



# I 69 Update – Kentucky

**Paul Looney, P.E.**

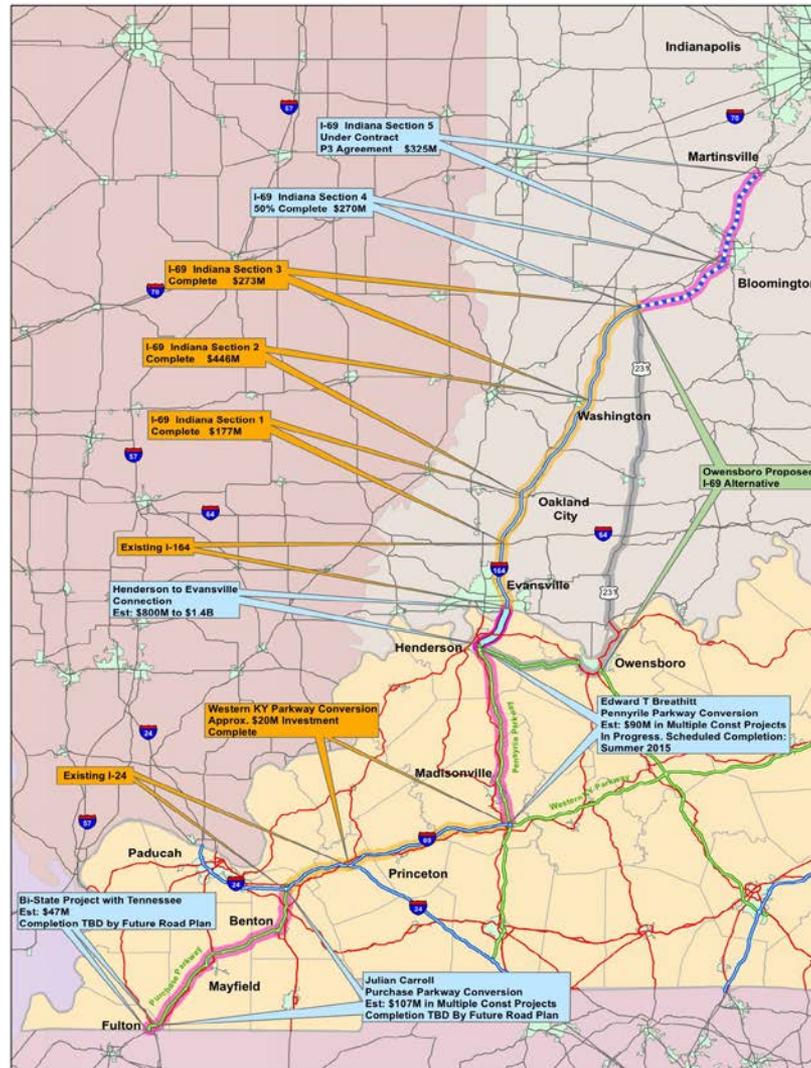
ASHE for Project Development  
State Highway Engineer's Office



# Mexico to Canada



# Indiana and Kentucky



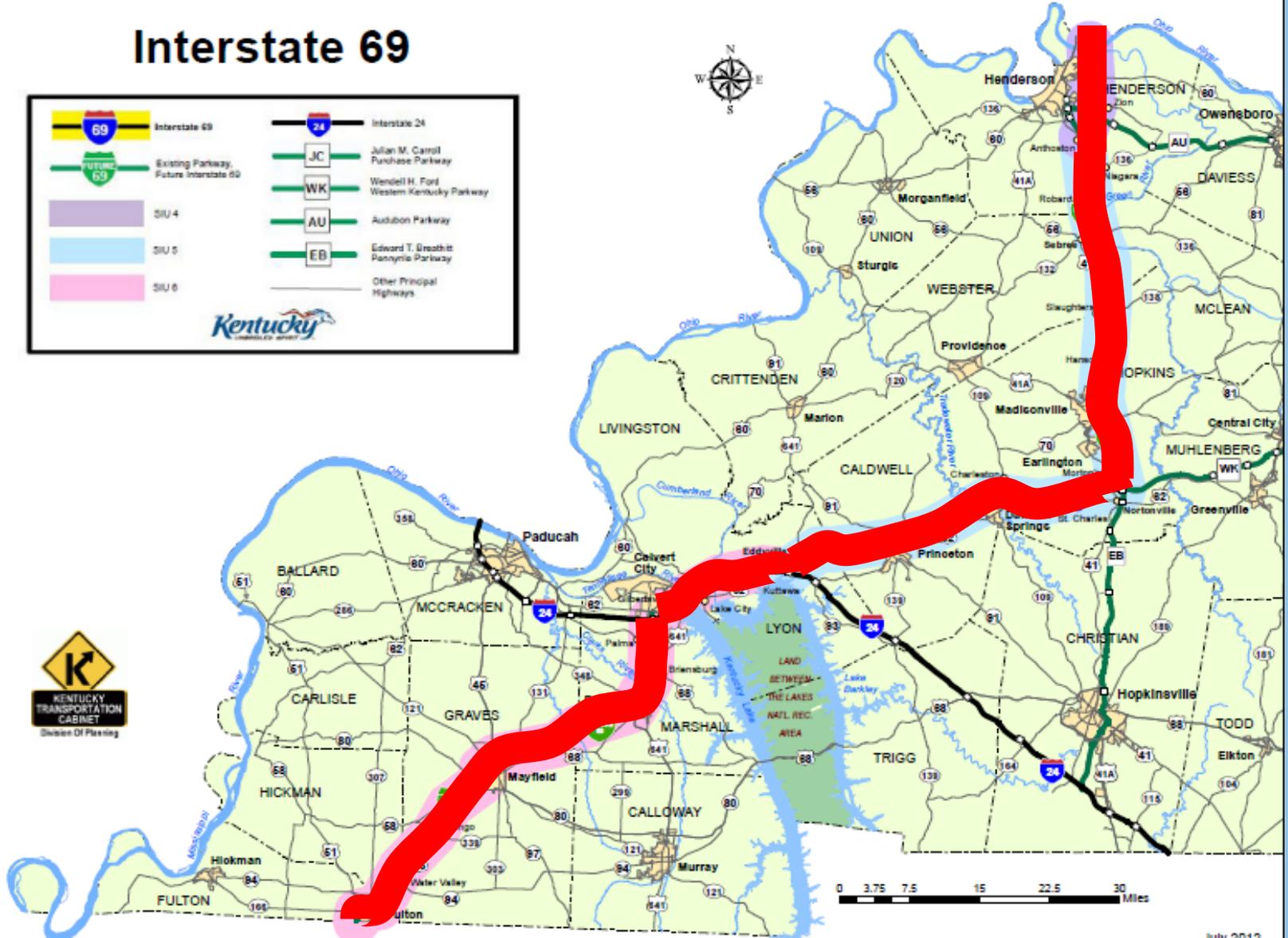
Kentucky - Indiana I-69 Projects



# KY Designation

## Interstate 69

	Interstate 69		Interstate 24
	Existing Parkway Future Interstate 69		Julian M. Carroll Purchase Parkway
	SIU 4		Wendell H. Ford Western Kentucky Parkway
	SIU 5		Audubon Parkway
	SIU 6		Edward T. Brothitt Pennylic Parkway
			Other Principal Highways





# Planning our Program

**FINAL REPORT**

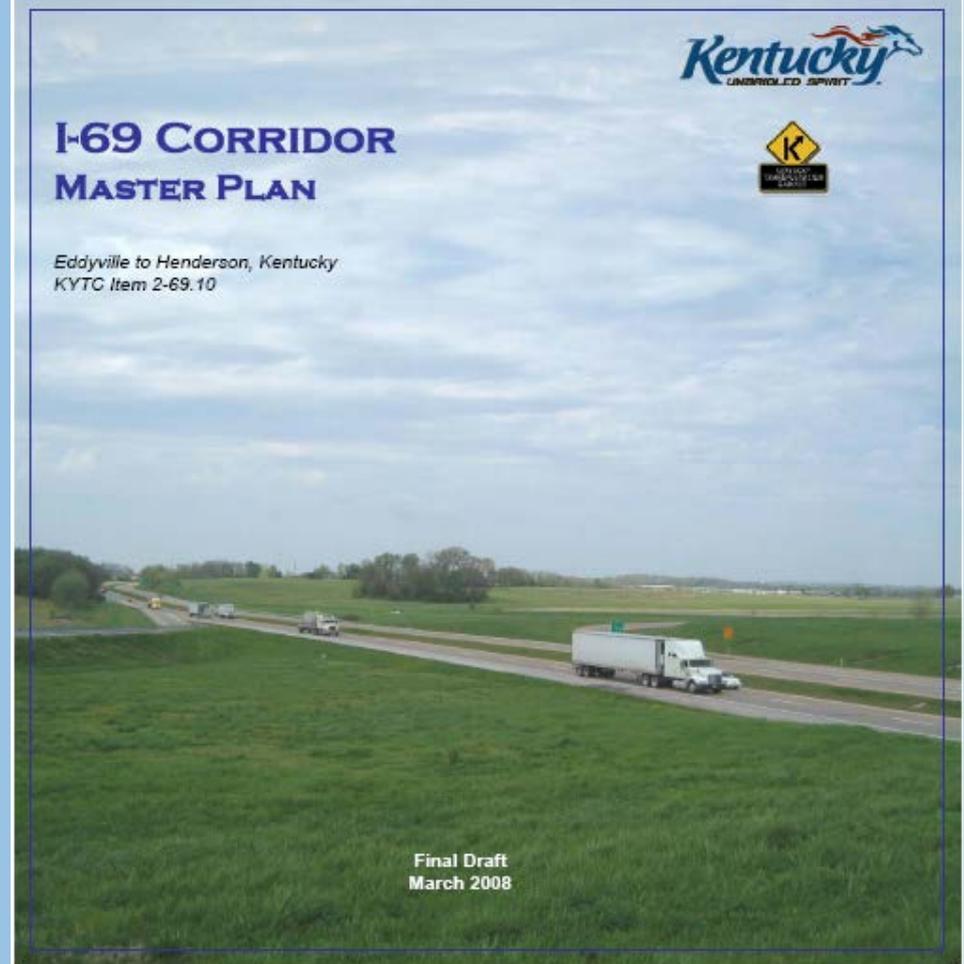
**OVERVIEW of EXISTING CONDITIONS**

along the Wendell H. Ford and Edward T. Breathitt Parkways  
as part of the Strategic Corridor Planning Study for I-69  
Eddyville to Henderson, Kentucky  
ITEM NO. 2-69.10  
March 2005



**Kentucky**  
UNBROILED SPIRIT  
kentucky@hca.com

prepared by:



**Kentucky**  
UNBROILED SPIRIT

**I-69 CORRIDOR MASTER PLAN**

Eddyville to Henderson, Kentucky  
KYTC Item 2-69.10



Final Draft  
March 2008



# Planning our Program

## EXECUTIVE SUMMARY

### I-69 Strategic Planning Corridor Study

Overview of Existing Conditions  
Julian M. Carroll Purchase Parkway and Interstate 24

**Fulton to Eddyville, Kentucky**

December 2011



Prepared By:



Stantec



# Key Finding

Our Parkway system adequately meet AASHTO guidelines for most design elements. Most deficiencies are minor and will be accepted as design exceptions through agreements with FHWA.



# Exceptions and Variances





# Necessary Upgrades

- ❑ Modernization of Toll Booth Interchanges
- ❑ 16ft vertical clearances over driving lanes
- ❑ Modernization of ramp tapers
- ❑ Interstate Route Continuity
- ❑ Modernization of guardrail and end treatments
- ❑ Appropriate median pier protection
- ❑ Modernization of bridge rails
- ❑ Modernization of signs
- ❑ Protection of Access Control at cross roads



# I-69 Kentucky Under Construction

Henderson to Evansville  
Connection  
Est: \$800M to \$1.4B

Evansville

\$102 Million Authorized or Awarded  
+  
\$150 Million Estimate to Fund  
Remaining (SIU 5 and 6)

Creathitt  
Parkway Conversion  
in Multiple Const Projects  
Scheduled Completion:  
15

Existing I-24

**Total = \$252 Million**

(Does NOT include Henderson to  
Evansville Segment)

Paducah

Bi-State Project with Tennessee  
Est: \$47M  
Completion TBD by Future Road Plan

Mayfield

Julian Carroll  
Purchase Parkway Conversion  
Est: \$107M in Multiple Const Projects  
Completion TBD By Future Road Plan

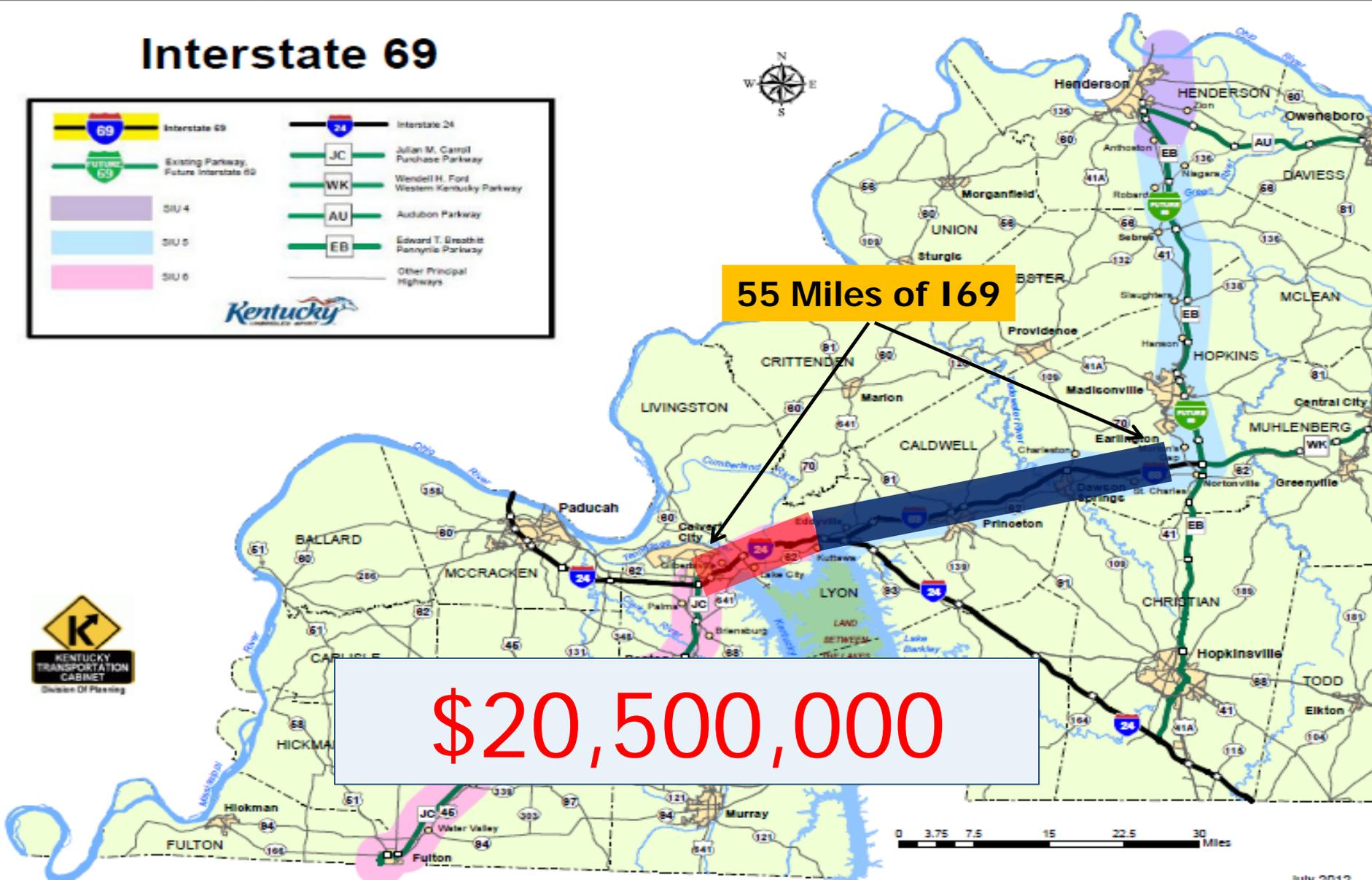
Fulton



# KY's First 55 Miles

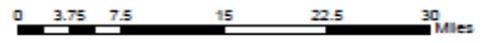
## Interstate 69

	Interstate 69		Interstate 24
	Existing Parkway, Future Interstate 69		Julian M. Carroll Purchase Parkway
	SIU 4		Wendell H. Ford Western Kentucky Parkway
	SIU 5		Audubon Parkway
	SIU 6		Edward T. Breathitt Pennyroyal Parkway
			Other Principal Highways



55 Miles of I69

\$20,500,000





# Parkway Modernization

Pennyrile Parkway from I69 to Henderson

Item #2-232

40 Miles

Awarded  
June 2014

\$13,192,338



© 2014 Google

© 2014 Google

Google earth

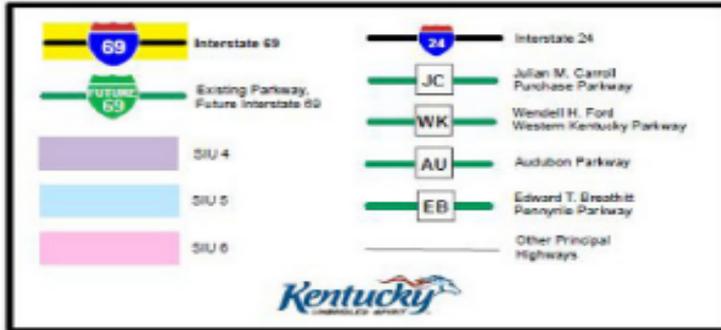
Imagery Date: 4/2014 37°14'03.67" N 87°26'44.93" W elev 484 ft eye alt 446 ft

Tour Guide

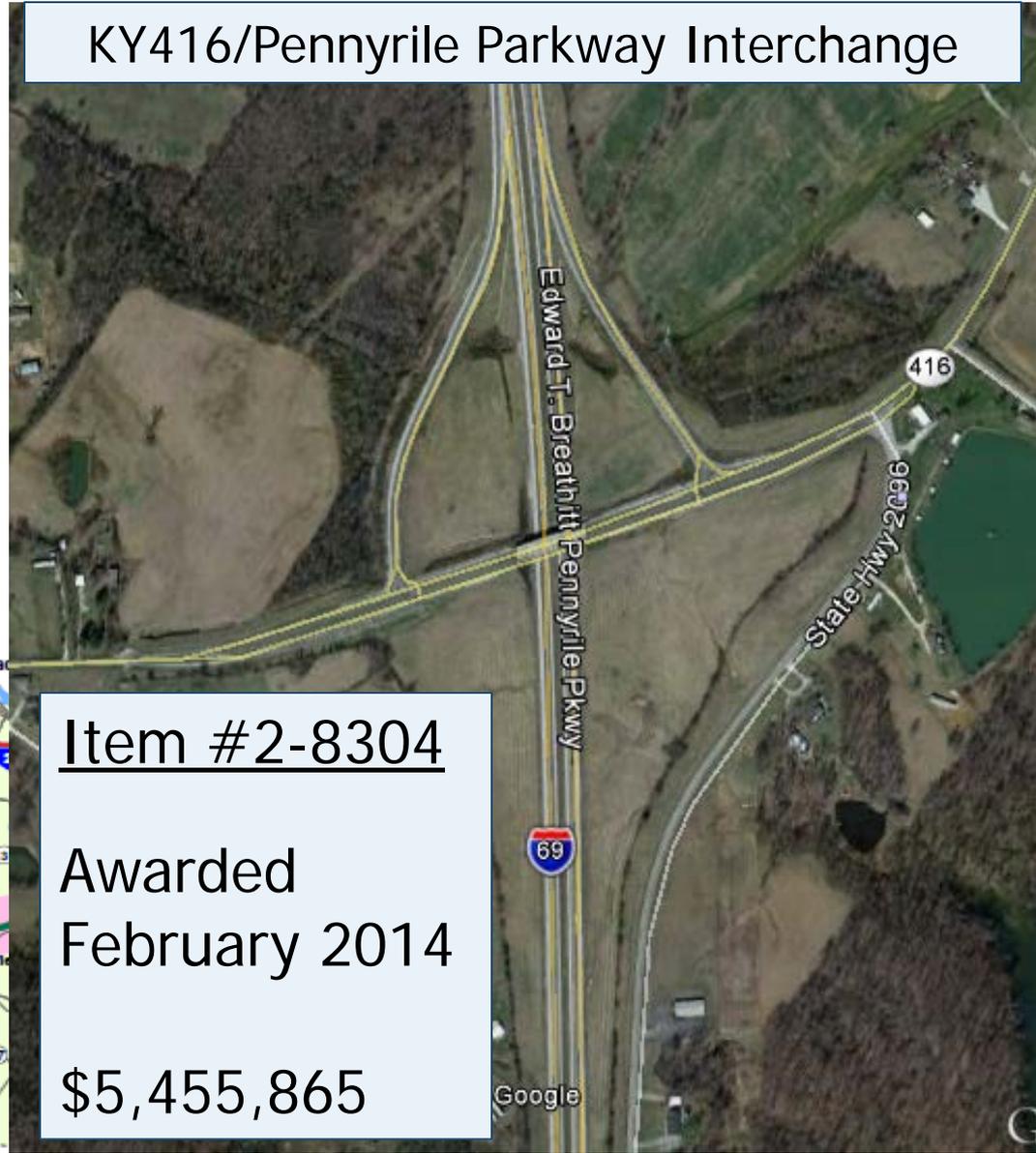


# Interchange Completion

## Interstate 69



## KY416/Pennyriple Parkway Interchange



Item #2-8304

Awarded  
February 2014

\$5,455,865





# Interchange Reconstruction

## Interstate 69

	Interstate 69		Interstate 24
	Existing Parkway, Future Interstate 69		Julian M. Carroll Parkway
	SIU 4		Wendell H. Ford Western Kentucky Parkway
	SIU 5		Audubon Parkway
	SIU 6		Edward T. Breathitt Pennyrile Parkway
			Other Principal Highways



## KY 56 Interchange at Sebree



Item #2-8637

Awarded  
July 2014

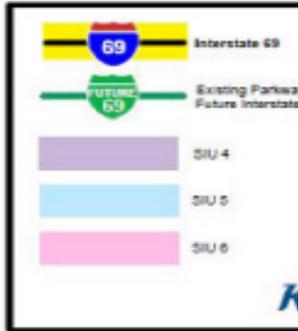
\$11,002,343

Farm Service Agency  
2012 Google

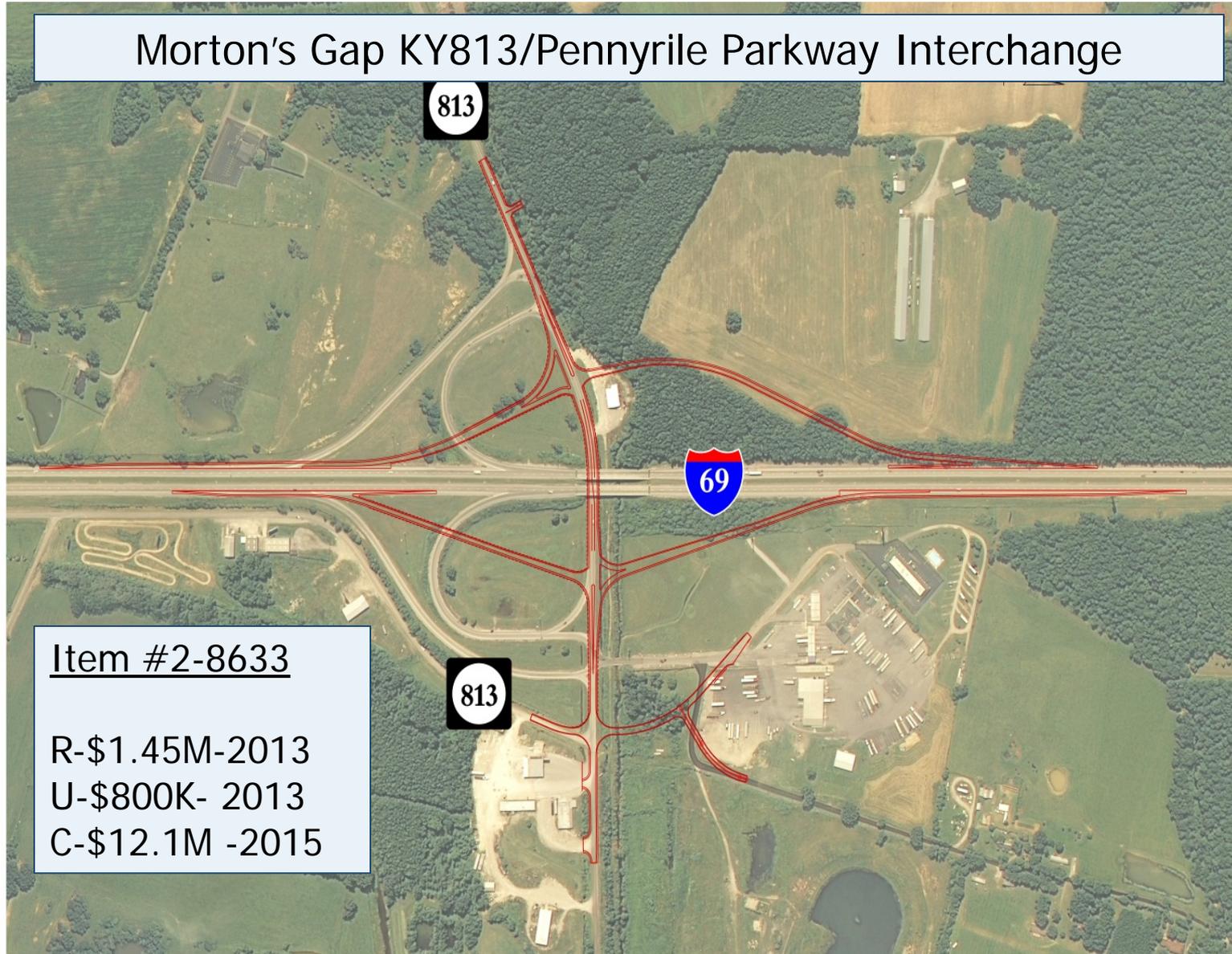


# Interchange Reconstruction

Inter



## Morton's Gap KY813/Pennyryle Parkway Interchange



Item #2-8633

R-\$1.45M-2013

U-\$800K- 2013

C-\$12.1M -2015





# Parkway Modernization

## Interstate 69

Purchase Parkway from Mayfield to Calvert City

Item #1-234

Awarded  
Sept. 2014

\$8,080,000





# Interchange Reconstruction

## KY348/Purchase Parkway in Benton

### Item #1-8101

R - \$2.21m - 2012

U - \$1.88m - 2012

C - \$16.32m - 2013

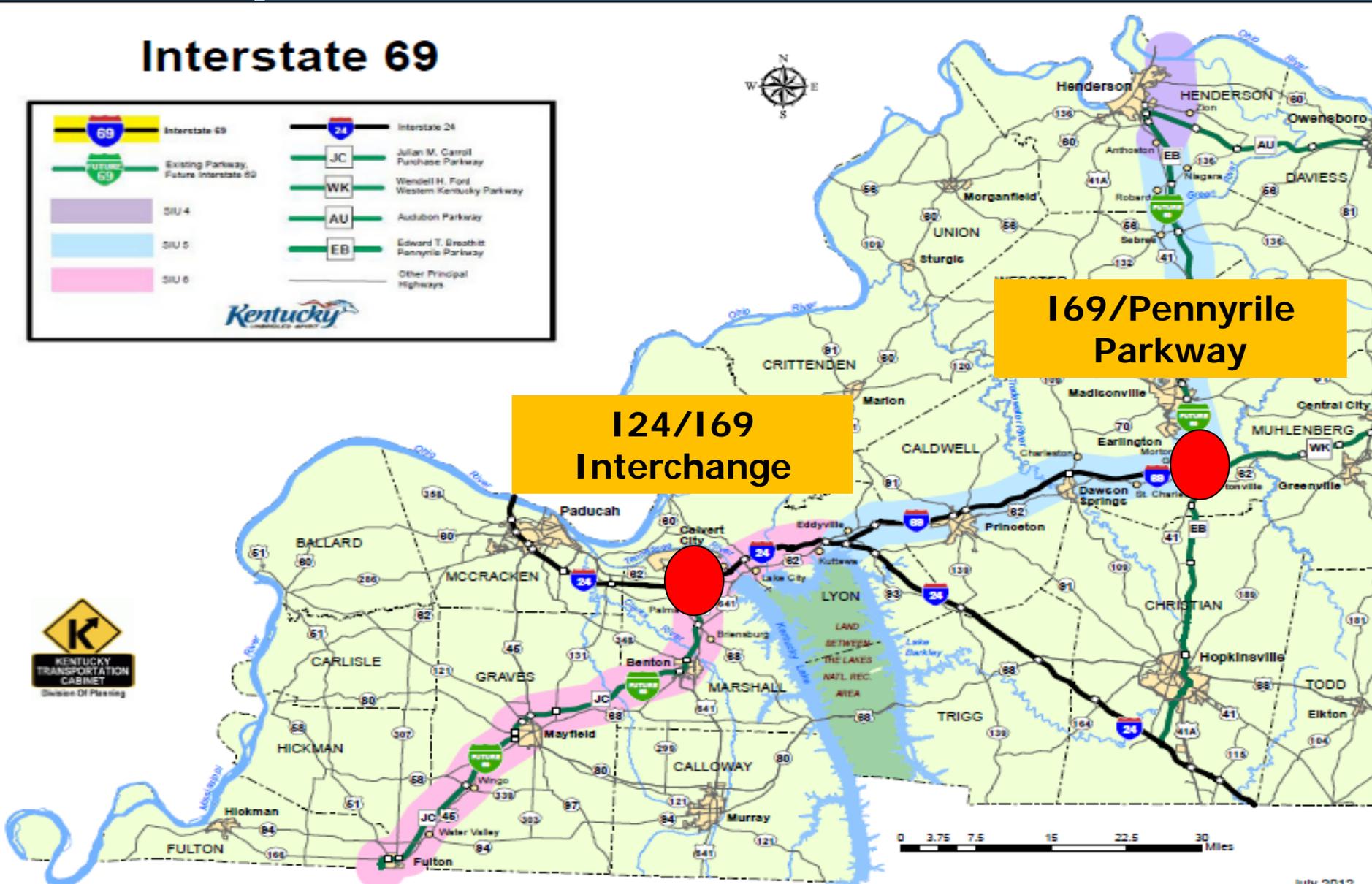
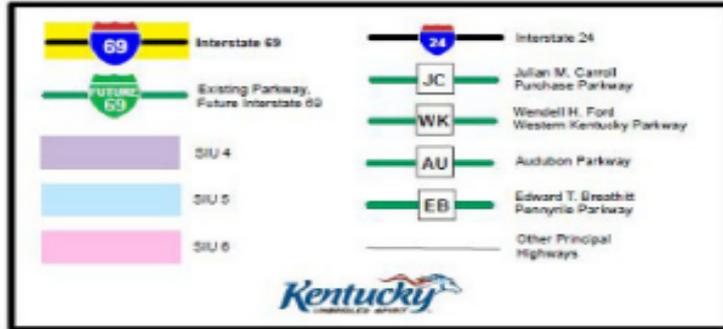
Anticipated Letting  
November 2014





# Interstate Route Continuity

## Interstate 69





# Interstate Continuity

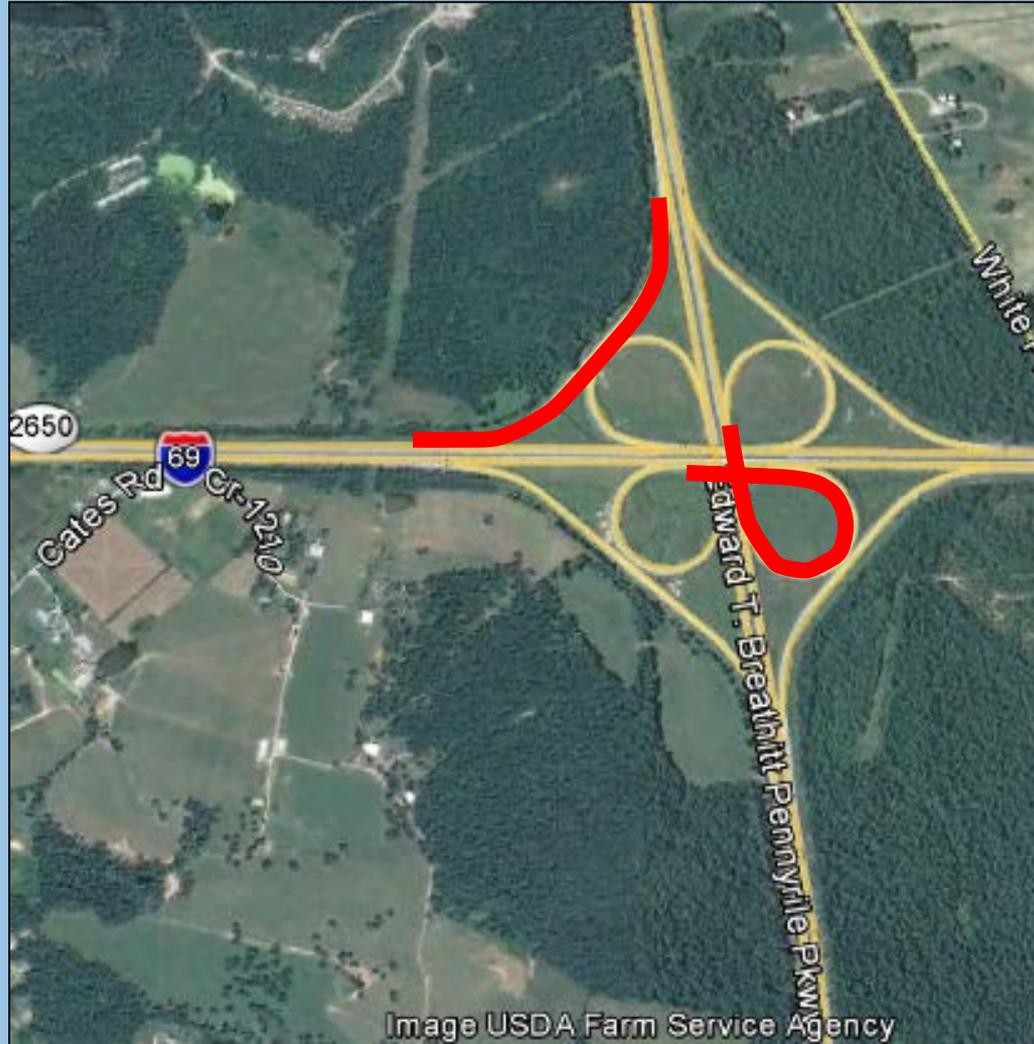
## I69/Pennyrile Parkway Interchange

Item #2-225.00

Awarded  
Design-Build  
December 2013

\$32,004,662

Anticipated  
Completion  
June 2015





# Pennyrile Pkwy Interchange





# Pennyrile Pkwy Interchange

- Notice to Proceed – March 2013
- Proof of Concept – May 2013
- Conversion to Design Build
- PL&G – July 2013
- Request for Proposals – Sept 2013
- Bids Submitted – Dec 6, 2013
- Contractor Award – Dec 18, 2013
- Completion Date – May 29, 2015





# Pennyrile Pkwy Interchange

## KYTC Owners Representative

- Develop RFP
- Utility Coordination
- Preliminary Line and Grade Plans
- Geometric Layout Sheet/ Design Executive Summary
- Environmental
- Right of Way Plans
- Plan Review
- Shop Drawing Approval





# Pennyrile Pkwy Interchange

## Interstate Design Criteria

- Design Speed
  - I-69 - 70 mph
  - Ramps - 50 mph
- 4 Lane Facility
- Lane Width – 12 feet
- Shoulder Width – 10 feet Paved (outside)  
4 feet Paved (inside)
- Median Width – 36 feet Pennyrile Parkway  
30 feet Western Ky Parkway





# Pennyrile Pkwy Interchange

## SURVEY

- Horizontal & Vertical Control
- Edges of Pavement
- Drainage data
- Geotechnical Staking
- Right of Way Staking
- Property Lines
- Utility Coordination





# Pennyrile Pkwy Interchange

## ENVIRONMENTAL

- CE Level III Reevaluation
  - Archaeology (UK)
  - Noise & Air Analysis
  - Haz-Mat/ UST
  - Document Preparation
  
- Document Approved
  - August 8, 2013
  
- Nationwide Permit Secured





# Pennyrile Pkwy Interchange

## Right of Way

- No Relocations
- Relocation of Cates Rd
  - Acquisition of Barn
- 6 Parcels
  - Mostly Farmland
- Right of Way Meeting
  - All Parcels Signed within 24 hrs





# Pennyrile Pkwy Interchange

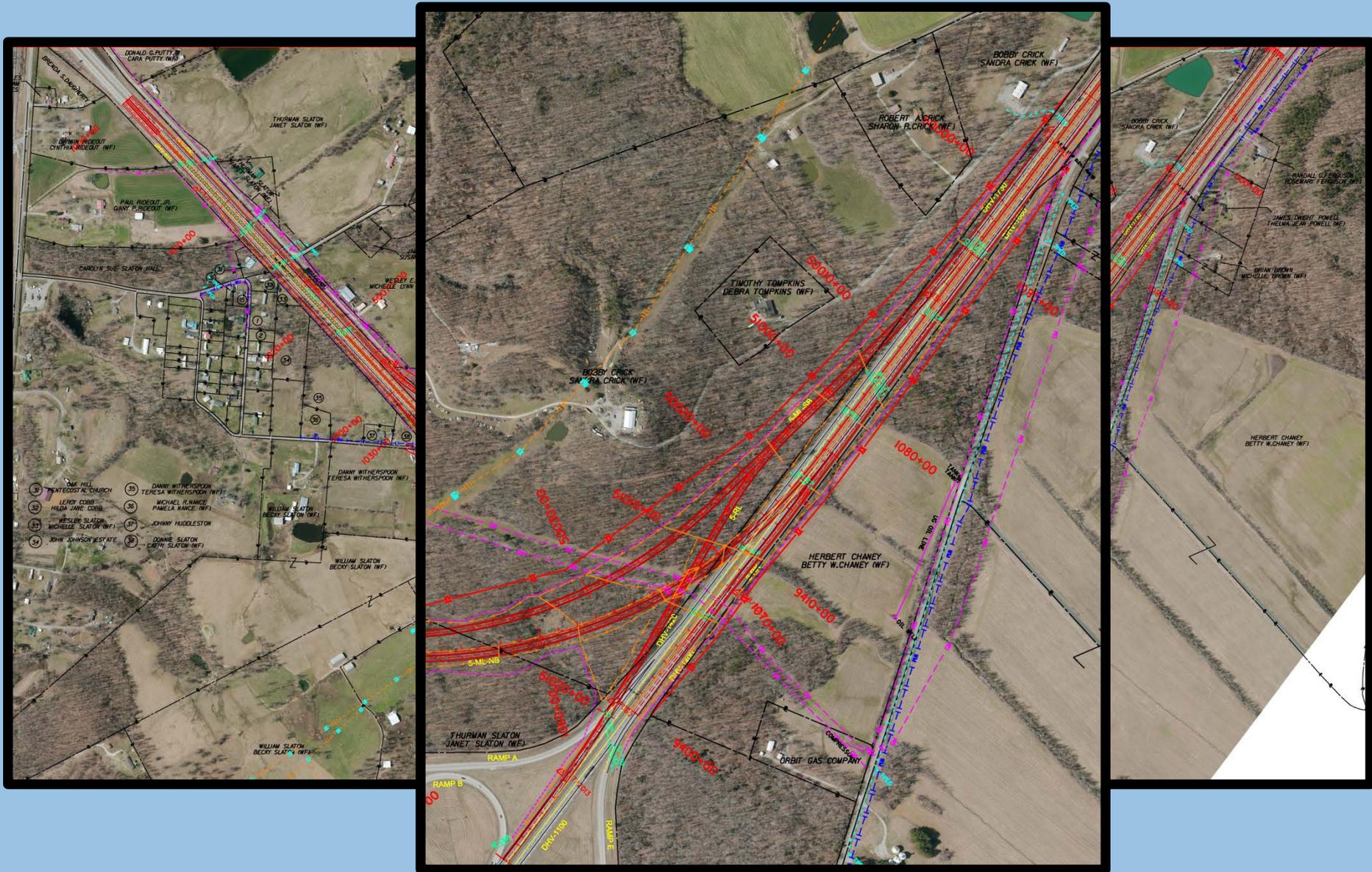
## Utility Coordination

- Electric Transmission Line
  - Buy America Delay
- Gas Transmission Lines
  - Atmos (8in line), Orbit (6 in line)
  - Avoided Relocating Lines
- Waterline Relocation
  - Relocation Plans included in RFP
- AT&T





# ALTERNATIVE 5





# Pennyrile Pkwy Interchange

- WESTERN KENTUCKY PAVEMENT REHAB
  - PAVEMENT OVERLAY MP 105.09 to 106.48
  - NB I-69 – 1.5” PAVEMENT OVERLAY
  - SB I-69 – 4.5” PAVEMENT OVERLAY
  - RAMP OVERLAYS
  - LATEX BRIDGE OVERLAY
  - GUARDRAIL





# Pennyrile Pkwy Interchange

HOPKINS DESIGN/BUILD,  
CID 13-9001, SYP 2-225.00

DESIGN BUILD TEAM	TECHNICAL SCORE	PRICE PROPOSAL	BEST VALUE SCORE	PRICE PROPOSAL	COMPLETION DATE
JIM SMITH CONTRACTING & BFW ENGINEERING	24.0	58.3	82.3	\$29,863,576.76	OCTOBER 1, 2015
ROGERS GROUP & QK4	40.0	60.0	100.0	\$29,004,661.94	MAY 29, 2015



# Pennyrile Pkwy Interchange

## Buildable Units

- Buildable Unit #1
  - Erosion Control, Waterline
- Buildable Unit #2
  - Ramps J & K, Cates Rd, Pave Rehab
- Buildable Unit #3
  - Ramps L & M, I-69
- Buildable Unit #4
  - Bridges & Box Culverts





# Pennyrile Parkway Interchange





# Pennyrile Pkwy Interchange

## Buildable Unit Plan Review

- Plan Review/Comments to KYTC
- Comments Provided Prior to Meeting
- Review/Concurrence of Resubmitted Plans
- Released for Construction
- Construction Revisions





# Pennyrile Pkwy Interchange

## Buildable Unit Plan Review

- ❑ Structure Plan Review
- ❑ Geotechnical Review
- ❑ Structural Plan Recheck
- ❑ Shop Drawings
- ❑ Pavement Rehab Plans
- ❑ Lighting Plans





# Pennyrile Pkwy Interchange

## Project Status

- Plans Approved
- Project on Schedule
- Traffic Shift for SB I-69 Ramp



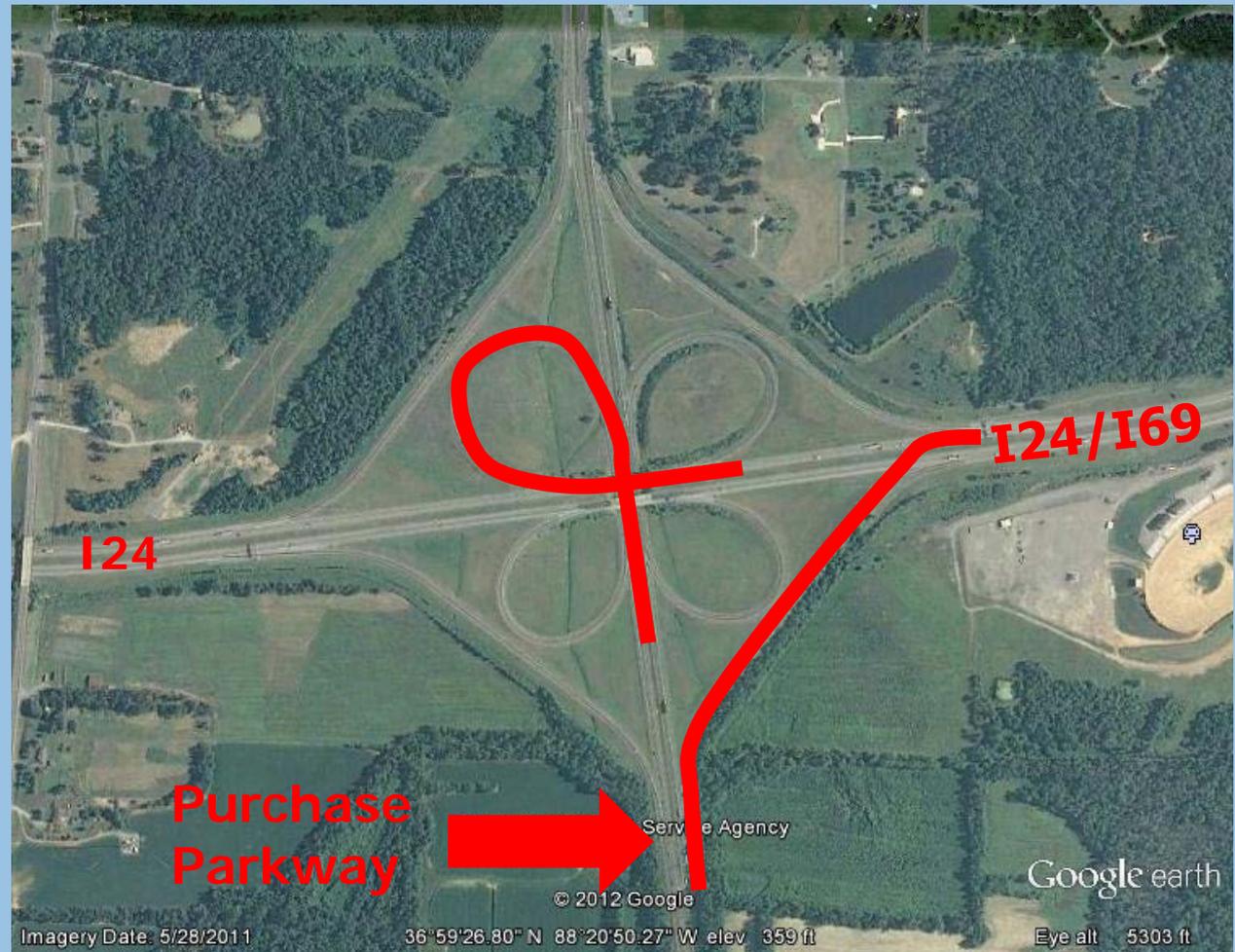


# Interstate Continuity

## I24/I69 at Calvert City

### Item #1-800

- D - \$2.5m - 2012
- R - \$3.1m - 2015
- U - \$1.6m - 2015
- C - \$16m - 2016
- C - \$8.0m - 2017





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ENGINEERING & TESTING, INC.

# 2014 KYTC Partnering Conference

September 10, 2014



## I-24/I-69 Interchange

Marshall County, Item No. 1-800

Tim Choate, PE, PLS



BACON | FARMER | WORKMAN  
ENGINEERING & TESTING, INC.

# Project Team

KYTC

FHWA

Bacon Farmer Workman Engineering and Testing, Inc. (PRIME)

EA Partners

Integrated Engineering (DBE)

Palmer Engineering



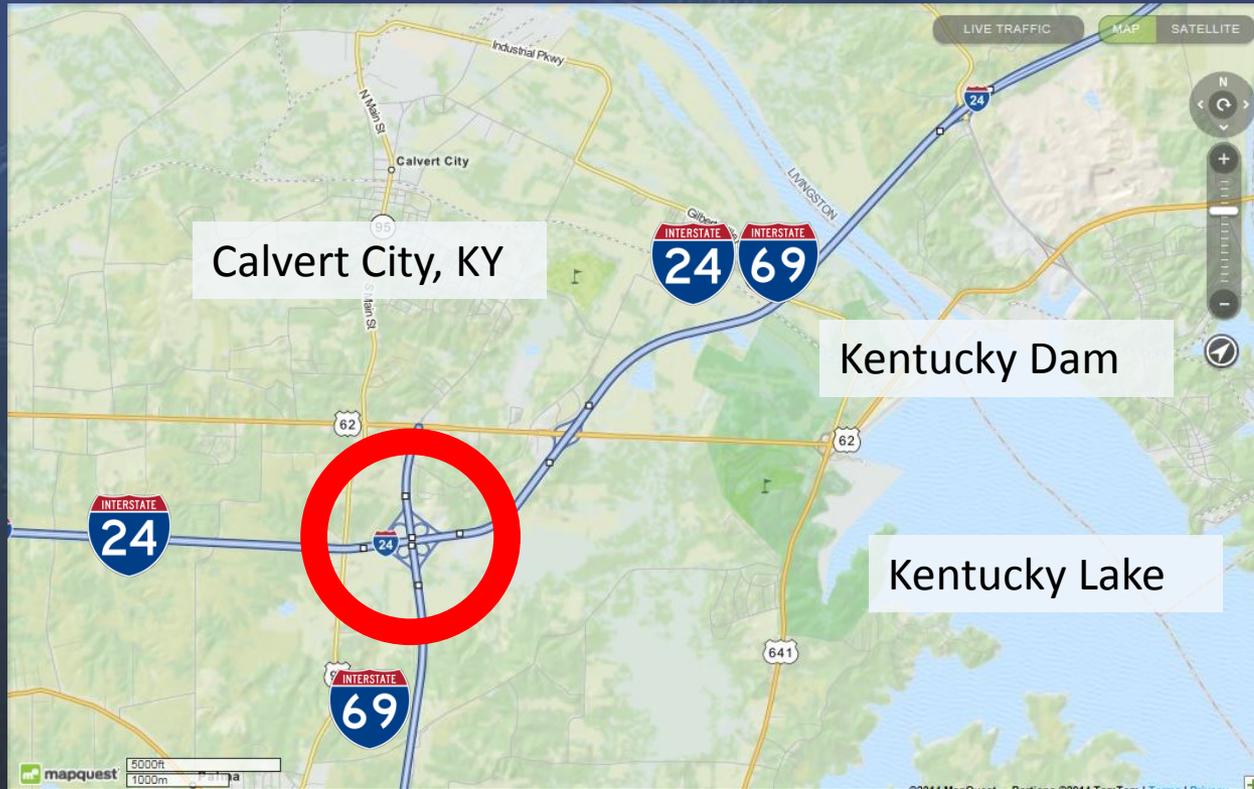
# Project Location







# Major Interstate Split





# Existing Interchange

- Existing Cloverleaf I-24 Parkway (Future I69)
- Loop Ramps (35 MPH)
- Single Lane leg ramps
- Semi-Directional
- Not map compliant
- Spur into Calvert City
- Racetrack
- Residential
- Farmland
- US 62 interchange
  - 1.5 miles from cloverleaf





# Purpose and Need

- Primary Purpose and Need
  - To Provide Interstate Continuity (major split design)
  - Upgrade the interchange to advance an agreement with FHWA for official Interstate 69 designation
- Secondary Purpose and Need
  - Address safety relative to short weaving issues with existing cloverleaf on major movements
  - Eliminate low speed ramps for major movements
  - Accommodate future I-69 traffic needs



# Previous Studies

- I-69 Fulton to Eddyville Strategic Corridor Planning Study – June 2011
  - Existing Interchange was not recommended for a Systems Interchange to accommodate the Parkway conversion to I-69
  - High crash segment on I-24 just east of cloverleaf
- BFW Team prepared I-24/I-69 Interchange Study – October 2013
  - 9 concepts were developed for consideration
    - Evaluation Criteria and Matrix
      - Environmental Impacts
      - Safety
      - Implementation
      - Mobility
      - Cost (\$30 M – \$125 M)



# Preliminary Engineering

- Two (2) interchange concepts were developed for Line and Grade
  - Three (3) legged fully directional “T” configuration
    - 70 MPH design for major movements
    - Spur closed
    - Traffic diverted to US 62 service interchange
    - All loop ramps eliminated
- Challenges/Issues
  - Both concepts exceeded the 6 year plan budget
  - Major impacts to racetrack
  - Floodway impacts to Little John Creek
  - Maintaining Local Access at Spur connection to US 62

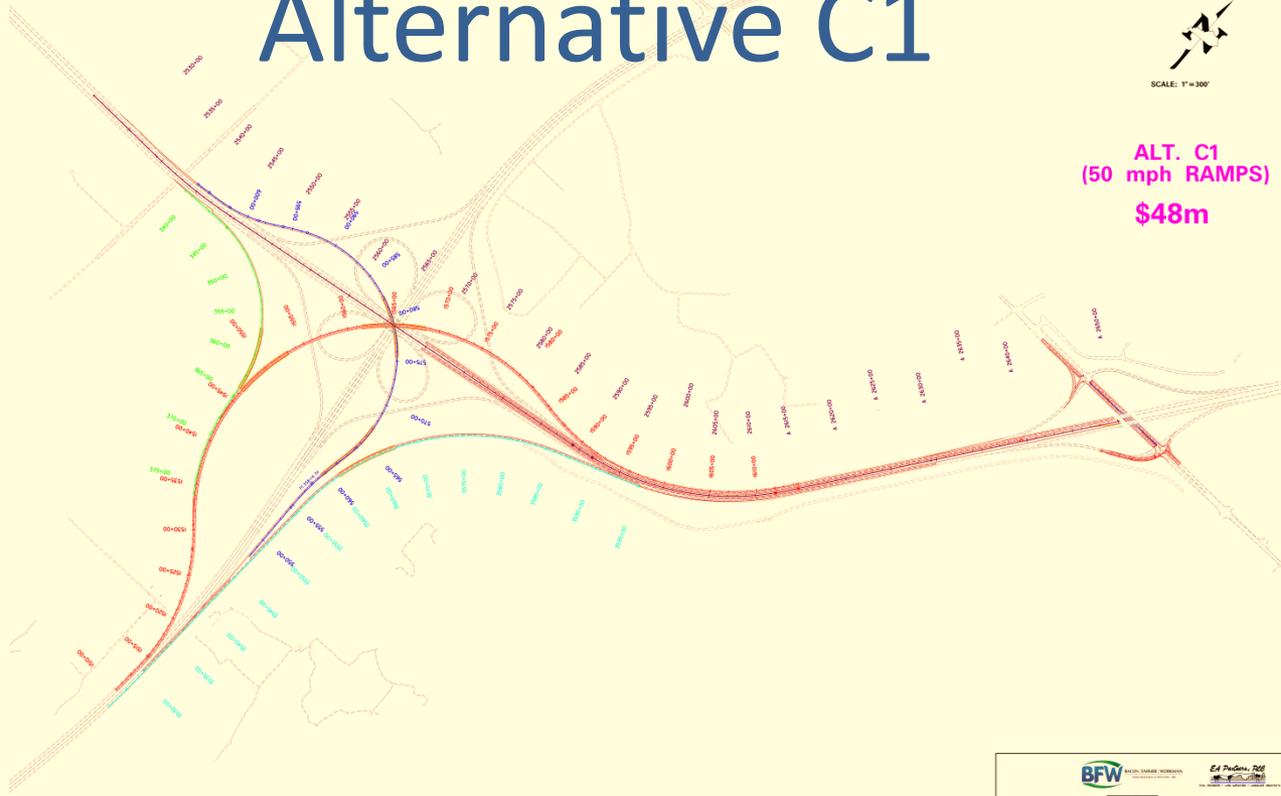


# Alternative C1



SCALE: 1"=300'

ALT. C1  
(50 mph RAMPS)  
\$48m



LEGEND	
<span style="color: red;">—</span>	I-24 WESTBOUND
<span style="color: orange;">—</span>	I-24 EASTBOUND
<span style="color: green;">—</span>	I-69 EASTBOUND TO I-69 SOUTHBOUND
<span style="color: blue;">—</span>	I-69 NORTHBOUND TO I-24 WESTBOUND
<span style="color: red;">—</span>	I-69 SOUTHBOUND



ALTERNATE C-1  
50 mph RAMPS  
I-69 / I-24 INTERCHANGE  
MARSHALL COUNTY  
ITEM 1-800.00

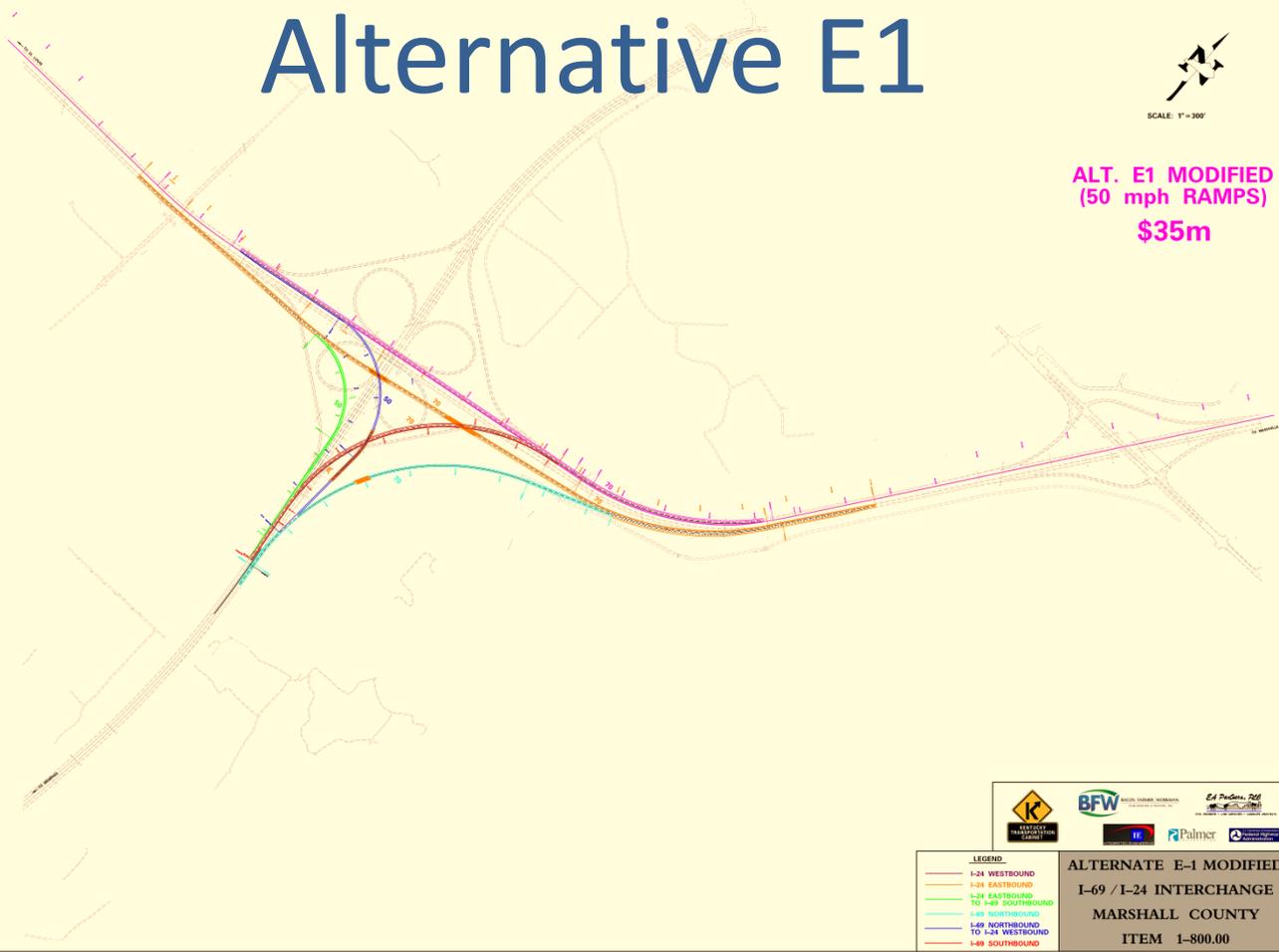


# Alternative E1



SCALE: 1" = 300'

ALT. E1 MODIFIED  
(50 mph RAMPS)  
\$35m



 K KISTOCH TRANSPORTATION CENTRE	 BFW BACON   FARMER   WORKMAN ENGINEERING & TESTING, INC.	 Ed Pearce, P.E. REGISTERED PROFESSIONAL ENGINEER STATE OF MISSISSIPPI
 Palmer	<b>ALTERNATE E-1 MODIFIED</b> I-69 / I-24 INTERCHANGE MARSHALL COUNTY ITEM 1-800.00	



# Public Involvement

- Public Meeting was held on June 26, 2014
  - 400 participants
  - Majority of the attendees were opposed to eliminating the spur connection to US 62
  - Public was concerned with putting additional traffic on other routes
    - US 62
    - KY 95
    - US 641
    - US 68
  - Racetrack Impacts (recently reopened under new ownership)



# Project Reassessment (Second Look)

- Three (3) additional interchange alternatives are currently being developed to allow the spur to remain open.
  - Southbound I-69 split to the left (Map Compliant) – EB I-24 merging
  - Southbound I-69 split to the left with bifurcated median – NB I-69 merging
  - Southbound I-69 split to the right (not map compliant)
- All 3 alternatives were developed to be compatible with a future NB I-69 to WB I-24 fly-over ramp resulting in an initial cost savings of 17 to 25 million.
  - Initial LOS B using existing loop ramp
  - This movement is primarily local traffic (users within 30 mile radius)

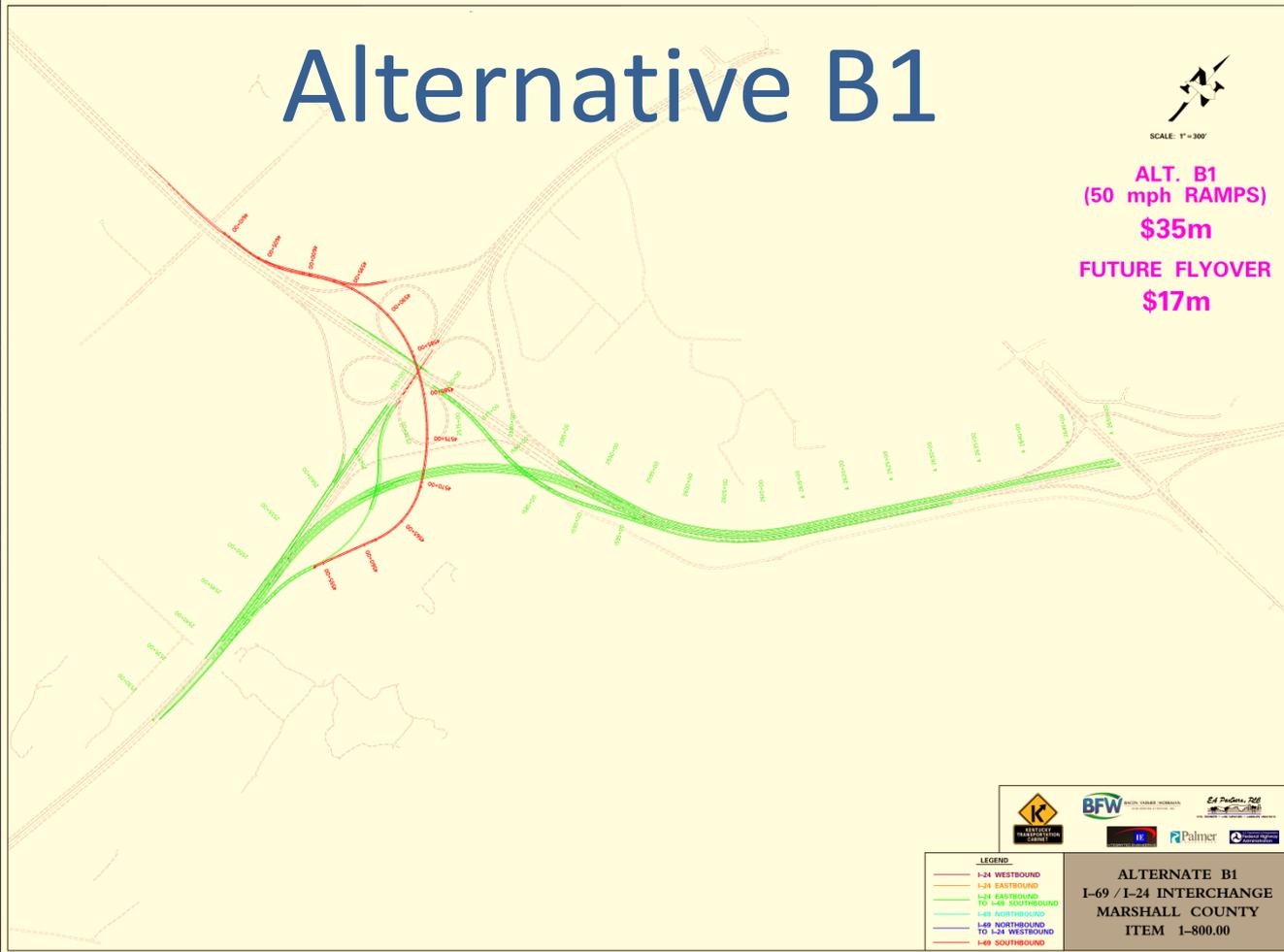


# Alternative B1



SCALE: 1" = 300'

**ALT. B1**  
**(50 mph RAMPS)**  
**\$35m**  
**FUTURE FLYOVER**  
**\$17m**



**LEGEND**

- I-69 WESTBOUND
- I-24 EASTBOUND
- I-24 EASTBOUND TO I-69 SOUTHBOUND
- I-69 NORTHBOUND
- I-69 NORTHBOUND TO I-24 WESTBOUND
- I-69 SOUTHBOUND

**ALTERNATE B1**  
**I-69 / I-24 INTERCHANGE**  
**MARSHALL COUNTY**  
**ITEM 1-800.00**



# Alternative B2



SCALE: 1"=300'

ALTERNATE B2  
\$35m

FUTURE FLYOVER  
\$17m



LEGEND

<span style="color: magenta;">—</span>	I-24 WESTBOUND
<span style="color: orange;">—</span>	I-24 EASTBOUND
<span style="color: cyan;">—</span>	I-69 NORTHBOUND
<span style="color: blue;">—</span>	HE RAMP TO PADUCAH
<span style="color: red;">—</span>	I-69 SOUTHBOUND
<span style="color: green;">—</span>	FUTURE FLYOVER

ALTERNATE B2  
I-69 / I-24 INTERCHANGE  
MARSHALL COUNTY  
ITEM 1-800.00

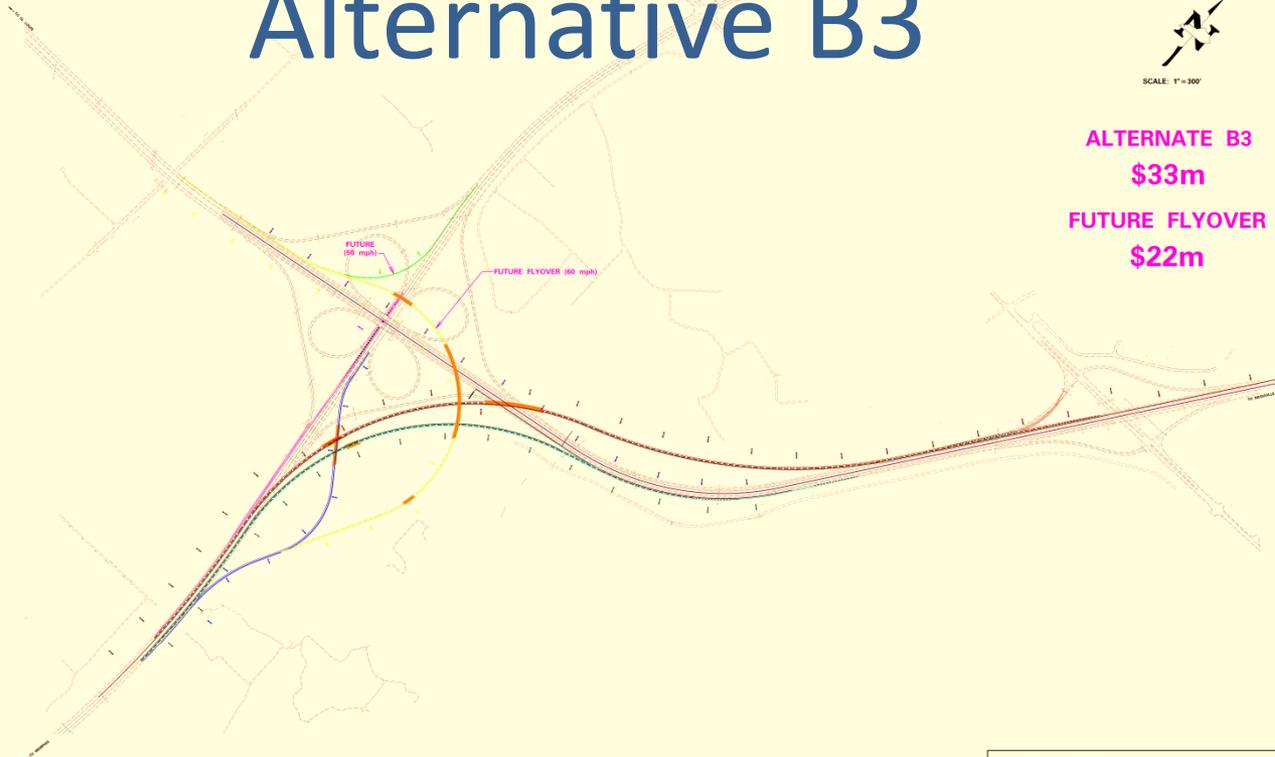


# Alternative B3



SCALE: 1" = 300'

ALTERNATE B3  
\$33m  
FUTURE FLYOVER  
\$22m



LEGEND

	I-69 NORTHBOUND
	NB RAMP TO PADUCAH
	I-69 SOUTHBOUND
	FUTURE FLYOVER

ALTERNATE B3  
I-69 / I-24 INTERCHANGE  
MARSHALL COUNTY  
ITEM 1-800.00



# Next Steps

- Additional Public Involvement Meeting
- Choose Preferred Alternative
- Geometric Approvals
- IIS/IMR Submittals and Approvals
- CE Level 3 Environmental Approvals
- Phase II Design and Construction Documents
- R/W and Utility Phases
- Anticipating a Fall 2015 Construction Letting



BACON | FARMER | WORKMAN  
ENGINEERING & TESTING, INC.

A large, stylized version of the BFW logo is centered on a black rectangular background. The letters 'BFW' are in a blue-to-purple gradient, and the green swoosh is prominent.

BACON | FARMER | WORKMAN  
ENGINEERING & TESTING, INC.

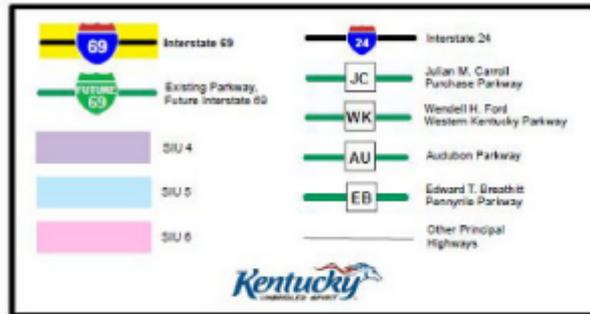
*Thank You.....*

civil | structural | transportation

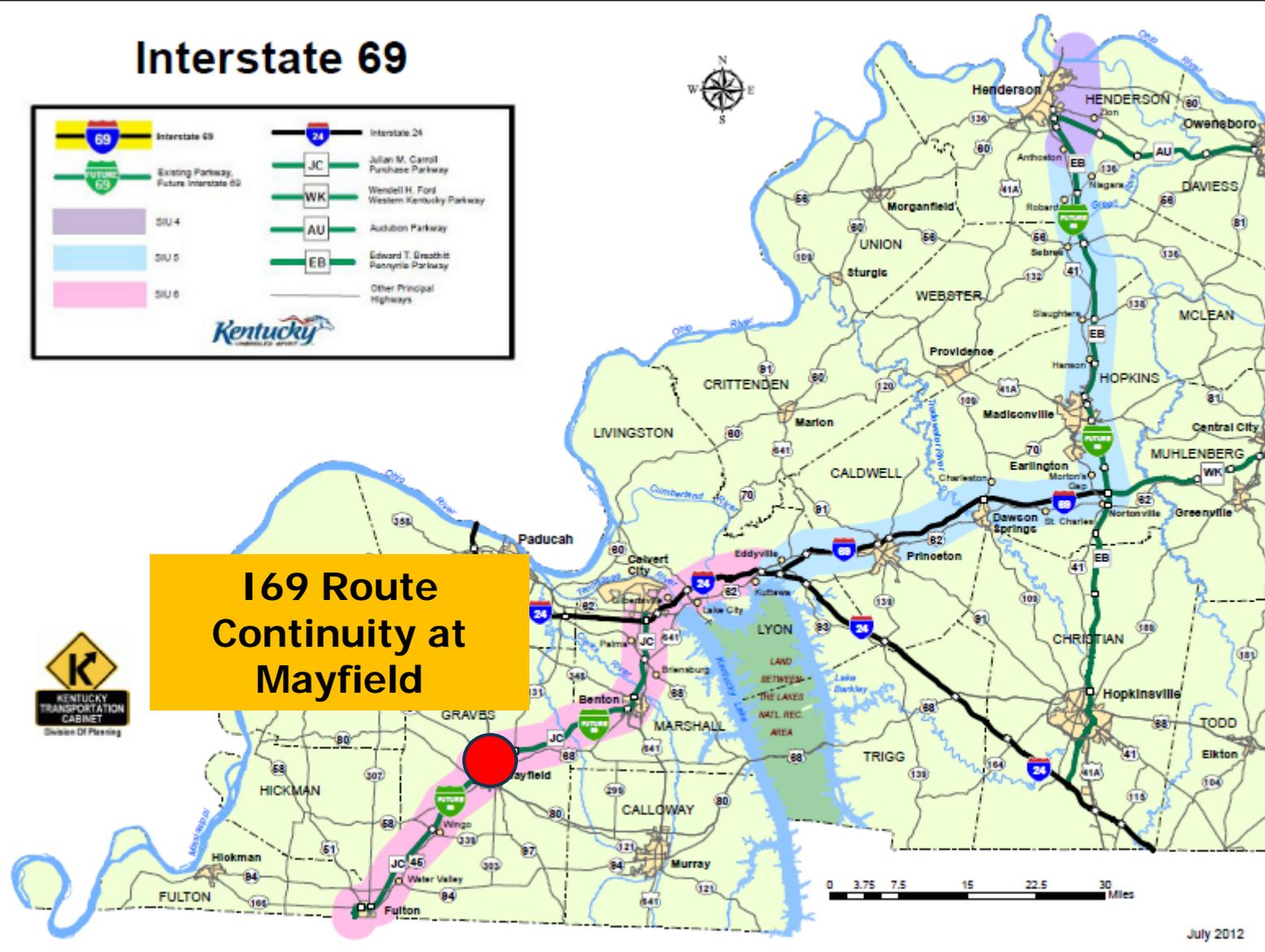


# Interstate Continuity

## Interstate 69



**I69 Route Continuity at Mayfield**



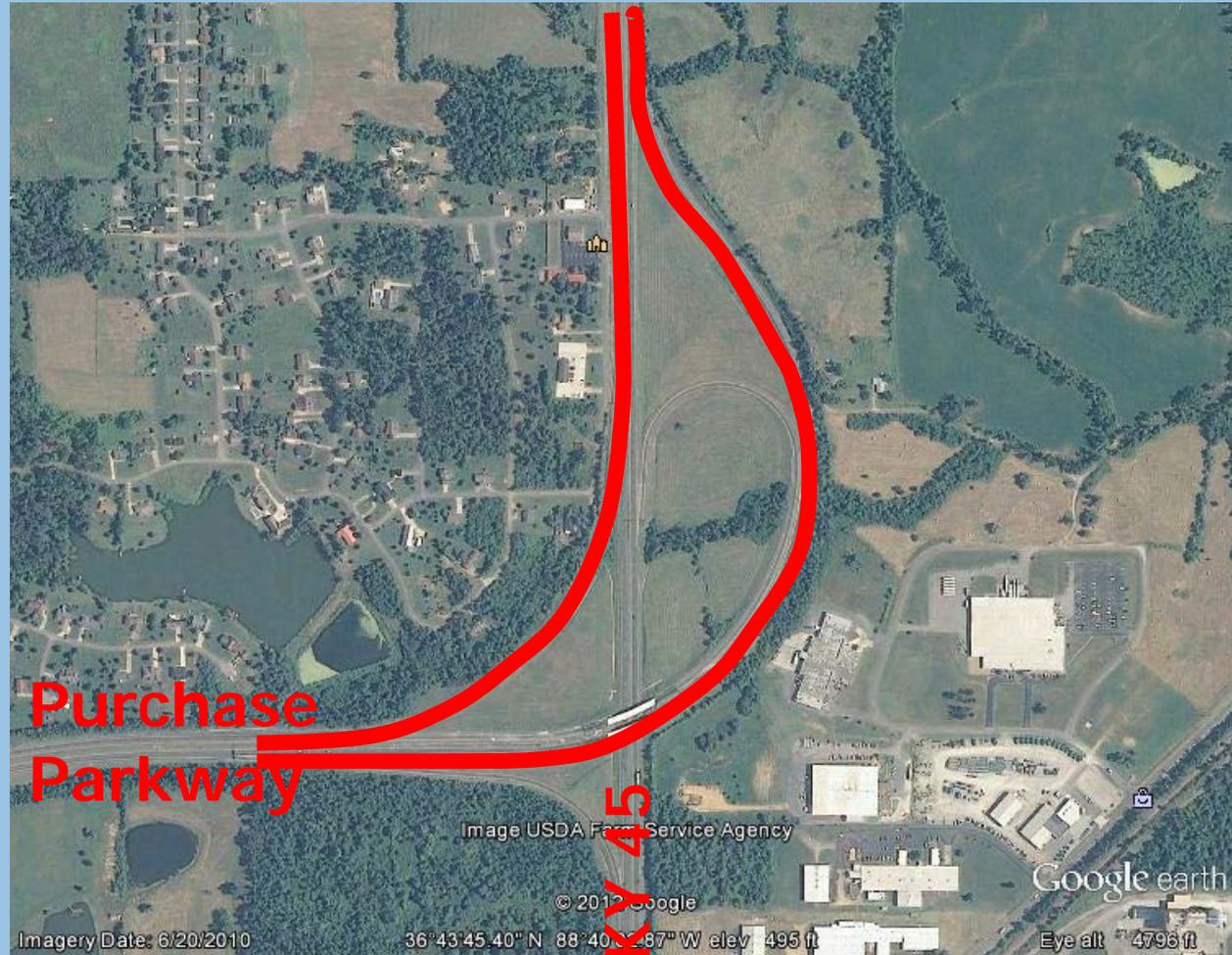


# Interstate Continuity

## KY45/Purchase Parkway in Mayfield

### Item #1-193

- D - \$2M – 2012
- R - \$5M -2015
- U - \$2.5M – 2015
- C - \$25M -2018



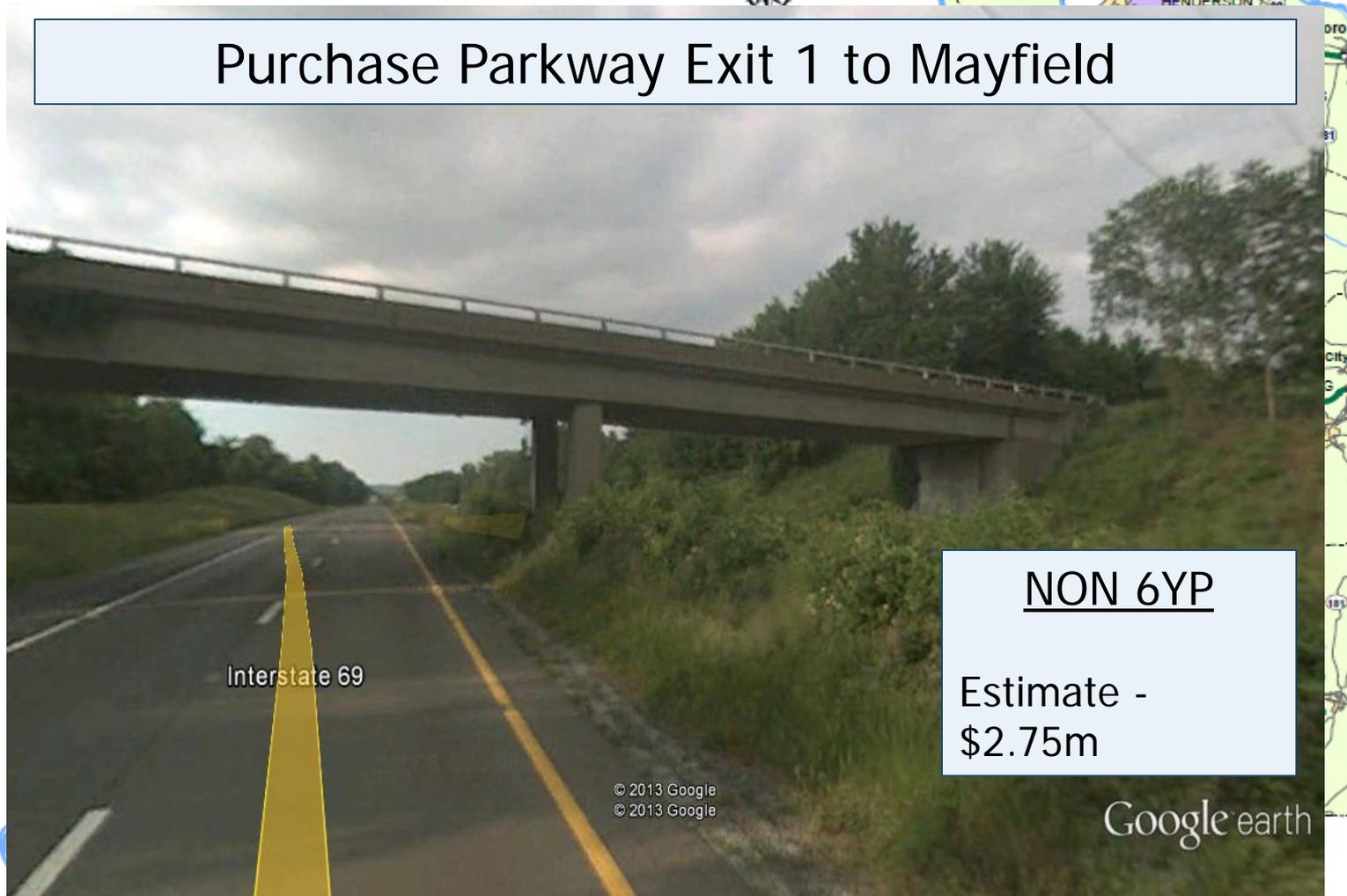


# Parkway Modernization

Interstate 69



Purchase Parkway Exit 1 to Mayfield



Interstate 69

NON 6YP  
Estimate -  
\$2.75m

© 2013 Google  
© 2013 Google

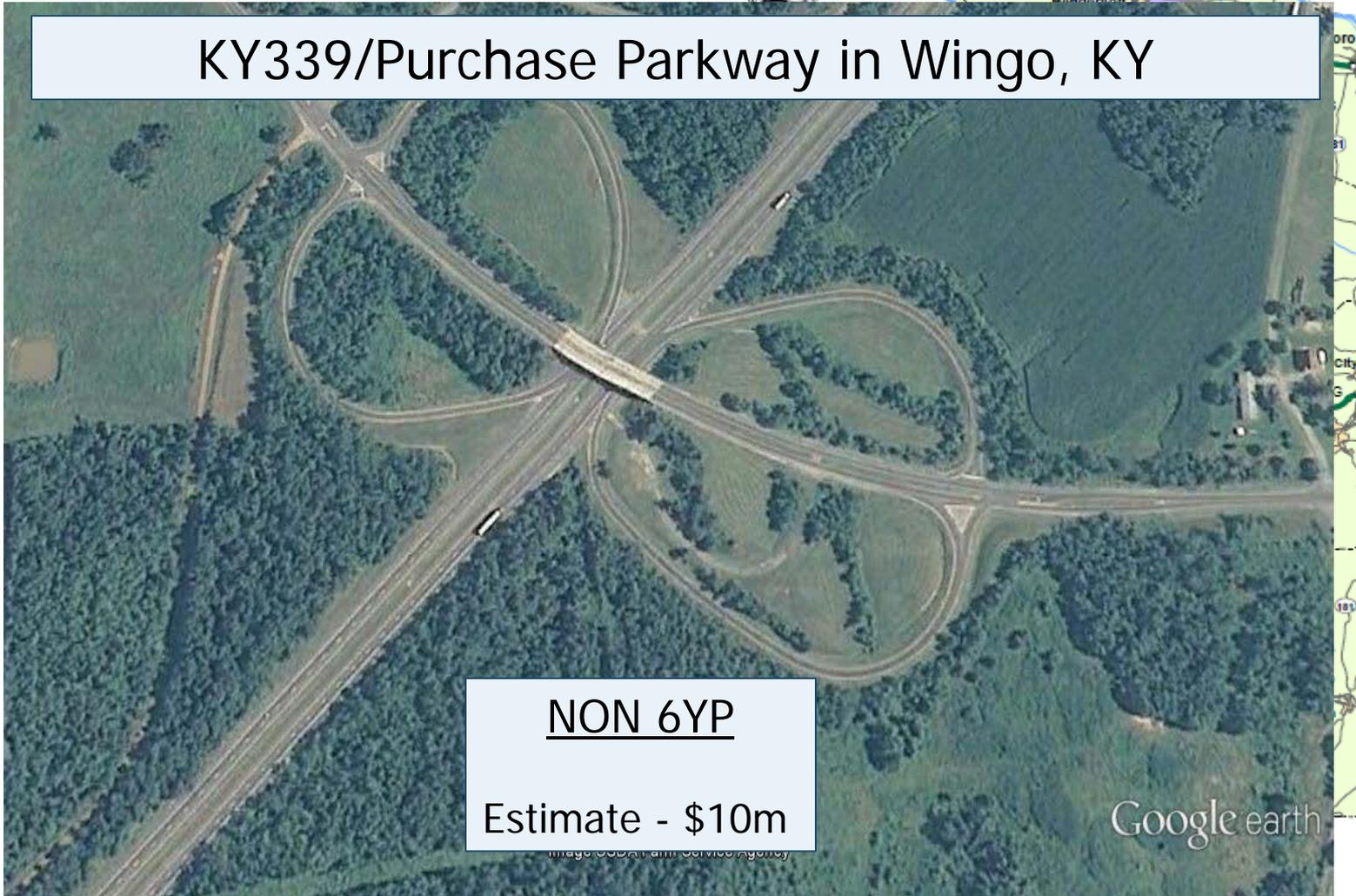
Google earth



# Interchange Reconstruction

## Interstate 69

KY339/Purchase Parkway in Wingo, KY



NON 6YP

Estimate - \$10m

Google earth



# TDOT Coordination

## Purchase Parkway at KY/TN State Line





# SIU 4 – Henderson to Evansville

## Interstate 69

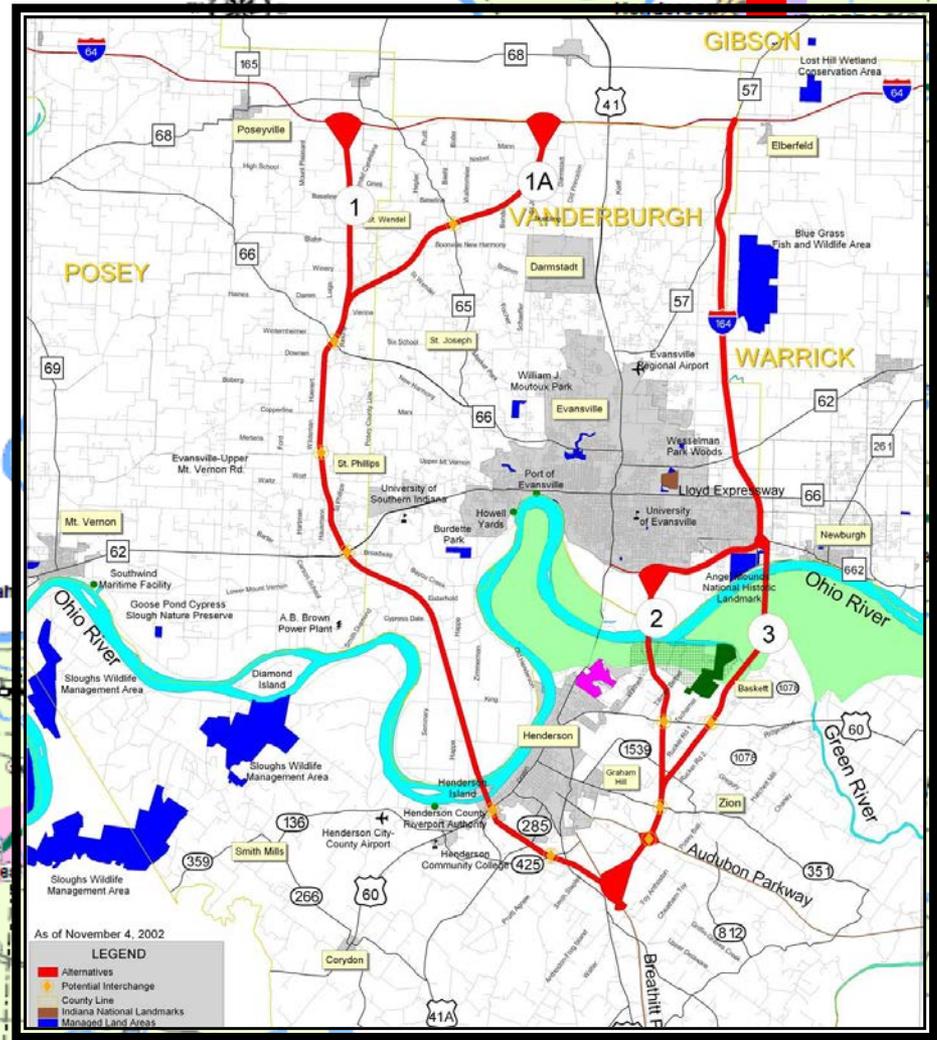
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	SIU 5		Audubon Parkway
	SIU 6		Edward T. Breathitt Pannyrille Parkway
			Other Principal Highways

Item #2-69.02

D - \$1m (2012)

Non-6Yr

Estimate - \$1.4 B





# I 69 Update – Kentucky

## Questions

Paul Looney, P.E.

[Paul.Looney@ky.gov](mailto:Paul.Looney@ky.gov)