

## Appendix C Roadway Characteristics

### Overview

The existing roadway network is limited, served mainly by the east-west roadways consisting of one interstate (with no access from the study area) and the two state highways located along the study area's north and south boundaries. Floyds Fork and Long Run are effective natural barriers in the western portion preventing east-west travel. Other roads present are minor local/rural 2-lane roads, winding through the hilly terrain, providing limited access to the major roads leading to the employment, education, health care, and economic activity centers in Louisville Metro and Shelbyville. Other area roadways and interchanges surrounding the study area are routinely congested with traffic, and emergency response times and access are a growing concern.

A map reconnaissance and windshield survey of the project study area reveals it to be bracketed on the north and south by primary roadways running east-to-west, specifically KY 155/KY 148 (Taylorsville Road), I-64, and US 60 (Shelbyville Road). The only north-south "through connector road" is KY 1531 (named Eastwood-Fisherville Road south of US 60), a narrow and winding 2-lane rural secondary road. All other roadways within the study area are narrow rural local roads, generally serving residential dwellings, and north-south travel is limited to connecting a series of roads together. East-west travel is virtually non-existent, except for KY 155/KY 148 and US 60. Two waterways run generally north-south in the study area's western side — Floyds Fork and Long Run — which tend to act as natural barriers and further limit local travel options. For the following discussion of study area roadways and their characteristics, refer to Tables C.1 and C.2 (*Existing Highway Systems*, and *Geometric and Traffic Characteristics of Existing Highways*). The shaded boxes in Table C.2 indicate those roadway sections with widths less than the current design standards of 12-foot wide driving lanes and 8-foot wide shoulders. Refer to Exhibits 1 and 2, *Environmental Footprint*, in Appendix A, and the color photographs in illustrating typical examples of existing roadway sections.

### Existing Major Roads

- **I-64.** According to the KYTC Highway Information System (HIS) database, the existing I-64 through the study area is a 4-lane divided highway with fully controlled-access, a depressed 54-foot wide median, 12-foot wide lanes, paved shoulders (10-foot wide, right, outer side), an average right-of-way width of 200-feet in Jefferson County, 300-feet in Shelby County, and a posted speed limit of 65 miles per hour (mph). There is no access to I-64 within the study area. The roadway is identified as a *Rural Interstate* on the Functional Classification System, and a *State Primary (Interstate)* on the state's system. It is part of the National Highway System and the Defense Highway Network, and a federally designated truck route with a weight classification of "AAA" (80,000 pounds gross weight). Regionally, I-64 is a major interstate highway and a major transportation roadway within the Louisville Metro Urbanized Area, and the major east-west roadway through Shelby County. I-64 is the major connector between Louisville, Frankfort, Lexington, and Ashland, each a major population and economic activity center.

I-64, under KYTC item number 5-65.00, is programmed for reconstruction and widening from I-265 (Gene Snyder Freeway) to KY 53 (Shelbyville). The proposed highway project would widen the I-64 mainline to the inside from four lanes to six lanes to meet current design standards. The typical section consists of three 12-foot wide lanes, 12-foot wide outside shoulders (10-foot paved), and a 30-foot wide paved median with a centerline

concrete barrier wall. The project widens the I-64 mainline primarily within its existing right-of-way. The purpose for the project is to increase the capacity of the highway to meet existing and projected traffic demands, and to provide a safe and efficient transportation solution along the I-64 corridor. The needs for the project are to relieve congestion along I-64, and the interchanges; to reduce crash rates and improve safety; and to provide a roadway meeting current safety design standards. The project would serve the recent and planned growth eastern Jefferson County and Shelby County are experiencing.

The I-64 roadway under study has existing (*i.e.*, year 2006) Average Daily Traffic (ADT) volumes of about 50,000 vehicles per day (vpd), which are projected to increase to about 92,000 vpd by the year 2030. This represents a projected traffic volume increase of about 84 percent along I-64 by the year 2030. Other study area highways are projected to experience even larger percent increases in traffic volumes.

- US 60 (Shelbyville Road) is the northern east-west roadway in the study area, and considered a major highway through Jefferson and Shelby Counties. Within the study area, US 60 is a 2-lane undivided highway traversing rolling terrain with 11-foot wide lanes, a 45 mph speed limit (changing to 55 mph just west of the Shelby County line), and 4-foot wide shoulders. Passing sight distance is unavailable for most of the study area, and ranges from 0 to 34-percent near the county line. US 60 is a State Primary (Other) system, functionally classified as a *Rural Minor Arterial*, with an “AAA” truck weight class rating. It is not listed on the National Truck Network or the National Highway System.
- KY 155/KY 148 (Taylorsville Road) is considered a major highway through Jefferson and Spencer Counties, and composes the southern east-west roadway in the study area. KY 155 enters Jefferson County from the south (Spencer County), intersecting KY 148 at MP 4.257 in the southwest corner of the study area, and continues west into Jefferson County. KY 148 begins at its intersection with KY 155 (MP 0.000) and continues east into Shelby County. Within the study area, KY 155 is a 2-lane undivided highway traversing rolling terrain with 11-foot wide lanes, a 55 mph speed limit, 4-foot wide shoulders, and an 8-percent passing sight distance. KY 148 makes up the majority of Taylorsville Road in the study area, and is a 2-lane undivided highway traversing rolling terrain with 10-foot wide lanes in Jefferson County, 9-foot wide lanes in Shelby County, a 55 mph speed limit, 3-foot wide shoulders, and an undetermined passing sight distance. KY 155 is a State Secondary system, functionally classified as an *Urban Principal Arterial*, with an “AAA” truck weight class rating. It is a state designated route on the National Truck Network, and not listed on the National Highway System. KY 148 is a Rural Secondary system, functionally classified as an *Urban Collector Street* and *Rural Minor Collector*, with an “A” truck weight class rating. It is not listed on the National Truck Network or the National Highway System.
- KY 1531 (Eastwood-Fisherville Road) is the only “direct” north-south roadway in the study area, and winds through the natural terrain. KY 1531 enters Jefferson County from the south, intersecting KY 155 about MP 5.6. Within the study area, KY 1531 is a 2-lane undivided highway traversing rolling terrain with mostly 9-foot wide lanes (it enters the study area as 10-foot wide lanes, and exits as 8-foot wide lanes), a posted 55 mph speed limit (although driving conditions limit 25 to 35 MPH), 1 to 3-foot wide shoulders, and an undetermined passing sight distance. KY 1531 is a Rural Secondary system, functionally classified as a *Rural Local*, with an “A” truck weight class rating. It is not listed on the National Truck Network or the National Highway System.

**Table C.1 Existing Highway Systems**

Begin MP	Begin Route	End MP	End Route	State System	National Truck Network	National Highway System	Functional Classification	Truck Weight Class
<b>I-64</b>								
18.888	I-265 Underpass (Gene Snyder)	23.974	Jefferson-Shelby C/L	State Primary (Interstate)	Yes	Yes	Rural Interstate	AAA
23.974	Jefferson-Shelby C/L	27.569	KY 1848 Interchange	State Primary (Interstate)	Yes	Yes	Rural Interstate	AAA
<b>US 60, Shelbyville Road</b>								
11.970	I-265 Ramp	12.185	n/a	State Primary (Other)	No	No	Urban Principal Arterial	AAA
12.185	n/a	12.980	Wickfield Dr	State Primary (Other)	No	No	Urban Principal Arterial	AAA
12.980	Wickfield Dr	13.415	n/a	State Primary (Other)	No	No	Urban Principal Arterial	AAA
13.415	n/a	13.557	Floyds Fork Bridge	State Primary (Other)	No	No	Urban Principal Arterial	AAA
13.557	Floyds Fork Bridge	14.600	Spring Dr	State Primary (Other)	No	No	Rural Minor Arterial	AAA
14.600	Spring Dr	14.718	KY 2841 (Eastwood Cutoff Rd)	State Primary (Other)	No	No	Rural Minor Arterial	AAA
14.718	KY 2841 (Eastwood Cutoff Rd)	15.210	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
15.210	n/a	15.500	Ash Run Rd	State Primary (Other)	No	No	Rural Minor Arterial	AAA
15.500	Ash Run Rd	17.375	Jefferson-Shelby C/L	State Primary (Other)	No	No	Rural Minor Arterial	AAA
0.000	Jefferson-Shelby C/L	2.500	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
2.500	n/a	2.750	n/a (Simpsonville)	State Primary (Other)	No	No	Rural Minor Arterial	AAA
2.750	n/a (Simpsonville)	3.500	Meadow Ridge	State Primary (Other)	No	No	Rural Minor Arterial	AAA
3.500	Meadow Ridge	3.850	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
3.850	n/a	6.600	Joyes Station Rd	State Primary (Other)	No	No	Rural Minor Arterial	AAA
6.600	Joyes Station Rd	8.200	n/a	State Primary (Other)	No	No	Rural Minor Arterial	AAA
<b>KY 1531, Eastwood-Fisherville Road</b>								
0.000	Bullitt-Jefferson C/L	5.720	east of KY 155/KY 148	Rural Secondary	No	No	Rural Local	A
5.720	north of KY 155/KY 148	8.120	vic I-64 underpass	Rural Secondary	No	No	Rural Local	A
8.120	vic I-64 underpass	9.120	US 60	Rural Secondary	No	No	Rural Local	A
9.120	US 60	10.120	Johnson Farm Rd	Rural Secondary	No	No	Rural Local	A
10.120	Johnson Farm Rd	12.656	Jefferson-Shelby C/L	Rural Secondary	No	No	Rural Local	A
<b>KY 155, Taylorsville Road/Taylorsville Lake Road</b>								
0.000	Jefferson-Spencer C/L	2.757	n/a	State Secondary	Yes <sup>1</sup>	No	Rural Minor Arterial	AAA
2.757	n/a	4.069	Old Taylorsville Rd	State Secondary	Yes <sup>1</sup>	No	Rural Minor Arterial	AAA
4.069	Old Taylorsville Rd	4.257	KY 148	State Secondary	Yes <sup>1</sup>	No	Urban Principal Arterial	AAA
4.257	KY 148	5.727	n/a	State Secondary	Yes <sup>1</sup>	No	Urban Principal Arterial	AAA
5.727	n/a	5.737	n/a	State Secondary	Yes <sup>1</sup>	No	Urban Principal Arterial	AAA
5.737	n/a	5.781	east of Harrods Old Trce	State Secondary	Yes <sup>1</sup>	No	Urban Principal Arterial	AAA
5.781	east of Harrods Old Trce	5.990	I-265 EB on ramp	State Primary (Other)	Yes <sup>1</sup>	No	Urban Principal Arterial	AAA
5.990	I-265 EB on ramp	6.279	Hopewell Rd	State Primary (Other)	Yes <sup>1</sup>	No	Urban Principal Arterial	AAA
<b>KY 148, Taylorsville Road/Finchville Road</b>								
0.000	KY155	1.070	Old Taylorsville Rd	Rural Secondary	No	No	Urban Collector Street	A
1.070	Old Taylorsville Rd	1.178	KY 1531 (Eastwood-Fisherville Rd)	Rural Secondary	No	No	Rural Minor Collector	A
1.178	KY 1531 (Eastwood-Fisherville Rd)	3.333	Jefferson-Shelby C/L	Rural Secondary	No	No	Rural Minor Collector	A
0.000	Jefferson-Shelby C/L	0.837	Veechdale Rd	Rural Secondary	No	No	Rural Minor Collector	A

Source: KYTC Highway Information System (HIS)

<sup>1</sup> State designated truck route from Spencer County line to I-265.

**Table C.2 Geometric and Traffic Characteristics of Existing Highways**

Begin MP	End MP	Length (miles)	No. of Lanes	Lane Width (feet) <sup>1</sup>	Shoulder Width (feet) <sup>1</sup>	% Passing Sight Distance <sup>2</sup>	Speed Limit (mph)	Roadway Type	Terrain Type	Pavement Type	ADT			Composite Adequacy Rating <sup>3</sup>	Composite Adequacy Percentile <sup>3</sup>
											2006	2030	percent increase		
<b>I-64</b>															
18.888	23.974	5.09	4	12	10	**	65	Divided	rolling	High Flexible	50,000	92,000	84.0%	77.25	7.57
23.974	27.569	3.60	4	12	10	**	65	Divided	rolling	Flexible over Rigid	50,000	92,000	84.0%	70.25	3.64
<b>US 60, Shelbyville Road</b>															
11.970	12.185	0.22	4	12	12	**	45	Undivided	rolling	Flexible over Rigid	28,000	58,000	107.1%	52.50	21.92
12.185	12.980	0.80	4	12	4	**	45	Undivided	rolling	Flexible over Rigid	28,000	58,000	107.1%	79.50	70.55
12.980	13.415	0.43	4	12	4	**	50	Undivided	rolling	Flexible over Rigid	15,000	29,400	96.0%	79.50	70.55
13.415	14.600	1.19	4	12	4	**	50	Divided	rolling	Flexible over Rigid	15,000	29,400	96.0%	93.00	87.23
14.600	14.718	0.12	3	12	4	**	45	Divided	rolling	Flexible over Rigid	15,000	29,400	96.0%	93.00	87.23
14.718	15.210	0.49	2	11	4	**	45	Undivided	rolling	Flexible over Rigid	9,000	20,500	127.8%	71.00	24.83
15.210	15.500	0.29	2	11	4	**	45	Undivided	rolling	Flexible over Rigid	9,000	20,500	127.8%	71.00	24.83
15.500	17.375	1.88	2	11	4	0	55	Undivided	rolling	Flexible over Rigid	9,000	20,500	127.8%	88.00	75.40
0.000	2.500	2.50	2	11	4	34	55	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
2.500	2.750	0.25	2	11	4	34	45	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
2.750	3.500	0.75	2	11	8	34	45	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
3.500	3.850	0.35	2	11	4	34	45	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
3.850	6.600	2.75	2	11	4	34	55	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
6.600	8.200	1.60	2	11	8	34	55	Undivided	rolling	Flexible over Rigid	5,200	10,600	103.8%	93.00	87.23
<b>KY 1531, Eastwood-Fisherville Road</b>															
0.000	5.720	5.72	2	10	5	**	55	Undivided	rolling	Mixed Bituminous	500	2,300	360.0%	**	**
5.720	8.120	2.40	2	9	2	**	55	Undivided	rolling	Mixed Bituminous	500	2,300	360.0%	**	**
8.120	9.120	1.00	2	9	3	**	55	Undivided	rolling	Mixed Bituminous	500	1,100	120.0%	**	**
9.120	10.120	1.00	2	8	1	**	55	Undivided	rolling	Mixed Bituminous	500	1,100	120.0%	**	**
10.120	12.656	2.54	2	8	5	**	55	Undivided	rolling	Mixed Bituminous	500	1,100	120.0%	**	**
<b>KY 155, Taylorsville Road/Taylorsville Lake Road</b>															
0.000	2.757	2.76	2	11	10	73	55	Undivided	rolling	High Flexible	15,100	48,700	222.5%	95.00	100.0
2.757	4.069	1.31	2	11	10	79	55	Undivided	rolling	High Flexible	15,100	48,700	222.5%	93.00	87.23
4.069	4.257	0.19	2	11	10	**	55	Undivided	rolling	High Flexible	15,100	48,700	222.5%	70.65	56.14
4.257	5.727	1.47	2	11	4	8	55	Undivided	rolling	High Flexible	16,000	57,800	261.3%	57.15	28.14
5.727	5.737	0.01	2	11	12	8	55	Divided	rolling	High Flexible	16,000	57,800	261.3%	80.10	72.48
5.737	5.781	0.04	4	11	12	8	55	Divided	rolling	High Flexible	16,000	57,800	261.3%	80.10	72.48
5.781	6.279	0.50	4	12	12	**	55	Divided	rolling	High Flexible	16,000	57,800	261.3%	80.10	72.48
<b>KY 148, Taylorsville Road/Fisherville Road</b>															
0.000	1.070	1.07	2	10	3	**	55	Undivided	rolling	Mixed Bituminous	2,000	6,500	225.0%	79.00	83.98
1.070	1.178	0.11	2	10	3	**	55	Undivided	rolling	Mixed Bituminous	2,000	6,500	225.0%	**	**
1.178	3.333	2.16	2	10	3	**	55	Undivided	rolling	Mixed Bituminous	1,300	2,700	107.7%	**	**
0.000	0.837	0.84	2	9	3	**	55	Undivided	rolling	Mixed Bituminous	1,300	2,700	107.7%	**	**

Source: KYTC Highway Information System (HIS). \*\* Information not available.

<sup>1</sup> Lane and shoulder widths that do not meet current design standards (i.e., less than 12-foot-wide driving lanes and 8-foot-wide shoulders), and unacceptable Level of Service (LOS) ratings (i.e., D, E, F) are shaded.

<sup>2</sup> Percent Passing Sight Distance - the percent of segment length (estimated to the nearest 10%), which has available passing sight distance (as measured from the driver's eye to the road surface) of at least 1,500 feet. This information is only available for Kentucky maintained roads classified as State Primary or State Secondary.

<sup>3</sup> Composite Adequacy Rating is a method being developed by KYTC to assess a roadway's condition and prioritize highway improvements. The ratings are calculated by individual functional class and based upon three roadway components (safety, service, and condition) with each component comprised of several measures. The rating scores 100 as a perfect, or near perfect, highway. The Composite Adequacy Percentile ranks a particular roadway section compared to other Kentucky roads in the same functional class into a percentile. For example, a road section with a composite adequacy percentile of 75.0 means that 25% of the roads are rated better. Composite adequacy data is from the April 10, 2007 update.