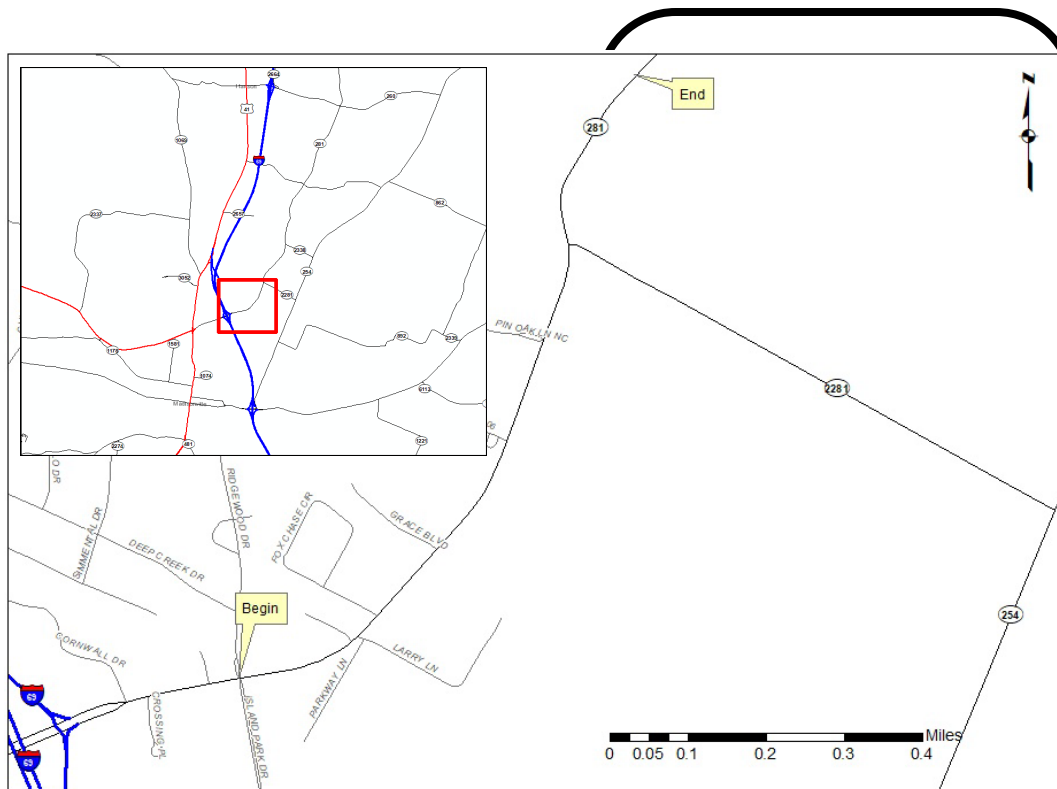
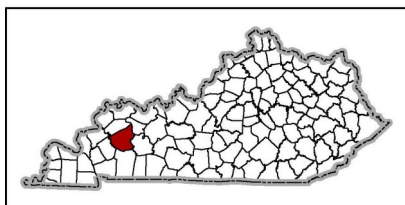


Data Needs Analysis



Scoping Study



KY 281 from Island Park Drive to 0.25 miles north of Carriage Lane (KY 2281)

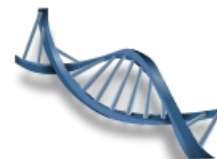
Hopkins County

Item No. **2-384.00**

Prepared by

KYTC District 2 Planning

July 2022



I. PRELIMINARY PROJECT INFORMATION

County:	Hopkins	Item No.:	2-384
Route Number(s):*	KY 281	Road Name:	Island Ford Road
Program No.:	152530	UPN:	FD52 054 0281 000-002
Federal Project No.:	STP 8037001	Type of Work:	Major Widening

2022 **Highway Plan Project Description:**

Improve KY 281 from Island Park Drive to 0.25 Miles North of Carriage Lane (KY 2281)

Beginning MP:	0.996	Ending MP:	2.000	Project Length:	1.004
In TIP:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Use PDP/CHAF to Verify Project Data		
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	
Functional Class.:	<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural	Collector	Truck Class.:	A	% Trucks: 8.002
MPO Area:	Not Applicable		Terrain:	Level	
ADT (current):	4354	2019			
Access Control:	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled		<input type="checkbox"/> Partial	Spacing: <input type="text"/>	
Median Type:	<input checked="" type="checkbox"/> Undivided <input type="checkbox"/> Divided (Type):				
Existing Bike Accommodations:	Shared Lane		Ped:	<input type="checkbox"/> Sidewalk	
Posted Speed:	<input type="checkbox"/> 35 mph <input checked="" type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph		<input type="checkbox"/> Other (Specify): <input type="text"/>		
KYTC Guidelines Preliminarily Based on :	45 MPH Proposed Design Speed				

COMMON GEOMETRIC

Roadway Data:	EXISTING	PRACTICES**	
No. of Lanes	2	2'	Existing Rdwy. Plans available?
Lane Width	11ft	MIN 10'	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Shoulder Width	1'		Year of Plans: <input type="text"/>
Max. Superelevation***		6%	<input type="checkbox"/> Traffic Forecast Requested
Minimum Radius***		1250'	Date Requested: <input type="text"/>
Maximum Grade	6%	8%	<input type="checkbox"/> Mapping/Survey Requested
Minimum Sight Dist.		360'	Date Requested: <input type="text"/>
Sidewalk Width(urban)	NA	4-8'	Type: <input type="text"/>
Clear-zone [†]			

Project Notes/Design Exceptions? Note: See Roadway deficiencies on Page 3 of this document

Bridge No.:#	(Bridge #1)	(Bridge #2)	
Sufficiency Rating			
Total Length			Existing Geotech Data Available?
Width, curb to curb			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Span Lengths			
Year Built			
Posted Weight Limit			Detour Length(s): <input type="text"/>
Structurally Deficient?			
Functionally Obsolete?			
Existing Bridge Type			

*If more than one road is included in the project, include additional sheets.
 **Based on proposed Design Speed
 ***AASHTO's A Policy on Geometric Design of Highways and Streets
 +AASHTO's Roadside Design Guide
 †If more than two bridges are located on the project, include additional sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

Funds were shown in the 2022 enacted Highway plan.

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
STP2	D	2023	\$750,000
SPP	R	2025	\$2,000,000
SPP	U	2025	\$1,850,000
SPP	C	2027	\$3,200,000

B. Project Status

Design funds have been requested. Project expected to be advertised in August 2022.

C. System Linkage

This section of KY 281 provides an additional connection from KY 254 (Brown road) to I 69 via KY 2281 (Carriage Lane).

D. Modal Interrelationships

This route does not provide direct access to airports, rail or other port facilities but it does improve direct access to an interstate interchange.

E. Social Demands & Economic Development

This route serves several neighborhoods as well as providing a connection to shopping, restaurants, drug stores etc.

II. PROJECT PURPOSE AND NEED (cont.)

F. Transportation Demand

The historical traffic data since 2010 shows a steady increase in traffic on this route. There has been residential development in the area over the last few years that would have contributed to this increase.

G. Capacity

This project would not increase capacity.

H. Safety

There were 21 crashes reported on this route from June 1, 2018 to June 1, 2022. See map in Tables and Exhibits below. Of those, 14 were single vehicle crashes. Of the 14 crashes, 4 were hitting fixed objects, 4 were running off the roadway and hitting earth embankment/ditch, and 3 collisions with animals. There was one fatality during the study period. It was a single car crash into a tree. The tree was reported to have been 25 feet east of the roadway. Of the report crashes, 11 of them were when the pavement was wet. One of the crashes listed the sight distance at Carriage Lane as a contributing factor.

Using CDAT data from 2016- 2020, there was a Excess Expected Crashes (ECC) -7.5, and a Level of Service of Safety (LOSS) of 2.

I. Roadway Deficiencies

This section of KY 281 experiences many roadway deficiencies in its one miles stretch. The road begins in a sharp horizontal curve and possesses no pedestrian facilities as well as a lack of access management. In addition, water crosses and pools in the road at ~MP 1.43 during heavy rain events along with pipe and ditch capacity drainage issues. Finally, the project terminates at a point 0.25 miles north of the intersection of KY 281 with KY 2281 (Carriage Lane) where there are significant site distance issues as well as geometric deficiencies.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

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

STIP Pg.#: TIP Pg.#:

No air quality impacts are anticipated.

B. Archeology/Historic Resources

Known Archeological or Historic Resources are present

No known sites are present, however, archeological impacts are always possible and a survey will be required.

C. Threatened and Endangered Species

Potential impacts to T & E species (bats).

D. Hazardous Materials

Potentially Contaminated Sites are present Potential Bridge or Structure Demolition

Several locations where contaminated soils may be present are along the project. A Phase 1 assessment is needed.

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

Minor stream impacts are anticipated.

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 [KYTC Noise Analysis and Abatement Policy?](#) Yes No

No noise impacts are anticipated.

G. Socioeconomic

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

Relocations possible, but not anticipated.

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

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

No Section 4(f) or 6(f) impacts are anticipated.

[Anticipated Environmental Document:](#)

CE Level 1



IV. PROJECT NEED, PURPOSE & SCOPE
A. Need:
<p>This section of KY 281 connects to the improved section of KY 281 near the interchange with I 69. It provides connection to local businesses and services on the north side of Madisonville, as well as residential properties. It provides a link (via KY 2281) to schools on KY 254 (Brown Road). This roadway has some issues with drainage that causes the road to flood. There are also some access management issues along this route which needs addressing.</p>
B. Purpose:
<p>The purpose of this project is to improve safety, traffic flow, and function of KY 281.</p>
C. Scope:
<p>To make necessary improvements to KY 281 from the intersection with Island Park Drive (MP 0.996) to a point 0.25 miles north of KY 2281 (MP 2.0). This project should address site distance issues and geometric deficiencies associated with the KY 281/KY 2281 intersection. In addition, this project should address pedestrians by adding facilities to accommodate them through this section and tie into existing facilities. Finally, this project should correct drainage issues, consider access management solutions, and address any other geometric deficiencies or substandard pavement conditions.</p>

V. PROJECT ESTIMATE & METHODOLOGY

Estimate Methodology:

This estimate was based on cost to complete similar projects.

Current Estimate

<u>Phase</u>	<u>Estimate</u>
Planning	
Design	750,000
R/W	2,000,000
Utilities	1,850,000
Const	3,200,000
Total	7,800,000

VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION

Atmos Energy
Contact - Chase Downing
3275 Highland Point Dr
Owensboro, KY 42303
(270)685-8128

KU
Contact -Hunter Gipson
Electrical Engineer I
195 Hubert Reid Drive
Earlington, KY 42410
M: (270)8410354
O:(270)383-6000

City of Madisonville (Electric, Water, Sewer)
Contact - Lincoln Fugal
900 McCoy Ave P.O Box 705
Madisonville, KY 42431
(270) 824-2120

AT&T
Contact - Scott Roche
1340 E John Rowan Blvd.
Bardstown, KY 40004
(502)348-4528

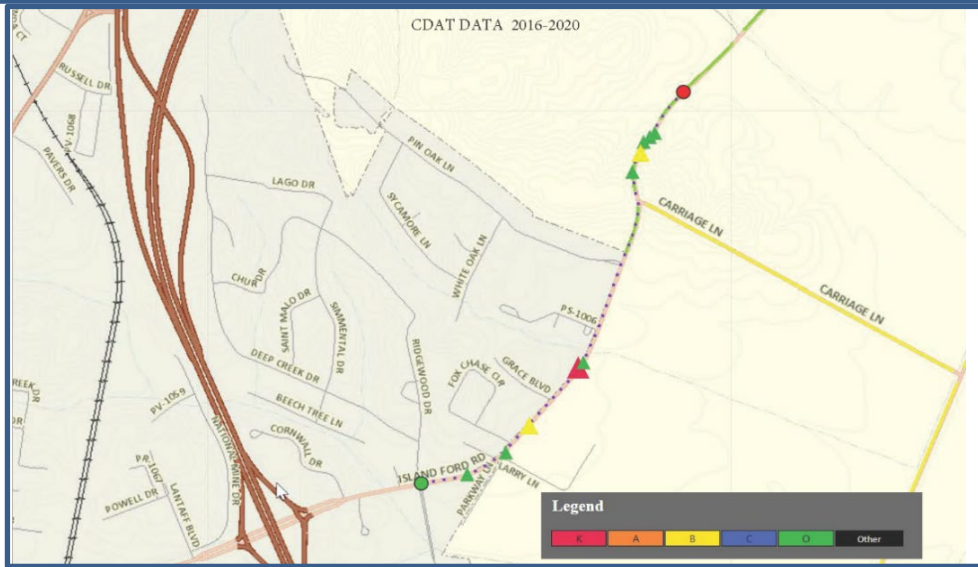
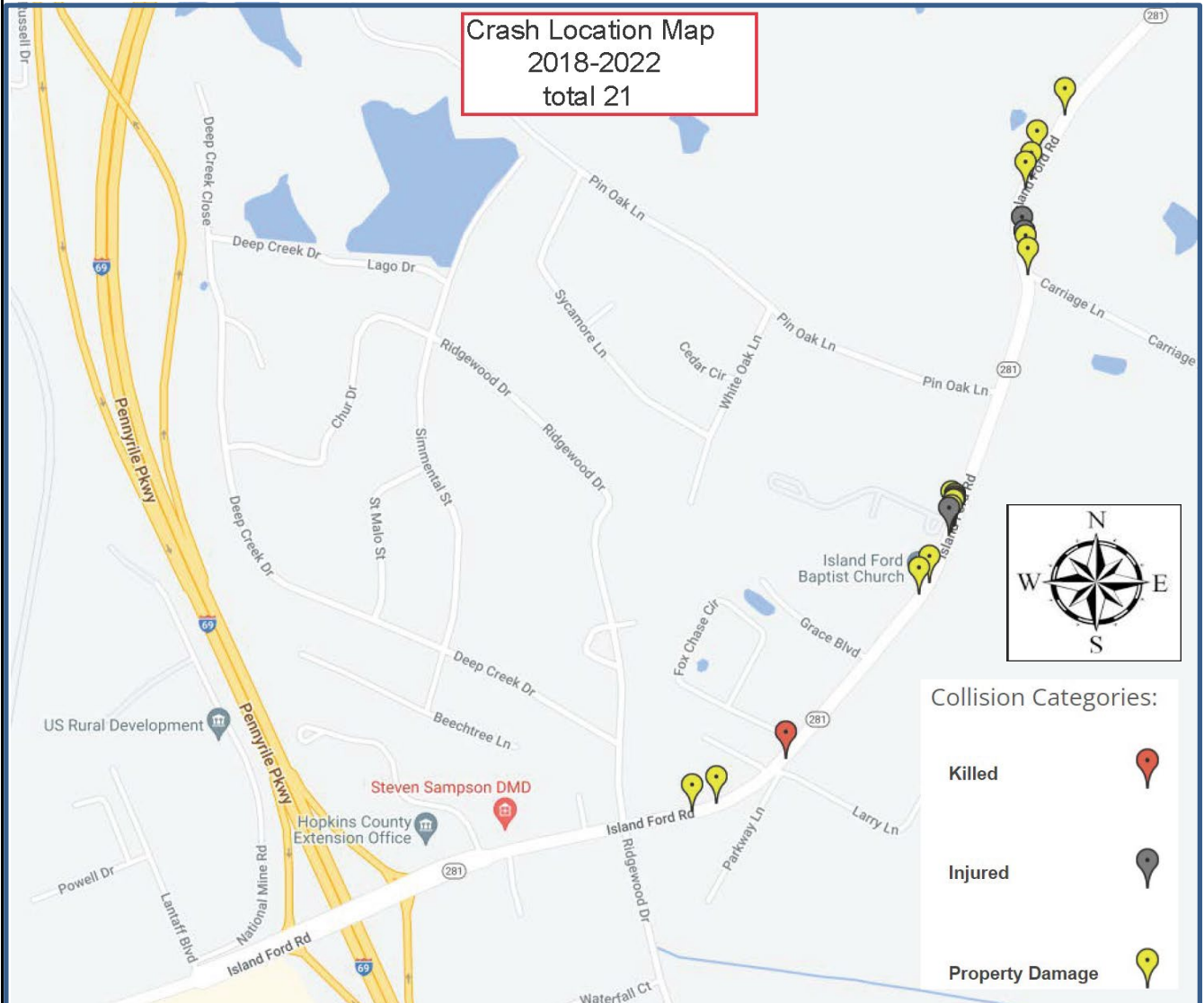
Spectrum
Contact - John Wade
250 Madison Square Dr.
Madisonville, KY 42431
(812)253-2710

Windstream
Contact - James Galvin
111 South Main Street
Elizabethtown, KY 42701
(270)765-1818

VII. TABLES AND EXHIBITS

Crash History

Crash Location Map
2018-2022
total 21



VII. TABLES AND EXHIBITS (cont.)

Traffic Count History

8/3/22, 2:48 PM

KYTC Traffic Count Reporting System

Historical Traffic Volume Summary

Station Details:

Sta ID:	054B12
Sta Type:	Classification
Map:	MapIt
District:	2
County:	Hopkins
Route:	054-KY-0281 -000
Route Desc:	ISLAND FORD RD

Begin MP:	0.6880
Begin Desc:	I-69
End Mp:	2.64
End Desc:	KY 2338
Impact Year:	2005
Year Added:	

Newest Count

AADT:	4354
Year:	2019
% Single:	5.8690
% Combo:	2.1330
K Factor:	10.40
D Factor:	58

Definitions:

Sta. ID - Three digit county number + station number

MP - milepoint

Impact Year - year of significant change to traffic pattern within station segment

AADT - Annual Average Daily Traffic - the annualized average 24-hour volume of vehicles on a segment of roadway

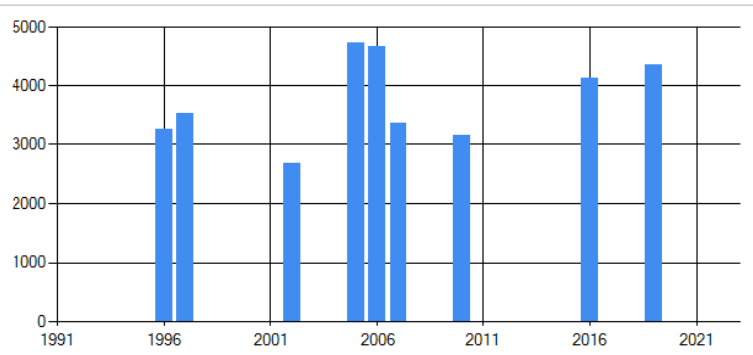
% Single - single unit truck volume as a percentage of the AADT

% Combo - combination truck volume as a percentage of the AADT

K Factor - peak hour volume as a percentage of the AADT

D Factor - percentage of peak hour volume flowing in the peak direction

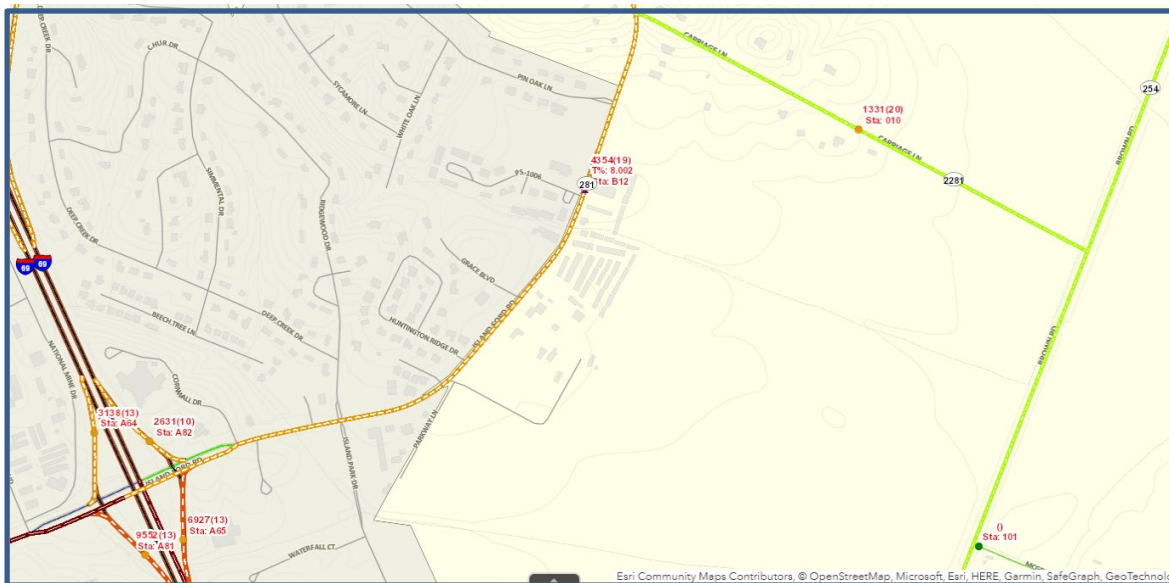
Year	AADT	Year	AADT	Year	AADT
2022		2012		2002	2680
2021		2011		2001	
2020		2010	3160	2000	
2019	4354	2009		1999	
2018		2008		1998	
2017		2007	3370	1997	3530
2016	4126	2006	4680	1996	3250
2015		2005	4730	1995	
2014		2004		1994	
2013		2003		1993	



https://datacenter.ky.gov/EDSB_SOLUTIONS/CTS/StationDetails.aspx?STATION=054B12&TF_NE_ID=47732494

1/1

Traffic Count Map



VII. TABLES AND EXHIBITS (cont.)

Photos



Looking North at Island Park Drive (MP 0.992)



Looking North near Huntington ridge Drive (MP 1.200)



Looking North near intersection with KY 2281 Carriage Lane (MP 1.75)