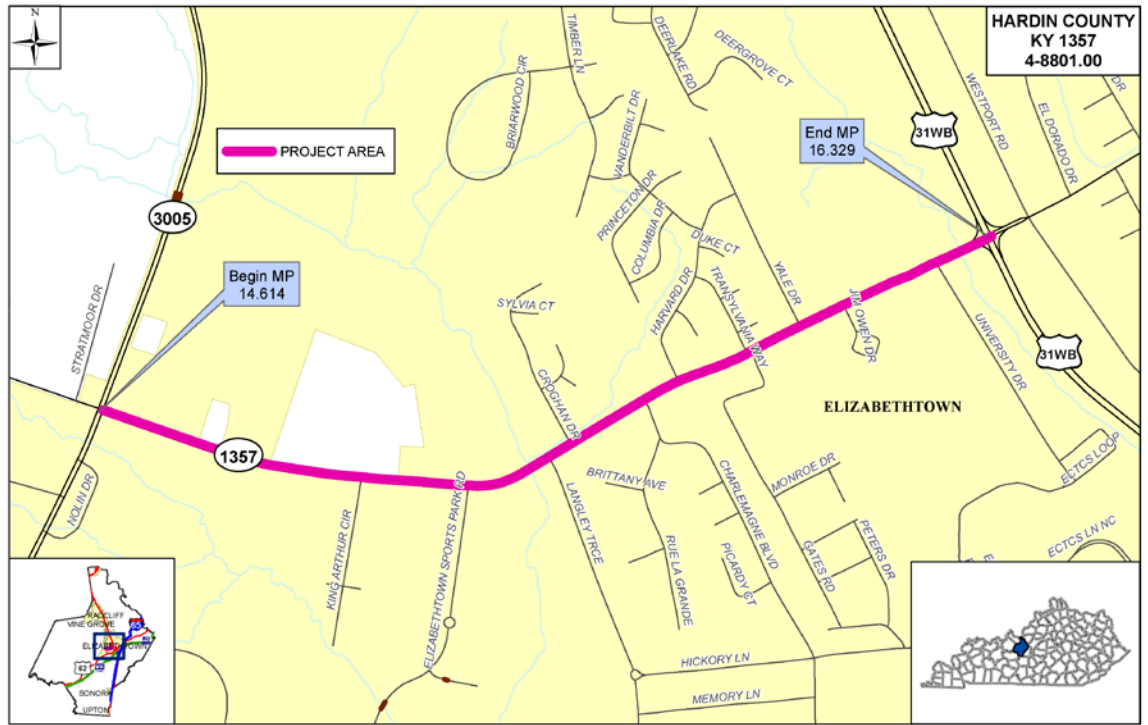


Data Needs Analysis



Scoping Study



KY 1357, Hardin County
From KY 3005 to US 31WB
Item No. 4-8801.00

Prepared by KYTC
District 4-Charlie Allen

August 2014



I. PRELIMINARY PROJECT INFORMATION

County:	Hardin	Item No.:	4-8801.00
Route Number(s):	KY 1357	Road Name:	St. Johns Road
Program No.:	8942801D	UPN:	FD04 047 1357 014-017
Federal Project No.:	N/A	Type of Work:	Roadway Improvemen

2014 Highway Plan Project Description:

ADDRESS SAFETY, GEOMETRIC DEFICIENCIES AND MAINTENANCE ISSUES ALONG KY 1357 (ST JOHNS RD) FROM US 31WB TO KY 3005 (RING ROAD) IN ELIZABETHTOWN.

Beginning MP:	14.614	Ending MP:	16.329	Project Length:	1.715
Functional Class.:	<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural Arterial	State Class.:	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary	Route is on: <input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt	
MPO Area:	Radcliff/E-town	Truck Class.:	A	% Trucks: N/A	
In TIP:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Terrain:	Rolling	Partial Spacing:	
ADT (current):	5460 2013	Access Control: <input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial			
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):	Existing Bike Accommodations: Shared Lane			
Posted Speed: <input type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input checked="" type="checkbox"/> 55 mph <input type="checkbox"/> Other (Specify):		Ped: <input type="checkbox"/> Sidewalk			
KYTC Guidelines Preliminarily Based on : 55 MPH Proposed Design Speed					

Roadway Data:	COMMON GEOMETRIC		Existing Rdwy. Plans available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Year of Plans: 1951
	EXISTING	COMMON GEOMETRIC	
No. of Lanes	2	2 to 5	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Lane Width	10-11'	12'	Year of Plans: 1951
Shoulder Width	0-4'	C&G	<input checked="" type="checkbox"/> Traffic Forecast Requested
Max. Superelevation**	Field Measure	**	Date Requested: 7/18/2014
Minimum Radius**	7.2 degrees	**	<input type="checkbox"/> Mapping/Survey Requested
Maximum Grade	2%	4-6%	Date Requested:
Minimum Sight Dist.	Field Measure	495'	Type:
Sidewalk Width(urban)	None	4-8'	
Clear-zone***	Field Measure	***	

Project Notes/Design Exceptions?:

*Based on proposed Design Speed, **AASHTO's A Policy on Geometric Design of Highways and Streets, ***AASHTO's Roadside Design Guide

Bridge No.*:	047B00082N	(Bridge #2)	Existing Geotech data available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sufficiency Rating	65.3	Detour Length(s): 3.7 miles	
Total Length	65.9'		
Width, curb to curb	20'		
Span Lengths	29.9'		
Year Built	1952		
Posted Weight Limit	None		
Structurally Deficient?	No		
Functionally Obsolete?	Yes		
Existing Bridge Type	Concrete Tee Beam		

*If more than two bridges are located on the project, include additions sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

The following funding was listed in the 2014 General Assembly's Enacted Highway Plan.	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
	SPP	D	2015	\$1,100,000
		R		
		U		
		C		

B. Project Status

Design funds are the only funds in the biennium. This is the #2 priority for the District of all the projects in this Highway Plan.

C. System Linkage

This roadway has been used for years as a cut through road from US 31WB to KY 3005 (Ring Road). Now that the new interchange is open to KY 361, this cut through is not as widely utilized. This is still a direct access to numerous businesses including factories located on the west side of Elizabethtown.

D. Modal Interrelationships

This section is not included in any published bike routes. There are no railroad, transit, riverport or freight networks associated with this new section.

E. Social Demands & Economic Development

A large sports complex is located along this route which generates heavy volumes periodically throughout the year. A new school is being built along this route and expected to be open in 2015. Numerous factories and businesses are located along KY 3005. Several residential developments are also along this route. Elizabethtown Community Technical College has access to this roadway off University Drive.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The traffic counts are highest near the north end of the project at US 31WB. The last actual count was 6769 in 2012. The south end of the project near KY 3005 was counted in 2013 and was 5460 ADT. Trends show that the traffic count has decreased by 10-14% throughout the corridor over the past 3 years.

G. Capacity

The VSF along this corridor is 0.62 which doesn't indicate a capacity issue.

H. Safety

There are no sections or spots with a CRF>1. There have been 29 crashes with 6 injury crashes over the past 3 years. The majority of the crashes are rear end crashes that actually occurred near the intersection with US 31wb. There are also numerous entrances and approach roads along this route which may have contributed to these crashes.

I. Roadway Deficiencies

This section of roadway has narrow shoulders, deficient horizontal curves, deep ditches adjacent to roadway, and our maintenance personnel continue to deal with drainage issues along this section. There is also a functionally obsolete bridge located near MP 15.403.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

Project is in: Attainment area Nonattainment or Maintenance Area PM 2.5 County

STIP Pg. #: [redacted] TIP Pg. #: [redacted]

Project will be included in the updated STIPP and the MPOs TIP.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

A site check of the Office of State Archaeology found no sites within the project area, however there have been no surveys either. The Archaeologist thought this might be a high probability area due to the proximity to Billy Creek and Shaw Creek, terrain and vicinity to other recorded sites. There are no listed historic homes and there is a low probability for the homes within the project area to be eligible.

C. Threatened and Endangered Species

The project area is within range of a known Northern Long Eared Bat Hibernaculum. Tree clearing restrictions should be enforced for this project from November 15-March 31

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

The electrical substation could be a potentially contaminated site for PCBs. If the structures over Billy Creek or Shaw Creek are replaced they will need to be inspected and sampled for Asbestos Containing Materials.

E. Permitting

Check all that may apply: Waters of the US MS4 area Floodplain Impacts Navigable Waters of the US Impacts
Are 401/404 Permits likely to be required? Yes No Impacts to: Wetlands Stream/Lake/Pond
 ACE LON ACE NW ACE IP DOW IWQC Special Use Waters

Billy Creek and Shaw Creek have FEMA flood studies with cross sections. Any impacts will need to be permitted.

F. Noise

Are existing or planned noise sensitive receptors adjacent to the proposed project? Yes No
Is this considered a "Type I Project" according to the [KYTC Noise Analysis and Abatement Policy?](#) Yes No

As long as there is no substantial horizontal realignment this project will not need a noise study.

G. Socioeconomic

Check all that may apply: Low Income/Minority Populations affected Relocations Local Land Use Plan available

The area is fairly well developed with residential homes. If substantial realignment is required relocations may be required.

H. Section 4(f) or 6(f) Resources

The following are present on the project: Section 4(f) Resources Section 6(f) Resources

There are two Parks within the Project area. The University Drive Baseball Complex received LWCF grants to construct the park in 1969. The Elizabethtown Sports Complex was constructed in 2012 and opened in 2013.

Anticipated Environmental Document:

None (Completely State funded) ▼

IV. PROJECT SCOPING, NEEDS & PURPOSE

A. Scoping & Need:

KY 1357 has widely been used as a cut through route from KY 3005 (Ring Road) to US 31WB. The roadway has a considerable number of houses and subdivision streets that are along this corridor. A large sports complex called the Elizabethtown Sports Park is located along this route and has been required to limit the access from KY 1357 to their site due to inadequacies of this roadway. Generally traffic is allowed to exit the park onto the roadway during large events. A new elementary school is under construction near the west end of the project and should be open in 2015. This section has narrow lanes and little to no shoulders. Some of the ditches are deep and very close to the edge of the roadway. Numerous drainage and maintenance issues exist along this route. Improvements to this roadway would provide a continuous link from US 31w just south of Hardin Memorial Hospital to Ring Road between US 62 and KY 361.

B. Draft Project Purpose:

The purpose of this project is to improve roadway deficiencies and provide a more efficient route between Ring Road (KY 3005) and US 31WB.

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:	Current Estimate	
<p>Estimates are based on a 4-lane urban section matching the segment from US 31WB to US 31w. My estimate was based on a cost per mile using similar projects constructed in District 4 over the previous years and adjusted for inflation. My estimate assumed 4-12' lanes with C&G and sidewalks. The number of lanes will be determined upon completion of a Traffic Forecast.</p> <p>Design funds are only available in this biennium.</p>	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$ 1,100,000.00
	R/W	\$ 5,000,000.00
	Utilites	\$ 2,500,000.00
	Const	\$ 13,100,000.00
	Total	\$ 21,700,000.00

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Company Name - Nolin RECC
 Contact - Greg Harrington
 Address - 411 Ring Rd. Elizabethtown, KY 42701
 Phone No. - 270-765-6153

Company Name - Hardin County Water Dustrict #2
 Contact - James Jeffries
 Address - 360 Ring Rd. Elizabethtown, KY 42702
 Phone No. - 270-737-1056

Company Name - Windstream Kentucky East LLC
 Contact - Roger Redford
 Address - 229 Lees Valley Rd. Shepherdsville, KY 40165
 Phone No. - 502-957-7140

Company Name - City of Elizabethtown Natural Gas
 Contact - Johnny Day
 Address - 200 West Dixie Ave. Elizabethtown, KY 42702
 Phone No. - 270-765-6121

Company Name - East Kentucky Power
 Contact - Nick Adams
 Address - 4774 Lexington Rd. Winchester, KY 40391
 Phone No. - 859-745-9605

Company Name - Doe Run Gas Transmission
 Contact - Nathan Beavin
 Address -
 Phone No. - 270-668-7361

VII. TABLES AND EXHIBITS

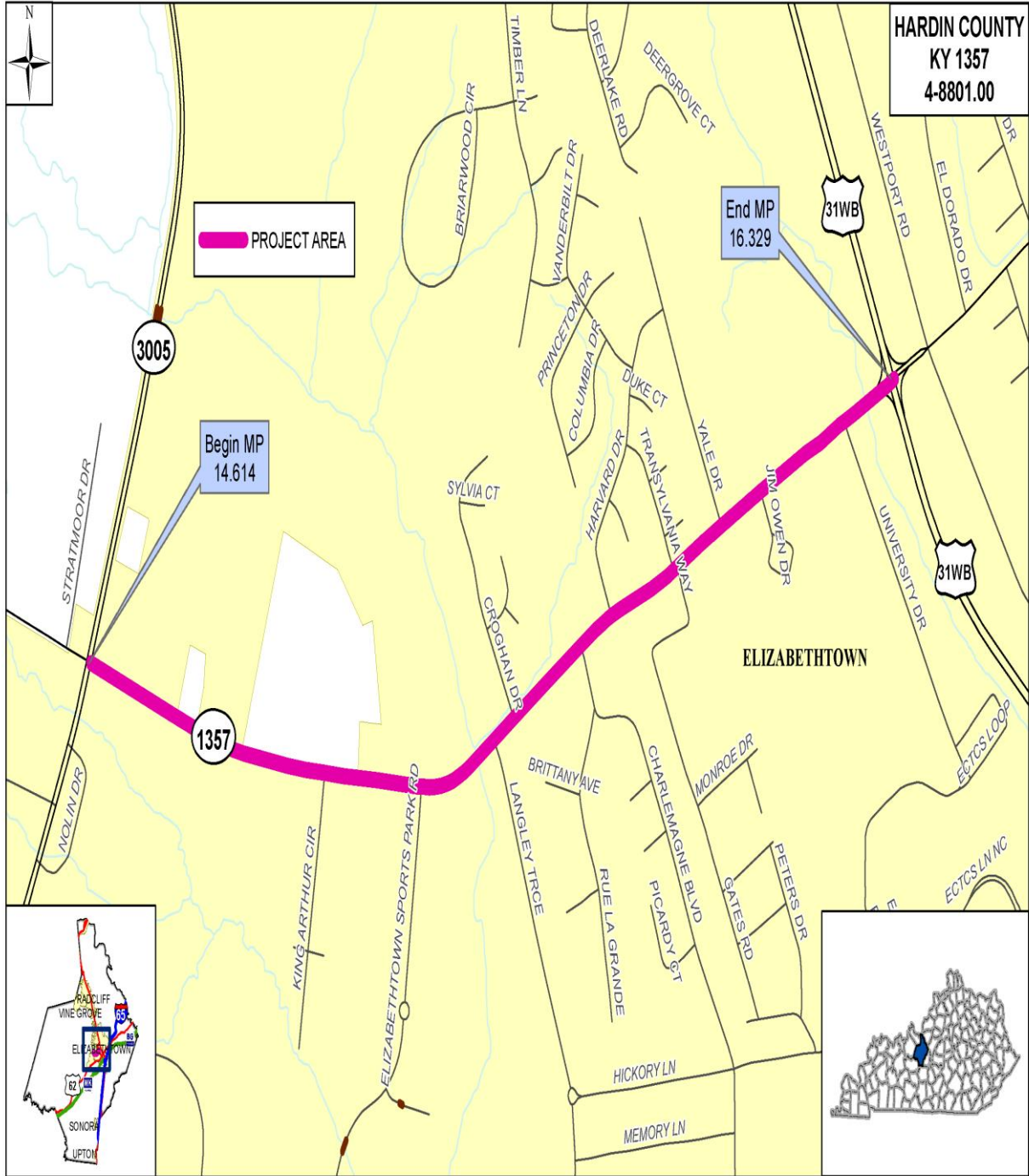


Exhibit #1_Project Area Map

VII. TABLES AND EXHIBITS (cont.)

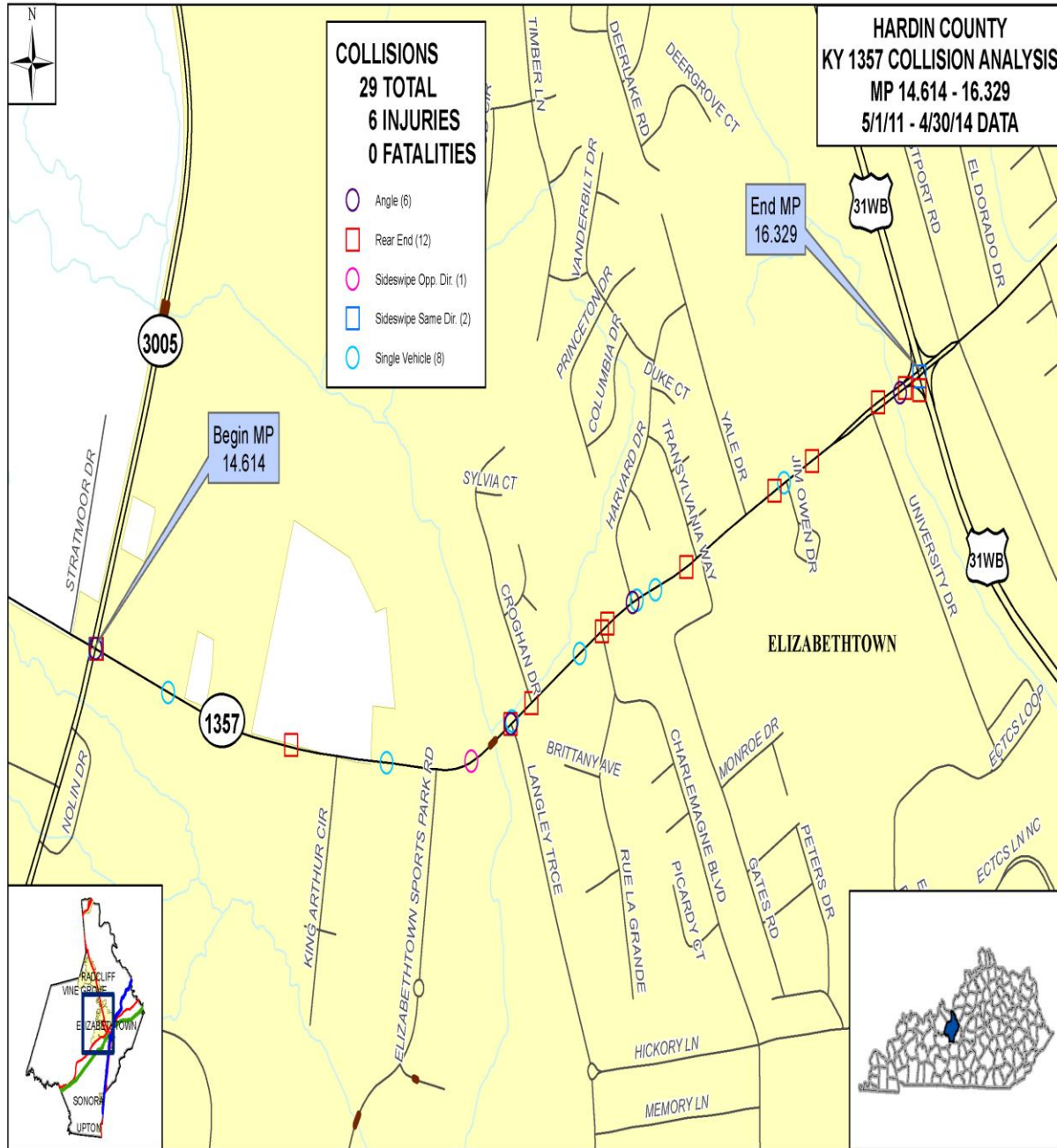


Exhibit #2_Crash Map