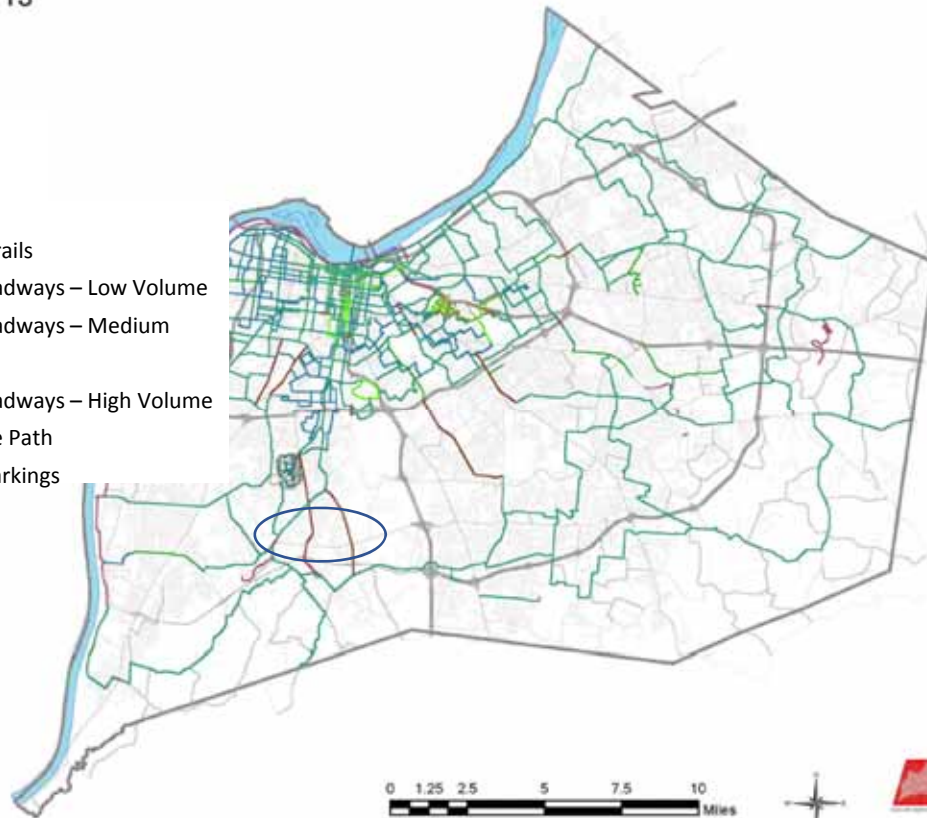


CORNERSTONE
2020

Legend

Facility Type

-  Bike Lanes
-  Off-road Trails
-  Shared Roadways – Low Volume
-  Shared Roadways – Medium Volume
-  Shared Roadways – High Volume
-  Shared Use Path
-  Signs & Markings



Taylor Boulevard/New Cut Road Corridor Study



From 3rd Street Road to National Turnpike

Reconfigure New Cut Road between Palatka Road and the Gene Snyder Freeway to provide for two 10-foot travel lanes in each direction, 8-foot planted median, a **5-foot bicycle lane in each direction**, 4-foot planted tree lawns, and **5-foot sidewalks** on both sides of the road.



Louisville Loop Master Plan



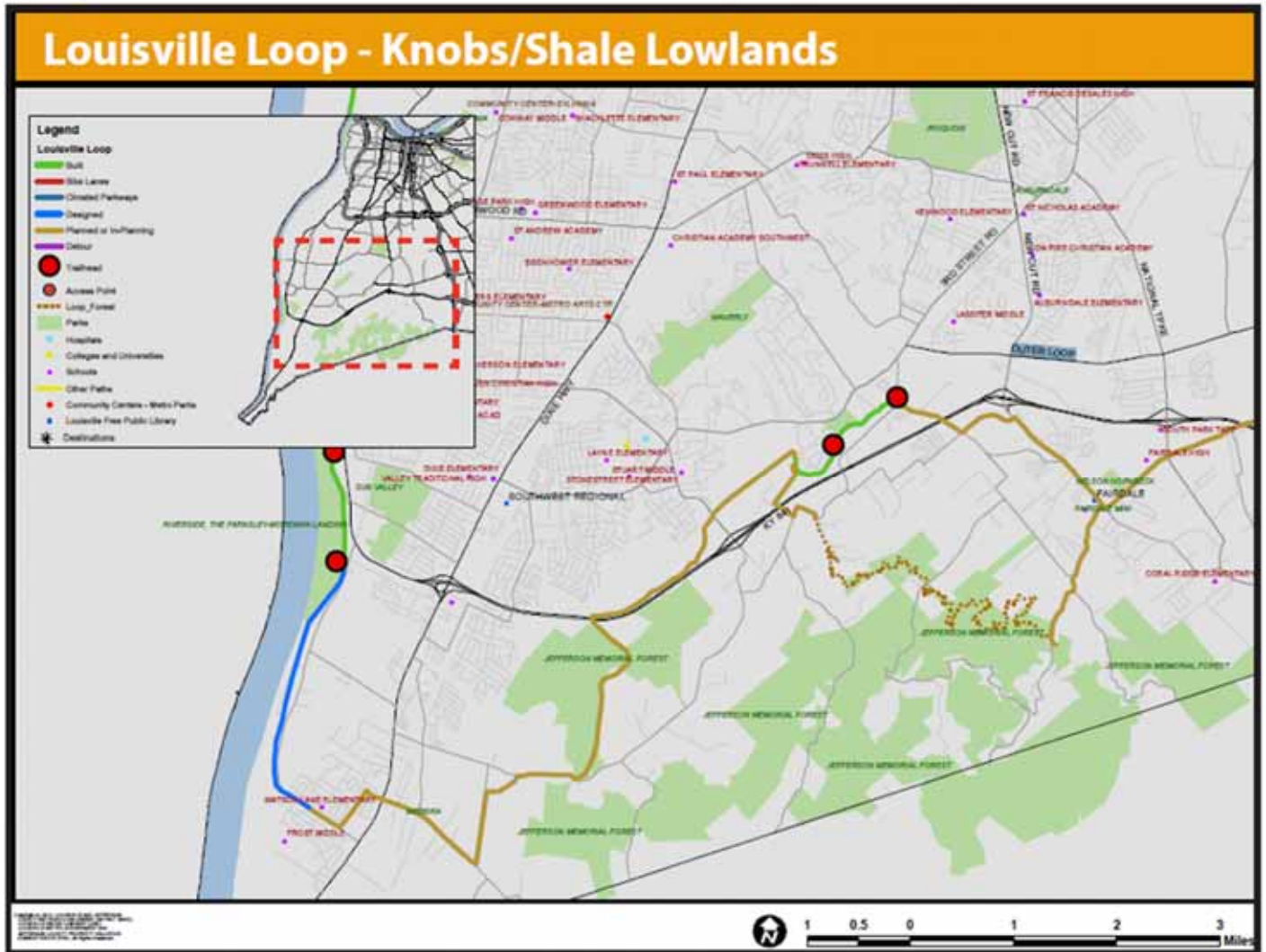
From 3rd Street Road to National Turnpike



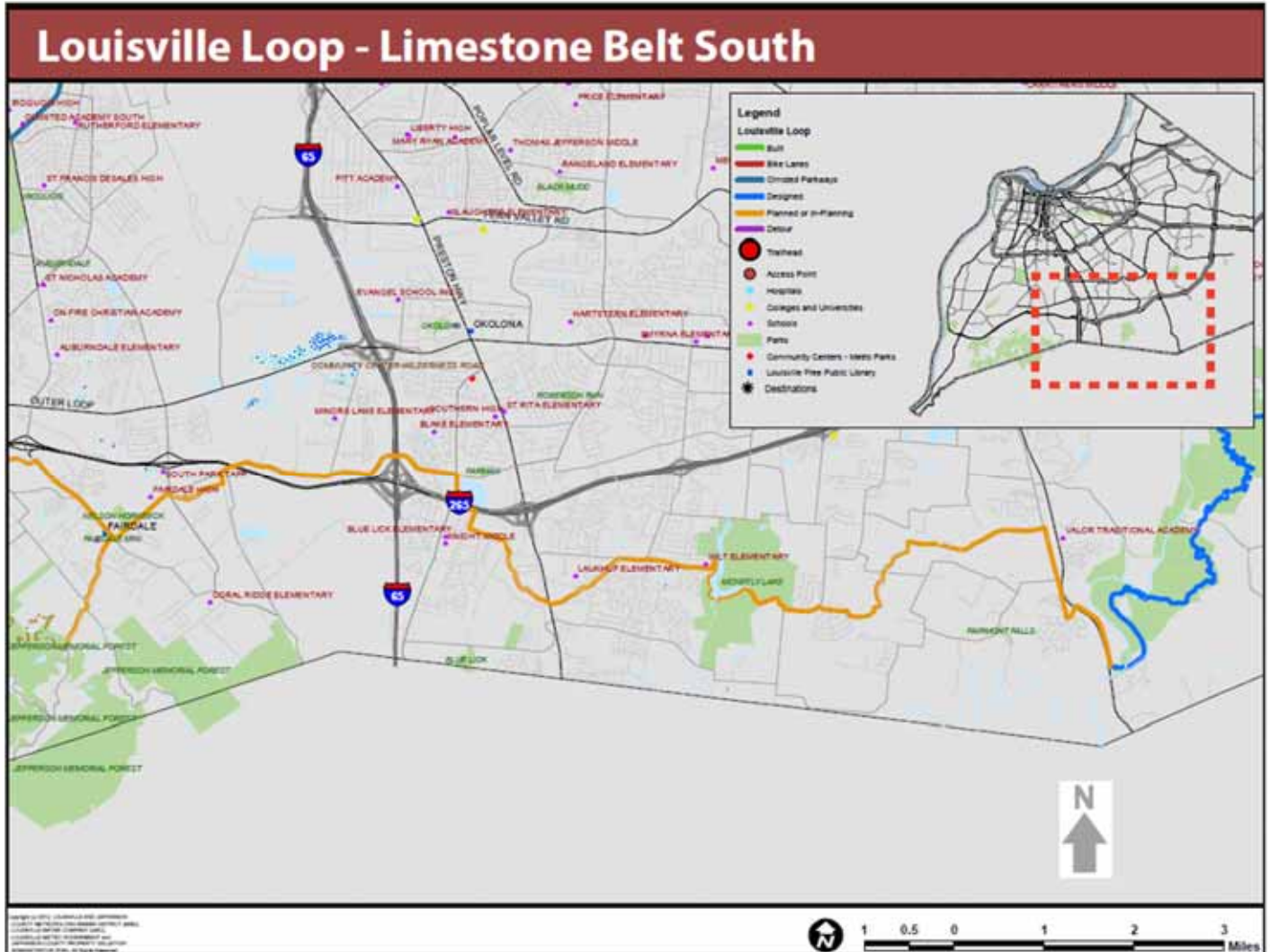
Adopted 2013



From 3rd Street Road to National Turnpike



From 3rd Street Road to National Turnpike



KIPDA Plan Bicycle/Pedestrian/Transit



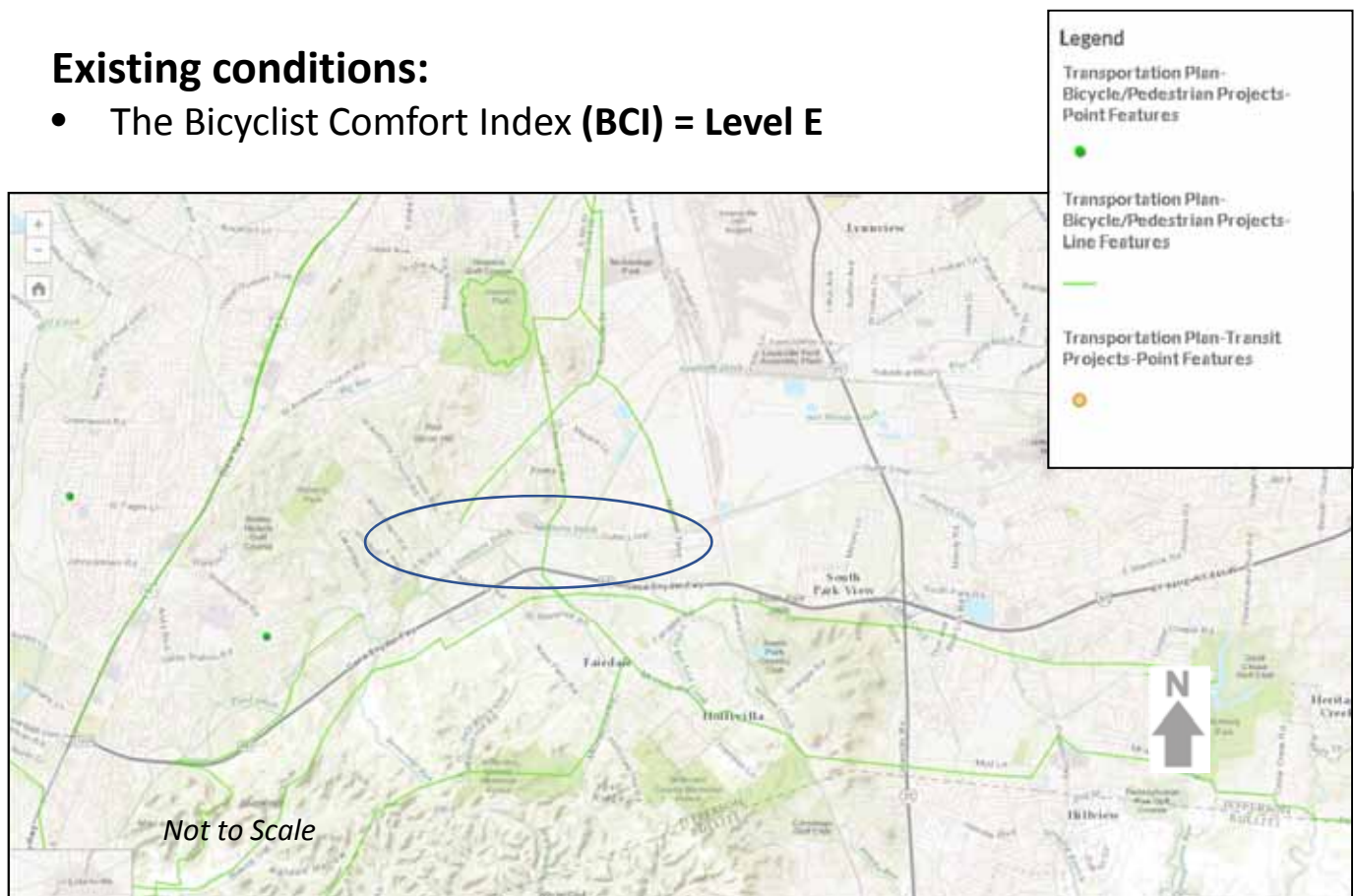
From 3rd Street Road to National Turnpike

Local/Regional Planning:

No specific plans for bicycle or pedestrian travel or improvements on Outer Loop, just crossroads, south of Gene Snyder, New Cut Road and 3rd Street Road.

Existing conditions:

- The Bicyclist Comfort Index (BCI) = **Level E**



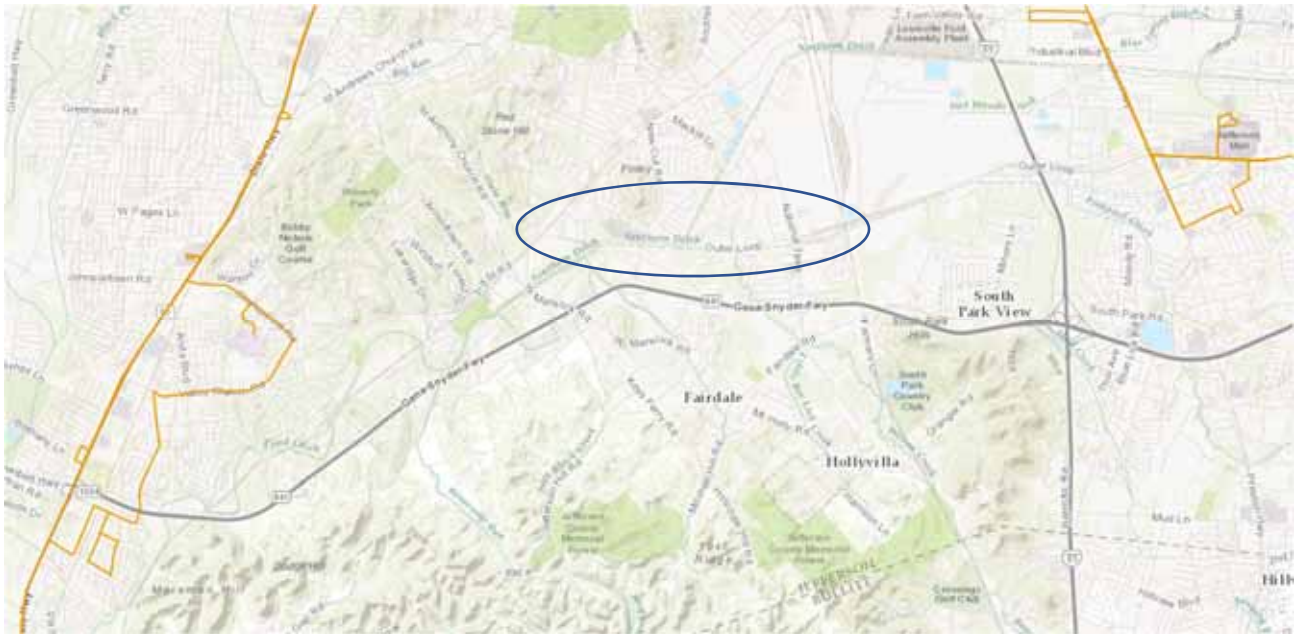
Source: KIPDA MTP and TIP



Transit



From 3rd Street Road to National Turnpike



Source: KIPDA MTP and TIP



Corridor Bicycle Use



From 3rd Street Road to National Turnpike



Pedestrian Assessment



From 3rd Street Road to National Turnpike

Minimum

- 5 foot sidewalks
- 5 foot landing areas (KYTC requires 4 feet)
- 2-foot-by-2-foot detectable warning
- Other
 - Reachable pedestrian button
 - Broken or uneven sidewalk
 - Obstructions

Used Standard Drawings:

- Louisville Metro 425A-E
- KYTC RGX04003



Outer Loop/3rd Street Road



From 3rd Street Road to National Turnpike

- 3rd Street Road northbound rights spillback into through lane
- Johnson Day care identified as an issue in 2008 Study
- Outer Loop approaching 3rd St. Road 0.1-mile CCRF approaching 1.0
- No sidewalk connectivity
- 2 vertical curves do not meet minimum stopping sight distance
- Outer loop grade (8%) exceeds maximum criteria for 45 mph



Aerial Imagery: Google 2016

Outer Loop/3rd Street Road Intersection Pedestrian Accommodations and Signal Analysis

Outer Loop (KY 1065) Corridor Study

3rd Street Road (KY 907) to National Turnpike (KY 1020)

Jefferson County, KY



From 3rd Street Road to National Turnpike



3rd Street SE Corner

Outer Loop/New Cut Road



From 3rd Street Road to National Turnpike

- Intersection LOS E in PM peak hour
- Northbound lefts spillback into through lane in PM peak hour
- North and southbound lefts are LOS E in the AM peak hour
- Southbound lefts spillback into through lane in AM peak hour
- Eastbound lefts $v/c = 0.974$.
- Kmart at New Cut eastbound is LOS E in PM peak hour
- High crash spot CCRF = 4.68
- Two 0.1 mile spots, one east and one west of New Cut Road have a CCRF approaching 1.0 (both CCRF = 0.98)



New Cut Road Backup

From 3rd Street Road to National Turnpike



Westbound backup on Outer Loop blocking left turn lane at New Cut Road

New Cut Road Backup

From 3rd Street Road to National Turnpike



NB backup on New Cut Road at Outer Loop

New Cut Road Backup

From 3rd Street Road to National Turnpike



NB backup on New Cut Road at Outer Loop

New Cut Road



From 3rd Street Road to National Turnpike

Only yellow signal back plates



New Cut Road



From 3rd Street Road to National Turnpike

Southwest Corner has no 5 foot landing area



From 3rd Street Road to National Turnpike



Outer Loop/National Turnpike



From 3rd Street Road to National Turnpike

- Westbound through inside lane fills up so westbound left-turn motorists including trucks drive in opposing lane and on the median to reach the left turn lane.
- CCRF is 1.92
- Access management motorists crossing three lanes of traffic exiting Thorntons, Als Way, and car lot to turn left
- LOS E AND F in AM and PM peak hour, respectively.
- Westbound and southbound lefts spillback into through lanes in PM peak
- Westbound through and right have has a $v/c > 1.0$
- No sidewalk connectivity



Outer Loop/National Turnpike Intersection Pedestrian Accommodations and Signal Analysis

Outer Loop (KY 1065) Corridor Study

3rd Street Road (KY 907) to National Turnpike (KY 1020)

Jefferson County, KY

Detectable Warnings



From 3rd Street Road to National Turnpike



Pedestrian Issues



From 3rd Street Road to National Turnpike



Behind guardrail SW
corner



National Turnpike



From 3rd Street Road to National Turnpike



National Turnpike



From 3rd Street Road to National Turnpike



National Turnpike

From 3rd Street Road to National Turnpike



National Turnpike

From 3rd Street Road to National Turnpike



National Turnpike



From 3rd Street Road to National Turnpike



Looking east on Outer Loop at National Turnpike

National Turnpike

From 3rd Street Road to National Turnpike

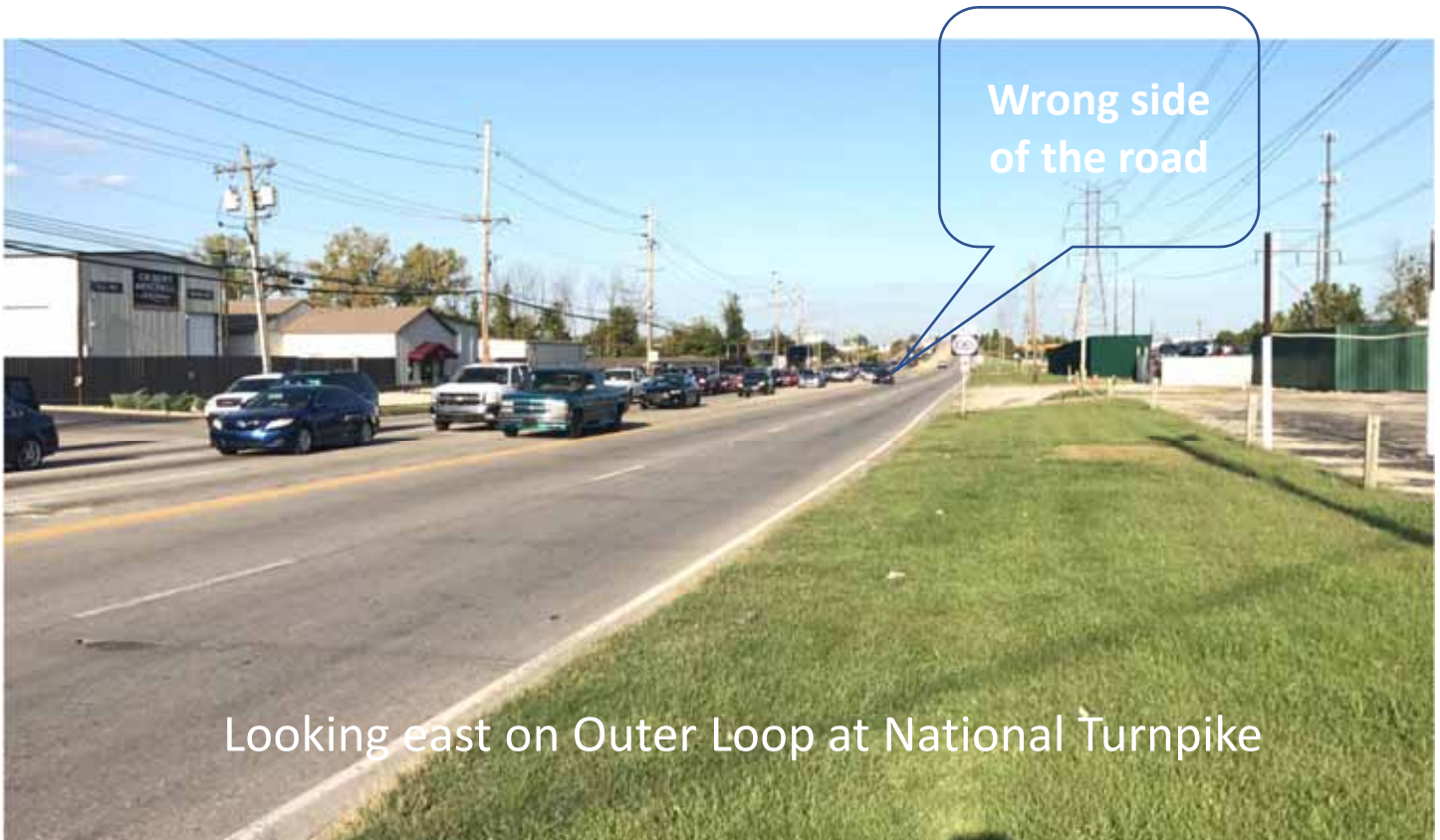


Looking east on Outer Loop at National Turnpike



National Turnpike

From 3rd Street Road to National Turnpike



Looking east on Outer Loop at National Turnpike

National Turnpike



From 3rd Street Road to National Turnpike



Looking north on National Turnpike

From 3rd Street Road to National Turnpike



From 3rd Street Road to National Turnpike



Other



From 3rd Street Road to National Turnpike



Sidewalk between Afterglow Drive and
Candlewood Drive

CSX Railroad



From 3rd Street Road to National Turnpike



June 22, 2017 Crossing Inventory Form
3 trains/day - 1 night, 1 day and 1 switching
Maximum speed 40 mph
No pedestrian crossing



From 3rd Street Road to National Turnpike





From 3rd Street Road to National Turnpike



From 3rd Street Road to National Turnpike



Eastbound traffic backup from train

Drainage

100-Year Floodplain



From 3rd Street Road to National Turnpike



Drainage Issue



From 3rd Street Road to National Turnpike



Drainage Issue continued



From 3rd Street Road to National Turnpike



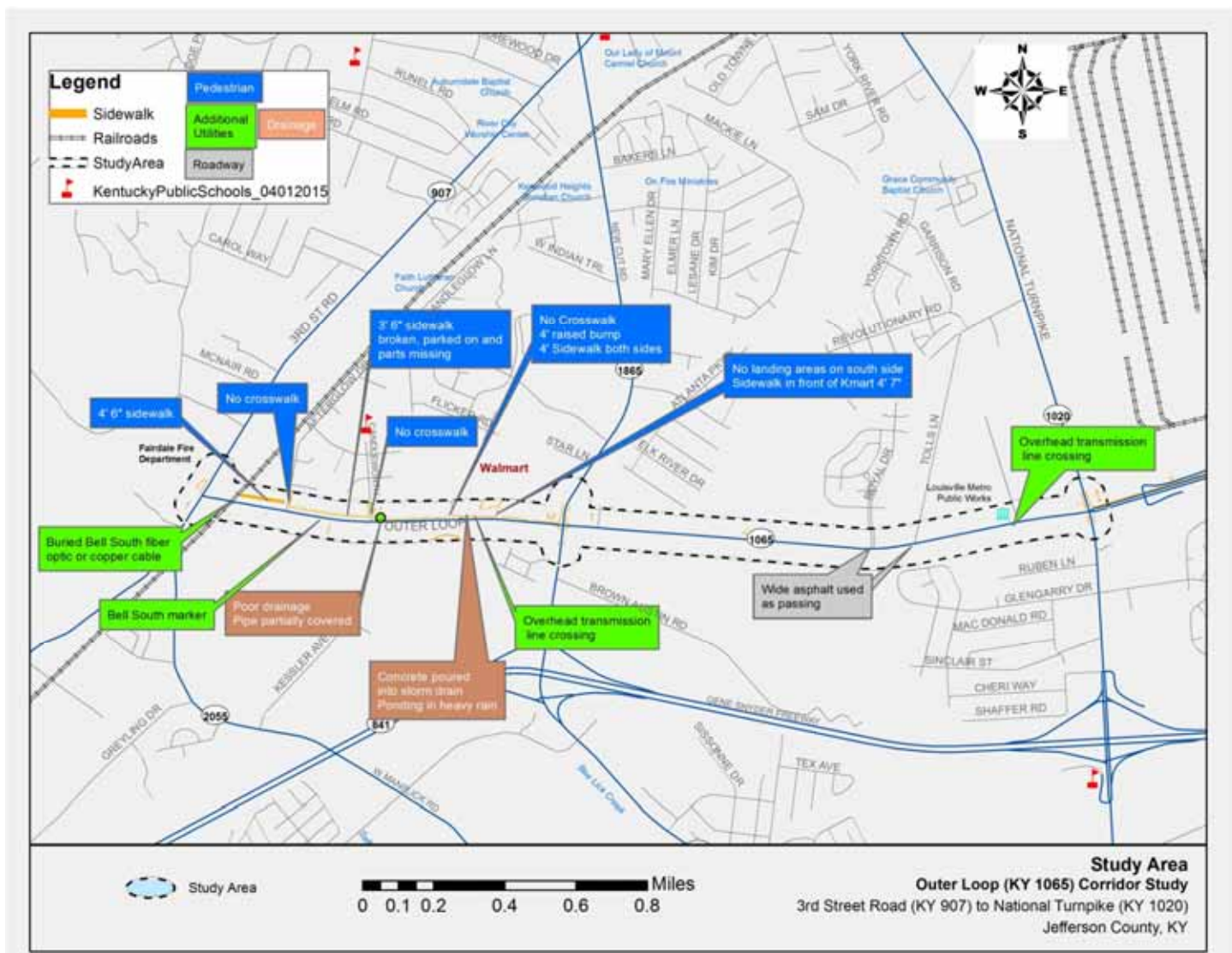
From 10/17/2017



Other

Additional Corridor Issues

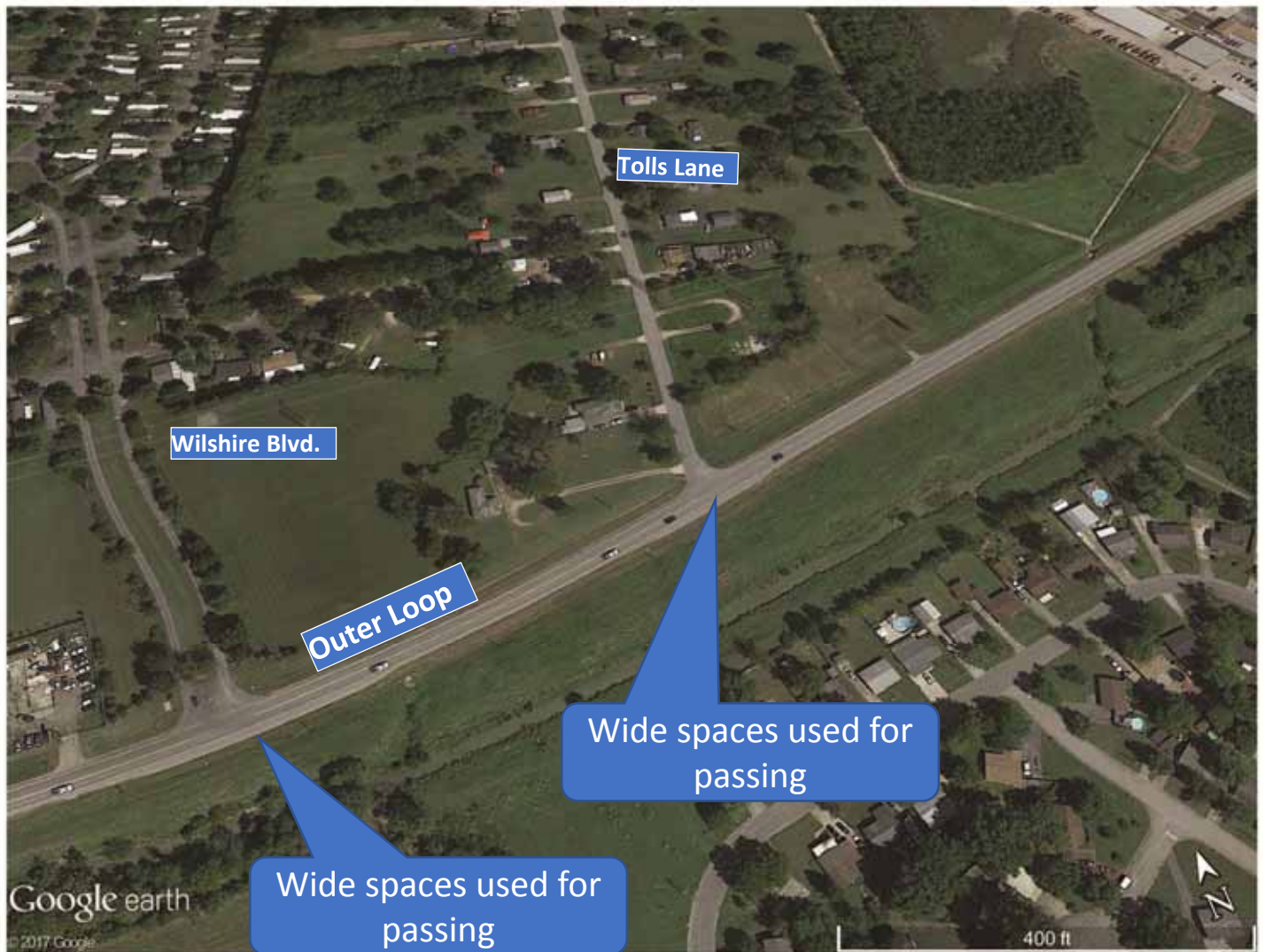
From 3rd Street Road to National Turnpike



Wide Paved Spaces



From 3rd Street Road to National Turnpike



Paved Shoulders



Geotechnical Overview

Geotechnical Issues



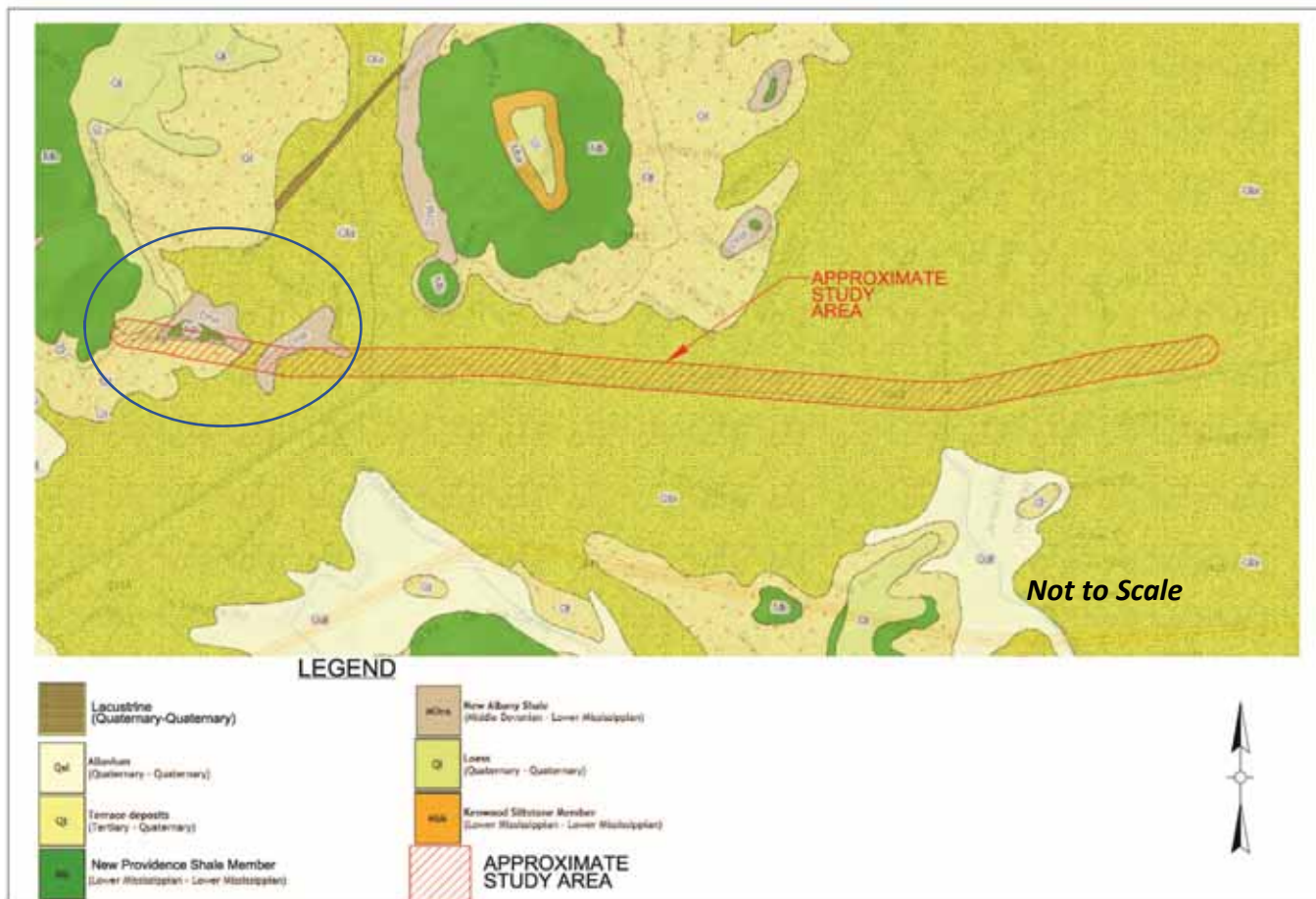
From 3rd Street Road to National Turnpike

1. Subgrade soils are anticipated to have a design CBR value ranging from 2 to 5.
2. Soils are clayey silts with excessive moisture content.
3. Wet areas could require stabilization for embankment construction.
4. Subgrade soils under existing pavements could be very wet and might require stabilization if pavement is removed.
5. New Albany Shale may have been utilized for pavement subgrade stabilization during prior roadway construction.
6. New construction subgrade stabilization (lime or cement) to effectively stabilize road subgrades, however may not be practical due to traffic, existing structures, utilities, etc. Stabilization using processed crushed stone and geotextile fabric may prove a more viable alternative for this project.
7. Manipulation and drying of subgrade soils is expected to provide adequate compaction.
8. Any new culverts or culvert extensions probably will be designed for a yielding foundation.
9. Any new bridges will likely be designed for a non-yielding foundation utilizing pointbearing piles.



New Albany Shale

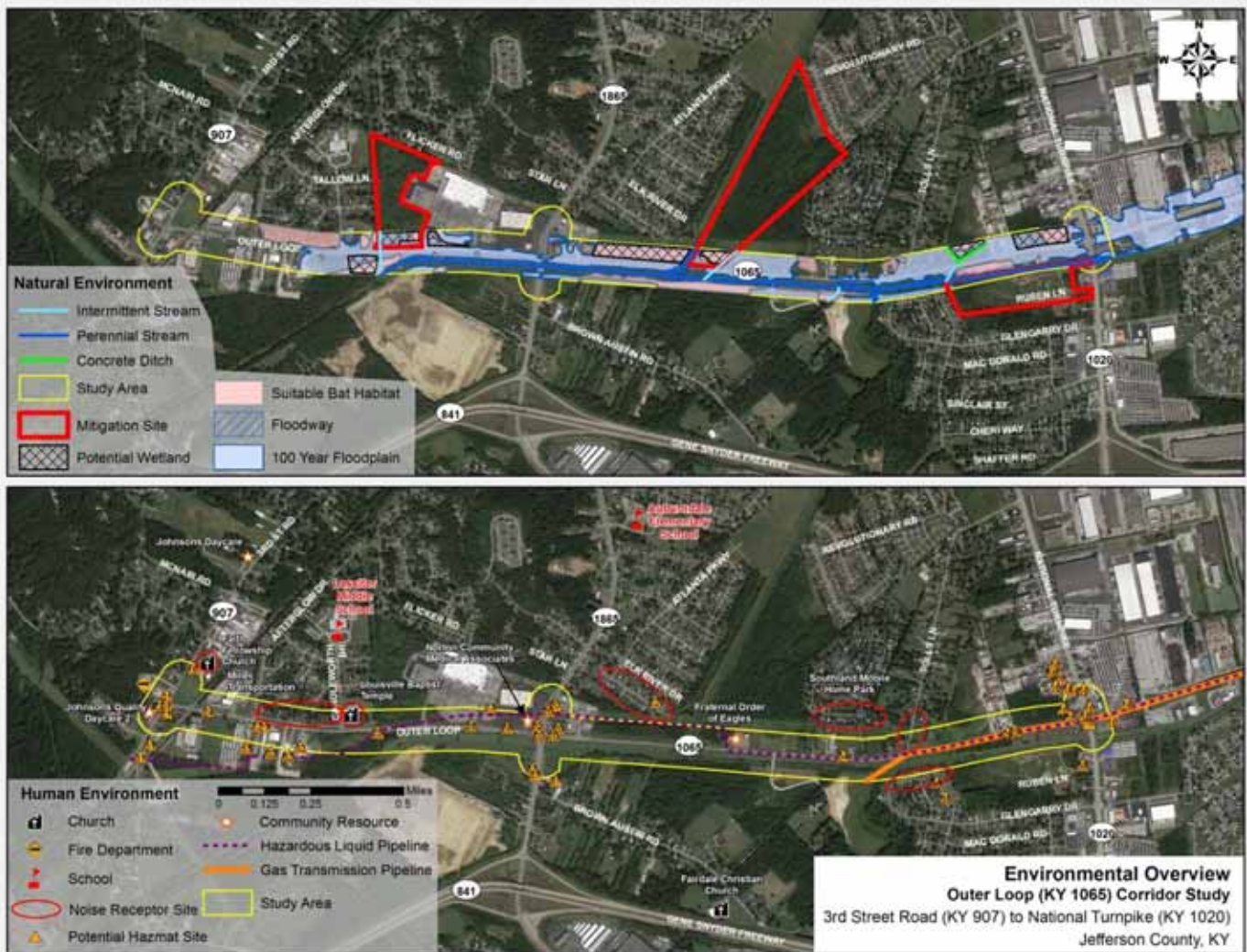
From 3rd Street Road to National Turnpike



Environmental Overview

Environmental Overview

From 3rd Street Road to National Turnpike



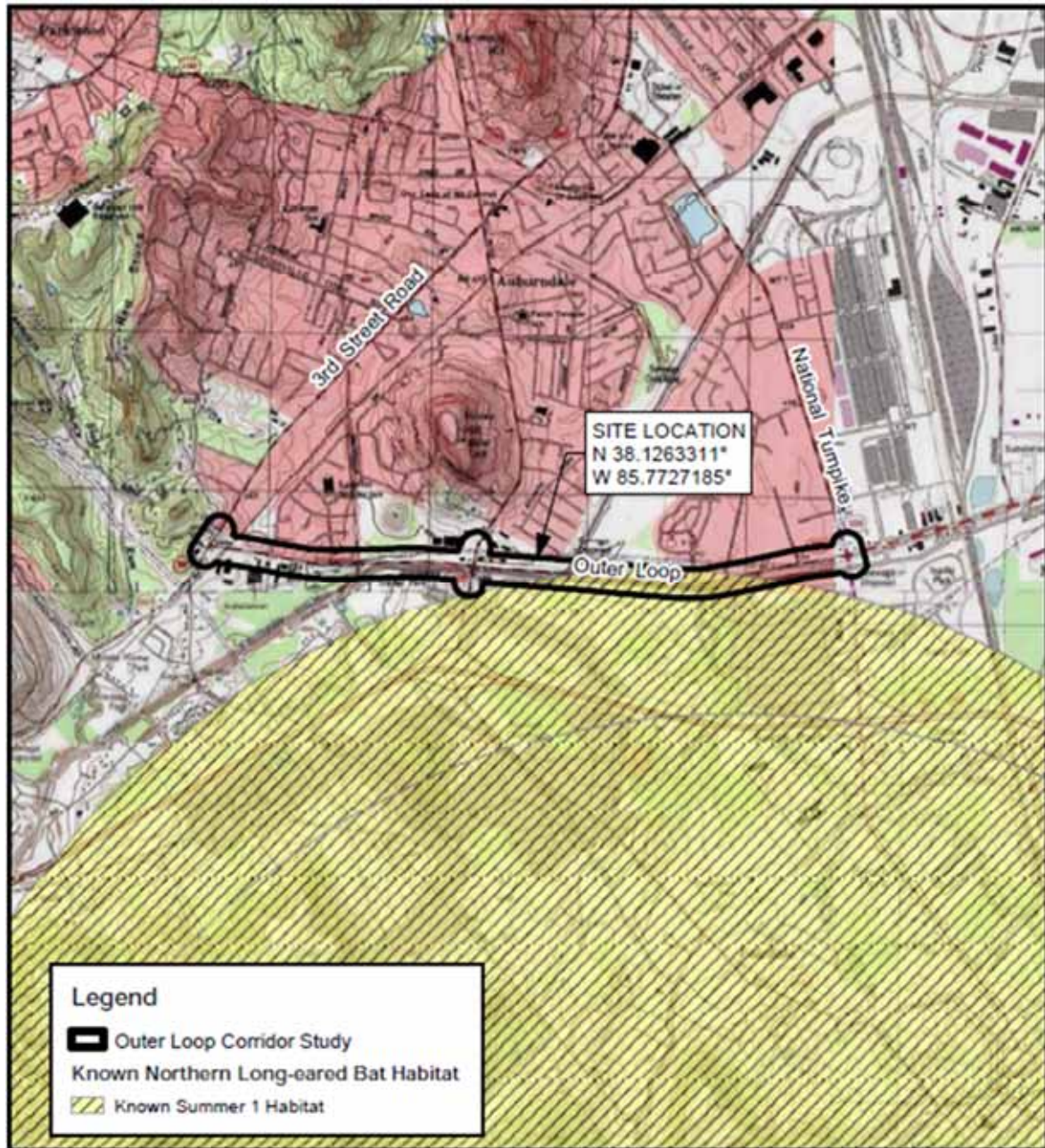
3 Mitigation Sites



Stream west side of easement



From 3rd Street Road to National Turnpike



Environmental Overview



- 74 HAZMAT/UST potential – (13 sites tanks removed); 3 closed meth labs
- 11,290 feet of perennial streams – Southern Ditch, Northern Ditch, Wilson Creek
- Wetlands – 7
- 1,690 feet of intermittent streams – 4
- Land Use/Community 6(f) and 4(f)
 - No structures listed on or recommended for the NRHP
 - Archaeology – low potential, recommends no further work
 - 3 mitigation sites
 - 32 Jefferson County Land and Water Conservation Projects (potential 6(f) if in the study area)
- Churches – 2
- Fraternal Order of Eagles
- 2 Schools near study area; Lassiter Middle School (Outer Loop access) and Auburndale Elementary several more on New Cut Road south of study area.
- Fire Department – 1
- Johnson's Daycare – 1
- Medical Facility – 1 (Norton Community Medical Associates)
- Noise – 7 receptors identified
- Presence of New Albany Shale
- Threatened/Endangered Species – 2 bat species
- Socioeconomic will need to be investigated further e.g. minority, poverty, LEP, zero households, disabled, elderly

Threatened & Endangered Species



From 3rd Street Road to National Turnpike

Group	Common Name	Federal Status	Habitat Present
Mammals	gray bat	Endangered	No
	northern long-eared bat	Threatened	Potential Summer
	Indiana bat	Endangered	Potential Summer
Mussels	fanshell	Endangered	No
	spectaclecase	Endangered	No
	snuffbox	Endangered	No
	Cracking pearlymussel	Endangered	No*
	pink mucket	Endangered	No
	ring pink	Endangered	No
	orangefoot pimpleback	Endangered	No
	sheepnose	Endangered	No
	clubshell	Endangered	No
	rough pigtoe	Endangered	No
	fat pocketbook	Endangered	No
	rabbitsfoot	Threatened	No
Plants	Kentucky glade cress	Threatened	No
	Short's goldenrod	Endangered	No*
	running buffalo clover	Endangered	No
Birds	pipin plover	Endangered	No
	interior least tern	Endangered	No
Insects	American burying beetle	Endangered	No*

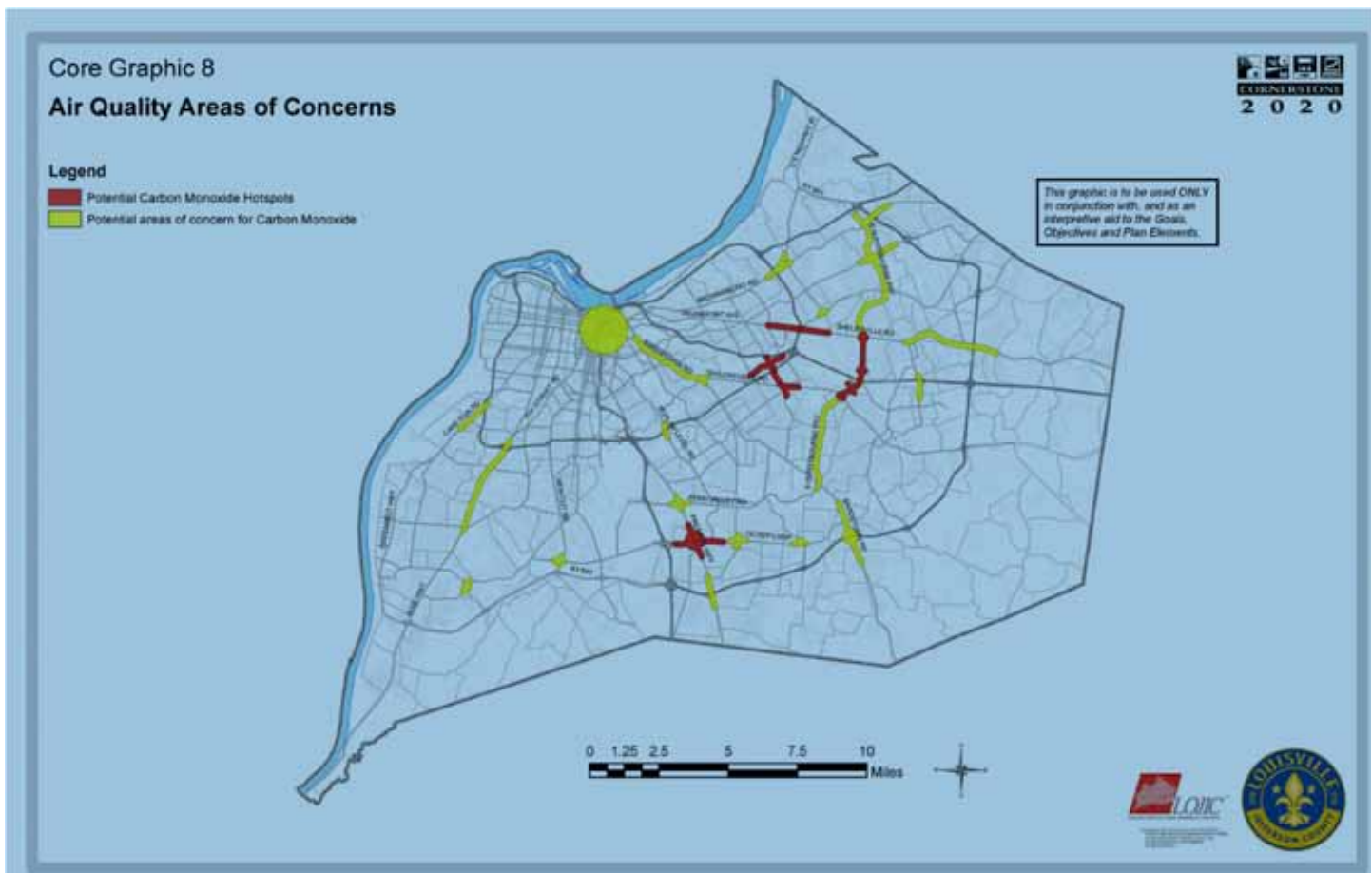
*considered extirpated by KSNPC



Air Quality Concerns



From 3rd Street Road to National Turnpike



Noise Impact Areas



From 3rd Street Road to National Turnpike

Core Graphic 9

Noise Impact Areas

Legend

Louisville Regional Airport Authority

2016 Annual Day-Night Average Sound Level, DNL, in Decibels

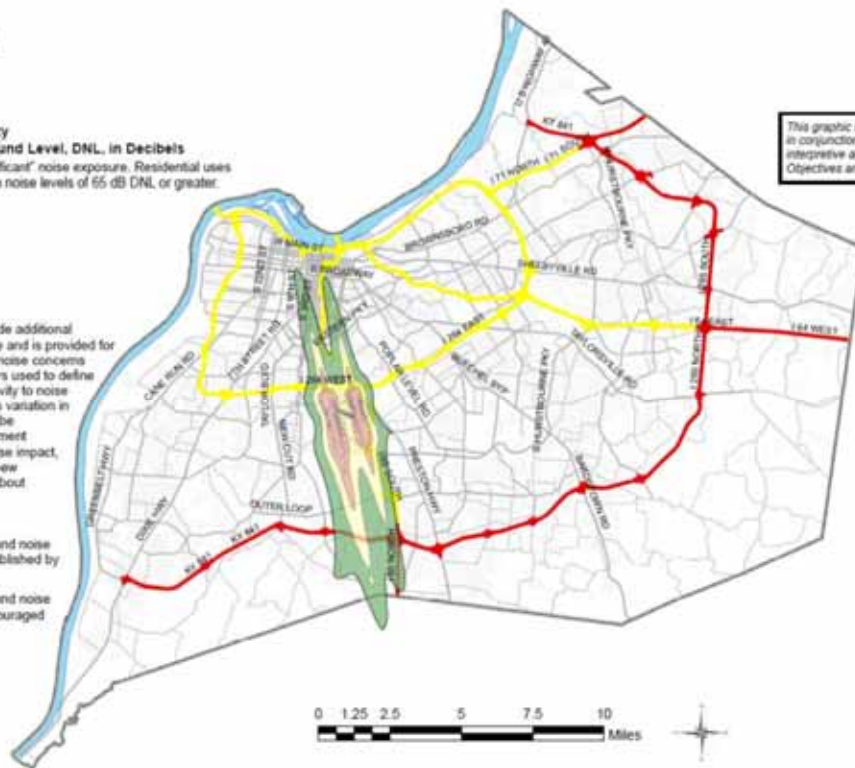
DNL 55 represents the threshold of "significant" noise exposure. Residential uses are typically considered incompatible with noise levels of 55 dB DNL or greater.

- 60 - 65 dB DNL*
- 65 - 70 dB DNL
- 70 - 75 dB DNL
- 75+ dB DNL

*DNL 60-65 contour is presented to provide additional information on community noise exposure and is provided for informational purposes only. Community noise concerns can extend well beyond the noise contours used to define "significant" noise impact because sensitivity to noise varies greatly from person to person. This variation in sensitivity indicates that, while it may not be appropriate to restrict residential development options beyond the area of significant noise impact, it would be beneficial to permit potential new residents to make an informed decision about moving into the Airport environs.

Expressway Noise

- 250' setback for residential uses and noise sensitive community facilities established by regulation
- 250' setback for residential uses and noise sensitive community facilities encouraged by Planning Commission policy



This graphic is to be used ONLY in conjunction with, and as an interpretive aid to the Goals, Objectives and Plan Elements.

2020



Parks



From 3rd Street Road to National Turnpike



New Cut Road Southeast
Corner

Resource Agency Coordination



From 3rd Street Road to National Turnpike

Redwing received correspondence or information from

- Kentucky Speleological Society,
- U.S. Army Corps of Engineers,
- Kentucky Division of Fish and Wildlife Resources,
- Metropolitan Sewer District (meeting), and
- Kentucky State Nature Preserves Commission.



Socioeconomic Study

Question :

What specific groups are included?

The following groups are included in this study...

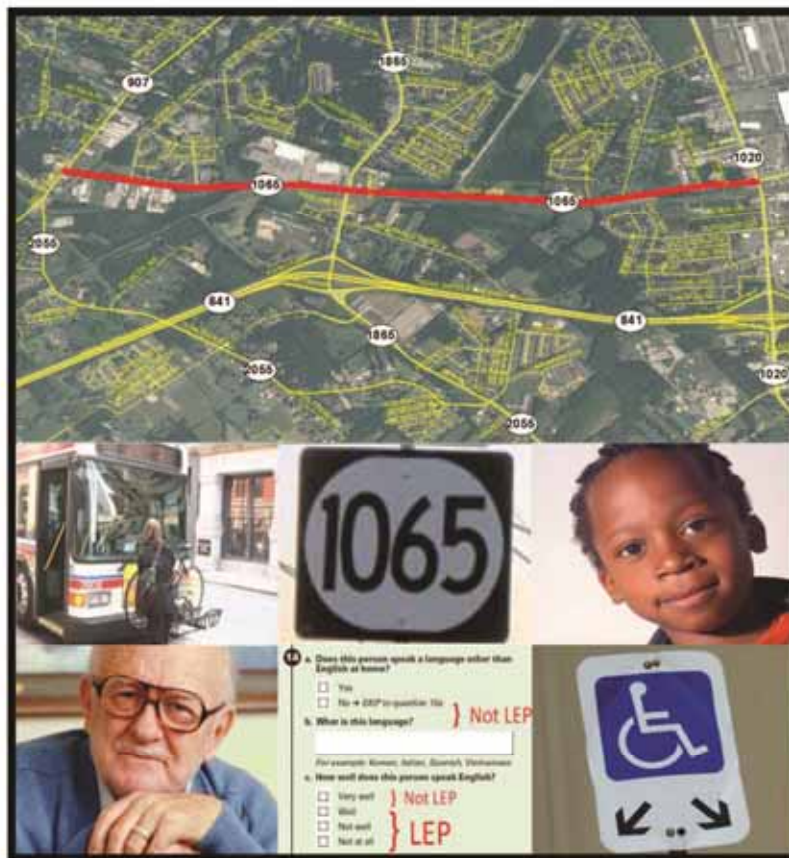
- Minority
- Low Income
- Older Persons (Older than 65 years of age)
- Disabled
- Zero Vehicle Households
- Limited English Proficiency

Socioeconomic Study

From 3rd Street Road to National Turnpike



Outer Loop / KY 1065 Socioeconomic Study Third Street Road (KY 907) to National Turnpike (KY 1020)



Jefferson County, Kentucky



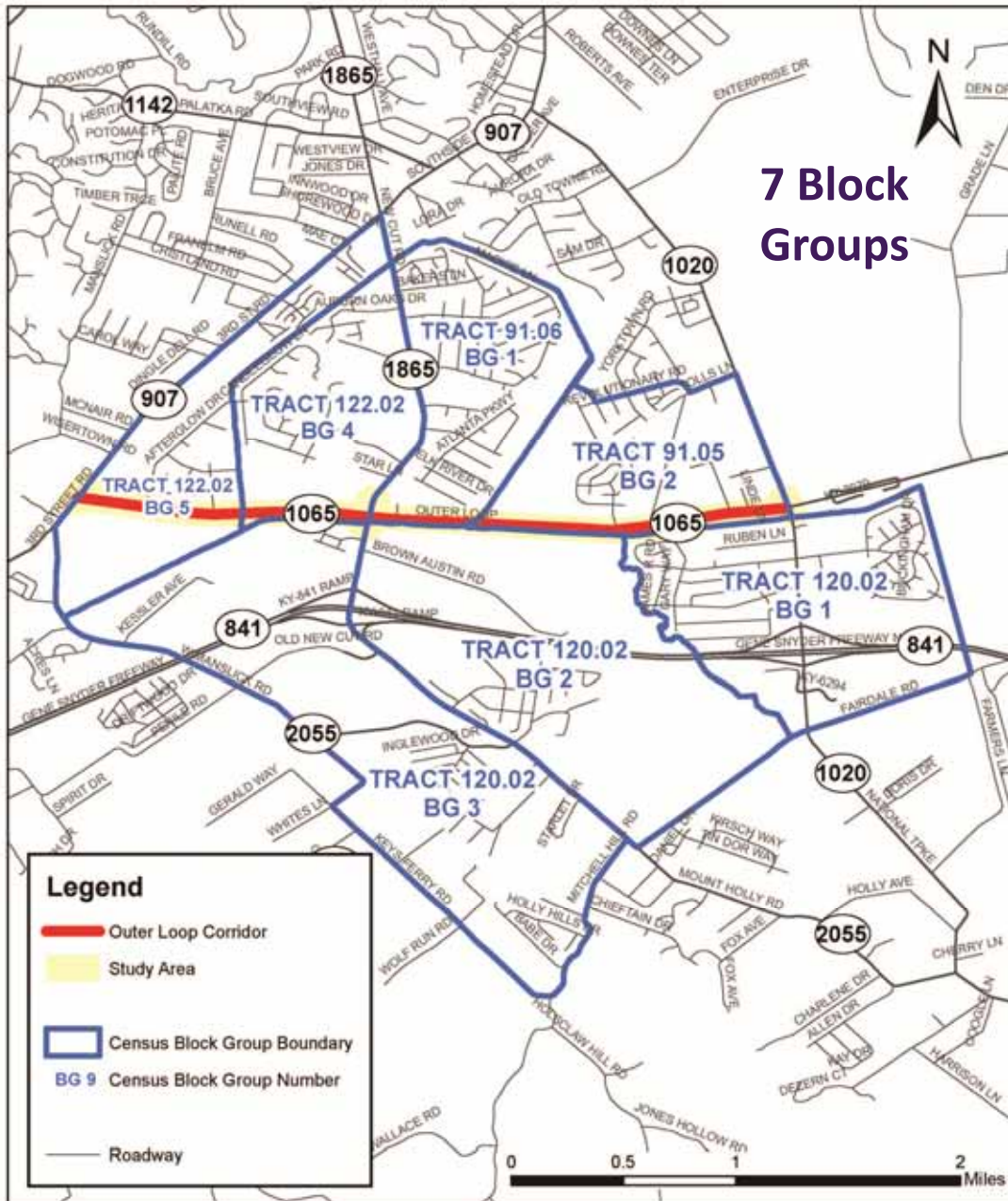
September 2017



Socioeconomic Study



From 3rd Street Road to National Turnpike



Created by KIPDA 2017
 Copyright © 2017 Kentucky Regional Planning & Development Agency (KIPDA). All rights reserved.
 No part of this map may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, without express permission in writing by KIPDA.
 LIMITATION OF LIABILITY: KIPDA has no obligation or responsibility to ensure that there are no errors or omissions or that the information is accurate or that the information is not misused. KIPDA is not responsible for any errors or omissions or for any consequences arising from the use of this information. KIPDA is not responsible for any damages, including consequential damages, arising from the use of this information.

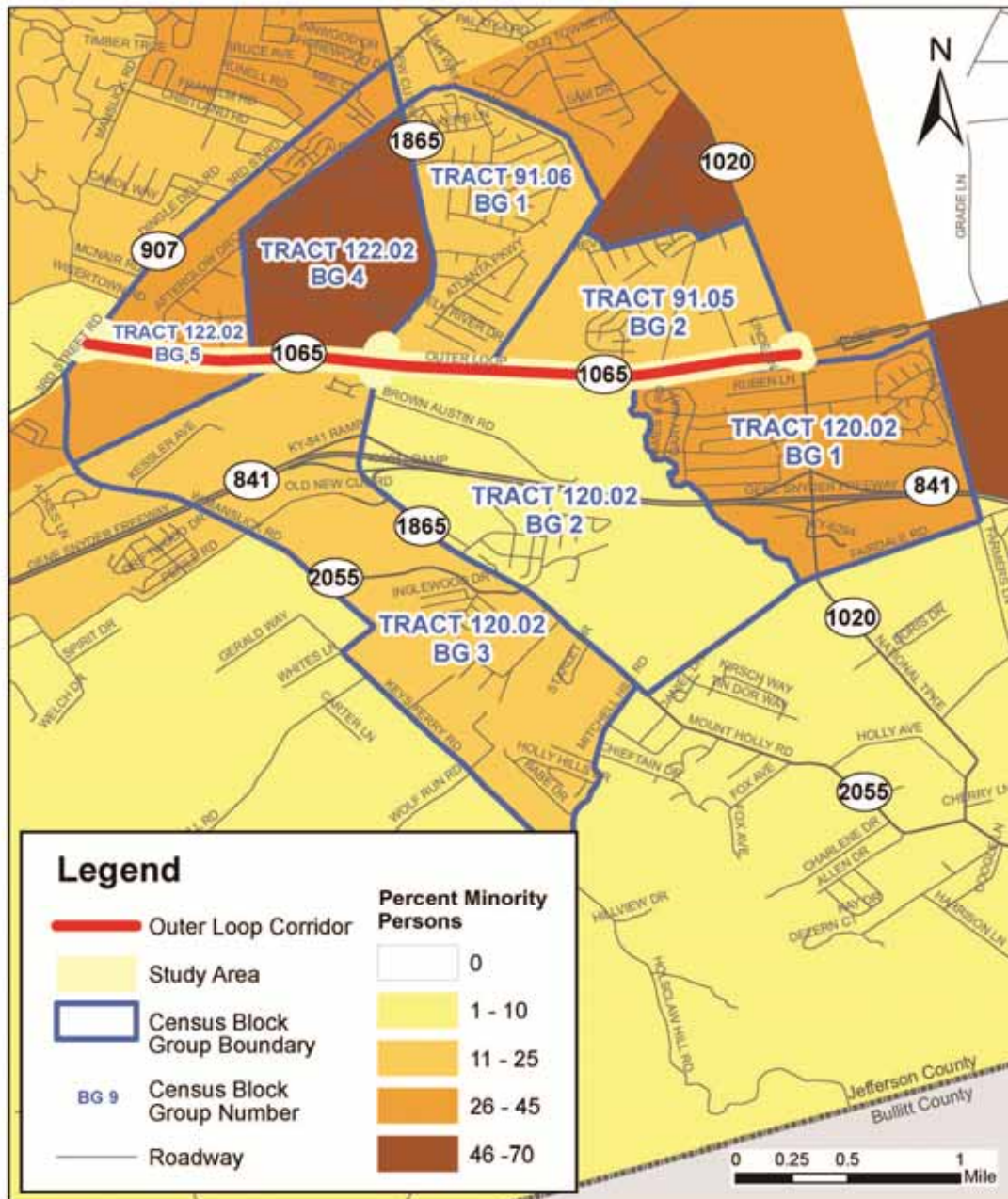
Figure 2
STUDY AREA CORRIDOR
CENSUS BLOCK GROUP BOUNDARIES
OUTER LOOP / KY 1065
SOCIOECONOMIC STUDY
THIRD ST RD (KY 907) TO NATIONAL TPK (KY 1020)



Minority – 30.48%



From 3rd Street Road to National Turnpike



Copyright © 2017, KIPDA/Kentucky Regional Planning & Development Agency (KIPDA). All rights reserved.
 No part of this map may be reproduced or transmitted in any form or by any means, electronic or mechanical,
 including photocopying, recording, or by any information storage or retrieval system, without the
 written permission of KIPDA.
 KIPDA and its staff do not warrant the accuracy of the data presented in this map. KIPDA and its staff
 do not assume any liability for any errors or omissions in this map. KIPDA and its staff do not
 assume any liability for any damages, including consequential damages, arising from the use of this map.
 Date Issued: 10/10/2017, 10:10 AM

Figure 3
**PERCENT MINORITY PERSONS
 BY CENSUS BLOCK GROUP--2011-2015**
 OUTER LOOP / KY 1065
 SOCIOECONOMIC STUDY
 THIRD ST RD (KY 907) TO NATIONAL TPK (KY 1020)



Low Income – 16.43%

From 3rd Street Road to National Turnpike

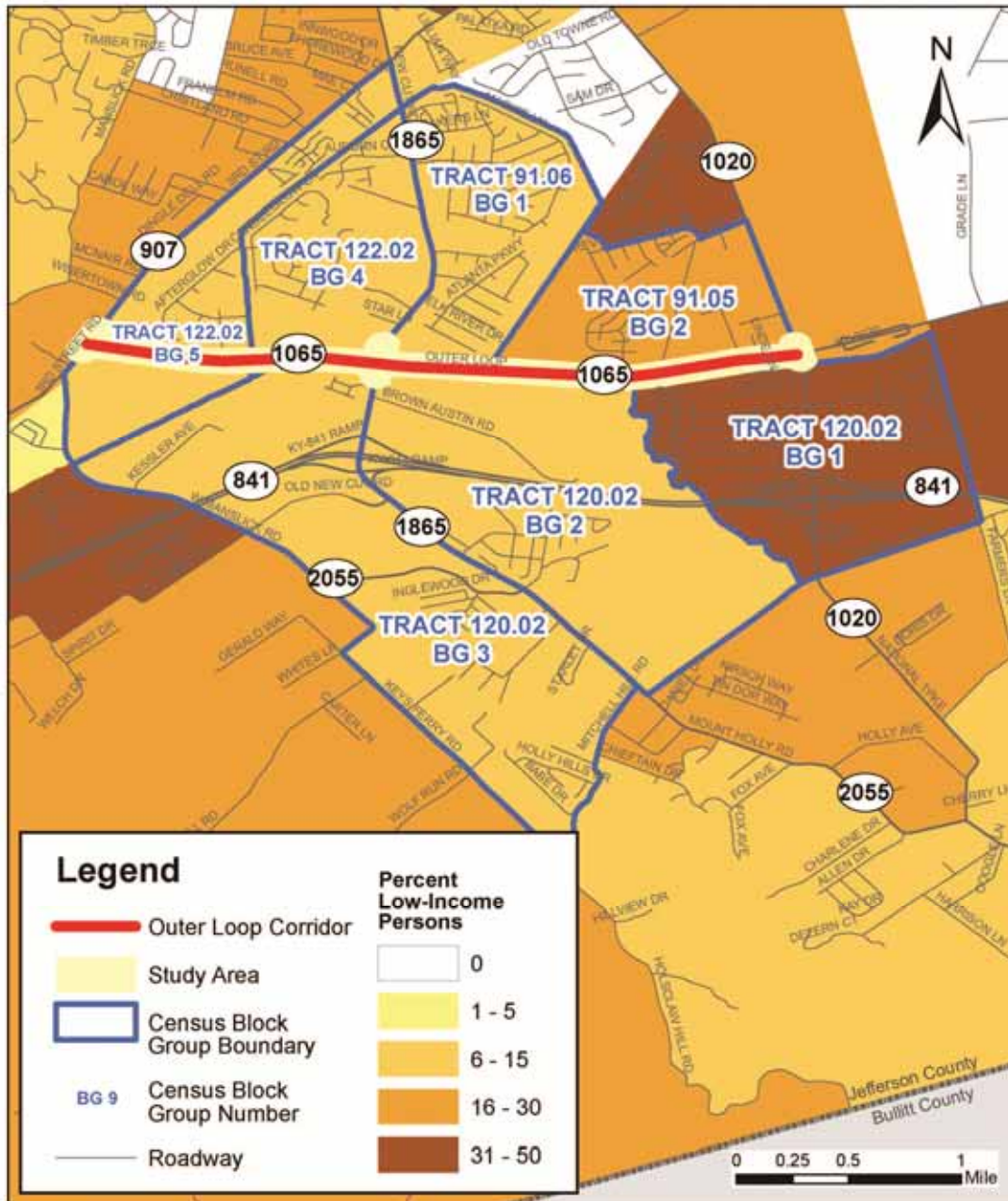


Figure 4

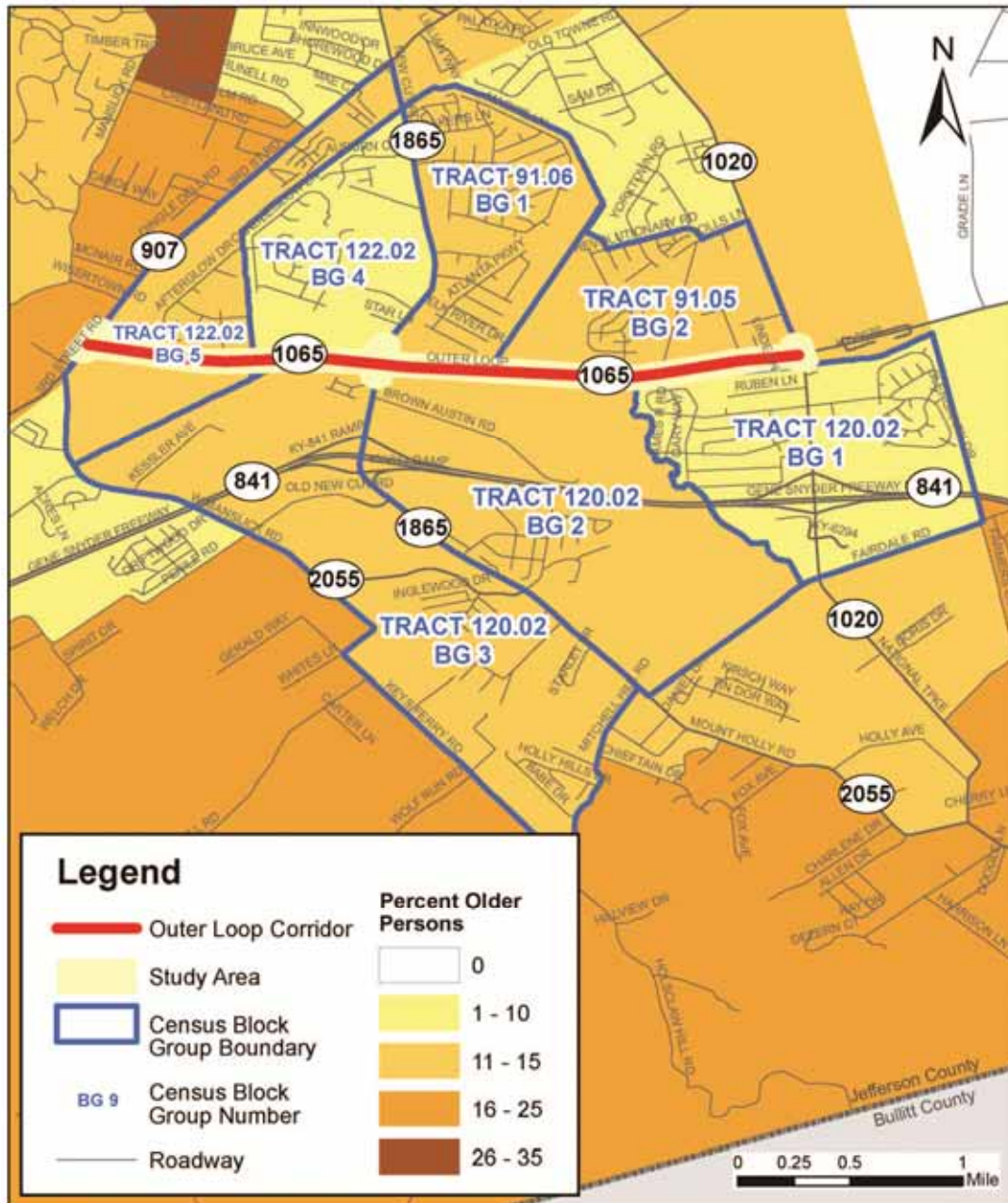
**PERCENT PERSONS WITH LOW-INCOME
BY CENSUS BLOCK GROUP--2011-2015**
OUTER LOOP / KY 1065
SOCIOECONOMIC STUDY
THIRD ST RD (KY 907) TO NATIONAL TPK (KY 1020)



Older Persons (> 65) – 14.14%



From 3rd Street Road to National Turnpike



Disabilities – 17.26%



From 3rd Street Road to National Turnpike

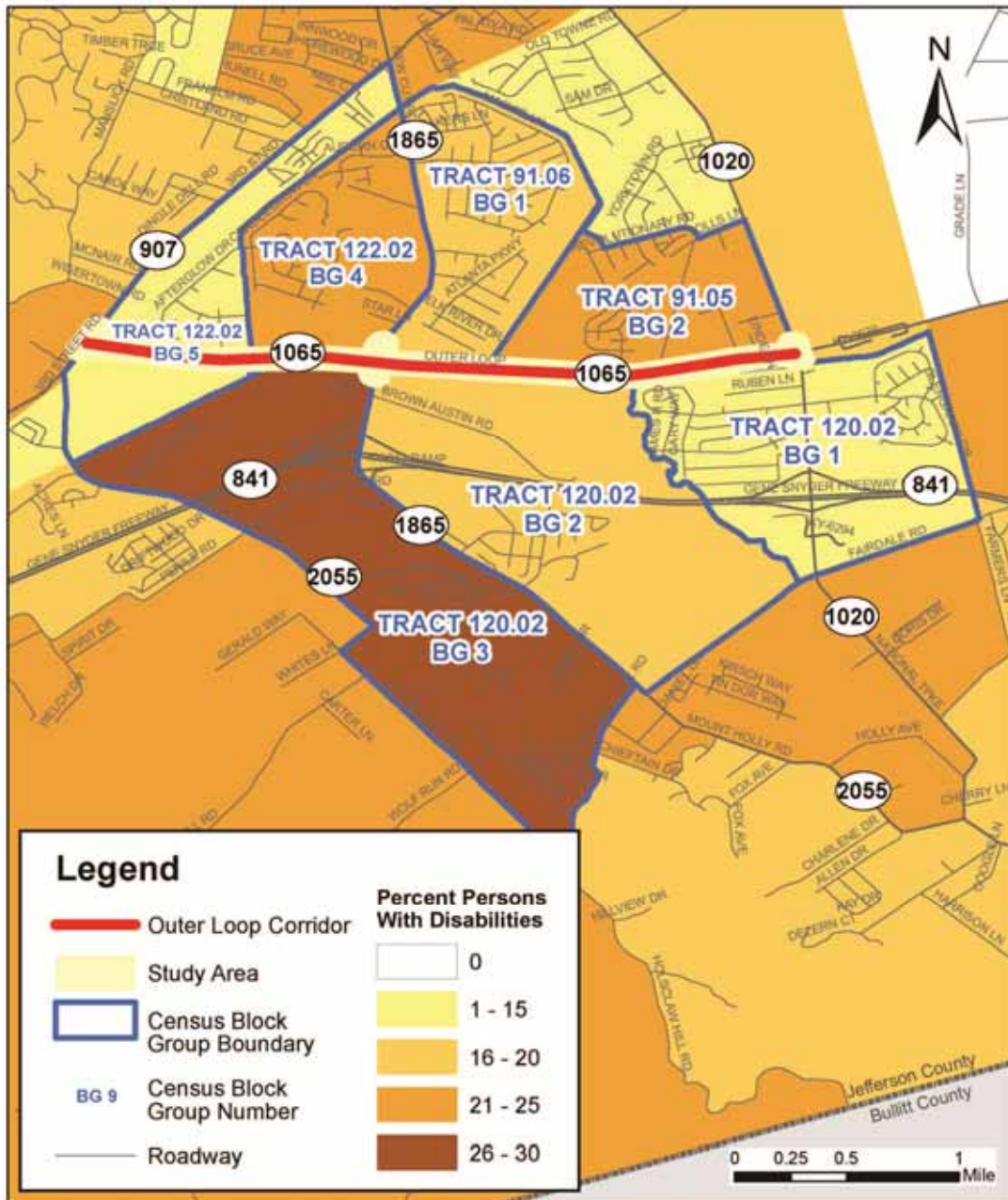


Figure 6
**PERCENT PERSONS WITH DISABILITIES
 BY CENSUS BLOCK GROUP--2011-2015**
 OUTER LOOP / KY 1065
 SOCIOECONOMIC STUDY
 THIRD ST RD (KY 907) TO NATIONAL TPK (KY 1020)

KIPDA
 Kentucky Regional Planning
 and Development Agency



Zero Vehicle Households – 10.12%



From 3rd Street Road to National Turnpike

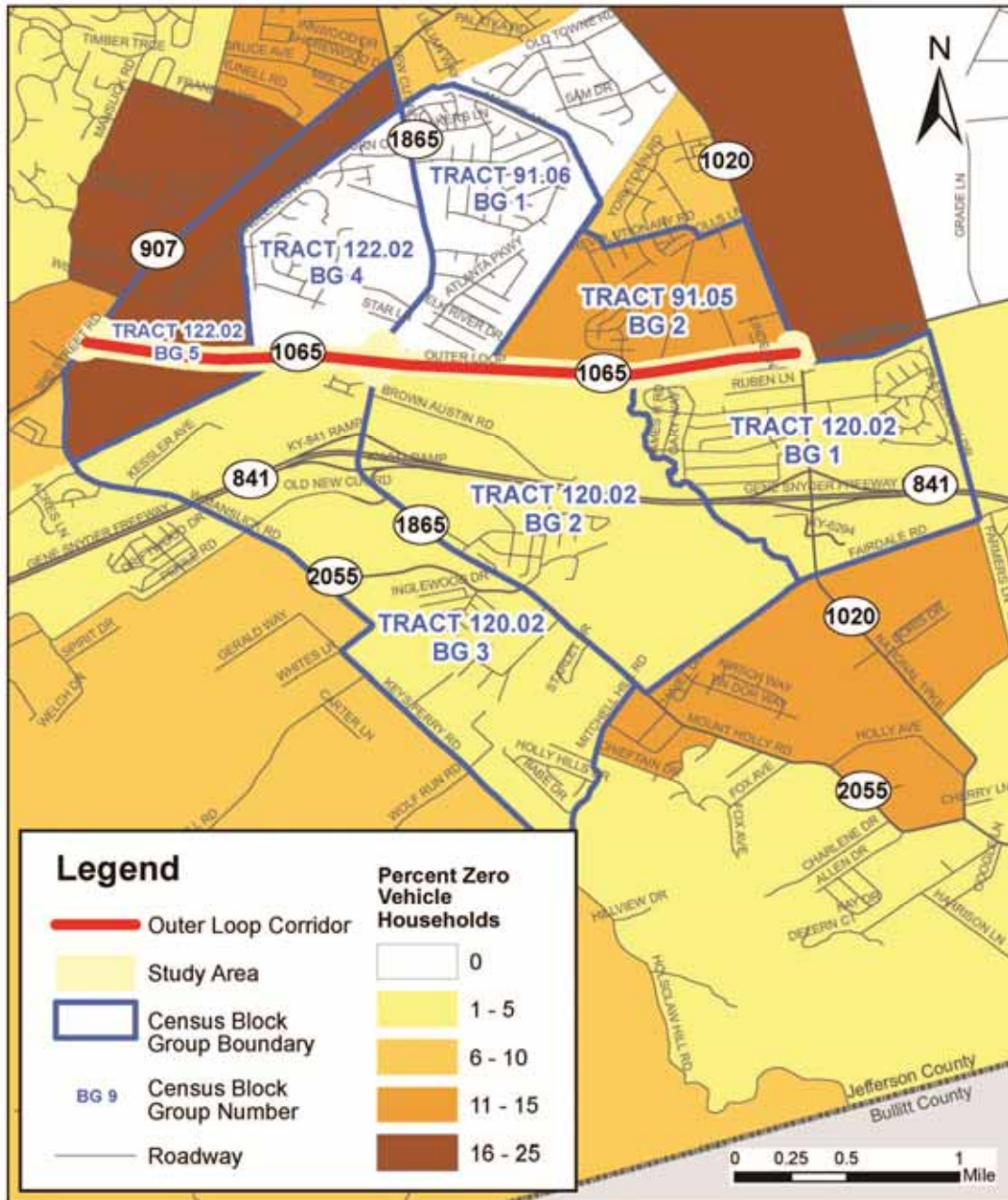


Figure 7

**PERCENT ZERO VEHICLE HOUSEHOLDS
BY CENSUS BLOCK GROUP--2011-2015**

OUTER LOOP / KY 1065
SOCIOECONOMIC STUDY
THIRD ST RD (KY 907) TO NATIONAL TPK (KY 1020)



Limited English Proficiency – 3.68%



From 3rd Street Road to National Turnpike

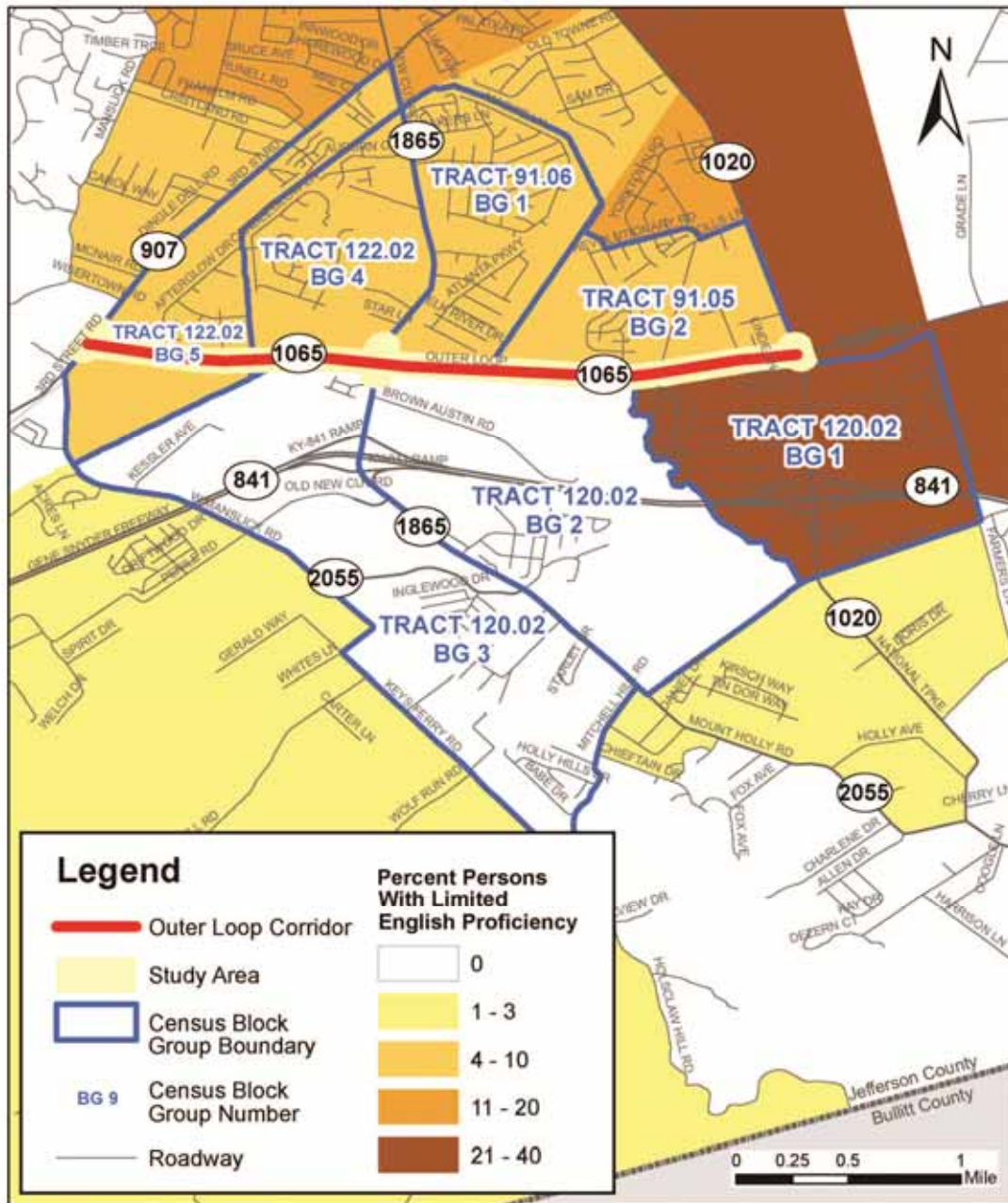


Figure 8

PERCENT PERSONS WITH LIMITED ENGLISH PROFICIENCY BY CENSUS BLOCK GROUP--2011-2015
 OUTER LOOP / KY 1065
 SOCIOECONOMIC STUDY
 THIRD ST RD (KY 907) TO NATIONAL TPK (KY 1020)



Utilities



From 3rd Street Road to National Turnpike

- Major fuel line
- LG & E High voltage transmission lines
- Water
- Sewer
- Gas Line
- Petroleum pipe lines
- Overhead

From Geotechnical Overview

1. Abandoned utilities be prepared to mitigate for geotechnical-related issues. Water can often become trapped in and around abandoned utility lines and cause deterioration of subgrade materials. These issues may require, but are not limited to
 - safeloading of pipes and removal and replacement of pipe, pipe bedding and pipe backfill.
2. Areas of shallow cut and fill will be susceptible to geotechnical issues from old utility lines.
3. Active utilities to remain in place:
 - Adequate cover should be provided for existing utilities to protect the utility as well as allow for proper performance of subgrade materials.



From 3rd Street Road to National Turnpike



Underground utilities north side of Outer Loop at Candleworth Drive



Overhead utilities at National Turnpike looking west



Overhead utilities north side of Outer Loop at Candleworth Drive



Underground pipeline markers south side of Outer Loop



SW Corner of National Turnpike

From 3rd Street Road to National Turnpike



Future Growth

KIPDA TAZs



From 3rd Street Road to National Turnpike



9 Traffic Analysis Zones (TAZ)
in study area



Meetings



From 3rd Street Road to National Turnpike

- ✓ UPS data provided by KYTC Multimodal Branch and forwarded to KIDPA
- ✓ Louisville International Airport (LIA)
- ✓ Louisville Metro Planning



Meetings - Metro



- Updating Comprehensive Plan, including socioeconomic data for “Market Areas,” the boundaries differ from TAZs.
- 2040 forecast for Airport Market Area (much larger than TAZ 315) includes 19,000 jobs.
- TAZ 315 currently has 2800 employees it is anticipated this number will increase to 3300 by 2018.
- Proposed land use in the Outer Loop/New Cut Road intersection’s SW quadrant (former site of a golf course) could be a large “center-type” development. A permit application had been filed with District 5.
- Metro provided information about proposed developments along National Turnpike, north of Outer Loop.
- A large parcel south of Outer Loop, in TAZ 312, is zoned R4 (single-family residential) but prime for development. It was agreed rezoning for multi-family or commercial uses would most likely be proposed.
- TARC applied for a CMAQ grant to improve services to the Renaissance Zone and the Iroquois Park area.

Meetings - LIA



From 3rd Street Road to National Turnpike

- Tax Increment Finance (TIF) District in Renaissance Zone area south (TAZ 315) of Outer Loop. The TIF has been very successful: recent development has already paid enough taxes into the district to cover the initial costs associated with the TIF. **In the last 18 months three million square feet of warehousing has been built in the Renaissance Zone.**
- The LIA in partnership with Louisville Metro is currently seeking a \$25 million INFRA (former FASTLANE) grant, matched by TIF funds **to finance a new interchange with KY 841 to connect with Outer Loop via Air Commerce Drive.**
- TAZ 315 **KIPDA should count households near I-65, and assume they will remain for the foreseeable future and no new homes will be built.** Open land provides opportunities for new warehouses and logistics operations and retail along Outer Loop.
- **TAZ 314** north of Outer Loop includes the landfill and is fully developed. TAZ data stay the same as KIPDA's traffic model (i.e., 4,460 jobs in 2035).
- Airport TAZ is a "Special Generator" and the number of trips to/from the LIA is based on the number of passenger flights (not UPS).
- Number of jobs at Ford Assembly Plant and UPS Worldport is based on actual data and included in the TAZ.
- LIA Master Plan may have minor tweaks but none would change traffic demand or patterns.
- Marathon has a gas pipeline along Outer Loop.
- UPS owns a pipeline through which fuel from barges on the Ohio River is pumped directly to its Worldport facilities at the LIA.
- **Would not be able to effectively distribute study surveys.**
- **Encourages coordination with TARC,** which is studying options to meet employment demands.
- **Working with Metro Parks to extend the Louisville Loop. Current plans call for the loop to use South Park Road to cross I-65, traverse the southern end of the Renaissance South Business Park, and then under KY 841 to reach Fairdale and the Jefferson Memorial Forest.**



Initial Future Year Socioeconomic Growth

From 3rd Street Road to National Turnpike



TAZ	2015 Population	2015 Households	2015 Employment	2035 Population	2035 Households	2035 Employment
303	2,131	800	599	2,971	1,210	985
304	4,695	1,865	595	4,553	2,003	718
305	-	-	4,239	-	-	5,177
306	2,753	1,202	423	2,380	1,122	687
311	1,481	583	107	1,239	541	129
312	2,130	859	514	1,791	742	829
313	-	-	1,119	-	-	1,327
314	-	-	3,719	-	-	4,460
315	2,510	969	2,622	1,731	728	3,136
Totals	15,700	6,278	13,937	14,665	6,345	17,446
Difference				(1,035)	67	3,509
% Difference				-6.6%	1.1%	25.2%
Annual Growth				-0.3%	0.1%	1.1%



Development Discussion



From 3rd Street Road to National Turnpike

- Bumped TAZ 315 to 3630 from 3300 for 2035
- TAZ 311 Outer Loop/New Cut Road southwest corner does not currently connect to Outer Loop should it?
 - Summit
 - Subdivision
 - Apartment Complex
 - Lowes
- TAZ 312 (zoned single family) does not currently connect to Outer Loop should it?



Draft Purpose and Need

Draft Purpose



From 3rd Street Road to National Turnpike

Given the existing conditions in the study area, the project purpose and need is proposed as follows:

Improve **safety**, **access**, and **mobility for all modes of travel** on Outer Loop from 3rd Street Road National Turnpike.



Need



From 3rd Street Road to National Turnpike

Safety

- 5 high crash locations with a CCRF >1.0
- 3 high crash locations with CCRF approaching 1.0
- Motorists use Outer Loop shoulders for passing in two locations
- Motorists at National Turnpike westbound use the opposing travelway and median to reach left turn lanes.
- Crest curve on 3rd Street southbound at Outer Loop does not meet minimum stopping sight distance.
- Vertical grade at railroad exceeds maximum for 45 mph
- Drainage issues and ponding of water in front of Walmart
- No yellow signal back plates for 3rd Street Road and New Cut intersections
- Much of the corridor is in the 100-year floodplain

Mobility

- Three intersections operating at LOS E or F in the current year.
- Travel Speeds less than 45 mph posted speed limit (30-37 mph)
- Spillback of intersection turn lanes into through traffic on NBR 3rd Street Road; NBL at New Cut Road ; and WBL and SBL at National Turnpike.
- Three intersection movements with v/c Ratio > 1.0 indicating capacity.
- Outer Loop is currently operating at LOS E.
- Mean peak hour travel times are between 5.01 (AM) to 8.76 (PM).

Access

- Access to businesses are in intersection functional areas, motorists attempting left turns crossing 3 lanes of traffic causing angle crashes.

Other Modes

- Lack of sidewalk connectivity in the corridor
- Major intersections are not ADA accessible
- Some sidewalks are less than minimum 5 feet, broken, and impassible
- No bicycle facilities – Bicycle Comfort Index is E
- Lack of east-west transit opportunities/routes

Moving Forward

● Improvement Alternatives



From 3rd Street Road to National Turnpike

Long-term Improvements

1. No Build
2. Continuous Three-Lane
3. Four Lanes with Median
4. Five lane with Two-Way-Left-Turn Lane (TWLTL)

Short-term Improvements

1. Pedestrian and Bicycle Accommodations
2. Access Management
3. Intersection Improvements
4. Drainage Improvements

Simulations:

1. 2035 No Build
2. Two Build Simulations:
 - *Build with new interchange
 - *Build without new interchange



Suggestions from D-5 staff



From 3rd Street Road to National Turnpike

1. **I assume the new roadway will be out of the floodplain.** The New Cut Road bridge over the creek just south of Outer Loop was raised out of the floodplain. Now, Outer Loop ramps up to New Cut Road on both sides.
2. **Left turn movements on Outer Loop westbound at National Turnpike.** The turn lane is nowhere near long enough to accommodate the number of vehicles making that movement so vehicles run through the left turn lane for Old Outer Loop and across the mountable median which causes a lot of accidents. *Tom Wright, P.E.*
3. **3rd Street:** total rebuild, signalize 4th leg, conversion to FYLTA, reflective back plates for 45mph or more
4. **Walmart:** conversion to FYLTA, reflective back plates for 45mph or more New Cut: appears to be recently updated
5. **Nat. Turnpike:** reflective back plates for all signal heads *Jason Yeager*
6. **Loops** for traffic counting in roadway *Jim Vernon*
7. **The current Outer Loop bridge** is in fair condition, but the roadway pavement is too narrow to go over the bridge. *Eddie House*





Discussion of Local Officials Meeting No. 1

What to leave in...

What to take out?

Survey Questions

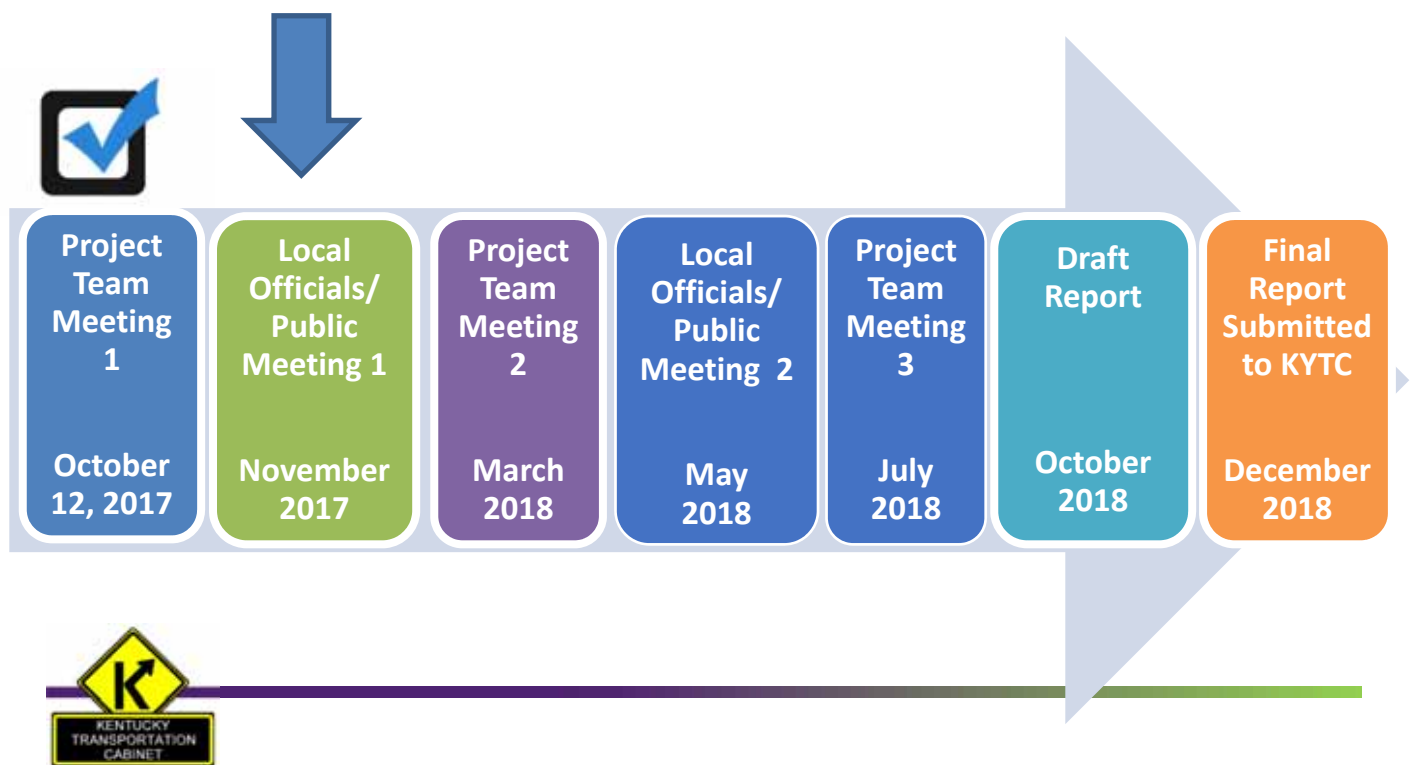
Typical Sections?

Next Steps



From 3rd Street Road to National Turnpike

- Local Official Officials/Public Meeting – Existing Conditions
- Development of Alternatives, Cost Estimates, and future year and build traffic operations
- Presentation of Alternatives to Project Team
- Presentation of Refined Alternatives to Local Officials/Public
- Final Presentation of Alternatives to Project Team
- Draft Report and Draft Executive Summary
- Final Report and Final Executive Summary



Other Ideas



From 3rd Street Road to National Turnpike

- **Facebook** – Create a post with survey link and pay to **boost** it to a desired age group. These are ads that pop up when someone is perusing Facebook we either click, don't want to see or not. You set the date range, and the \$ amount. It is fairly inexpensive to reach 1000s of people, and we set the radius around our project too.
- Each chamber has a young professionals group and they meet. Contact the **Greater Louisville, Inc. (GLI)** find meeting schedule or contact their leader and they will work with us either to get a survey out, or attend their meeting
- **Twitter** posts giveaways to answer your survey, people will respond.
- **Emails** to UPS Worldport, and other to send to their employees who may use Outer Loop or travel through the intersections.
- Find **neighborhood groups**
- **Walmart and the gas stations** drop surveys off.
- **U of L engineering** as a resource, they may be willing to get engineering students to be interviewers at Walmart or other places for class project.



Groups



From 3rd Street Road to National Turnpike

<https://www.ypal.org/index.html>

Young Professionals Association of Louisville

The Premier Professional & Social Networking Group for 20-and-30 Somethings

<http://ywclouisville.org/>

Younger Woman's Club of Louisville

<http://www.lulyp.org/>

Louisville League of Young Professionals encourages it's members to become actively involved in local civic, social and economic issues.

<https://lul.org/membership/yp/>

The Louisville Urban League Young Professionals (LULYP) is an auxiliary organization of the Louisville Urban League. Membership predominantly consists of African American professionals between the ages of 21 and 40. The mission is to promote social and economic empowerment in Louisville Metro through professional development and community involvement.



Local Officials/Public Meeting



From 3rd Street Road to National Turnpike

- **Facebook Page**

- **Boost posts**

- Helps **more people to like, share and comment** on posts you create.
 - **Reaches new people** who are likely interested in your content but don't currently follow you on Facebook.
 - **Include a call-to-action button** so you can drive people to take other actions completing a survey, notification of meeting, contacting D-5.
 - **Targeted** to the audience of your choosing.
 - **Define** a new audience based on things such as location, interests and more.
 - **Custom audience** based on contacts you already have or a lookalike audience based on people who have already shown interest in the district's page.
 - **Placements** are where your ad will appear. Boost posts can be shown on
 - the Desktop
 - NewsFeed,
 - Mobile NewsFeed and
 - Instagram.
 - **Customizable budget:** select a pre-populated budget or a custom amount. Minimum budgets are \$1 a day.
 - **Scheduling:** Set amount of time you want ad to run.
 - Choose a custom duration (ex, 7 days) or set a custom end date.
 - **Ad Creative:** Looks like the Page post it's based on. The only difference is your ad will appear with a Sponsored label in the top-left corner and will have a call-to-action button in the bottom-right corner if you chose to add one.



Young Groups



From 3rd Street Road to National Turnpike

<https://www.ypal.org/index.html>

Young Professionals Association of Louisville

The Premier Professional & Social Networking Group for 20-and-30 Somethings

<http://ywclouisville.org/>

Younger Woman's Club of Louisville

<http://www.lulyp.org/>

Louisville League of Young Professionals encourages it's members to become actively involved in local civic, social and economic issues.

<https://lul.org/membership/yp/>

The Louisville Urban League Young Professionals (LULYP) is an auxiliary organization of the Louisville Urban League. Membership predominantly consists of African American professionals between the ages of 21 and 40. The mission is to promote social and economic empowerment in Louisville Metro through professional development and community involvement.



Local Officials Meeting No. 1



MEETING MINUTES

Project: Outer Loop Corridor Study
Jefferson County
3rd Street Road to National Turnpike

Purpose: Local Officials Meeting No. 1

Place: Lassiter Middle School – 3:00 PM

Meeting Date: December 5, 2017

Prepared By: Annette Coffey, Qk4

Attendees: Attachment A

<u>Name</u>	<u>Representing</u>	<u>Telephone Number</u>	<u>Email Address</u>
Bill Johnson	Johnsons Day Care	502-361-7832 502-551-8924	Susbj31@aol.com
Robert L Davison	Yorktown North Subdivision	502-368-6490	
Jeff Donohue	State Representative 37	502-439-6175	Jeffmdonohue@gmail.com
Brett Perry	Auburndale Elementary	502-485-8204	brett.perry@jefferson.kyschools.us
Pat Dominik	Louisville Renaissance Zone	502-584-6271	Patrick@swlinc.com
Amber Rains	Southland Mobile Home Park	502-368-4117	
Elizabeth Alexander	District 13	502-574-1113	Elizabeth.alexander@louisville.gov

Presentations: Attachment B

Handouts: Attachment C

Introduction. Matt Bullock opened the meeting noting the goal of the meeting is to present and seek feedback on the existing conditions. He also stated future phases beyond this planning study are not funded at this time.

Annette Coffey provided an existing conditions overview (Appendix C), and explained the draft purpose of the project is to identify opportunities to improve safety, access, drainage, freight movement, and mobility for all modes of travel on Outer Loop (i.e., bike, pedestrian, and transit) for the travelers and residents. She stated the study area is 300 feet either side of the centerline of Outer Loop.

Stakeholder Comments/Questions. The following are comments/questions from the stakeholders:

- One stakeholder from the Renaissance South Business Park noted the following: over five million square feet of building space has been added to the park in the last five years; freight is a prime focus for the park; improving safety, including safety of pedestrians, would be “great”; and a TARC route servicing Outer Loop and the park is needed.
- A Southland Mobile Home Park representative had these concerns:
 - Usually travelling 60 mph, eastbound motorists use the wide shoulder to pass motorists waiting to turn left at Wilshire Boulevard.
 - Outer Loop at New Cut Road by Circle K is the location of many crashes.
 - Drivers often encounter opposing traffic coming at them head-on while trying to pass slower moving cars.
 - More police patrols are needed in the park and along Outer Loop due to speeding.
- Councilwoman Welch had three comments:
 - Expand Outer Loop to four lanes to 3rd Street Road.
 - Add right-turn lanes on Outer Loop at New Cut Road both east and west. Westbound traffic backs up to Tolls Lane in peak afternoon hours.
 - Turn lanes are needed at the following locations:
 - Candleworth Drive
 - 201 Outer Loop (Eagles Club)
 - Southland Mobile Home Park at Wilshire Drive
 - Tolls Lane
 - Nash Road
 - Afterglow Drive
- The owner of Johnson’s Quality Day Care on 3rd Street Road near Outer Loop provided the following comments:
 - Westbound Outer Loop motorists unaware of the stop condition at 3rd Street Road sometimes “run the stop” and crash.
 - New warehouses at New Cut Road and potential increased traffic are a concern.
 - If bike lanes are constructed, they should be wide for bicyclists’ safety.
 - Turn lanes are needed at various locations along Outer Loop.
 - Dropping off/picking up students at Johnson’s Quality Day Care on 3rd Street Road is a concern of school officials, and an agreeable resolution has not been reached. Adding an additional entrance was not approved by KYTC due to the proximity to 3rd Street Road.

Closing Statements. Annette asked stakeholders to complete the survey provided in their handout or on-line by December 19, 2017, and visit the web site for project updates. She encouraged attendance at the public meeting to begin at 5:00 p.m. She asked attendees to review existing conditions display boards and a simulation of existing traffic on Outer Loop available around the room and at the public meeting. She

concluded by noting the second stakeholders meeting would occur after Derby—date and time to be announced.

The meeting concluded at 4:00 PM.

[illegible]



**Outer Loop Corridor Study
3rd Street Road to National Turnpike
Jefferson County**

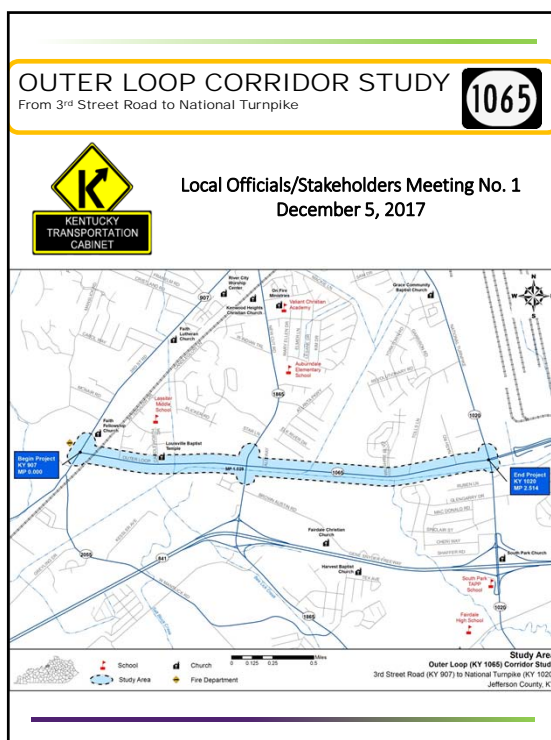


**Local Officials Meeting #1 – KYTC / KIPDA / Consultant
Lassiter Middle School
December 5, 2017
3:00 PM**

NAME	REPRESENTING	PHONE #	EMAIL
Tonya Hisdon	KYTC CO. Planning	502-782-5062	Tonya.Hisdon@ky.gov
Brett Perry	Auburndale Elem	502-6485-8204	brett.perry@jefferson.kyschools.us
Daniel Halker	KYTC C.O. Planning	502-782-5067	daniel.halker@ky.gov
Andy Rush	KIPDA	502-266-6144	andy.rush@kipda.org
Jeff Donohue	State Rep 37	502-439-6175	JeffDonohue@kentucky.com
Lynn Doporowski	KYTC	502-782-5083	Lynn.Doporowski@ky.gov
Steve Ross	KYTC CO Planning	502-782-5080	steve.ross@ky.gov
Tom Hall	KYTC DS Planning	502-210-5479	tom.hall@ky.gov
Matt Bullock	KYTC DS	502-210-5400	Matt.Bullock@ky.gov
Travis Thompson	KYTC DS	502-210-5400	travis.thompson@ky.gov
Judi Hickerson	KYTC DS	502-210-5429	JUDI.HICKERSON@KY.GOV
Chris Allen	KYTC DS	502-210-5447	Chris.allen@ky.gov
Cheryl Receveur	KYTC DS	502-210-5420	cheryl.receveur@ky.gov
Susan Outman	KYTC DS	502-210-5448	susanoutman@ky.gov



OK₄
Engineering Planning



Draft Study Purpose and Goals
From 3rd Street Road to National Turnpike

K
KENTUCKY
TRANSPORTATION
CABINET

Study Purpose

Improve **safety, access, drainage, freight movement**, and **mobility** for all modes of travel on Outer Loop.

Goals

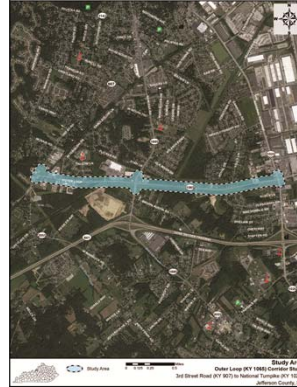
- Improve access to transit

Project Overview

From 3rd Street Road to National Turnpike



- Today funding exists only to complete this corridor study-Outer Loop from 3rd Street Rd to National Turnpike.
- The study will identify, evaluate, and prioritize: Short- and Long-Term Alternatives.
- Currently reviewing existing conditions and completed studies in the area.
- KYTC is advancing HSIP project to add right turn lanes on Outer Loop at New Cut Road.



Improvement Alternatives

From 3rd Street Road to National Turnpike



Long-term Improvements

1. No Build
2. Continuous Three-Lane
3. Four Lanes with Median
4. Five lane with Two-Way-Left-Turn Lane (TWLTL)

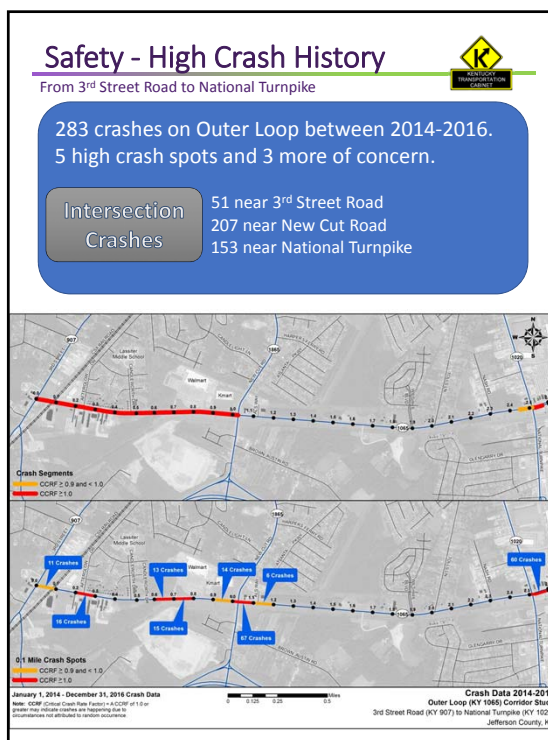
Short-term Improvements

1. Pedestrian and Bicycle Accommodations
2. Access Management
3. Intersection Improvements
4. Drainage Improvements

Challenges

- 100 feet of right of way
- Utilities
- Environmental constraints
- Raise Outer Loop out of Floodplain?
- Bridges too close to intersections
- Entrances too close to intersections



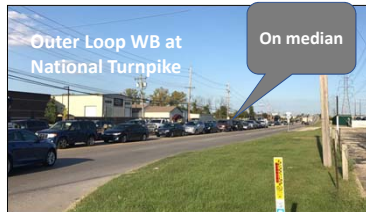


Roadway Concerns

From 3rd Street Road to National Turnpike



- Two vertical curves do not meet minimum sight distance:
 - 3rd Street near Outer Loop
 - Outer Loop near 3rd Street Road
- Short grade near railroad exceeds maximum for 45 mph.



- Motorists on Outer Loop westbound at National Turnpike use the opposing travel way and median to reach left turn lanes.
- Motorists use Outer Loop shoulders for passing in two locations.



Roadway Concerns cont.

From 3rd Street Road to National Turnpike



- No reflective back plates at 3rd Street Road and New Cut intersections
- No signal head on 4th leg of 3rd Street Road Intersection



- Much of road is in 100 Year floodplain
- Ponding water on roadway in front of Walmart



Access Issues

From 3rd Street Road to National Turnpike



Access Points

- 3rd Street Road to New Cut Road – 22
- New Cut Road to National Turnpike – 15

Many access points are in functional area of intersections.



Freight Generators

From 3rd Street Road to National Turnpike



- 4% truck traffic
- Large expansion of Renaissance South Business Park to the east
- New warehouses on New Cut Road south of Outer Loop

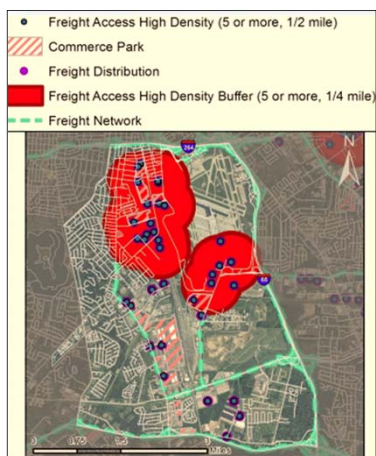


Figure 40012-D: Freight clusters in TAD 40012.

Source:
KIDPA



Mobility

From 3rd Street Road to National Turnpike



- ✓ AADT – 14,000-17,600 vehicles per day
- ✓ Operates at Level of Service (LOS) E during peak hours
- ✓ New Cut Road and National Turnpike intersections operate at LOS E or F in PM peak hour
- ✓ Volume to Capacity ratio (if \geq to 1.0 roadway is at capacity)
 - 0.34-0.47 in AM peak hour
 - 0.55-0.61 in PM peak hour
- ✓ Mean Travel Times (below)

AM/PM	Peak Hour Times	Cumulative Peak Hour Travel Time (minutes)	
Direction		Eastbound	Westbound
From/To		3rd Street Road to National Turnpike	National Turnpike to 3rd Street Road
AM	7:00-8:00	5.41	5.01
PM	5:00-6:00	8.76	7.33



3rd Street Road NB Right

From 3rd Street Road to National Turnpike





Turn lane storage insufficient during AM or PM peak hours.




Outer Loop at New Cut Road

From 3rd Street Road to National Turnpike





Outer Loop EB
Congestion



Outer Loop WB
blocking left turn lane

New Cut Road NB Left

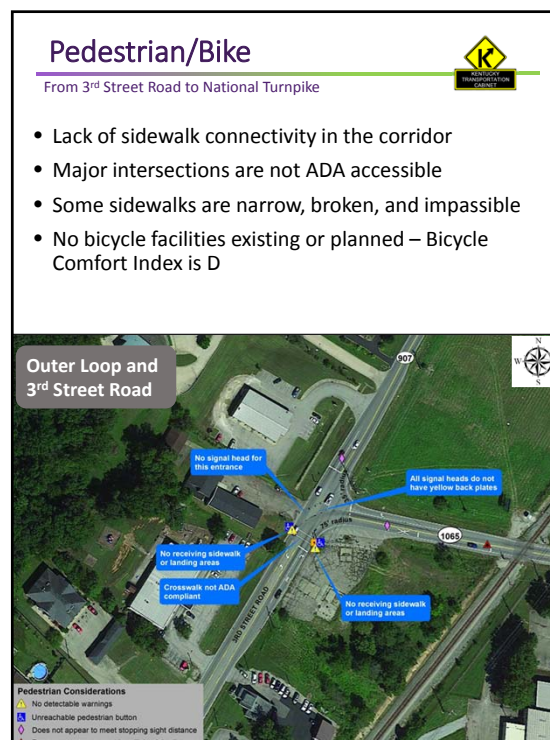
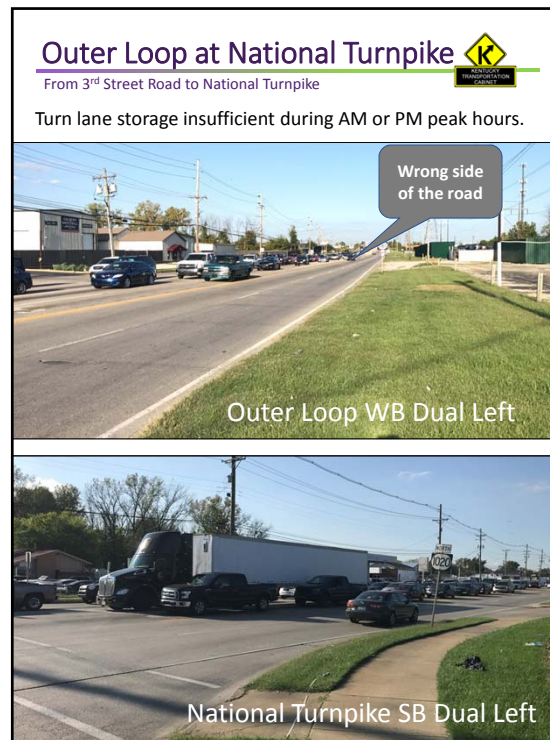
From 3rd Street Road to National Turnpike





Turn lane storage
insufficient during
AM or PM peak
hours.







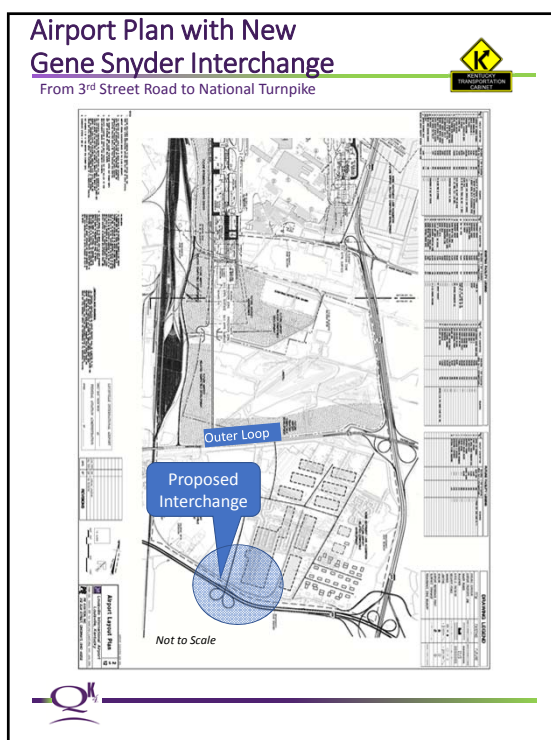
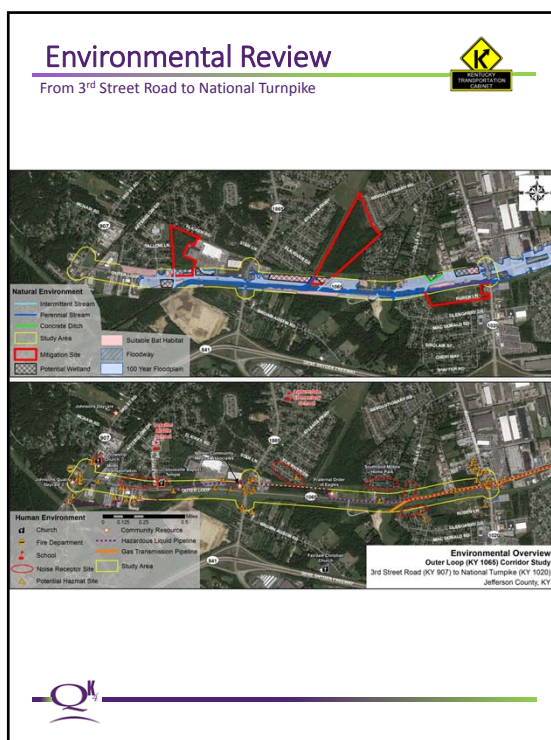
Transit

From 3rd Street Road to National Turnpike

Existing TARC Routes and Shared Use Paths


Source: LOJIC Online Map

- No east-west transit routes on Outer Loop




Wrap-Up/Next Steps

From 3rd Street Road to National Turnpike




OUTER LOOP CORRIDOR STUDY

From 3rd Street Road to National Turnpike



- 1) Make sure you turn in your survey before you leave!
 - iPads are available to take survey electronically.
 - Survey can also be accessed through QR code on fact sheet and at Outer Loop Corridor Study webpage hosted by KYTC District 5:
<http://tiny.cc/fixouterloop>
 - Postage-paid return envelopes are available if necessary and must be returned by **December 19, 2017!**
 - Study information and public meeting materials will be available on webpage.
- 2) Second Local Officials/Stakeholders and Public Meeting
 - After derby 2018
 - Discuss improvement alternatives and prioritization
- 3) Final Report available winter 2018.





Outer Loop Corridor Study 3rd Street Road to National Turnpike Jefferson County



Groundbreaking by Design.

LOCAL OFFICIALS/STAKEHOLDERS MEETING NO. 1

3:00 PM

Lassiter Middle School

December 5, 2017

AGENDA

1. Introductions
2. Purpose and Need
3. Project Overview
4. Existing Conditions
 - a. Safety
 - b. Roadway Concerns
 - c. Freight
 - d. Mobility
 - e. Bike/Pedestrian
 - f. Transit
 - g. Environmental Overview
5. Discussion
6. Wrap-up/Next Steps



OUTER LOOP CORRIDOR STUDY

FROM 3RD STREET ROAD TO NATIONAL TURNPIKE

PUBLIC MEETING

8200 CANDLEWORTH DRIVE | LASSITER MIDDLE SCHOOL
DEC 5 2017 | 5 PM - 7 PM

LET US KNOW
YOUR OPINION



PROJECT PURPOSE:

**IMPROVE SAFETY, ACCESS, DRAINAGE,
FREIGHT MOVEMENT, AND MOBILITY FOR
ALL MODES OF TRAVEL ON OUTER LOOP.**

MOBILITY

- 14,000 to 17,600 vehicles per day.
- New Cut Rd and National Turnpike intersections fail during peak hours.
- It takes 5 minutes to travel from one end of the corridor to the other in the peak am and 7-8 minutes in the pm.



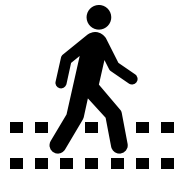
SAFETY

- **283** crashes between 2014-16.
- **2** of the top 40 high crash intersections (New Cut Rd and National Turnpike) in Jefferson County.
- **5** high crash locations with 3 more of concern.
- Motorists use shoulders for passing.



BIKE/PEDESTRIAN

- Some sidewalks do not connect, are narrow, broken, and impassible.
- Pedestrian facilities are not ADA compliant (disabled persons).
- No bicycle facilities along the corridor.



FREIGHT

- 4% truck traffic.
- Large expansion of Renaissance South Business Park to the east of the corridor study.



TRANSIT



TARC currently only operates one route (Route 6 - Sixth Street) along the corridor which stops at the Walmart parking lot.

CONTACT US AT:

Kentucky Transportation Cabinet
Attn: District 5 Planning
8310 Westport Road
Louisville, KY 40242



CHRIS ALLEN PE/TOM HALL PE
CHRIS.ALLEN@KY.GOV/TOM.HALL@KY.GOV
(502)-210-5447

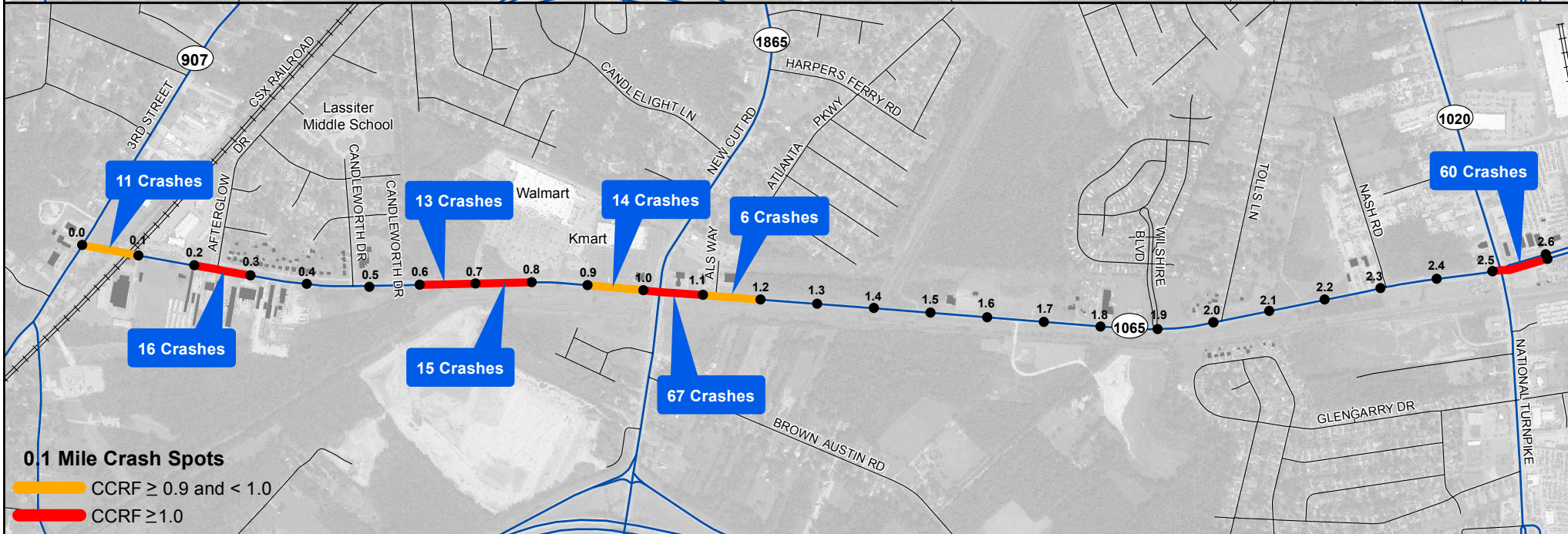
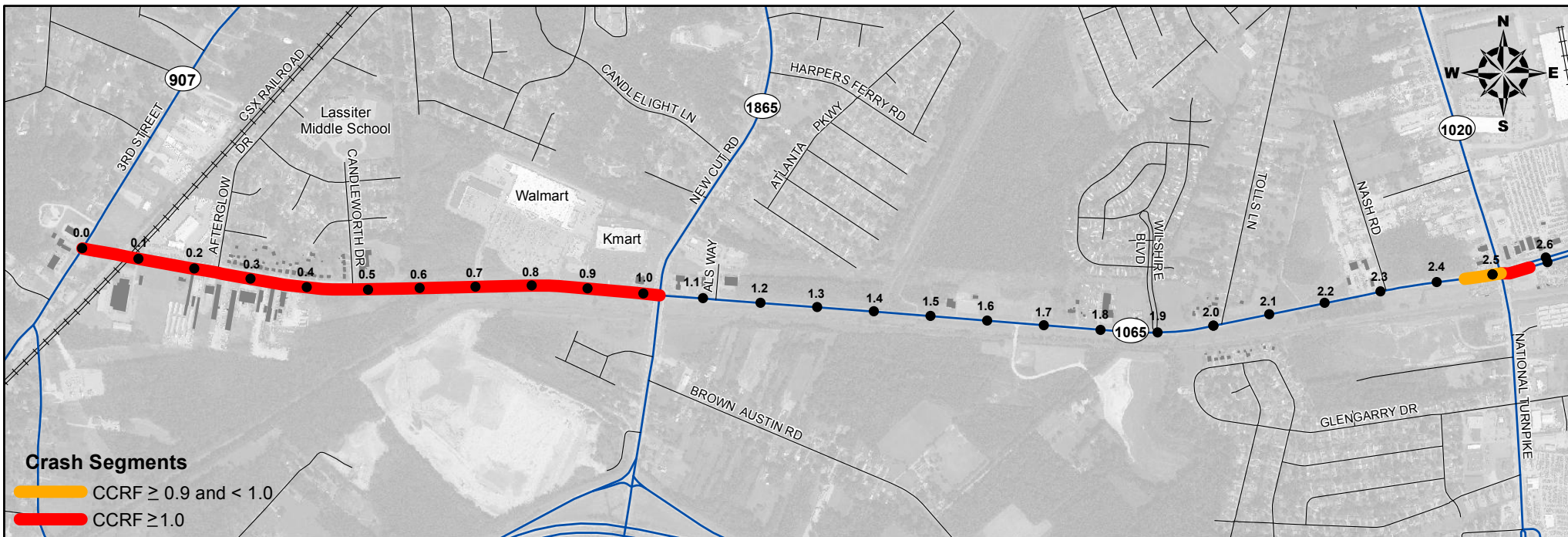
ACCESS

Driveways too close to intersections.



DRAINAGE

Much of the corridor is in the 100-year floodplain.

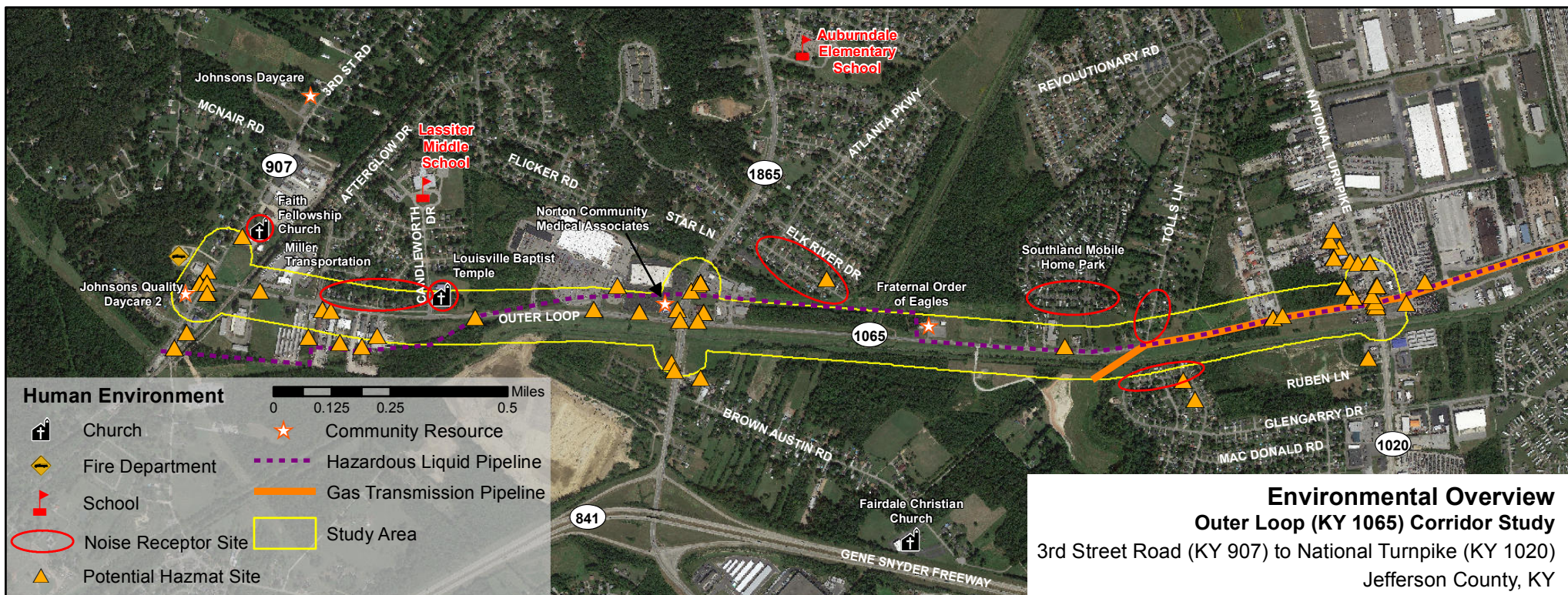
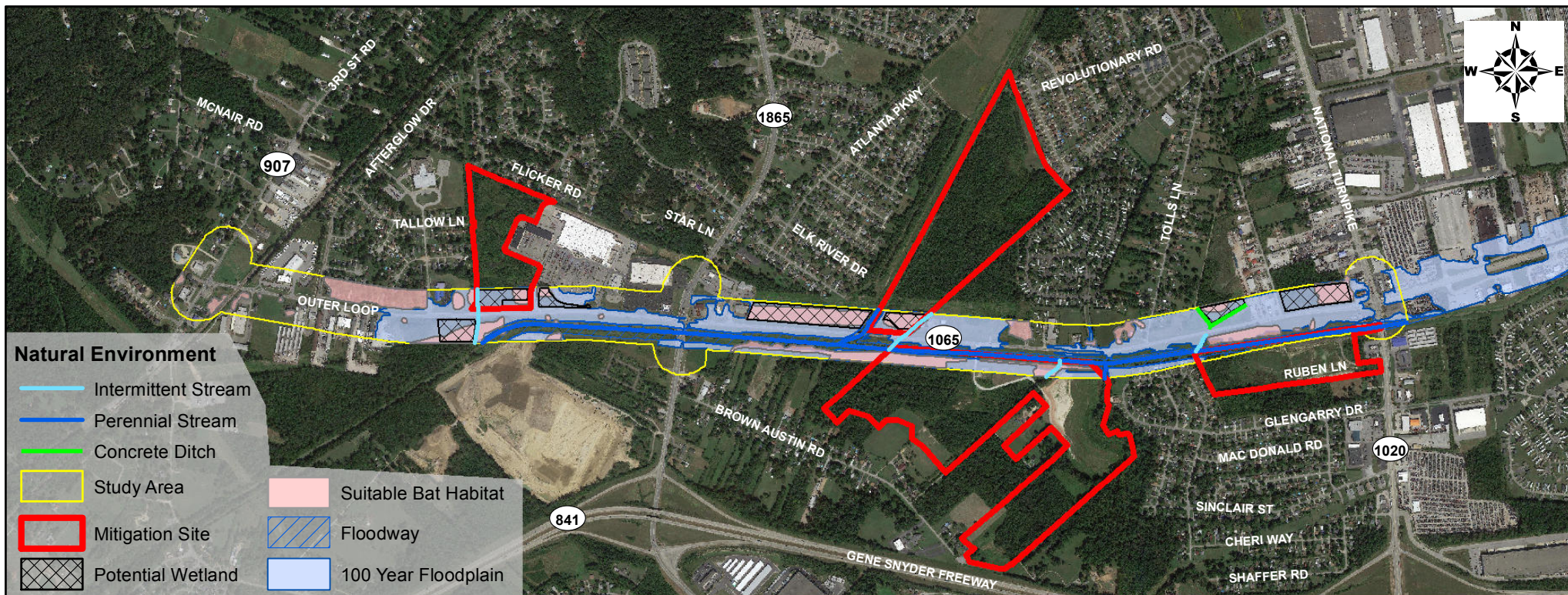


January 1, 2014 - December 31, 2016 Crash Data

Note: CCR_{CF} (Critical Crash Rate Factor) = A CCR_{CF} of 1.0 or greater may indicate crashes are happening due to circumstances not attributed to random occurrence.

0 0.125 0.25 0.5 Miles

Crash Data 2014-2016
Outer Loop (KY 1065) Corridor Study
 3rd Street Road (KY 907) to National Turnpike (KY 1020)
 Jefferson County, KY



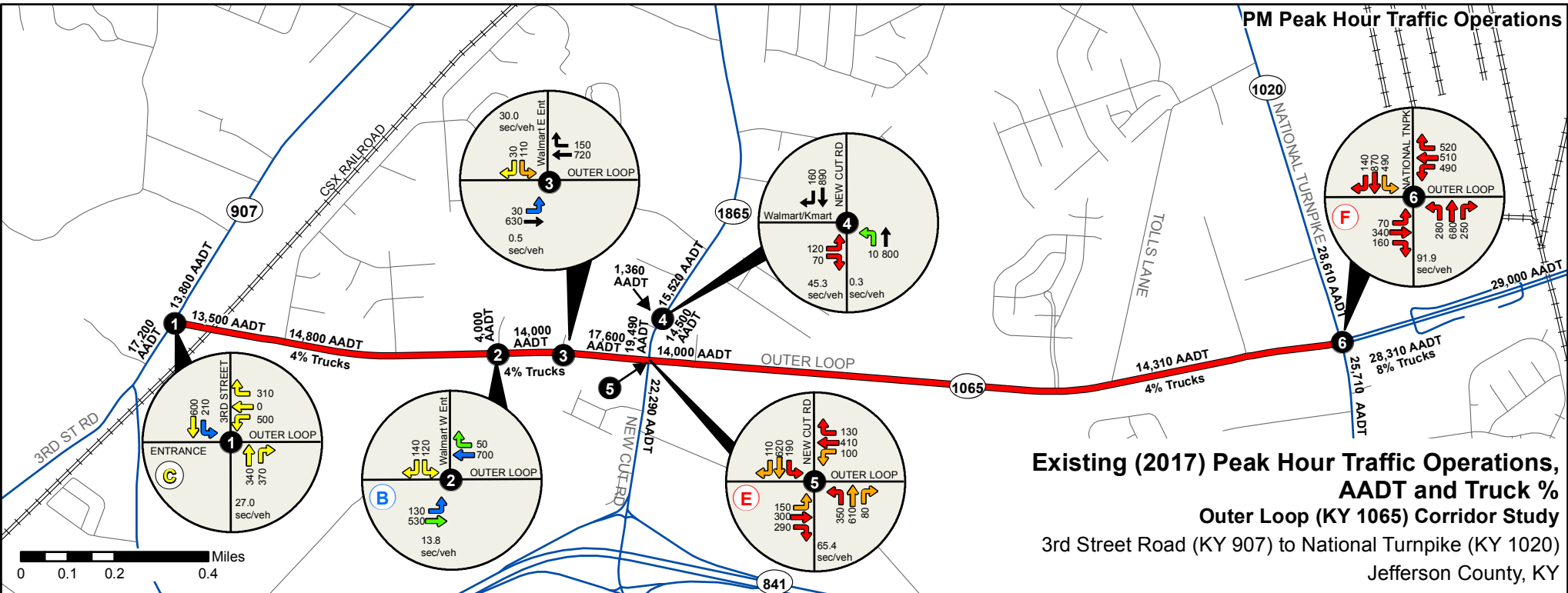
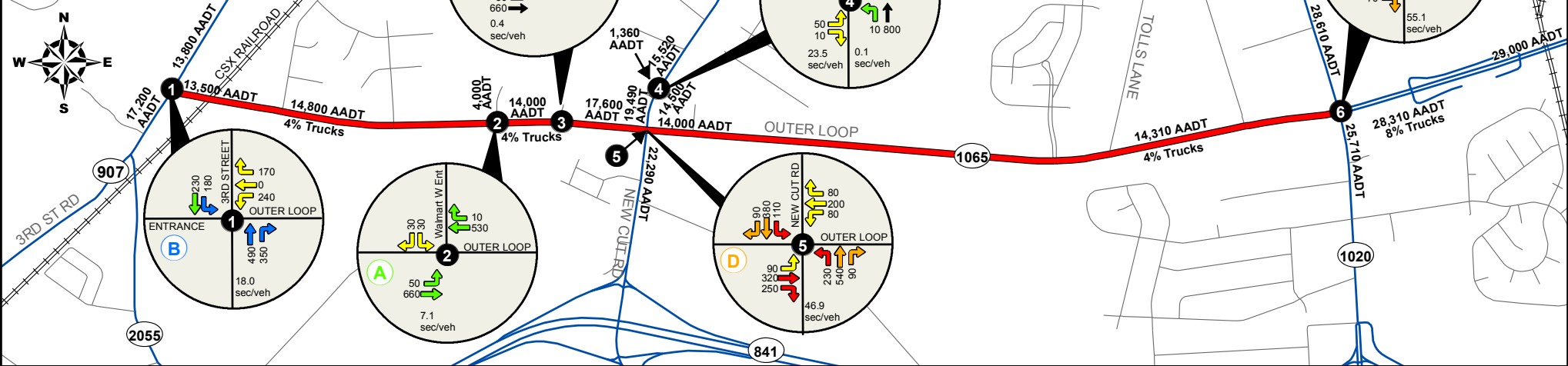
Environmental Overview
Outer Loop (KY 1065) Corridor Study
 3rd Street Road (KY 907) to National Turnpike (KY 1020)
 Jefferson County, KY

Level of Service (LOS)

- █ A
 - █ B
 - █ C
 - █ D
 - █ E/F
- x,xxx Average Annual Daily Traffic (AADT)
- X% % Trucks of AADT
- (X) Overall Signalized Intersection LOS

Intersections with no signals have movements not required to stop that will not have an associated LOS and are in black.

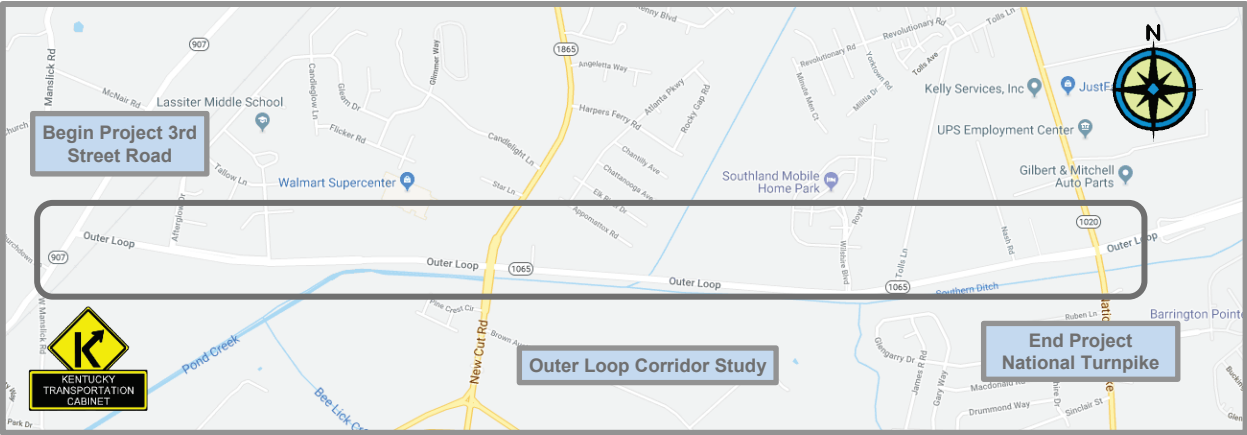
Note: Delay is in seconds per vehicle.



**Existing (2017) Peak Hour Traffic Operations,
AADT and Truck %
Outer Loop (KY 1065) Corridor Study
3rd Street Road (KY 907) to National Turnpike (KY 1020)
Jefferson County, KY**

9. We are trying to reach a wider demographic. Please share your age (optional).

	Questions/Topics	
a.	under 25	
b.	26 to 35 years old	
c.	36 to 45 years old	
d.	46 to 55 years old	
e.	56 to 65 years old	
f.	Over 66	



PLEASE RETURN THIS SURVEY TO KYTC AT THIS MEETING OR TO ONE OF THE FOLLOWING:

CHRIS ALLEN OR TOM HALL, PE
DEPARTMENT OF HIGHWAYS,
DISTRICT FIVE
8310 WESTPORT ROAD
LOUISVILLE, KENTUCKY 40242
Phone: 502-210-5400
Chris Allen email: Chris.Allen@ky.gov
Tom Hall email: Tom.Hall@ky.gov



ELECTRONIC SURVEY

FOR PROJECT UPDATES AND THE ELECTRONIC SURVEY LINK,
PLEASE VISIT THE FOLLOWING WEBSITE:

<http://tiny.cc/fixouterloop>

Survey Deadline – December 19, 2017



If funding was available, how would you fix Outer Loop?

OUTER LOOP CORRIDOR STUDY
From 3rd Street Road to National Turnpike
SURVEY

- How often do you travel Outer Loop? (Please circle one)
a. Several times per day b. Once Daily c. Weekly
d. Monthly e. Rarely
- Do you live along the Outer Loop corridor between 3rd Street Road and National Turnpike? (Please circle one)
a. Yes b. No
- Choose as many of the items below that need to be improved on Outer Loop.

	Questions/Topics	
a.	Congestion/Delay	
b.	Safety	
c.	Drainage	
d.	Bike/Pedestrian	
e.	No improvements needed	
f.	Other	

Other

- Select as many of the following you feel contributes to congestion/delay on Outer Loop.

	Questions/Topics	
a.	3rd Street Road Intersection	
b.	Rail Crossing	
c.	School traffic	
d.	Walmart Intersection	
e.	New Cut Road Intersection	
f.	National Turnpike Intersection	
g.	Not enough lanes for traffic	
h.	Truck Traffic	
i.	Road operates well	
j.	Other	

Other

5. Select as many of the following you feel are major safety concerns on Outer Loop.

	Questions/Topics	
a.	Visibility and signal operation on Outer Loop at 3rd Street Road	
b.	Turning into and out of Afterglow Drive	
c.	Turning into and out of Walmart	
d.	Visibility of signal on New Cut Road approaching Outer Loop	
e.	Turning conflicts at Outer Loop/New Cut Road	
f.	Lane changes where Outer Loop drops a lane at National Turnpike	
g.	Turning conflicts at Outer Loop/National Turnpike	
h.	Too many entrances	
i.	No safety concerns	
j.	Other	

Other

6. Select as many of the following you feel are drainage issues on Outer Loop.

	Questions/Topics	
a.	Roadway floods	
b.	Drains need to be maintained	
c.	Water ponds on roadway	
d.	Water ponds on sidewalks	
e.	No drainage issues	
f.	Other	

Other

7. Select as many of the following improvements for bicycling you feel are needed on Outer Loop.

	Questions/Topics	
a.	Wider shoulders	
b.	Bike lanes	
c.	Separate path from roadway	
d.	Signage	
e.	No improvements needed	
f.	Other	

Other

8. Select as many of the following pedestrian improvements you feel are needed on Outer Loop.

	Questions/Topics	
a.	Replace existing sidewalks	
b.	Construct new sidewalks	
c.	Improve pedestrian crossing at signalized intersections	
d.	Improve access for disabled pedestrians	
e.	No improvements needed	
f.	Other	

Other

10. Select as many of the following TARC improvements you feel are needed on Outer Loop.

	Questions/Topics	
a.	New TARC routes	
b.	New TARC stops	
c.	More frequent services	
d.	No improvements needed	
e.	Other	

Other

11. Please share any comments you have with any of the previous questions or additional thoughts about Outer Loop you would like us to know about.

Public Meeting No. 1

**Public Meeting No. 1 Summary
Outer Loop Corridor Study
3rd Street Road to National Turnpike
Jefferson County
Lassiter Elementary School
8200 Candleworth Drive
Louisville, KY 40214
December 5, 2017
5:00 PM to 7:00 PM**

An informal open house public meeting was held for Outer Loop Corridor Study from 5:00 p.m. to 7:00 p.m. Tuesday, December 5, 2017, in Louisville, Kentucky. The purpose of the meeting was to gather information on existing conditions and to help verify what the current issues and needs are; e.g., traffic volumes, congestion, crash data, roadway deficiencies, drainage, bike and pedestrian connectivity, and environmental issues.

Prior to the Meeting

November 20, 23, and 26, a quarter-page advertisement was placed in Louisville's daily newspaper, *The Courier Journal*. Three variable message signs were strategically placed along the corridor to capture commuters' attention. Information was posted on District 5's web site that included a link to an electronic survey made available a week before the meeting. Regular posts about the meeting were made through Facebook and Twitter. A campaign was started through KYTC's District 5 Facebook page for the corridor study which allowed advertisements purchased through Facebook with a targeted audience of a five-mile radius around the Outer Loop corridor study area.

Welcome

Attendees were greeted by representatives of KYTC and the consultant team staff. Attendees were given a handout that provided a project area map with information that included the project's purpose, location of the online survey, existing conditions, and contact information. A traffic simulation video of existing traffic conditions was shown. Each attendee was provided the opportunity to participate in either an on-line survey via iPads or paper surveys.

Presentation Boards

No formal presentation was made by the project team. The following project information was presented on large exhibit boards at two stations for members of the public to review and ask questions.

- Crash History 2014 – 2016
- Environmental Overview
- AM and PM Existing Traffic Operations

Meeting and Survey Results

Approximately 60 persons from the public and 18 staff/consultants attended the public meeting. There were 303 responses to the survey; three from the Local Officials/Stakeholder meeting, 31 paper surveys, and 269 electronic. Most responders indicated they traveled Outer Loop several times per day (51%) and that they did not live along the corridor (61%). The survey results are included in Attachment A and summarized below. Table 1 (Attachment B) summarizes the open-ended questions.

Note, responders could select multiple answers; therefore, any percentages quoted will not sum to 100%.

- Congestion/delay (93%), safety (80%), drainage (66%), and bike/pedestrian (47%) were the items chosen as most needing improvement.
 - Top contributors to congestion: New Cut Road intersection (72%), not enough lanes for traffic (72%), National Turnpike intersection (58%), 3rd Street Road intersection (50%), and the rail crossing (46%).
 - Most often selected safety concerns: lane changes where Outer Loop drops a lane at National Turnpike (70%), turning conflicts at Outer Loop/New Cut Road (60%), turning conflicts at Outer Loop/National Turnpike (46%), turning into and out of Walmart (42%), and turning into and out of Afterglow Drive (41%).
 - Major drainage issues: roadway flooding (68%), water ponding (67%), and the need for maintenance of drains (59%).
- Bicycle improvement needs most often cited: a path separated from the roadway (58%), and wider shoulders 45%).
- Pedestrian facility improvements most needed: construct new sidewalks (75%), and improve pedestrian crossings at signalized intersections (54%).
- Most-desired TARC improvements: new TARC stops (38%), new TARC routes (36%), and more frequent services (35%); whereas 39% felt no improvements were needed.

In addition, notes taken at the meeting are summarized below:

- A few hundred yards east of New Cut Road and Tolls Lane flooding occurs at least twice per year.
- Sidewalk along Candleworth Drive in front of the Louisville Baptist Temple needs repair.
- The sidewalk is broken halfway between Candleworth Drive and the Walmart east entrance. People in wheelchairs and scooters use this sidewalk to reach Walmart.
- Make Outer Loop a five-lane road.
- Remove “hump” at the railroad tracks.
- A traffic signal is needed at Afterglow Drive due to difficulty in making left turns.
- Bicycles should be separated from mainstream traffic. Near National Turnpike at night motorists cannot see bicyclists.
- Combine Tolls Lane and Wilshire Boulevard and add a traffic signal.
- Emergency vehicles need in-cab capabilities to preempt traffic lights at New Cut Road and National Turnpike.
- A potential location for a Flying J along Outer Loop was provided near the northwest corner of Outer Loop and National Turnpike (Figure 1).
- Although out of the study area, reduce ramp congestion from Gene Snyder Freeway to New Cut Road by adding a sign to advise motorists they do not have to stop.

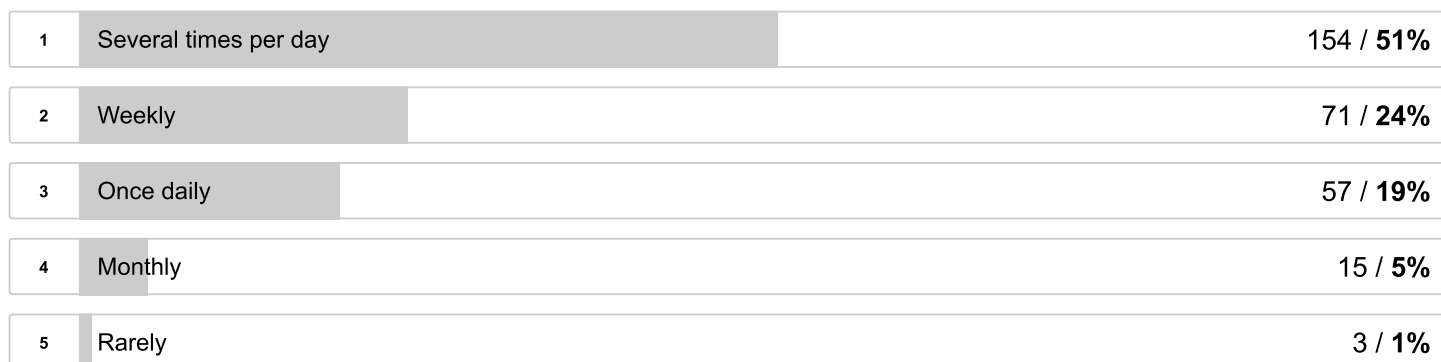
The meeting concluded at 7:20 PM.



Figure 1: Potential Flying J along Outer Loop at National Turnpike

How often do you travel Outer Loop?

300 out of 303 people answered this question



Do you live along the Outer Loop corridor between 3rd Street Road and National Turnpike?*

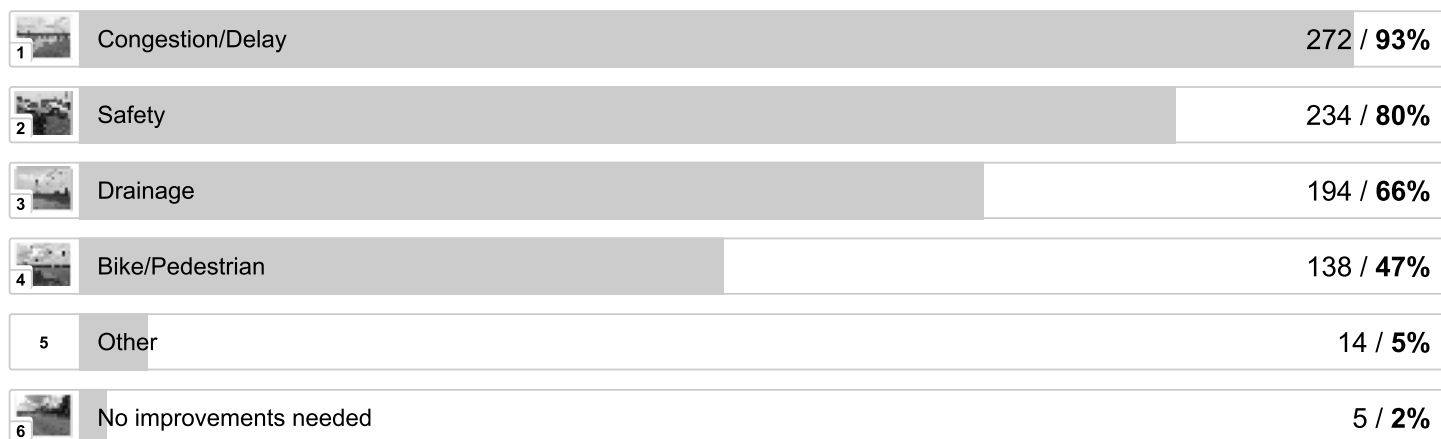
*

295 out of 303 people answered this question



Choose as many of the items below that need to be improved on Outer Loop.

294 out of 303 people answered this question



Select as many of the following you feel contribute to congestion/delay on Outer Loop.

298 out of 303 people answered this question



3	National Turnpike Intersection	173 / 58%
4	3rd Street Road Intersection	150 / 50%
5	Rail Crossing	138 / 46%
6	School Traffic	103 / 35%
7	Walmart Intersection	101 / 34%
8	Truck Traffic	83 / 28%
9	Other	11 / 4%
10	Road Operates Well	8 / 3%

Select as many of the following you feel are major safety concerns on Outer Loop.

292 out of 303 people answered this question

1	Lane changes where Outer Loop drops a lane at National Turnpike	204 / 70%
2	Turning conflicts at Outer Loop/New Cut Road	176 / 60%
3	Turning conflicts at Outer Loop/National Turnpike	134 / 46%
4	Turning into and out of Walmart	122 / 42%
5	Turning into and out of Afterglow Drive	121 / 41%
6	Visibility and signal operation on Outer Loop at 3rd Street Road	100 / 34%
7	Visibility of signal on New Cut Road approaching Outer Loop	79 / 27%
8	Too many entrances	32 / 11%
9	Other	15 / 5%
10	No safety concerns	13 / 4%
11	Visibility of signal of New Cut Road approaching Outer Loop	4 / 1%








Select as many of the following you feel are drainage issues on Outer Loop.

290 out of 303 people answered this question

1	Roadway floods	198 / 68%
2	Water ponds on roadway	195 / 67%
3	Drains need to be maintained	171 / 59%
4	Water ponds on sidewalks	76 / 26%
5	No drainage issues	25 / 9%
6	Other	1 / 0%

Select as many of the following improvements for bicycling you feel are needed on Outer Loop.

289 out of 303 people answered this question

1	 Separate path from roadway	168 / 58%
2	 Wider shoulders	129 / 45%
3	 Bike lanes	73 / 25%
4	 No improvements needed	39 / 13%
5	 Signage	38 / 13%
6	 Other	9 / 3%
7	 Bike lanes	0 / 0%

Select as many of the following pedestrian improvements you feel are needed on Outer Loop.

290 out of 303 people answered this question

1	Construct new sidewalks	217 / 75%
2	Improve pedestrian crossings at signalized intersections	157 / 54%
3	Improve access for disabled pedestrians	114 / 39%
4	Replace existing sidewalks	100 / 34%
5	No improvements needed	30 / 10%
6	Other	2 / 1%

Select as many of the following TARC improvements you feel are needed on Outer Loop.

264 out of 303 people answered this question

1	No improvements needed	104 / 39%
2	New TARC stops	101 / 38%
3	New TARC routes	95 / 36%
4	More frequent services	92 / 35%
5	Other	13 / 5%

We are trying to reach a wider demographic. Please share your age (optional).

298 out of 303 people answered this question

1	26 to 35 years old	66 / 22%
2	46 to 55 years old	63 / 21%
3	56 to 65 years old	59 / 20%
4	36 to 45 years old	51 / 17%
5	over 66	45 / 15%
6	under 25	14 / 5%

Summary of Other Comments by Category

Improvements Needed:	
Additional Lanes:	<ul style="list-style-type: none"> From 3rd Street to National Turnpike. Most want four lanes, one suggested three.
Turn Lanes needed:	<ul style="list-style-type: none"> Candleworth Drive to help with Lassiter School traffic.
	<ul style="list-style-type: none"> New Cut Road - both eastbound and westbound.
	<ul style="list-style-type: none"> Tolls Lane - drivers use shoulder to pass on the right.
	<ul style="list-style-type: none"> National Turnpike - additional turn lane for southbound traffic. Drivers turn from center lane, cutting off other drivers. Existing turn lanes need to be lengthened.
Traffic Signal needed:	<ul style="list-style-type: none"> Fraternal Order of Eagles at MP 1.5-1.6.
	<ul style="list-style-type: none"> Candleworth Drive to help with Lassiter School traffic.
Corridor Improvements:	<ul style="list-style-type: none"> At Tolls Lane. Turning left from Tolls Lane to Outer Loop can be dangerous.
	<ul style="list-style-type: none"> Overhead lighting is insufficient throughout corridor.
	<ul style="list-style-type: none"> Signal timing should be looked at for smoother traffic flow.
Causes of Congestion/Delay:	
Corridor:	<ul style="list-style-type: none"> Poorly timed traffic signals.
	<ul style="list-style-type: none"> Increased volume of large truck traffic.
	<ul style="list-style-type: none"> Traffic on Tolls Lane turning left onto Outer Loop.
Safety Concerns:	
Speed Limit:	<ul style="list-style-type: none"> Should be reduced throughout corridor.
Crashes:	<ul style="list-style-type: none"> High crash numbers at New Cut Road, Tolls Lane. Rising truck traffic hampers signal and signage visibility.
Kmart:	<ul style="list-style-type: none"> Parking lot access should be restricted. People use as a cut through.
Eagles Club area:	<ul style="list-style-type: none"> Concern regarding drunk drivers.
Traffic Signals:	<ul style="list-style-type: none"> Many drivers run red lights. Stop and go traffic causes rear-end crashes.
Lighting:	<ul style="list-style-type: none"> Corridor is dark. More lighting is needed.
Lane Markings:	<ul style="list-style-type: none"> Lane lines are difficult to see in the rain.
Drainage Issues:	
Flooding:	<ul style="list-style-type: none"> Road floods from New Cut Road to Tolls Lane.
	<ul style="list-style-type: none"> Though improved since the bridge replacement on New Cut Road, road from New Cut Road to National Turnpike continues to flood.
	<ul style="list-style-type: none"> Road floods in front of the Walmart building.
	<ul style="list-style-type: none"> Water retention during heaving rains.
Bicycle Issues:	
Bike Lanes:	<ul style="list-style-type: none"> Most say none are needed, the road is too busy. Two responders want separate lanes.
Signage:	<ul style="list-style-type: none"> Place additional signs for bike/pedestrian traffic.
Pedestrian Issues:	
Sidewalks:	<ul style="list-style-type: none"> Needed from 3rd Street Road to National Turnpike.
	<ul style="list-style-type: none"> Needed from 3rd Street Road to New Cut Road.
Cross walks:	<ul style="list-style-type: none"> Needed throughout corridor.
	<ul style="list-style-type: none"> National Turnpike: pedestrians cross to go to the Space Center. Trucks turn right, against the pedestrian signal, nearly hitting pedestrians.
TARC Improvements:	
Additional Stops:	<ul style="list-style-type: none"> Need better access for wheelchair bound people. Noted that TARC has failed the special needs community.
	<ul style="list-style-type: none"> Need better access to the west. New warehouses, but no public transportation.
No TARC:	<ul style="list-style-type: none"> Some wanted no TARC and another wanted reduced stops.
Other Comments:	
CSX Train:	<ul style="list-style-type: none"> Need train overpass. Trains block traffic for as long as 20 minutes at a time.
Economic Development:	<ul style="list-style-type: none"> Improving conditions for existing users is fine. Attracting new businesses is not needed.

Preliminary Alternatives Discussion



Groundbreaking by Design.

MEETING MINUTES

Project: Outer Loop Corridor Study
3rd Street Road to National Turnpike
Jefferson County, Kentucky

Purpose: Pre-Project Team Meeting No. 2 – Preliminary Alternatives Discussion

Place: KYTC, District 5, Louisville

Meeting Date: February 23, 2018
1:30PM EDT

Prepared By: Qk4

Attendees: Chris Allen KYTC – D5 Planning
Tom Hall KYTC – D5 Planning
Andy Gilley Qk4, Inc.
Annette Coffey Qk4, Inc.

The purpose of this meeting was to discuss preliminary alternatives with D5 personnel. The Scope of Work for this project under Task 8.0, Analysis of Conditions and Improvement Alternatives Subtask 8.1 Long-Term Improvements, showed Qk4 analyzing the following alternatives for Outer Loop:

1. Continuous Three-Lane
2. Four Lanes with Median
3. Five Lanes with Two-Way-Left-Turn-Lane (TWLTL)

After discussions with stakeholders, research yielded the following information:

- Four environmental mitigation sites in the corridor would prohibit future development.
- Future growth south of the corridor at New Cut Road would be severed by the Southern Ditch and have no access to Outer Loop.
- Future jobs/households within the study corridor would have minimal effect on No-Build 2035 traffic volumes.

The 2035 future No-Build ADT is expected to increase, at most, 400 vehicles per day above existing volumes. Given all of this information coupled with the rural nature of the Outer Loop from New Cut Road to just west of National Turnpike, the above three long-term improvements no longer

seem valid. For example, the rural section from New Cut Road to just west of National Turnpike is now proposed as two lanes because, in future conditions, there will be nowhere to turn for over 2,000 feet. Leaving this section as two lanes also saves widening the Outer Loop bridge. District 5 agreed with this approach. For the long-term alternatives 2 and 3 above, this section would only be studied as four lanes without a median.

In essence, there will be two hybrid alternatives rather than the original long-term alternatives. West to east beginning at National Turnpike:

- **3-2-3 Lane Alternative:** Three lanes west to beyond the southern mitigation site, transitioning to two lanes until near Al's Way, then transitioning to three lanes to before 3rd Street Road.
- **5-4-5-3 Lane Alternative:** Five lanes west to beyond the southern mitigation site, transitioning to four lanes until near Al's Way, then transitioning to five lanes near Candleworth Drive, and changing to three lanes before Third Street Road.

Bicycle Accommodations

A KYTC Bicycle/Pedestrian Program Team review of bicycle/pedestrian accommodations within the study area indicated a need for sidewalks and pedestrians elements, bicycle green boxes at intersections, but not bicycle facilities. Using the Bicycle Comfort Index (BCI) average rating, Outer Loop was rated "D" on a grading scale from "A" to "E," which indicates compatibility for bicycling on the road is "moderately low." Bicycle facilities do not exist on 3rd Street Road, New Cut Road, or National Turnpike. Facilities are planned outside the 2035 design year for 3rd Street Road and New Cut Road. Strava heat map showed portions of north/south New Cut Road and 3rd Street Road as heavily used bicycle routes, but not Outer Loop. Louisville Metro plans do not identify Outer Loop as a future bike route. **Given this information and the close proximity to Louisville Loop (south of the corridor), bicycle facilities will not be proposed with these alternatives.**

Sidewalks are proposed on the north side of Outer Loop. Between Candleworth and Afterglow drives, the existing sidewalk is proposed along the frontage road (Outer Loop Road). District 5 staff agreed with this approach. The KYTC needs to rehabilitate the frontage road between the two drives and turn it over to Louisville Metro for maintenance.

Outer Loop/Third Street Road Intersection

The Outer Loop/3rd Street Road intersection proposed improvements would create a four-way intersection with signal poles in all four quadrants versus the current angle configuration. In addition, improvements provide an alternative to Johnson's Day Care unloading onto southbound 3rd Street Road. Tom was concerned with the proposed shared connection to Johnson's Day care and the adjacent car lot; however, he wanted to pursue the proposed bus pull off.

Andy stated the southbound left-turn lane on 3rd Street Road does not meet minimum design criteria, and asked whether we should propose lengthening it. Tom asked Qk4 to document in the report that the turn-lane does not meet minimum criteria. and provide an estimate for upgrading to the desirable length; but noted the information will most likely not be provided to the public. Turn lanes on Outer Loop approaching 3rd Street Road also do not meet minimum design criteria.

Near or at Railroad Crossing

The proposed sidewalk at Miller's Bus facility should be adjusted to avoid locating the crossing at the widest part of their Y entrance.

Tom requested Qk4 contact Keith Downs with Parsons for their recent cost estimates for new railroad crossing gates and signal. Concerned the entire crossing would have to be reconstructed, he wanted to ensure cost estimates included reconstruction. Pat Matheny or Allen Rust may also be a source.

School Traffic at Candleworth Drive

Public comments included concern that westbound Candleworth Drive traffic to/from Lassiter Elementary School backs up onto Outer Loop. Rather than add a right-turn lane at Candleworth Drive to relieve the backup, switching the school's car pickup route from Candleworth Drive to Afterglow Drive was proposed. Tom suggested contacting the school regarding this matter.

New Cut Road Intersection

Add bollards on New Cut Road in front of the right in/right out service station entrance.

Outer Loop/National Turnpike Intersection

Adding a concrete median on the east side of the National Turnpike intersection is acceptable. This median would also prohibit or make awkward a left-turn into the junkyard. Qk4 will confer with Jason Richardson regarding the offset. Tom also noted the westbound left-turn lane minimal taper.

Remove the added westbound lane carried through the intersection and add it to the 5-4-5-3 Lane Alternative. The 3-2-3 Lane Alternative, show placement of signs westbound to help motorists understand which lanes to be in through the intersection.

Project Team Meeting 2

District 5 will need two weeks to prepare right-of-way and utility estimates for the next Project Team meeting, and meeting materials will need to be available for review one week prior to the meeting. Therefore, Qk4 requested the second Project Team meeting take place at the end of March. The next LO/S meeting would still be on target for "after Derby," as discussed at the previous LO/S meeting.

Project Team Meeting No. 2



Groundbreaking by Design.

MEETING MINUTES

Project: Outer Loop (KY 1065) Corridor Study
3rd Street Road to National Turnpike
Jefferson County, Kentucky

Purpose: Project Team Meeting No. 2 – Alternatives Presentation, Review of Local Officials/Stakeholder/Public Meeting Input and Future No Build and Build Traffic Operations

Place: KYTC, District 5, Louisville

Meeting Date: April 11, 2018
9:30 a.m. EDT

Prepared By: Qk4

Attendees:

Chris Allen	KYTC – D5 Planning
Mikael Pelfrey*	KYTC – CO Planning
Tom Hall	KYTC – D5 Planning
Judi Hickerson	KYTC – D5 Planning
Tom Wright	KYTC – D5 PD&P
Lindsay Ashby	KYTC – D5 Environmental
Pat Matheny	KYTC – D5 Design
Shelley Morrison	KYTC – D5 Right of Way
Lynn Soporowski*	KYTC – CO Planning
Larry Chaney	KIPDA
Andy Rush	KIPDA
Steve Ross*	KYTC – CO Planning
Balaji, Jayalakshmi *	KYTC – CO Planning
Jill Asher*	KYTC – CO Highway Design
Jeremy Lukat	Qk4, Inc.
Andy Gilley	Qk4, Inc.
Annette Coffey	Qk4, Inc.

***videoconference**

Each project team member was provided a packet containing the following:

- Agenda (**Attachment A**)
- Handouts (**Attachment B**)
 - 2035 Peak Hour Traffic Operations, AADT, and Truck %
 - No Build
 - Build Alternative 1
 - Build Alternative 2
 - Traffic Operations Summary by Segment and Intersection
- Presentation (**Attachment C**)

Following introductions, Tom Hall reminded everyone the impetus for the study—New Cut Road and National Turnpike intersections with Outer Loop—are Numbers 1 and 9, respectively, on KIPDA’s 2009–2011 Top 40 high crash intersections. In addition, New Cut Road was identified on the 2017 HSIP Study’s Preliminary Priority List Recommendations. Items such as improve drainage, freight movement, and mobility were added to the project purpose; however, safety at the two intersections remains the primary focus. Larry noted Outer Loop and KY 841 are the only major east/west corridors south of the Watterson Expressway.

Following introductions and a brief project history, Tom turned the meeting over to Qk4 for a presentation.

Review of Local Officials/Public Meeting No. 1

The top responses to the first survey were Congestion/Delay, Safety, Drainage, and Pedestrian (see Slide 7: Local Officials/Stakeholder/Public Meeting Summary). The overall summary was provided in more detail to members of the project team following the first round of meetings. A high-level summary of Local Officials/Stakeholder responses was also presented.

Future 2035 No Build Traffic

At the onset of this study, the Louisville International Airport Authority, in partnership with Louisville Metro, was seeking an INFRA (former FASTLANE) grant, matched by TIF funds to finance a new interchange with KY 841. The interchange would connect with Outer Loop via Air Commerce Drive east of the study corridor at Air Commerce Park. Tom explained that assessing the new interchange’s effects on traffic in the study corridor was included in the Outer Loop scope of work because this interchange is not currently in any long-range plan.

Given future growth in the study area, traffic analysis zones, and KIPDA’s travel model results, anticipated 2035 traffic growth/diversion for the study corridor, with and without an interchange, was minimal—maximum 400 vehicles per day (vpd). Therefore, the presented traffic analysis used the worst case scenario—no new interchange on KY 841.

In addition, the No Build traffic operations include the HSIP recommended 200-foot right-turn lanes at New Cut Road.

Using the current Highway Capacity Software (HCS), 2035 No Build Outer Loop traffic between 3rd Street Road and New Cut Road is expected to operate at LOS E. Outer Loop from New Cut Road to National Turnpike operates at LOS D and E in the AM and PM peak hours, respectively. Given future traffic projections, in the PM peak hour (worst case), three study corridor intersections are expected to operate at LOS F—Walmart East Unsignalized, Walmart/Kmart/New Cut Road, and National Turnpike.

NOTE: The posted speed limit from New Cut Road east to National Turnpike is 55 mph, which results in a segment Level of Service (LOS) D in the AM peak hour for the 2035 No Build scenario. Future exhibits will be revised to reflect this change.

Comments

- What growth rate was used for the corridor? The growth rate is negligible (less than 1%).
- Jay asked that K factors be checked for a few 2017 turning movements that appear out of the normal range for an urban arterial. Usually K factors are between 8% and 12% for this facility type. Several show 4% of ADT. Note the reason for the lower peak, i.e. peak hour spreading or another reason in the Traffic Forecast Report.

Alternatives Discussion

Given a short list of committed projects, KIPDA modeled and provided estimated 2035 traffic diverted to the Outer Loop Corridor between 3rd Street Road and National Turnpike for the following scenarios:

- Three lanes—diverts 2,600 to 3,100 vpd
- Four or five lanes—diverts 5,000 to 11,100 vpd

Andy Rush noted a three-lane facility usually only adds 10% capacity in the KIPDA model. Given this information, ADTs and peak hour traffic volumes were developed for each long-term build alternative and corresponding intersection.

Two best-fit, long-term build alternatives were studied—Alternatives 1 and 2. For reference in cost estimating, the KYTC provided a comparable railroad crossing project (approximately \$500,000)—English Station Road Item No. 5-353.00.

Alternative 1: Three lanes—adds Two-Way Left-Turn Lane—except between east of Als Way and the new conservation easement, where it will be two lanes for 0.5 mile (including a bridge) because future development is not expected. This alternative proposes the following:

- Drainage improvements
- Continuous sidewalk and intersection pedestrian improvements
- Right-turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane
- Extends northbound right-turn lane on 3rd Street Road

- Extends westbound left-turn lanes on Outer Loop at National Turnpike
- Adds southbound right-turn lane on National Turnpike at Outer Loop, with widening
- Adds northbound right-turn lane on National Turnpike at Outer Loop, with striping

In addition, Circle K is used as a cut through from westbound Outer Loop to New Cut Road north; therefore, access management using Qwik Kurb is suggested to prevent this from occurring.

Comments

- Tom Wright noted the long stretch between New Cut to approximately to Nash Road should be four lanes.
- Regarding whether development might occur on sites identified for mitigation, it was agreed all that can be relied on is information currently available.
- If mitigation sites are to be disturbed by the project, the Corps of Engineers would have to be contacted regarding property restrictions.
- Alternative 1 could be widened to the south toward the ditch; in fact, either side could have been chosen for the alignment.
- The bridge on Outer Loop may be in such poor condition it will need to be replaced in the long term.
- We must make clear to the public how the design will improve traffic along the corridor.
- In an effort to reduce crashes, a new access via Als Way (in blue) was proposed in the northeast corner of the Outer Loop/New Cut Road intersection. However, according to District 5 right-of-way staff, this concept would likely require the purchase of Wendy's. The recommendation was to remove the access road and purchase Circle K.
- Quik Curb could be used at the Circle K entrance to prevent left turns to and from Circle K. Tom asked if the two frontage roads east of National Turnpike could be connected under the bridge to provide more storage space for westbound right and left turns at National Turnpike. The short answer was yes; however, it would be costly. It also was beyond the study area.

Alternative 2: Five lanes—with Two-Way Left-Turn Lane—except between east of Als Way and new conservation easement, where it will be four lanes for 0.5 mile (including a bridge) because future development is not expected. This alternative proposes the following:

- **Same as the first four bullets for Alternative 1.**
- Adds second through lane on Outer Loop in both directions at New Cut Road and westbound at National Turnpike
- Widens National Turnpike bridge at Outer Loop
- Adds right-turn lanes at Outer Loop/National Turnpike intersection
- Adds dual left-turn lanes from New Cut Road and National Turnpike
- Extends westbound left-turn lanes on Outer Loop at National Turnpike

- Access management includes closing Outer Loop Circle K entrance in the northeast quadrant of New Cut Road and relocation of the New Cut Road Kmart entrance to align with the Marathon entrance

Comments

- Regarding whether Alternative 2 could be widened south toward the Southern Ditch between New Cut Road west to the culvert between Walmart Signalized intersection and Candleworth Drive: This section currently has curb and gutter, sidewalk, and overhead utilities along the north side. Field and cross section reviews indicated there may be sufficient space to widen south of Outer Loop in this section. However, in future project phases, results of a hydraulic analysis or environmental analyses could negate that possibility. For planning purposes, a worst case scenario was shown, i.e., widening along the north side and reconstructing the curb and gutter and sidewalk.
- The only Outer Loop bridge may be in such poor condition it will need to be replaced in the long term.
- Providing a four-lane roadway with raised/divided median between New Cut Road and National Turnpike may need to be considered.
- Alternative 2 did not show a construction easement between Afterglow and Candleworth Drives; therefore, Shelley estimated fee simple property. She will revise her estimate as a construction easement.
- In an effort to reduce crashes, a new access via Als Way (see **Figure 1**) was proposed in the northeast corner of the Outer Loop/New Cut Road intersection. However, according to District 5 right-of-way staff, this concept would likely require the purchase of Wendy's. The recommendation was to remove the access road and purchase Circle K.
- Travis stated the Kmart Entrance on New Cut Road north does present an issue, with cut-through traffic to westbound Outer Loop also.
- A suggestion was made to move the entrance east of Als Way further east to lengthen the westbound dual left turn lanes at National Turnpike.
- Lynn said her staff had forecasted traffic at either National Turnpike or New Cut Road and she could provide that data to Qk4.

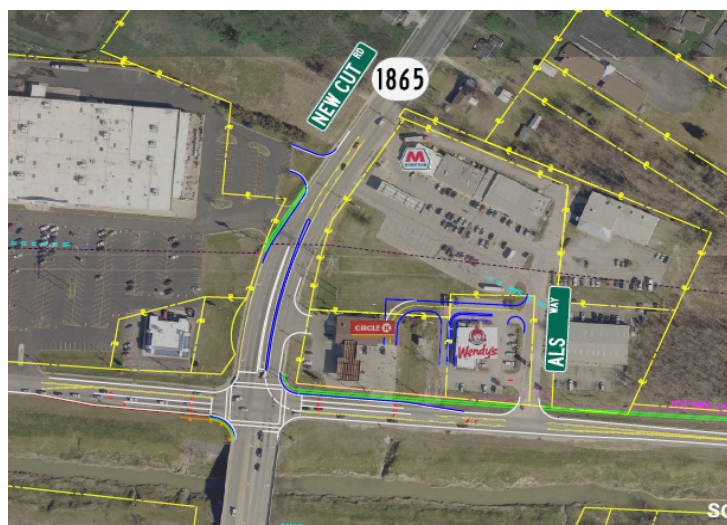


Figure 1: Access Management at Outer Loop/New Cut Road Intersection

Highway Capacity Manual/Software Traffic Operations

The current Highway Capacity Manual was used for the Traffic Operations analysis summarized in **Appendix B**. Intersection results are summarized in **Table 1**. To make an “apples to apples” comparison between changes in the existing, No Build, and Build scenarios, these results utilize the existing signal timings. For the next round of meetings, Qk4 will optimize signal timings at New Cut Road to see whether improvement in delay is achievable.

Table 1: HCS Intersection Traffic Operational Analysis

Alternative AM PM	3 rd Street Road	Walmart Signalized Western Entrance	Walmart Un- Signalized Eastern Entrance	New Cut Road/ Kmart Entrance	New Cut Road	National Turnpike
No Build Total Peak Hour AM/PM Volumes	1,680/ 2,350	1,400/ 1,710	1,400/ 1,850	1,880/ 2,590	2,900/ 3,860	3,720/ 5,670
Alternative 1 3-2-3 Total Peak Hour AM/PM Volumes	1,760/ 2,500	1,550/ 2,050	1,550/ 2,110	1,760/ 2,500	3,510/ 5,400	3,780/ 5,860
Range of Delay compared to No Build (seconds/vehicle)	2.3-9.7 	0.7-8.3 	5.8-170.0 	19.7-394.9 	5.1- 18.8 	32.1-41.8
LOS compared to No Build AM PM						
Alternative 2 3-5-4-5 Total Peak Hour AM/PM Volumes	1,850/ 2,650	2,070/ 2,760	1,340/ 2,820	1,950/ 2,580	3,420/ 4,570	3,660/ 5,710
Range of Delay compared to No Build (seconds/vehicle)	6.5-34.1 	1.0-1.6 	-12.3 - +557.8 	0.6- 321.1 	8.2-10.6 	43.2-67.0
LOS compared to No Build LOS AM PM						

Westbound congestion along Outer Loop at National Turnpike causes queuing that stretches nearly 0.7 mile to Grade Lane in the No Build VISSIM model. This long backup meters westbound traffic through the National Turnpike intersection, which results in reduced Outer Loop westbound queues at New Cut Road. This causes model results to vary at the New Cut Road intersection; however, travel times from 3rd Street Road to National Turnpike account for this and show improvements with both Build alternatives. The existing VISSIM model was calibrated to within 30 seconds of the field-collected westbound travel times. Therefore, this calibrated model—modified with 2035 volumes from KIPDA and forecasted turning movements—was used to simulate future year traffic for both alternatives.

In the No Build simulation, the New Cut Road intersection appears to operate better in the PM peak hour with the addition of the HSIP right-turn lanes. Jeremy showed a VISSIM model for the No Build and both Build alternatives. The model results showed an improvement in peak hour travel times, as shown in **Table 2**.

Table 2: VISSIM Simulation Travel Time Analysis

Scenarios	Peak Hour Travel Times (seconds/vehicle)	
	Eastbound	Westbound
Collected	301	564
Existing Modeled	434	536
No Build Modeled	352	707
Alt 1: 3/2/3 Lane Alternative	333	596
Alt 2: 3/5/4/5 Lane Alternative	336	357

Short-term Alternatives

Short-term alternatives were discussed. Pat stated he had concerns regarding titling a project short-term if buying right-of-way was included. The short-term projects discussed were as follows:

Intersection Improvements (including pedestrian) for:

- 3rd Street Road
- New Cut Road
- National Turnpike

Turn Lanes and National Turnpike

- Northbound right
- Southbound right
- Lengthen dual lefts westbound
- Carry westbound through lane east through the intersection.

Maintenance (these will be referred to the KYTC)

- Clean drain in front of Walmart
- Deepen ditch near Tolls Lane

Comments

- Any improvement that requires just restriping should be labeled a short-term project.
- It was noted lengthening the westbound left turn lanes at National Turnpike results in the same delay as the No Build Alternative; however, it does improve the length of queue.
- Provide a benefit/cost (B/C) ratio for the following:
 - Alternative 1
 - Alternative 2
 - 3 intersections

- New Cut Road
 - National Turnpike
 - 3rd Street Road
- Add bus pulloff on 3rd Street Road at Johnson's Day Care as a short-term project.
- Develop costs for short-term alternatives.
- Add Qwik Kurb access management at Circle K.
- Provide additional roadside signs to direct westbound Outer Loop drivers approaching National Turnpike.

Draft Purpose and Need (P&N) Statement

Future year analysis will be added to the needs statement. Improved transit has not been addressed by these alternatives. Post meeting, Qk4 contacted TARC to garner their input. Their long-term goal is to directly serve the Outer Loop study corridor as part of a larger east-west, cross-town transit route connecting Dixie Highway to Westport Road. One route would be just inside the Watterson Expressway and the other just inside the Snyder Freeway. She also stated bus pulloffs for transit are not desirable because difficulty pulling back into the traffic stream during peak hours results in their inability to stay on schedule.

Discussion of Local Officials/Stakeholders (LO/S) and Public Meeting No. 2

- Show both Alternatives 1 and 2 as long-term projects.
- Provide exhibits for short-term projects.
- Provide five B/C ratios, two of which will be for Alternatives 1 and 2; and the remaining three will reflect intersection improvements at 3rd Street Road, New Cut Road, and National Turnpike.
- Use two Existing Conditions display sets.
- Include a link to the larger exhibits on the survey.
- Defer the LO/S meeting target date until a discussion can take place with District 5's PIO.

Next Steps:

The immediate next steps are:

- Prepare meeting minutes.
- Prepare for the second round of Local Officials/Stakeholders and Public Meetings
- Conduct Resource Agency Coordination early to mid-May:
 - Provide as existing conditions exhibits: No Build Traffic Operations, crash spots and locations, environmental overview, three intersection short-term alternatives, and Alternatives 1 and 2.
 - Do not include B/C ratios in this mailing.

**Outer Loop (KY 1065) Corridor Study
3rd Street Road (KY 907) to National Turnpike (KY 1020)
Jefferson County**

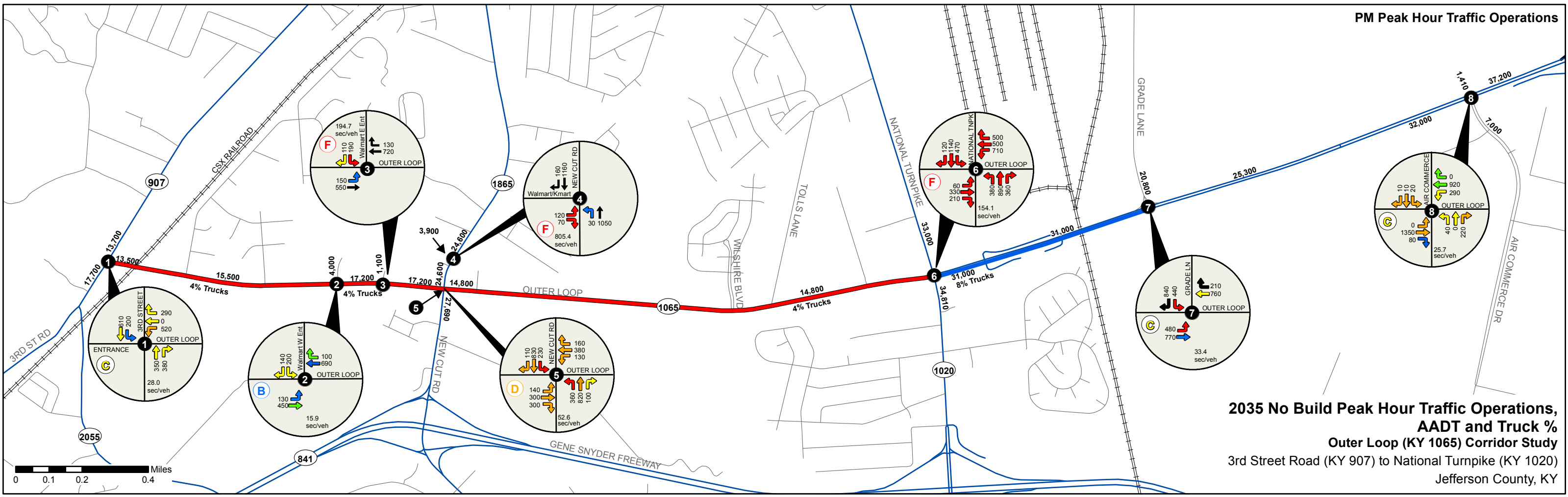
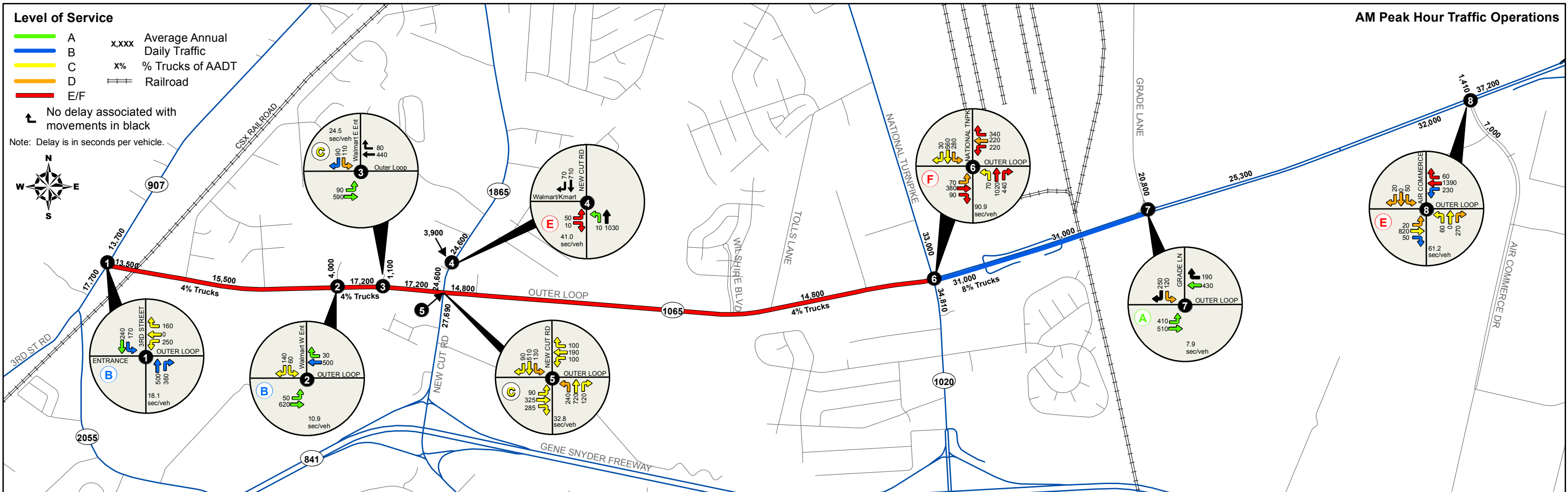
**Project Team Meeting No. 2
District 5 Office – Louisville, KY**

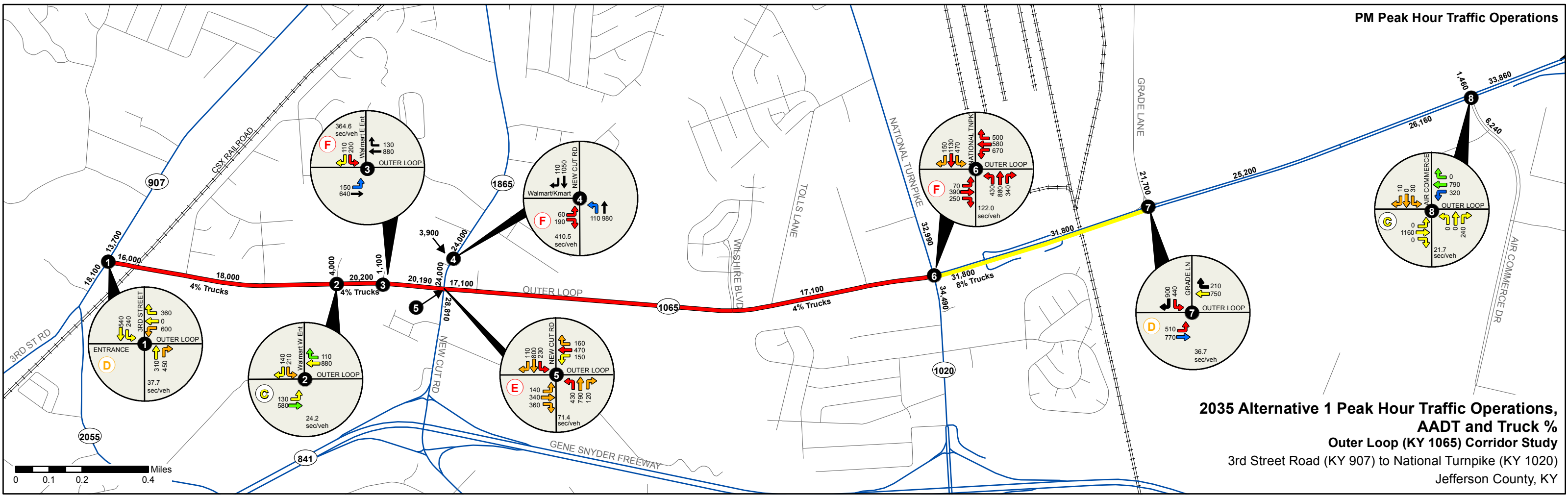
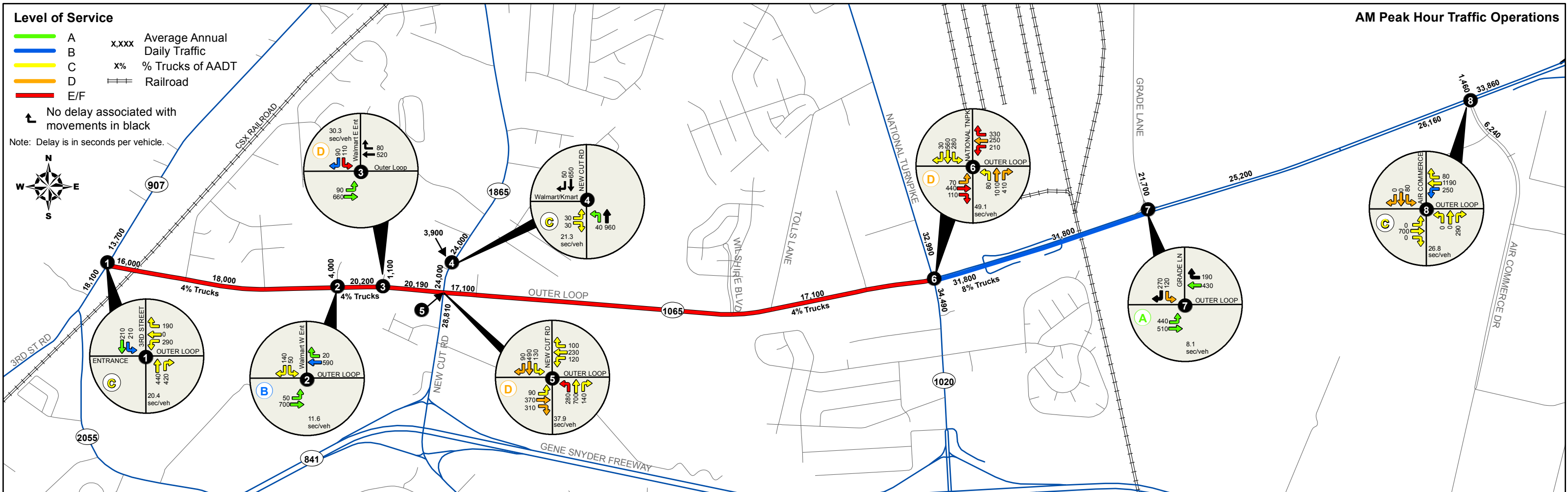
**April 11, 2018
9:30 AM EDT**

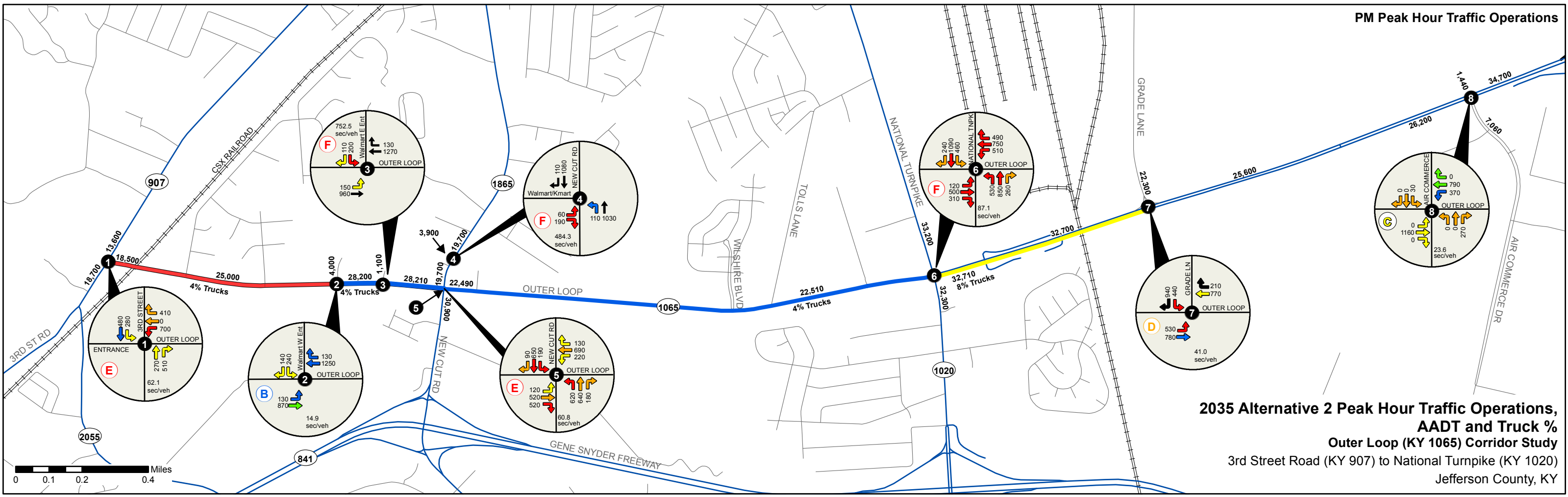
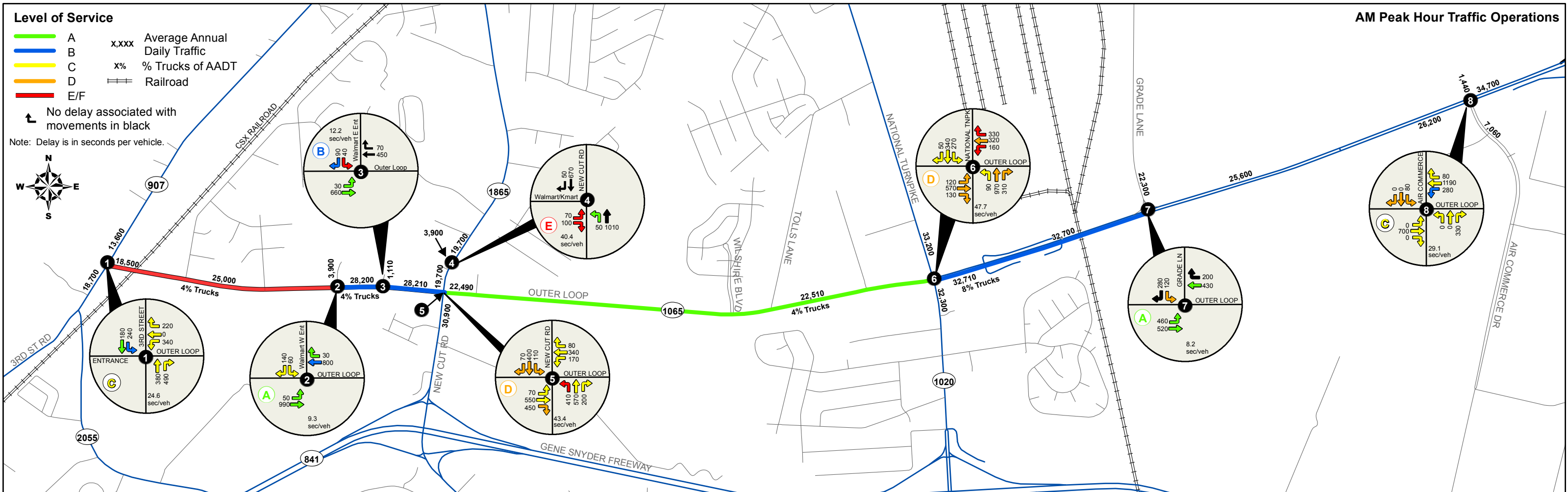
MEETING AGENDA

- I. Introductions
- II. Review of Local Officials/Public Meeting No. 1
- III. Future Traffic
- IV. Alternatives Discussion
 - a. Long-term Alternatives 1 and 2
 - b. Short-term alternatives
- V. Draft Purpose and Need
- VI. Next Steps
 - a. Preparation of Local Officials/Stakeholders/Public Meeting No. 2
 - i. Meeting date
 - ii. Handout
 - iii. Survey
 - iv. Exhibits
 - b. Resource Agency Coordination









STUDY INTERSECTIONS

Outer Loop Intersections	2017 EXISTING				2035 NO BUILD				2035 BUILD ALTERNATIVE 1				2035 BUILD ALTERNATIVE 2			
	AM Delay	AM Peak Hour LOS	PM Delay	PM Peak Hour LOS	AM Delay	AM Peak Hour LOS	PM Delay	PM Peak Hour LOS	AM Delay	AM Peak Hour LOS	PM Delay	PM Peak Hour LOS	AM Delay	AM Peak Hour LOS	PM Delay	PM Peak Hour LOS
3rd Street Road	18	B	27.0	C	18.1	B	28.0	C	20.4	C	37.7	D	24.6	C	62.1	E
Walmart W Entrance (Signalized)	7.1	A	13.8	B	10.9	B	15.9	B	11.6	B	24.2	C	9.3	A	14.9	B
Walmart E Entrance	0.4 14.8	EB - A SB - B	0.5 30.0	EB - B SB - D	1.2 24.5	EB - A SB - C	2.6 194.7	EB - B SB - F	1.1 30.3	EB - A SB - D	2.7 364.6	EB - B SB - F	0.4 12.2	EB - A SB - C	3.2 752.5	EB - C SB - F
New Cut Road/Kmart Entrance	23.5 0.1	EB - C NB - A	45.3 0.3	EB - E NB - A	41.0 0.1	EB - E NB - A	805.4 0.4	EB - F NB - B	21.3	C	410.5 1.3	EB - F NB - B	40.4 0.4	EB - E NB - A	484.3 1.3	EB - F NB - B
New Cut Road	46.9	D	65.4	E	32.8	C	52.6	D	37.9	D	71.4	E	43.4	D	60.8	E
National Turnpike	55.1	E	91.9	F	90.9	F	154.1	F	49.1	D	122.0	F	47.7	D	87.1	F
Grade Lane	5.0	A	12.4	B	7.9	A	33.4	C	8.1	A	36.7	D	8.2	A	41	D
Air Commerce Drive	34.9	C	22.3	C	61.2	E	25.7	C	26.8	C	21.7	C	29.1	C	23.6	C

STUDY MAINLINE

SECTION DESCRIPTIONS		2017 EXISTING								2035 NO BUILD								2035 BUILD ALTERNATIVE 1								2035 BUILD ALTERNATIVE 2							
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
Beginning Description	Ending Description	LOS	LOS	PTSF or Density	PTSF or Density	ATS	ATS	v/c ratio	v/c ratio	LOS	LOS	PTSF or Density	PTSF or Density	ATS	ATS	v/c ratio	v/c ratio	LOS	LOS	PTSF or Density	PTSF or Density	ATS	ATS	v/c ratio	v/c ratio	LOS	LOS	PTSF or Density	PTSF or Density	ATS	ATS	v/c ratio	v/c ratio
3rd Street Road	Walmart Signalized West Entrance	E	E	81.2	85.8	32.2	30.5	0.47	0.55	E	E	81.9	85.8	31.6	30.5	0.47	0.55	E	E	82.2	89.5	30.8	28.7	0.49	0.67	E		82.2	89.5	28.7	28.7	0.48	0.73
Walmart Signalized West Entrance	New Cut Road			80.8	86.0	34.9	33.7	0.45	0.57			80.8	86.0	34.9	33.7	0.45	0.57			84.0	89.4	33.9	31.8	0.50	0.66	B	B	12.5	16.3	50.0	50.0	0.32	0.41
New Cut Road	National Turnpike			74.9	88.5	37.1	32.7	0.34	0.61			74.9	86.0	37.1	33.7	0.34	0.57			79.9	91.8	35.7	29.9	0.42	0.76	A	B	9.6	17.7	50.0	50.0	0.24	0.45
4-Lanes																																	
National Turnpike	Grade Lane	B	B	11.4	17.7	50.0	50.0	0.30	0.47	B	B	11.4	17.7	50.0	50.0	0.29	0.45	B	C	13.2	20.4	50.0	50.0	0.33	0.52	B	C	13.4	20.4	50.0	50.0	0.34	0.52

Outer Loop Corridor Study

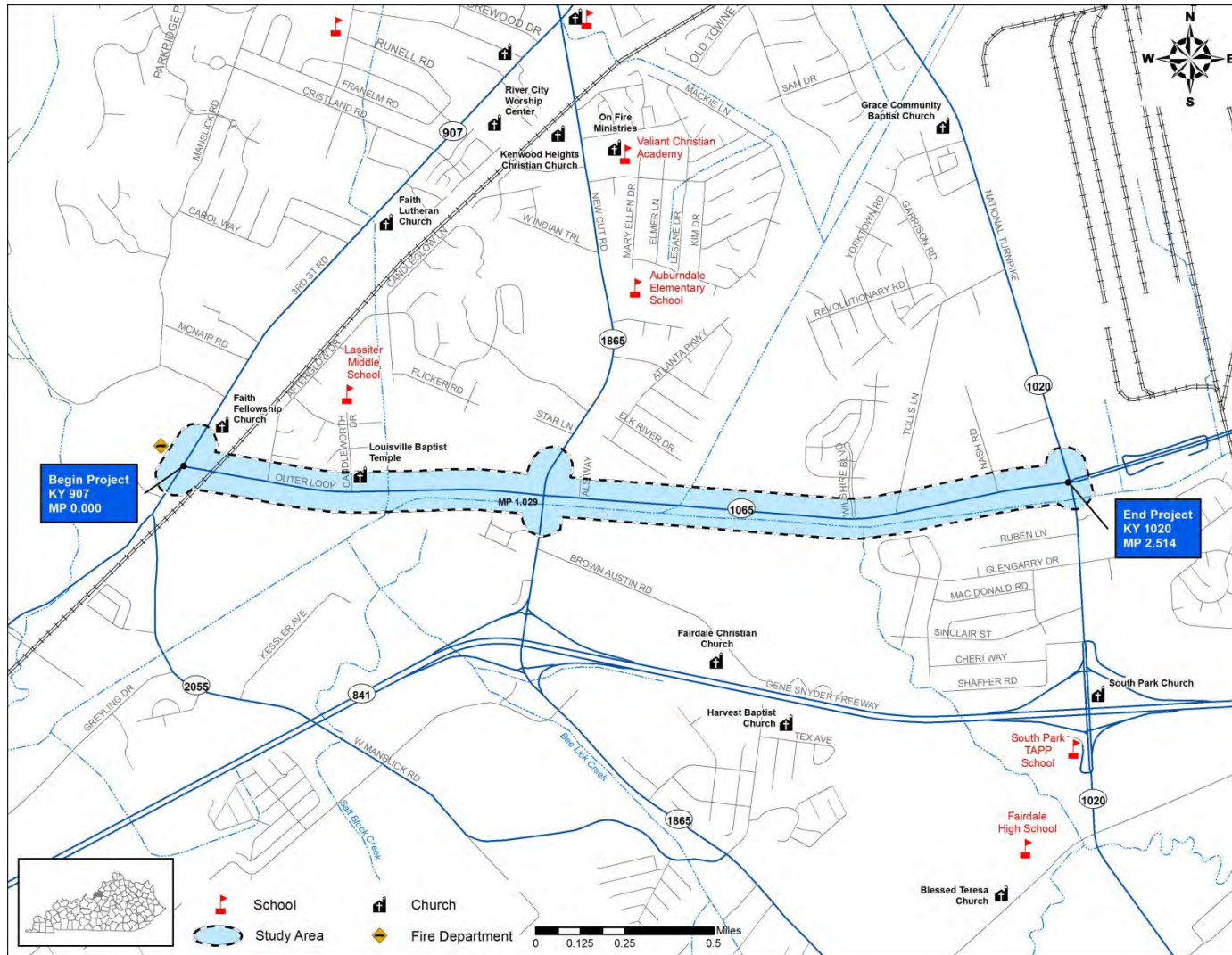
Project Team Meeting No. 2

April 11, 2018

Prepared For:



From 3rd Street Road to National Turnpike



Study Purpose and Goals

From 3rd Street Road to National Turnpike



Study Purpose

Improve **safety**, **access**, **drainage**, **freight movement**, and **mobility** for all modes of travel on Outer Loop.

Goals

- **Improve access to transit**

History

From 3rd Street Road to National Turnpike



- ✓ **05 056 D1065 49.00:** Improve safety, access, and mobility for all modes along Outer Loop from 3rd Street Road to National Turnpike.
 - ✓ Ranked #29 in 2013 DTP & #46 in 2015 DTP,
 - ✓ Sponsored by District 5 in the 2018 Highway Plan Prioritization process, and ranked #39 in Jefferson County by District 5 during this process.
- ✓ Not in General Assembly-approved 2018-2024 Highway Plan
- ✓ Some intersections identified by KIPDA as high crash intersections

Construction:			
SCH YEAR	SCH FUND	PLAN YEAR	ITEMNO
2021			
Original Estimate:			
Planning:		\$250,000.00	
Design:		\$2,300,000.00	
Right of Way:		\$400,000.00	
Utilities:		\$4,900,000.00	
Construction:		\$18,620,000.00	
Total Cost:		\$26,470,000.00	

Scope of Work

From 3rd Street Road to National Turnpike



- Project History
- Existing Conditions
- Geotechnical Issues
- Environmental Issues
- Existing/Future Traffic Operations
- Crash History
- Local Officials and Public Involvement
- Environmental Overview
- Short- and Long-Term Alternatives and Intersection Analysis
- Report



Schedule

From 3rd Street Road to National Turnpike



Local Officials/Stakeholder/Public Meeting Summary

From 3rd Street Road to National Turnpike



TOTAL Survey – 303 Responses

- 75% Drive Outer Loop at least weekly
- 39% Lived along Outer Loop

Congestion/Delay is top priority – 93%

- New Cut Road
- Not enough lanes for traffic

Safety – 80%

- Lane changes at **National** Turnpike
- Conflicts at New Cut Road

Drainage – 70%

- Roadway floods - 68%
- Water ponds on roadway – 67%

Pedestrian – 75%

- Construct new sidewalks

LO/Stakeholder Meeting or by mail

Local Officials/Stakeholders

- Four lanes or center turn lane
- Right turn lanes at New Cut Road
- Turn lanes
 - Afterglow Drive
 - Candleworth Drive
 - Eagles Club
 - Southland Mobile Home Park
 - Wilshire Boulevard
 - Tolls Lane
 - Nash Road
- Sidewalks on north side
- New Cut Road and Circle K crashes
- Speeding
- Drivers on wrong side of road

Traffic Analysis

From 3rd Street Road to National Turnpike



KIPDA MODEL SHOWS

- **2035 No Build** minimal difference from 2017 for study area corridor
 - **MAX 490 VPD INCREASE** over existing 2017 traffic.
- **Interchange /No Interchange** minimal difference for study area corridor:
 - **MAX 400 VPD DECREASE**

Build vs. No Build for study area corridor:

- **3-lanes** – will divert **2,600-3,100 vpd (No Interchange)**
- **3-lanes** – will divert **2,300-3,000 vpd (Interchange)**
- **5-lanes** – will divert **5,000-11,100 vpd (No Interchange)**
- **5-lanes** – will divert **5,000-11,000 vpd (With Interchange)**

All analysis for study corridor uses No Interchange – worst case scenario

Long-Term Alternatives

From 3rd Street Road to National Turnpike



Alternative 1

- Three lanes – adds Two Way Left Turn Lane – except between east of Als Way and new conservation easement (two lanes - 0.5 miles including bridge) where future development is not expected. Includes the following:
 - Drainage improvements
 - Continuous sidewalk and intersection pedestrian improvements
 - Adds right-turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane
 - Extends NB right-turn lane on 3rd Street Road
 - Extends WB left-turn lanes on Outer Loop at National Turnpike
 - Adds SB right-turn lane on National Turnpike at Outer Loop with widening
 - Adds NB right-turn lane on National Turnpike at Outer Loop with striping

Long-Term Alternatives

From 3rd Street Road to National Turnpike



Alternative 2

- Five lanes – with Two Way Left Turn Lane – except between east of Als Way and new conservation easement (four lanes - 0.5 miles including bridge) where future development is not expected. Includes the following:
 - Drainage improvements
 - Continuous sidewalk and intersection pedestrian improvements
 - Adds right-turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane
 - Extends NB right-turn lane on 3rd Street Road
- Adds second through lane on Outer Loop in both directions at New Cut and WB at National Turnpike
- Widens National Turnpike bridge at Outer Loop
- Adds right-turn lanes at Outer Loop/National Turnpike Intersection
- Adds dual left-turn lanes from New Cut Road and National Turnpike
- Extends WB left-turn lanes on Outer Loop at National Turnpike
- Access management



Long-Term Alternatives

From 3rd Street Road to National Turnpike



- Traffic Simulations

Segment LOS Summary

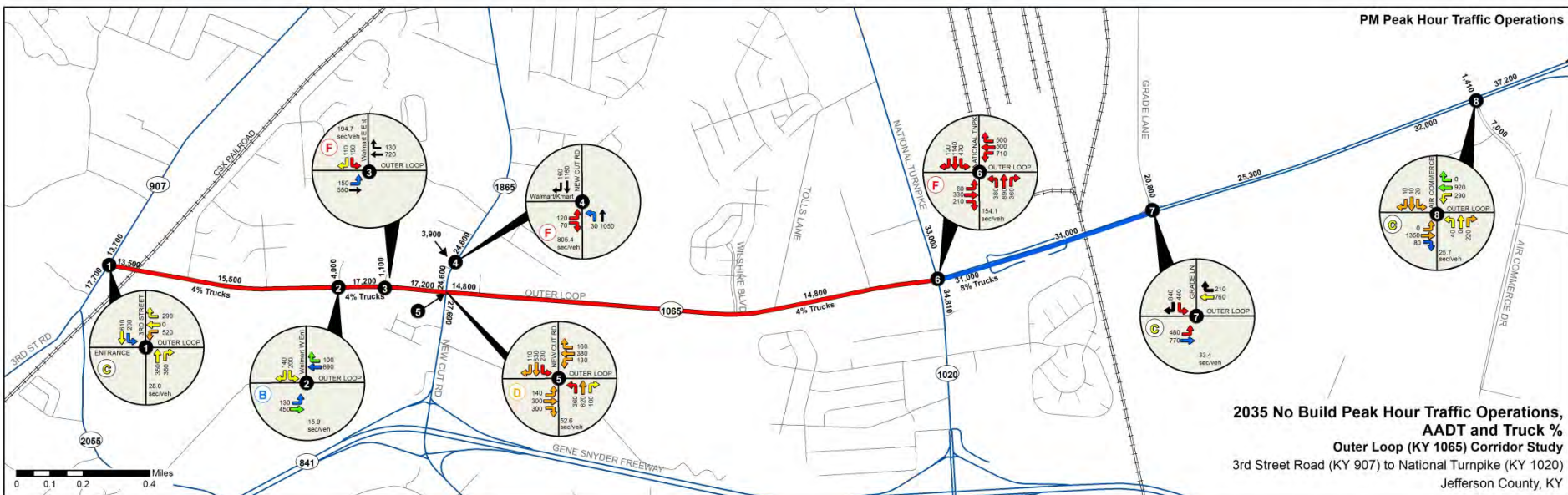
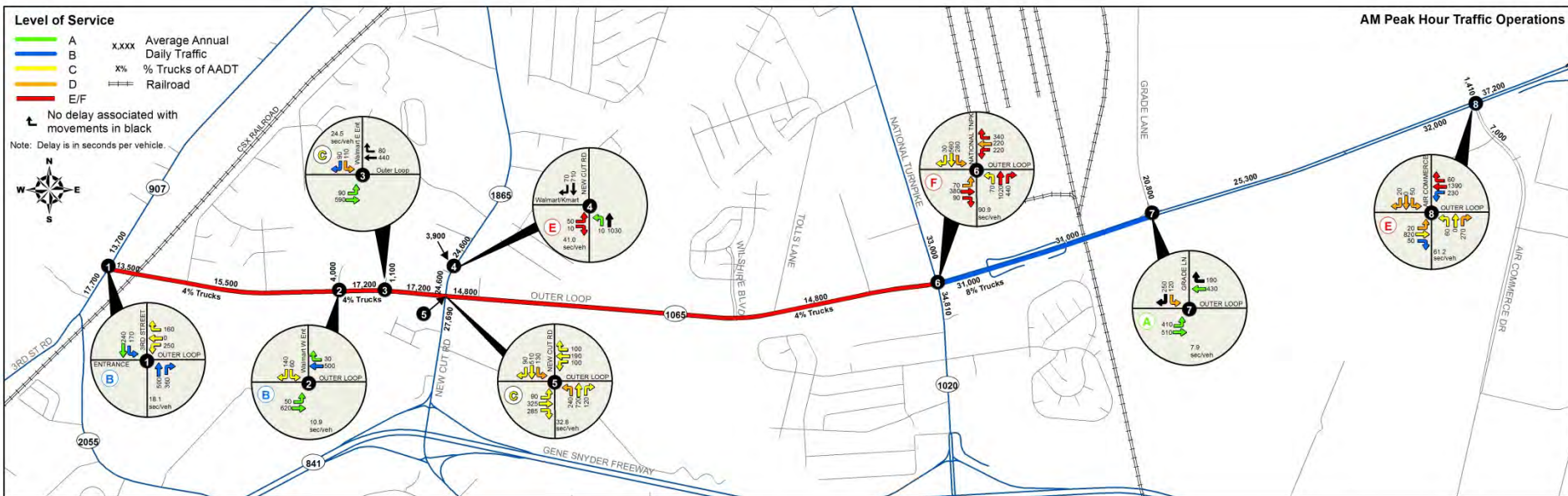
From 3rd Street Road to National Turnpike



SECTION DESCRIPTIONS		2035 NO BUILD								2035 BUILD Alternative 1 3-2-3								2035 BUILD Alternative 2 3-5-4-5							
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Beginning Description	Ending Description	LOS	LOS	PTSF or Density	PTSF or Density	ATS	ATS	v/c ratio	v/c ratio	LOS	LOS	PTSF or Density	PTSF or Density	ATS	ATS	v/c ratio	v/c ratio	LOS	LOS	PTSF or Density	PTSF or Density	ATS	ATS	v/c ratio	v/c ratio
3rd Street Road	Walmart Signalized West Entrance	E	E	81.9	85.8	31.6	30.5	0.47	0.55	E	E	82.2	89.5	30.8	28.7	0.49	0.67	E		82.2	89.5	28.7	28.7	0.48	0.73
Walmart Signalized West Entrance	New Cut Road			80.8	86.0	34.9	33.7	0.45	0.57			84.0	89.4	33.9	31.8	0.50	0.66	B	B	12.5	16.3	50.0	50.0	0.32	0.41
New Cut Road	National Turnpike			74.9	86.0	37.1	33.7	0.34	0.57			79.9	91.8	35.7	29.9	0.42	0.76	A	B	9.6	17.7	50.0	50.0	0.24	0.45
4-Lanes																									
National Turnpike	Grade Lane	B	B	11.4	17.7	50.0	50.0	0.29	0.45	B	C	13.2	20.4	50.0	50.0	0.33	0.52	B	C	13.4	20.4	50.0	50.0	0.34	0.52

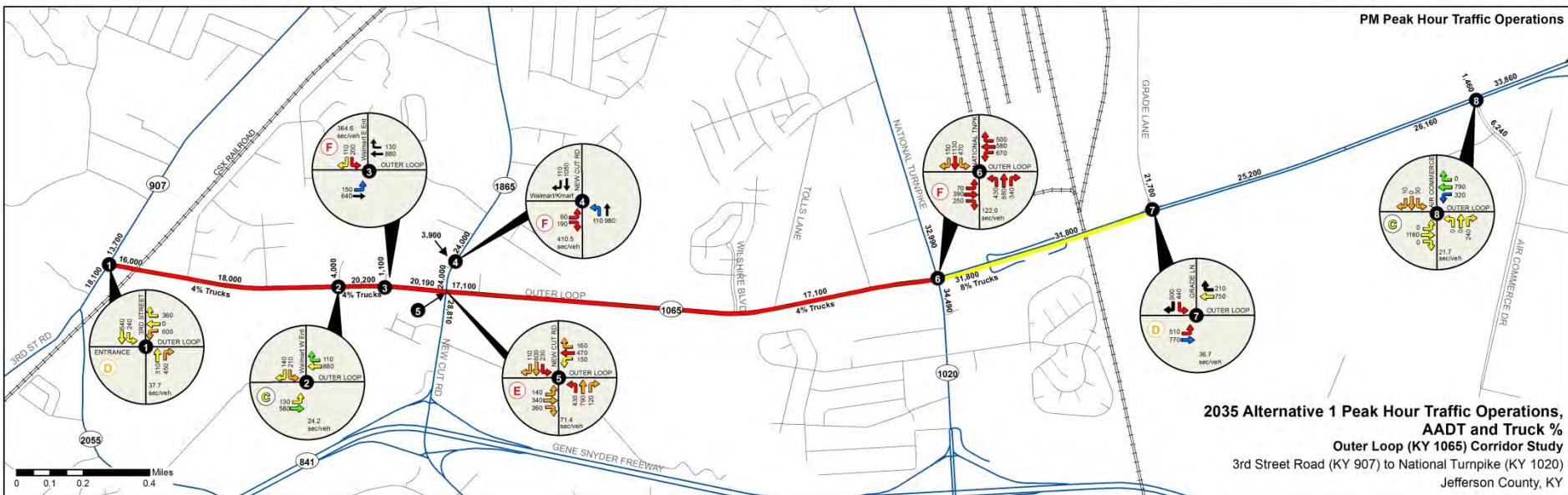
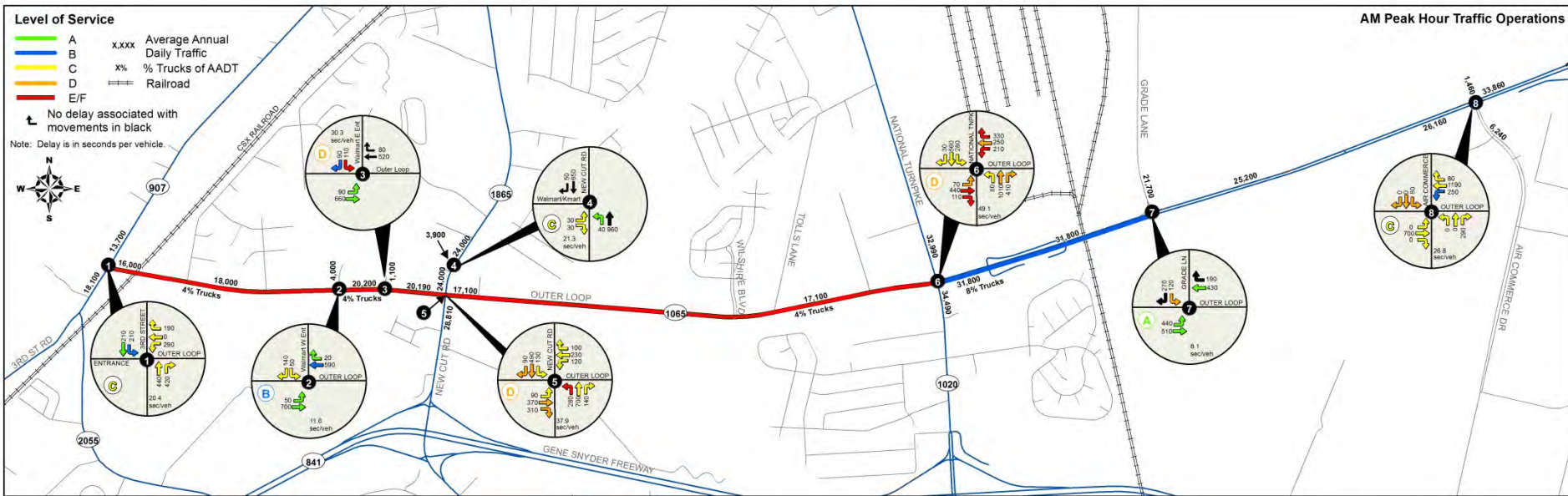
No Build

From 3rd Street Road to National Turnpike



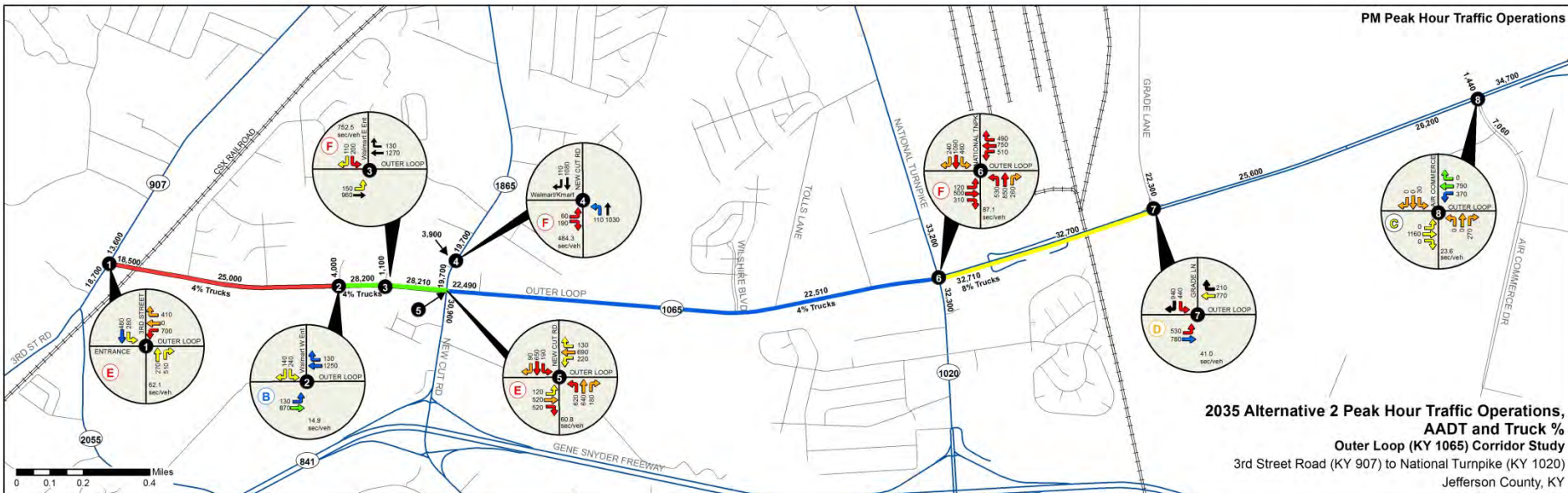
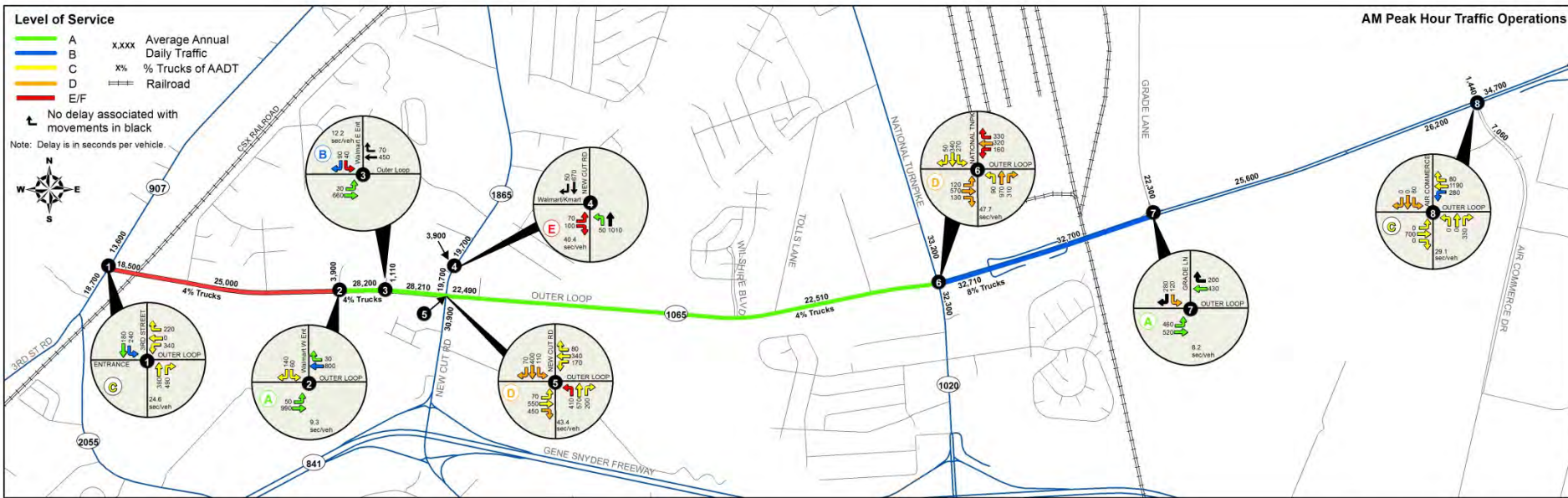
Alternative 1

From 3rd Street Road to National Turnpike



Alternative 2

From 3rd Street Road to National Turnpike



VISSIM Model Results

From 3rd Street Road to National Turnpike



Scenarios	Peak Hour Travel Times (seconds/vehicle)	
	EB	WB
Collected	301	564
Existing Modeled	434	536
No Build Modeled	352	707
Alt 1: 3/2/3 Lane Alternative	333	596
Alt 2: 3/5/4/5 Lane Alternative	336	357

*Includes only those vehicles traveling the entire corridor.



Short-Term Alternatives Discussion

From 3rd Street Road to National Turnpike



- Intersection Improvements
 - 3rd Street Road
 - New Cut Road
 - National Turnpike
- Turn Lanes at National Turnpike
 - Northbound right
 - Southbound right
 - Lengthen dual lefts westbound
 - Carry westbound through lane east through the intersection
- Maintenance
 - Clean drain in front of Walmart
 - Deepen ditch near Tolls Lane

Turn-Lane Metrics

From 3rd Street Road to National Turnpike

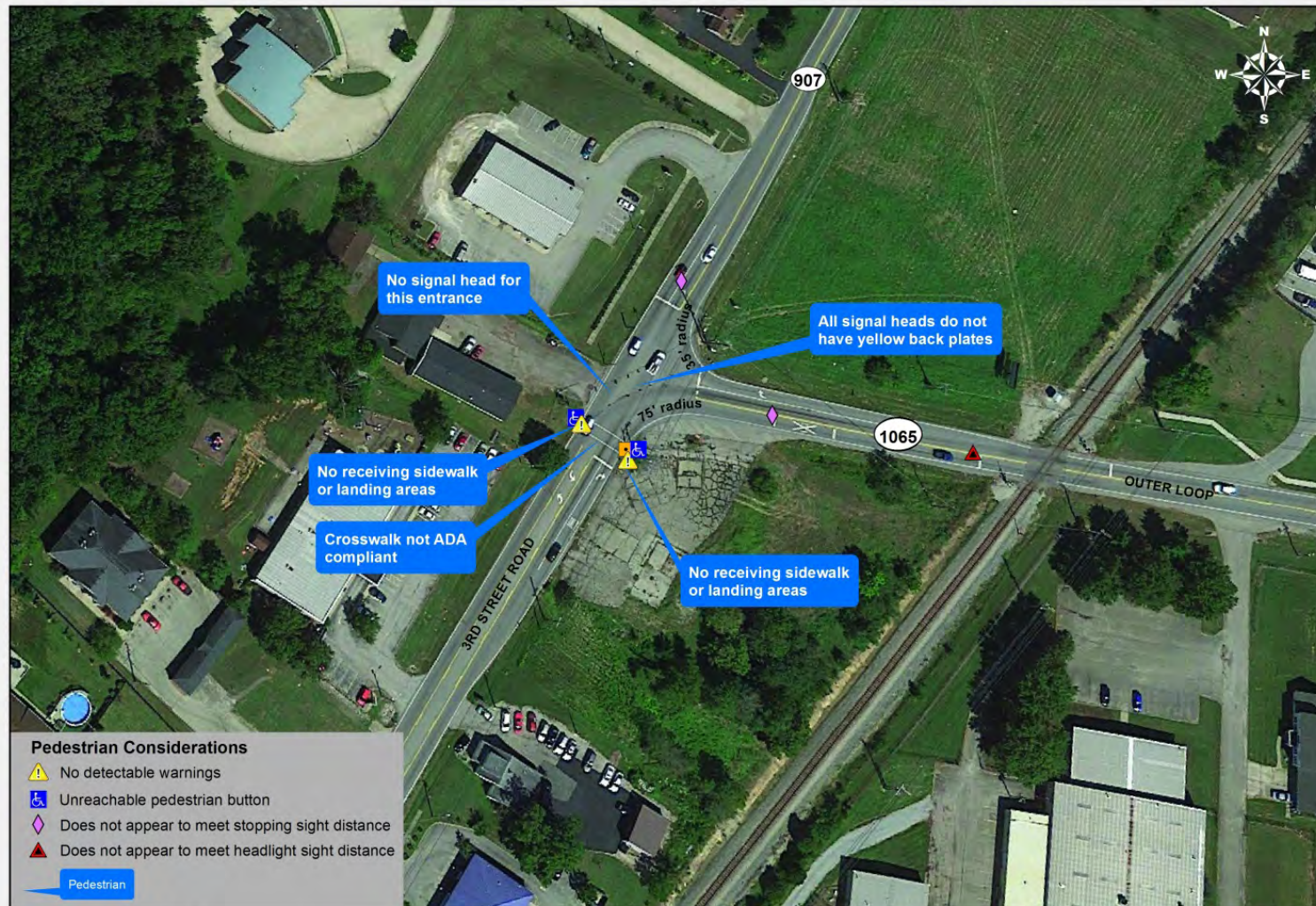


Outer Loop National Turn Pike Short-Term Alternatives	AM		PM	
	Overall Intersection Delay (seconds/vehicle)	LOS	LOS	Overall Intersection Delay (seconds/vehicle)
No Build	90.9	F	F	154.1
SB Right	90.8	F	F	143.2
NB Right	48.3	D	F	122.5
WB Lefts Lengthened	90.9	F Changes WB Left Queue Storage ratio from 0.52 to 0.22	F	154.1 Changes WB Left Queue Storage ratio from 2.82 to 1.13
WB Through Carried WB through intersection	87.5	F	F	142.1



Improved over No Build

Outer Loop/3rd Street Road



Aerial Imagery: Google 2016

0 0.01 0.02 0.04 Mile

Outer Loop/3rd Street Road Intersection Pedestrian Accomodations and Signal Analysis

Outer Loop (KY 1065) Corridor Study

3rd Street Road (KY 907) to National Turnpike (KY 1020)

Jefferson County, KY

Outer Loop/New Cut Road



Pedestrian Considerations

- Unreachable pedestrian button
- Not a 5 foot square minimum landing area
- No detectable warnings

Aerial Imagery: Google 2016

0 0.0125 0.025 0.05
Mile

Outer Loop/New Cut Road Intersection Pedestrian Accomodations and Signal Analysis

Outer Loop (KY 1065) Corridor Study

3rd Street Road (KY 907) to National Turnpike (KY 1020)

Jefferson County, KY

Outer Loop/National Turnpike



Aerial Imagery: Google 2016

0 0.01 0.02 0.04 Mile

Outer Loop/National Turnpike Intersection Pedestrian Accommodations and Signal Analysis

Outer Loop (KY 1065) Corridor Study

3rd Street Road (KY 907) to National Turnpike (KY 1020)

Jefferson County, KY

Proposed Short-Term Intersections Costs

From 3rd Street Road to National Turnpike



Outer Loop Intersections	Description	Design	Right of Way*	Utilities*	CONSTRUCTION	Total
		10% C			Total C	(D+C)
3 rd Street Road		\$ 70,000	\$ -	\$ -	\$650,000	\$720,000
New Cut Road	RTL Included	\$ 70,000	\$ -	\$ -	\$650,000	\$720,000
New Cut Road	RTL NOT included	\$ 50,000	\$ -	\$ -	\$487,500	\$537,500
National Turnpike	No Resurfacing restripe x-walk & stop bars only	\$ 40,000	\$ -	\$ -	\$357,500	\$397,500
National Turnpike	Resurface West Leg Restripe all	\$ 50,000	\$ -	\$ -	\$438,750	\$488,750

*Right of way and utility estimates will be developed if project team decides to move forward.

RTL - Right Turn Lane

NOTE: These improvements correspond with Alternative 1 and intersection pedestrian improvements shown in previous slides



Long-Term Phased Cost Estimates

From 3rd Street Road to National Turnpike



ALTERNATIVE	DESIGN	APPROXIMATE NUMBER OF PARCELS AFFECTED	APPROXIMATE NUMBER OF ACRES AFFECTED	RIGHT OF WAY	UTILITIES	UTILITIES AFFECTED (overhead and underground)	CONSTRUCTION	TOTAL
NO BUILD	\$0	0		\$0	\$0	None	\$0	\$0
1 (3-2-3 HYBRID)	\$720,000	73 Commercial – 25 Exempt – 1 Industrial – 12 Residential – 34 Utility - 1	<5			Telephone, fiber, electric, gas, water, sewer, Marathon pipeline, cable and fiber	\$7,130,000	
2 (3-5-4-5 HYBRID)	\$1,420,000	91 Commercial – 39 Exempt – 4 Industrial – 13 Residential – 34 Utility - 1	<10			Telephone, fiber, electric, gas, water, sewer, Marathon pipeline, cable and fiber	\$15,620,000	

Preliminary Long-Term Alternative Comparison

From 3rd Street Road to National Turnpike



Alternative	Potential Environmental Impacts	Pros	Cons
Do Nothing	Minimal	<ul style="list-style-type: none"> No expenditure of funds Improved Outer Loop/New Cut Road intersection with HSIP right-turn lanes. 93% public considered most congested. 	<ul style="list-style-type: none"> Continued delay Drainage issues Not pedestrian friendly Increased crashes
Alternative 1 3-2-3	Minimal	<ul style="list-style-type: none"> Removes left turns from Outer Loop developed areas Provides continuous sidewalks and other pedestrian improvements Improves overall intersection delay for four intersections: <ul style="list-style-type: none"> AM New Cut Road/Kmart (19.7sec/veh.) PM New Cut Road/Kmart (394.9 sec/veh.) AM National Turnpike (41.8 sec/veh.) and LOS PM National Turnpike (32.1 sec/veh.) 	<ul style="list-style-type: none"> Does not improve Outer Loop segments between intersections LOS, ATS, or PTSF Increases Overall Delay for remainder of intersections not in pros:
Alternative 2 3-5-4-5	Minimal	<ul style="list-style-type: none"> Adds capacity Improves Outer Loop LOS Walmart to National Turnpike Removes Outer Loop left turns in developed areas Provides continuous sidewalks and other pedestrian improvements Improves overall intersection delay for the following: <ul style="list-style-type: none"> AM Walmart Signalized (1.0 sec/veh.)* AM Walmart Unsignalized (12.3 sec/veh) AM New Cut Road/Kmart (0.6 sec/veh.)* AM National Turnpike (43.2 sec/veh) PM Walmart Signalized (1.0 sec/veh)* PM New Cut Road/Kmart (321.1 sec/veh.) PM National Turnpike (67.0 sec/veh.) <p style="text-align: right;">*negligible</p>	<ul style="list-style-type: none"> Most expensive Diverts more vehicles Increases Overall Delay for intersections not in Pros:

Intersection Comparison

From 3rd Street Road to National Turnpike

NOTE: No Change 



Alternative AM PM	3 rd Street Road	Walmart Signalized Western Entrance	Walmart Un- Signalized Eastern Entrance	New Cut Road/ Kmart Entrance	New Cut Road	National Turnpike
No Build Total Peak Hour AM/PM Volumes	1,680/ 2,350	1,400/ 1,710	1,400/ 1,850	1,880/ 2,590	2,900/ 3,860	3,720/ 5,670
Alternative 1 3-2-3 Total Peak Hour AM/PM Volumes	1,760/ 2,500	1,550/ 2,050	1,550/ 2,110	1,760/ 2,500	3,510/ 5,400	3,780/ 5,860
Range of Delay compared to No Build (seconds/vehicle)	2.3-9.7 	0.7-8.3 	5.8-170.0 	19.7-394.9 	5.1- 18.8 	32.1-41.8 
LOS compared to No Build AM PM	 	 	 	 	 	 
Alternative 2 3-5-4-5 Total Peak Hour AM/PM Volumes	1,850/ 2,650	2,070/ 2,760	1,340/ 2,820	1,950/ 2,580	3,420/ 4,570	3,660/ 5,710
Range of Delay compared to No Build (seconds/vehicle)	6.5-34.1 	1.0-1.6 	-12.3- +557.8  	0.6-321.1 	8.2-10.6 	43.2-67.0 
LOS compared to No Build LOS AM PM	 	 	 	 	 	 

Study Purpose and Goals

From 3rd Street Road to National Turnpike



Study Purpose

Improve **safety**, **access**, **drainage**, **freight movement**, and **mobility** for all modes of travel on Outer Loop.

Goals

- **Improve access to transit**

NEED

Safety

- 5 high crash locations with CCRF >1.0
- 3 high crash locations with CCRF approaching 1.0
- Motorists use Outer Loop shoulders for passing in two locations
- Motorists at National Turnpike westbound use opposing travelway and median to reach left turn lanes.
- Crest curve on 3rd Street southbound at Outer Loop does not meet minimum stopping sight distance.
- Vertical grade at railroad exceeds maximum for 45 mph
- Drainage issues, ponding of water in front of Walmart and flooding from Tolls Lane to National Turnpike
- No yellow signal back plates for 3rd Street Road and New Cut intersections
- Much of the corridor is in the 100-year floodplain

Mobility

- Three intersections operate at LOS E or F in the current year and four are expected by 2035.
- Existing and 2035 travel speeds less than 45 mph posted speed limit (30-37 mph);
- Spillback of intersection turn lanes into through traffic on NBR 3rd Street Road; NBL at New Cut Road ; and WBL and SBL at National Turnpike. In 2035, the New Cut Road SBL will also spillback.
- Three intersection movements with v/c Ratio > 1.0 indicating capacity and four by 2035.
- Outer Loop is currently and will in 2035 operate at LOS E.
- Existing mean peak hour travel times are between 5.01 (AM) to 8.76 (PM).

Access

- Business driveways are in intersection functional areas, motorists attempting left turns crossing 3 lanes of traffic causing angle crashes.

Other Modes

- Lack of sidewalk connectivity in the corridor
- Major intersections are not ADA accessible
- Some sidewalks are less than minimum 5 feet (Louisville Metro), broken, and impassible
- No bicycle facilities – Bicycle Comfort Index is D
- Lack of east-west transit opportunities/routes

Next Steps Discussion

From 3rd Street Road to National Turnpike



- Preparation of Local Officials/Public Meeting No. 2
 - Meeting date
 - Handout
 - Survey
 - Exhibits
- Resource Agency Coordination

Local Officials/Stakeholders Meeting No. 2



Groundbreaking by Design.

MEETING MINUTES

Project: Outer Loop (KY 1065) Corridor Study
3rd Street Road to National Turnpike
Jefferson County, Kentucky

Purpose: Local Officials/Stakeholders Meeting No. 2
Alternatives Presentation

Place: Lassiter Middle School
Candleworth Lane, Louisville

Meeting Date: May 17, 2018
3:00 PM EDT

Prepared By: Deanna Miller
Qk4, Inc.

In Attendance: Attachment A

Name	Representing	Email
Richard Manion	Scottsdale Homeowner's Association	rmanion202@aol.com
Marie Burnett	Waste Management	mburnett@wm.com
Tammy Markert	Louisville Metro Public Works	tammy.markert@louisvilleky.gov
Vicki Welch	Louisville Metro Council	vicki.welch@louisvilleky.gov
Jeff Johnson	Johnson's Day Care	Susbi31@aol.com
Mark Fox	Louisville Metro Council Candidate	Markfox.louisville@yahoo.com
Mikael Pelfrey	KYTC CO Planning	Mikael.Pelfrey@ky.gov
Tom Hall	KYTC D5 Planning	Tom.Hall@ky.gov
Chris Allen	KYTC D5 Planning	Chris.Allen@ky.gov
Amanda Desmond	KYTC D5 Design	Amanda.Desmond@ky.gov
Cheryl Receveur	KYTC D5	Cheryl.Receveur@ky.gov
Patrick Matheny	KYTC D5 Design	Patrick.matheny@ky.gov
Anthony Norman	KYTC CO Planning	Anthony.Norman@ky.gov
Larry Chaney	KIPDA	larry.chaney@kipda.org
Annette Coffey	Qk4, Inc.	acoffey@qk4.com
Andy Gilley	Qk4, Inc.	agilley@qk4.com
Jeremy Lukat	Qk4, Inc.	jlukat@qk4.com
Deanna Miller	Qk4, Inc.	dmiller@qk4.com

Presentation: Attachment B

Handouts: Attachment C

I. Introductions and Study Purpose

Tom Hall, KYTC District 5, welcomed participants to the second Local Officials and Stakeholders (LO/S) meeting and self-introductions were made. He provided a brief history and purpose of the Outer Loop Corridor Study and shared the goal of the meeting: to solicit feedback and input on short- and long-term improvement alternatives developed for Outer Loop and three main intersections—3rd Street Road, New Cut Road, and National Turnpike. He then introduced Annette Coffey, QK4, Inc., who began the group presentation.

Handouts included a meeting agenda and an Outer Loop fact sheet. Oversized exhibits of long-term Alternatives 1 and 2, and three short-term intersection improvements were available for viewing.

II. Project Overview

Annette presented the study area and schedule, noting past and future milestones, including a final project team meeting in summer 2018, submittal of the final report to KYTC, and conclusion of the study by winter 2018. It was noted funding is not available beyond the study.

Revised Purpose and Need. Following existing conditions analysis, the first round of public meetings, and the second project team meeting, the project's purpose and need were refined to include improving safety at two major intersections—New Cut Road and National Turnpike; and improving mobility for travelers. Project goals were also amended to add improving pedestrian safety through better sidewalk conditions and connectivity, and improving drainage to eliminate the need to close Outer Loop to traffic during flooding events that result from much of the corridor being within the 100-year floodplain of Southern Ditch.

Survey Results. The KYTC received 303 survey responses, which provided the following information: 75 percent of respondents drive Outer Loop and 39 percent live along the corridor. Top Outer Loop concerns were congestion/delay (93 percent), safety (80 percent), and drainage (70 percent). In addition, 75 percent of survey participants wanted new sidewalks constructed for pedestrian safety. Note: Totals will not sum to 100 percent because some respondents chose multiple options.

LO/S Meeting No. 1 Suggestions. Annette reviewed improvement suggestions and concerns gathered at the April 11, 2018, project team meeting. Suggestions included providing for four lanes or a center turn lane; *right turn lanes at New Cut Road; turn lanes at six approach roads; and sidewalks on the north side of Outer Loop. Concerns of the group included crashes at New Cut Road and Circle K, speeding, and motorists driving on the wrong side of the road.

*A separate Highway Safety Improvement Program (HSIP) project is scheduled to add right turn lanes on Outer Loop at New Cut Road.

Environmental Overview. Annette presented a map showing human and natural environments in the study area. She pointed out locations of four conservation easements that are held in perpetuity and cannot be developed. Therefore, restricted growth on Outer Loop results in minimal traffic growth of 500 vehicles per day in design year 2035. New warehouses currently under construction most likely will not contribute to traffic growth due to the site's Outer Loop access being restricted by Southern Ditch. Resulting truck traffic will reach the interstate via New Cut Road. Annette also mentioned the application submitted for a new interchange on the Gene Snyder Freeway (I-265) between National Turnpike and I-65 at Air Commerce Drive—a location outside the corridor study limits. Future traffic analyses conducted with and without the new interchange revealed no effect on future traffic volumes on the 3rd Street Road to National Turnpike section of Outer Loop.

Traffic Operations. 2018 AADT is between 14,000 and 17,600 vehicles per day (vpd) with four percent truck traffic. Travel times along the corridor are between seven and eight minutes in peak hours. Although calculated volume-to-capacity ratios are 0.61 or less, in PM peak hours Outer Loop operates at level of service (LOS) E and New Cut Road and National Turnpike intersections operate at LOS E or F.

Long-term Improvements. Annette presented Alternatives 1 and 2 noting that each can be divided into two segments—3rd Street Road to New Cut Road and New Cut Road to National Turnpike. VISSIM models were shown illustrating traffic operations that compared the 2035 No Build option with each Build alternative. Alternatives 1 and 2 are described below:

Alternative 1

- Three lanes, with two-way left-turn lane (TWLTL) from 3rd Street Road to Als Way and from F.O.E. Derby City to National Turnpike.
- Two lanes from east of Als Way and across Outer Loop Bridge to near F.O.E. Derby City, where future development is not expected.

Alternative 1 includes the following options:

- Improve drainage.
- Provide continuous sidewalk and intersection improvements for pedestrians.
- Add right turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane.
- Extend northbound right turn lane on 3rd Street Road.
- Extend westbound left turn lanes on Outer Loop at National Turnpike.
- Add southbound right turn lane on National Turnpike at Outer Loop with widening.
- Add northbound right turn lane on National Turnpike at Outer Loop with striping.
- Raise Outer Loop above the elevation of Southern Ditch floodplain.

Alternative 1 increases traffic on Outer Loop by 2,600 to 3,100 vpd, with most added between 3rd Street Road and New Cut Road. Average travel speed decreases slightly and percent-time-spent-following increases slightly. Outer Loop remains LOS D/E in AM/PM peak hours. Delay at National Turnpike intersection improves 32 seconds/vehicle in PM peak hours, but delay at New Cut Road intersection increases 5 seconds/vehicle and LOS worsens to E in PM peak hours.

Alternative 2

- Three lanes with two-way left-turn lane (TWLTL) from 3rd Street Road to Candleworth Drive.
- Four or five lanes with TWLTL or median from east of Candleworth Drive to National Turnpike.

Alternative 2 includes the following options:

- Improve drainage.
- Provide continuous sidewalk and intersection improvements for pedestrians.
- Add right turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane.
- Extend northbound right turn lane on 3rd Street Road.
- Extend westbound left turn lanes on Outer Loop at National Turnpike.
- Add southbound right turn lane on National Turnpike at Outer Loop.
- Add second through lane on Outer Loop in both directions at New Cut and westbound at National Turnpike.
- Widen Outer Loop and National Turnpike bridges.
- Add northbound right turn lane on National Turnpike at Outer Loop.
- Add dual left turn lanes from New Cut Road and National Turnpike.
- Raise Outer Loop above the elevation of Southern Ditch floodplain.
- Provide access management.

Alternative 2 increases traffic on Outer Loop by 5,000 to 11,100 vpd, with most added between 3rd Street Road and New Cut Road. Average travel speed decreases slightly from 3rd Street Road to Walmart's signalized entrance. LOS from the Walmart signal east to National Turnpike improves to LOS A or B in AM/PM peak hours; 3rd Street Road to Walmart signal operates at LOS E in PM peak hour. Delay improves 12 seconds/vehicle at New Cut Road intersection and 67 seconds/vehicle at National Turnpike intersection.

Cost Estimates. Cost estimates were presented for four scenarios: Alternative 1 and Alternative 2 with and without the option to raise Outer Loop above the 100-year floodplain elevation of Southern Ditch. Total project costs for Alternatives 1 and 2 raised above the floodplain elevation are \$19.2 and \$36.8 million, respectively; and not raised above the floodplain elevation, \$14.4 and \$28.1 million, respectively.

Short-term Improvements. Annette described projects that could be more quickly implemented and are mutually exclusive of long-term improvements. The project team will use input and feedback received from the LO/S and public meetings held today to prioritize the following short-term improvement options:

- Intersection improvements.
 - Outer Loop/3rd Street Road — \$1,513,000
 - Add signal head for west approach (Pronto Auto Parts driveway).
 - Add sidewalks (ADA compliant) east and west along 3rd Street Road from approximately Churchdown Lane to Outer Loop.
 - Add sidewalk ramps and crosswalks (ADA compliant) at the intersection.
 - Install higher visibility signals (yellow backplates) and southbound flashing yellow arrow for left turns.
 - Add southbound bus pull-off in front of Johnson's 2 Quality Child Care.
 - Provide 150 feet of additional northbound right turn lane storage.
 - Add advance warning signal southbound on 3rd Street Road.
 - Widen Outer Loop westbound right turn radius to northbound 3rd Street Road.
 - Outer Loop/New Cut Road — \$1,323,000
 - Provide sidewalk ramps (ADA compliant) at intersection.
 - Add sidewalk (ADA compliant) on north side between New Cut Road and Als Way.
 - Relocate former Kmart entrance and extend sidewalk.
 - Add "Quick Kurb" to prohibit left turns at both Circle K entrances.
 - Provide 200 additional feet of westbound left turn lane storage.
 - Add advance signal warning for southbound New Cut Road.
 - Outer Loop/National Turnpike — \$1,160,000
 - Restripe roadway and provide a northbound right turn lane.
 - Provide 200 feet of additional westbound left turn lane storage for dual lefts.
 - Install higher visibility signals (yellow backplates).
 - Add southbound right turn lane, consolidate driveway access, and provide sidewalk.
 - Convert BK Auto entrance to right in/right out.
 - Close southern National Turnpike entrance to Thornton's.
 - Add ramps (ADA compliant) at intersection.
 - Add eastbound right turn lane and reconstruct broken sidewalk.
 - Provide "Quick Kurb" to prohibit left turns at entrances to Thornton's and Gilbert and Mitchell Auto Salvage.
- Carry a second westbound Outer Loop lane through the National Turnpike intersection.
- Deepen ditches and/or add new pipe across Outer Loop near Tolls Lane.
- Add turn lanes on Outer Loop at Wilshire Boulevard, Tolls Lane, and Nash Road.

- Add right turn lane on Outer Loop at Candleworth Drive.
- Provide access management near intersections.

III. LO/S Comments and Questions

LO/S comments were invited and gathered throughout the presentation. The following is a list of comments and questions offered by the participants:

Comment 1: A new traffic signal at New Cut Road and Scottsdale Boulevard would help residents of three subdivisions and school buses navigate the roadway. Residents experience extended wait times pulling out of the subdivision roads and many crashes have been witnessed. If the road is widened and traffic is increased, the fear is problems will worsen without a new signal to direct traffic.

Question 1: How do improvements to Outer Loop affect 3rd Street Road?

Answer 1: Improvements show a slight traffic increase.

Question 2: Is the bus pull-off for the day care center located on 3rd Street Road included in both long-term alternatives?

Answer 2: Yes. It is also included in the 3rd Street Road short-term intersection improvement.

Question 3: Is there funding for improvements and how can the study be used?

Answer 3: There is no funding in the current highway plan. The results of the study can be used to lobby legislators to include funding for improvements in upcoming highway plans.

IV. Next Steps/Wrap Up

Annette informed the group of the next steps in the process: Input and feedback from today's meetings will be summarized and analyzed prior to the final project team meeting, improvements will be prioritized, and the final report will be submitted to the KYTC late this year.

Tom Hall thanked everyone for participating in the meeting and encouraged each to use the final report information as talking tools when speaking with their legislators.

The meeting was adjourned at approximately 4:30 PM EDT.

[illegible]



Outer Loop Corridor Study
3rd Street Road to National Turnpike
Jefferson County



Local Officials/Stakeholder Meeting No. 2
KYTC / KIPDA / Consultant
Lassiter Middle School
May 17, 2018
3:00 PM

NAME	REPRESENTING	PHONE #	EMAIL
PATRICK MATHENY	KYTC D5	502-210-5488	patrick.matheny@ky.gov
Anthony Norman	KYTC Planning	502-782-4728	anthony.norman@ky.gov
Amanda Desmond	KYTC D5	502-210-5400	amanda.desmond@ky.gov
Tom Hall	KYTC D5	502-210-5479	tom.hall@ky.gov
Cheryl Receveur	KYTC D5	502-210-5420	cheryl.receveur@ky.gov
Chris Allen	KYTC D5	502-210-5447	chris.allen@ky.gov
Mikael Pelfrey	KYTC C.O. Planning	502-782-5073	mikael.pelfrey@ky.gov
LARRY CHANEY	KIPPA	502-266-6084	larry.chaney@kipda.org
JEFF JOHNSON	JOHNSON'S DAY CARE	502-262-3578	SUBJ31@AOL.COM
Vicki Welch	Metro Council	502-574-1113	vicki.welch@louisvilleky.gov
MARK FOX	President YNNA	502-777-2481	MARKFOX.Louisville@yahoo.com

OUTER LOOP CORRIDOR STUDY

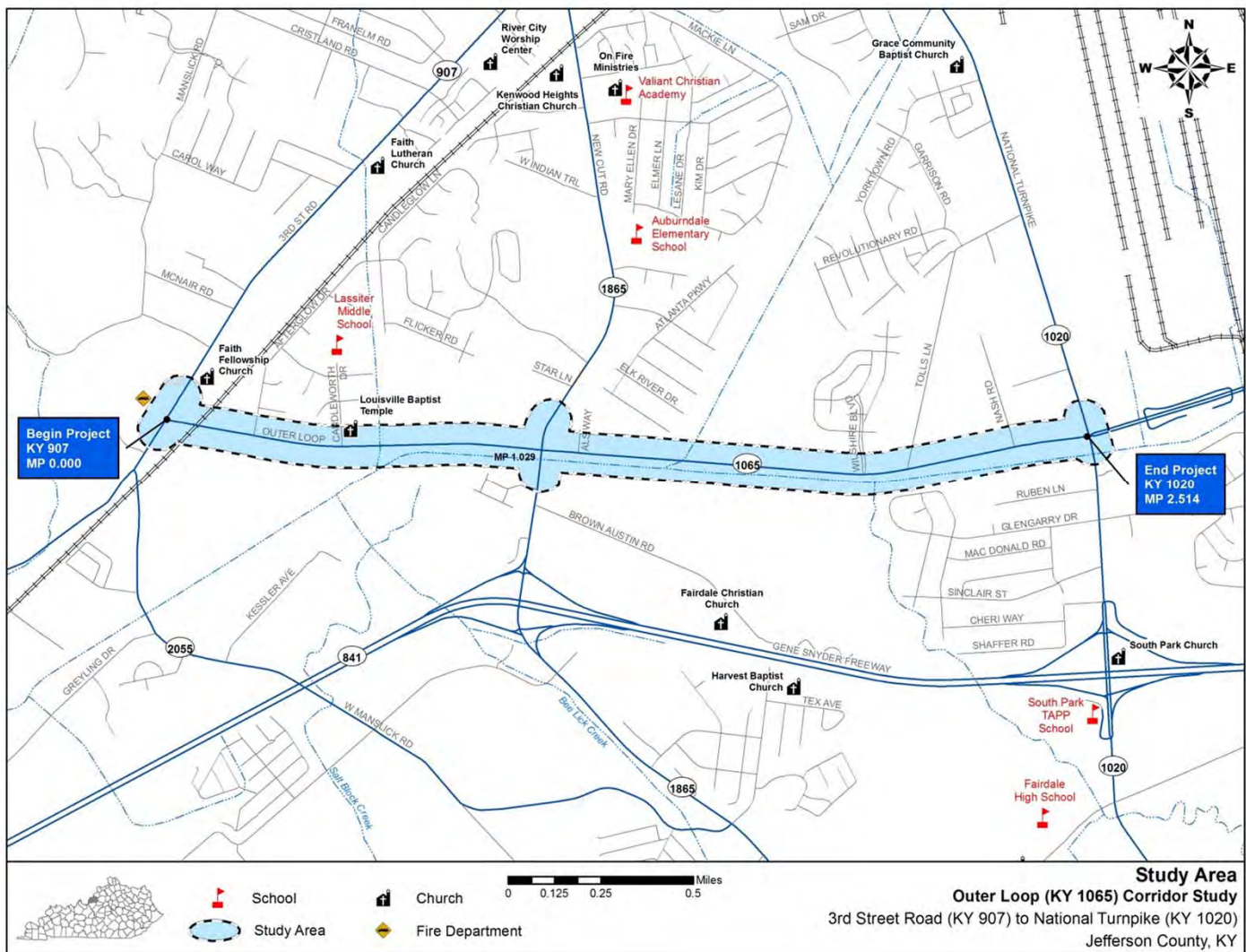
From 3rd Street Road to National Turnpike

1065



KENTUCKY
TRANSPORTATION
CABINET

Local Officials/Stakeholders Meeting No. 2
May 17, 2018



Agenda

From 3rd Street Road to National Turnpike



Outer Loop Corridor Study 3rd Street Road to National Turnpike Jefferson County



LOCAL OFFICIALS/STAKEHOLDERS (LO/S) MEETING NO. 2 3:00 PM Lassiter Middle School May 17, 2018 AGENDA

1. Introductions
2. Project Overview
3. Input Received from December 5, 2017 LO/S and Public Meetings
4. Short- and Long-term Alternatives
5. Discussion
6. Next Steps



From 3rd Street Road to National Turnpike



Draft Purpose and Goals

From 3rd Street Road to National Turnpike



Study Purpose

The purpose of the Outer Loop Corridor Project (from 3rd Street Road to National Turnpike in Jefferson County) is to improve **safety**, targeting the two major intersections (National Turnpike and New Cut Road), and to **improve mobility** for travelers.

Goals

Other goals for the project include:

- Improve drainage, as much of the corridor lies within the 100-year floodplain, closing the road to travel during flooding events
- Improve pedestrian safety through better sidewalk condition and connectivity



Schedule

From 3rd Street Road to National Turnpike



Local Officials/Stakeholder/Public Meeting Summary

From 3rd Street Road to National Turnpike



TOTAL Survey – 303 Responses

- 75% Drive Outer Loop at least weekly
- 39% Lived along Outer Loop

Congestion/Delay is top priority – 93%

- New Cut Road
- Not enough lanes for traffic

Safety – 80%

- Lane changes at National Turnpike
- Conflicts at New Cut Road

Drainage – 70%

- Roadway floods - 68%
- Water ponds on roadway – 67%

Pedestrian – 75%

- Construct new sidewalks

LO/Stakeholder Meeting or by mail

Local Officials/Stakeholders

- Four lanes or center turn lane
- Right turn lanes at New Cut Road
- Turn lanes
 - Afterglow Drive
 - Candleworth Drive
 - FOE Derby City
 - Southland Mobile Home Park/Wilshire Boulevard
 - Tolls Lane
 - Nash Road
- Sidewalks on north side
- New Cut Road and Circle K crashes were a concern
- Speeding was a concern
- Drivers on wrong side of road



Outer Loop/New Cut Road Intersection

From 3rd Street Road to National Turnpike



Separate HSIP project under development:
Right turn lanes on Outer Loop at New Cut Road

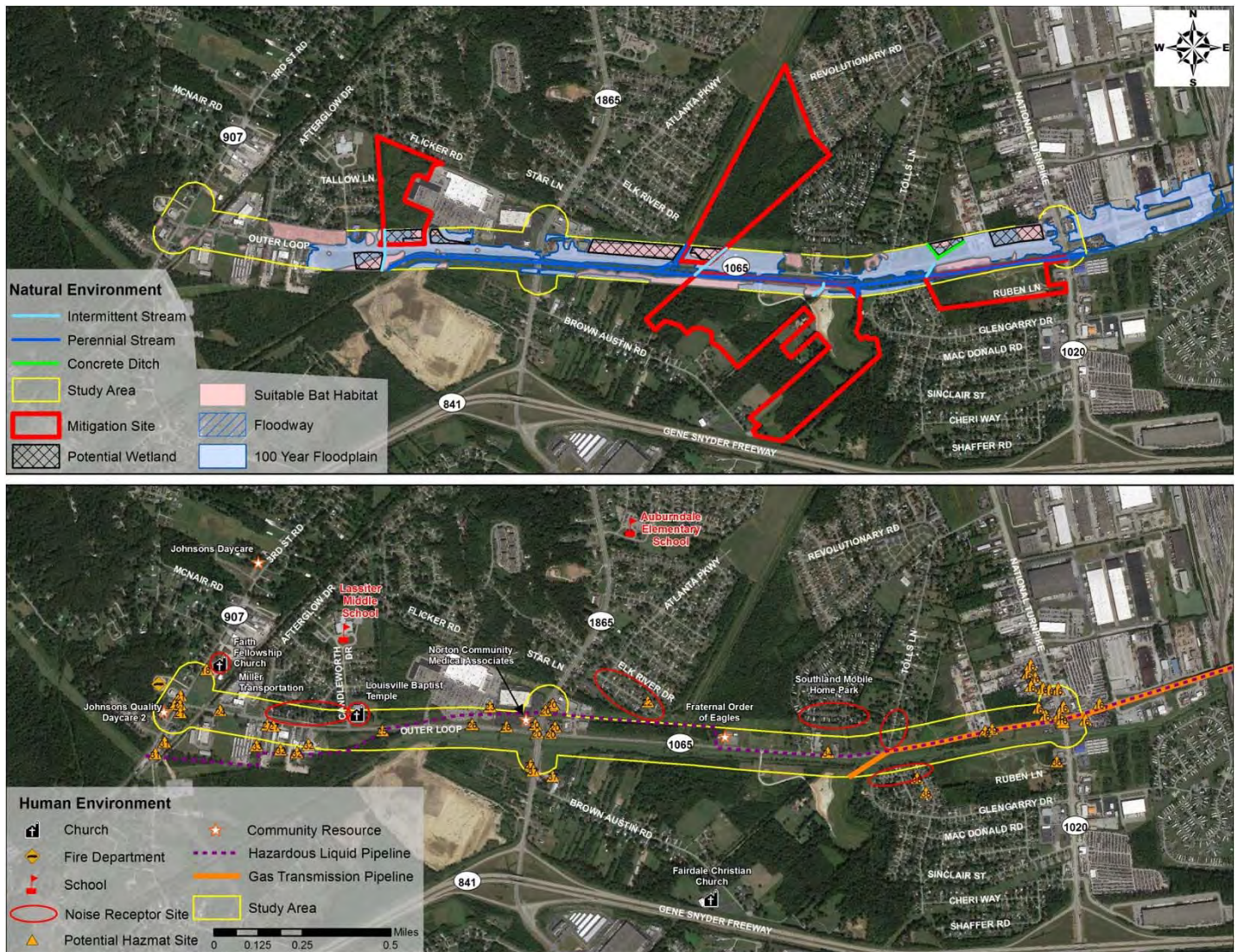


From 3rd Street Road to National Turnpike



Environmental Review

From 3rd Street Road to National Turnpike



Mobility – Existing

From 3rd Street Road to National Turnpike



- ✓ AADT – 14,000-17,600 vehicles per day
- ✓ Operates at Level of Service (LOS) E during PM peak hour
- ✓ New Cut Road and National Turnpike intersections operate at LOS E or F in PM peak hour
- ✓ Volume to Capacity ratio (if \geq to 1.0 roadway is at/above capacity)
 - 0.34-0.47 in AM peak hour
 - 0.55-0.61 in PM peak hour
- ✓ Mean Peak Hour Travel Times (below)
- ✓ Peak Hour backup at National Turnpike

AM/PM	Peak Hour Times	Cumulative Peak Hour Travel Time (minutes)	
Direction		Eastbound	Westbound
From/To		3 rd Street Road to National Turnpike	National Turnpike to 3 rd Street Road
AM	7:00-8:00	5.41	5.01
PM	5:00-6:00	8.76	7.33



Long-Term Alternative 1

From 3rd Street Road to National Turnpike



Alternative 1

Three lanes – with Two-Way-Left-Turn-Lane from 3rd Street Road to Als Way and from F.O.E. Derby City to National Turnpike.

Two lanes – from east of Als Way across Outer Loop Bridge to near F.O.E. Derby City where future development is not expected.

Includes the following:

- Drainage improvements
- Continuous sidewalk and intersection pedestrian improvements
- Adds right-turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane
- Extends NB right-turn lane on 3rd Street Road
- Extends WB left-turn lanes on Outer Loop at National Turnpike
- Adds SB right-turn lane on National Turnpike at Outer Loop with widening
- Adds NB right-turn lane on National Turnpike at Outer Loop with striping
- Option to raise Outer Loop out of floodplain



Long-Term Alternative 2

From 3rd Street Road to National Turnpike



Alternative 2

Three lanes – with Two-Way-Left-Turn-Lane from 3rd Street Road to Candleworth Drive

Four to five lanes – with Two-Way-Left-Turn-Lane or median from east of Candleworth Drive to National Turnpike.

Includes the following:

- Drainage improvements
- Continuous sidewalk and intersection pedestrian improvements
- Adds right-turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane
- Extends NB right-turn lane on 3rd Street Road
- Extends WB left-turn lanes on Outer Loop at National Turnpike
- Adds SB right-turn lanes on National Turnpike at Outer Loop
- Adds second through lane on Outer Loop in both directions at New Cut and WB at National Turnpike
- Widens Outer Loop and National Turnpike bridges
- Adds NB right-turn lane on National Turnpike at Outer Loop
- Adds dual left-turn lanes from New Cut Road and National Turnpike
- Option to raise Outer Loop out of floodplain
- Access Management



Outer Loop Metrics



From 3rd Street Road to National Turnpike

LOS is a measure of “driver comfort”

v/c Ratio – how much traffic is on the roadway compared to the theoretical volume it can handle.

2035 No Build

- 14800-17,200 vpd
- Outer Loop - LOS E in the PM peak hour
- v/c ratio ranges 0.55-0.61
- New Cut Road intersection improves to LOS D
- National Turnpike intersection – LOS F
- Overall intersection delay increases 62 seconds/vehicle

Alternative 1

- 17,100-20,200 vpd
- Outer Loop remains LOS E in the PM peak
- v/c ratio ranges 0.66-0.76
- New Cut Road intersection drops from LOS D to E
- National Turnpike intersection delay improves by 32 seconds /vehicle; still operates at LOS F.

Alternative 2

- 22,510-28,200 vpd
- Outer Loop improves to LOS B from Walmart to National Turnpike
- Outer Loop remains LOS E approaching 3rd Street Road
- v/c ratio ranges 0.41-0.73
- 3rd Street Road intersection decreases to LOS E
- New Cut Road intersection stays LOS D and overall intersection delay improves by 12 seconds/vehicle
- National Turnpike intersection remains LOS F however delay improves 67 seconds/vehicle

Travel Time

From 3rd Street Road to National Turnpike



Scenario	Daily Regional VMT Estimate	Daily Regional VHT Estimate	2035 Daily VMT Improvement over No Build	2035 Daily VHT Improvement over No Build	2035 VMT Improvement Total	2035 VHT Improvement Total
2015 KIPDA Model	31,921,196	1,071,323				
2035 NoBuild	39,523,146	1,365,707				
2035 3 Lane No Interchange	39,521,029	1,365,404	2,117	303	772,705	110,595
2035 5 Lane No Interchange	39,519,875	1,365,282	3,271	425	1,193,915	155,125

Scenarios	Outer Loop Peak Hour Travel Times (seconds/vehicle)	
	EB	WB
Collected	442	584
Existing Modeled	434	536
No Build Modeled	352	707
Alternative 1	333	596
Alternative 2	336	357



Cost Estimates

From 3rd Street Road to National Turnpike



Phase	Alternative 1	Alternative 1 Raised	Alternative 2	Alternative 2 Raised
Design	\$0.7 M	\$0.7 M	\$1.5 M	\$1.5 M
Right of Way	\$2.7 M	\$4.1 M	\$4.2 M	\$6.3 M
Utilities	\$4.2 M	\$4.2 M	\$7.2 M	\$7.2 M
Construction	\$6.8 M	\$10.2 M	\$15.2 M	\$21.8 M
Total	\$14.4 M	\$19.2 M	\$28.1 M	\$36.8 M



Short-Term Alternatives

From 3rd Street Road to National Turnpike



- Intersection Improvements
 - 3rd Street Road
 - New Cut Road
 - National Turnpike
- Turn Lanes at National Turnpike
 - Restripe and provide a Northbound right turn lane (in Intersection Improvements above)
 - Add southbound right turn lane (in intersection improvements above)
 - Provide 200 feet of additional westbound left turn lane storage for dual lefts (in intersection improvements above)
 - Carry westbound through lane east through the intersection
- Deepen ditch near Tolls Lane
- Turn lanes at Wilshire Boulevard, Tolls Lane, and Nash Road
- Right turn lane on Outer Loop at Candleworth Drive
- Access management





OUTER LOOP/3rd STREET ROAD INTERSECTION IMPROVEMENTS

- Add signal head for west approach (Pronto Auto Parts driveway)
- New east and west sidewalks (ADA compliant) along 3rd Street Road from approximately Churchdown Lane to Outer Loop
- New ramps and crosswalks (ADA compliant) at the intersection
- Higher visibility signals (yellow backplates) and southbound flashing yellow arrow for left turns
- Add southbound bus pull off in front of Johnson's 2 Quality Child Care
- Provide 150 feet of additional northbound right turn lane storage
- Add advance warning signal southbound 3rd Street Road
- Widen Outer Loop westbound right turn radius to northbound 3rd Street Road

Total Improvement Cost \$1,513,000



OUTER LOOP/NEW CUT ROAD INTERSECTION IMPROVEMENTS

- New ramps (ADA compliant) at intersection
- New sidewalk (ADA compliant) on north side between New Cut Road and Als Way
- Relocate Old Kmart entrance and extend sidewalk
- Add "Qwick Kurb" to prohibit left turns at both Circle K entrances
- Provide 200 additional feet of westbound left turn lane storage
- Add advance signal warning for southbound New Cut Road

Total Improvement Cost \$1,323,000



OUTER LOOP/NATIONAL TURNPIKE INTERSECTION IMPROVEMENTS

- Restripe roadway and provide a northbound right turn lane
- Provide 200 feet of additional westbound left turn lane storage
- Higher visibility signals (yellow backplates)
- Add southbound right turn lane, consolidate driveway access, and provide sidewalk
- Convert BK Auto entrance to right in/right out
- Close southern National Turnpike entrance to Thorntons
- Add ramps (ADA compliant) at intersection
- Add eastbound right turn lane and reconstruct broken sidewalk
- Provide Quick Kurb to prohibit left turns at entrances to Thorntons and Gilbert and Mitchell Auto Salvage

Total Improvement Cost \$1,160,000

Short Term Savings

From 3rd Street Road to National Turnpike



National Turnpike Intersection Improvement	2035 Daily Peak Hour Savings (Hours)		2035 Annual Peak Hour Savings (Hours)	
	AM	PM	AM	PM
EB Right	46.9	57.9	12,195.8	15,059.5
SB Right	0.1	18.1	29.7	4,704.5
NB Right	46.3	52.3	12,030.5	13,607.1



Traffic Simulations

From 3rd Street Road to National Turnpike



Next Steps Discussion

From 3rd Street Road to National Turnpike



- Summarize these meetings
- Resource agency coordination
- Draft and Final Report



Wrap-Up/Next Steps

From 3rd Street Road to National Turnpike



OUTER LOOP CORRIDOR STUDY

From 3rd Street Road to National Turnpike



- 1) Make sure you turn in your survey before you leave!
 - iPads are available to take survey electronically.
 - Survey can also be accessed through QR code on fact sheet and at Outer Loop Corridor Study webpage hosted by KYTC District 5:
<http://tiny.cc/fixouterloop>
 - Postage-paid return envelopes are available if necessary and must be returned by **May 31, 2018!**
 - Study information and public meeting materials will be available on webpage.
- 2) Final Report available winter 2018.





Outer Loop Corridor Study 3rd Street Road to National Turnpike Jefferson County



Groundbreaking by Design.

LOCAL OFFICIALS/STAKEHOLDERS (LO/S) MEETING NO. 2

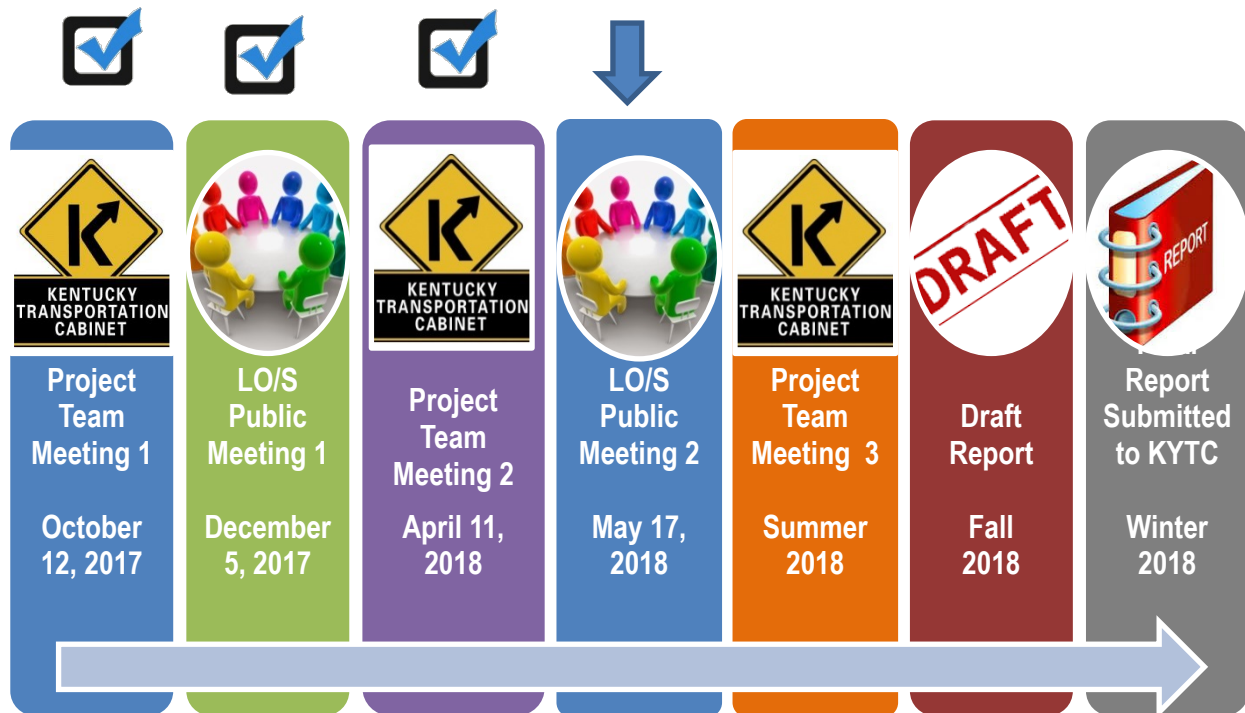
3:00 PM

Lassiter Middle School

May 17, 2018

AGENDA

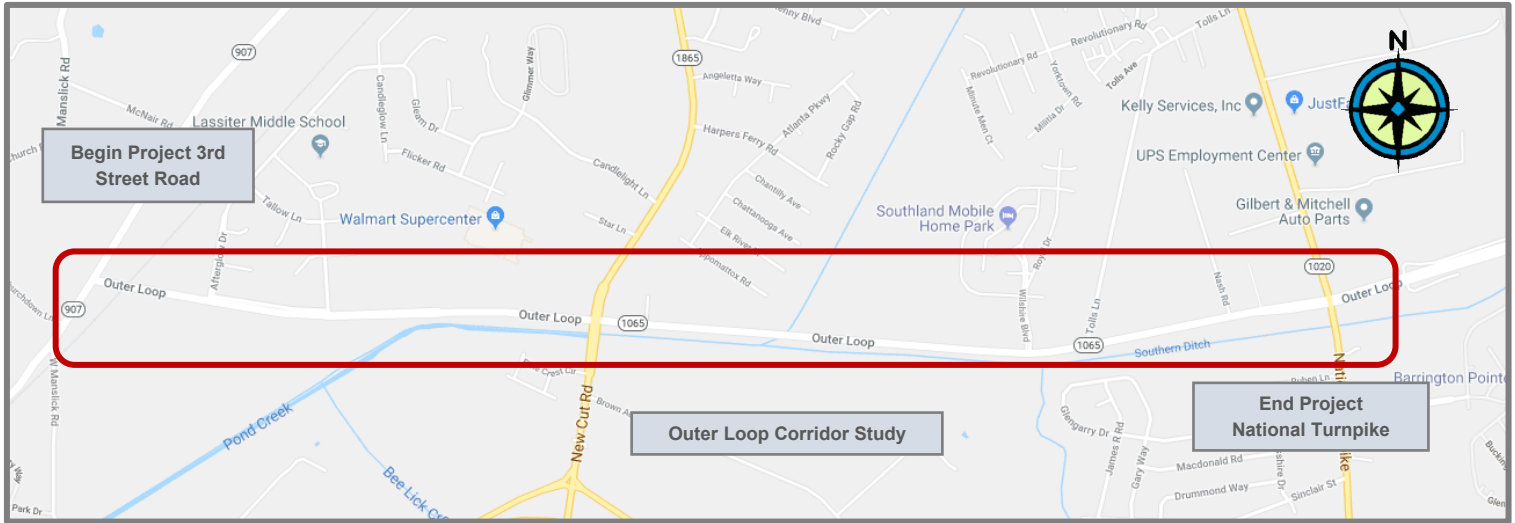
1. Introductions
2. Project Overview
3. Input Received from December 5, 2017 LO/S and Public Meetings
4. Short- and Long-term Alternatives
5. Discussion
6. Next Steps





KY 1065 Outer Loop Corridor Study 3rd Street Road to National Turnpike Jefferson County, KY

The Kentucky Transportation Cabinet (KYTC) has undertaken a planning study to **improve safety**, targeting the two major intersections—National Turnpike and New Cut Road—and to **improve mobility** for travelers along Outer Loop between 3rd Street Road and National Turnpike. The project team has reviewed information about roadway characteristics, existing traffic, crashes, environmental features and more. We've coordinated with local elected officials and collected survey feedback from over 300 respondents in December 2017 to find out what you think are the existing concerns. Considering this background information, the project team has developed a series of potential improvement concepts: two **long-term corridor widening alternatives** and a series of smaller, **short-term spot improvements**.



LONG-TERM CORRIDOR WIDENING ALTERNATIVES

- **Alternative 1:** widen to three lanes with the center lane as a Two-Way-Left-Turn-Lane (TWLTL) west of New Cut Road; keep two lanes between New Cut Road and Wilshire Blvd; widen to three lanes with the center lane as a TWLTL east of Wilshire Blvd
- **Alternative 2:** widen to three lanes with the center lane as a TWLTL west of Candleworth Drive; widen to five lanes with the center lane as a TWLTL from Candleworth Drive to New Cut Road; widen to four lanes from New Cut Road to Wilshire Blvd; widen to five lanes with the center lane as a TWLTL east of Wilshire Blvd

Either alternative could be raised to lift the roadway above the floodplain. Cost estimates are presented below.

LONG-TERM CORRIDOR WIDENING ALTERNATIVE COST ESTIMATES

Phase	Alternative 1	Alternative 1 Raised	Alternative 2	Alternative 2 Raised
Design	\$0.7 M	\$0.7 M	\$1.5 M	\$1.5 M
Right of Way	\$2.7 M	\$4.1 M	\$4.2 M	\$6.3 M
Utilities	\$4.2 M	\$4.2 M	\$7.2 M	\$7.2 M
Construction	\$6.8 M	\$10.2 M	\$15.2 M	\$21.8 M
Total	\$14.4 M	\$19.2 M	\$28.1 M	\$36.8 M

Lower cost **SPOT IMPROVEMENTS** are faster to implement and have been identified at three main intersections: 3rd Street Road, New Cut Road, and National Turnpike. A few spot improvements lie beyond these intersections, such as adding turn lanes or improving ditches.

For more information,
visit the project website at
<http://tiny.cc/fixouterloop>

A QR code to access the survey
is included to the right.



SURVEY

For more info, contact Chris Allen or Tom Hall
KYTC District 5, 8310 Westport Road in Louisville, KY 40242.

By Phone: 502-210-5400

By email: Chris.Allen@ky.gov or Tom.Hall@ky.gov

Public Meeting No. 2

Public Meeting No. 2—Summary
Outer Loop Corridor Study
3rd Street Road to National Turnpike
May 17, 2018
5:00 to 7:00 PM

The Kentucky Transportation Cabinet (KYTC) and project consultants (the project team) held a second open house public meeting for the Outer Loop Corridor Study May 17, 2018, at Lassiter Middle School, 8200 Candleworth Drive in Louisville, Kentucky. The purpose of the meeting was to present two long-term corridor widening alternatives and several short-term spot improvements, and to gather public input on the options presented.

Public Notice

In advance of the meeting, the KYTC notified the public by (1) placing quarter-page meeting notices in Louisville's daily *Courier Journal* print and e-newspaper editions May 2, 5, and 8, 2018; (2) strategically locating three variable message signs along the corridor to capture commuters' attention; (3) including on its District 5 website the meeting notice, project information, and a link to an electronic survey; and (4) posting the notice on social media platforms via District 5's Twitter and Facebook accounts; and (5) using Facebook Ads Manager to reach a target audience within a five-mile radius of the Outer Loop Corridor Study area.

Welcome

In total, 49 members of the public and 11 project team members attended the public meeting. Project team members greeted attendees at the door and offered each a study area map that included a statement of the project's purpose, brief descriptions of long-term alternatives and short-term improvements, links to the project's website and online survey, and contact information. The survey was also provided in hard-copy format, and iPads were available for completing the survey electronically.

Presentation Boards and Videos

The project team did not make a formal presentation. The following project information was presented on large exhibit boards at two stations and on a video screen for the public to review, discuss, and ask questions of KYTC and consultant staff.

1. Long-term Corridor Widening Alternatives

Alternative 1

- Three lanes, with two-way left-turn lane (TWLTL) from 3rd Street Road to Als Way and from F.O.E. Derby City to National Turnpike.
- Two lanes from east of Als Way and across Outer Loop Bridge to near F.O.E. Derby City, where future development is not expected.

Alternative 1 includes the following options:

- a. Improve drainage.
- b. Provide continuous sidewalk and intersection improvements for pedestrians.
- c. Add right turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane.
- d. Extend northbound right turn lane on 3rd Street Road.
- e. Extend westbound left turn lanes on Outer Loop at National Turnpike.
- f. Add southbound right turn lane on National Turnpike at Outer Loop with widening.
- g. Add northbound right turn lane on National Turnpike at Outer Loop with striping.
- h. Raise Outer Loop above the elevation of Southern Ditch floodplain.

Alternative 2

- Three lanes with two-way left-turn lane (TWLTL) from 3rd Street Road to Candleworth Drive.
- Four or five lanes with TWLTL or median from east of Candleworth Drive to National Turnpike.

Alternative 2 includes the following options:

- a. Improve drainage.
- b. Provide continuous sidewalk and intersection improvements for pedestrians.
- c. Add right turn lanes at Candleworth Drive (Lassiter Middle School), Wilshire Boulevard (Southland Mobile Home Park), and Tolls Lane.
- d. Extend northbound right turn lane on 3rd Street Road.
- e. Extend westbound left turn lanes on Outer Loop at National Turnpike.
- f. Add southbound right turn lane on National Turnpike at Outer Loop.
- g. Add second through lane on Outer Loop in both directions at New Cut and westbound at National Turnpike.
- h. Widen Outer Loop and National Turnpike bridges.
- i. Add northbound right turn lane on National Turnpike at Outer Loop.
- j. Add dual left turn lanes from New Cut Road and National Turnpike.
- k. Raise Outer Loop above the elevation of Southern Ditch floodplain.
- l. Provide access management.

2. Short-term Spot Improvements

Intersection improvements

- Outer Loop/3rd Street Road — \$1,513,000
 - a. Add signal head for west approach (Pronto Auto Parts driveway).
 - b. Add sidewalks (ADA compliant) east and west along 3rd Street Road from approximately Churchdown Lane to Outer Loop.
 - c. Add sidewalk ramps and crosswalks (ADA compliant) at the intersection.
 - d. Install higher visibility signals (yellow backplates) and southbound flashing yellow arrow for left turns.
 - e. Add southbound bus pull-off in front of Johnson's 2 Quality Child Care.
 - f. Provide 150 feet of additional northbound right turn lane storage.
 - g. Add advance warning signal southbound on 3rd Street Road.
 - h. Widen Outer Loop westbound right turn radius to northbound 3rd Street Road.
- Outer Loop/New Cut Road — \$1,323,000
 - a. Provide sidewalk ramps (ADA compliant) at intersection.
 - b. Add sidewalk (ADA compliant) on north side between New Cut Road and Als Way.
 - c. Relocate former Kmart entrance and extend sidewalk.
 - d. Add "Qwick Kurb" to prohibit left turns at both Circle K entrances.
 - e. Provide 200 additional feet of westbound left turn lane storage.
 - f. Add advance signal warning for southbound New Cut Road.
- Outer Loop/National Turnpike — \$1,160,000
 - a. Restripe roadway and provide a northbound right turn lane.
 - b. Provide 200 feet of additional westbound left turn lane storage for dual lefts.
 - c. Install higher visibility signals (yellow backplates).
 - d. Add southbound right turn lane, consolidate driveway access, and provide sidewalk.
 - e. Convert BK Auto entrance to right in/right out.
 - f. Close southern National Turnpike entrance to Thornton's.

- g. Add ramps (ADA compliant) at intersection.
- h. Add eastbound right turn lane and reconstruct broken sidewalk.
- i. Provide “Qwick Kurb” to prohibit left turns at entrances to Thornton’s and Gilbert and Mitchell Auto Salvage.

Additional improvements

- a. Carry a second westbound Outer Loop lane through the National Turnpike intersection.
- b. Deepen ditches and/or add new pipe across Outer Loop near Tolls Lane.
- c. Add turn lanes on Outer Loop at Wilshire Boulevard, Tolls Lane, and Nash Road.
- d. Add right turn lane on Outer Loop at Candleworth Drive.

3. 2035 No Build and Build traffic operations

- Traffic simulation video loops of design year 2035 No Build operations versus long-term corridor widening Build Alternatives 1 and 2 were shown.

Survey Results

Throughout the 15 day comment period, 316 survey responses were received. Overall, the majority of respondents (94%) supported Outer Loop improvements, and preferred Alternative 2 for western (60%) and eastern (76%) segments. Top spot improvement options chosen at three major intersections, listed in order of chosen priority, included the following:

1. New Cut Road: (1) Provide 200 additional feet of westbound left turn lane storage; (2) New ramps (ADA compliant) at the intersection; (3) Relocate Old Kmart entrance and extend sidewalk.
2. National Turnpike: (1) Provide 200 feet of additional westbound left turn lane storage; (2) Restripe roadway and provide a northbound right turn lane; (3) Add southbound right turn lane, consolidate driveway access, and provide sidewalk.
3. 3rd Street Road: (1) Widen Outer Loop westbound right turn radius to northbound 3rd Street Road; (2) Add southbound bus pull off in front of Johnson’s 2 Quality Child Care and Provide 150 feet of additional northbound right turn lane storage.

Respondents supported all four individual spot improvements, chose east segment construction (67%) as higher priority over west; thought the roadway should be raised above floodplain elevation (89%), and wanted sidewalks along Outer Loop (82%). Top written-in comments were: widen Outer Loop to five lanes (6 responses), add turn lanes at New Cut Road (6 responses); do not change (4 responses); and add bike lanes (4 responses).

The meeting concluded at approximately 7:20 PM.

Project Team Meeting No. 3



MEETING MINUTES

Groundbreaking by Design.

Project: Outer Loop (KY 1065) Corridor Study
3rd Street Road to National Turnpike
Jefferson County, Kentucky

Purpose: Project Team Meeting No. 3 – Review of Local Officials/Stakeholder/Public Meeting Input, Resource Agency Coordination, and Prioritization

Place: Kentucky Transportation Cabinet (KYTC), District 5, Louisville

Meeting Date: August 20, 2018
9:30 a.m. EDT

Prepared By: Qk4

Attendees:

Chris Allen	KYTC – D5 Planning
Mikael Pelfrey	KYTC – CO Planning
Tom Hall	KYTC – D5 Planning
Judi Hickerson	KYTC – D5 Planning
Tom Wright	KYTC – D5 PD&P
Lindsay Ashby	KYTC – D5 Environmental
Travis Thompson	KYTC – D5 Design
Shelley Morrison	KYTC – D5 Right of Way
Kim Irwin	KYTC – D5 Planning
Larry Chaney	KIPDA
Heath Phillips	KYTC – D5
Steve Ross	KYTC – CO Planning
Troy Hearn *	KYTC – CO Planning
Tonya Higdon*	KYTC – CO Planning
Jeremy Edgeworth*	KYTC – CO Planning
Jill Asher*	KYTC – CO Highway Design
Jeremy Lukat	Qk4, Inc.
Andy Gilley	Qk4, Inc.
Annette Coffey	Qk4, Inc.
*videoconference	

Each project team member was provided a packet containing the following:

- Agenda (**Attachment A**)
- Presentation (review of improvement alternatives, evaluation matrix, and resource agency coordination) (**Attachment B**)
- Local Officials/Stakeholder/Public Meeting No. 2 Survey Summary (**Attachment C**)
- Turn Lane Metrics (**Attachment D**)
- Traffic Operations Summary from Public Meeting No. 2 (**Attachment E**)

Following introductions and a brief project history, Tom Hall turned the meeting over to Qk4 for a presentation.

Review of Improvement Alternatives

The top of presentation slide 2 illustrates Alternatives 1 and 2, the long-term corridor widening options. The bottom of the slide shows four spot improvements from the Local Officials/Stakeholder (LO/S) and Public Meeting (PM) No. 2 surveys. Slide 3 lists the 3rd Street Road, New Cut Road and National Turnpike intersection spot improvement options.

Long-term improvement Alternative 2 improves traffic operations the most while the National Turnpike intersection improvements have the most reduction in delay.

Local Officials/Stakeholder/Public Meeting No. 2 Survey Summary

316 survey responses were received throughout the 15 day comment period following the May 17, 2018, LO/S and PM No. 2 meetings. The majority (94%) of the 313 respondents to Question 1 (**Q1**) supported Outer Loop improvements; and 60% of the 235 respondents to **Q2** and 76% of the 233 respondents to **Q3** preferred long-term improvement Alternative 2 for western and eastern segments. Top spot improvement options chosen at three major intersections included the following:

Q4. 3rd Street Road (134 answered): (1) Widen Outer Loop westbound right-turn radius to northbound 3rd Street Road; (2, tie) Add southbound bus pull off in front of Johnson's 2 Quality Child Care, and (2, tie) provide 150 feet of additional northbound turn lane storage.

Q5. New Cut Road (133 answered): (1) Provide 200 additional feet of westbound turn lane storage; (2) New sidewalk ramps (Americans with Disabilities Act compliant); (3) Relocate old Kmart entrance and extend sidewalk.

Q6. National Turnpike (126 answered): (1) Provide 200 feet per lane of additional westbound left- turn lane storage; (2) Restripe roadway and provide a northbound right-turn lane; (3) Add southbound right-turn lane, consolidate driveway access, and provide sidewalk.

Respondents supported all four individual spot improvements, chose east segment construction (67%) as higher priority over west; thought the roadway should be raised above floodplain elevation (89%), and wanted sidewalks along Outer Loop (82%). Top written-in comments were: widen Outer Loop to five lanes (six responses), add turn lanes at New Cut Road (six responses); do not change (four responses); and add bike lanes (four responses).

Comments

- Provide an explanation in the report of the survey average scores.
- Place survey charts in the appendices of the draft and final report.
- Include in the body of the report the three intersection figures shown in presentation slide 3 with the scores beside each improvement (e.g., a-i).
- A mode score may be more appropriate than the average.
- The survey responses reduce by one-half following the first three questions. However, the project team was pleased with the overall number of responses.
- Everyone agreed the survey responses would be used as a decision making tool together with improvement in congestion and safety, costs, and project team input.

Resource Agency Responses

A comprehensive list of resource agency coordination responses was provided on presentation slides 5 and 6. Many of the comments were standard, as with most projects. The following comments were discussed:

Comments

- Kentucky Geological Survey—the following can present geotechnical design and performance challenges.
 - a. New Albany black and New Providence clay shale are near the western end of the corridor.
 - b. Most of the rest of the project area has 20 feet of Pleistocene lacustrine deposits (poorly drained).
 - c. Excavation activities may encounter a perched groundwater table, and fractured bedrock units should also be anticipated.
 - d. Crude oil occurs in vugs and fractures in the near surface bedrock units.
- US Environmental Protection Agency—main environmental concerns are water quality and stormwater management.
- US Army Corps of Engineers—a Department of Army permit may be required if work is in or near “waters of the US.”
- Kentucky Energy and Environment Cabinet
 - a. Avoid and/or minimize impacts to wetlands.
 - b. Tree clearing may require payment into the Imperiled Bat Fund.
 - c. Channel changes should incorporate natural stream design.
 - d. If culverts are used, note the following:
 - i. They should be designed to allow the passage of aquatic organisms.
 - ii. Development/excavation should occur during low flow period to minimize disturbances.
 - iii. Ensure proper placement of erosion control structures below highly disturbed areas to minimize entry of silt into area streams.

- iv. Replant disturbed areas after construction, including stream banks, with native vegetation for soil stabilization and enhancement of fish and wildlife populations.
- v. Return all disturbed instream habitat to a stable condition.
- vi. Preserve tree canopy overhanging streams.
- Kentucky State Police—“a large number of collisions were rear-end and usually occurred near an intersection; many of these collisions are attributed to congestion and driver inattention.”
- Kentucky Division of Waste Management—underground storage tanks both active and sites where tanks have been removed exist in the project area.
- Kentucky State Nature Preserves Commission—reported 31 occurrence records and three federal-listed bat species.

Long/Short-Term Alternatives Discussion

Presentation slide 4 provides highlights of the Outer Loop long and short-term study alternatives. The following comments summarize input received at this meeting.



Survey
 Score
 a. 6.87
 b. 7.41
 c. 4.88
 d. 6.33
 e. 4.10
 f. 4.16
 g. 3.76
 h. 5.06
 i. 4.22

OUTER LOOP/NATIONAL TURNPIKE INTERSECTION IMPROVEMENTS

- a. Restripe roadway and provide a northbound right turn lane
- b. Provide 200 feet of additional westbound left turn lane storage
- c. Higher visibility signals (yellow backplates)
- d. Add southbound right turn lane, consolidate driveway access, and provide sidewalk
- e. Convert BK Auto entrance to right in/right out
- f. Close southern National Turnpike entrance to Thorntons
- g. Add ramps (ADA compliant) at intersection
- h. Add eastbound right turn lane and reconstruct broken sidewalk
- i. Provide Quick Kurb to prohibit left turns at entrances to Thorntons and Gilbert and Mitchell Auto Salvage

National Turnpike Intersection (left)

- High priority—a, b, c, f, g, and i
- Medium priority—e, h
- Low priority—d

a—Check signal head alignment when northbound lanes are shifted to add the right-turn lane. As proposed, the restriping will have a minimal shift. Add pedestrian countdown timers to the northbound leg if “a” is implemented.

b—Will be implemented as part of a pavement rehabilitation project let to construction next month.

d—Low priority due to right of way impacts and little delay improvement.

f—Modify to a right in/right out.

i—Change Quick Kurb to raised concrete median/separation.

Additional option—Add two through lanes westbound across National Turnpike to reduce driver confusion as to which lane to be in. Instead, the project team preferred to add additional Outer Loop signage farther east from National Turnpike to show lane designation. Also, add small skip lines between the through and right-turn lanes with the new signage. This additional option is a high priority.



Survey
 Score
 a. 3.78
 b. 3.55
 c. 3.58
 d. 3.51
 e. 4.66
 f. 2.67

OUTER LOOP/NEW CUT ROAD INTERSECTION IMPROVEMENTS
 a. New ramps (ADA compliant) at intersection
 b. New sidewalk (ADA compliant) on north side between New Cut Road and Als Way
 c. Relocate Old Kmart entrance and extend sidewalk
 d. Add "Quick Kurb" to prohibit left turns at both Circle K entrances
 e. Provide 200 additional feet of westbound left turn lane storage
 f. Add advance signal warning for southbound New Cut Road

New Cut Road Intersection (above)

- High priority—a, e
- Medium priority—b
- Low priority—c, f
- Prioritize later—d

d—Qk4 will contact Circle K to learn their internal fuel truck circulation. Autoturn was suggested to determine if semis can navigate the turns with the modified design. Change Quick Kurb to raised concrete median/separation.

e—Add phrase "Restripe for" instead of "Provide."



Survey
 Score
 a. 4.03
 b. 4.75
 c. 4.35
 d. 4.81
 e. 5.33
 f. 5.33
 g. 3.26
 h. 5.39

OUTER LOOP/3RD STREET ROAD INTERSECTION IMPROVEMENTS
 a. Add signal head for west approach (Pronto Auto Parts driveway)
 b. New east and west sidewalks (ADA compliant) along 3rd Street Road from approximately Churchdown Lane to Outer Loop
 c. New ramps and crosswalks (ADA compliant) at the intersection
 d. Higher visibility signals (yellow backplates) and southbound flashing yellow arrow for left turns
 e. Add southbound bus pull off in front of Johnson's 2 Quality Child Care
 f. Provide 150 feet of additional northbound right turn lane storage
 g. Add advance warning signal southbound 3rd Street Road
 h. Widen Outer Loop westbound right turn radius to northbound 3rd Street Road

3rd Street Road Intersection (above)

- High priority—a, c, d, e, h
- Medium priority—b, f
- Low priority—g (recommended signal ahead sign only)

Comments

Add to each intersection option, the Public Meeting No. 2 survey score.

Evaluation Matrix

- Benefit/Cost Analysis (BCA) for each alternative presented should be relative to BCA in KYTC SHIFT scoring, though it will not be exactly the same.
- Note in the report and at the bottom of the matrix: “The presented BCA results include right-turn lanes at New Cut Road in the No Build alternative.”
- Add to this spreadsheet a column entitled “Travel Time Savings over the No Build Scenario.”
- Add right-turn radius at 3rd Street Road to dark blue section at bottom of matrix.
- Alternative 2 is the recommended alternative based on the traffic operations summary, BCA, and public input.
 - Qk4 will divide phase cost estimates and milepoints from 3rd Street Road to New Cut Road and New Cut Road to National Turnpike. The KYTC will provide the right of way and utility estimates.
 - Provide cost estimates for high priority short-term intersection improvements. The KYTC will provide the right of way and utility estimates.
- Qk4 suggested the New Cut Road and Walmart signals be coordinated to improve progression through the corridor. The KYTC stated this would be the responsibility of Louisville Metro.

Draft Purpose and Need (P&N) Statement

The Purpose and Need Statement has not changed.

Next Steps:

The immediate next steps are:

- Prepare meeting minutes.
- Draft Report and Executive Summary in October 2018.
- Final Report and Executive Summary in December 2018.

**Outer Loop (KY 1065) Corridor Study
3rd Street Road (KY 907) to National Turnpike (KY 1020)
Jefferson County**

**Project Team Meeting No. 3
District 5 Office – Louisville, KY**

**August 20, 2018
9:30 AM EDT**

MEETING AGENDA

- I. Introductions
- II. Summaries
 - a. Local Officials/Public Meeting No. 2
 - b. Public Meeting No. 2
 - c. Resource Agency Coordination Summary
- III. Alternatives Review
 - a. Long-term Alternatives 1 and 2
 - b. Short-term alternatives
- IV. Draft Purpose and Need
- V. Next Steps
 - a. Draft Report and Executive Summary – October
 - b. Final Report and Executive Summary – December



Outer Loop Corridor Study

Jefferson County

Project Team Meeting 3

August 20, 2018

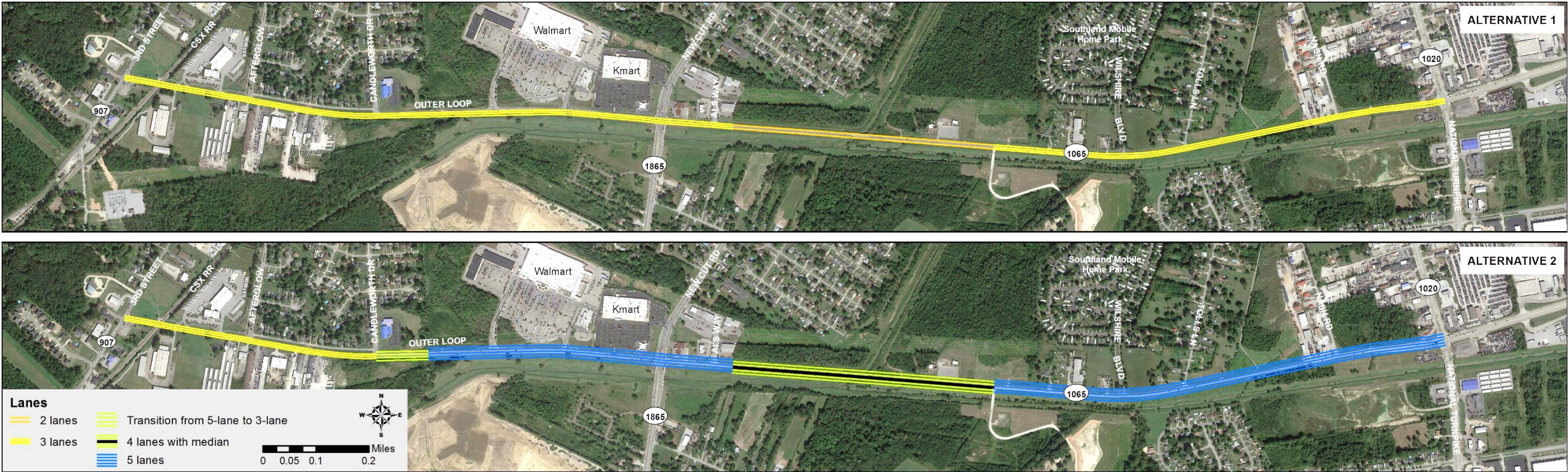


Engineering
Planning





1. Corridor-scale widening alternatives



2. Other Spot Improvements



3. Intersection Spot Improvements



OUTER LOOP/3RD STREET ROAD INTERSECTION IMPROVEMENTS

- Add signal head for west approach (Pronto Auto Parts driveway)
- New east and west sidewalks (ADA compliant) along 3rd Street Road from approximately Churchdown Lane to Outer Loop
- New ramps and crosswalks (ADA compliant) at the intersection
- Higher visibility signals (yellow backplates) and southbound flashing yellow arrow for left turns
- Add southbound bus pull off in front of Johnson's 2 Quality Child Care
- Provide 150 feet of additional northbound right turn lane storage
- Add advance warning signal southbound 3rd Street Road
- Widen Outer Loop westbound right turn radius to northbound 3rd Street Road

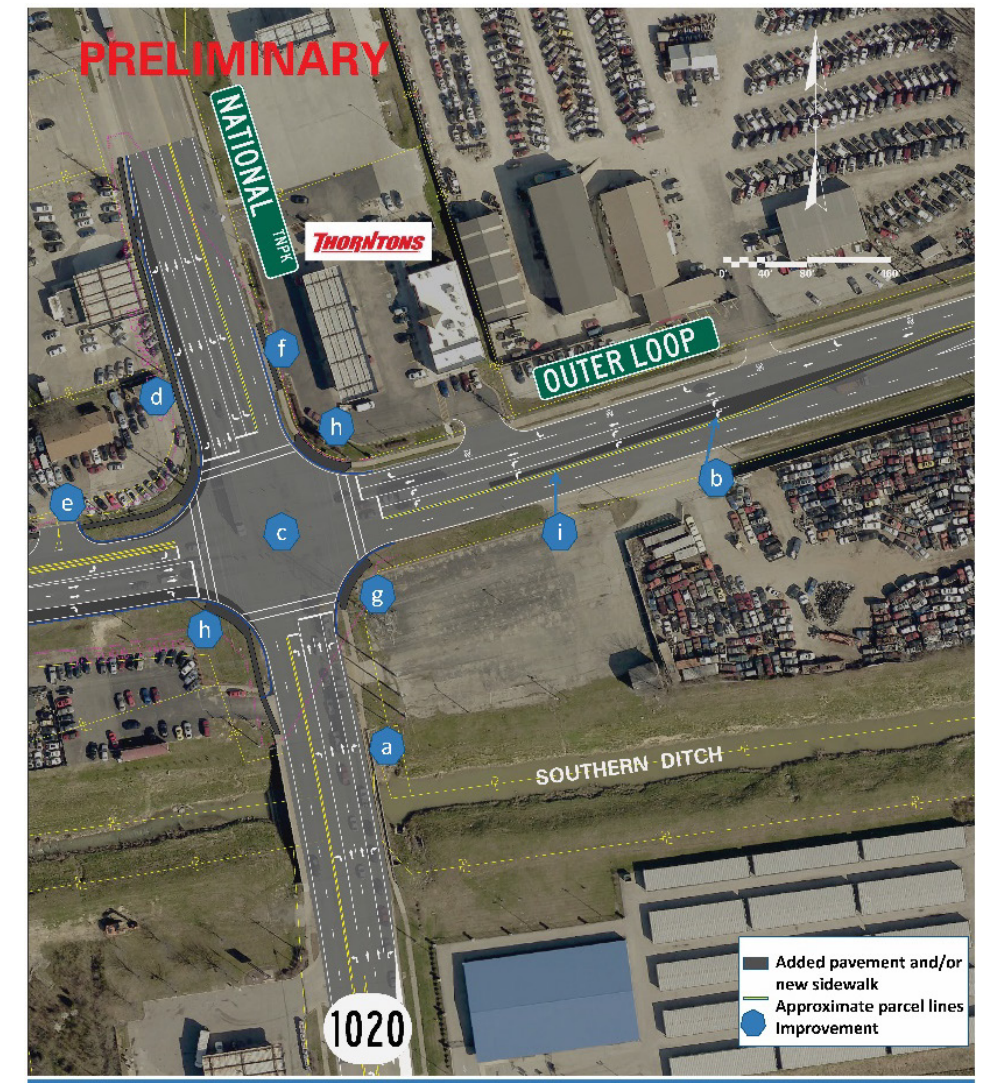
Total Improvement Cost \$1,513,000



OUTER LOOP/NEW CUT ROAD INTERSECTION IMPROVEMENTS

- New ramps (ADA compliant) at intersection
- New sidewalk (ADA compliant) on north side between New Cut Road and Als Way
- Relocate Old Kmart entrance and extend sidewalk
- Add "Quick Kurb" to prohibit left turns at both Circle K entrances
- Provide 200 additional feet of westbound left turn lane storage
- Add advance signal warning for southbound New Cut Road

Total Improvement Cost \$1,323,000



OUTER LOOP/NATIONAL TURNPIKE INTERSECTION IMPROVEMENTS

- Restripe roadway and provide a northbound right turn lane
- Provide 200 feet of additional westbound left turn lane storage
- Higher visibility signals (yellow backplates)
- Add southbound right turn lane, consolidate driveway access, and provide sidewalk
- Convert BK Auto entrance to right in/right out
- Close southern National Turnpike entrance to Thorntons
- Add ramps (ADA compliant) at intersection
- Add eastbound right turn lane and reconstruct broken sidewalk
- Provide Quick Kurb to prohibit left turns at entrances to Thorntons and Gilbert and Mitchell Auto Salvage

Total Improvement Cost \$1,160,000





Outer Loop Corridor Study Long/Short-Term Alternatives

Improvement Category	Long/Short-Term Alternatives	Design	Right of Way	Utilities	Construction	Total	Peak Hour Eastbound Travel Time (sec./veh.)	Peak Hour Westbound Travel Time (sec./veh.)	BCA 7% Discount Rate	Additional Survey Results	Public Involvement
Long-term	No Build	\$ -	\$ -	\$ -	\$ -	\$ -	352	707			94% believe Outer Loop should be improved.
	Alternative 1	\$ 700,000	\$ 2,700,000	\$ 4,200,000	\$ 6,800,000	\$ 14,400,000	333	596	3.2		Preferred 40% 3rd Street Road to New Cut Road: New Cut Road to National Turnpike: Preferred 14%
	Alternative 1 - Raised Out of Floodplain	\$ 700,000	\$ 4,100,000	\$ 4,200,000	\$ 10,200,000	\$ 19,200,000	333	596			89% stated road should be raised above floodplain.
	Alternative 2	\$ 1,500,000	\$ 4,200,000	\$ 7,200,000	\$ 15,200,000	\$ 28,100,000	336	357	1.5		Preferred 60% 3rd Street Road to New Cut Road: New Cut Road to National Turnpike: Preferred 76%
	Alternative 2 - Raised Out of Floodplain	\$ 1,500,000	\$ 6,300,000	\$ 7,200,000	\$ 21,800,000	\$ 36,800,000	336	357			89% thought Outer Loop should be raised above the floodplain. New Cut Road to National Turnpike: Preferred 76%
Intersection Spot Improvement Options	Option A - 3rd Street Intersection	\$ 70,000	\$ 292,500	\$ 500,000	\$ 650,000	\$ 1,513,000			2.8	Number 3 Intersection Option	(1) Widen Outer Loop westbound right turn radius to northbound 3rd Street Road; (2) Add southbound bus pull off in front of Johnson's 2 Quality Child Care and Provide 150 feet of additional northbound right turn lane storage
	Option B - New Cut Road Intersection	\$ 70,000	\$ 102,500	\$ 500,000	\$ 650,000	\$ 1,323,000			1.9	Number 1 Intersection Option	(1) Provide 200 additional feet of westbound left turn lane storage; (2) New ramps (ADA compliant) at the intersection; (3) Relocate Old Kmart entrance and extend sidewalk.
	Option C - National Turnpike Intersection	\$ 50,000	\$ 170,000	\$ 500,000	\$ 440,000	\$ 1,160,000			12.7	Number 2 Intersection Option	(1) Provide 200 feet of additional westbound left turn lane storage; (2) Restripe roadway and provide a northbound right turn lane; (3) Add southbound right turn lane, consolidate driveway access, and provide sidewalk.
Other Short-term Spot Improvements from Survey No. 2	Carry two westbound through lane east of the National Turnpike Intersection (a.)	\$ 100,000	\$ 100,000	\$ 882,000	\$ 1,000,000	\$ 2,082,000					1st Preferred Other Short-term Spot Improvements - 1.76 Weighted Average
	Deepen Ditch at Tolls Lane (b.)	\$ -	\$ 25,000	\$ 150,000	\$ 40,000	\$ 215,000					2nd preferred Other Short-term Spot Improvements - 1.61 Weighted Average
	Wilshire Blvd, Tolls Lane, Nash Road TWLTL (c.)	\$ 160,000	\$ 65,000	\$ 65,000	\$ 1,520,000	\$ 1,810,000					3rd preferred Other Short-term Spot Improvements - 1.58 Weighted Average
	Right Turn Lane Wilshire Boulevard (c.)	\$ -	\$ -	\$ 100,000	\$ 50,000	\$ 150,000					3rd preferred Other Short-term Spot Improvements - 1.58 Weighted Average
	Right Turn Lane at Candleworth Drive (d.)	\$ -	\$ -	\$ 60,000	\$ 150,000	\$ 210,000					2nd preferred Other Short-term Spot Improvements - 1.61 Weighted Average
Potential Short-term Spot Improvements Extracted from Intersection Options A, B and C	Bus Pull off in front of Johnson's 2 Quality Child Care on Southbound 3rd Street Road	\$ -	\$ -	\$ -	\$ 60,000	\$ 60,000					Tied for 1st for 3rd Street Road Intersection
	Access Control at Ncw Cut Road	\$ -	\$ -	\$ -	\$ 70,000	\$ 70,000					Ranked fourth for New Cut Road Intersection
	Access Control at National Turnpike	\$ -	\$ -	\$ -	\$ 100,000	\$ 100,000					Ranked sixth for National Turnpike Intersection
	Restripe Roadway and Provide a Northbound Right Turn Lane at National Turnpike	\$ -	\$ -	\$ -	\$ 30,000	\$ 30,000					Ranked second for National Turnpike Intersection
	Provide 200 feet of additional westbound left turn lane Storage at National Turnpike	\$ -	\$ -	\$ -	\$ 340,000	\$ 340,000					Ranked first for National Turnpike Intersection
	Sidewalks	\$ 50,000	\$ -	\$ -	\$ 830,000	\$ 880,000					82% preferred a sidewalk along Outer Loop

Red lettering may have additional r/w and/or utility costs.

Representing	Summary of Comments Resource Agency Coordination
US Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> Main preliminary environmental concerns for this project are water quality and stormwater management. Based on a review of EPA's Geographical Information System (GIS), NEPAassist, data shows two impaired streams/rivers-two unnamed rivers, perpendicular to the project area that feed Southern Ditch that is parallel to the project area. Once the draft of NEPA document is completed, provide EPA with two hard copies and/or electronic link to the document. Recommends the following be considered in preparation for the environmental document and project construction: <ul style="list-style-type: none"> Explain how adequate sediment and erosion control measures will be used to prevent discharge of pollutants into the water body. Reduce the impact of pollution runoff from construction activities. Use best management practices to control erosion, sediment release, and stormwater surface runoff to minimize adverse impacts on water resources. Stabilize soils to reduce the effects of erosion, sedimentation, and runoff to maintain or improve water quality. Identify and quantify incremental and cumulative impacts on water quality as a result of the past, present, and reasonably foreseeable actions, including the proposed project and other land use actions. Drainage design should be a major part of planning for the project and stormwater from new impervious surfaces should be treated (e.g. grassed detention basins) prior to discharge to streams to help minimize water quality impacts.
US Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> USACE was concerned their database is dated and may not identify old mitigation sites that didn't require permits (old preservation sites). Several old mitigation projects were KYTC's sites and USACE suggests contacting KYTC to check their records within the study area. USACE provided an excel table of mitigation sites, but none are located within the study area. Later coordination response from USACE (July 24, 2018) stated a Department of Army (DA) Permit may be required. The mapping shows proposed work in or near "waters of the US." Waters include several unnamed ephemeral, intermittent, or perennial tributaries to Southern Ditch, Pond Creek and the Ohio River. If the project would necessitate the discharge of dredged or fill material into any "waters of the US" then a DA permit application and additional project design detail should be submitted for review.
US Department of Housing and Urban Development (HUD)	<ul style="list-style-type: none"> After review, HUD has no input, but is available for additional assistance.
KY Airport Zoning Commission (KAZC)	<ul style="list-style-type: none"> Any permanent or temporary structures greater than 607 feet above mean sea level require a permit from the KAZC.
KY State Police	<ul style="list-style-type: none"> Noted a large number of collisions were rear-end and usually occurred near an intersection. Many of these collisions are attributed to congestion and driver inattention. Attached a KYOPS Map in response.
KY Energy And Environment Cabinet – Department for Environmental Protection	<ul style="list-style-type: none"> <u>KY Department of Fish and Wildlife (KDFWR)</u>: The Indiana bat... Gray bat... Interior Least Tern...Piping Plover... and Northern Long-eared bat...are known to occur within 10 miles of the project area. The state-listed crayfish and Kirtland's snake are known to occur within one mile of the project area. To minimize impacts to the surrounding species, the KDFWR recommends avoiding and/or minimizing impacts to wetlands. No caves, critical habitats, trout streams/fish spawning areas, or any other unique natural areas are known to occur within close proximity to the project site. If tree clearing will be required for the project, contact the U.S Fish and Wildlife Service Kentucky Field Office. Tree clearing may require payment into the Imperiled Bat Mitigation Fund. KDFWR recommends : Channel changes located within the project area should incorporate natural stream channel design; if culverts are used, the culvert should be designed to allow the passage of aquatic organisms; culverts should be designed so that degradation upstream and downstream of the culvert does not occur; development/excavation during low flow period to minimize disturbances; proper placement of erosion control structures below highly disturbed areas to minimize entry of silt into area streams; replanting of disturbed areas after construction, including stream banks, with native vegetation for soil stabilization and enhancement of fish and wildlife populations; return all disturbed instream habitat to a stable condition upon completion of construction in the area; preservation of any tree canopy overhanging any streams within the project area.
KY Division for Air Quality	<ul style="list-style-type: none"> Kentucky Division for Air Quality Regulations 401 KAR 63:010 Fugitive Emissions and 401 KAR 63:005 must be adhered to for this project. The Division has the following suggestions on how this project can help stay in compliance with the NAAQS: utilize alternatively fueled equipment; utilize other emission controls that are applicable to your equipment; reduce idling time on equipment.

Representing	Summary of Comments Resource Agency Coordination
KY Department of Education (KDE)	<ul style="list-style-type: none">No impacts under the direct control of KDE in terms of school facilities or school bus routes.Recommended Jefferson County School District be contacted directly for feedback. They will have a better knowledge of how this project could impact schools in the affected area.
KY Division of Water	<ul style="list-style-type: none">Best management practices should be utilized to reduce runoff from construction activities into nearby surface waters.Depending upon specific project details, an Individual Water Quality Certification may be required.“Stream Construction Permit for Construction in or Along a Stream” will not be required. No formal approval is required for Water Withdrawal Permitting or Water Management Planning.No permits, certifications, or formal approvals needed for the description of work from the Groundwater Section of the Watershed Management Branch. However, it is recommended the site be made aware of 401 KAR 5:037 requirements and the need to develop a Groundwater Protection Plan (GPP) for the protection of groundwater resources within that area during both construction and in operation if necessary.Project must obtain all necessary permit approvals from DOW before implementing construction.
KY Division of Waste Management	<ul style="list-style-type: none">A number of active underground storage tanks exist in the project area and sites where underground storage tanks have been removed. List of sites included in response email.All solid waste generated by this project must be disposed at a permitted facility.If asbestos, lead paint, and/or other contaminants are encountered during this project, they must be properly addressed.
KY Geological Survey	<ul style="list-style-type: none">There should be no karst or sinkhole related issues in this part of Louisville-Jefferson County.This project is outside the area of the Ohio River alluvial aquifer, and groundwater-related issues are not expected to be of great concern. However, excavation activities in the area may encounter a perched groundwater table on the unconsolidated surficial sediments, and the possibility of some localized groundwater drainage from fractured bedrock units should also be anticipated. KGS can provide information about depth to water from archives if desired.It seems unlikely excavation activities will extend deep enough to breach into the Sellersburg-Jeffersonville Limestones, but crude oil occurs in vugs and fractures in these near-surface bedrock units. Refer to Taylor and Hostettler, 2002 (US Geological Survey Water-Resources Investigation Report 02-4123).The western end of the project is underlain by a mosaic of terrace deposits, loess, and bedrock outcrops (New Albany black shale, New Providence clay shale); each of these has its own unique geotechnical challenges, so careful geotechnical data collection should precede any construction in this area.KGS surficial geologic mapping shows most of the rest of the project area is underlain by an estimated 20 feet of Pleistocene lacustrine deposits; these will typically be fine grained, can be poorly drained, and can present geotechnical design and performance challenges.
Kentucky Speleological Survey (KSS)	<ul style="list-style-type: none">Identified the Falls City Quarry Cave. This cave is approximately 3.5 miles east of the eastern study area boundary.
Metropolitan Sewer District (MSD)	<ul style="list-style-type: none">No significant concerns, but a few comments on the review of their mapping of the corridor:Water Resources, LLC stormwater basin is located on the south side of southern ditch and west of National Turnpike.MSD 72-inch diameter pipe beneath Outer Loop along the east side of Northern Ditch, which ties into a 10-foot diameter pipe along the south side of Southern Ditch.Wal-Mart Mitigation Site is located along north side of Outer Loop and west of the Wal-Mart building.Western end of the project corridor has a private pump station and a shallow 7-inch sewer line along the south side of Outer Loop and both are located within the right-of-way.Floodplain mitigation may be required for fill placed within the local 100-yr floodplain at a 1.5:1 ratio. Credits can be purchased from the Water Resources, LLC basin.
Kentucky State Nature Preserves Commission (KSNPC)	<ul style="list-style-type: none">Reported 31 occurrence records. Three federally-listed species were identified, including the Indiana bat, Gray bat, and Northern Long-eared bat. The exact location of protected species within the KSNPC report may not be released in any document or correspondence.
KY Heritage Council	<ul style="list-style-type: none">No comments about the specifics of the study, but will need to review the project as additional information becomes available. There is a possibility for the presence of cultural resources within the vicinity of the project area and further consultation will be required.

Color Key:

Federal State Study Area

Abbreviations: KY = Kentucky USFWS = U.S. Fish and Wildlife Service USDA–NRCS = U.S. Dept. of Agriculture–Natural Resources Conservation Service KDNR = Kentucky Dept. for Natural Resources KSNPC = Kentucky State Nature Preserves Commission

Outer Loop Corridor Study From 3rd Street Road to National Turnpike May 2018 Survey

Tuesday, June 05, 2018

316

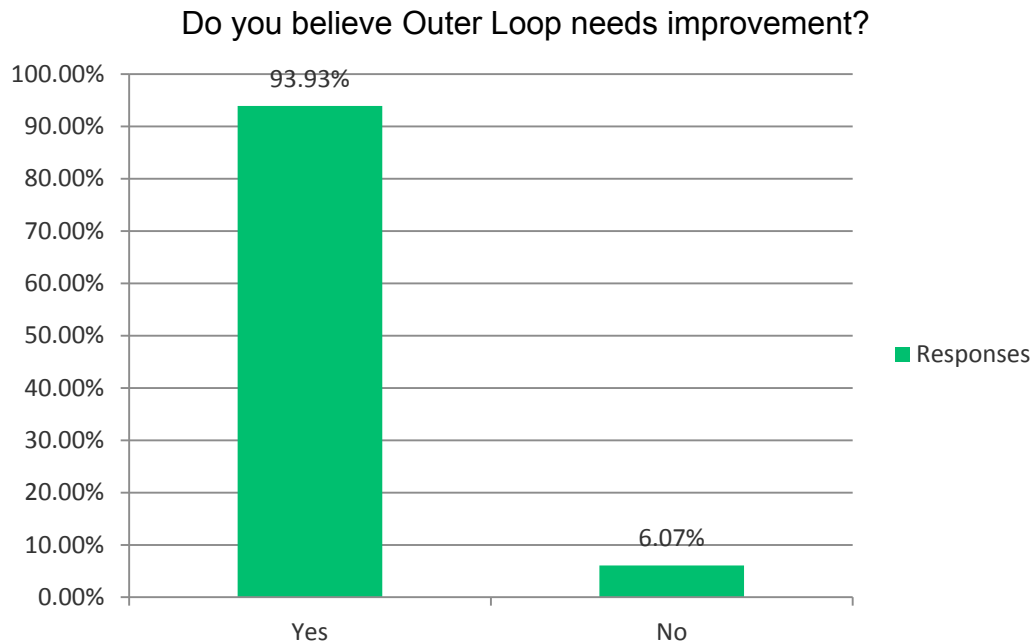
Total Responses

Date Created: Thursday, May 10, 2018

Complete Responses: 149

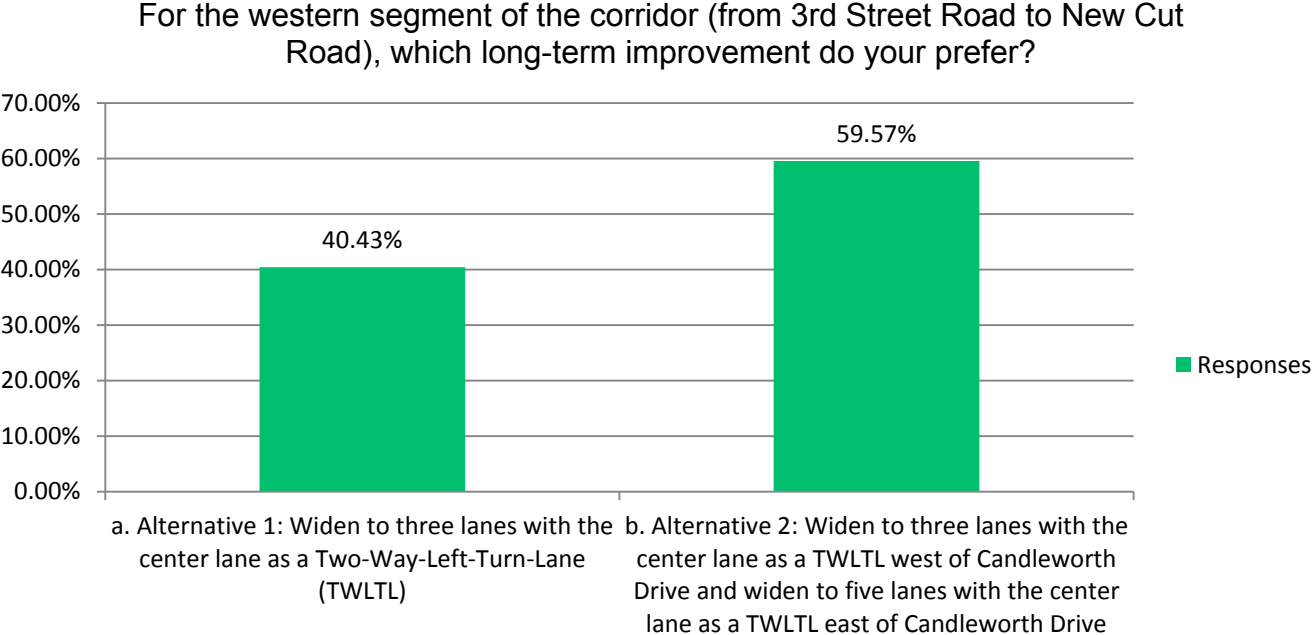
Q1: Do you believe Outer Loop needs improvement?

Answered: 313 Skipped: 3



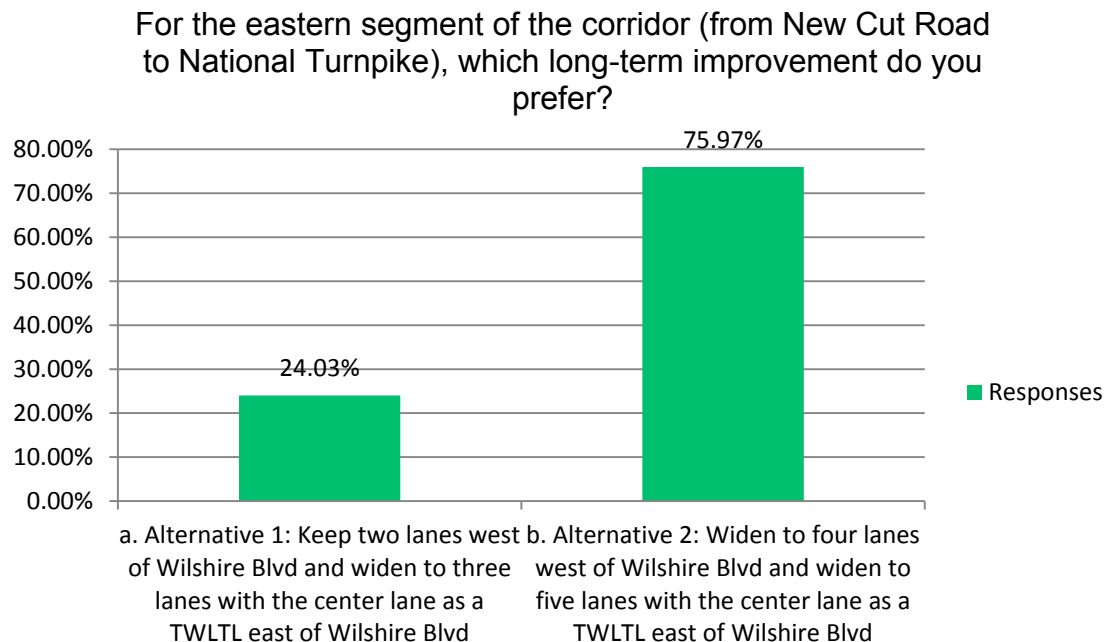
Q2: For the western segment of the corridor (from 3rd Street Road to New Cut Road), which long-term improvement do you prefer?

Answered: 235 Skipped: 81



Q3: For the eastern segment of the corridor (from New Cut Road to National Turnpike), which long-term improvement do you prefer?

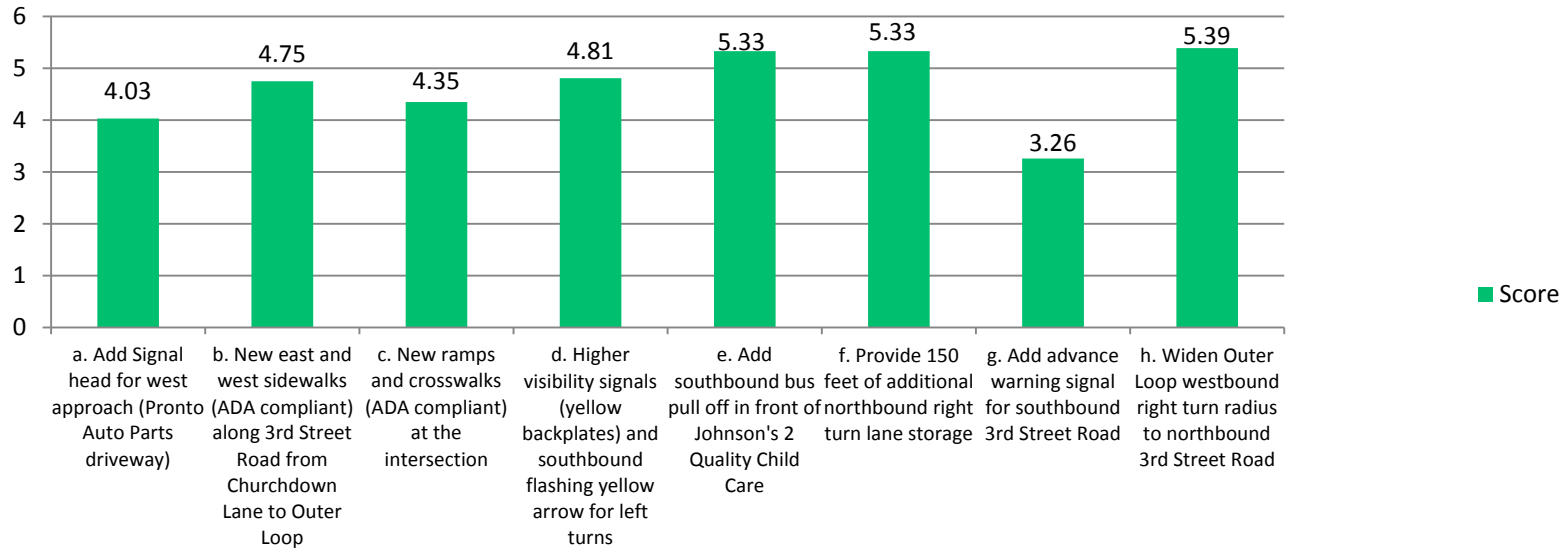
Answered: 233 Skipped: 83



Q4: Which spot improvements at 3rd Street Road above are most important to you? Rank each option 1 (most important) through 8 (least important)

Answered: 134 Skipped: 182

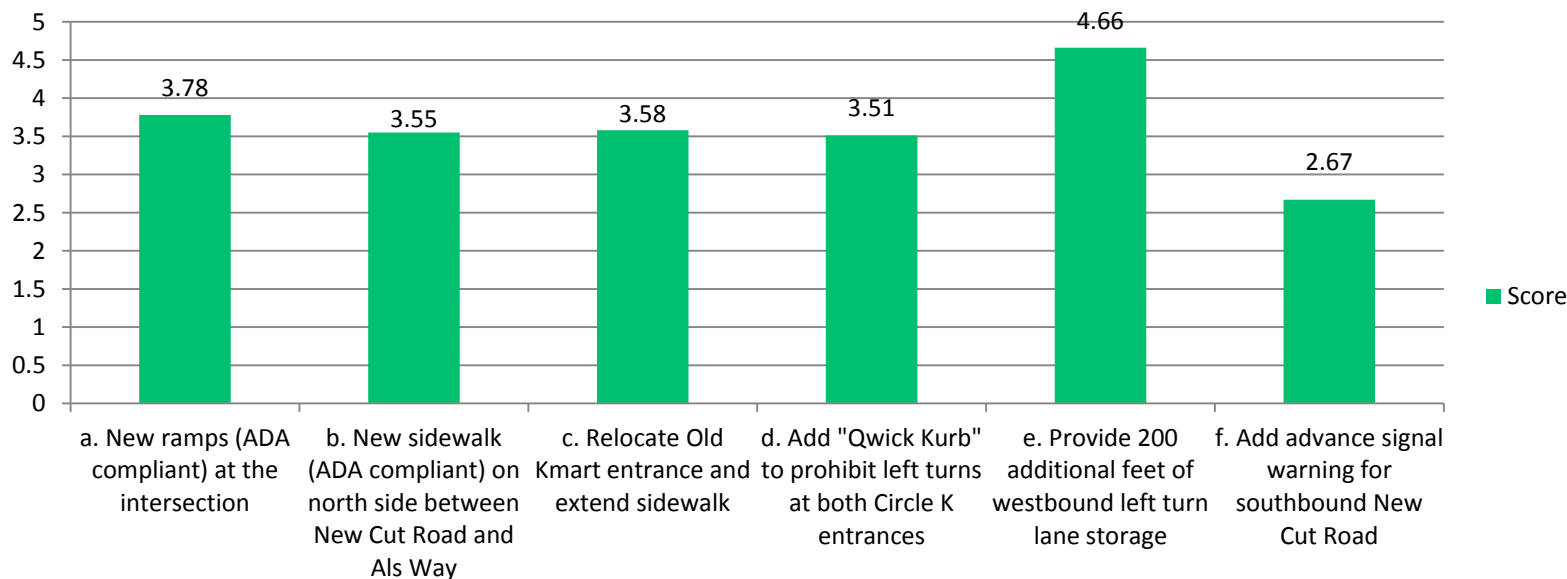
Which spot improvements at 3rd Street Road above are most important to you? Rank each option 1 (most important) through 8 (least important)



Q5: Which spot improvements at New Cut Road are most important to you? Rank each option 1 (most important) through 6 (least important)

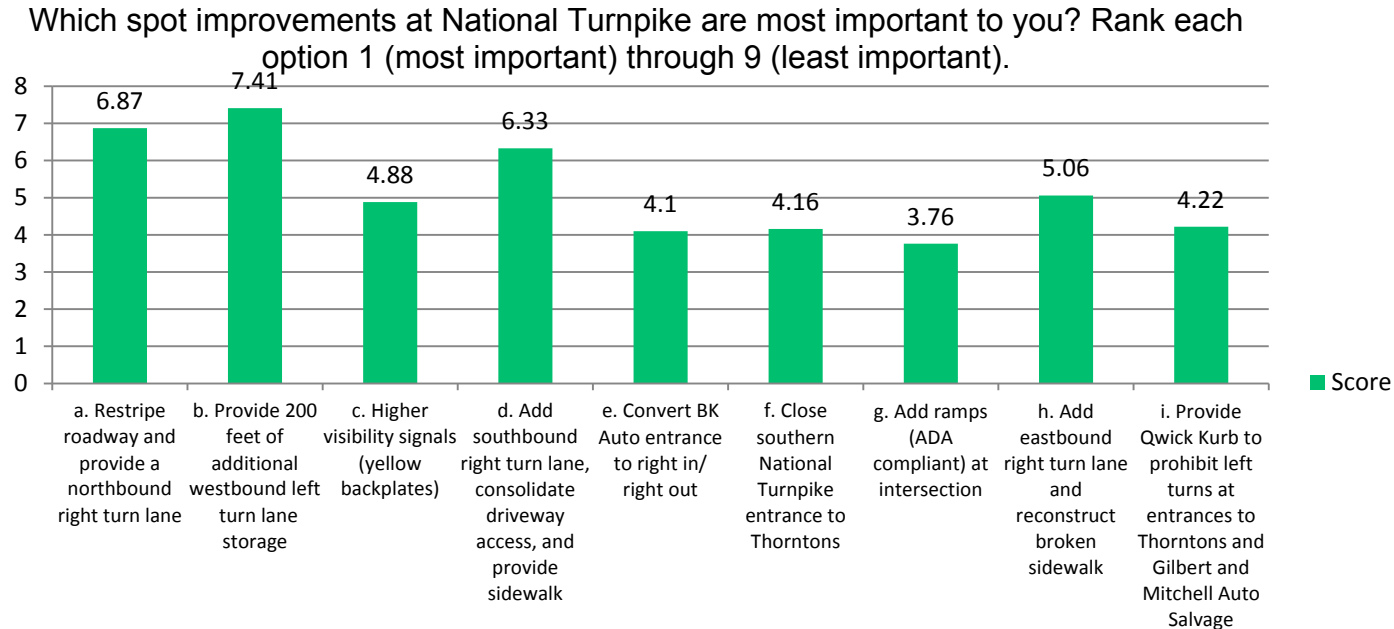
Answered: 133 Skipped: 183

Which spot improvements at New Cut Road are most important to you? Rank each option 1 (most important) through 6 (least important)



Q6: Which spot improvements at National Turnpike are most important to you? Rank each option 1 (most important) through 9 (least important).

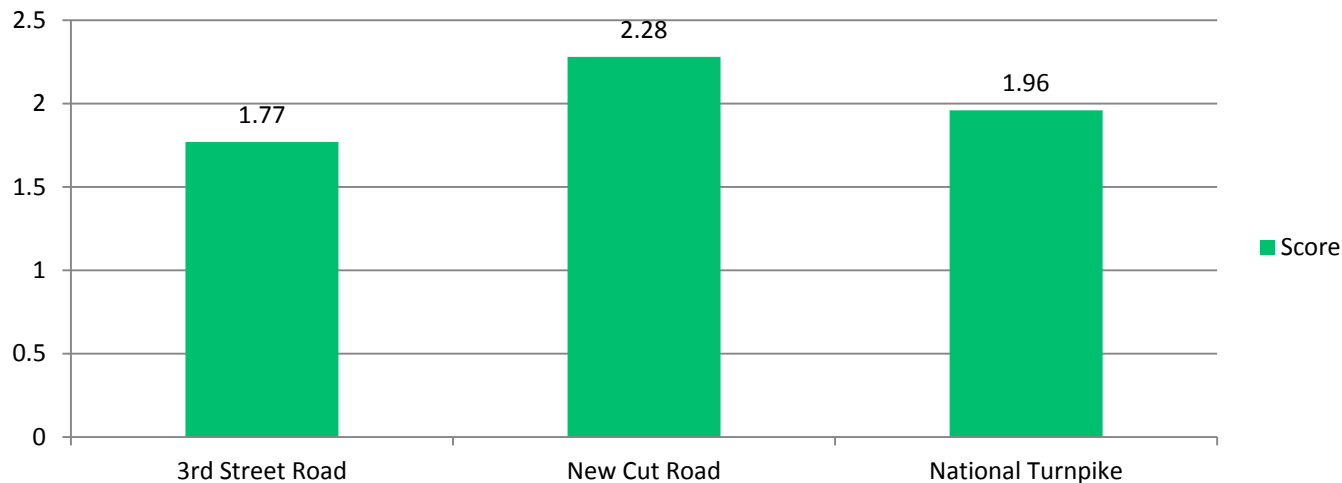
Answered: 126 Skipped: 190



Q7: For the short-term spot improvements, please rank the priority level of each intersection to show which are most important to fix. Rank each option 1 (most important) through 3 (least important).

Answered: 130 Skipped: 186

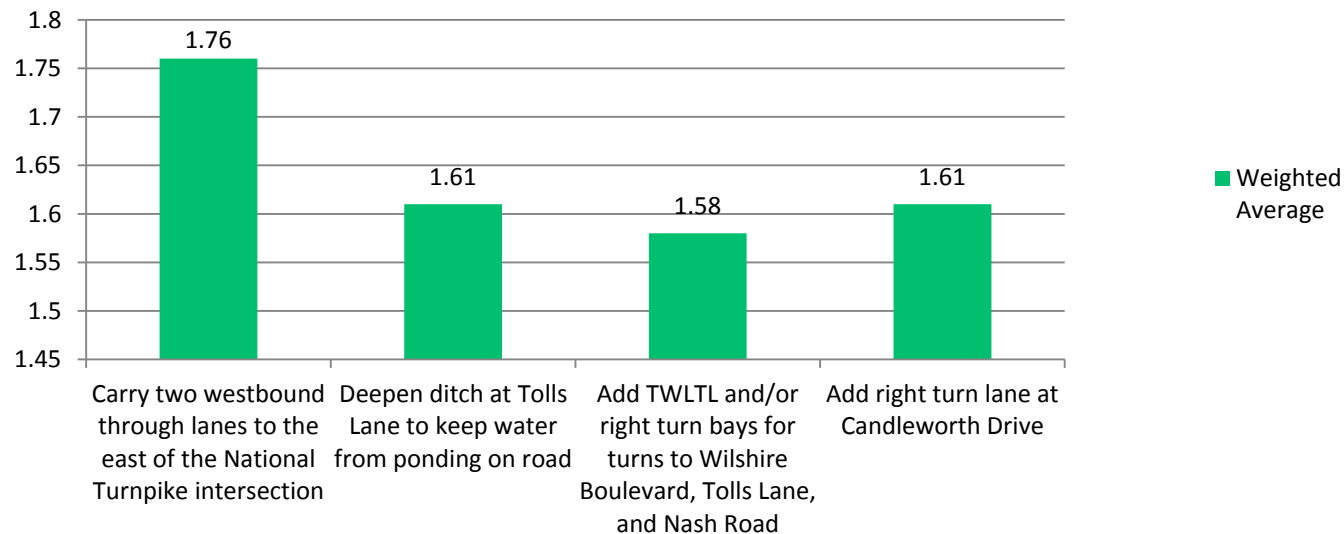
For the short-term spot improvements, please rank the priority level of each intersection to show which are most important to fix. Rank each option 1 (most important) through 3 (least important).



Q8: Please indicate your priority for the following other short-term Spot Improvements. For each, select Low or High priority column. If you do not think one of these measures should be implemented, leave the priority for that row blank.

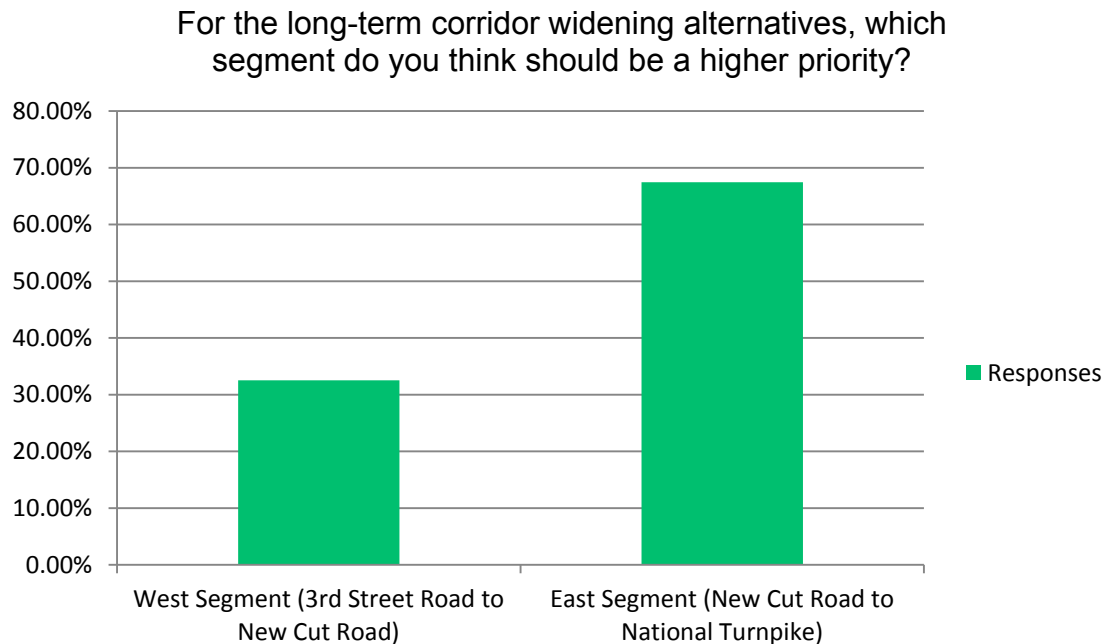
Answered: 126 Skipped: 190

Please indicate your priority for the following other short-term Spot Improvements. For each, select Low or High priority column. If you do not think one of these measures should be implemented, leave the priority for that row blank.



Q9: For the long-term corridor widening alternatives, which segment do you think should be a higher priority?

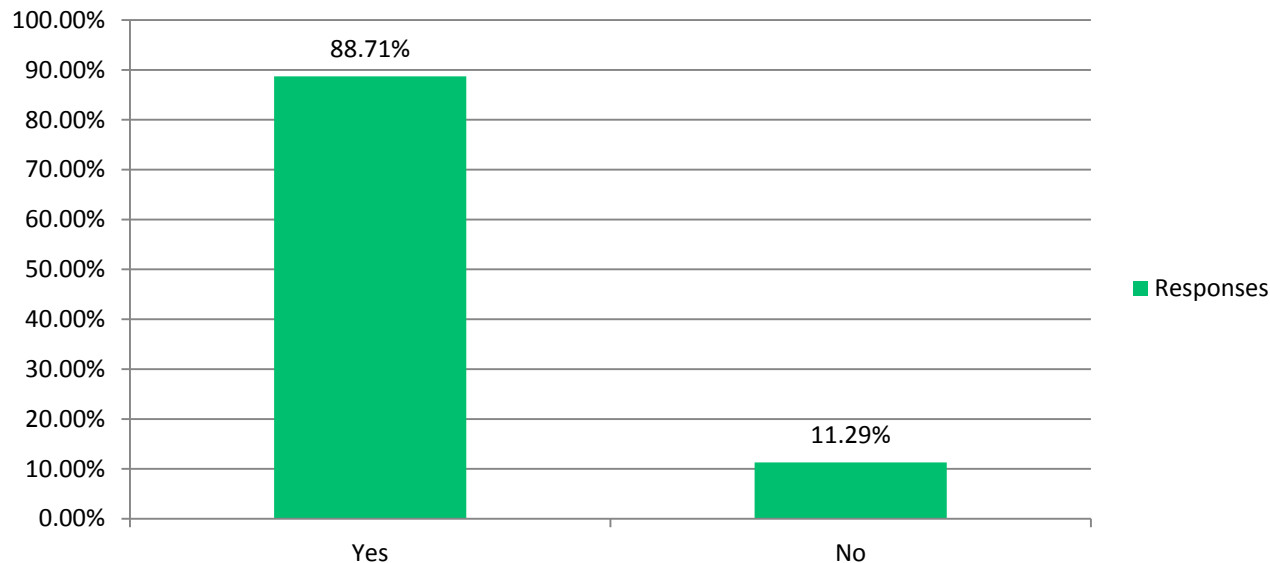
Answered: 126 Skipped: 190



Q10: For the long-term corridor widening alternatives, should the roadway be raised above the floodplain?

Answered: 124 Skipped: 192

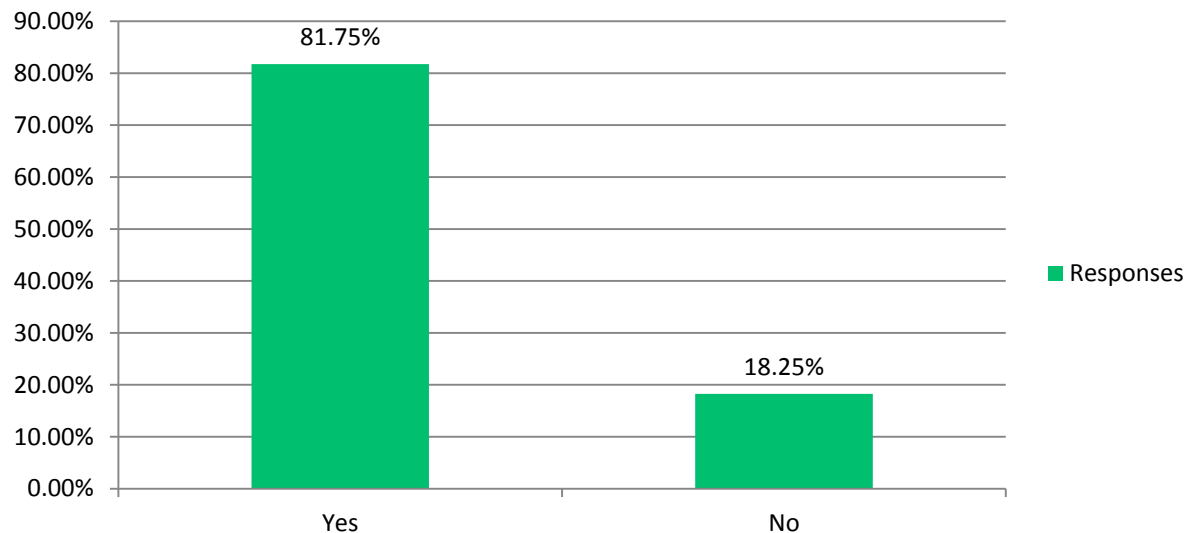
For the long-term corridor widening alternatives,
should the roadway be raised above the
floodplain?



Q11: For the long-term corridor widening alternatives, should the project include a sidewalk along Outer Loop?

Answered: 126 Skipped: 190

For the long-term corridor widening alternatives, should the project include a sidewalk along Outer Loop?



Other

- Widen Outer Loop to 5 Lanes (6)
- Add turn lanes at New Cut Rd (6)
- Do not change (4)
- Bike lane (4)
- Longer turn lanes (3)
- Add light/fix intersection at Afterglow Dr (2)
- Lower the speed limit (2)
- Longer turn lane on EB 3rd Street Rd (2)
- Add light at Candleworth (2)
- Add light at Wilshire Blvd (2)
- Look at St Anthony's Church Rd
- Add turn lanes at National Turnpike
- Widen all intersections
- Repave road only
- Add a lane from National Turnpike to New Cut Rd
- Synchronize lights from 3rd Street Rd to New Cut Rd
- Add sidewalk from National Turnpike to New Cut Rd
- Make Outer Loop 7 lanes
- Add light at Tolls Lane
- Improve RR crossing signal at 3rd Street Rd
- Make turning lane for Briercliff instead of emergency lane at 65 N off ramp

2040 Turn-Lane Metrics

Outer Loop National Turn Pike Short-Term Alternatives	AM		PM	
	Overall Intersection Delay (seconds/vehicle)	LOS	LOS	Overall Intersection Delay (seconds/vehicle)
No Build	90.9	F	F	154.1
SB Right	90.8	F	F	143.2
NB Right	48.3	D	F	122.5
WB Lefts Lengthened	90.9	F Changes WB Left Queue Storage ratio from 0.52 to 0.22	F	154.1 Changes WB Left Queue Storage ratio from 2.82 to 1.13
WB Through Carried WB through intersection	87.5	F	F	142.1
Eastbound Right	46.8	D	F	115.3
All of the above	46.2	D	F	115.4

Improved over No Build

Outer Loop Mainline Traffic Operations Summary

From 3rd Street Road to National Turnpike



	3rd Street Road to Walmart Signalized West Entrance				Walmart Signalized West Entrance to New Cut Road				New Cut Road to National Turnpike			
Description	2017 EXISTING	2035 NO BUILD	2035 BUILD Alternative 1	2035 BUILD Alternative 2	2017 EXISTING	2035 NO BUILD	2035 BUILD Alternative 1	2035 BUILD Alternative 2	2017 EXISTING	2035 NO BUILD	2035 BUILD Alternative 1	2035 BUILD Alternative 2
AM LOS	E	E	E	E	E	E	E	B	D	D	D	A
PM LOS	E	E	E	E	E	E	E	B	E	E	E	B
AM PTSF or Density	81.2	81.9	82.2	82.2	80.8	80.8	84.0	9.0	74.9	74.9	79.9	8.7
PM PTSF or Density	85.8	85.8	89.5	89.5	86.0	86.0	89.4	16.3	88.5	88.5	91.8	16.1
AM ATS	32.2	31.6	30.8	28.7	34.9	34.9	33.9	-	37.1	46.9	45.5	-
PM ATS	30.5	30.5	28.7	28.7	33.7	33.7	31.8	-	32.7	42.5	39.7	-
AM V/C Ratio	0.47	0.47	0.49	0.48	0.45	0.45	0.50	0.23	0.34	0.34	0.42	0.22
PM V/C Ratio	0.55	0.55	0.67	0.73	0.57	0.57	0.66	0.41	0.61	0.61	0.76	0.41

LOS – Level of Service

PTSF – Percent Time Spent Following

V/C Ratio – volume to capacity ratio

ATS – Average Travel Speed



Outer Loop Intersection Traffic Operations Summary

From 3rd Street Road to National Turnpike



	3rd St Rd				Walmart Signalized West Entrance				Walmart Unsignalized East Entrance			
	2017	2035 No Build	2035 Alt 1	2035 Alt 2	2017	2035 No Build	2035 Alt 1	2035 Alt 2	2017	2035 No Build	2035 Alt 1	2035 Alt 2
AM Delay	18.0	18.1	20.4	24.6	7.1	10.9	11.6	9.3	14.8	24.5	30.3	12.2
AM Peak LOS	B	B	C	C	A	B	B	A	SB - B	SB - C	SB - D	SB -C
PM Delay	27.0	28.0	37.7	62.1	13.8	15.9	24.2	14.9	30.0	194.7	364.6	752.5
PM Peak LOS	C	C	D	E	B	B	C	B	SB - D	SB - F	SB - F	SB - F

	New Cut Road/Kmart				New Cut Road				National Turnpike			
	2017	2035 No Build	2035 Alt 1	2035 Alt 2	2017	2035 No Build	2035 Alt 1	2035 Alt 2	2017	2035 No Build	2035 Alt 1	2035 Alt 2
AM Delay	23.5	41.0	21.3	40.4	46.9	32.8	33.1	32.0	55.1	90.9	49.1	47.7
AM Peak LOS	EB - C	EB - E	C	EB - E	D	C	C	C	E	F	D	D
PM Delay	45.3	805.4	410.5	484.3	65.4	52.6	57.7	44.5	91.9	154.1	122	87.1
PM Peak LOS	EB - E	EB - F	EB - F	EB - F	E	D	E	D	F	F	F	F

Note: Using the Highway Capacity Manual and Software
EB- Eastbound SB - Southbound

