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
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

preparing by:

Kentucky

I-69 Corridor Master Plan
Eddyville to Henderson, Kentucky KYTC Item 2-69.10

Final Draft
March 2008
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:
Palmer Engineering

KENTUCKY TRANSPORTATION CABINET
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

- Substandard Inside Paved Shoulder Widths
- Substandard Bridge Widths
- Cross Slope/Superelevation
- Ditch Width/Foreslopes
- Interchange Spacing
- Interchange at I24/WKP
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
$102 Million Authorized or Awarded
+
$150 Million Estimate to Fund Remaining (SIU 5 and 6)

**Total = $252 Million**

(Does NOT include Henderson to Evansville Segment)
KY’s First 55 Miles

Interstate 69

55 Miles of I-69

$20,500,000
Pennyville Parkway from I-69 to Henderson

Item #2-232
40 Miles

Awarded June 2014

$13,192,338
Interchange Completion

KY416/Pennyville Parkway Interchange

Item #2-8304
Awarded
February 2014
$5,455,865
Interchange Reconstruction

Item #2-8637
Awarded
July 2014
$11,002,343
Morton’s Gap KY813/Pennyrile Parkway Interchange

Item #2-8633

R-$1.45M-2013
U-$800K- 2013
C-$12.1M -2015
Parkway Modernization

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

I-69/Pennyrile Parkway

I-24/I-69 Interchange

I-69/Pennyrile Parkway

I-24/I-69 Interchange
Interstate Continuity

I-69/Pennyville 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
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
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

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<th>TECHNICAL SCORE</th>
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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
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
2014 KYTC Partnering Conference

September 10, 2014

I-24/I-69 Interchange

Marshall County, Item No. 1-800

Tim Choate, PE, PLS
Project Team

KYTC
FHWA
Bacon Farmer Workman Engineering and Testing, Inc. (PRIME)
EA Partners
Integrated Engineering (DBE)
Palmer Engineering
Project Location

Calvert City, KY

Louisville (You are Here)
Major Interstate Split

Calvert City, KY

Kentucky Dam

Kentucky Lake
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

Spur
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

ALT. C1
(50 mph RAMPS)
$48m
Alternative E1

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

ALTERNATIVE B1
I-69 / I-24 INTERCHANGE
MARSHALL COUNTY
ITEM 1-000.00

SCALE: 1" = 300'

ALT. B1
(50 mph RAMPS)
$35m
FUTURE FLYOVER
$17m
Alternative B2

ALTERNATE B2
$35m
FUTURE FLYOVER
$17m
Alternative B3

$33m
FUTURE FLYOVER
$22m
Next Steps

- Additional Public Involvement Meeting
- Choose Preferred Alternative
- Geometric Approvals
- IJS/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
Thank You........
169 Route Continuity at Mayfield
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

NON 6YP

Estimate - $2.75m
Interchange Reconstruction

KY339/Purchase Parkway in Wingo, KY

NON 6YP

Estimate - $10m
TDOT Coordination

Purchase Parkway at KY/TN State Line
Item #2-69.02
D - $1m (2012)
Non-6Yr
Estimate - $1.4 B
Questions

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