

APPENDIX E:

Improvement Option Sheets

US 25 CORBIN TO LONDON CONNECTOR STUDY

IMPROVEMENT OPTION SHEETS



COMMONLY USED ABBREVIATIONS

AADT – Average Annual Daily Traffic

AASHTO – American Association of State Highway and Transportation Officials

CCRF – Critical Crash Rate Factor – measure of crash frequency for each segment or spot location

DHV – Design Hourly Volume

EEC – Expected Excess Crashes – measure of crashes that actually occurred compared to the number of crashes expected for each segment or spot location

KABCO Crash Injury Classification:

K – fatality

A – severe injury

B – minor injury

C – potential injury

O – no injury

LOS – Level of Service

MP – Mile Point

TWLTL – Two Way Left Turn Lane

LOCATION INFORMATION



US 25 Existing Features

- Varies from Two to Three (TWLTL) Lanes
- Lane Width Varies from 11-12'
- Paved Shoulder Width Varies from 2-14'
- 34 Access Points Per Mile
- High Speed Differential

Issues

Throughout this portion of US 25 over 50 percent of crashes can be attributed to the frequency of access points. How vehicles entering and exiting these access points interact with traffic on US 25 is a detriment to the safety of the roadway. There were eight fatality crashes and 13 crashes in which an incapacitating injury occurred from 2016 to 2019.

IMPROVEMENT CONCEPT

Proposed Access Management—MP 8.90 to MP 8.95



Existing Street View—MP 8.90 to MP 8.95



According to the 2018 AASHTO green book, as the number of driveways or business entrances increase along a roadway, there is a corresponding increase in crash rates. The estimated crash rate for urban and suburban areas with 34 access points per mile is eight crashes per million vehicle miles traveled for undivided roadways and between six and seven crashes per million vehicle miles traveled for roadways with a TWLTL.

A

SPOT AND SAFETY

PROJECT PRIORITY

HIGH

LOCATION

Laurel County
US 25
MP 0.000 to MP 9.028

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 6

A: 12

High CRF Spots

(0.3 Miles): 7

EEC: -96

Crashes: 514

DESCRIPTION

Improve access management on US 25 from the intersection with US 25E to KY 1006. The amount of access points will be reduced by 35 and entrances will be consolidated and more clearly defined.

COST ESTIMATE

2020 Dollars

Design: \$155,000

ROW: \$225,000

Utilities: \$125,000

Const.: \$755,000

LOCATION INFORMATION



US 25 Existing Features

- Varies from Two to Three (TWLTL) Lanes
- Lane Width Varies from 11-12'
- Paved Shoulder Width Varies from 2-14'
- 34 Access Points Per Mile
- High Speed Differential



Issues

From 2016 to 2019, 38% of all crashes along the US 25 study corridor occurred during wet or dark conditions. During these roadway conditions, the visibility of traditional pavement striping is decreased. Increasing the reflectivity of this pavement striping throughout the corridor could mitigate some of these crashes.

IMPROVEMENT CONCEPT

Non-Reflective Striping, Wet Conditions



Reflective Striping, Wet Conditions



B

SPOT AND SAFETY

PROJECT PRIORITY

SHORT-TERM

LOCATION

Laurel County
US 25
MP 0.000 to MP 9.028

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 6

A: 12

High CRF Spots
(0.3 Miles): 7

EEC: -96

Crashes: 514

DESCRIPTION

Restripe US 25 from US 25E to KY 1006 using 6" thermo pavement markings and restripe all thermo turn arrows. This will improve the visibility of the pavement striping and enhance the safety of the corridor.

COST ESTIMATE

2020 Dollars

Design: N/A

ROW: N/A

Utilities: N/A

Const.: \$170,000

LOCATION INFORMATION



US 25 Existing Features

- Three Lanes (TWLTL)
- 12' Lane Width
- 14' Paved Shoulder NB/4' Paved Shoulder SB
- 55 mph Posted Speed Limit

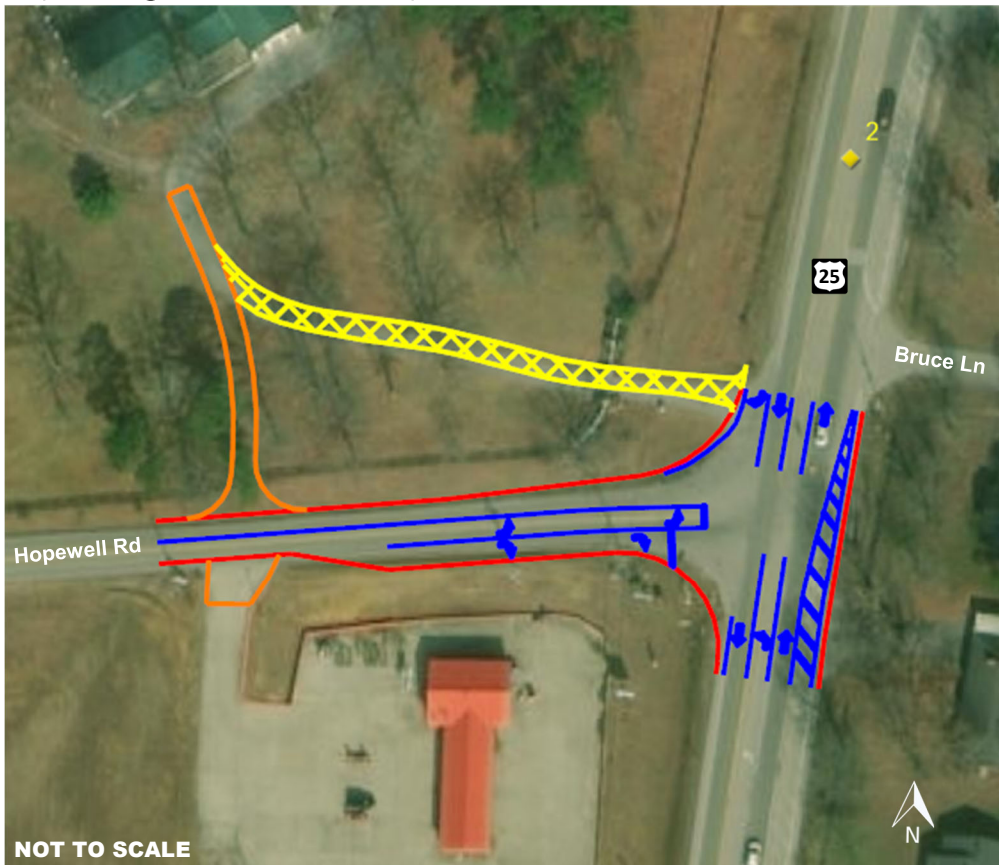


Issues

Hopewell Rd., Bruce Ln., and a private entrance all intersect US 25 within a short distance of each other resulting in a high number of conflict points. Of the 15 crashes that occurred within the vicinity of these intersections, six were angle crashes involving vehicles entering or exiting Hopewell Rd.

IMPROVEMENT CONCEPT

Separate Right and Left Turn on Hopewell Rd.; Remove Entrance From US 25



NOT TO SCALE

Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove

C

SPOT AND SAFETY

PROJECT PRIORITY

HIGH

LOCATION

Laurel County
US 25 at Hopewell Rd.
MP 1.965

DATA

No Build (AADT):

2025: 12,700

2040: 13,700

Crash Data:

K: 1

A: 1

CRF 4.46

EEC: 10.43

Crashes: 15

DESCRIPTION

Improve intersection by widening Hopewell Rd. to separate left and right turn lanes. Move private entrance from US 25 to Hopewell Rd.

COST ESTIMATE

2020 Dollars

Design: \$25,000

ROW: \$60,000

Utilities: \$70,000

Const.: \$115,000

LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 55 mph Posted Speed Limit

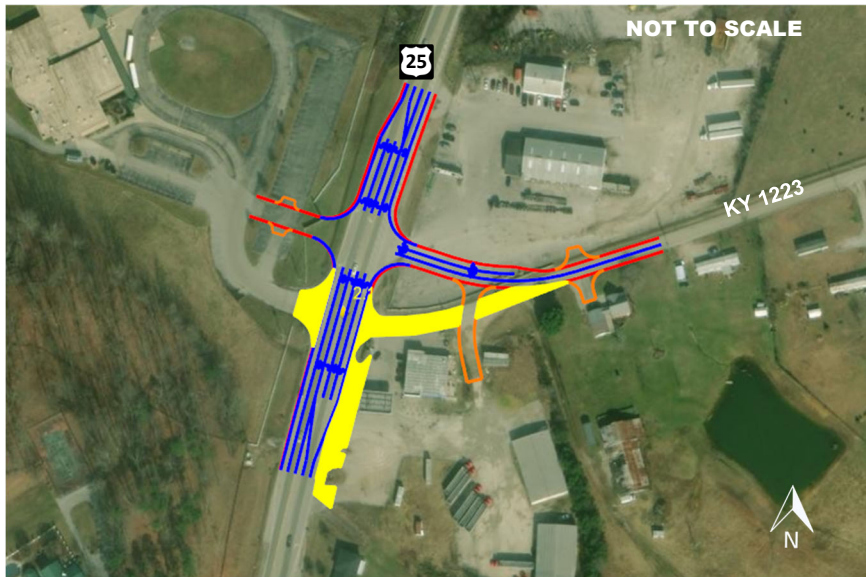


Issues

There are six private entrances near the intersection of US 25—KY 1223 that may negatively impact the safety of US 25. From 2016 to 2019 there were eight crashes at this intersection, two of which resulted in an injury.

IMPROVEMENT CONCEPT

Improve US 25—KY 1223 Intersection; Eliminate Access Points Along US 25



Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove

According to the 2018 AASHTO green book, as the number of driveways or business entrances increase along a roadway, there is a corresponding increase in crash rates. At the intersection of US25—KY 1223 there are three business entrances with access to US 25. These entrances also occur in the middle of the right turn lane.

By moving the US 25—KY 1223 intersection to the north (MP 2.120) and removing the business entrances from US 25, friction is reduced between vehicles entering and exiting these entrances and vehicles traveling on US 25. This improvement option is compatible with any future widening of US 25.

D

SPOT AND SAFETY

PROJECT PRIORITY

HIGH

LOCATION

Laurel County
US 25 at KY 1223
MP 2.098

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 0

CRF: 2.35

EEC: 3.53

Crashes: 8

DESCRIPTION

Re-align KY 1223 so that it intersects US 25 at MP 2.120. Eliminate multiple private entrances on US 25 and reconstruct a more clearly defined private entrance off of KY 1223.

COST ESTIMATE

2020 Dollars

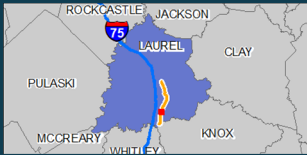
Design: \$100,000

ROW: \$275,000

Utilities: \$50,000

Const.: \$540,000

LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 55 mph Posted Speed Limit

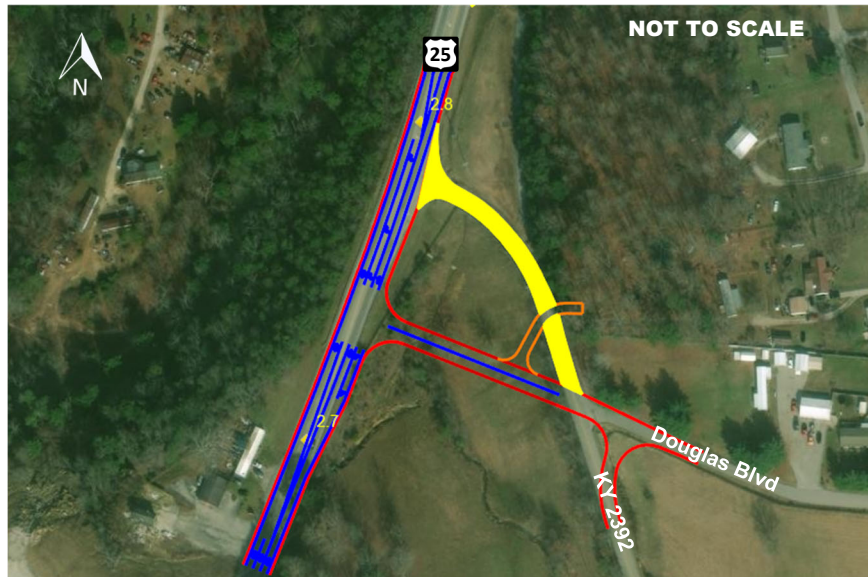


Issues

Laurel Whitley Rd. currently intersects US 25 at MP 3.111 at a severe skew. From 2016 to 2019, two of the five crashes reported at this location were caused by vehicles waiting to turn left into Laurel Whitley Rd. The intersections of US 25—Elmer Williams Rd. and US 25—KY 2392 are 195 feet apart. The close proximity of these approach roads presents a potential safety issue.

IMPROVEMENT CONCEPT

Improve US 25—KY 2392/Douglas Blvd Intersection MP 2.735



Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove

The intersections of US 25—Elmer Williams Rd. and US 25—KY 2392 are 195 feet apart. The close proximity of these approach roads presents a potential safety issue. Laurel Whitley Rd. ties to US 25 at a severe skew (47 degrees) that is much greater than desirable according to highway design standards. There is no left or right turn lane for vehicles exiting US 25 through these approach roads.

Elmer Williams Rd. and Laurel Whitley Rd. will be closed, and traffic formerly accessing US 25 at these locations will be diverted to an improved US 25—KY 2392/Douglas Blvd. intersection. At the improved intersection there are left and right turn lanes for vehicles exiting US 25. This improvement option is compatible with any future widening of US 25.

E-1

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25 at KY 2392
MP 2.787

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 1

CRF: 1.45

EEC: 0.52

Crashes: 7

DESCRIPTION

Close both the Elmer Williams Rd. (MP 2.841) and Laurel Whitley Rd. (MP 3.111). Improve the US 25—KY 2392/Douglas Blvd. Intersection. Traffic formerly accessing US 25 through Elmer Williams Rd. and Laurel Whitley Rd. will access US 25 through the improved intersection.

COST ESTIMATE

2020 Dollars

Design: \$105,000

ROW: \$200,000

Utilities: \$105,000

Const.: \$525,000

LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 55 mph Posted Speed Limit



Issues

Laurel Whitley Rd. currently intersects US 25 at MP 3.111 at a severe skew. From 2016 to 2019, two of the five crashes reported at this location were caused by vehicles waiting to turn left into Laurel Whitley Rd. While it does not appear that any of the crashes can be attributed to the skew of this intersection during the crash analysis period, the conditions at this approach road still present a potential intersection sight distance deficiency.

IMPROVEMENT CONCEPT

Improve Skew at Laurel Whitley Rd.



US 25 MP 3.111, Laurel Whitley Rd. Existing Intersection Skew: 47 degrees

US 25 MP 3.015, Laurel Whitley Rd. Proposed Intersection Skew: 0 degrees

According to the 2018 AASHTO green book, a skewed intersection leg should not be more than 15 degrees from perpendicular. Further investigation is required to ensure that enough sight distance is provided at the existing intersection.

E-2

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25 at Laurel Whitley
Rd.
MP 3.111

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 1

CRF: 1.45

EEC: 0.52

Crashes: 5

DESCRIPTION

Improve approach intersection sight distance by moving the tie point of Laurel Whitley Rd. to US 25 from MP 3.111 to MP 3.015, which will reduce the skew of the approach road.

COST ESTIMATE

2020 Dollars

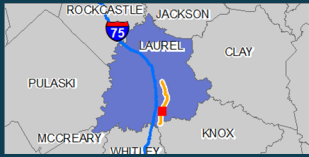
Design: \$40,000

ROW: \$250,000

Utilities: \$90,000

Const.: \$200,000

LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 25 Access Points
- High Speed Differential

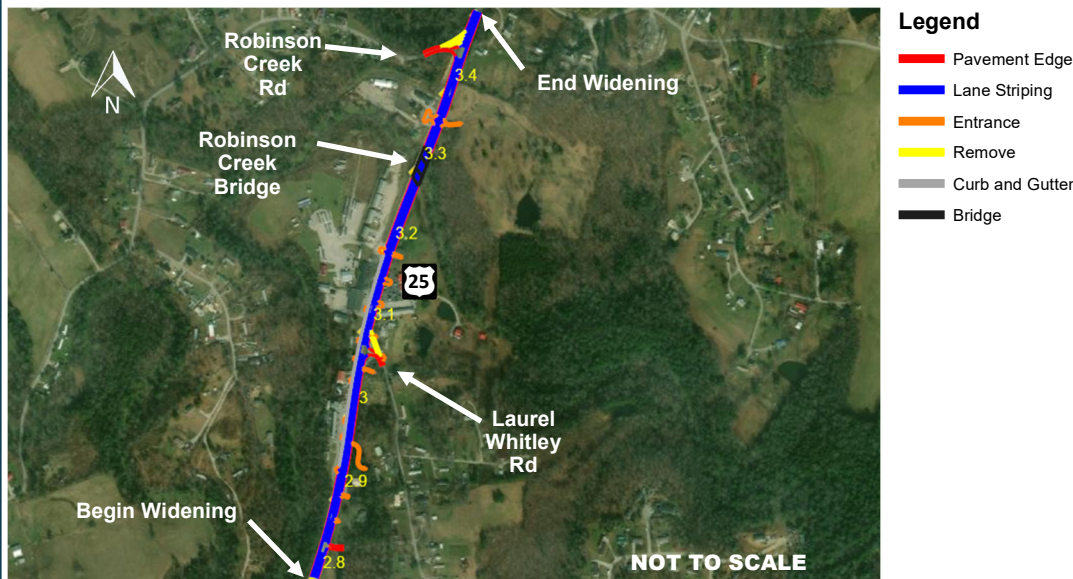


Issues

This portion of US 25 is two lanes with a high frequency of access points throughout the segment. Vehicles turning left into an entrance are forced to stop in the middle of the travel lane while yielding to oncoming traffic, which has resulted in 16 rear-end collisions through this portion of the corridor. This stretch is approximately 0.5 miles long, with transitions to three lanes on both the north and south ends. There is an existing two lane bridge over Robinson Creek at approximately MP 3.320.

IMPROVEMENT CONCEPT

Widen US 25 from MP 2.80 to MP 3.50—Overview



US 25 is two lanes through this section where there are 25 access points. Providing a two way left turn lane will reduce conflicts between through traffic and vehicles entering and exiting these access points.

Connecting the three lane sections of US 25 at MP 2.800 and 3.500, including the replacement of the Robinson Creek Bridge, was previously designed by HMB (Item No. 11-8305.00). Curb and gutter will be installed along the west side of US 25 from approximately MP 2.800 to MP 3.200, and the access points through this stretch will be more clearly defined. The Joint Inspection (typically held when design is 70% complete) for this design project was held on October 22, 2008, and HMB submitted an advanced situation folder for the Robinson Creek Bridge. This project came to a halt when the full reconstruction of US 25 was being explored. Further information about the design cost can be found in the detailed cost summary.

F

SPOT AND SAFETY

PROJECT PRIORITY

LOW

LOCATION

Laurel County

US 25

MP 2.800 to MP 3.500

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 1

CRF: 1.37

EEC: 5.47

Crashes: 29

DESCRIPTION

Widen the existing two lane section of US 25 to accommodate a two way left turn lane. This separates left-turning traffic from the traveled way. The bridge over Robinson Creek will be replaced.

COST ESTIMATE

2020 Dollars

Design: \$540,000

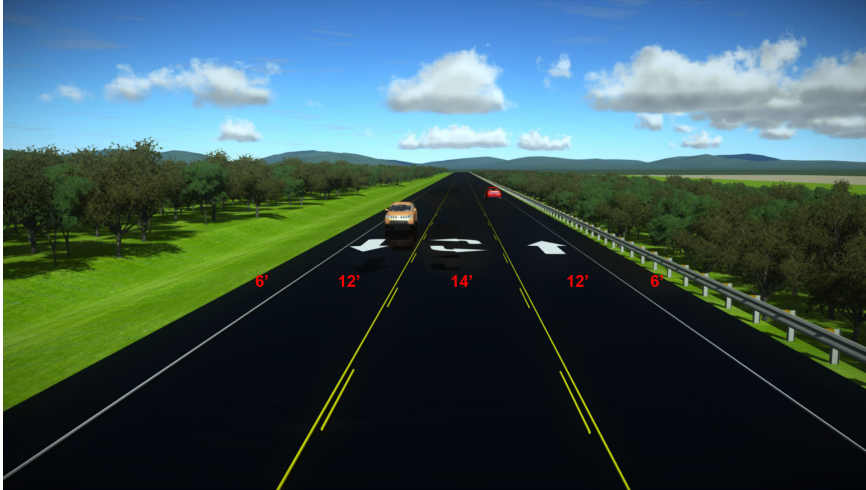
ROW: \$1,540,000

Utilities: \$700,000

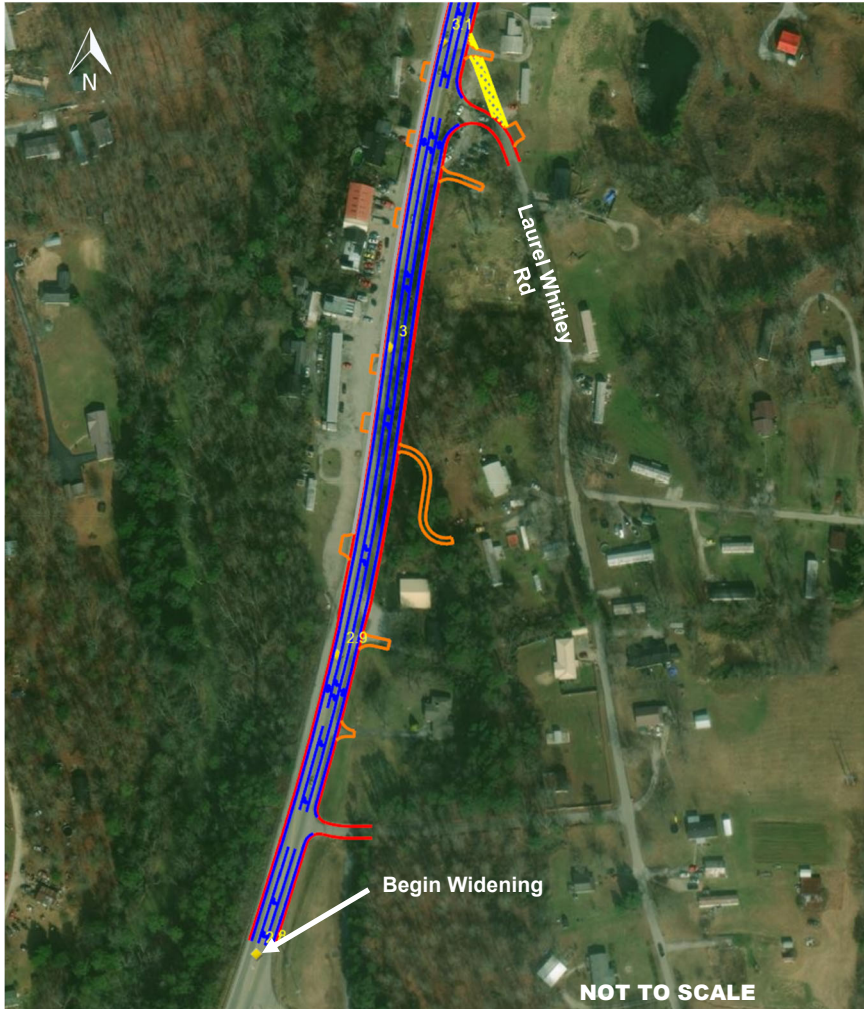
Const.: \$5,400,000

LOCATION INFORMATION

Proposed Typical Section



Improvement Option F—MP 2.800 to MP 3.100



Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove
- Curb and Gutter
- Bridge

F

CONTINUED

SPOT AND SAFETY

PROJECT PRIORITY

LOW

LOCATION

Laurel County
US 25
MP 2.800 to MP 3.500

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 1

CRF: 1.37

EEC: 5.47

Crashes: 29

DESCRIPTION

Widen the existing two lane section of US 25 to accommodate a two way left turn lane. This separates left-turning traffic from the traveled way. The bridge over Robinson Creek will be replaced.

COST ESTIMATE

2020 Dollars

Design: \$540,000

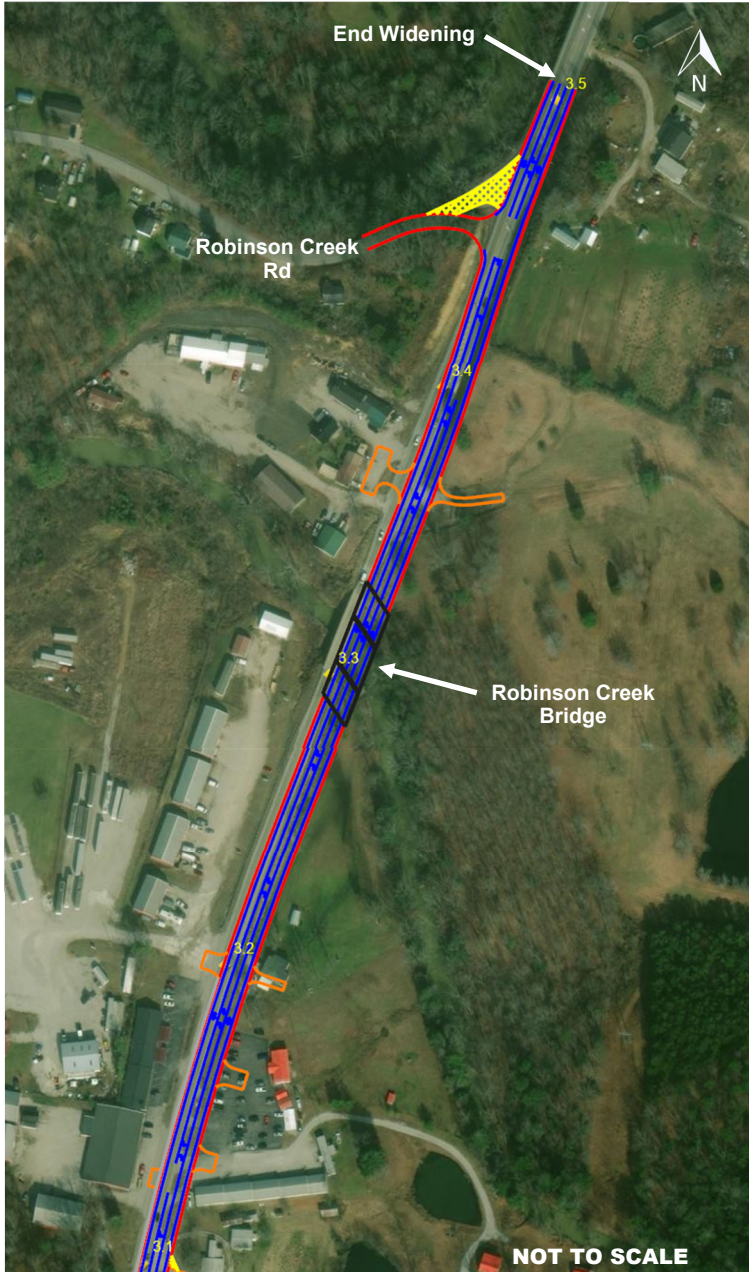
ROW: \$1,540,000

Utilities: \$700,000

Const.: \$5,400,000

LOCATION INFORMATION

Improvement Option F—MP 3.100 to MP 3.500



Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove
- Curb and Gutter
- Bridge

F

CONTINUED

SPOT AND SAFETY

PROJECT PRIORITY

LOW

LOCATION

Laurel County
US 25
MP 2.800 to MP 3.500

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 1

CRF: 1.37

EEC: 5.47

Crashes: 29

DESCRIPTION

Widen the existing two lane section of US 25 to accommodate a two way left turn lane. This separates left-turning traffic from the traveled way. The bridge over Robinson Creek will be replaced.

COST ESTIMATE

2020 Dollars

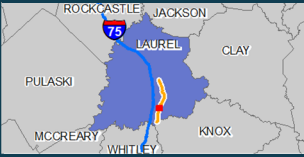
Design: \$540,000

ROW: \$1,540,000

Utilities: \$700,000

Const.: \$5,400,000

LOCATION INFORMATION



US 25 Existing Features

- Three Lanes (TWLTL)
- 11' Lane Width
- 4' Paved Shoulder Width
- 55 mph Posted Speed Limit



Issues

Robinson Creek Rd. and Lily School Rd./Echo Valley Rd. currently intersect US 25 at severe skew which creates a potential intersection sight distance deficiency. From 2016 to 2019, seven crashes occurred at the US 25—Robinson Creek Rd. intersection and one crash resulted in an injury, while 14 crashes occurred at the US 25—Lily School Rd./Echo Valley Rd. intersection and six crashes resulted in injuries.

IMPROVEMENT CONCEPT

Improving the skew of Robinson Creek Rd. and reconstructing Echo Valley Rd. to make a four leg intersection at US 25 MP 3.450 increases the sight distance for both approach roads. Removing the access of Lily School Rd. to US 25 at MP 3.606 eliminates an intersection at which 14 crashes occurred from 2016 to 2019, four of those crashes causing an incapacitating injury. Vehicles that normally access US 25 through this approach road will do so through the US 25—Lily School Rd./Slate Ridge Rd. intersection at MP 4.105. The distance between these two intersections measured along Lily School Rd. is 0.72 miles. This improvement option is compatible with any future widening of US 25.

US 25 MP 3.606, Robinson Creek Rd. Existing Intersection Skew (Eliminated): 44 degrees

US 25 MP 3.606, Lily School Rd. Existing Intersection Skew (Eliminated): 26 degrees

US 25 MP 3.606, Echo Valley Rd. Existing Intersection Skew (Eliminated): 33 degrees

According to the 2018 AASHTO green book, a skewed intersection leg should not be more than 15 degrees from perpendicular. Further investigation is required to ensure that enough sight distance is provided at the existing intersection.

G

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25 at Robinson Creek Rd. & Lily School Rd./Echo Valley Rd.
MP 3.480 & MP 3.606

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 4

CRF: 4.06

EEC: 9.30

Crashes: 21

DESCRIPTION

Move Robinson Creek Rd. to the south to improve intersection skew. Reconstruct Echo Valley Rd. to tie to US 25 across from Robinson Creek Rd. at approximately MP 3.450. Construct a cul-de-sac to terminate Lily School Rd. at US 25 MP 3.606.

COST ESTIMATE

2020 Dollars

Design: \$145,000

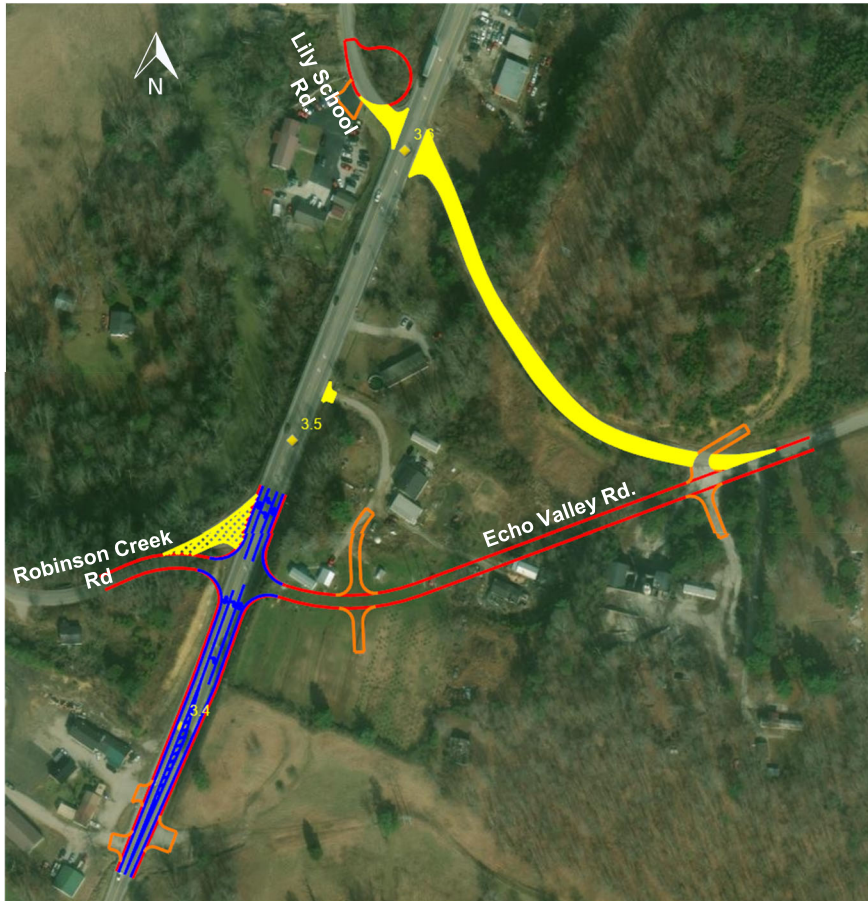
ROW: \$450,000

Utilities: \$120,000

Const.: \$725,000

LOCATION INFORMATION

Proposed US 25—Robinson Creek Rd./Echo Valley Rd. Intersection



Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove

Terminate Lily School Road, Remove Existing Echo Valley Rd.



G

CONTINUED

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25 at Robinson Creek
Rd. & Lily School Rd./
Echo Valley Rd.
MP 3.480 & MP 3.606

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 4

CRF: 4.06

EEC: 9.30

Crashes: 21

DESCRIPTION

Move Robinson Creek Rd. to the south to improve intersection skew. Reconstruct Echo Valley Rd. to tie to US 25 across from Robinson Creek Rd. at approximately MP 3.450. Construct a cul-de-sac to terminate Lily School Rd. at US 25 MP 3.606.

COST ESTIMATE

2020 Dollars

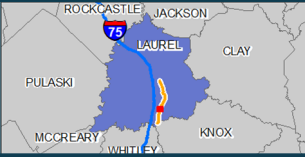
Design: \$145,000

ROW: \$450,000

Utilities: \$120,000

Const.: \$725,000

LOCATION INFORMATION



US 25 Existing Features

- Three Lanes (TWLTL)
- 11' Lane Width
- 4' Paved Shoulder Width
- 55 mph Posted Speed Limit



Issues

The existing intersections of US 25—Lily School Rd./Echo Valley Rd. and US 25—Old Hwy 25 occur at a skew resulting in a potential intersection sight distance deficiency. Lily School Rd. has an 11% grade as it approaches US 25, further contributing to the intersection sight distance issue. Between 2016 and 2019, there were 14 crashes at Lily School Rd./Echo Valley Rd. and six of those crashes resulted in an injury.

IMPROVEMENT CONCEPT

Lily School Rd. (MP 3.606) and Old Highway 25 (MP 3.784 & MP 4.311) will no longer have access to US 25. Vehicles that normally access US 25 through these approach roads will do so through the US 25—Lily School Rd./Slate Ridge Rd. intersection at MP 4.105. This intersection will be evaluated for a traffic signal due to the additional traffic that would enter and exit US 25 at this location. Installation of a traffic signal is included in the cost estimate.

A cul-de-sac will be constructed to terminate Lily School Rd. at the existing intersection with Echo Valley Rd. Refer to Improvement Option G concerning Echo Valley Rd.

US 25 MP 3.606, Lily School Rd. Existing Intersection Skew (Eliminated): 26 degrees

US 25 MP 3.784, Old Hwy 25 Existing Intersection Skew (Eliminated): 31 degrees

US 25 MP 4.105, Lily School Rd. / Slate Ridge Rd. Existing Intersection Skew: 0 degrees

US 25 MP 4.311, Old Hwy 25 Existing Intersection Skew (Eliminated): 17 degrees

According to the 2018 AASHTO green book, a skewed intersection leg should not be more than 15 degrees from perpendicular. Further investigation is required to ensure that enough sight distance is provided at the existing intersection.

H

SPOT AND SAFETY

PROJECT PRIORITY

LOW

LOCATION

Laurel County
US 25 at Lily School Rd. /
Slate Ridge Rd.
MP 4.105

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 4

CRF: 4.06

EEC: 9.30

Crashes: 24

DESCRIPTION

Close approach road access from US 25 for Old US 25 (MP 3.784 & MP 4.311) and Lily School Rd. (MP 3.606). Construct a cul-de-sac to terminate Lily School Rd. Evaluate warrants for traffic signal at the intersection of Lily School Rd. / Slate Ridge Rd. and US 25 at MP 4.105.

COST ESTIMATE

2020 Dollars

Design: \$35,000

ROW: \$40,000

Utilities: \$10,000

Const.: \$170,000

LOCATION INFORMATION

Close Old Hwy 25 MP 4.311, Traffic Signal at Lily School Rd. / Slate Ridge Rd.



Legend

Remove

H

CONTINUED

SPOT AND SAFETY

PROJECT PRIORITY

LOW

LOCATION

Laurel County
US 25 at Lily School Rd. /
Slate Ridge Rd.
MP 4.105

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Crash Data:

K: 0

A: 4

CRF: 4.06

EEC: 9.30

Crashes: 24

DESCRIPTION

Close approach road access from US 25 for Old US 25 (MP 3.784 & MP 4.311) and Lily School Rd. (MP 3.606). Construct a cul-de-sac to terminate Lily School Rd. Evaluate warrants for traffic signal at the intersection of Lily School Rd. / Slate Ridge Rd. and US 25 at MP 4.105.

COST ESTIMATE

2020 Dollars

Design: \$35,000

ROW: \$40,000

Utilities: \$10,000

Const.: \$170,000

Close Lily School Rd. MP 3.606, Close Old Hwy 25 MP 3.784



LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 55 mph Posted Speed Limit



Issues

There were 17 crashes in the vicinity of the intersection of Fariston Rd. and US 25 from 2016 to 2019. Eleven of those crashes were rear ends that likely can be attributed to vehicles entering and exiting this approach interacting with through traffic on US 25.

IMPROVEMENT CONCEPT

Remove Fariston Rd. Approach MP 5.146, Traffic Signal at KY 552



If the Fariston Rd. approach is eliminated, then a grade separated rail crossing would be removed. This crossing under the railroad is narrow and doesn't appear to have much vertical clearance. Further investigation is required to determine if emergency vehicles can currently travel through this grade separated crossing. The nearest grade separated rail crossing to the north is at US 25 MP 7.300, while the nearest grade separated crossing to the south is at Underpass Rd., from Lily School Rd., which intersects US 25 at MP 4.100.

Legend

Remove

I-1

SPOT AND SAFETY

PROJECT PRIORITY

HIGH

LOCATION

Laurel County
US 25 at Fariston Rd. /
KY 552
MP 5.146

DATA

No Build (AADT):

2025: 14,200

2040: 15,300

Crash Data:

K: 0

A: 1

CRF: 4.99

EEC: 12.30

Crashes: 17

DESCRIPTION

Remove access to US 25 from Fariston Rd. at MP 5.146. Vehicles that currently gain access to or leave US 25 at Fariston Rd. will travel to KY 552. Evaluate warrants for traffic signal at the intersection of KY 552 and US 25.

COST ESTIMATE

2020 Dollars

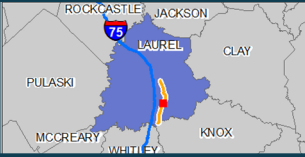
Design: \$15,000

ROW: \$15,000

Utilities: \$15,000

Const.: \$60,000

LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 55 mph Posted Speed Limit

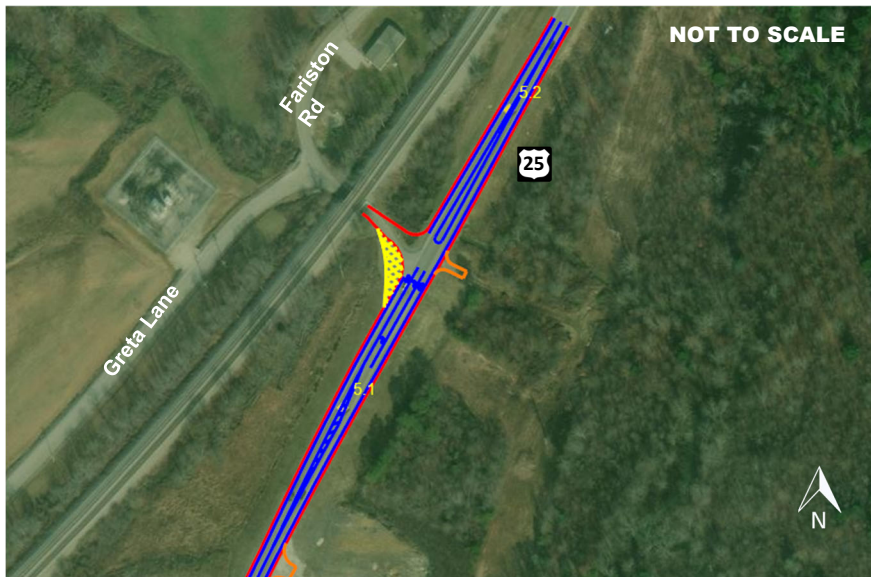


Issues

There were 17 crashes in the vicinity of the intersection of Fariston Rd. and US 25 from 2016 to 2019. Eleven of those crashes were rear ends that likely can be attributed to vehicles entering and exiting this approach interacting with through traffic on US 25.

IMPROVEMENT CONCEPT

Widen US 25 for Left Turn Lane; Improve Fariston Rd. Skew



US 25 is currently a two lane roadway through the Fariston Rd. approach at MP 5.146. Widening US 25 to accommodate a left turn lane will prevent conflicts between through traffic on US 25 and vehicles turning left into Fariston Rd. Improving the skew at this intersection will improve sight distance for vehicles entering US 25 from Fariston Rd. A similar improvement has been considered at this location in the past, but nothing moved forward in anticipation of the full reconstruction of US 25.

US 25 MP 5.146, Fariston Rd. Existing Intersection Skew: 38 degrees

US 25 MP 5.155, Fariston Rd. Proposed Intersection Skew: 0 degrees

According to the 2018 AASHTO green book, a skewed intersection leg should not be more than 15 degrees from perpendicular. Further investigation is required to ensure that enough sight distance is provided at the existing intersection.

I-2

SPOT AND SAFETY

PROJECT PRIORITY

HIGH

LOCATION

Laurel County
US 25 at Fariston Rd. /
KY 552
MP 5.146

DATA

No Build (AADT):

2025: 14,200

2040: 15,300

Crash Data:

K: 0

A: 1

CRF: 4.99

EEC: 12.30

Crashes: 17

DESCRIPTION

Widen US 25 to accommodate a left turn lane into Fariston Rd. at MP 5.146. Improve the skew of the Fariston Rd. approach.

COST ESTIMATE

2020 Dollars

Design: \$80,000

ROW: \$35,000

Utilities: \$25,000

Const.: \$385,000

- Two Lanes
- 11' Lane Width
- 4' Shoulder Width
- 55 mph Posted Speed Limit



The existing intersections of US 25 and Fariston Rd. /Old Hwy 25 at MP 7.511 and Fariston Rd. at MP 8.126 are severely skewed. US 25 is three lanes with a TWLTL through the intersection at MP 7.511 and two lanes through the intersection at MP 8.126. From 2016 to 2019, there were five crashes that occurred at the intersection at MP 7.511, and nine crashes that occurred at the intersection at MP 8.126. Two of those nine crashes resulted in fatalities, while three other crashes resulted in an injury.

Improve Old Hwy 25/Fariston Rd. Skew MP 7.511



US 25 MP 7.450/7.540, Fariston Rd./Old Hwy 25 Proposed Intersection Skew: 0 degrees

According to the 2018 AASHTO green book, a skewed intersection leg should not be more than 15 degrees from perpendicular. Further investigation is required to ensure that enough sight distance is provided at the existing intersection.

J

PROJECT PRIORITY

MEDIUM

Laurel County

Laurel County
US 25 at Fariston Rd./Old
Hwy 25
MP 7.511 &
MP 8.126

No Build (AADT):

2025: 12,900

2040: 13,900

Crash Data:

K: 2

A: 1

CRF: 2.79

EEC: 4.82

Crashes: 14

Eliminate the Fariston Rd. approach at US 25 MP 8.126. Vehicles that currently access US 25 through this intersection will do so through Old Hwy 25 at approximately MP 7.540. Construct new connection to US 25 for Fariston Rd. and Old Hwy 25 to improve intersection skew.

2020 Dollars

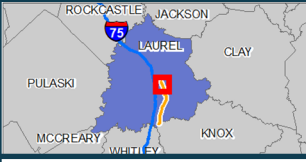
Design: \$45,000

ROW: \$275,000

Utilities: \$80,000

Const.: \$225,000

LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 14 Access Points
- High Speed Differential
- Parking Lots Flush with US 25
- 55 mph Posted Speed Limit



Issues

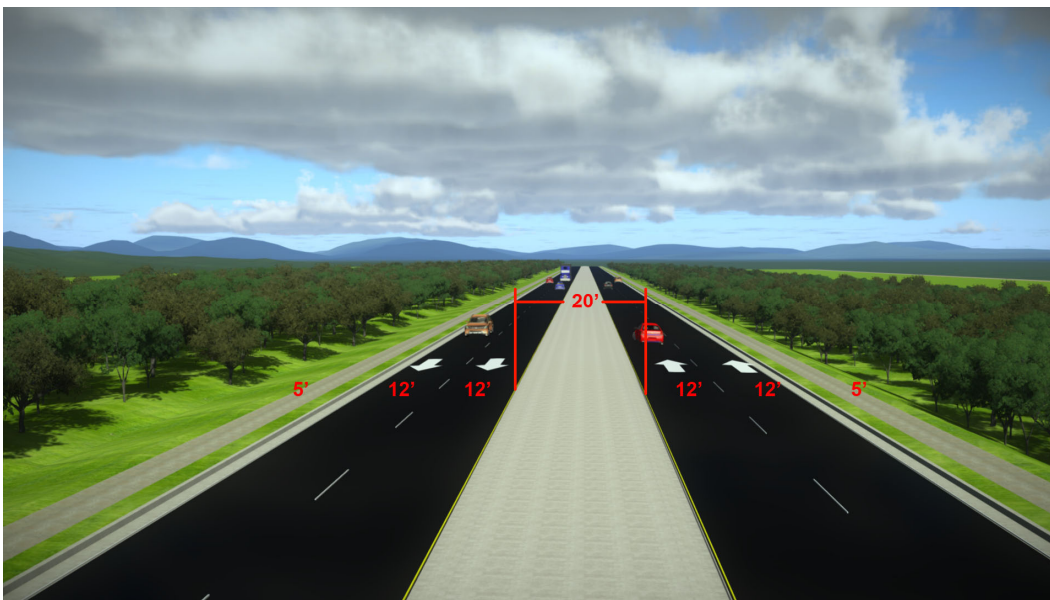
The parking lots for the businesses that sit adjacent to the roadway do not have clearly defined entrances. The frequency of access points has resulted in 26 crashes through this two lane segment of US 25 from 2016 to 2019, and 10 of those crashes were rear ends.

IMPROVEMENT CONCEPT

New US 25 will be constructed off alignment from approximately MP 8.520 to MP 8.800 to allow for a J-Turn to be constructed in between US 25 and the railroad at MP 8.630. The transition from two to four lanes will occur through this curve, and curb and gutter and sidewalk will be constructed to match the previously designed section to the north. This improvement serves as a transition zone to the section of US 25 from KY 1006 to KY 192 currently in the right of way phase.

Vehicles traveling SB will no longer be able to turn left into the access points on the east side of US 25. Those vehicles will access these properties through a J-turn at approximately MP 8.630. Vehicles wishing to travel SB from the access points on the east side of US 25 will travel to the intersection to KY 1006 to make a U-turn. The future development plan to the west of existing US 25 will be taken into consideration when designing this improvement option, and it is compatible with any future widening of US 25.

Proposed Typical Section



K-1

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25
MP 8.520 to MP 9.028

DATA

No Build (AADT):

2025: 12,900

2040: 13,900

Crash Data:

K: 1

A: 0

CRF: 1.50

EEC: 6.68

Crashes: 26

DESCRIPTION

Widen the existing two lane roadway to four lanes with a raised median. The lane configuration will match a section of US 25 to the north of KY 1006 that was previously designed. US 25 will be constructed off of existing alignment for a short stretch to construct the J-Turn at MP 8.630.

COST ESTIMATE

2020 Dollars

Design: \$545,000

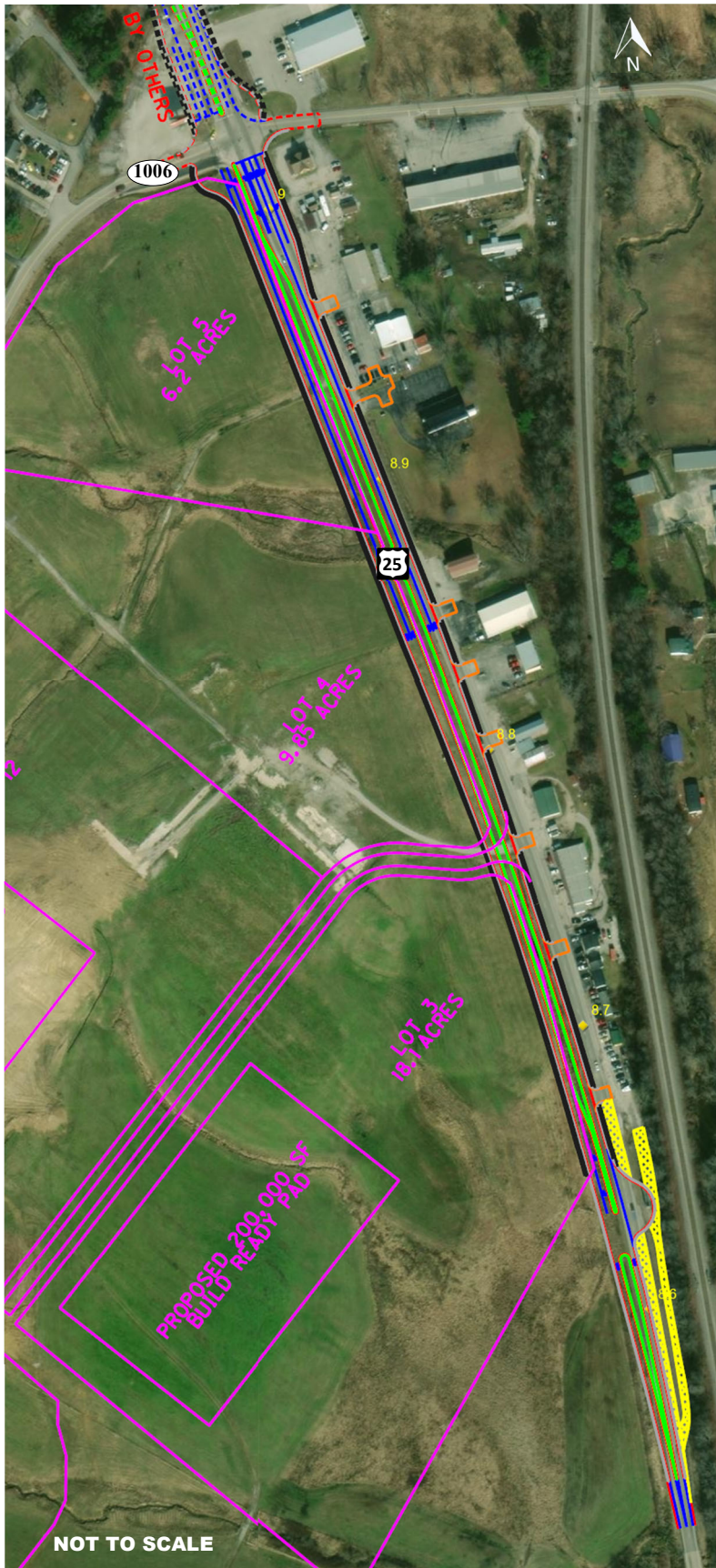
ROW: \$250,000

Utilities: \$200,000

Const.: \$2,710,000

LOCATION INFORMATION

Widen US 25 From MP 8.520 to KY 1006



Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove
- Curb and Gutter
- Raised Median
- Sidewalk
- Development Plan

K-1

CONTINUED

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25
MP 8.520 to MP 9.028

DATA

No Build (AADT):

2025: 12,900

2040: 13,900

Crash Data:

K: 1

A: 0

CRF: 1.50

EEC: 6.68

Crashes: 26

DESCRIPTION

Widen the existing two lane roadway to four lanes with a raised median. The lane configuration will match a section of US 25 to the north of KY 1006 that was previously designed. US 25 will be constructed off of existing alignment for a short stretch to construct the J-Turn at MP 8.630.

COST ESTIMATE

2020 Dollars

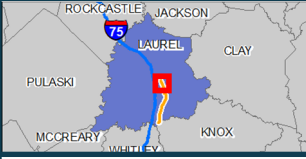
Design: \$545,000

ROW: \$250,000

Utilities: \$200,000

Const.: \$2,710,000

LOCATION INFORMATION



US 25 Existing Features

- Two Lanes
- 11' Lane Width
- 4' Paved Shoulder Width
- 14 Access Points
- High Speed Differential
- Parking Lots Flush with US 25
- 55 mph Posted Speed Limit

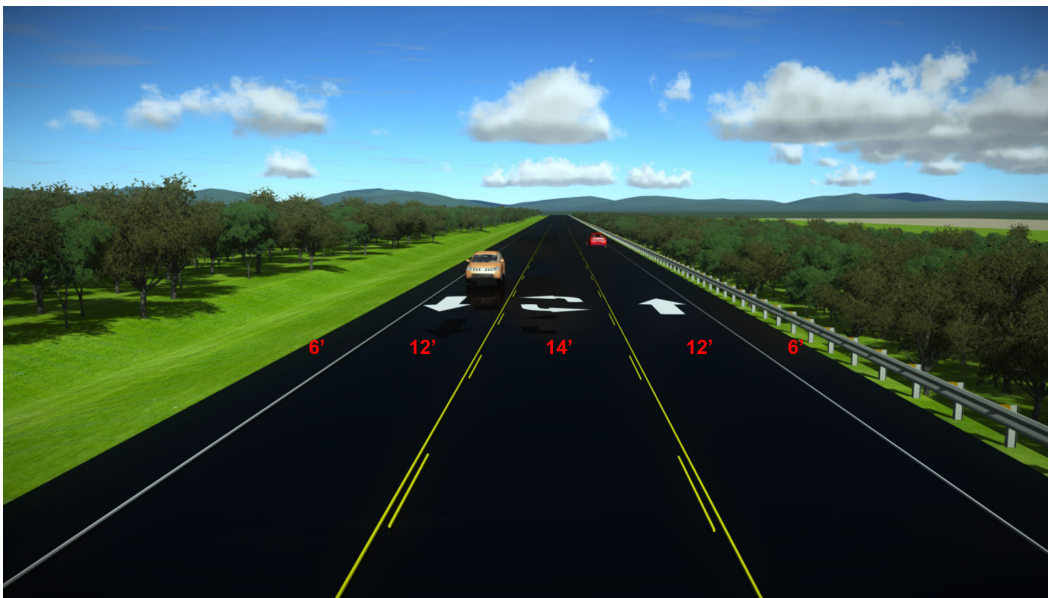
Issues

The parking lots for the businesses that sit adjacent to the roadway do not have clearly defined entrances. The frequency of access points has resulted in a 26 crashes through this two lane segment of US 25, and 10 of those crashes were rear ends.

IMPROVEMENT CONCEPT

New US 25 will be constructed off alignment from approximately MP 8.520 to MP 8.900. Old US 25 through will serve as a frontage road through this area. The lane configuration at the intersection of US 25 and KY 1006 will match that of the project to the north that is currently in the right of way phase. New US 25 will be a three lane roadway with a two way left turn lane. The future development plan to the west of existing US 25 will be taken into consideration when designing this improvement option, and it is compatible with any future widening of US 25.

Proposed Typical Section



K-2

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25

MP 8.520 to MP 9.028

DATA

No Build (AADT):

2025: 12,900

2040: 13,900

Crash Data:

K: 1

A: 0

CRF: 1.50

EEC: 6.68

Crashes: 26

DESCRIPTION

Re-align US 25 from approximately MP 8.520 to 8.900. Use the existing two lane section of US 25 as a frontage road in order to separate through traffic and traffic entering/exiting the access points to the east.

COST ESTIMATE

2020 Dollars

Design: \$470,000

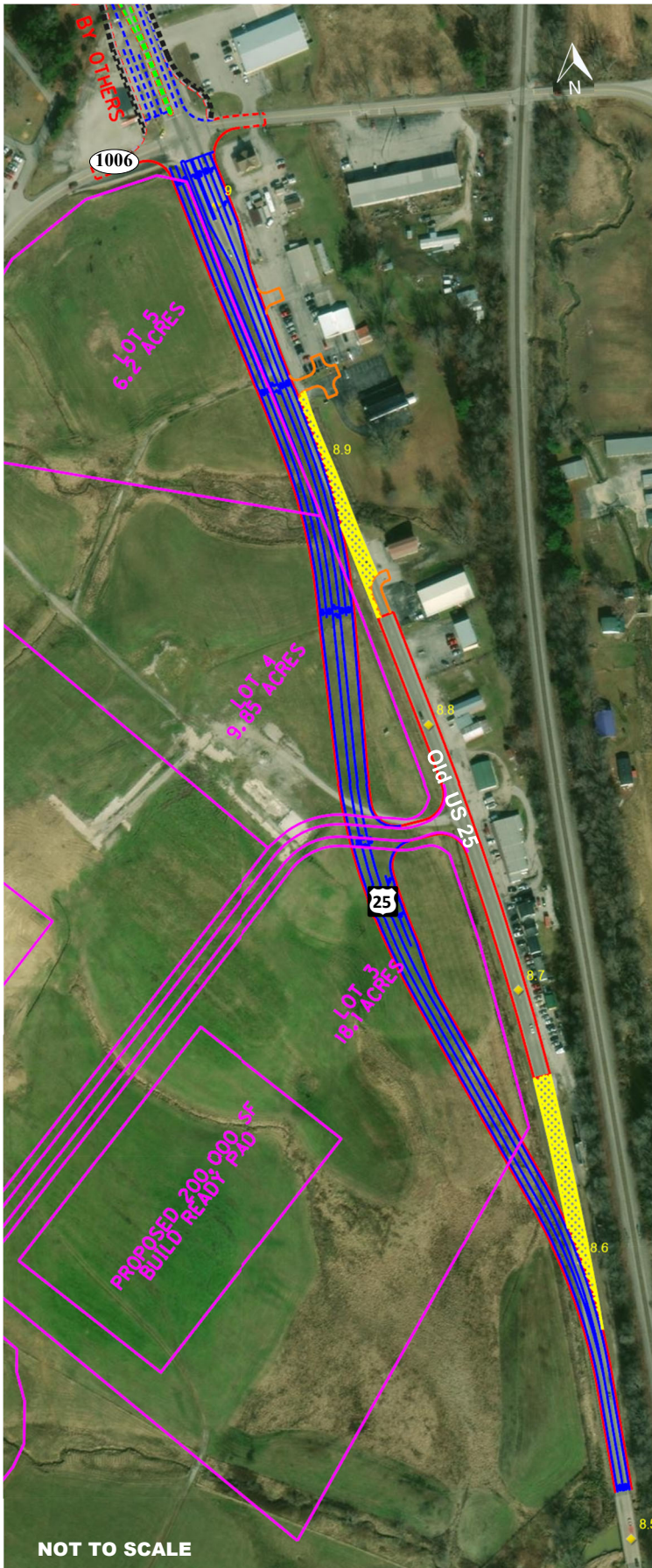
ROW: \$600,000

Utilities: \$200,000

Const.: \$2,330,000

LOCATION INFORMATION

Re-align US 25 From MP 8.520 to KY 1006



Legend

- Pavement Edge
- Lane Striping
- Entrance
- Remove
- Development Plan

K-2

CONTINUED

SPOT AND SAFETY

PROJECT PRIORITY

MEDIUM

LOCATION

Laurel County
US 25
MP 8.520 to MP 9.028

DATA

No Build (AADT):

2025: 12,900

2040: 13,900

Crash Data:

K: 1

A: 0

CRF: 1.50

EEC: 6.68

Crashes: 26

DESCRIPTION

Re-align US 25 from approximately MP 8.520 to 8.900. Use the existing two lane section of US 25 as a frontage road in order to separate through traffic and traffic entering/exiting the access points to the east.

COST ESTIMATE

2020 Dollars

Design: \$470,000

ROW: \$600,000

Utilities: \$200,000

Const.: \$2,330,000

LOCATION INFORMATION



US 25 Proposed Features

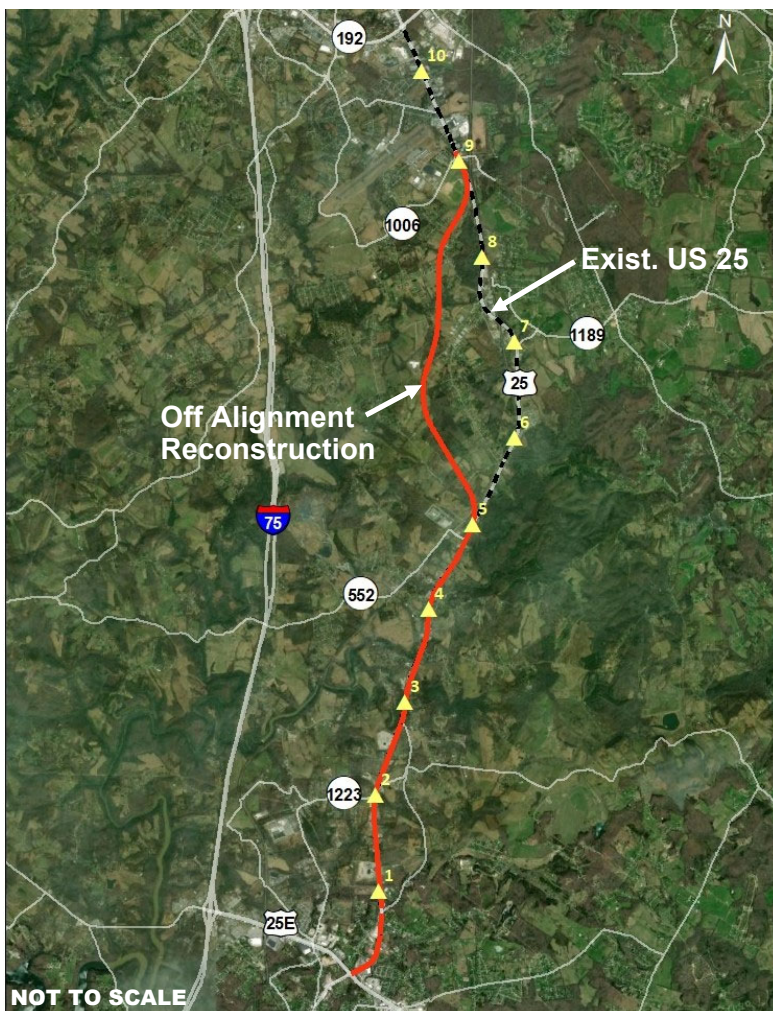
- Four Lanes
- 12' Lane Width
- 10' Outside Paved Shoulder, 4' Inside Paved Shoulder
- Partially Access Controlled
- 40' Depressed Median

Option Description

US 25 will be widened along the roadway's existing alignment until MP 5.000. At that point new US 25 curves to the west of the existing alignment and travels cross country before tying back to existing US 25 at KY 1006. The proposed typical section transitions from five lanes (TWLTL) at US 25E to four lanes with a depressed median at Campground Rd. at MP 0.650. US 25 continues as a four lane, depressed median roadway until just south of the intersection of US 25 and KY 1006 where it transitions back to five lanes. This option was previously explored through the preliminary design phase.

IMPROVEMENT CONCEPT

Option A, US 25 Full Reconstruction



A

FULL RECONSTRUCTION

PROJECT PRIORITY

LONG-TERM

LOCATION

Laurel County
US 25

MP 0.000 to MP 9.028

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Build (AADT):

2025: 13,900

2040: 15,000

Crash Data:

K: 6

A: 12

High CRF Spots
(0.3 Miles): 7

EEC: -96

Crashes: 514

COST ESTIMATE

2020 Dollars

Design: \$15,700,000

ROW: \$35,400,000

Utilities: \$3,300,000

Const.: \$78,100,000

LOCATION INFORMATION



US 25 Proposed Features

- Four Lanes
- 12' Lane Width
- 10' Outside Paved Shoulder, 4' Inside Paved Shoulder
- Partially Access Controlled
- 40' Depressed Median

Option Description

US 25 will be widened along the roadway's existing alignment from US 25E to KY 1006. The proposed typical section transitions from five lanes (TWLTL) at US 25E to four lanes with a depressed median at Campground Rd. at MP 0.650. US 25 continues as a four lane, depressed median roadway until just south of the intersection of US 25 and KY 1006 where it transitions back to five lanes. This option was previously explored through the preliminary design phase.

IMPROVEMENT CONCEPT

Option B, US 25 Full Reconstruction



B

FULL RECONSTRUCTION

PROJECT PRIORITY

LONG-TERM

LOCATION

Laurel County
US 25

MP 0.000 to MP 9.028

DATA

No Build (AADT):

2025: 14,600

2040: 15,800

Build (AADT):

2025: 13,200

2040: 14,200

Crash Data:

K: 6

A: 12

High CRF Spots
(0.3 Miles): 7

EEC: -96

Crashes: 514

COST ESTIMATE

2020 Dollars

Design: \$14,400,000

ROW: \$39,800,000

Utilities: \$4,600,000

Const.: \$71,900,000

LOCATION INFORMATION



US 25 Proposed Features

- Five (TWLTL) Lanes
- 12' Lane Width
- 14' TWLTL
- 10' Paved Shoulder Width

Option Description

Construct a grade separated interchange at US 25E and US 25. The new interchange will be to the north of the existing intersection, and US 25 will be realigned to the west of its existing alignment. The new alignment will tie into existing US 25 at MP 0.800.

IMPROVEMENT CONCEPT

Option C, US 25E / US 25 Grade Separated Interchange



A high volume of traffic travels through the signalized intersection of US 25E and US 25. A grade separated interchange at this location was previously explored through the preliminary design phase. Multiple interchange configurations were evaluated. The feasibility of this interchange will be evaluated as a part of this study.

C

FULL RECONSTRUCTION

PROJECT PRIORITY

NOT RECOMMENDED

LOCATION

Laurel County
US 25E / US 25

DATA

US 25/US 25E

No Build (AADT):

2025: 17,450

2040: 19,750

US 25/US 25E

Build (AADT):

2025: 18,550

2040: 21,000

Crash Data:

K: 0

A: 0

CRF: N/A

EEC: 36.23

Crashes: 81

COST ESTIMATE

2020 Dollars

Design: \$3,900,000

ROW: \$6,200,000

Utilities: \$200,000

Const.: \$19,300,000

LOCATION INFORMATION



I-75 Connector Proposed Features

- Two Lanes
- 12' Lane Width
- 4' Paved Shoulder Width
- Interchange With I-75
- Includes Bridge Over CSX Railroad
- Relocate Weigh Station on I-75 MP 33.60

Option Description

Construct a new connection from KY 363 to US 25 north of Lily. This roadway will be bridged over I-75 and a new interchange will be constructed. The proposed connection between I-75 and US 25 is a two lane roadway that connects to US 25 at either MP 4.700 (Option D-1) or MP 5.800 (Option D-2).

IMPROVEMENT CONCEPT

Options D-1 and D-2, I-75 Connector to US 25



A traffic model was completed to predict future volumes on US 25 and I-75 both with and without this interstate connection. Traffic was not significantly impacted on either US 25 or I-75 when this connection was provided.

The feasibility of this option and the interchange layout will be further evaluated as a part of this study, but the location of the interchange was determined through a previous study.

D

FULL RECONSTRUCTION

PROJECT PRIORITY

NOT RECOMMENDED

LOCATION

Laurel County
US 25 / I-75 Connector
Interchange at I-75 MP
33.600

DATA

I-75 Conn. Option A

(AADT):

2025: 6,000

2040: 7,500

I-75 Conn. Option B

(AADT):

2025: 4,000

2040: 5,000

Crash Data:

K: 6

A: 12

High CRF Spots

(0.3 Miles): 7

EEC: -96

Crashes: 514

COST ESTIMATE

2020 Dollars

Option D-1:

Design: \$5,200,000

ROW: \$10,000,000

Utilities: \$1,500,000

Const.: \$25,900,000

Option D-2:

Design: \$5,800,000

ROW: \$10,000,000

Utilities: \$1,500,000

Const.: \$29,000,000