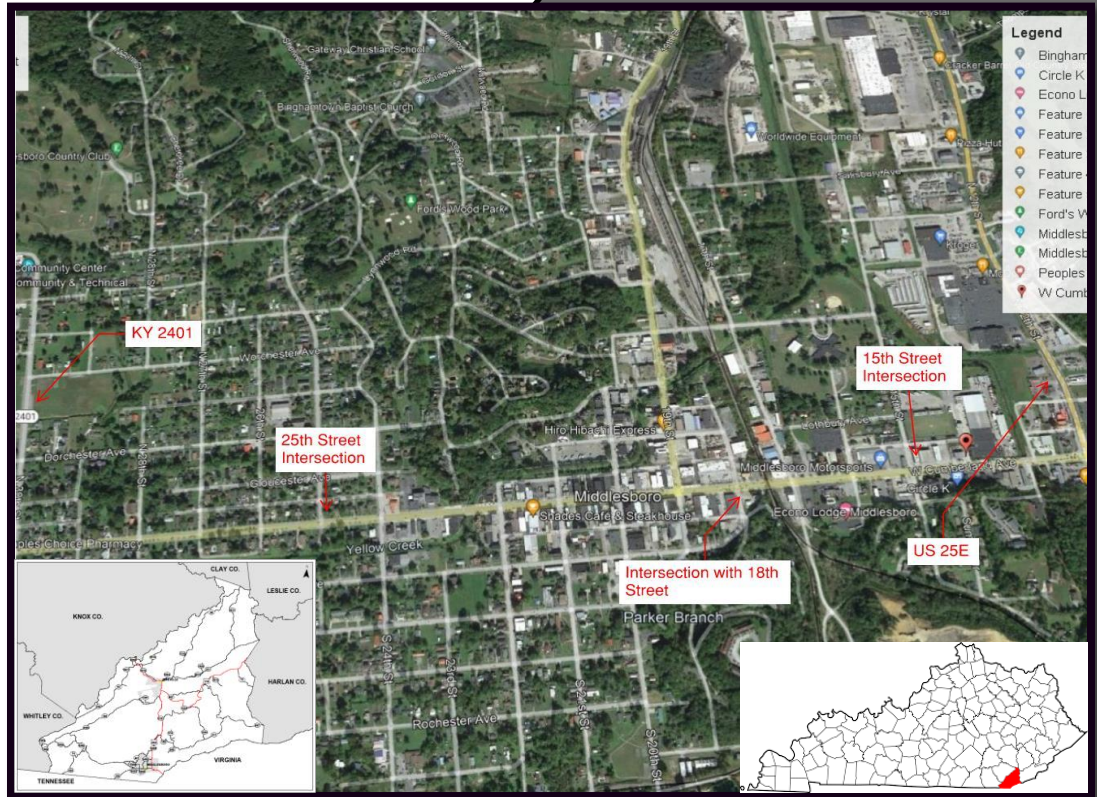


# Data Needs Analysis



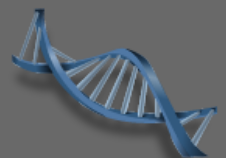
## Scoping Study



KY 74, Bell County  
From US 25E to 30<sup>th</sup> Street  
Item No. 11-167.00

Prepared by the KYTC  
Division of Planning and  
KYTC District 11

July 2023



I. PRELIMINARY PROJECT INFORMATION			
<b>County:</b>	Bell	<b>Item No.:</b>	11-167.00
<b>Route Number(s):*</b>	KY-74	<b>Road Name:</b>	W Cumberland Ave
<b>Program No.:</b>		<b>UPN:</b>	(Function) 007 KY74 15.19-16.75
<b>Federal Project No.:</b>		<b>Type of Work:</b>	BIKE/PED FACIL(O)
<b>2022 Highway Plan Project Description:</b>			
ENHANCING CUMBERLAND AVENUE FROM US 25E TO 30TH STREET WITH STREET IMPROVEMENTS FOR VEHICLE AND PEDESTRIANS, AS WELL AS STORM WATER MANAGEMENT TO IMPROVE SAFETY, CONGESTION, AND ENVIRONMENTAL IMPACT.			
<b>Beginning MP:</b>	15.19	<b>Ending MP:</b>	16.75
<b>Project Length:</b>	1.56		
<b>In TIP:</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <a href="#">Use PDP/CHAF to Verify Project Data</a>		
<b>State Class.:</b>	<input type="checkbox"/> Primary <input checked="" type="checkbox"/> Secondary	<b>Route is on:</b>	<input type="checkbox"/> NHS <input type="checkbox"/> NN <input type="checkbox"/> Ext Wt
<b>Functional Class.:</b>	<input checked="" type="checkbox"/> Urban <input type="checkbox"/> Rural Arterial	<b>Truck Class.:</b>	A % Trucks: 6.6577
<b>MPO Area:</b>	Not Applicable	<b>Terrain:</b>	Level
<b>ADT (current):</b>	10069 (2021)	<b>Access Control:</b>	<input type="checkbox"/> None <input checked="" type="checkbox"/> Permit <input type="checkbox"/> Fully Controlled <input type="checkbox"/> Partial Spacing:
<b>Median Type****:</b>	<input checked="" type="checkbox"/> Undivided <input checked="" type="checkbox"/> Divided (Type):	Raised Non Mountable	
<b>Existing Bike Accommodations:</b>	Shared Lane	<b>Ped:</b>	<input checked="" type="checkbox"/> Sidewalk
<b>Posted Speed:</b>	<input checked="" type="checkbox"/> 35 mph <input type="checkbox"/> 45 mph <input type="checkbox"/> 55 mph	<input checked="" type="checkbox"/> Other (Specify):	25 mph from MP15.71 to 16.23
<b>KYTC Guidelines Preliminarily Based on :</b>	35 MPH Proposed Design Speed		
COMMON GEOMETRIC			
<b>Roadway Data:</b>	EXISTING	PRACTICES**	<a href="#">Existing Rdwy. Plans available?</a>
No. of Lanes	4	2 MIN	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Lane Width	11'-12'	11'	Year of Plans: 1998
Shoulder Width	None	4'	<input checked="" type="checkbox"/> <a href="#">Traffic Forecast Requested</a>
Max. Superelevation***	Unknown	6%	Date Requested: 6/14/2022
Minimum Radius***	Unknown	144' (25 MPH)-340' (35MPH)	<input type="checkbox"/> Mapping/Survey Requested
Maximum Grade	0%	7%	Date Requested:
Minimum Sight Dist.	Unknown	155'(25 MPH)-250' (35 MPH)	Type:
Sidewalk Width(urban)	4'	4' MIN	
Clear-zone <sup>†</sup>			
<b>Project Notes/Design Exceptions?</b>	N/A		
<b>Bridge No.:#</b>	007B00086N	007B00084N	
Sufficiency Rating	48.3	78.2	<a href="#">Existing Geotech Data Available?</a>
Total Length	64'	86'	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Width, curb to curb	44'	62'	
Span Lengths	12.1'	35.1'	
Year Built	1949	1951	
Posted Weight Limit	22 TONS	24 TONS	Detour Length(s):
Structurally Deficient?	Not Deficient	Not Deficient	
Functionally Obsolete?	Not Deficient	Not Deficient	
Existing Bridge Type	Concrete culvert	Concrete continuous slab	
*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**

The project description in the 2022 Highway Plan is "ENHANCING CUMBERLAND AVENUE FROM US 25E TO 18TH STREET WITH STREET IMPROVEMENTS FOR VEHICLE AND PEDESTRIANS, AS WELL AS STORM WATER MANAGEMENT TO IMPROVE SAFETY, CONGESTION, AND ENVIRONMENTAL IMPACT."	<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
	SPP	D	2024	\$990,000
	SPP	D	2025	\$990,000
	SPP	R	2026	\$580,000

**B. Project Status**

The funding phases and years for this project are listed above. The route has two sidewalk improvement projects currently under construction within the limits of this project, 11-80150 & 11-80151. The sidewalk project will address safety issues related to the deteriorated sidewalks, but will not address the issues encompassed in this project.

**C. System Linkage**

The project will be important to the transportation system primarily because of the access to 25E and other connecting roads. The intersections on this route located at 15th St, KY 2079, KY 2402, and KY 2401 are vital in maintaining traffic through the area as well as continuing the flow of transportation linkage along the section. It is also noteworthy that KY 74 also has a truck route that runs concurrently with KY 441 and KY 2079 and intersects KY 74 (Cumberland Avenue) within the limits of this project area..

**D. Modal Interrelationships**

The section does include a sidewalk area for bicycles and pedestrians. Improving the drainage system will have a positive impact upon these users and will be an important factor throughout the project. Many of the vehicles along the roadway are passenger cars, but with the connection to 25E, trucks are present as well.

**E. Social Demands & Economic Development**

This project will have a positive impact throughout the community because of its proximity to residences, a hospital and public school. The project will also have a positive environmental impact as drainage issues are improved along this corridor section.

## II. PROJECT PURPOSE AND NEED (cont.)

### F. Transportation Demand

Recent traffic count data shows that the ADT along KY-74 from MP 15.19 to MP 16.77 was 10,069 in 2021, 6,930 in 2020, and 9,856 in 2019. The dip in traffic in 2020 is likely due to the COVID-19 pandemic. Using 2019 and 2021 volumes, there was a slight increase in traffic, so there is no indication of demand being reduced. A traffic forecast has been requested to further study the current and future demand.

### G. Capacity

The current roadway includes four lanes that maintain the amount of traffic travelling through the section. In regards to future capacity during project construction, there are currently no projects or changes that will result in increased traffic congestion. Although the ADT for 2021 has seen a slight increase over past years. The current lane configuration should continue to maintain the amount of traffic in the future but should be examined to see if reconfiguration is needed.

### H. Safety

A review of the KSP Collision Data Base shows 176 crashes occurred along the corridor between 2017 and 2021. Crash data was analyzed using the CDAT tool and it calculates the following using segment analysis for this project- KAB EEC = -1.3. LOSS = 2, CO EEC = -55.2 LOSS = 2. However, since most crashes occurred within intersections, it is recommended that a more detailed analysis should be conducted within the Design Phase as the project moves forward.

### I. Roadway Deficiencies

The roadway has issues with the existing storm sewer system, which is affecting the drainage along W Cumberland Ave. There are multiple existing drainage structures in undesirable locations, such as in the driving lane, which will likely need shifted to a new location. The intersections of W Cumberland Ave with both 15th and 18th Streets need widened due to the limited radii for right turns onto both side streets. The same issue applies for 25th Street as well; however, 15th and 18th Streets have a right turn that is more challenging to complete. The sight distance here is limited and is a safety concern for vehicles turning onto W Cumberland Ave. The project area also has some parcels with large undefined entrances, which need to be investigated to determine if access management can be used to improve these locations. There are two structures along the route that should be analyzed for possible rehab or replacement to gain additional load capacity and improve drainage.

**III. PRELIMINARY ENVIRONMENTAL OVERVIEW**

**A. Air Quality**

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

STIP Pg.#:  TIP Pg.#:

Project must be added to STIP. TIP is not applicable because it is not in an MPO. Bell County is an attainment area for all monitored air pollutants. If the project receives federal funding and it significantly changes or increases traffic, or adds additional lanes, it may require MSAT analysis. If structures are impacted they will need to be inspected for asbestos containing materials, and KY DAQ will require advanced notification prior to demolition, if applicable.

**B. Archeology/Historic Resources**

Known Archeological or Historic Resources are present

Several structures along the route appear greater than 50 years old. If federal funding is applied to the project, then investigations of archeological and historic resources will be required for the entire APE. If State funding is used, investigation within USACE Jurisdictional Areas will most-likely be required for Corps permitting.

Previous project review has identified several structures either eligible or listed on the National Register of Historic Places (NRHP) along KY-74. The Middlesboro Downtown Commercial District, running from approximately 18th to 24th Street along KY-74, is a Historic District listed on the NRHP.

**C. Threatened and Endangered Species**

USFWS IPaC report generated for this location lists Gray Bat, Indiana Bat, and Northern Long-eared Bat. There is no critical habitat in the project area. Several trees are adjacent to the roadway. Parker Branch, Yellow Creek, Little Yellow Creek, and several unnamed tributaries of Yellow Creek are all within the project area..

If federal funds are applied to the project, then future review will have to address the requirements of USFWS to prevent detriment to the protected species. Even with SPP funds, investigation within USACE Jurisdictional Areas will most-likely be required for Corps permitting. A habitat assessment, biological assessment, or mitigation measures will address potential impacts.

**D. Hazardous Materials**

Potentially Contaminated Sites are present  Potential Bridge or Structure Demolition

No obvious sites noted from aerial photography, however a UST/HAZMAT SME should review the project for issues such as prior fuel stations or known monitoring wells. Structures requiring demolition will need to be inspected for asbestos.

**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

404 and 401 permit requirements TBD based upon impacts from alternatives and improvements selected. A KYR10 construction permit will likely be required. A floodplain permit may be required. Middlesboro is a MS4 community and coordination may be required.

**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

Several noise sensitive receptors are present along the route. There are many residences west of 24th Street. There are medical care facilities along the route as well as a public library and a daycare near the route. However, based on the initial scope, it does not appear to be a Type I Project.

**G. Socioeconomic**

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

There are several residences very close to the existing roadway. Given the demographics of Bell County, it is likely that low income populations are along the route. Relocations are unknown at this time. The project should not pose hardships to the community during construction provided that traffic access is maintained during construction. There is no Local Land use plan.

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

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

In addition to the many NRHP listed or eligible structures mentioned above, Middlesboro Canal Park is adjacent to the project area near MP 15.83. If the Park is effected, 6(f) review may be necessary if Land and Water Conservation Funds were used to acquire or improve the Park.

[Anticipated Environmental Document:](#)

None (Completely State funded)



**IV. PROJECT NEED, PURPOSE & SCOPE**

**A. Need:**

The primary need of this project is addressing storm water concerns and access management, and improving intersections with limited sight distance to increase traffic safety along KY 74.

**B. Purpose:**

The purpose of this project is to improve the existing drainage issues in the area to enhance the safety along Cumberland Ave, investigate improvements to structures, and to improve the operation and safety of approaches and entrances.

**C. Scope:**

The scope of the project includes improving the existing drainage system in the area, improving structures, and improving intersections and entrances.

V. PROJECT ESTIMATE & METHODOLOGY		
Estimate Methodology:	Current Estimate	
The cost estimate for the project reflects a focus in improving the design of the storm sewer system and improvements to approaches and entrances. There have currently been no estimates completed for the cost of utilities and construction. The design estimate recognizes that a significant analysis will be required on this roadway before a design is developed. Right of way impacts are primarily small areas of residential properties at various intersections along W Cumberland Ave.	<u>Phase</u>	<u>Estimate</u>
	Planning	
	Design	\$ 1,980,000
	R/W	\$ 580,000
	Utilities	
	Const	
<b>Total</b>	<b>\$ 2,560,000</b>	

**VI. UTILITIES POTENTIALLY AFFECTED - CONTACT INFORMATION**

Company Name -	AT&T
Contact -	Jack Salyer
Address -	29 Wills Branch Rd Prestonsburg KY 41653
Phone No. -	606-424-9328 js2299@att.com
Company Name -	KU
Contact -	John Alderson
Address -	180 Substation Rd London KY 40741
Phone No. -	606-337-0321 John.Alderson@lge-ku.com
Company Name -	Charter
Contact -	William Clark
Address -	
Phone No. -	606-416-9212 William.Clark2@charter.com
Company Name -	Middlesboro Waste Water
Contact -	Josh Campbell
Address -	Middlesboro KY 40965
Phone No. -	606-248-2306 mborowwtp@yahoo.com
Company Name -	Water Service Corporation of KY
Contact -	Stephen Vaughn
Address -	102 Water Plant Rd Middlesboro KY 40965
Phone No. -	606-248-2306 stephen.vaughn@uiwater.com
Company Name -	Delta Natural Gas Company
Contact -	Rob Nellipowitz
Address -	3617 Lexington Rd Winchester KY 40391
Phone No. -	859-744-6171 rnellipowitz@DeltaGas.com

STRUCTURES CONT'd

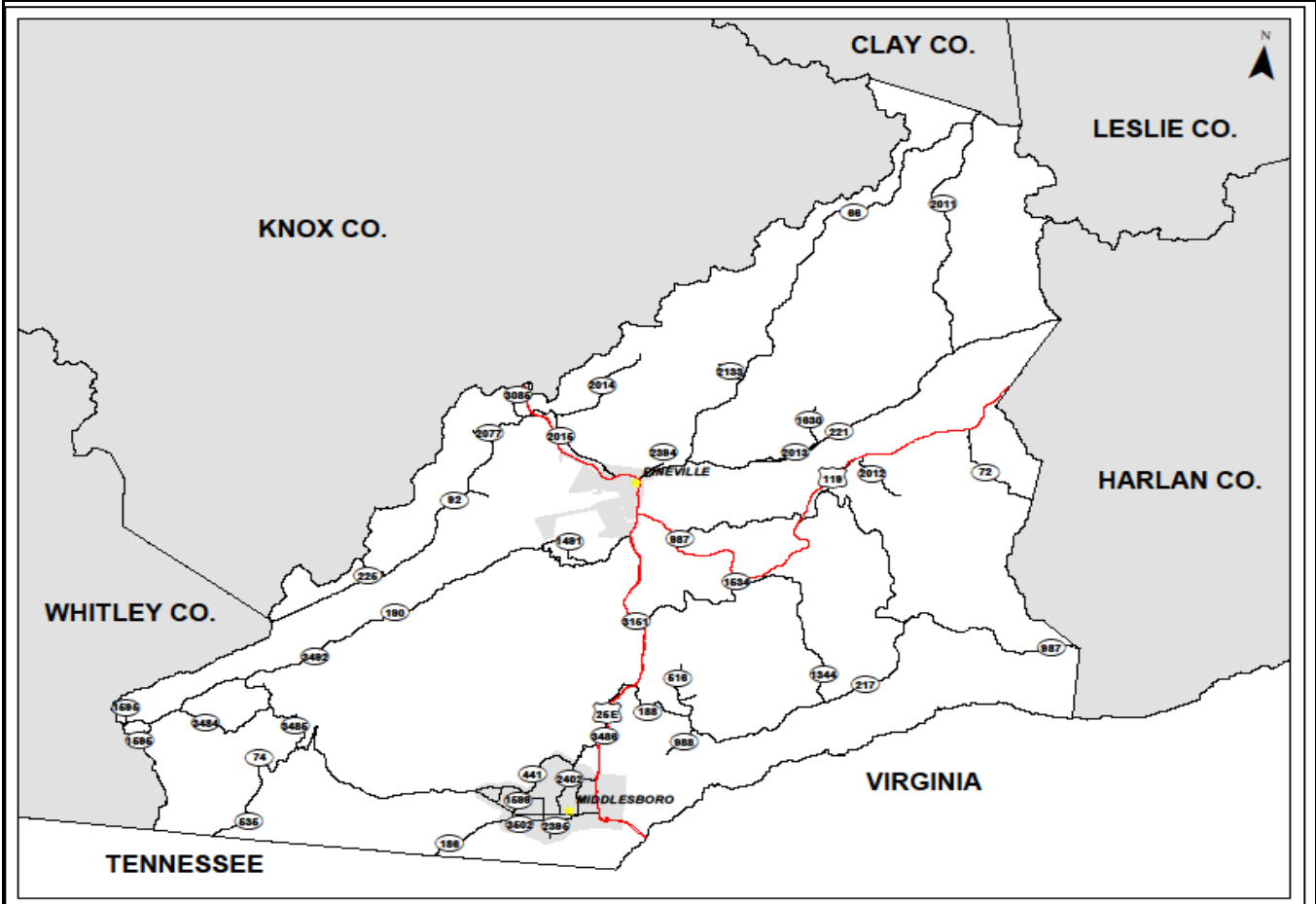
<b>Bridge No.:</b> <sup>‡</sup>	<u>007R00603N</u>
Sufficiency Rating	<u>N/A</u>
Total Length	<u>111'</u>
Width, curb to curb	<u>16'</u>
Span Lengths	<u>66.9'</u>
Year Built	<u>1947</u>
Posted Weight Limit	<u>N/A</u>
Structurally Deficient?	<u>Not Deficient</u>
Functionally Obsolete?	<u>Not Deficient</u>
Existing Bridge Type	<u>Railroad overpass</u>

Extra Utility Contact Info:

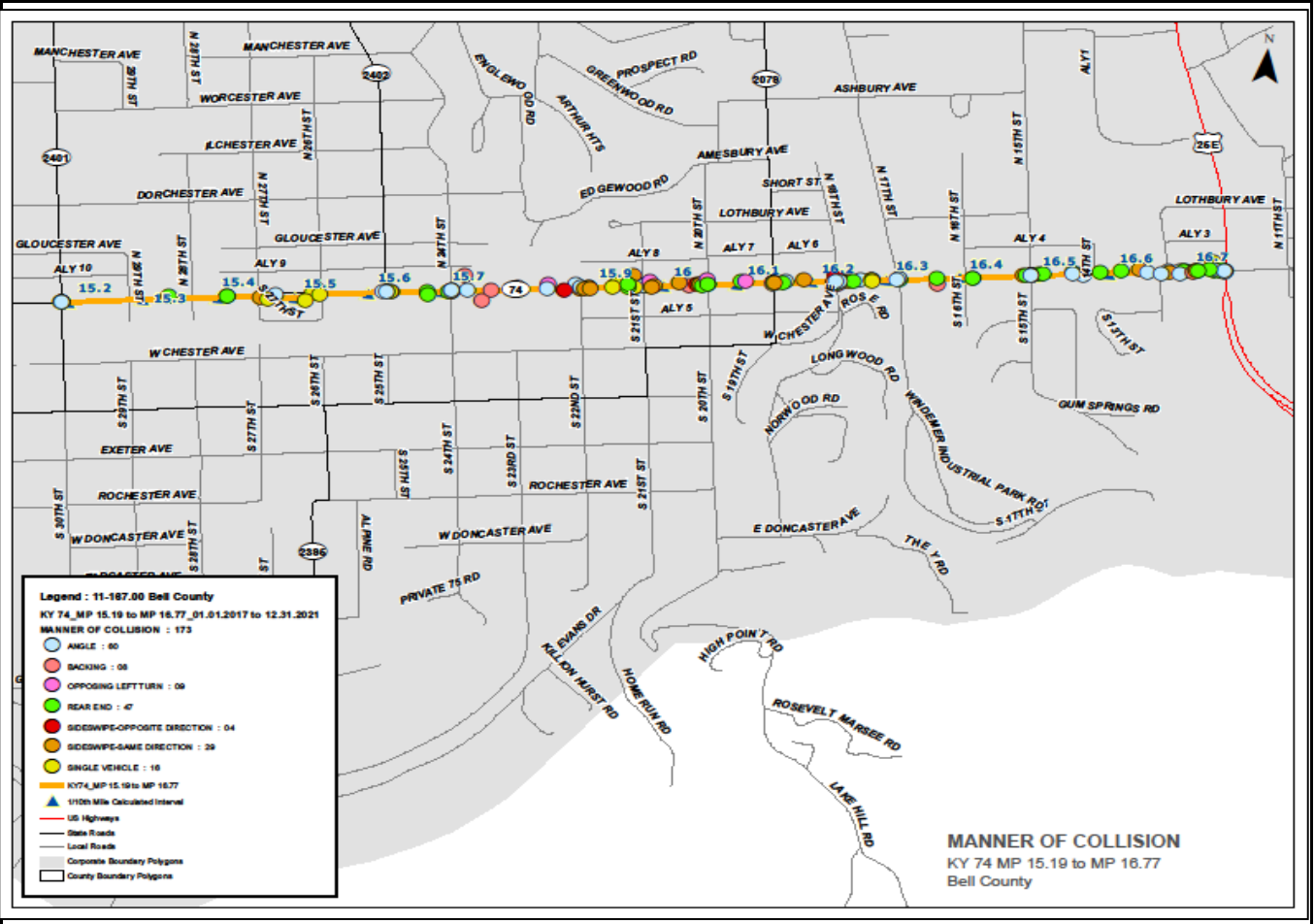
Company Name -	AT&T
Contact -	Jason Lewis
Address -	
Phone No. -	606.524.2376    jl9154@att.com
Company Name -	AT&T
Contact -	Dennis Watkins
Address -	
Phone No. -	606.528.0360    dw5600@att.com
Company Name -	KU
Contact -	Caroline Justice
Address -	10300 Ballardsville Road, Louisville, KY 40241
Phone No. -	502.627.3708    caroline.justice@lge-ku.com

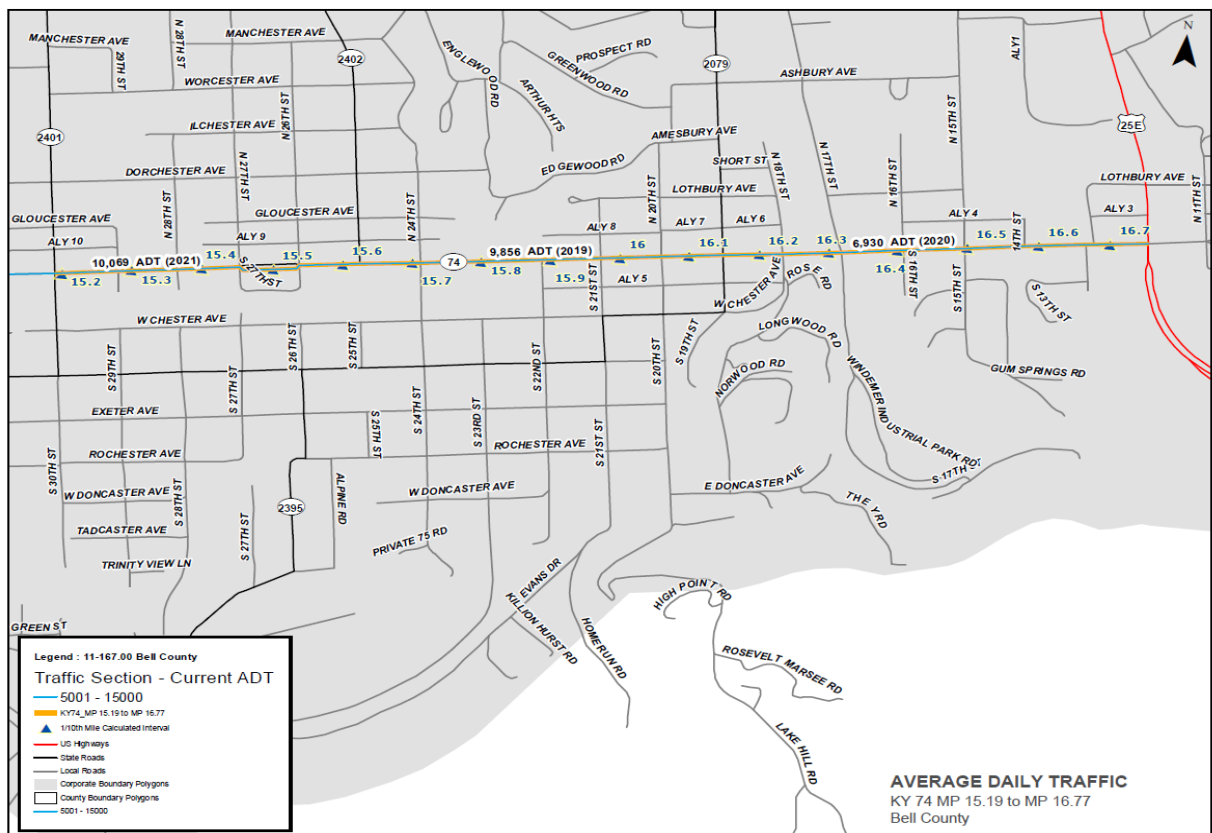
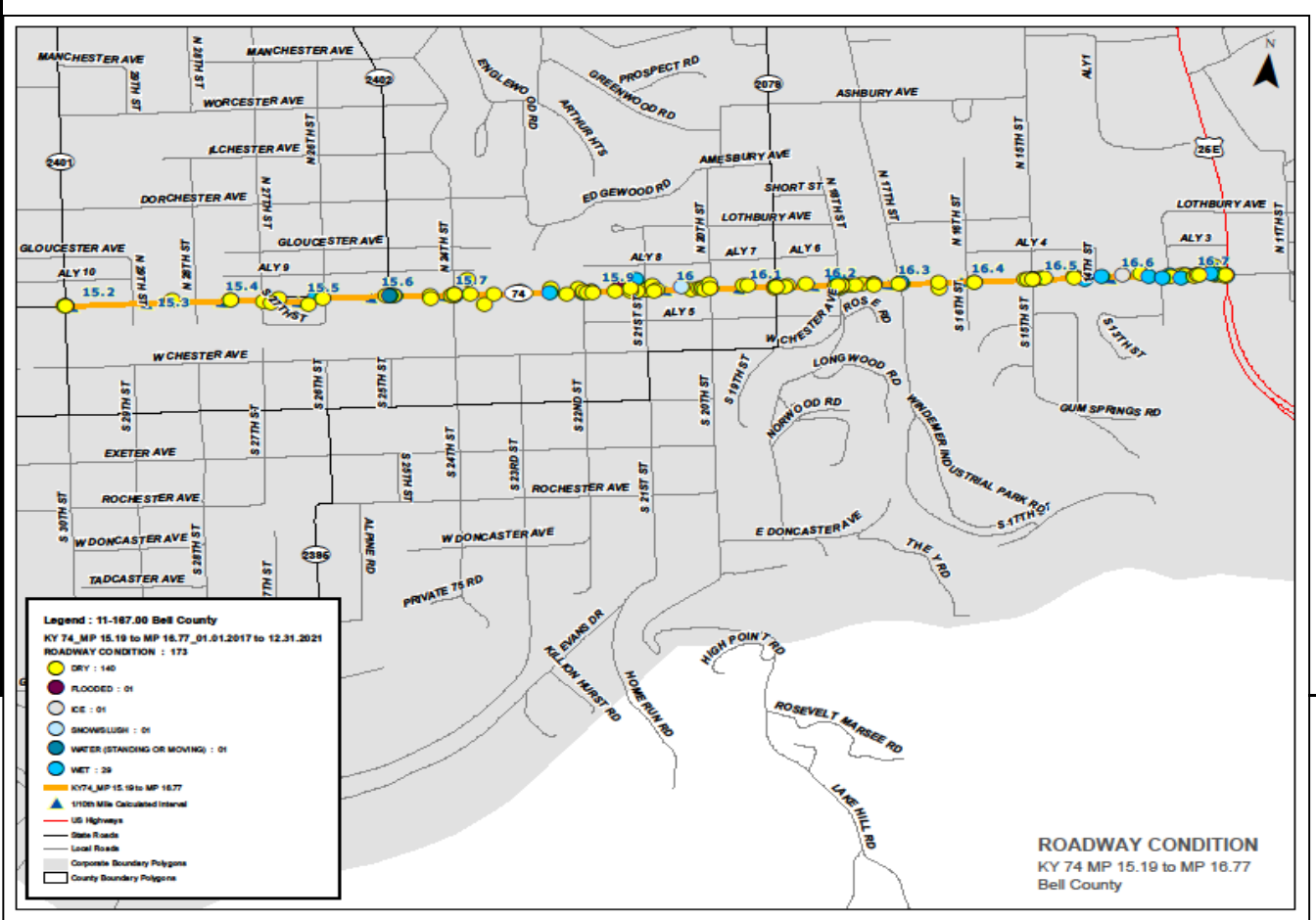


VII. TABLES AND EXHIBITS



VII. TABLES AND EXHIBITS (cont.)







Right turn at the intersection of W Cumberland Ave and 25th Street







Intersection of W Cumberland Ave and 18th Street