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Hummingbird Solar Noise Assessment

Hummingbird Solar Facility

September 23, 2022

Prepared for:

Hummingbird Energy LLC

Prepared by:

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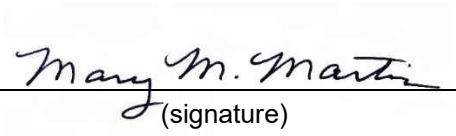
Reviewed by 
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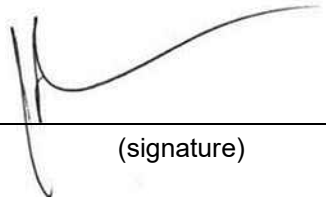
Approved by 
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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Hummingbird Solar Project (Project) is a proposed 200-megawatt (MW) photovoltaic (PV) solar power energy generating facility located in Fleming County, Kentucky. The project site is located within approximately 3,900 acres 2.5 miles northeast of Flemingsburg (Figure 1). The solar project consists of solar panels, a panel tracking system, inverters and electrical equipment associated with a solar facility and substation. The power generated by the proposed solar facility will be connected to the existing power grid using the existing transmission line connecting to the proposed Substation located on Carpenter Road. The generating facility will sell power on the wholesale market as a merchant power plant or independent power producer. The solar facility will be enclosed by a six (6)-foot chain link fence with three strand barbed wire. At the end of the project's life the equipment and electrical infrastructure will be decommissioned, and land may return to farming or other development.

A desktop noise assessment was completed to evaluate potential noise impacts to noise sensitive receptors within 1,000 feet from the project boundary (Noise Assessment Area). Background noise as well as noise generated during construction and operation of the Project were considered in the analysis.

1.2 EXISTING LAND USE AND SITE CONDITIONS

The Project is located in a rural area with gently sloping topography. Existing land use within the project site is cultivated cropland with small areas of deciduous forest. (MLRC 2016 and USDA-FSA 2018). Land use adjacent to the Project is comprised of scattered homes and cultivated cropland. The community of Mt. Carmel is located in the north central portion of the Project while Flemingsburg is located to the southeast. KY-57 transects the project site northeast to southwest while forested land is present to the southeast (Figure 2). There are two 138-kV transmission lines that intersects the Project.

2.0 NOISE STUDY

2.1 EXISTING NOISE CONDITIONS

2.1.1 Noise Sensitive Receptors

A noise sensitive receptor is generally defined as locations where people reside or where the presence of unwanted sound may adversely affect the use of the land. Receptors may include but are not limited to schools, homes, churches, hospitals, and certain types of recreation or outdoor land uses such as outdoor restaurant seating.

Potential noise sensitive receptors were evaluated within a 1,000 foot buffer from the project boundary. High resolution aerial photography, topographic quadrangles and proposed site layouts were analyzed using ESRI ArcMap 10.8 and Google Earth Pro to determine the presence of potential noise sensitive receptors. These receptors include residential dwellings and are shown on Figure 2. Two churches are present within the study area: Mt. Carmel Christian Church and Mt. Carmel Bible Fellowship. Mt. Carmel Christian Church is located within the Mt. Carmel community near the north portion of the site while Mt. Carmel Bible Fellowship is located along Carpenter Road near the center of the site. The Fleming County Cemetery is located in the Mt. Carmel community and will not be analyzed further for this study. No schools, nursing homes, childcare centers, outdoor recreation, medical centers or other types of noise sensitive receptors were observed within the noise assessment area.

136 residences consisting of single family homes are located within the Noise Assessment Area. These dwellings are referred to as noise sensitive receptors within this report (R1-R139). Forty three (43) of these dwellings are located within areas that meet the definition of “residential neighborhood” according to KRS 278.700. These 43 dwellings are in one of five neighborhoods, which include populated areas of five or more acres containing at least one residential structure per acre. The five residential neighborhoods include an area along Beech Springs Drive, Maddox Road, Poplar Grove Road, Foxport Road and the community of Mt. Carmel. The nearest residence is approximately 260 feet from the nearest solar panel (Table 1). Proposed inverters are located even further away with the nearest being approximately 624 feet from a residence. Three adjacent residences along Botkins Lane are currently under a purchase option and will be removed prior to construction (R4, R5 and R6); therefore, they have not been considered as noise sensitive receptors in this study. These are labeled as Participating Structures on Figure 2.

Table 1. Nearest Sensitive Receptor to the Site

Type	Nearest to	Direction from Project Site	Distance from Fence	Distance from Nearest Solar Panel	Distance from Nearest Inverter or Transformer*
Residences – Beech Springs Drive Neighborhood (R17-R32)		West	Within 305 ft	Within 351 ft	Within 1,252 ft
Residences – Maddox Road Neighborhood (R40-R44)		West	Within 309 ft	Within 381 ft	Within 1,053 ft
Residence (R46)	Fence	West	Within 180 ft	Within 316 ft	Within 755 ft
Residences – Poplar Grove Road Neighborhood (R63-R73)		Northwest	Within 317 ft	Within 372 ft	Within 1,010 ft
Residences – Mount Carmel Neighborhood (R80-R85)		North Central	Within 320 ft	Within 394 ft	Within 1,529 ft
Residence (R91)	Substation	Central	Within 324 ft	Within 575 ft	Within 792 ft*
Residence (R105)	Solar Panel / Tracking Motors	East	Within 208 ft	Within 260 ft	Within 788 ft
Residence (R109)	Inverter	East	Within 355 ft	Within 469 ft	Within 624 ft
Residences – Foxport Road Neighborhood (R126-R130)		Northeast	Within 243 ft	Within 305 ft	Within 1,287 ft

*All values reflect distance to inverters except for R91 which is the distance to the substation/transformer area.

2.1.2 Noise Ordinances

The unincorporated portions of Fleming and Lewis Counties do not appear to have a specific noise ordinance.

2.1.3 Existing Noise from Surrounding Areas

Noise is typically measured in decibels (dB_A - A-weighted sound levels) to describe the relative loudness of specific sounds. Unless otherwise noted, sound is presented as equivalent continuous sound level [L_{eq} (dB_A)]. This is defined as the steady sound pressure level which, over a given period of time, has the same total energy as the actual fluctuating noise. This can be generally thought of as average sound levels. L_{min} (dB_A) and L_{max} (dB_A) are the minimum and maximum sound levels at a given period in time. See Table 2 for example sound levels from the Centers for Disease Control and Prevention (CDC 2020) and the Federal Railroad Administration (FRA 2010).

Table 2. Common Sources of Noise and Decibel Levels

Noise Source	Average Noise Level (dB_A)*
Loud Entertainment Venues (Nightclubs, Bars and Rock Concerts)	105 – 110
Car horn at 16 ft / Sporting Events	100
Motorcycle	95
Locomotives and Rail Cars at 100 feet**	80-90
Gas powered lawnmowers and leaf blowers	80-85
Heavy Traffic	80-85
Washing Machine / Dishwasher	70
Normal Conversation / Air Conditioner	60
Soft Whisper	30

**CDC 2020 **FRA 2010*

The primary source of noise from the surrounding area is similar to the Project site with sparse automotive traffic on rural roads and adjacent farms producing agricultural sounds related to tractors, farm machinery, trucks, and ATVs. Additionally, wildlife also contributes to the local noise including insects, birds and frogs.

2.1.4 Existing On-Site Noise

Existing noise on the Project site consists of noises typically produced by agricultural activities. These noises include tractors, trucks, and all-terrain vehicles. Rural wildlife noises contribute to the existing noise conditions including birds, frogs and insects.

2.2 PROPOSED CONSTRUCTION NOISE CONDITIONS

2.2.1 Equipment and Machinery

The Project's construction will require earthmoving and tree removal activities as well as typical solar panel and electrical equipment installation. Typical construction equipment is expected to be used for site preparation and infrastructure installation and may include dump trucks, pile drivers, backhoes, dozers,

and excavators. The Federal Transit Administration outlines typical construction equipment noise levels and is presented in Table 3 (FTA 2018). The Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) was used to evaluate noise during construction (FHWA 2006). Pile drivers are expected to be the loudest machinery and will only be used during installation of the solar panel supports. Since pile drivers will only be used during pole installation, nearest receptor model results have been presented both with and without pile drivers in use.

Table 3. Construction Equipment Noise Emission Levels

Equipment	Typical Noise Levels at 50 ft from Source (dB_A)*
Air Compressor	80
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pile Driver (Impact)	101
Pile Driver (Sonic)	95
Pneumatic Tool	85
Pump	77
Rail Saw	90
Rock Drill	95
Roller	85
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	84

**Taken from FTA 2018*

2.2.2 Roadway Noise During Construction

Traffic noise is expected to increase temporarily during construction due to the mobilization of labor and materials, equipment and staff moving between sections of the project and construction and equipment vehicles entering and leaving the site. Construction related activity is expected to occur mainly between 7 a.m. and 7 p.m. (sunrise and sunset) and will be of limited duration at any given location within the project.

2.2.3 Assembly of Solar Array and Construction of Facilities

The solar facility consists of solar panels, a panel tracking system, inverters and electrical equipment associated with the solar facility and substation. All solar module equipment is expected to be assembled using handheld equipment and power tools. Assembly will occur within the Project site several hundred to thousands of feet from the nearest receptors. Assembly will take place during daytime hours and will be of limited duration at any given location within the project.

2.3 PROPOSED OPERATIONAL NOISE CONDITIONS

2.3.1 Solar Array and Tracking System

The solar array associated with this project includes single-axis tracking panels distributed evenly across the site (Figure 2). Tracking systems involve the panels being driven by small, 24-volt brushless DC motors to track the arc of the sun to maximize each panel's potential for solar absorption. Panels would turn no more than five (5) degrees every 15 minutes and would operate no more than one (1) minute out of every 15-minute period during daylight hours. These tracking motors are a potential source of mechanical noise and are included in this assessment. Tracking motors will not be installed closer than 100 feet from the project boundary. The sound typically produced by panel tracking motors (NexTracker or equivalent) is approximately 78 dB_A. Comparing similar noise values and distances from the RCNM, at the nearest receptor (R105) the tracking system will be approximately 49.7 dB_A as a worst-case maximum noise [L_{max} (dB_A)] which is similar to a refrigerator hum. The equivalent continuous sound level [L_{eq} (dB_A)] from the tracking motors is 37.5 dB_A which is around a soft whisper. Model results are presented in Table 5.

2.3.2 Inverters

Approximately 53 inverters are expected to be installed across the Project site. Inverters installed onsite are expected to be SMA Energy PCS or General Electric (GE) LV5 PCS or similar. Manufacturer's specifications for the equipment include a range of noise emission for SMA Energy PCS from 49 dB_A at 50 meters (164 feet) distance to 67 dB_A at 10 meters (32.8 feet) from the source which roughly translates to 31.1 dB_A at the nearest receptor (R109), comparable to a computer. The GE LV5 PCS ranges from 73.6 dB_A at lowest cooling level to 91.3 dB_A at highest cooling levels at 10 meters (32.8 feet) from the source which is approximately 48 dBA at the nearest receptor (R109), comparable to a refrigerator. Since the GE approximate sound levels are higher, those were used for this assessment and results are shown in Table 5.

The noise produced by the inverters can be characterized as a hum and during average operation is similar in noise level to a household air conditioner at the unit. Proposed inverter locations are shown on Figure 2.

2.3.3 Transformers

The proposed substation and battery storage area covers approximately 14.0 acres and is located on the central portion of the Project. Transformers associated with the project will include a SBG-SMIT 3 phase 127 kVA transformer or similar. According to manufacturer specifications the loudest the transformer is expected to be is just over 60 $dB_{A,}$ measured 1 meter (3.2 feet) from the source, or the level of a normal conversation. The nearest sensitive receptor (R91) is approximately 792 feet away which equates to a sound level of 12.2 dBA and is barely audible, comparable to normal breathing. Remaining model results can be found in Table 5.

2.3.4 Site Operation and Maintenance

2.3.4.1 Vehicular Traffic

During operation, the solar facility is expected to have a maximum of one technician visiting the site daily for inspection and two to three technicians up to 70 days per year. Operation and maintenance work may be expected at night for up to 30 days per year. Weekend work is not anticipated but may be required upon any component outages that may impact energy production from the site. Other than the scenarios mentioned, vehicular traffic onsite will be limited to typical weekday business hours. Technicians will drive mid- or full-sized trucks and will not contribute noticeably to the existing traffic noise levels.

2.3.4.2 Maintenance Activities

Typical maintenance activities may include inspection, minor repair and maintenance on the solar panels, the tracking system, wiring, and/or inverters. Grounds maintenance will include periodic inspection of the boundary fencing and vegetation control through mowing and herbicide applications.

2.4 NOISE SUMMARY AND CONCLUSIONS

Noise is expected to increase temporarily and intermittently during the construction phase of the project due to increases in vehicular traffic, construction equipment and assembly of the solar facility components. This increase in noise is expected to be within accepted ranges and of short duration at any given location within the project with the majority of the noise producing activities to occur many hundreds to thousands of feet from the nearest noise sensitive receptors. With the exception of the pile driving activities, the typical noise levels of construction equipment are not unlike the existing noise levels related to cultivation within and surrounding the Project.

The noisiest portion of the construction will be the use of pile drivers to install the solar panel supports. These will only be used very briefly for each pile. The pile driver's worst-case intermittent maximum noise

[L_{max} (dB_A)] level (86.5 dB_A) is expected to occur at the nearest receptor (R105) and is similar to a motorcyle. The equivalent continuous sound level [L_{eq} (dB_A)] from construction including the pile driver is 79.6 dB_A which is similar to the sound level of a leaf blower. The noise model was also evaluated without the inputs of the pile driver since that is more typical of ongoing construction sound levels. The sound levels for typical construction (without pile driving) onsite are approximately 64.2 dB_A which around the sound level of a dishwasher (Table 4). Construction activities at the Project site would move around the site and are not anticipated to be performed near a sensitive receptor for more than a few weeks.

Table 4. Calculated Noise Levels at Nearest Receptor Due to Construction (Sunrise to Sunset)

	Panel Distance (ft)	**Calculated L_{max} (dB_A)**	**Calculated L_{eq} (dB_A)**
Noise Level at Nearest Residential Receptor (R105) (including pile driver)	260	86.5	79.6
Noise Level at Nearest Residential Receptor (R105) (minus pile driver)	260	66.2	64.2

During site operation, intermittent noise related to the panel tracking system and the constant noise of the inverters is expected. The increase in noise is negligible due to the distance between the panels / inverters and the nearest noise sensitive receptors. The nearest receptor (R105) is approximately 260 feet from the closest solar panels (and approximately 788 feet from an inverter). Maximum sound levels from the tracking system can be expected to be the levels of a refrigerator hum at the nearest receptor (R105, 49.7 dB_A), while the sounds will be much quieter at most receptors.

It should be noted that the trackers and the inverters for the panels themselves will not operate at night when residential receptors are most sensitive. During average daytime operation, the inverters will be similar in noise level (~48 $dB_{A\ max}$) to a quiet library at the nearest receptor (R109). According to manufacturer specifications the loudest the substation transformer is expected to be is just over 60 dB_A at 1m from the source, or the level of a normal conversation. Since the nearest receptor (R91) is approximately 792 ft from the substation, transformers are not expected to add additional noise above background noise as the noise levels are barely audible (12.2 dB_A). Site visits and maintenance activities including single vehicular traffic and mowing will be negligible as they are similar to the background agricultural noise characteristics. All site visits, outside of emergency maintenance, will occur during daylight hours.

At the nearest receptors, besides intermittent and infrequent pile driver activity, no elevated and prolonged noise levels above background levels are expected either during construction or operation of the Project site. Construction (pile driving) is not expected to remain in any area beyond a week.

Table 5. Approximate Noise Levels During Operation (Sunrise to Sunset)

Receptor*	Nearest Panel / Panel Tracking System		Nearest Inverter		Nearest Transformer/Substation	
	Distance (ft)	dB_A	Distance (ft)	dB_A	Distance (ft)	dB_A
R1	542	43.3	1430	40.8	16205	<10
R2	913	38.8	1990	37.9	15231	<10
R3	477	44.4	989	44.0	13972	<10
R7	1027	37.7	1534	40.2	14700	<10
R8	903	38.9	1472	40.5	14960	<10
R9	668	41.5	1526	40.2	15850	<10
R10	386	46.2	1328	41.4	16538	<10
R11	823	39.7	1742	39.1	17479	<10
R12	441	45.1	1022	43.7	17351	<10
R13	733	40.7	1254	41.9	17802	<10
R14	1061	37.5	1522	40.2	18083	<10
R15	1003	38.0	1118	42.9	14049	<10
R16	988	38.1	1187	42.4	13587	<10
R17	880	39.1	1414	40.9	12999	<10
R18	1079	37.3	1706	39.2	12807	<10
R19	951	38.4	1605	39.8	12701	<10
R20	849	39.4	1550	40.1	12600	<10
R21	722	40.8	1460	40.6	12524	<10
R22	571	42.8	1410	40.9	12356	<10
R23	376	46.5	1349	41.3	12073	<10
R24	352	47.0	1333	41.4	11967	<10
R25	369	46.6	1412	40.9	11734	<10
R26	395	46.0	1252	41.9	11525	<10
R27	544	43.3	1475	40.5	11747	<10
R28	558	43.0	1538	40.1	11910	<10
R29	586	42.6	1552	40.1	12006	<10
R30	756	40.4	1627	39.6	12267	<10
R31	853	39.4	1668	39.4	12390	<10
R32	953	38.4	1725	39.1	12481	<10
R33	718	40.9	1657	39.5	10010	<10
R34	457	44.8	1402	40.9	9621	<10
R35	506	43.9	883	45.0	9441	<10
R36	1132	36.9	1400	40.9	8914	<10
R37	532	43.5	1291	41.7	11251	<10
R38	1077	37.3	1842	38.6	8626	<10
R39	350	47.1	1037	43.6	8220	<10

Receptor*	Nearest Panel / Panel Tracking System		Nearest Inverter		Nearest Transformer/Substation	
	Distance (ft)	dB_A	Distance (ft)	dB_A	Distance (ft)	dB_A
R40	398	46.0	1080	43.2	8581	<10
R41	439	45.1	1065	43.3	8702	<10
R42	440	45.1	1054	43.4	8800	<10
R43	381	46.4	1086	43.2	9072	<10
R44	462	44.7	1188	42.4	9344	<10
R45	474	44.5	893	44.9	9752	<10
R46	317	48.0	755	46.3	9712	<10
R47	902	38.9	1515	40.3	10854	<10
R48	1182	36.5	1901	38.3	11408	<10
R49	960	38.3	1653	39.5	11248	<10
R50	1047	37.6	1895	38.3	11288	<10
R51	1042	37.6	1939	38.1	11233	<10
R52	405	45.8	1320	41.5	7917	<10
R53	361	36.7	1157	42.6	7699	<10
R54	488	44.2	655	47.5	8026	<10
R55	682	41.3	901	44.8	8195	<10
R56	275	49.2	821	45.6	6181	<10
R57	348	47.1	757	46.3	3530	<10
R58	351	47.1	1246	42.0	3725	<10
R59	284	48.9	1306	41.6	4532	<10
R60	1035	37.7	1054	43.4	8084	<10
R61	829	39.6	2466	36.0	11207	<10
R62	405	45.8	1966	38.0	11006	<10
R63	914	38.8	2172	37.1	12787	<10
R64	613	42.1	1864	38.5	12484	<10
R65	615	42.2	1883	38.4	12481	<10
R66	445	45.0	1697	39.3	12257	<10
R67	385	46.3	1609	39.7	12148	<10
R68	373	46.5	1545	40.1	12054	<10
R69	408	45.8	1447	40.7	11903	<10
R70	485	44.3	1361	41.2	11762	<10
R71	381	46.4	1133	42.8	11603	<10
R72	526	43.6	1011	43.8	11317	<10
R73	672	41.4	1153	42.6	11380	<10
R74	920	38.7	2068	37.6	12463	<10
R75	807	39.8	1834	38.6	12159	<10
R76	787	40.1	1749	39.0	12046	<10

Receptor*	Nearest Panel / Panel Tracking System		Nearest Inverter		Nearest Transformer/Substation	
	Distance (ft)	dB_A	Distance (ft)	dB_A	Distance (ft)	dB_A
R77	1063	37.4	1526	40.2	11483	<10
R78	995	38.0	1272	41.8	9538	<10
R79	740	40.6	2193	37.0	6130	<10
R80	534	43.4	1529	40.2	3941	<10
R81	394	46.1	1740	39.1	3719	<10
R82	675	41.4	2006	37.8	3857	<10
R83	955	38.4	2309	36.6	3932	<10
R84	1046	37.6	2375	36.4	4011	<10
R85	463	44.7	2030	37.7	3162	<10
R86	1113	37.0	3056	34.2	3393	<10
R87	859	39.3	2916	34.6	2690	<10
R88	1708	33.3	1960	38.0	926	10.9
R89	1554	34.2	2018	37.8	895	11.3
R90	598	42.4	1571	39.9	1399	<10
R91	575	42.8	1624	39.7	792	12.2
R92	428	45.4	1386	41.0	906	11.2
R93	371	46.6	844	45.3	1514	<10
R94	727	40.7	1259	41.9	1220	<10
R95	631	42.0	1710	39.2	866	11.6
R96	369	46.6	2225	36.9	1251	<10
R97	590	42.6	1679	39.4	1882	<10
R98	412	45.7	1118	42.9	1974	<10
R99	371	46.6	1904	38.3	3043	<10
R100	750	40.5	1938	38.1	3549	<10
R101	406	45.8	1580	39.9	3819	<10
R102	469	44.6	862	45.2	5483	<10
R103	268	49.4	3100	34.0	4147	<10
R104	314	48.0	1584	39.9	5635	<10
R105	260	49.7	788	45.9	6267	<10
R106	286	48.9	650	47.6	6406	<10
R107	328	47.7	916	44.6	6652	<10
R108	941	38.5	975	44.1	8346	<10
R109	469	44.6	624	48.0	7851	<10
R110	374	46.5	1469	40.5	8326	<10
R111	564	43.0	2207	37.0	8969	<10
R112	371	46.6	2393	36.3	8792	<10
R113	906	38.8	2885	34.7	9291	<10

Noise Study

Receptor*	Nearest Panel / Panel Tracking System		Nearest Inverter		Nearest Transformer/Substation	
	Distance (ft)	dB_A	Distance (ft)	dB_A	Distance (ft)	dB_A
R114	983	38.1	3203	33.8	9253	<10
R115	1053	37.5	3527	32.9	9359	<10
R116	1094	37.2	3664	32.6	9399	<10
R117	370	46.6	745	46.4	7302	<10
R118	542	43.3	967	44.2	7418	<10
R119	733	40.7	1357	41.2	8090	<10
R120	443	45.1	837	45.4	8189	<10
R121	648	41.7	770	46.1	8462	<10
R122	867	39.2	1325	41.4	9076	<10
R123	956	38.4	1801	38.8	9802	<10
R124	774	40.2	1351	41.3	11791	<10
R125	420	45.5	1328	41.4	12165	<10
R126	452	44.9	1435	40.7	9498	<10
R127	533	43.4	1427	40.8	9675	<10
R128	454	44.8	1352	41.3	9665	<10
R129	306	48.3	1287	41.7	9606	<10
R130	475	44.4	1313	41.5	9555	<10
R131	395	46.0	1392	41.0	9125	<10
R132	504	43.9	1639	39.6	8888	<10
R133	385	46.3	1258	41.9	9978	<10
R134	890	39.0	1797	38.8	9062	<10
R135	921	38.7	1589	39.8	8743	<10
R136	915	38.8	1685	39.3	11542	<10
R137	586	42.6	1300	41.6	12410	<10
R138	293	48.6	894	44.8	13064	<10
R139	317	48.0	907	44.7	13152	<10
Note	Operates 1 minute every 15 minutes during daylight hours		Continuous low hum during daylight hours		Substation area	

Noise Levels are Lmax – maximum noise levels expected. R4, R5, and R6 will be demolished prior to construction.

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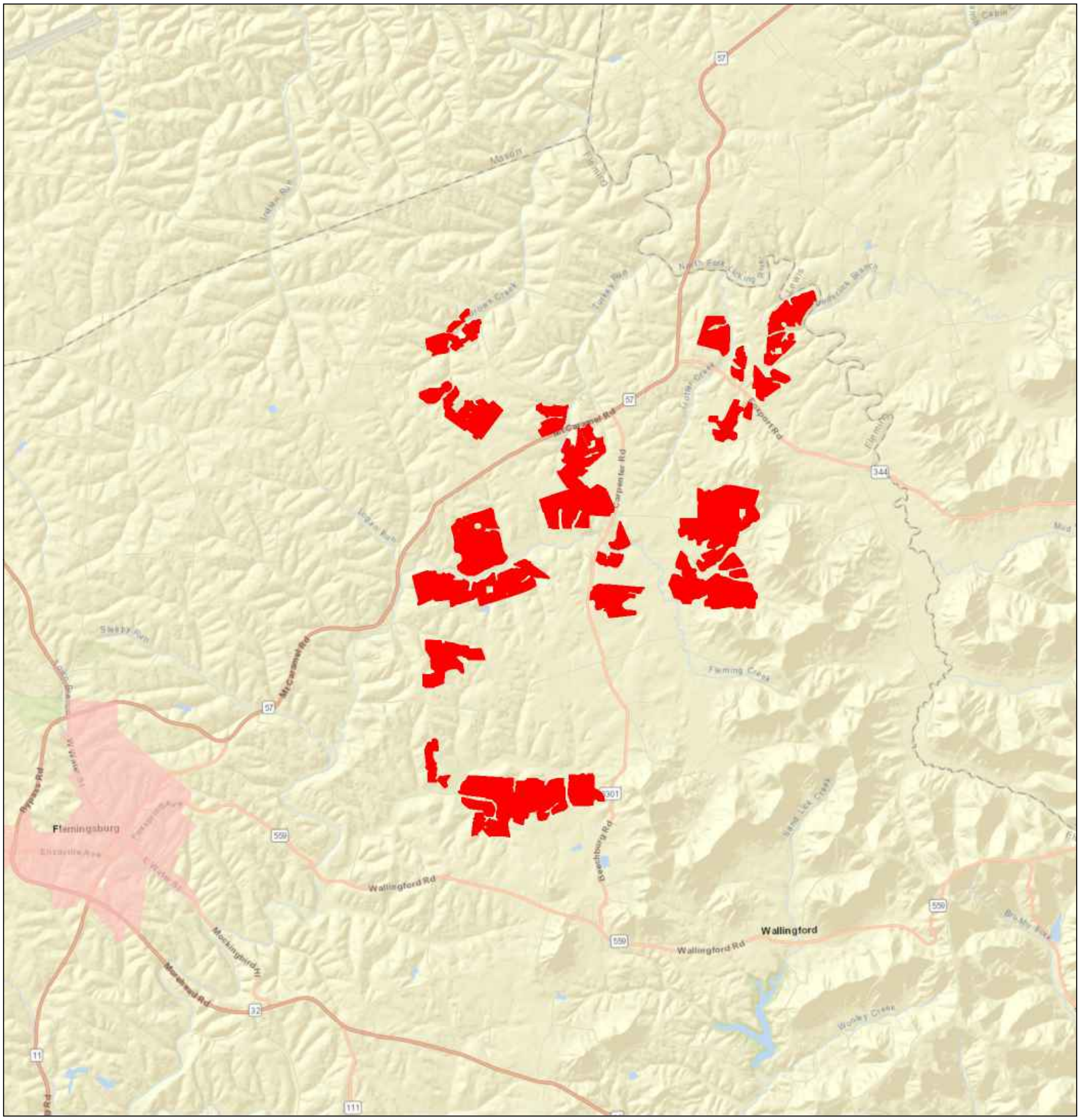
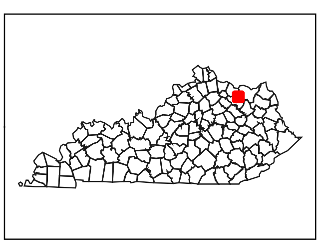
Appendix A FIGURES





Legend

Kentucky Corporate Boundary Polygons

Project Study Area

1.5 0.75 0 1.5 Miles

(At original document size of 8.5x11)
1:100,000

N

Stantec

Project Location

Fleming County, KY

Prepared by GRG on 2022-09-19
TR by ALC on 2022-03-31
IR Review by on 2022-03-31

Client/Project

Hummingbird Solar Facility
Noise Assessment

Figure No.

1

Title

Vicinity Map

Notes

1. Coordinate System: NAD 1983 2011 StatePlane Kentucky South FIPS 1602 Ft US
2. Data Sources: Stantec
3. Background: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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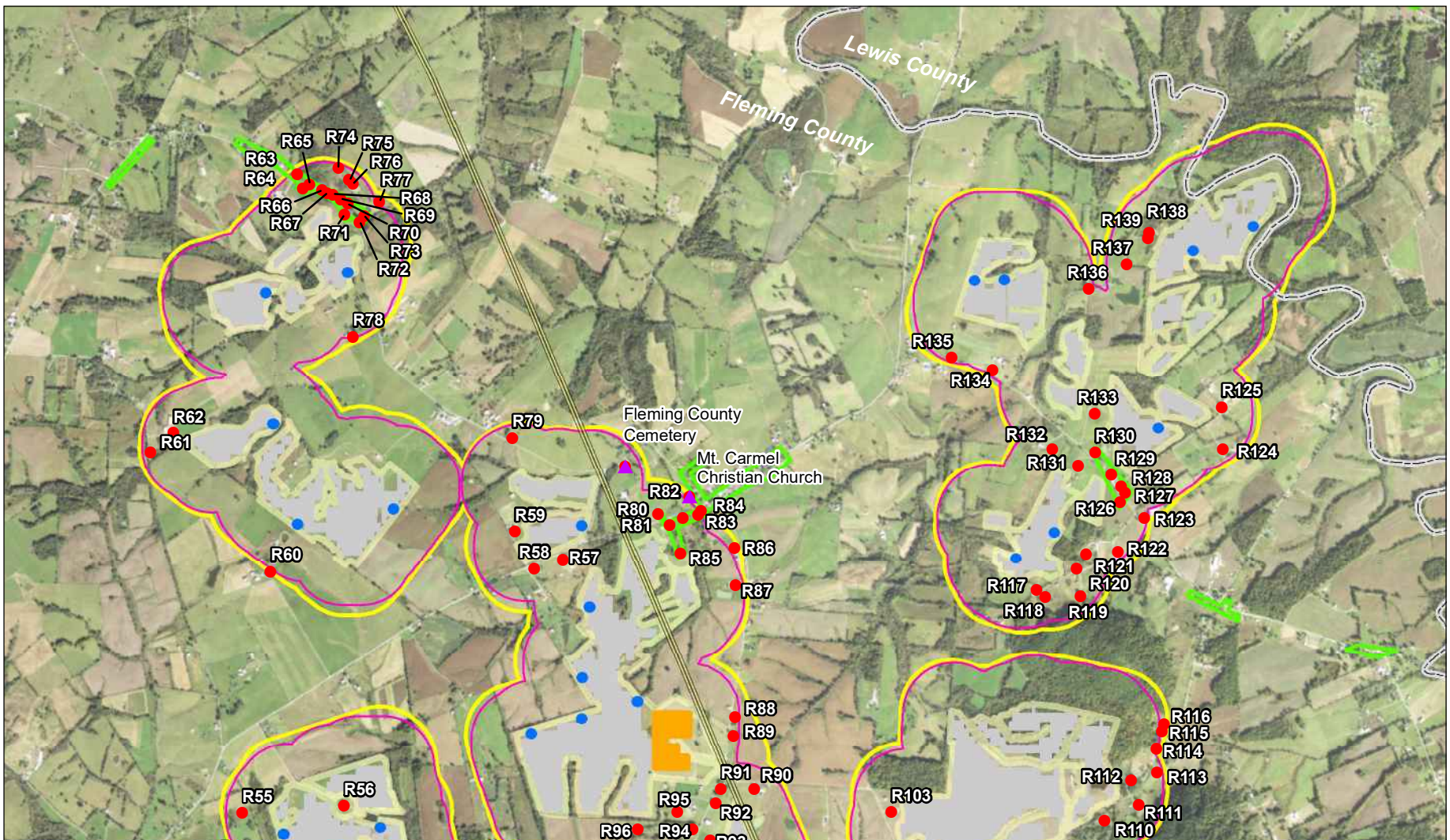

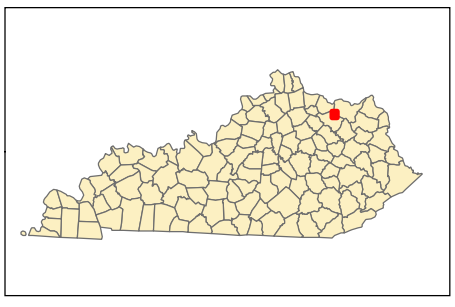

Notes

1. Coordinate System: NAD 1983 StatePlane Kentucky North FIPS 1601 Feet
2. Data Sources: ESRI; Stantec
3. Background: BING Aerials Kentucky Transportation Cabinet (KYTC)

Legend

- 1000 ft Noise Assessment Area
- Potential Fence Line
- Noise Sensitive Receptors
- Participating Structures
- Potential PV Layout
- Potential Inverter Locations
- Potential Substation Location
- 55dBA Temporary Construction Noise Limit
- Residential Neighborhoods as per KRS 278.700
- Counties
- 138kv Transmission Line

0 3,000 6,000 Feet

(At original document size of 11x17)
1:36,000

N

Stantec

Project Location
Fleming County, KY

Prepared by ALC on 2022-09-19
TR by JA on 2022-09-19

Client/Project

Hummingbird Solar Facility
Noise Assessment Report

Figure No.
2

Title
Hummingbird Solar Project

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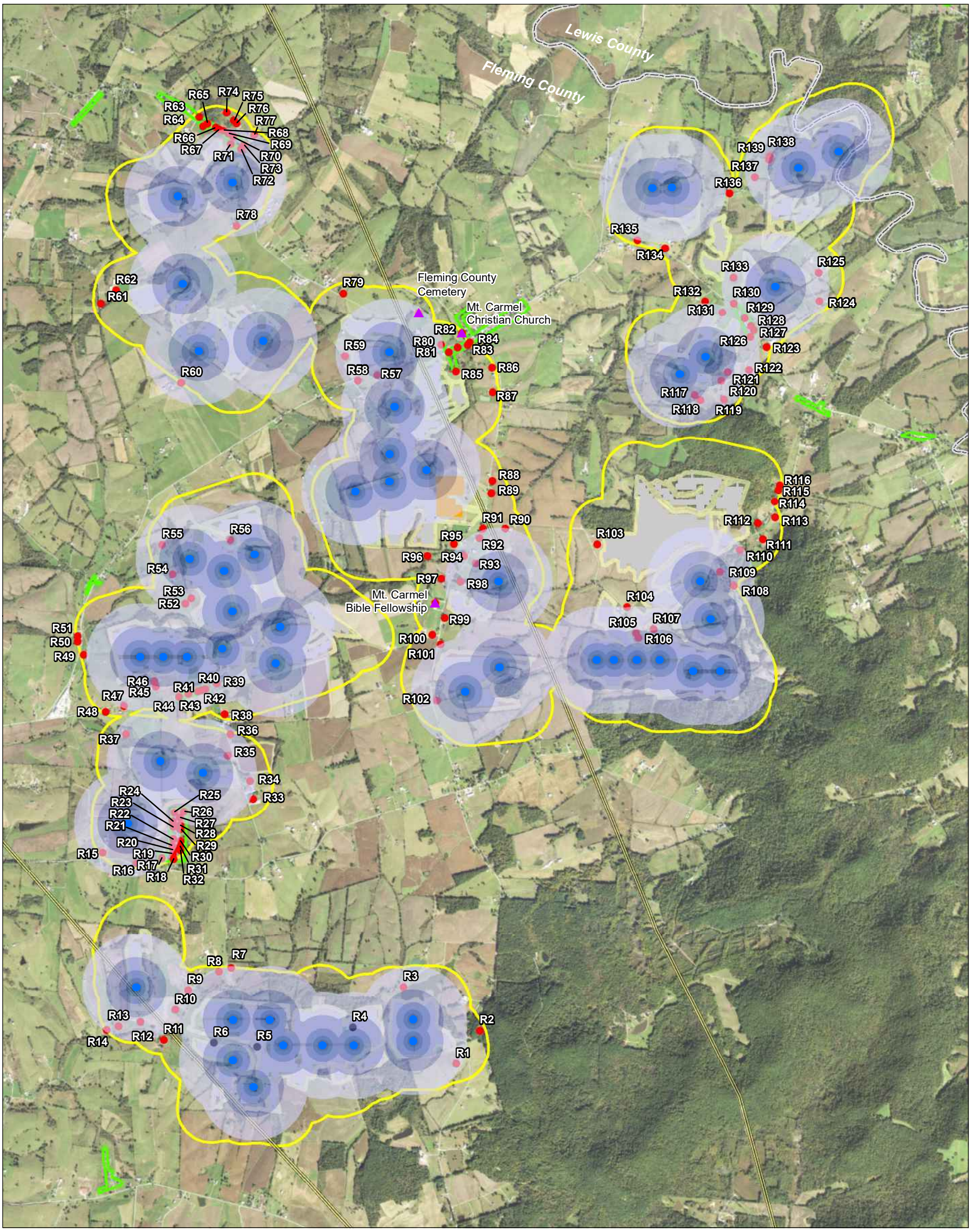

Legend

- 1000 ft Noise Assessment Area

Approximate Sound Levels for Potential Inverter Locations

- 40 dB
- 45 dB
- 50 dB
- 55 dB
- 60 dB
- Potential Inverter Locations
- Potential Fence Line
- Noise Sensitive Receptors
- Participating Structures
- Potential PV Layout
- Potential Substation Location
- Residential Neighborhoods as per KRS 278.700
- Counties
- 138kv Transmission Line

Notes

1. Coordinate System: NAD 1983 StatePlane Kentucky North FIPS 1601 Feet
2. Data Sources: ESRI; Stantec
3. Background: BING Aerials Kentucky Transportation Cabinet (KYTC)

0 3,000 6,000 Feet

(At original document size of 11x17)
1:36,000

N

Stantec

Project Location
Fleming County, KY

Prepared by ALC on 2022-09-19
TR by JA on 2022-09-19

Client/Project

Hummingbird Solar Facility
Noise Assessment Report

Figure No.

3

Title

Approximate Inverter Sound Contours

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SAR Exhibit E

Hummingbird Solar Project

August 12, 2022

Prepared for:

Recurrent Energy
98 San Jacinto Blvd, Suite 750
Austin, Texas 78701

Prepared by:

Stantec Consulting Services Inc.
9200 Shelbyville Road, Suite 800
Louisville, Kentucky 40222

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Prepared by _____
(signature)
Enter Name

Reviewed by _____
(signature)
Enter Name

Approved by _____
(signature)

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LIST OF APPENDICES

Executive Summary

The Hummingbird Solar Project development is proposed northeast of Flemingsburg in Fleming County, Kentucky on a property located south of KY 1237 (Burtonville Road), north of KY 559 (Fox Spring Avenue/Wallingford Road), mostly east of KY 57 (Mt. Carmel Road) and west of KY 1902. The petitioner proposes to utilize the existing land to establish a solar facility on the site. The development will have access points along several routes around the facility. Analyses of the 2022 existing conditions (based on most recent counts provided by the Kentucky Transportation Cabinet, KYTC) and the 2023 construction year were performed. The traffic impact study (TIS) evaluated the operating conditions for the AM and PM peak hours at the roadway segments below:

- Station 035080: CR 1027 (Carpenter Road)
- Station 035150: CR 1030 (Colgan Road)
- Station 035049: CR 1036 (Wilson Run Road)
- Station 035083: CR 1037 (Maddox Pike)
- Station 068811: KY 57 from Fleming/Lewis County Line (MP 0.00) to KY 1237 (MP 2.093)
- Station 035002: KY 57 from KY 344 (MP 8.232) to KY 3301 (2.567)
- Station 035104: KY 57 from KY 3301 (2.567) to KY 57X (MP 1.728)
- Station 035001: KY 344 from KY 57 (MP 0.00) to KY 989 (MP 1.600)
- Station 035091: KY 344 from KY 989 (MP 1.600) to Licking River (MP 2.404)
- Station 035054: KY 559 from Stewart Lane (MP 5.455) to Dudley Hollow Road (MP 11.850)
- Station 068516: KY 989 from Fleming/Lewis County Line (MP 0.00) to KY 1237 (MP 1.214)
- Station 068517: KY 1237 from KY 989 (MP 0.00) to Ribolt-Epworth Road (MP 1.579)
- Station 068761: KY 1237 from Ribolt-Epworth Road (MP 1.579) to KY 57 (MP 3.163)
- Station 035087: KY 3301 from KY 57 (MP 0.00) to Colgan Road (MP 3.425)
- Station 035081: KY 3301 from Colgan Road (MP 3.425) to KY 559 (MP 6.387)

Based on the results of the analysis, the following conclusions were developed:

- During construction, all highway segments are anticipated to continue to operate at acceptable level of service (LOS) standards during both the peak hours. Therefore, the construction for this project will not adversely affect traffic operations on any of the roadways in and around the project area.

- After construction is complete, the site will be managed with negligible added traffic demand. During the operational phase of the project, the surrounding roadway network will continue to operate at an acceptable LOS during the peak hours.

1.0 INTRODUCTION

The purpose of this study is to estimate the traffic impacts of the proposed Hummingbird Solar Project located approximately three miles northeast of Flemingsburg in Fleming County, Kentucky. The project site can be generally described as south of KY 1237 (Burtonville Road), north of KY 559 (Fox Spring Avenue/Wallingford Road), mostly east of KY 57 (Mt. Carmel Road) and west of KY 1902. The proposed project site is shown in **Figure 1**.

The Project area encompasses approximately 4,300-acres in an agricultural area. The petitioner proposes to utilize the land to establish a 110-megawatt (MW), utility-scale, solar-powered electric generating facility. The Project will have access points around the site with major truck deliveries. A construction year of 2023 was evaluated as part of the study.

2.0 DATA COLLECTION

Traffic counts (including both 24-hour and classification counts) were obtained from the Kentucky Transportation Cabinet (KYTC) to establish the existing traffic conditions. **Figure 2** shows the locations of the primary / adjacent count stations used in this analysis. The summarized count data for each of these stations (plus additional stations outside the immediate area) is included in **Appendix A** for the following count stations:

- Station 035080: CR 1027 (Carpenter Road)
- Station 035150: CR 1030 (Colgan Road)
- Station 035049: CR 1036 (Wilson Run Road)
- Station 035083: CR 1037 (Maddox Pike)
- Station 068811: KY 57 from Fleming/Lewis County Line (MP 0.00) to KY 1237 (MP 2.093)
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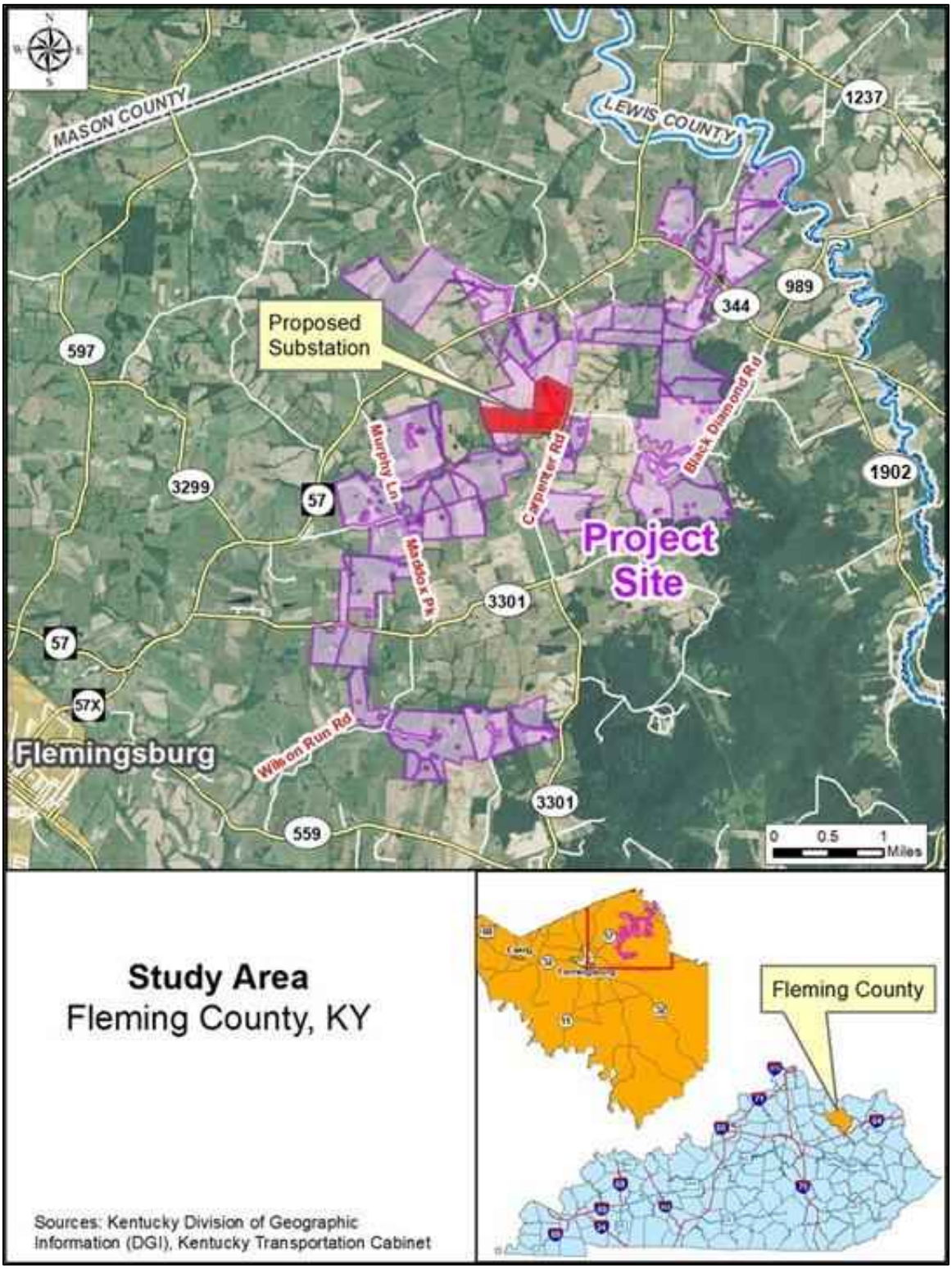

Figure 1: Project Location

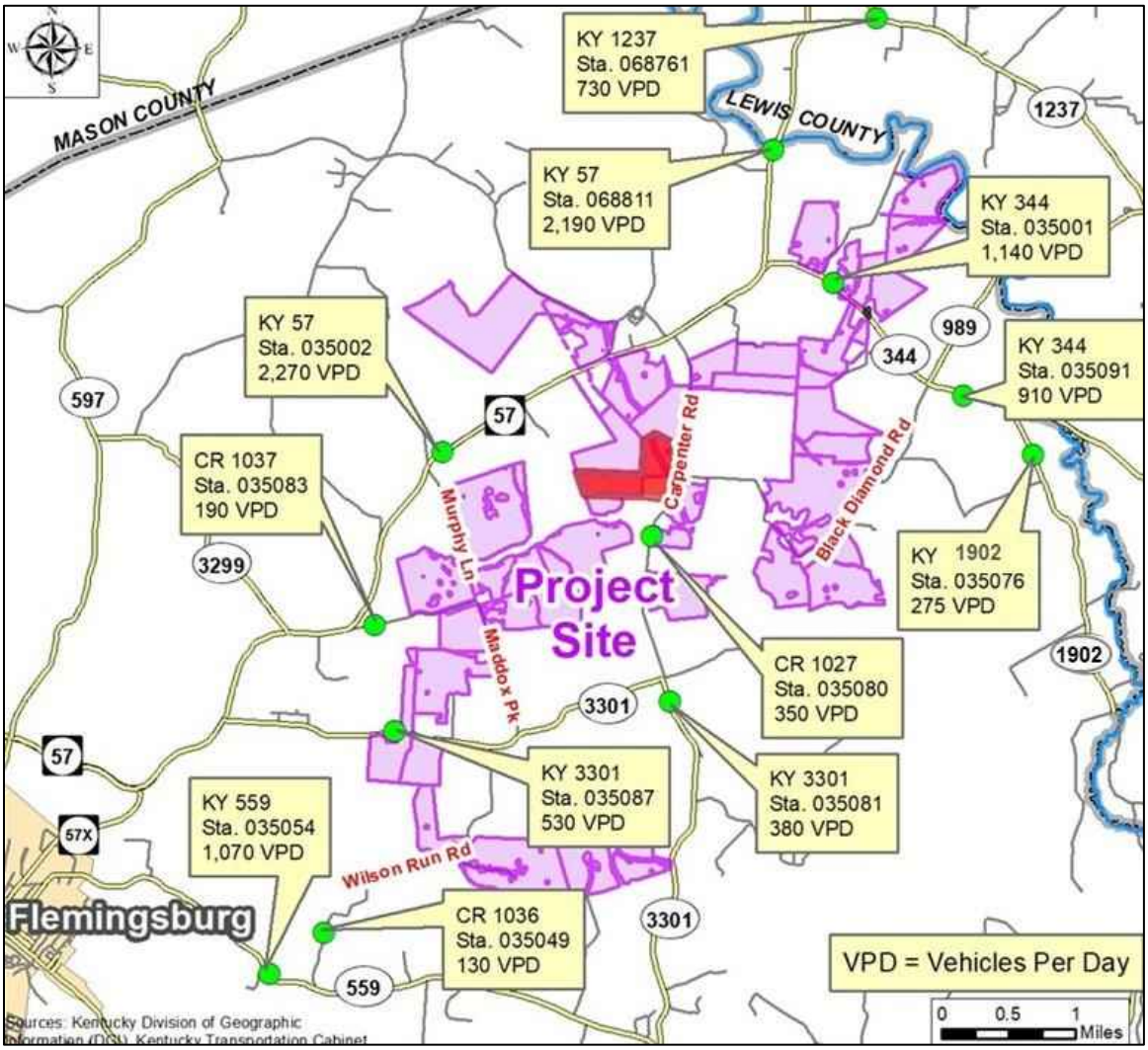

Figure 2: KYTC Count Stations

KY 57 (Mt. Carmel Road), located directly west of most of the project site, is classified as a two-lane major collector with daily traffic volume of 2,300 vehicles per day (VPD). KY 57 has posted speed limits ranging from 35 miles per hour (mph) to 55 mph. To the north, KY 1237 in Lewis County is a two-lane urban minor collector with a posted speed limit of 55 mph and daily traffic of 700 VPD. To the east of the project site, KY 1902 is a two-lane urban local roadway with a posted speed limit of 55 mph. To the south, KY 559 (Fox Spring Avenue/Wallingford Road) is a two-lane urban minor collector from with a posted speed limit of 35 mph to 55 mph.

Two-lane analyses were used to evaluate the roadways based on methods described in the Highway Capacity Manual (HCM) and implemented within the Highway Capacity Software (HCS 2022). The results can be found in **Appendix B**. The analyses were used to estimate capacity and Level of Service (LOS) for given traffic and geometric conditions. LOS provides a measure of the quality of traffic flow provided

by a roadway facility, expressed in terms of letter grades with LOS A representing the highest quality traffic flow and minimal delay, and LOS F representing poor traffic operations and significant delay. For rural areas, LOS C or better is generally considered to be desirable. In urban areas, LOS D or better is generally considered desirable.

The two-lane highways method utilizes follower density (followers/mile) as the service measure for LOS, as shown in **Table 1**.

Table 1: Level of Service Criteria for Two-Lane Highways

LOS	Density (followers/mi) Speed Limit ≥ 50 mph	Density (followers/mi) Speed Limit < 50 mph
A	≤ 2	≤ 2.5
B	> 2 - 4	> 2.5 - 5.5
C	> 4 - 8	> 5 - 10
D	> 8 - 12	> 10 - 15
E	> 12	> 15
F	Demand exceeds capacity	Demand exceeds capacity

The results of the existing AM and PM peak hour traffic analyses for two-lane roads are summarized in **Table 2**. The results indicate that all existing project-adjacent two-lane roadways currently operate at acceptable LOS during both the AM and PM peak hours.

Table 2: Existing AM/PM Two-Lane Highway Analysis

Segment	Existing AM		Existing PM	
	Density (followers/mi/ln)	LOS	Density (followers/mi/ln)	LOS
CR 1027 (Carpenter Road)	0.2	A	0.3	A
CR 1030 (Colgan Road)	0.1	A	0.0	A
CR 1036 (Wilson Run Road)	0.1	A	0.1	A
CR 1037 (Maddox Pike)	0.1	A	0.1	A
KY 57 (Mt. Caramel Road) at:				
KY 1237 (Burtonville Road) to near north of Mandie Lane	0.2	A	0.6	A
North of Mandie Lane to south of Mandie Lane	0.1	A	0.5	A
South of Mandie Lane to Fleming/Lewis County Line	0.1	A	0.4	A
Fleming/Lewis County Line to near Perkins Lane	0.2	A	0.6	A
Near Perkins Lane to near KY 344 (Foxport Road)	0.1	A	0.4	A
Near KY 344 (Foxport Road) to J M Clary	0.3	A	0.2	A
J M Clary to near Kilbreth Valley Road	0.8	A	0.7	A
Kilbreth Valley Road to near Penny Patch Road	0.3	A	0.2	A
Near Penny Patch Road to near Murphy Lane	0.3	A	0.2	A
Near Murphy Lane to north of Logan Run Road	0.3	A	0.2	A
North of Logan Run Road to south of Logan Run Road	0.3	A	0.3	A
South of Logan Run Road to KY 3301 (Beechtree Pike)	0.3	A	0.2	A
KY 3301 (Beechtree Pike) to north of KY 57X (Mt. Caramel Road)	1.3	A	1.7	A
KY 344 (Foxport Road) at:				
KY 1902 to 2155 KY 344 (Foxport Road)	0.2	A	0.4	A
2155 KY 344 (Foxport Road) to 1680 Foxport Road	0.1	A	0.1	A
1680 Foxport Road to KY 989 (Burtonville Road)	0.1	A	0.2	A
KY 989 (Burtonville Road) to 1278 Foxport Road	0.1	A	0.2	A
1278 Foxport Road to near Saunders Lane	0.1	A	0.2	A
Near Saunders Lane to 875 KY 344 (Foxport Road)	0.1	A	0.3	A
875 KY 344 (Foxport Road) to Andrew Graham property	0.1	A	0.2	A
Andrew Graham Property to west of Breeze Road	0.1	A	0.2	A
West of Breeze Road to 234 KY 344 (Foxport Road)	0.1	A	0.2	A
234 KY 344 (Foxport Road) to KY 57 (Mt. Caramel Road)	0.1	A	0.3	A
KY 559 (Foxspring Avenue/Wallingford Road) at:				
Gulley Drive to near east of Sutton Road	0.2	A	0.2	A
East of Sutton Road to west of Botkins Lane	0.1	A	0.1	A
West of Botkins Lane to 3954 KY 559 (Wallingford Road)	0.1	A	0.2	A
3954 KY 559 (Wallingford Road) to near Crump Lane	0.1	A	0.1	A
Near Crump Lane to near Adams Lane	0.1	A	0.2	A
Near Adams Lane to 3215 KY 559 (Wallingford Road)	0.1	A	0.2	A
3215 KY 559 (Wallingford Road) to near Brookstone Drive	0.2	A	0.2	A
Near Brookstone Drive to near Stewart Lane	0.2	A	0.3	A
Near Stewart Lane to School Street	0.5	A	0.5	A
KY 989 (Burtonville Road/Salt Lick Road) at:				
KY 344 (Foxport Road) to Fleming/Lewis County Line	0.0	A	0.0	A
Fleming/Lewis County Line to KY 1237 (Burtonville Road)	0.0	A	0.0	A
KY 1237 (Burtonville Road) at:				
KY 989 (Salt Lick Road) to Thomas Lane/Ribolt Epworth Road	0.0	A	0.0	A
Thomas Lane/Ribolt Epworth Road to KY 57	0.0	A	0.1	A
KY 3301 (Beechtree Pike/Road) at:				
KY 57 (Mt. Carmel Road) to near Rebecca Lane	0.1	A	0.1	A
Near Rebecca Lane to near Penny Lane	0.0	A	0.0	A
Near Penny Lane to Licking River Bridge	0.0	A	0.1	A
Licking River Bridge to 1208 KY 3301 (Beechtree Pike)	0.0	A	0.0	A
1208 KY 3301 (Beechtree Pike) to Beech Spring Estates	0.0	A	0.0	A
Beech Spring Estates to Wilson Run Road	0.0	A	0.0	A
Wilson Run Road to 2810 KY 3301 (Beechtree Pike)	0.0	A	0.0	A
2810 KY 3301 (Beechtree Pike) to near Colgan Road	0.0	A	0.0	A
Near Colgan Road to Rice Lane	0.0	A	0.1	A

3.0 PROJECT TRIP GENERATION

3.1 CONSTRUCTION

The trip generation analysis for the construction of the Project would generally be based on the number of workers and the associated construction and delivery truck trips expected during the construction of the project. Construction workers will consist of laborers, equipment operators, electricians, supervisory personnel, support personnel, and construction management personnel. It is envisioned that workers will arrive/depart from passenger vehicles and trucks daily during the AM (7:00 – 9:00 AM) and PM (3:00 – 6:00 PM) peak hours. Equipment deliveries will occur on trailers, flatbeds, or other large vehicles at various times during the day. Specific details concerning construction duration and intensity are not currently known. Therefore, this study has employed a sensitivity analysis to demonstrate that likely construction traffic levels will not have a significant, adverse effect on peak hour traffic operations. For this analysis, AM and PM peak hour traffic volumes on roadways were increased by 50 percent which is far greater than would be anticipated for the actual construction of the Project.

3.1.1 CONSTRUCTION ANALYSIS

The 2023 construction year analysis assumed no changes to the existing roadway network and increases in traffic demand discussed above. The results of the construction year AM and PM peak hour two-lane analysis are summarized in **Table 3**. Complete output reports are included in **Appendix B**. The results indicate that all analyzed roadway segments are anticipated to continue to operate at acceptable LOS during construction for both peak hours.

Table 3: Construction Year (2023) AM/PM Two-Lane Highway Analysis

Segment	Construction AM		Construction PM	
	Density (followers/mi/ln)	LOS	Density (followers/mi/ln)	LOS
CR 1027 (Carpenter Road)	0.4	A	0.5	A
CR 1030 (Colgan Road)	0.1	A	0.1	A
CR 1036 (Wilson Run Road)	0.2	A	0.1	A
CR 1037 (Maddox Pike)	0.2	A	0.2	A
KY 57 (Mt. Caramel Road) at:				
KY 1237 (Burtonville Road) to near north of Mandie Lane	0.4	A	1.2	A
North of Mandie Lane to south of Mandie Lane	0.3	A	1.0	A
South of Mandie Lane to Fleming/Lewis County Line	0.2	A	0.8	A
Fleming/Lewis County Line to near Perkins Lane	0.3	A	1.1	A
Near Perkins Lane to near KY 344 (Foxport Road)	0.3	A	0.9	A
Near KY 344 (Foxport Road) to J M Clary	0.6	A	0.5	A
J M Clary to near Kilbreth Valley Road	1.5	A	1.3	A
Kilbreth Valley Road to near Penny Patch Road	0.5	A	0.4	A
Near Penny Patch Road to near Murphy Lane	0.5	A	0.5	A
Near Murphy Lane to north of Logan Run Road	0.6	A	0.5	A
North of Logan Run Road to south of Logan Run Road	0.6	A	0.5	A
South of Logan Run Road to KY 3301 (Beechtree Pike)	0.6	A	0.5	A
KY 3301 (Beechtree Pike) to north of KY 57X (Mt. Caramel Road)	2.4	B	3.2	B
KY 344 (Foxport Road) at:				
KY 1902 to 2155 KY 344 (Foxport Road)	0.4	A	0.8	A
2155 KY 344 (Foxport Road) to 1680 Foxport Road	0.1	A	0.3	A
1680 Foxport Road to KY 989 (Burtonville Road)	0.2	A	0.4	A
KY 989 (Burtonville Road) to 1278 Foxport Road	0.2	A	0.5	A
1278 Foxport Road to near Saunders Lane	0.1	A	0.4	A
Near Saunders Lane to 875 KY 344 (Foxport Road)	0.2	A	0.5	A
875 KY 344 (Foxport Road) to Andrew Graham property	0.1	A	0.3	A
Andrew Graham Property to west of Breeze Road	0.2	A	0.4	A
West of Breeze Road to 234 KY 344 (Foxport Road)	0.1	A	0.3	A
234 KY 344 (Foxport Road) to KY 57 (Mt. Caramel Road)	0.2	A	0.5	A
KY 559 (Foxspring Avenue/Wallingford Road) at:				
Gulley Drive to near east of Sutton Road	0.3	A	0.3	A
East of Sutton Road to west of Botkins Lane	0.2	A	0.2	A
West of Botkins Lane to 3954 KY 559 (Wallingford Road)	0.2	A	0.3	A
3954 KY 559 (Wallingford Road) to near Crump Lane	0.2	A	0.2	A
Near Crump Lane to near Adams Lane	0.2	A	0.3	A
Near Adams Lane to 3215 KY 559 (Wallingford Road)	0.2	A	0.3	A
3215 KY 559 (Wallingford Road) to near Brookstone Drive	0.4	A	0.3	A
Near Brookstone Drive to near Stewart Lane	0.4	A	0.5	A
Near Stewart Lane to School Street	0.7	A	0.8	A
KY 989 (Burtonville Road/Salt Lick Road) at:				
KY 344 (Foxport Road) to Fleming/Lewis County Line	0.0	A	0.0	A
Fleming/Lewis County Line to KY 1237 (Burtonville Road)	0.0	A	0.0	A
KY 1237 (Burtonville Road) at:				
KY 989 (Salt Lick Road) to Thomas Lane/Ribolt Epworth Road	0.0	A	0.1	A
Thomas Lane/Ribolt Epworth Road to KY 57	0.1	A	0.2	A
KY 3301 (Beechtree Pike/Road) at:				
KY 57 (Mt. Carmel Road) to near Rebecca Lane	0.1	A	0.1	A
Near Rebecca Lane to near Penny Lane	0.1	A	0.1	A
Near Penny Lane to Licking River Bridge	0.1	A	0.1	A
Licking River Bridge to 1208 KY 3301 (Beechtree Pike)	0.1	A	0.1	A
1208 KY 3301 (Beechtree Pike) to Beech Spring Estates	0.1	A	0.1	A
Beech Spring Estates to Wilson Run Road	0.1	A	0.1	A
Wilson Run Road to 2810 KY 3301 (Beechtree Pike)	0.1	A	0.1	A
2810 KY 3301 (Beechtree Pike) to near Colgan Road	0.1	A	0.1	A
Near Colgan Road to Rice Lane	0.1	A	0.1	A

3.2 OPERATION

Once operational, the facility will be managed and monitored by a small number of employees. The facility will have one employee on site every day and up to three additional employees for 70 days a year for site inspections and repair. Operations workers are expected to commute to and from the project site individually during the peak AM and PM hours. Work can also be conducted at night up to thirty days a year. This additional volume of daily traffic is considered negligible, and the operational phase of the project will have no measurable impact on the traffic and/or transportation infrastructure.

4.0 CONCLUSION

As demonstrated in the traffic analysis, the construction period will not produce significant operational changes to existing roadways. All roadways within the project area will continue to operate at LOS B or better during peak construction traffic. Although no significant adverse traffic impacts are expected during project construction or operation, using mitigation measures such as ridesharing between construction workers, using appropriate traffic controls, or allowing flexible working hours outside of peak hours could be implemented to minimize any potential for delays during the AM and PM peak hours.

Appendix A

TRAFFIC COUNTS AND CLASSIFICATION DATA

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 05/03/2017 through 05/05/2017

Site names:	035081	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-3301 -000 @ 3.700 From: COLGAN	Growth Factor Grp:	08

	Sun, Apr 30, 2017			Mon, May 1, 2017			Tue, May 2, 2017			Wed, May 3, 2017			Thu, May 4, 2017			Fri, May 5, 2017			Sat, May 6, 2017		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													4			1					
01:00													0			0					
02:00													4			1					
03:00													3			0					
04:00													4			7					
05:00													14			12					
06:00													13			18					
07:00													49			37					
08:00													31			20					
09:00													11			7					
10:00										29			27								
11:00										16			31								
12:00										21			36								
13:00										34			32								
14:00										16			34								
15:00										37			39								
16:00										37			44								
17:00										50			50								
18:00										62			30								
19:00										34			14								
20:00										32			26								
21:00										27			17								
22:00										10			8								
23:00										3			4								
Total										408			525			103					
AM Peak Vol										0			49			0					
AM Peak Fct										0			1			0					
AM Peak Hr										:			7: 00			:					
PM Peak Vol										62			50			0					
PM Peak Fct										1			1			0					
PM Peak Hr										18: 00			17: 00			:					
Seasonal Fct										.955			.955			.955					
Daily Fct										.995			.953			.860					
Axle Fct										.489			.489			.489					
Pulse Fct										2.000			2.000			2.000					

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 09/01/2020 through 09/03/2020

Site names:	035081	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-3301 -000 @ 3.700 From: COLGAN	Growth Factor Grp:	08

	Sun, Aug 30, 2020			Mon, Aug 31, 2020			Tue, Sep 1, 2020			Wed, Sep 2, 2020			Thu, Sep 3, 2020			Fri, Sep 4, 2020			Sat, Sep 5, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00										1			1								
01:00										2			3								
02:00										5			1								
03:00										1			0								
04:00										1			0								
05:00										9			7								
06:00										16			21								
07:00										29			22								
08:00										24			23								
09:00										21			21								
10:00										18			19								
11:00										21			29								
12:00										13			23								
13:00										33			18								
14:00										29			27								
15:00							32			20											
16:00							37			29											
17:00							51			31											
18:00							29			32											
19:00							19			23											
20:00							21			17											
21:00							16			19											
22:00							7			7											
23:00							5			6											
Total							217			407			215								
AM Peak Vol										30			32								
AM Peak Fct										.536			.8								
AM Peak Hr										6: 30			10: 45								
PM Peak Vol										33											
PM Peak Fct										.635											
PM Peak Hr										13: 00			:								
Seasonal Fct							.924			.924			.924								
Daily Fct							.989			.986			.961								
Axle Fct							.489			.489			.489								
Pulse Fct							2.000			2.000			2.000								

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 06/24/2019 through 06/27/2019

Site names:	035087	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-3301 -000 @ 1.200 From: KY 57 (NE	Growth Factor Grp:	08

	Sun, Jun 23, 2019			Mon, Jun 24, 2019			Tue, Jun 25, 2019			Wed, Jun 26, 2019			Thu, Jun 27, 2019			Fri, Jun 28, 2019			Sat, Jun 29, 2019		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							3			6			1								
01:00							1			3			2								
02:00							4			1			5								
03:00							6			5			5								
04:00							5			6			6								
05:00							19			20			11								
06:00							18			13			17								
07:00							46			32			51								
08:00							29			31											
09:00							24			40											
10:00				29			17			29											
11:00				38			33			32											
12:00				31			30			37											
13:00				40			29			38											
14:00				32			23			40											
15:00				33			38			40											
16:00				40			45			38											
17:00				48			39			45											
18:00				32			41			42											
19:00				16			30			32											
20:00				17			33			23											
21:00				11			14			21											
22:00				7			12			11											
23:00				3			9			9											
Total				377			548			594			98								
AM Peak Vol							46			40											
AM Peak Fct							.767			.714											
AM Peak Hr				:			7: 00			8: 45											
PM Peak Vol				53			54			50											
PM Peak Fct				.779			.9			.735											
PM Peak Hr				16: 45			16: 15			12: 30											
Seasonal Fct				.950			.950			.950			.950								
Daily Fct				1.008			.985			.998			.962								
Axle Fct				.495			.495			.495			.495								
Pulse Fct				2.000			2.000			2.000			2.000								

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Short-term Hourly Traffic Volume for 05/14/2019 through 05/17/2019

Site names:	068517	Seasonal Factor Grp:	2
County:	Lewis	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	068-KY-1237 -000 @ .500 From: KY 989 To:	Growth Factor Grp:	08

	Sun, May 12, 2019			Mon, May 13, 2019			Tue, May 14, 2019			Wed, May 15, 2019			Thu, May 16, 2019			Fri, May 17, 2019			Sat, May 18, 2019		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00										3			3			1					
01:00										1			1			0					
02:00										2			0			1					
03:00										3			3			1					
04:00										2			0			0					
05:00										12			8			6					
06:00										17			17			19					
07:00										16			16								
08:00							20			24			20								
09:00							18			27			24								
10:00							28			24			19								
11:00							22			32			18								
12:00							30			28			32								
13:00							42			31			33								
14:00							22			27			27								
15:00							28			38			31								
16:00							34			41			39								
17:00							39			35			38								
18:00							27			30			33								
19:00							37			22			31								
20:00							26			17			17								
21:00							17			14			18								
22:00							5			10			12								
23:00							5			6			6								
Total							400			462			446			28					
AM Peak Vol							28			36			24								
AM Peak Fct							.636			.529			.75								
AM Peak Hr							10: 00			10: 45			8: 45								
PM Peak Vol							42			47			41								
PM Peak Fct							.7			.691			.788								
PM Peak Hr							13: 00			16: 45			16: 45								
Seasonal Fct							.931			.931			.931			.931					
Daily Fct							.977			.982			.970			.863					
Axle Fct							.494			.494			.494			.494					
Pulse Fct							2.000			2.000			2.000			2.000					

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Short-term Hourly Traffic Volume for 06/08/2020 through 06/11/2020

Site names:	068761	Seasonal Factor Grp:	2
County:	Lewis	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	068-KY-1237 -000 @ 2.400 From: RIBOLT-	Growth Factor Grp:	08

	Sun, Jun 7, 2020			Mon, Jun 8, 2020			Tue, Jun 9, 2020			Wed, Jun 10, 2020			Thu, Jun 11, 2020			Fri, Jun 12, 2020			Sat, Jun 13, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							5			3			2								
01:00							7			4			3								
02:00							2			3			3								
03:00							8			1			5								
04:00							5			9			7								
05:00							14			12			10								
06:00							28			24			25								
07:00							42			41			38								
08:00							49			28			34								
09:00							42			29											
10:00							56			30											
11:00				43			55			45											
12:00				46			57			31											
13:00				64			50			64											
14:00				43			50			45											
15:00				66			67			63											
16:00				73			67			59											
17:00				75			73			70											
18:00				58			61			53											
19:00				46			36			44											
20:00				49			32			32											
21:00				30			21			35											
22:00				20			23			12											
23:00				7			8			5											
Total				620			858			742			127								
AM Peak Vol							63			45											
AM Peak Fct							.788			.804											
AM Peak Hr				:			10: 15			11: 00											
PM Peak Vol				78			75			70											
PM Peak Fct				.78			.781			.673											
PM Peak Hr				16: 30			17: 30			17: 00											
Seasonal Fct				.921			.921			.921			.921								
Daily Fct				.998			1.000			.976			.960								
Axle Fct				.495			.495			.495			.495								
Pulse Fct				2.000			2.000			2.000			2.000								

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Short-term Hourly Traffic Volume for 06/12/2017 through 06/14/2017

Site names:	068761	Seasonal Factor Grp:	2
County:	Lewis	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	068-KY-1237 -000 @ 2.400 From: RIBOLT-	Growth Factor Grp:	08

	Sun, Jun 11, 2017			Mon, Jun 12, 2017			Tue, Jun 13, 2017			Wed, Jun 14, 2017			Thu, Jun 15, 2017			Fri, Jun 16, 2017			Sat, Jun 17, 2017		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							3			4											
01:00							0			0											
02:00							5			9											
03:00							3			5											
04:00							7			10											
05:00							29			31											
06:00							39			32											
07:00							46			42											
08:00				43			44			54											
09:00				41			50			45											
10:00				45			55														
11:00				40			42														
12:00				41			44														
13:00				46			47														
14:00				47			53														
15:00				49			62														
16:00				58			74														
17:00				79			65														
18:00				43			47														
19:00				41			44														
20:00				45			42														
21:00				23			28														
22:00				21			12														
23:00				13			4														
Total				675			845			232											
AM Peak Vol				0			55			0											
AM Peak Fct				0			1			0											
AM Peak Hr				:			10: 00			:											
PM Peak Vol				79			74			0											
PM Peak Fct				1			1			0											
PM Peak Hr				17: 00			16: 00			:											
Seasonal Fct				.950			.950			.950											
Daily Fct				1.016			1.015			.984											
Axle Fct				.488			.488			.488											
Pulse Fct				2.000			2.000			2.000											

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Short-term Hourly Traffic Volume for 05/14/2019 through 05/16/2019

Site names:	068516	Seasonal Factor Grp:	2
County:	Lewis	Daily Factor Grp:	2
Funct Class:	R Local System	Axle Factor Grp:	09
Location:	068-KY-0989 -000 @ .800 From: FLEMING	Growth Factor Grp:	09

	Sun, May 12, 2019			Mon, May 13, 2019			Tue, May 14, 2019			Wed, May 15, 2019			Thu, May 16, 2019			Fri, May 17, 2019			Sat, May 18, 2019		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00										1			5								
01:00										3			0								
02:00										3			1								
03:00										7			8								
04:00										4			1								
05:00										6			4								
06:00										9			6								
07:00										13			7								
08:00										4			6								
09:00							9			7			17								
10:00							14			12			12								
11:00							18			12			8								
12:00							13			19			19								
13:00							18			18			18								
14:00							18			21			7								
15:00							18			34			18								
16:00							12			22			21								
17:00							21			20			21								
18:00							15			14			10								
19:00							8			10			10								
20:00							9			16											
21:00							14			7											
22:00							3			5											
23:00							1			2											
Total							191			269			199								
AM Peak Vol							18			15			17								
AM Peak Fct							.5			.536			.531								
AM Peak Hr							11: 00			6: 30			9: 00								
PM Peak Vol							22			36			24								
PM Peak Fct							.611			.563			.75								
PM Peak Hr							13: 30			14: 15			15: 30								
Seasonal Fct							.931			.931			.931								
Daily Fct							.977			.982			.970								
Axle Fct							.500			.500			.500								
Pulse Fct							2.000			2.000			2.000								

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Short-term Hourly Traffic Volume for 06/24/2019 through 06/27/2019

Site names:	035042	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-0559 -000 @ 13.200 From: DUDLEY	Growth Factor Grp:	08

	Sun, Jun 23, 2019			Mon, Jun 24, 2019			Tue, Jun 25, 2019			Wed, Jun 26, 2019			Thu, Jun 27, 2019			Fri, Jun 28, 2019			Sat, Jun 29, 2019		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							2			2			0								
01:00							0			3			0								
02:00							2			1			2								
03:00							1			0			2								
04:00							2			1			2								
05:00							8			8			10								
06:00							12			10			11								
07:00							25			25			16								
08:00							19			20											
09:00							24			23											
10:00				25			22			30											
11:00				18			26			22											
12:00				23			26			28											
13:00				31			26			27											
14:00				17			32			37											
15:00				30			28			55											
16:00				44			31			36											
17:00				29			25			29											
18:00				24			26			25											
19:00				20			22			20											
20:00				16			18			19											
21:00				14			14			8											
22:00				9			5			8											
23:00				4			4			0											
Total				304			400			437			43								
AM Peak Vol							29			30											
AM Peak Fct							.725			.625											
AM Peak Hr				:			10: 15			10: 00											
PM Peak Vol				46			34			60											
PM Peak Fct				.676			.708			.469											
PM Peak Hr				16: 15			15: 15			15: 15											
Seasonal Fct				.950			.950			.950			.950								
Daily Fct				1.008			.985			.998			.962								
Axle Fct				.495			.495			.495			.495								
Pulse Fct				2.000			2.000			2.000			2.000								

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Short-term Hourly Traffic Volume for 04/06/2021 through 04/08/2021

Site names:	035054	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-0559 -000 @ 7.200 From: STEWART	Growth Factor Grp:	08

	Sun, Apr 4, 2021			Mon, Apr 5, 2021			Tue, Apr 6, 2021			Wed, Apr 7, 2021			Thu, Apr 8, 2021			Fri, Apr 9, 2021			Sat, Apr 10, 2021		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00										6			4								
01:00										2			4								
02:00										1			2								
03:00										4			8								
04:00										14			7								
05:00										13			25								
06:00										49			45								
07:00										76			99								
08:00							78			62											
09:00							57			56											
10:00							64			62											
11:00							63			64											
12:00							76			79											
13:00							83			70											
14:00							79			89											
15:00							90			87											
16:00							96			97											
17:00							75			92											
18:00							65			80											
19:00							51			44											
20:00							34			38											
21:00							25			31											
22:00							13			16											
23:00							8			6											
Total							957			1,138			194								
AM Peak Vol										77											
AM Peak Fct										.875											
AM Peak Hr							:			7: 30											
PM Peak Vol							104			108											
PM Peak Fct							.813			.9											
PM Peak Hr							15: 45			16: 30											
Seasonal Fct							1.244			1.244			1.244								
Daily Fct							.930			.943			.948								
Axle Fct							.494			.494			.494								
Pulse Fct							2.000			2.000			2.000								

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Short-term Hourly Traffic Volume for 06/24/2019 through 06/27/2019

Site names:	035001	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-0344 -000 @ .500 From: KY 57 To:	Growth Factor Grp:	08

	Sun, Jun 23, 2019			Mon, Jun 24, 2019			Tue, Jun 25, 2019			Wed, Jun 26, 2019			Thu, Jun 27, 2019			Fri, Jun 28, 2019			Sat, Jun 29, 2019		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							3			4			4								
01:00							3			5			1								
02:00							7			3			8								
03:00							15			16			14								
04:00							13			14			13								
05:00							50			35			38								
06:00							50			62			55								
07:00							46			62			74								
08:00							59			57			63								
09:00							53			57											
10:00							59			57											
11:00				64			60			79											
12:00				80			59			80											
13:00				83			67			69											
14:00				76			74			61											
15:00				93			61			82											
16:00				90			84			106											
17:00				94			115			115											
18:00				87			83			91											
19:00				54			70			56											
20:00				58			32			56											
21:00				24			42			92											
22:00				23			34			16											
23:00				7			9			14											
Total				833			1,148			1,289			270								
AM Peak Vol							71			79											
AM Peak Fct							.74			.823											
AM Peak Hr				:			10: 45			11: 00											
PM Peak Vol				100			115			120											
PM Peak Fct				.833			.821			.909											
PM Peak Hr				16: 30			16: 45			16: 15											
Seasonal Fct				.950			.950			.950			.950								
Daily Fct				1.008			.985			.998			.962								
Axle Fct				.495			.495			.495			.495								
Pulse Fct				2.000			2.000			2.000			2.000								

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Short-term Hourly Traffic Volume for 04/27/2020 through 04/29/2020

Site names:	035091	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-0344 -000 @ 1.800 From: KY 989	Growth Factor Grp:	08

	Sun, Apr 26, 2020			Mon, Apr 27, 2020			Tue, Apr 28, 2020			Wed, Apr 29, 2020			Thu, Apr 30, 2020			Fri, May 1, 2020			Sat, May 2, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							2			4											
01:00							0			3											
02:00							1			3											
03:00							3			2											
04:00							4			7											
05:00							25			22											
06:00							36			22											
07:00							30			36											
08:00							29			29											
09:00							38			41											
10:00							55			46											
11:00							35			53											
12:00							58			40											
13:00							40			48											
14:00				48			35														
15:00				48			70														
16:00				64			72														
17:00				75			92														
18:00				71			56														
19:00				46			46														
20:00				38			26														
21:00				19			31														
22:00				6			13														
23:00				2			5														
Total				417			802			356											
AM Peak Vol							55			53											
AM Peak Fct							.688			.663											
AM Peak Hr							10: 00			11: 00											
PM Peak Vol							97														
PM Peak Fct							.808														
PM Peak Hr							16: 45			:											
Seasonal Fct				1.244			1.244			1.244											
Daily Fct				.942			.930			.943											
Axle Fct				.494			.494			.494											
Pulse Fct				2.000			2.000			2.000											

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 08/16/2017 through 08/18/2017

Site names:	035091	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Minor Collector	Axle Factor Grp:	08
Location:	035-KY-0344 -000 @ 1.800 From: KY 989	Growth Factor Grp:	08

	Sun, Aug 13, 2017			Mon, Aug 14, 2017			Tue, Aug 15, 2017			Wed, Aug 16, 2017			Thu, Aug 17, 2017			Fri, Aug 18, 2017			Sat, Aug 19, 2017		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													6			3					
01:00													2			1					
02:00													1			3					
03:00													10			3					
04:00													13			16					
05:00													33			34					
06:00													65			54					
07:00													61			56					
08:00													53			44					
09:00										55			45								
10:00										49			44								
11:00										70			67								
12:00										52			53								
13:00										46			53								
14:00										56			66								
15:00										73			80								
16:00										64			60								
17:00										95			93								
18:00										55			62								
19:00										37			44								
20:00										38			35								
21:00										22			21								
22:00										12			13								
23:00										2			4								
Total										726			984			214					
AM Peak Vol										0			67			0					
AM Peak Fct										0			1			0					
AM Peak Hr										:			11: 00			:					
PM Peak Vol										95			93			0					
PM Peak Fct										1			1			0					
PM Peak Hr										17: 00			17: 00			:					
Seasonal Fct										.957			.957			.957					
Daily Fct										.990			.939			.867					
Axle Fct										.489			.489			.489					
Pulse Fct										2.000			2.000			2.000					

Kentucky Transportation Cabinet

Count Class Distribution for 04/27/2020 through 04/29/2020

Site names: 035002
County: Fleming
Funct Class: R Major Collector
Location: 035-KY-0057 -000 @ 5.407 From: KY 3301 To: KY 344

Seasonal Factor Grp: 2
Daily Factor Grp: 2
Axle Factor Grp: 07
Growth Factor Grp: 07

	Road	Pos	Neg	Pos Lane1	Neg Lane1
MC	7 .18%	3 .16%	4 .20%	3 .16%	4 .20%
CAR	1,997 51.39%	966 50.63%	1,031 52.12%	966 50.63%	1,031 52.12%
PU	1,343 34.56%	643 33.70%	700 35.39%	643 33.70%	700 35.39%
BUS	42 1.08%	26 1.36%	16 .81%	26 1.36%	16 .81%
2D	352 9.06%	183 9.59%	169 8.54%	183 9.59%	169 8.54%
SU 3	7 .18%	4 .21%	3 .15%	4 .21%	3 .15%
SU 4+	4 .10%	2 .10%	2 .10%	2 .10%	2 .10%
ST 4-	130 3.35%	77 4.04%	53 2.68%	77 4.04%	53 2.68%
ST 5	3 .08%	3 .16%	0 .00%	3 .16%	0 .00%
ST 6+	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
MT 5-	1 .03%	1 .05%	0 .00%	1 .05%	0 .00%
MT 6	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
MT 7+	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
NA	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
UNCLS	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
Trucks	539 13.87%	296 15.51%	243 12.29%	296 15.51%	243 12.29%
Combo Trucks	134 3.45%	81 4.25%	53 2.68%	81 4.25%	53 2.68%
Classified	3,886 100.00%	1,908 100.00%	1,978 100.00%	1,908 100.00%	1,978 100.00%
Unclassified	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
Total	3,886 100.00%	1,908 100.00%	1,978 100.00%	1,908 100.00%	1,978 100.00%

Kentucky Transportation Cabinet

Count Class Distribution for 06/03/2014 through 06/05/2014

Site names: 035002
County: Fleming
Funct Class: R Major Collector
Location: 035-KY-0057 -000 @ 5.407 From: KY 3301 To: KY 344

Seasonal Factor Grp: 2
Daily Factor Grp: 2
Axle Factor Grp: 07
Growth Factor Grp: 07

	Road	Pos	Neg	Pos Lane1	Neg Lane1
MC	17 .49%	11 .65%	6 .33%	11 .65%	6 .33%
CAR	2,259 64.64%	1,104 65.33%	1,155 63.99%	1,104 65.33%	1,155 63.99%
PU	888 25.41%	413 24.44%	475 26.32%	413 24.44%	475 26.32%
BUS	19 .54%	9 .53%	10 .55%	9 .53%	10 .55%
2D	133 3.81%	65 3.85%	68 3.77%	65 3.85%	68 3.77%
SU 3	27 .77%	17 1.01%	10 .55%	17 1.01%	10 .55%
SU 4+	11 .31%	6 .36%	5 .28%	6 .36%	5 .28%
ST 4-	54 1.55%	22 1.30%	32 1.77%	22 1.30%	32 1.77%
ST 5	78 2.23%	38 2.25%	40 2.22%	38 2.25%	40 2.22%
ST 6+	7 .20%	3 .18%	4 .22%	3 .18%	4 .22%
MT 5-	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
MT 6	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
MT 7+	1 .03%	1 .06%	0 .00%	1 .06%	0 .00%
NA	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
UNCLS	1 .03%	1 .06%	0 .00%	1 .06%	0 .00%
Trucks	330 9.44%	161 9.53%	169 9.36%	161 9.53%	169 9.36%
Combo Trucks	140 4.01%	64 3.79%	76 4.21%	64 3.79%	76 4.21%
Classified	3,494 99.97%	1,689 99.94%	1,805 100.00%	1,689 99.94%	1,805 100.00%
Unclassified	1 .03%	1 .06%	0 .00%	1 .06%	0 .00%
Total	3,495 100.00%	1,690 100.00%	1,805 100.00%	1,690 100.00%	1,805 100.00%

Kentucky Transportation Cabinet

Count Class Distribution for 04/26/2022 through 04/29/2022

Site names: 035103
County: Fleming
Funct Class: R Major Collector
Location: 035-KY-0057 -000 @ 1.202 From: KY 597 To: KY 57X

Seasonal Factor Grp: 2
Daily Factor Grp: 2
Axle Factor Grp: 07
Growth Factor Grp: 07

	Road	Pos	Neg	Pos Lane1	Neg Lane1
MC	10 .15%	3 .09%	7 .20%	3 .09%	7 .20%
CAR	3,717 54.26%	1,817 54.66%	1,900 53.89%	1,817 54.66%	1,900 53.89%
PU	2,108 30.77%	1,020 30.69%	1,088 30.86%	1,020 30.69%	1,088 30.86%
BUS	68 .99%	38 1.14%	30 .85%	38 1.14%	30 .85%
2D	420 6.13%	201 6.05%	219 6.21%	201 6.05%	219 6.21%
SU 3	82 1.20%	45 1.35%	37 1.05%	45 1.35%	37 1.05%
SU 4+	28 .41%	4 .12%	24 .68%	4 .12%	24 .68%
ST 4-	186 2.72%	94 2.83%	92 2.61%	94 2.83%	92 2.61%
ST 5	223 3.26%	98 2.95%	125 3.55%	98 2.95%	125 3.55%
ST 6+	7 .10%	3 .09%	4 .11%	3 .09%	4 .11%
MT 5-	1 .01%	1 .03%	0 .00%	1 .03%	0 .00%
MT 6	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
MT 7+	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
NA	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
UNCLS	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
Trucks	1,015 14.82%	484 14.56%	531 15.06%	484 14.56%	531 15.06%
Combo Trucks	417 6.09%	196 5.90%	221 6.27%	196 5.90%	221 6.27%
Classified	6,850 100.00%	3,324 100.00%	3,526 100.00%	3,324 100.00%	3,526 100.00%
Unclassified	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
Total	6,850 100.00%	3,324 100.00%	3,526 100.00%	3,324 100.00%	3,526 100.00%

Kentucky Transportation Cabinet

Count Class Distribution for 05/16/2018 through 05/18/2018

Site names: 035103
County: Fleming
Funct Class: R Major Collector
Location: 035-KY-0057 -000 @ 1.202 From: KY 597 To: KY 57X

Seasonal Factor Grp: 2
Daily Factor Grp: 2
Axle Factor Grp: 07
Growth Factor Grp: 07

	Road	Pos	Neg	Pos Lane1	Neg Lane1
MC	10 .22%	6 .28%	4 .17%	6 .28%	4 .17%
CAR	2,452 54.97%	1,136 53.53%	1,316 56.26%	1,136 53.53%	1,316 56.26%
PU	1,332 29.86%	627 29.55%	705 30.14%	627 29.55%	705 30.14%
BUS	38 .85%	16 .75%	22 .94%	16 .75%	22 .94%
2D	288 6.46%	154 7.26%	134 5.73%	154 7.26%	134 5.73%
SU 3	78 1.75%	61 2.87%	17 .73%	61 2.87%	17 .73%
SU 4+	35 .78%	3 .14%	32 1.37%	3 .14%	32 1.37%
ST 4-	100 2.24%	47 2.21%	53 2.27%	47 2.21%	53 2.27%
ST 5	125 2.80%	70 3.30%	55 2.35%	70 3.30%	55 2.35%
ST 6+	1 .02%	1 .05%	0 .00%	1 .05%	0 .00%
MT 5-	1 .02%	1 .05%	0 .00%	1 .05%	0 .00%
MT 6	1 .02%	0 .00%	1 .04%	0 .00%	1 .04%
MT 7+	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
NA	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
UNCLS	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
Trucks	667 14.95%	353 16.64%	314 13.42%	353 16.64%	314 13.42%
Combo Trucks	228 5.11%	119 5.61%	109 4.66%	119 5.61%	109 4.66%
Classified	4,461 100.00%	2,122 100.00%	2,339 100.00%	2,122 100.00%	2,339 100.00%
Unclassified	0 .00%	0 .00%	0 .00%	0 .00%	0 .00%
Total	4,461 100.00%	2,122 100.00%	2,339 100.00%	2,122 100.00%	2,339 100.00%

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 04/27/2020 through 04/29/2020

Site names:	035002	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Major Collector	Axle Factor Grp:	07
Location:	035-KY-0057 -000 @ 5.407 From: KY 3301	Growth Factor Grp:	07

	Sun, Apr 26, 2020			Mon, Apr 27, 2020			Tue, Apr 28, 2020			Wed, Apr 29, 2020			Thu, Apr 30, 2020			Fri, May 1, 2020			Sat, May 2, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							6	4	2	10	7	3									
01:00							13	9	4	3	0	3									
02:00							4	1	3	3	0	3									
03:00							7	3	4	6	4	2									
04:00							15	5	10	13	5	8									
05:00							46	15	31	39	9	30									
06:00							57	17	40	64	20	44									
07:00							130	28	102	119	28	91									
08:00							101	41	60	102	37	65									
09:00							89	44	45	103	45	58									
10:00							120	59	61	129	58	71									
11:00							118	54	64	152	77	75									
12:00							138	62	76	130	63	67									
13:00							136	69	67	142	72	70									
14:00				152	71	81	147	83	64												
15:00				155	84	71	158	73	85												
16:00				156	100	56	151	91	60												
17:00				190	112	78	190	124	66												
18:00				118	69	49	92	65	27												
19:00				67	40	27	76	37	39												
20:00				56	30	26	62	33	29												
21:00				39	23	16	34	16	18												
22:00				13	7	6	19	11	8												
23:00				6	0	6	10	3	7												
Total				952	536	416	1,919	947	972	1,015	425	590									
AM Peak Vol							133	60	102	153	78	93									
AM Peak Fct							.693	.789	.607	.797	.65	.802									
AM Peak Hr							7: 30	10: 15	7: 00	10: 45	10: 45	7: 15									
PM Peak Vol							199	139	85												
PM Peak Fct							.905	.772	.759												
PM Peak Hr							16: 45	16: 45	15: 00	:	:	:									
Seasonal Fct				1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244	1.244									
Daily Fct				.942	.942	.942	.930	.930	.930	.943	.943	.943									
Axle Fct				.500	.500	.500	.500	.500	.500	.500	.500	.500									
Pulse Fct				2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000									

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 05/03/2017 through 05/05/2017

Site names:	035002	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Major Collector	Axle Factor Grp:	07
Location:	035-KY-0057 -000 @ 5.407 From: KY 3301	Growth Factor Grp:	07

	Sun, Apr 30, 2017			Mon, May 1, 2017			Tue, May 2, 2017			Wed, May 3, 2017			Thu, May 4, 2017			Fri, May 5, 2017			Sat, May 6, 2017		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00													13	8	5	11	8	3			
01:00													2	1	1	7	3	4			
02:00													11	4	7	10	4	6			
03:00													26	6	20	33	12	21			
04:00													22	9	13	16	6	10			
05:00													45	11	34	35	5	30			
06:00													89	28	61	73	20	53			
07:00													164	36	128	157	39	118			
08:00													116	37	79	113	37	76			
09:00													109	47	62	126	62	64			
10:00													107	53	54	103	47	56			
11:00													111	53	58	145	66	79			
12:00													104	56	48	151	83	68			
13:00													138	80	58	132	63	69			
14:00													154	76	78	142	73	69			
15:00										143	78	65	159	90	69						
16:00										163	102	61	175	113	62						
17:00										168	118	50	157	97	60						
18:00										123	75	48	84	50	34						
19:00										86	57	29	58	40	18						
20:00										88	56	32	62	46	16						
21:00										51	28	23	30	13	17						
22:00										25	16	9	10	7	3						
23:00										22	13	9	18	12	6						
Total										869	543	326	1,964	973	991	1,254	528	726			
AM Peak Vol										0	0	0	164	53	128	157	66	118			
AM Peak Fct										0	0	0	1	1	1	1	1	1			
AM Peak Hr										:	:	:	7: 00	10: 00	7: 00	7: 00	11: 00	7: 00			
PM Peak Vol										0	0	0	175	113	78	0	0	0			
PM Peak Fct										0	0	0	1	1	1	0	0	0			
PM Peak Hr										:	:	:	16: 00	16: 00	14: 00	:	:	:			
Seasonal Fct										.955	.955	.955	.955	.955	.955	.955	.955	.955			
Daily Fct										.995	.995	.995	.953	.953	.953	.860	.860	.860			
Axle Fct										.500	.500	.500	.500	.500	.500	.500	.500	.500			
Pulse Fct										2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000			

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Short-term Hourly Traffic Volume for 04/06/2021 through 04/08/2021

Site names:	035104	Seasonal Factor Grp:	2
County:	Fleming	Daily Factor Grp:	2
Funct Class:	R Major Collector	Axle Factor Grp:	07
Location:	035-KY-0057 -000 @ 2.147 From: KY 57X	Growth Factor Grp:	07

	Sun, Apr 4, 2021			Mon, Apr 5, 2021			Tue, Apr 6, 2021			Wed, Apr 7, 2021			Thu, Apr 8, 2021			Fri, Apr 9, 2021			Sat, Apr 10, 2021		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00										20			12								
01:00										10			13								
02:00										7			10								
03:00										42			37								
04:00										50			46								
05:00										81			72								
06:00										145			124								
07:00										263			287								
08:00										194			220								
09:00										208			200								
10:00										216			236								
11:00										201			194								
12:00										228			233								
13:00										214			245								
14:00							241			222											
15:00							309			236											
16:00							324			367											
17:00							336			329											
18:00							179			214											
19:00							152			172											
20:00							129			120											
21:00							88			83											
22:00							58			48											
23:00							25			34											
Total							1,841			3,704			1,929								
AM Peak Vol										281			287								
AM Peak Fct										.798			.854								
AM Peak Hr										7: 30			7: 00								
PM Peak Vol										394											
PM Peak Fct										.879											
PM Peak Hr										16: 15			:								
Seasonal Fct							1.244			1.244			1.244								
Daily Fct							.930			.943			.948								
Axle Fct							.492			.492			.492								
Pulse Fct							2.000			2.000			2.000								

Kentucky Transportation Cabinet

Short-term Hourly Traffic Volume for 06/08/2020 through 06/11/2020

Site names: 068811
County: Lewis
Funct Class: R Major Collector
Location: @ .308 From: ??? To: ???

Seasonal Factor Grp: 2
Daily Factor Grp: 2
Axle Factor Grp: 07
Growth Factor Grp: 07

	Sun, Jun 7, 2020			Mon, Jun 8, 2020			Tue, Jun 9, 2020			Wed, Jun 10, 2020			Thu, Jun 11, 2020			Fri, Jun 12, 2020			Sat, Jun 13, 2020		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							13			12			10								
01:00							6			9			7								
02:00							8			10			6								
03:00							18			23			24								
04:00							24			32			24								
05:00							74			80			90								
06:00							78			80			69								
07:00							144			138			155								
08:00							141			164			151								
09:00							129			134											
10:00							151			154											
11:00				147			161			183											
12:00				146			156			155											
13:00				178			165			166											
14:00				160			173			198											
15:00				162			180			184											
16:00				178			178			205											
17:00				214			200			198											
18:00				121			133			135											
19:00				89			98			74											
20:00				73			67			87											
21:00				61			36			59											
22:00				32			37			34											
23:00				17			17			21											
Total				1,578			2,387			2,535			536								
AM Peak Vol							175			183											
AM Peak Fct							.875			.775											
AM Peak Hr				:			10: 30			11: 00											
PM Peak Vol				214			206			212											
PM Peak Fct				.836			.817			.914											
PM Peak Hr				17: 00			16: 30			15: 30											
Seasonal Fct				.921			.921			.921			.921								
Daily Fct				.998			1.000			.976			.960								
Axle Fct				.492			.492			.492			.492								
Pulse Fct				2.000			2.000			2.000			2.000								

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Short-term Hourly Traffic Volume for 06/12/2017 through 06/14/2017

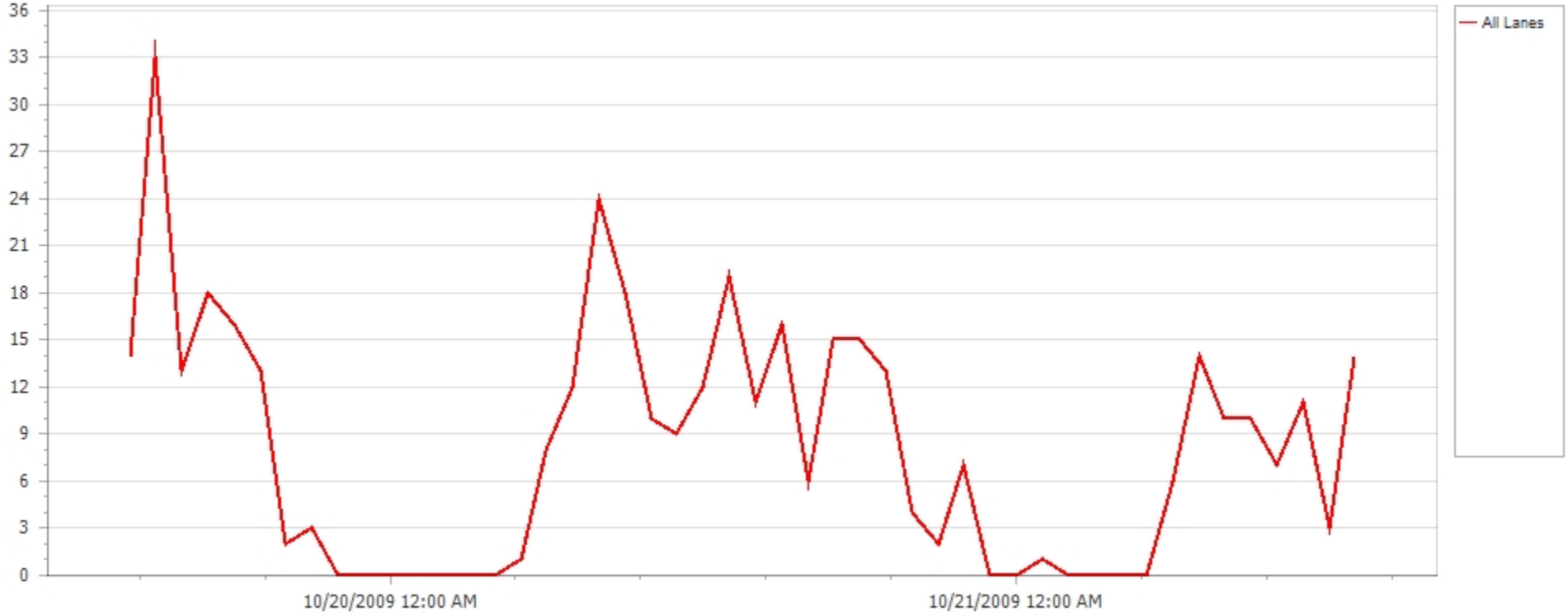
Site names:	068811	Seasonal Factor Grp:	2
County:	Lewis	Daily Factor Grp:	2
Funct Class:	R Major Collector	Axle Factor Grp:	07
Location:	@ .308 From: ??? To: ???	Growth Factor Grp:	07

	Sun, Jun 11, 2017			Mon, Jun 12, 2017			Tue, Jun 13, 2017			Wed, Jun 14, 2017			Thu, Jun 15, 2017			Fri, Jun 16, 2017			Sat, Jun 17, 2017		
	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg	Road	Pos	Neg
00:00							16			39											
01:00							8			11											
02:00							8			9											
03:00							11			7											
04:00							26			24											
05:00							31			39											
06:00							81			77											
07:00							96			78											
08:00							148			133											
09:00				99			115			110											
10:00				147			118			118											
11:00				119			128														
12:00				121			131														
13:00				137			135														
14:00				119			149														
15:00				116			130														
16:00				155			140														
17:00				162			199														
18:00				186			171														
19:00				136			131														
20:00				79			87														
21:00				64			79														
22:00				40			50														
23:00				29			23														
Total				1,709			2,211			645											
AM Peak Vol				0			148			0											
AM Peak Fct				0			1			0											
AM Peak Hr				:			8: 00			:											
PM Peak Vol				186			199			0											
PM Peak Fct				1			1			0											
PM Peak Hr				18: 00			17: 00			:											
Seasonal Fct				.950			.950			.950											
Daily Fct				1.016			1.015			.984											
Axle Fct				.484			.484			.484											
Pulse Fct				2.000			2.000			2.000											

Peek Traffic
5401 N Sam Houston Pkwy W
Houston, Tx 77086
1-800-848-7025

Volume by Lane

Name:	R1037_0018T9-035083A2AV11		
Site:	R1037_0018T9	Station:	035083A2AV11
Latitude:	0.000000 N	Longitude:	0.000000 E
Started:	10/19/2009 2:00:00 PM	Ended:	10/21/2009 1:59:59 PM



Hasta 24 horas comenzando en Monday, October 19, 2009

Interval	All Lanes
14:00	14
15:00	33
16:00	13
17:00	18
18:00	16
19:00	13
20:00	2
21:00	3
22:00	0
23:00	0
00:00	0
01:00	0
02:00	0
03:00	0
04:00	0
05:00	1
06:00	8
07:00	12
08:00	24
09:00	18
10:00	10
11:00	9
12:00	12
13:00	19
24 Hour Total	**225**
AM Peak	**24 (starting at 08:00:00)**
PM Peak	**33 (starting at 15:00:00)**

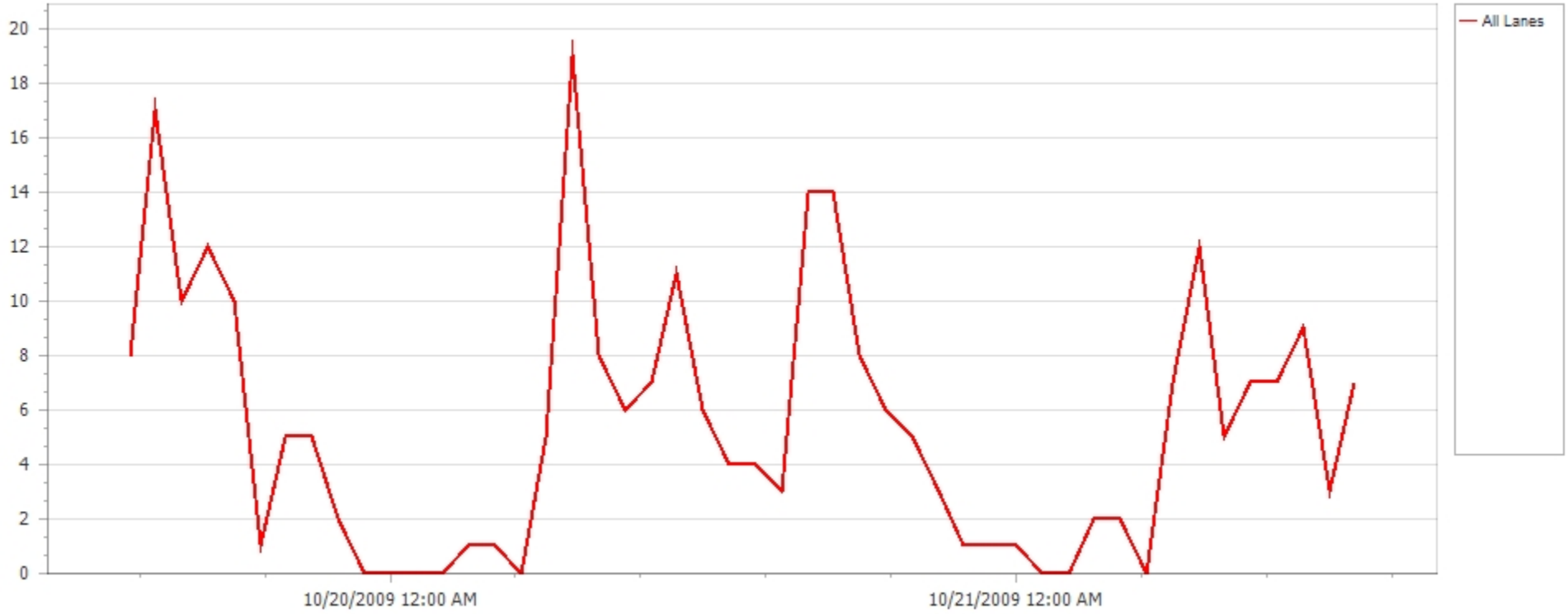
Hasta 24 horas comenzando en Tuesday, October 20, 2009

Interval	All Lanes
14:00	11
15:00	16
16:00	6
17:00	15
18:00	15
19:00	13
20:00	4
21:00	2
22:00	7
23:00	0
00:00	0
01:00	1
02:00	0
03:00	0
04:00	0
05:00	0
06:00	6
07:00	14
08:00	10
09:00	10
10:00	7
11:00	11
12:00	3
13:00	14
24 Hour Total	**165**
AM Peak	**14 (starting at 07:00:00)**
PM Peak	**16 (starting at 15:00:00)**
Average Interval	**8**
Maximum in one Interval	**33**
Grand Total	**390**

Peek Traffic
5401 N Sam Houston Pkwy W
Houston, Tx 77086
1-800-848-7025

Volume by Lane

Name:	R1036_0004T9-035049A2AV11		
Site:	R1036_0004T9	Station:	035049A2AV11
Latitude:	0.000000 N	Longitude:	0.000000 E
Started:	10/19/2009 2:00:00 PM	Ended:	10/21/2009 1:59:59 PM



Hasta 24 horas comenzando en Monday, October 19, 2009

Interval	All Lanes
14:00	8
15:00	17
16:00	10
17:00	12
18:00	10
19:00	1
20:00	5
21:00	5
22:00	2
23:00	0
00:00	0
01:00	0
02:00	0
03:00	1
04:00	1
05:00	0
06:00	5
07:00	19
08:00	8
09:00	6
10:00	7
11:00	11
12:00	6
13:00	4
24 Hour Total	**138**
AM Peak	**19 (starting at 07:00:00)**
PM Peak	**17 (starting at 15:00:00)**

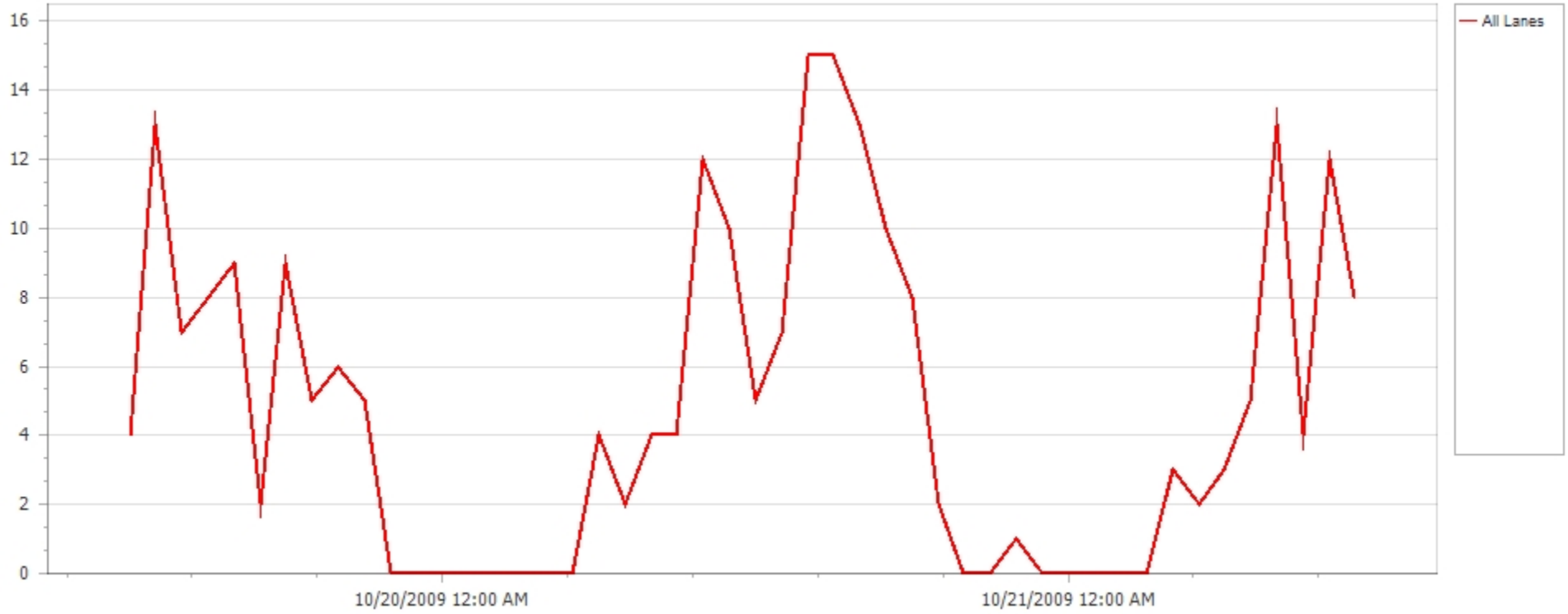
Hasta 24 horas comenzando en Tuesday, October 20, 2009

Interval	All Lanes
14:00	4
15:00	3
16:00	14
17:00	14
18:00	8
19:00	6
20:00	5
21:00	3
22:00	1
23:00	1
00:00	1
01:00	0
02:00	0
03:00	2
04:00	2
05:00	0
06:00	7
07:00	12
08:00	5
09:00	7
10:00	7
11:00	9
12:00	3
13:00	7
24 Hour Total	**121**
AM Peak	**12 (starting at 07:00:00)**
PM Peak	**14 (starting at 16:00:00)**
Average Interval	**5**
Maximum in one Interval	**19**
Grand Total	**259**

Peek Traffic
5401 N Sam Houston Pkwy W
Houston, Tx 77086
1-800-848-7025

Volume by Lane

Name:	R1030_0009T9-035Z81A2AV11		
Site:	R1030_0009T9	Station:	035Z81A2AV11
Latitude:	0.000000 N	Longitude:	0.000000 E
Started:	10/19/2009 12:00:00 PM	Ended:	10/21/2009 11:59:59 AM



Hasta 24 horas comenzando en Monday, October 19, 2009

Interval	All Lanes
12:00	4
13:00	13
14:00	7
15:00	8
16:00	9
17:00	2
18:00	9
19:00	5
20:00	6
21:00	5
22:00	0
23:00	0
00:00	0
01:00	0
02:00	0
03:00	0
04:00	0
05:00	0
06:00	4
07:00	2
08:00	4
09:00	4
10:00	12
11:00	10
24 Hour Total	**104**
AM Peak	**12 (starting at 10:00:00)**
PM Peak	**13 (starting at 13:00:00)**

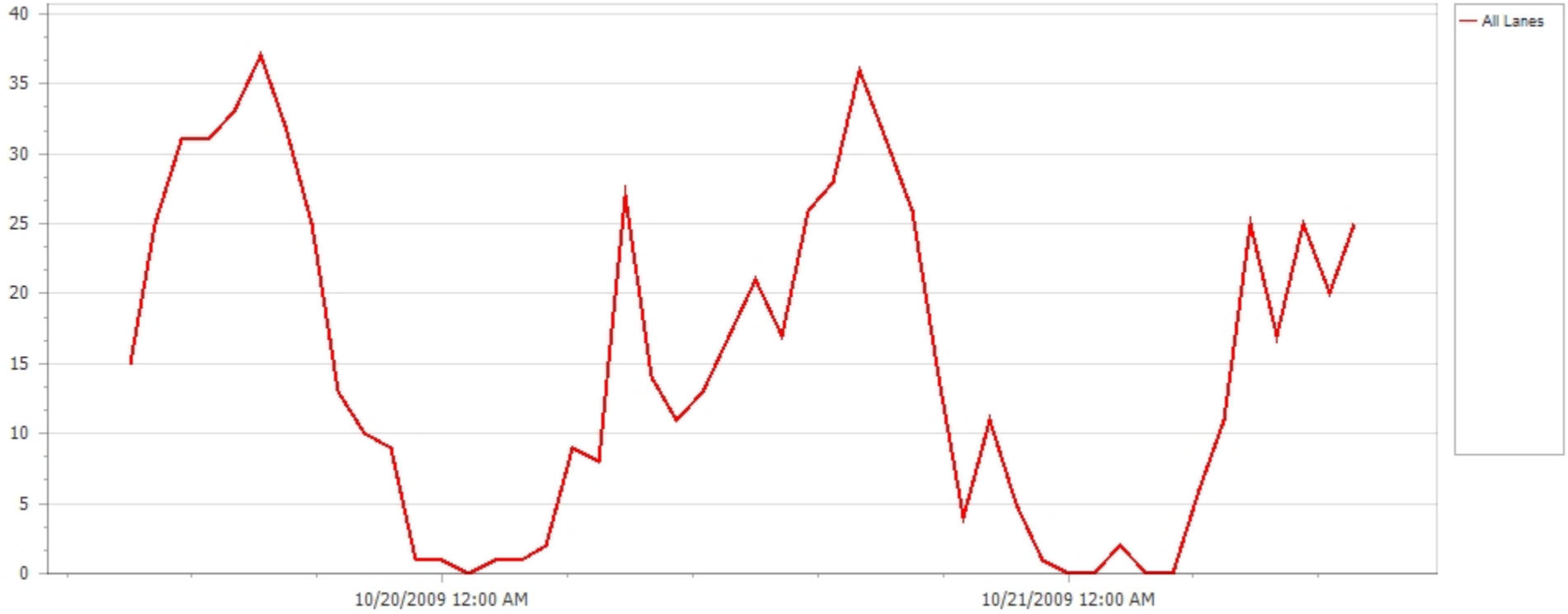
Hasta 24 horas comenzando en Tuesday, October 20, 2009

Interval	All Lanes
12:00	5
13:00	7
14:00	15
15:00	15
16:00	13
17:00	10
18:00	8
19:00	2
20:00	0
21:00	0
22:00	1
23:00	0
00:00	0
01:00	0
02:00	0
03:00	0
04:00	3
05:00	2
06:00	3
07:00	5
08:00	13
09:00	4
10:00	12
11:00	8
24 Hour Total	**126**
AM Peak	**13 (starting at 08:00:00)**
PM Peak	**15 (starting at 14:00:00)**
Average Interval	**5**
Maximum in one Interval	**15**
Grand Total	**230**

Peek Traffic
5401 N Sam Houston Pkwy W
Houston, Tx 77086
1-800-848-7025

Volume by Lane

Name:	R1027_0012T9-035080A2AV11		
Site:	R1027_0012T9	Station:	035080A2AV11
Latitude:	0.000000 N	Longitude:	0.000000 E
Started:	10/19/2009 12:00:00 PM	Ended:	10/21/2009 11:59:59 AM



Hasta 24 horas comenzando en Monday, October 19, 2009

Interval	All Lanes
12:00	15
13:00	25
14:00	31
15:00	31
16:00	33
17:00	37
18:00	32
19:00	25
20:00	13
21:00	10
22:00	9
23:00	1
00:00	1
01:00	0
02:00	1
03:00	1
04:00	2
05:00	9
06:00	8
07:00	27
08:00	14
09:00	11
10:00	13
11:00	17
24 Hour Total	**366**
AM Peak	**27 (starting at 07:00:00)**
PM Peak	**37 (starting at 17:00:00)**

Hasta 24 horas comenzando en Tuesday, October 20, 2009

Interval	All Lanes
12:00	21
13:00	17
14:00	26
15:00	28
16:00	36
17:00	31
18:00	26
19:00	14
20:00	4
21:00	11
22:00	5
23:00	1
00:00	0
01:00	0
02:00	2
03:00	0
04:00	0
05:00	6
06:00	11
07:00	25
08:00	17
09:00	25
10:00	20
11:00	25
24 Hour Total	**351**
AM Peak	**25 (starting at 07:00:00)**
PM Peak	**36 (starting at 16:00:00)**
Average Interval	**15**
Maximum in one Interval	**37**
Grand Total	**717**

Appendix B

HIGHWAY CAPACITY SOFTWARE (HCS 2022) FILES

EXISTING

CONSTRUCTION PERIOD

EXISTING

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	CR 1027	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2575
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	6.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.9
Speed Slope Coefficient (m)	1.66210	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.30998	PF Power Coefficient (p)	0.59048
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2575	-	-	20.9

Vehicle Results

Average Speed, mi/h	20.9	Percent Followers, %	14.6
Segment Travel Time, minutes	1.40	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	3	0.00	0.2	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	CR 1027	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2575
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	6.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.9
Speed Slope Coefficient (m)	1.66210	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.30998	PF Power Coefficient (p)	0.59048
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2575	-	-	20.9

Vehicle Results

Average Speed, mi/h	20.9	Percent Followers, %	16.8
Segment Travel Time, minutes	1.40	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	4	0.00	0.3	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	KY 3301	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	33.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.4
Speed Slope Coefficient (m)	3.13556	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46639	PF Power Coefficient (p)	0.71076
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	48.4

Vehicle Results

Average Speed, mi/h	48.4	Percent Followers, %	10.5
Segment Travel Time, minutes	0.37	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1732
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.90478	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.22654	PF Power Coefficient (p)	0.78245
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1732	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	6.9
Segment Travel Time, minutes	0.39	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.7
Speed Slope Coefficient (m)	3.41926	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44983	PF Power Coefficient (p)	0.72120
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	53.7

Vehicle Results

Average Speed, mi/h	53.7	Percent Followers, %	10.1
Segment Travel Time, minutes	0.22	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1796
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	2.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.19448	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.21184	PF Power Coefficient (p)	0.80011
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1796	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	6.4
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2565
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.6
Speed Slope Coefficient (m)	3.43628	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.39290	PF Power Coefficient (p)	0.73652
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2565	-	-	53.6

Vehicle Results

Average Speed, mi/h	53.6	Percent Followers, %	9.2
Segment Travel Time, minutes	0.54	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2067
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.9
Speed Slope Coefficient (m)	3.03029	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.20996	PF Power Coefficient (p)	0.79496
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2067	-	-	52.9

Vehicle Results

Average Speed, mi/h	52.9	Percent Followers, %	6.5
Segment Travel Time, minutes	0.44	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4526
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.1
Speed Slope Coefficient (m)	3.48395	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35008	PF Power Coefficient (p)	0.74489
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4526	-	-	54.1

Vehicle Results

Average Speed, mi/h	54.1	Percent Followers, %	8.7
Segment Travel Time, minutes	0.95	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	3016
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.8
Speed Slope Coefficient (m)	3.03813	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.18454	PF Power Coefficient (p)	0.80498
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3016	-	-	52.8

Vehicle Results

Average Speed, mi/h	52.8	Percent Followers, %	6.2
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3185
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	26	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.0
Speed Slope Coefficient (m)	3.40708	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38055	PF Power Coefficient (p)	0.73849
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

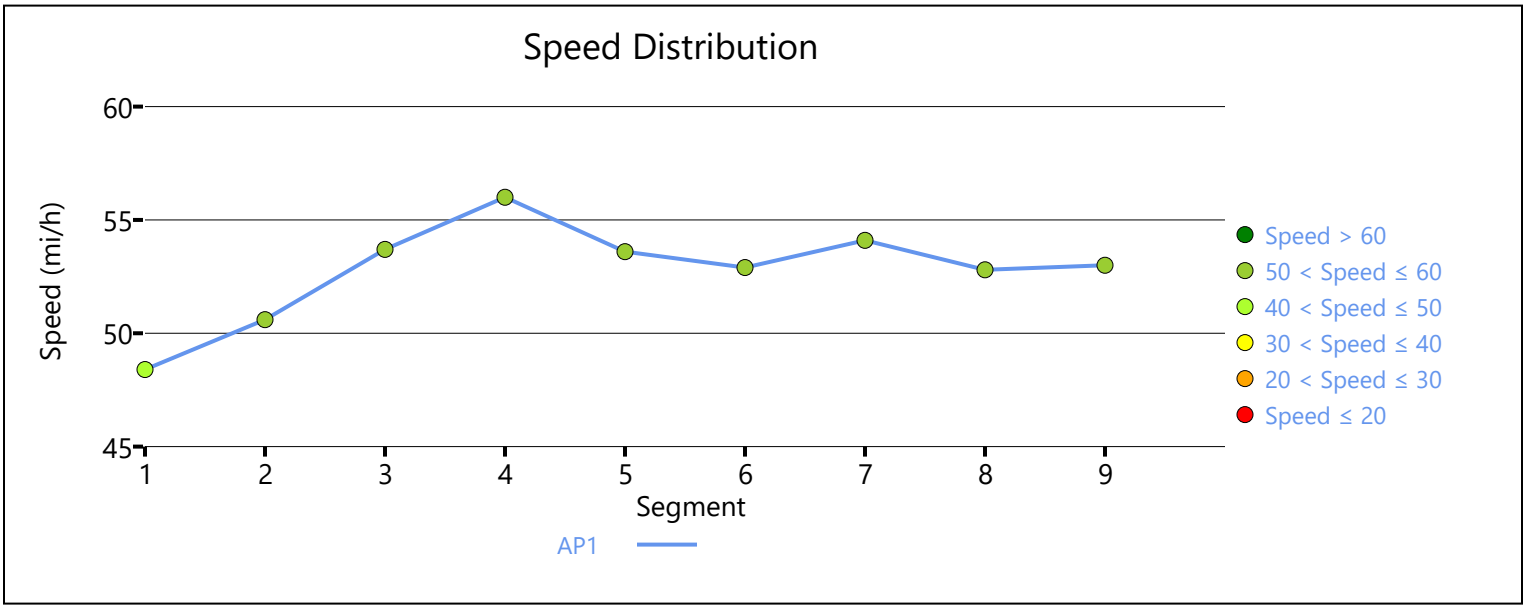
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3185	-	-	53.0

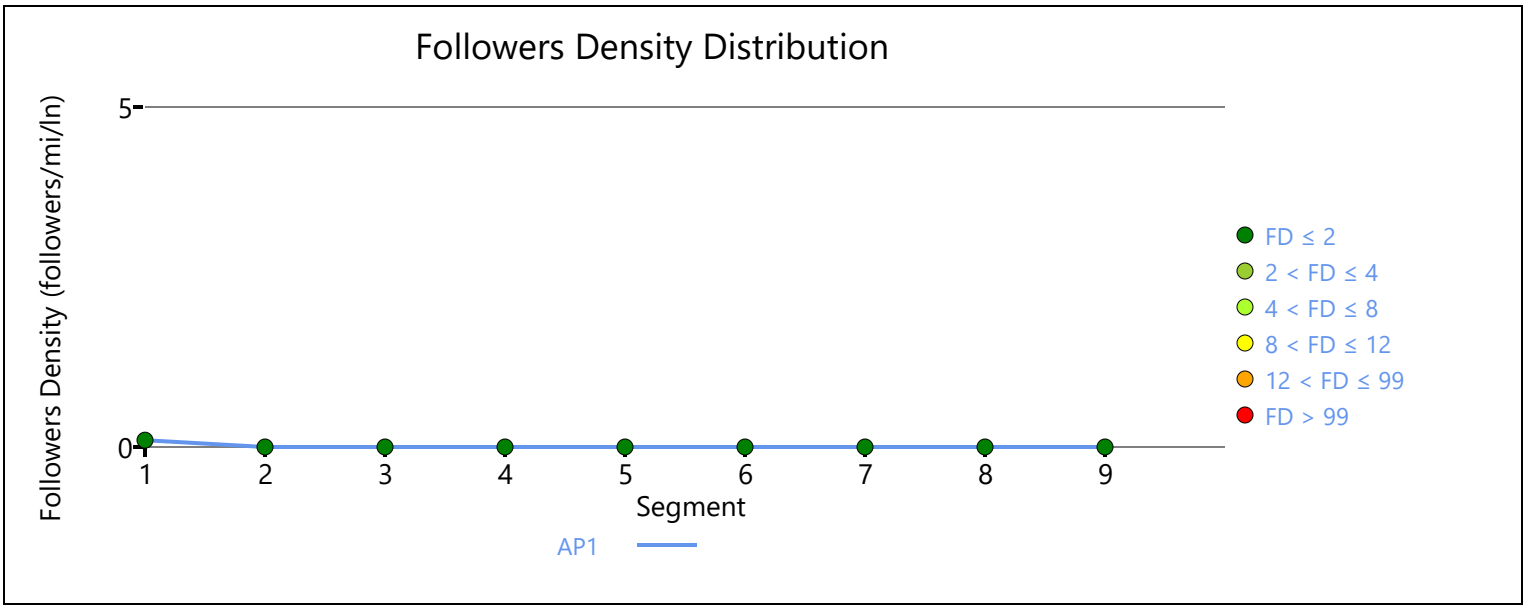
Vehicle Results

Average Speed, mi/h	53.0	Percent Followers, %	8.8
Segment Travel Time, minutes	0.68	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	25	0.00	0.0	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	KY 3301	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	33.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.4
Speed Slope Coefficient (m)	3.13556	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46639	PF Power Coefficient (p)	0.71076
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	48.4

Vehicle Results

Average Speed, mi/h	48.4	Percent Followers, %	10.8
Segment Travel Time, minutes	0.37	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1732
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.90478	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.22654	PF Power Coefficient (p)	0.78245
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1732	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	7.1
Segment Travel Time, minutes	0.39	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.7
Speed Slope Coefficient (m)	3.41926	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44983	PF Power Coefficient (p)	0.72120
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	53.7

Vehicle Results

Average Speed, mi/h	53.7	Percent Followers, %	10.3
Segment Travel Time, minutes	0.22	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1796
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	2.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.19448	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.21184	PF Power Coefficient (p)	0.80011
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1796	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	6.6
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2565
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.6
Speed Slope Coefficient (m)	3.43628	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.39290	PF Power Coefficient (p)	0.73652
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2565	-	-	53.6

Vehicle Results

Average Speed, mi/h	53.6	Percent Followers, %	9.4
Segment Travel Time, minutes	0.54	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2067
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.9
Speed Slope Coefficient (m)	3.03029	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.20996	PF Power Coefficient (p)	0.79496
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2067	-	-	52.9

Vehicle Results

Average Speed, mi/h	52.9	Percent Followers, %	6.7
Segment Travel Time, minutes	0.44	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4526
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.1
Speed Slope Coefficient (m)	3.48395	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35008	PF Power Coefficient (p)	0.74489
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4526	-	-	54.1

Vehicle Results

Average Speed, mi/h	54.1	Percent Followers, %	8.9
Segment Travel Time, minutes	0.95	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	3016
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	19
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.8
Speed Slope Coefficient (m)	3.03813	Speed Power Coefficient (p)	0.62836
PF Slope Coefficient (m)	-1.18454	PF Power Coefficient (p)	0.80498
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3016	-	-	52.8

Vehicle Results

Average Speed, mi/h	52.8	Percent Followers, %	6.4
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3185
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	30	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.0
Speed Slope Coefficient (m)	3.40708	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38055	PF Power Coefficient (p)	0.73849
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

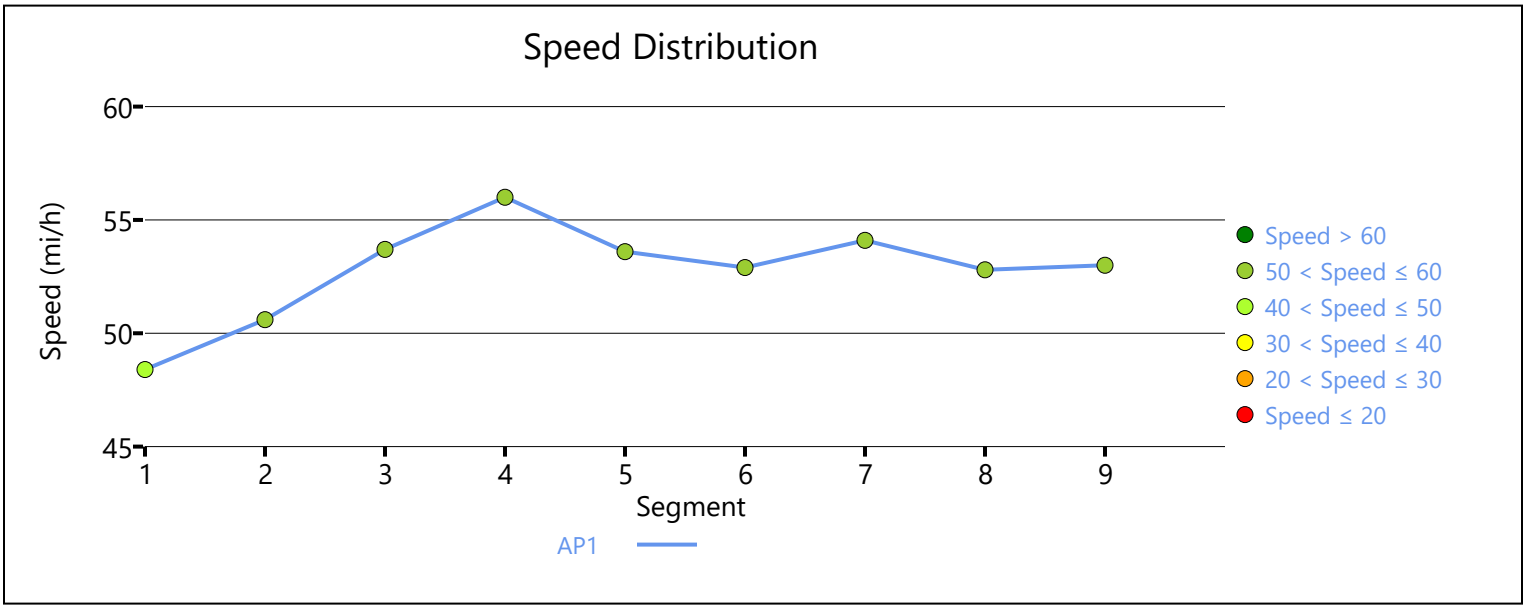
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3185	-	-	53.0

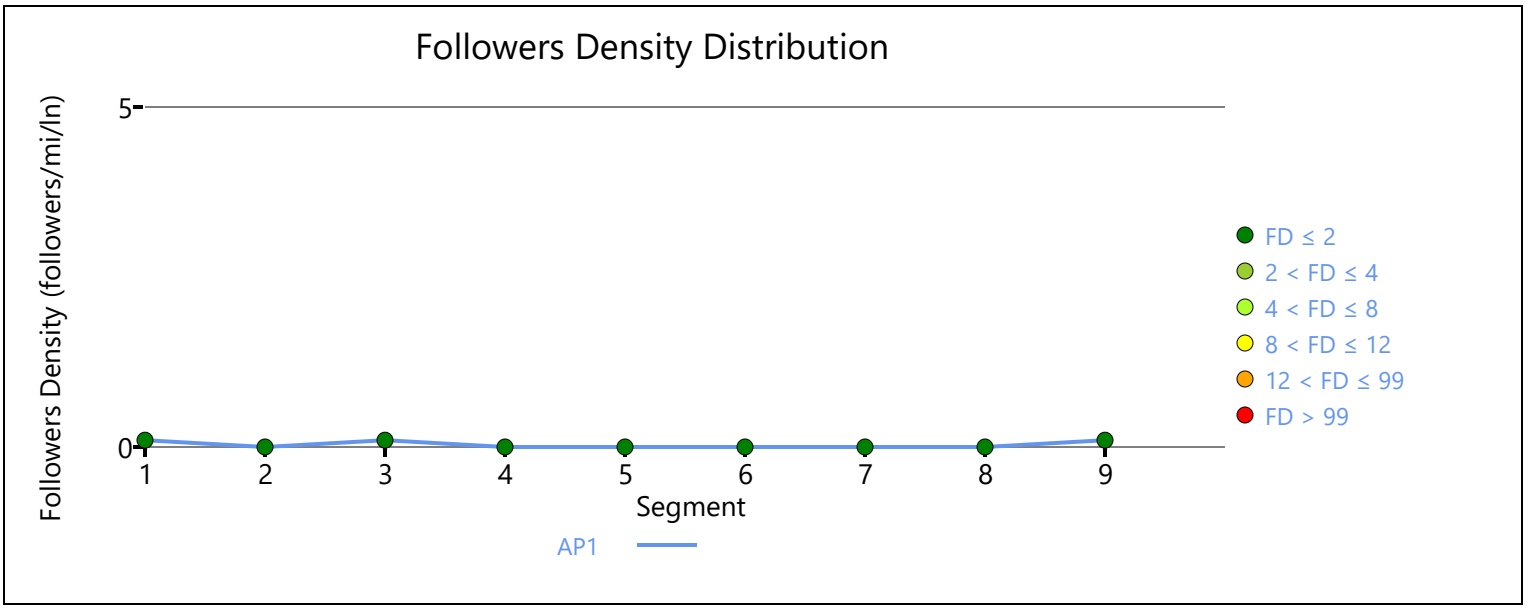
Vehicle Results

Average Speed, mi/h	53.0	Percent Followers, %	9.8
Segment Travel Time, minutes	0.68	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	27	0.00	0.0	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	KY 1237	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8337
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	18.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	14	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.7
Speed Slope Coefficient (m)	3.44540	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34677	PF Power Coefficient (p)	0.72875
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8337	-	-	52.7

Vehicle Results

Average Speed, mi/h	52.7	Percent Followers, %	5.8
Segment Travel Time, minutes	1.80	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8264
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	21.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	27	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.9
Speed Slope Coefficient (m)	3.40003	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35159	PF Power Coefficient (p)	0.72676
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

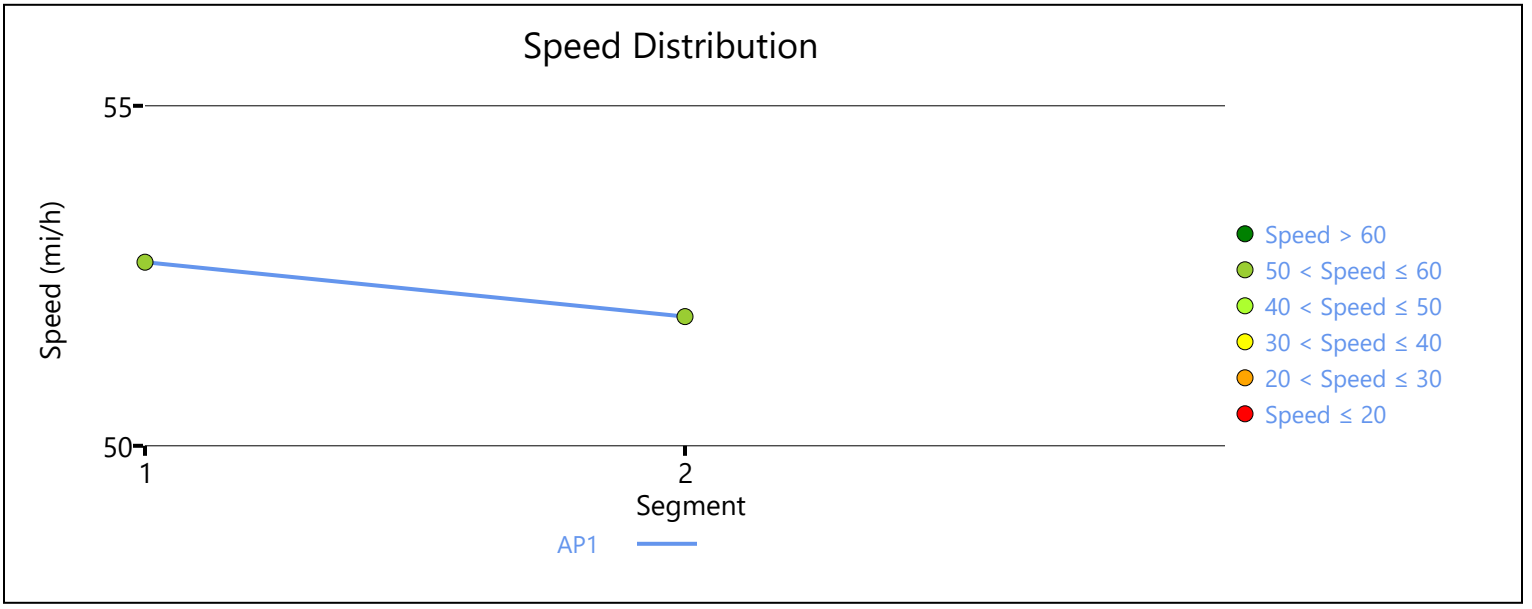
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8264	-	-	51.9

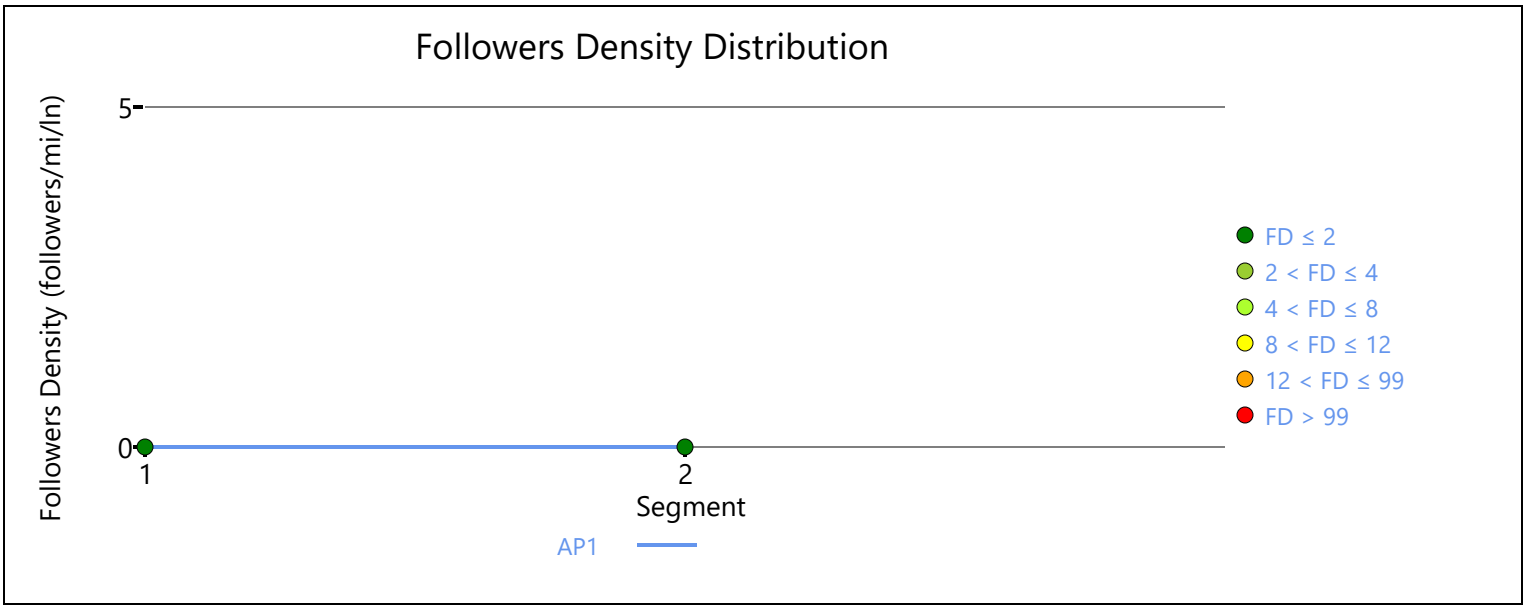
Vehicle Results

Average Speed, mi/h	51.9	Percent Followers, %	9.2
Segment Travel Time, minutes	1.81	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	15	0.00	0.0	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	KY 1237	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8337
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	18.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	23	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.7
Speed Slope Coefficient (m)	3.44540	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34677	PF Power Coefficient (p)	0.72875
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8337	-	-	52.7

Vehicle Results

Average Speed, mi/h	52.7	Percent Followers, %	8.4
Segment Travel Time, minutes	1.80	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8264
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	21.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	43	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.9
Speed Slope Coefficient (m)	3.40003	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35159	PF Power Coefficient (p)	0.72676
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

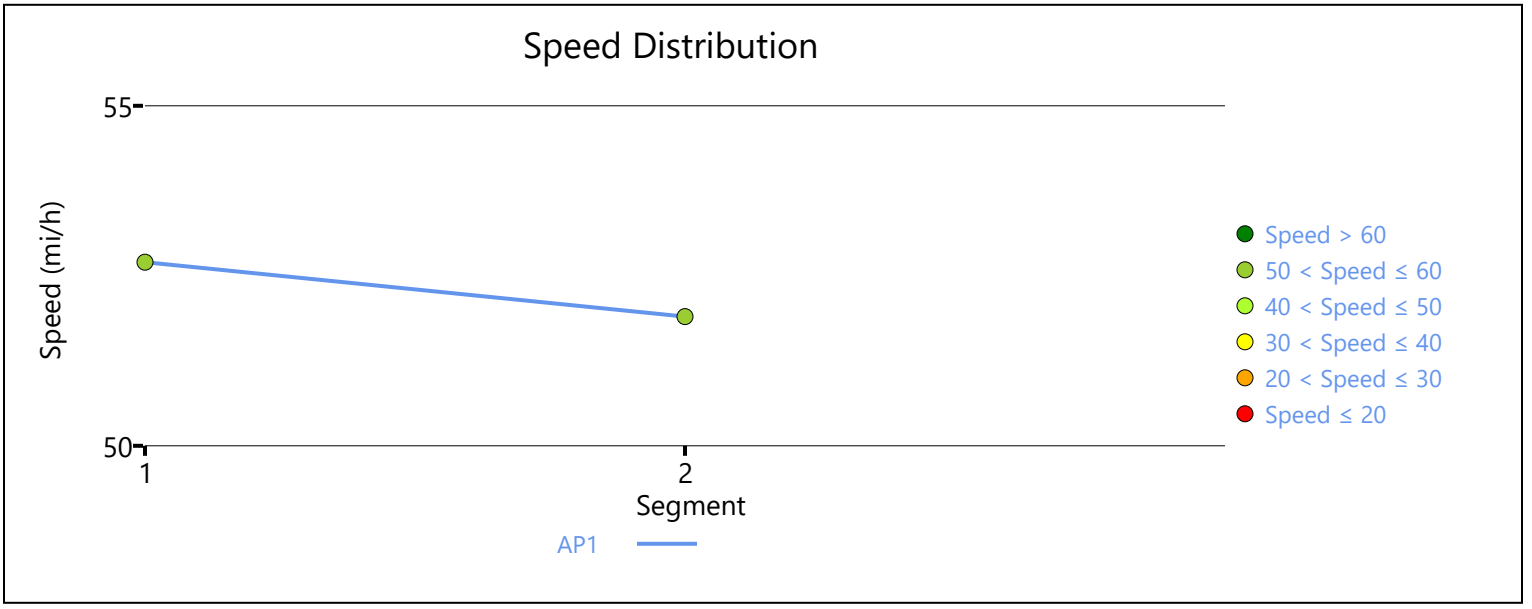
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8264	-	-	51.9

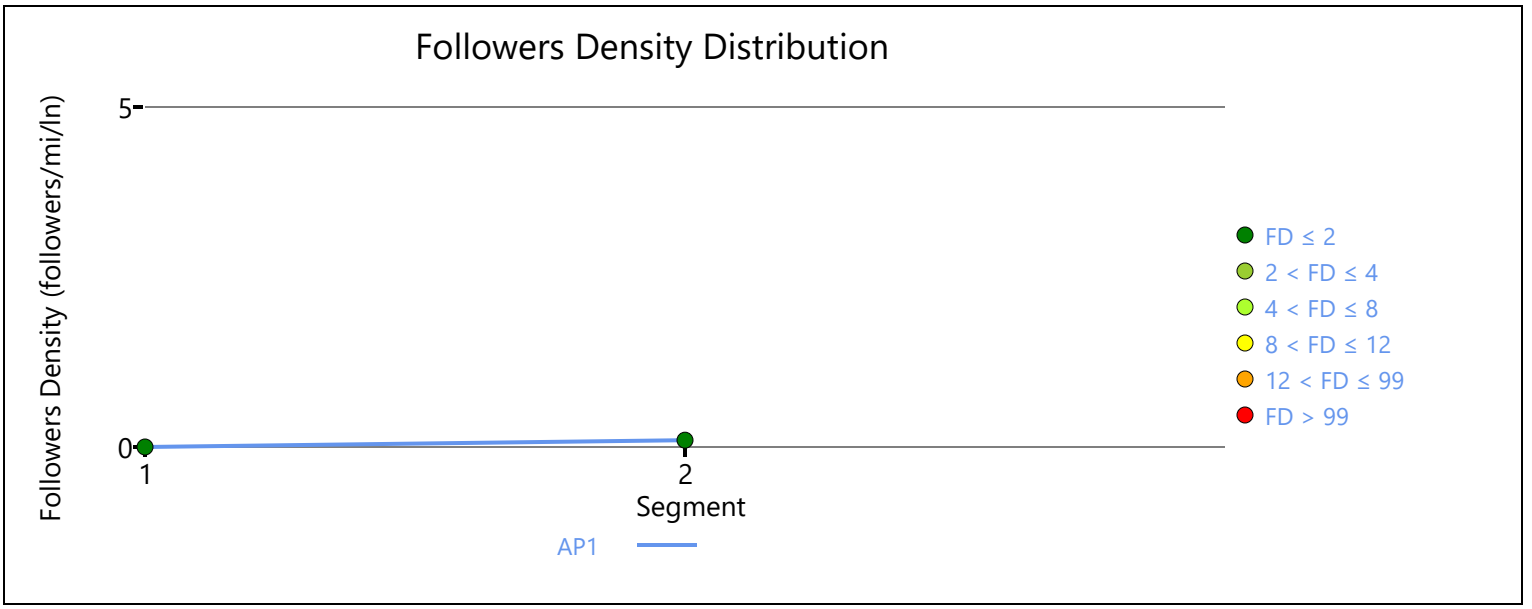
Vehicle Results

Average Speed, mi/h	51.9	Percent Followers, %	12.7
Segment Travel Time, minutes	1.81	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	24	0.00	0.1	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	KY 989	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5412
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	6	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.00

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.7
Speed Slope Coefficient (m)	3.52422	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33772	PF Power Coefficient (p)	0.74619
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5412	-	-	54.7

Vehicle Results

Average Speed, mi/h	54.7	Percent Followers, %	3.0
Segment Travel Time, minutes	1.13	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	6410
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	6	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.00

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.2
Speed Slope Coefficient (m)	3.51015	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33606	PF Power Coefficient (p)	0.74237
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

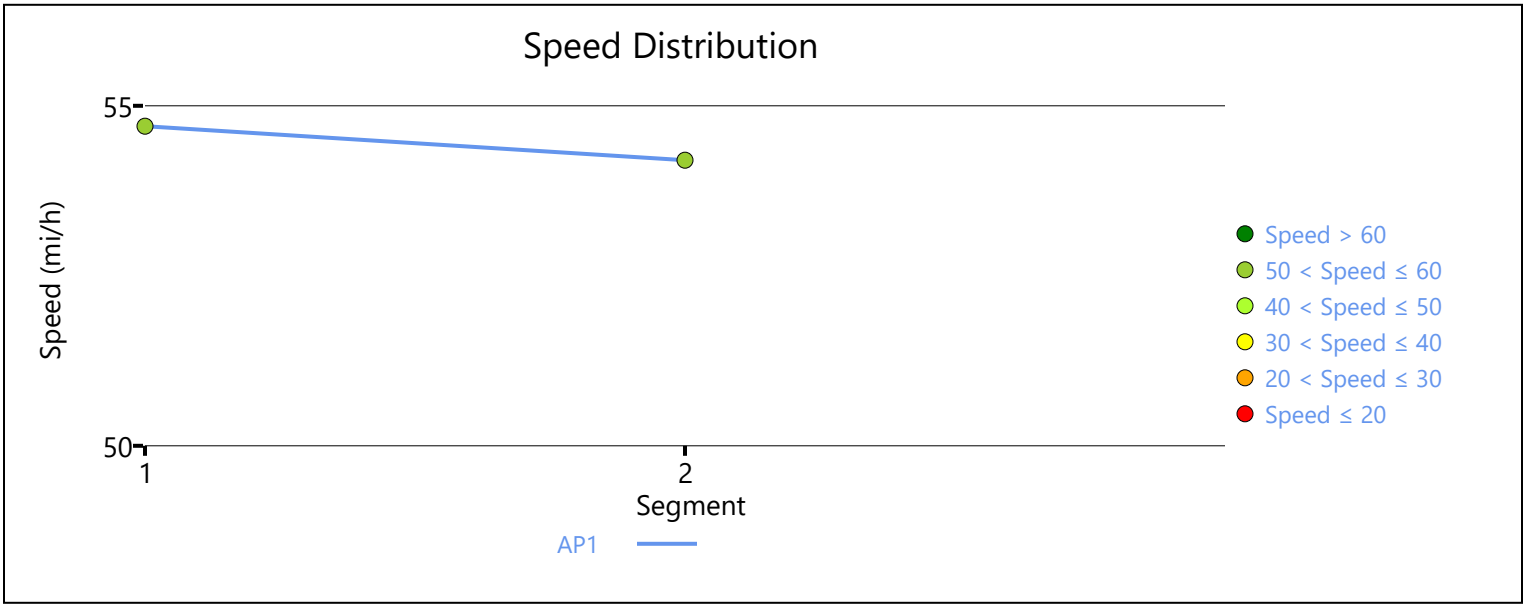
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6410	-	-	54.2

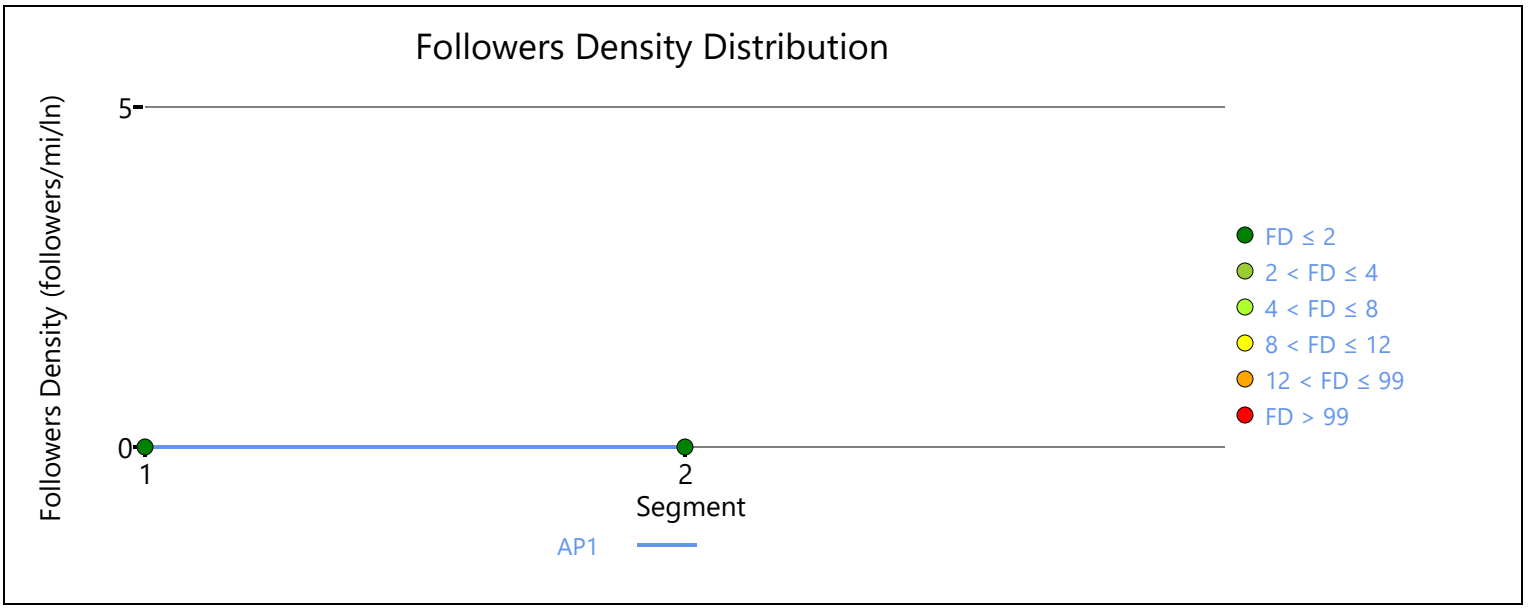
Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	3.1
Segment Travel Time, minutes	1.34	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	3	0.00	0.0	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	KY 989	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5412
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	13	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.7
Speed Slope Coefficient (m)	3.52422	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33772	PF Power Coefficient (p)	0.74619
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5412	-	-	54.7

Vehicle Results

Average Speed, mi/h	54.7	Percent Followers, %	5.0
Segment Travel Time, minutes	1.13	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	6410
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	13	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.2
Speed Slope Coefficient (m)	3.51015	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33606	PF Power Coefficient (p)	0.74237
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

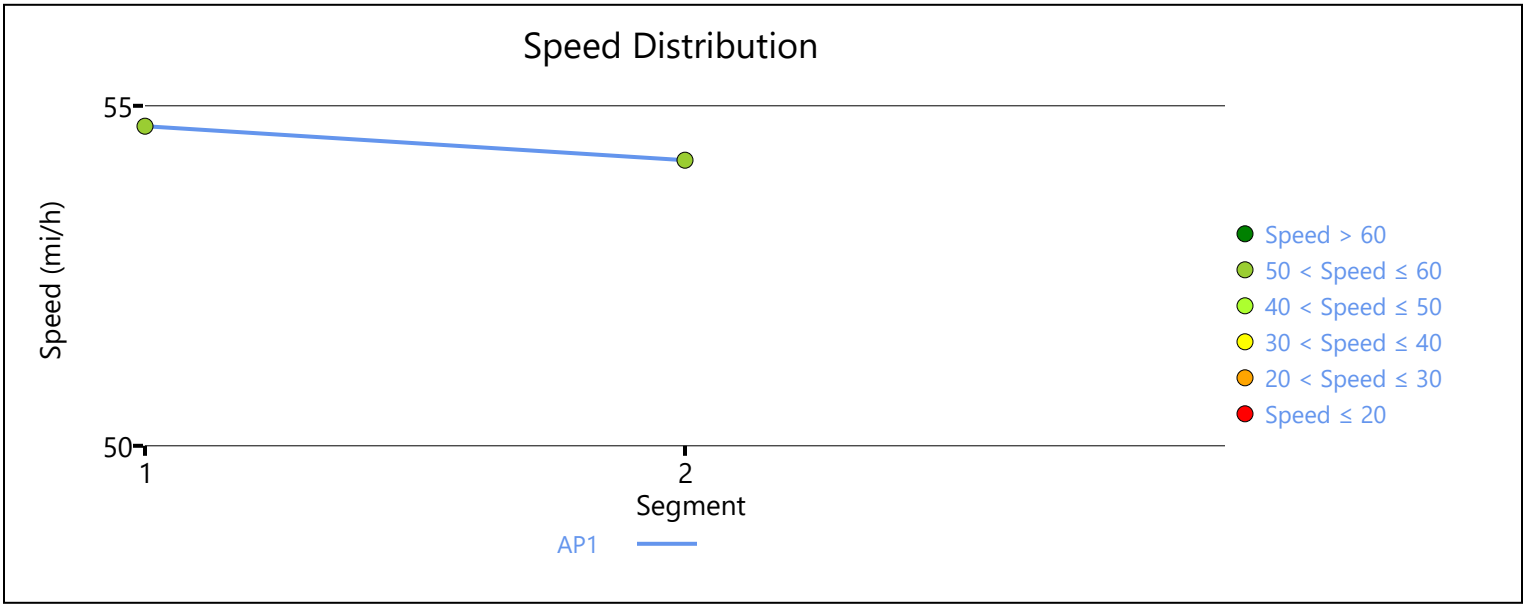
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6410	-	-	54.2

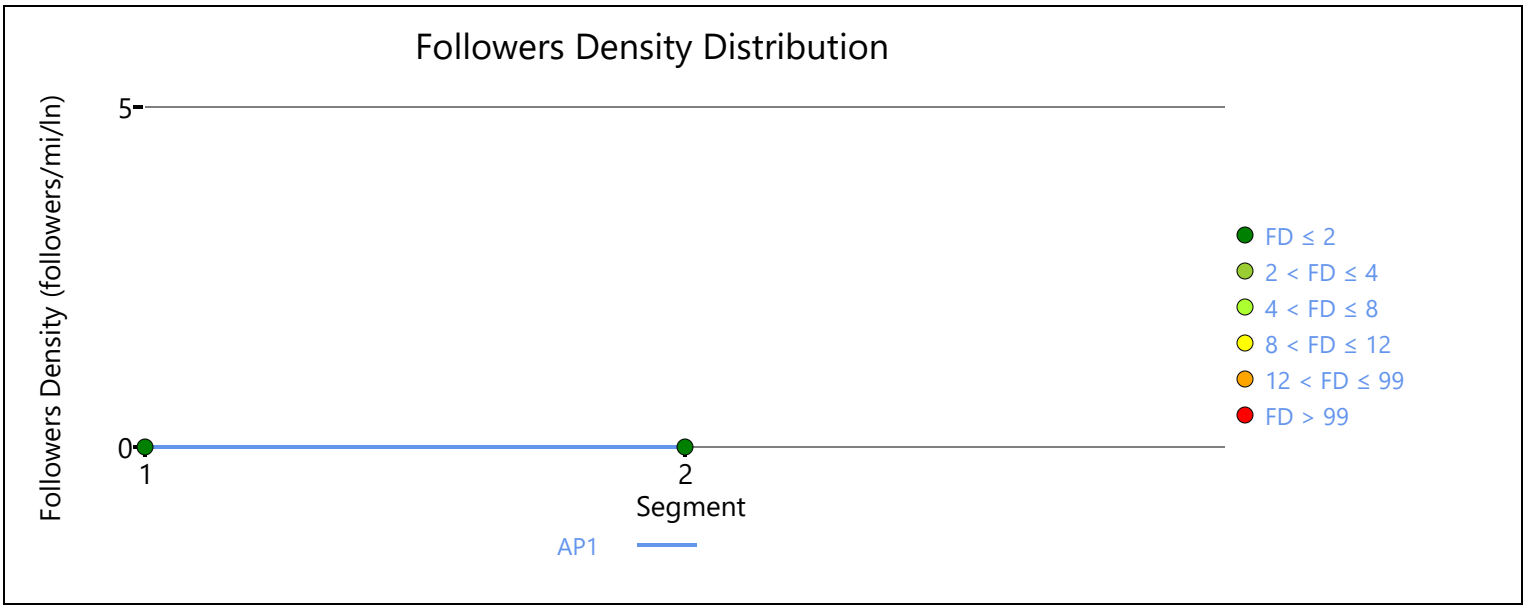
Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	5.1
Segment Travel Time, minutes	1.34	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	7	0.00	0.0	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	KY 559	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2862
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	31.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.4
Speed Slope Coefficient (m)	3.20852	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.40969	PF Power Coefficient (p)	0.72659
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2862	-	-	49.4

Vehicle Results

Average Speed, mi/h	49.4	Percent Followers, %	15.4
Segment Travel Time, minutes	0.66	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2899
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	40
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.2
Speed Slope Coefficient (m)	3.02857	Speed Power Coefficient (p)	0.60883
PF Slope Coefficient (m)	-1.20604	PF Power Coefficient (p)	0.79798
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2899	-	-	52.2

Vehicle Results

Average Speed, mi/h	52.2	Percent Followers, %	11.0
Segment Travel Time, minutes	0.63	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4715
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.3
Speed Slope Coefficient (m)	3.44342	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35294	PF Power Coefficient (p)	0.74299
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4715	-	-	53.3

Vehicle Results

Average Speed, mi/h	53.3	Percent Followers, %	14.2
Segment Travel Time, minutes	1.01	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	317
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	40
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.2
Speed Slope Coefficient (m)	3.22057	Speed Power Coefficient (p)	0.60883
PF Slope Coefficient (m)	-1.25169	PF Power Coefficient (p)	0.78709
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	317	-	-	56.2

Vehicle Results

Average Speed, mi/h	56.2	Percent Followers, %	11.7
Segment Travel Time, minutes	0.06	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3168
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient (m)	3.52656	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36536	PF Power Coefficient (p)	0.74471
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3168	-	-	55.2

Vehicle Results

Average Speed, mi/h	55.2	Percent Followers, %	14.2
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	40
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.91831	Speed Power Coefficient (p)	0.60883
PF Slope Coefficient (m)	-1.25193	PF Power Coefficient (p)	0.77544
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	12.1
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	12302
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.1
Speed Slope Coefficient (m)	3.59986	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36038	PF Power Coefficient (p)	0.70449
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12302	-	-	55.1

Vehicle Results

Average Speed, mi/h	55.1	Percent Followers, %	15.8
Segment Travel Time, minutes	2.54	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1003
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	40.8
Speed Slope Coefficient (m)	2.72189	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.50480	PF Power Coefficient (p)	0.68051
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1003	-	-	40.8

Vehicle Results

Average Speed, mi/h	40.8	Percent Followers, %	18.5
Segment Travel Time, minutes	0.28	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1869
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	57.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	24.4
Speed Slope Coefficient (m)	1.84278	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38415	PF Power Coefficient (p)	0.60433
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

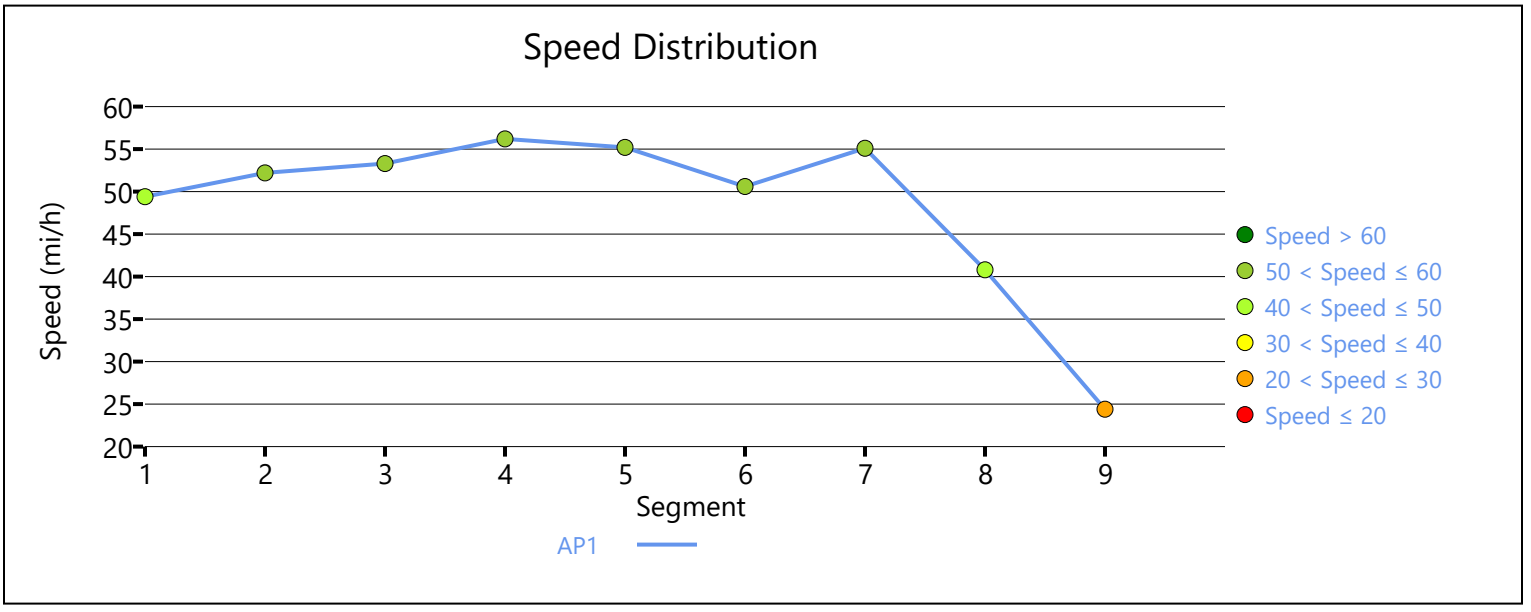
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1869	-	-	24.4

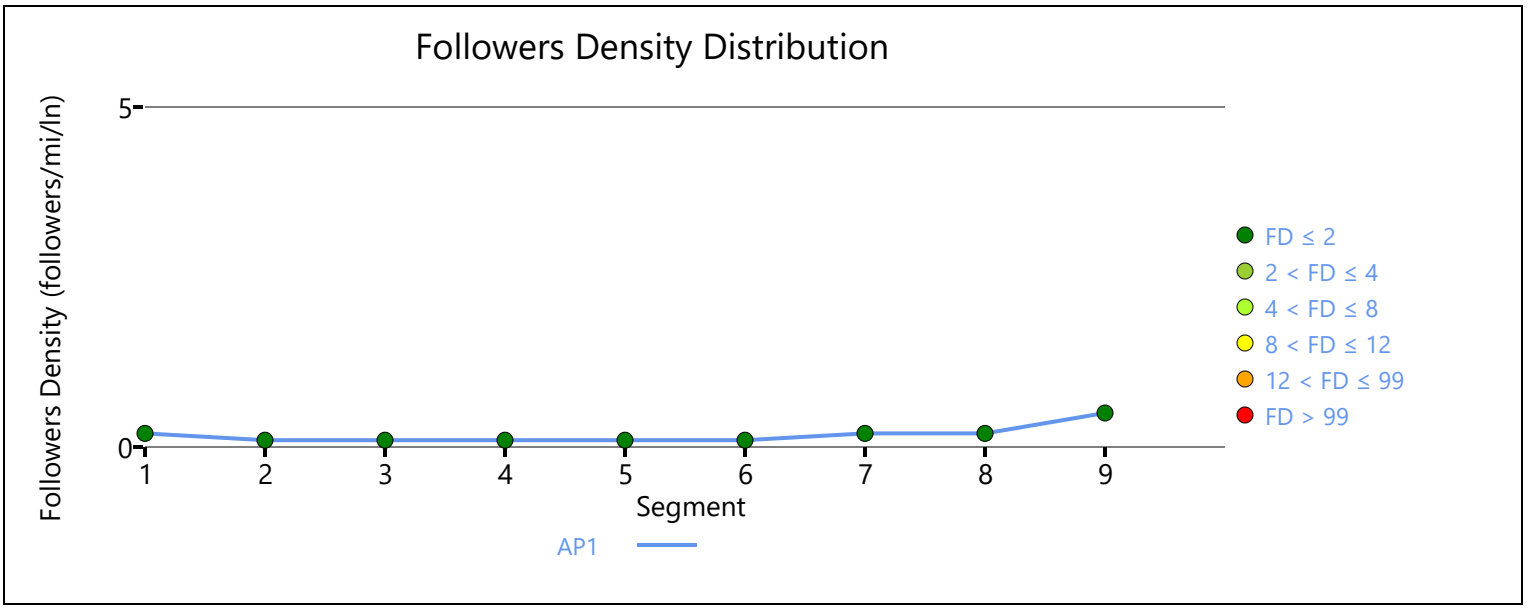
Vehicle Results

Average Speed, mi/h	24.4	Percent Followers, %	20.9
Segment Travel Time, minutes	0.87	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	73	0.00	0.2	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	KY 559	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2862
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	31.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.4
Speed Slope Coefficient (m)	3.20852	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.40969	PF Power Coefficient (p)	0.72659
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2862	-	-	49.4

Vehicle Results

Average Speed, mi/h	49.4	Percent Followers, %	16.4
Segment Travel Time, minutes	0.66	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2899
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	44
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.2
Speed Slope Coefficient (m)	3.03197	Speed Power Coefficient (p)	0.60561
PF Slope Coefficient (m)	-1.20906	PF Power Coefficient (p)	0.79721
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2899	-	-	52.2

Vehicle Results

Average Speed, mi/h	52.2	Percent Followers, %	11.8
Segment Travel Time, minutes	0.63	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4715
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.3
Speed Slope Coefficient (m)	3.44342	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35294	PF Power Coefficient (p)	0.74299
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4715	-	-	53.3

Vehicle Results

Average Speed, mi/h	53.3	Percent Followers, %	15.1
Segment Travel Time, minutes	1.01	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	317
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	44
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.2
Speed Slope Coefficient (m)	3.22398	Speed Power Coefficient (p)	0.60561
PF Slope Coefficient (m)	-1.25480	PF Power Coefficient (p)	0.78639
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	317	-	-	56.2

Vehicle Results

Average Speed, mi/h	56.2	Percent Followers, %	12.6
Segment Travel Time, minutes	0.06	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3168
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient (m)	3.52656	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36536	PF Power Coefficient (p)	0.74471
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3168	-	-	55.2

Vehicle Results

Average Speed, mi/h	55.2	Percent Followers, %	15.2
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	44
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.92171	Speed Power Coefficient (p)	0.60561
PF Slope Coefficient (m)	-1.25510	PF Power Coefficient (p)	0.77474
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	13.0
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	12302
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.1
Speed Slope Coefficient (m)	3.59986	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36038	PF Power Coefficient (p)	0.70449
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12302	-	-	55.1

Vehicle Results

Average Speed, mi/h	55.1	Percent Followers, %	16.8
Segment Travel Time, minutes	2.54	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1003
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	40.8
Speed Slope Coefficient (m)	2.72189	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.50480	PF Power Coefficient (p)	0.68051
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1003	-	-	40.8

Vehicle Results

Average Speed, mi/h	40.8	Percent Followers, %	19.6
Segment Travel Time, minutes	0.28	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1869
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	57.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	59	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	24.4
Speed Slope Coefficient (m)	1.84278	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38415	PF Power Coefficient (p)	0.60433
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

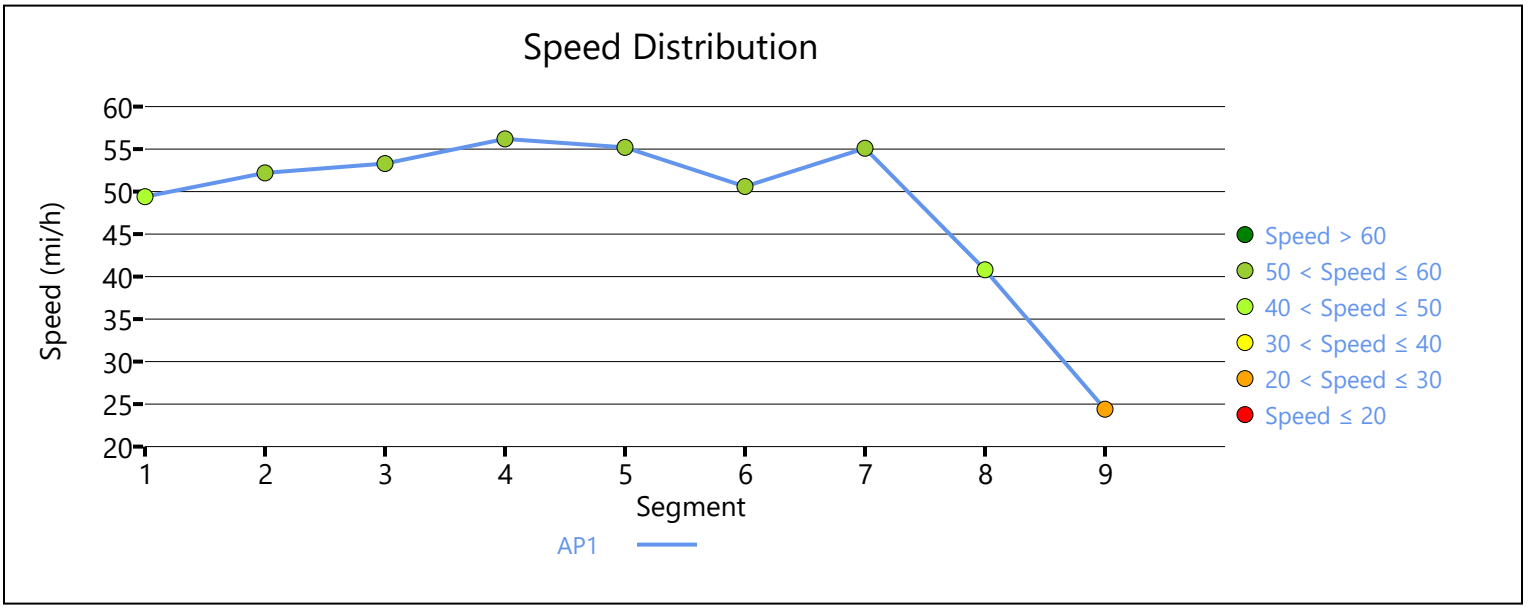
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1869	-	-	24.4

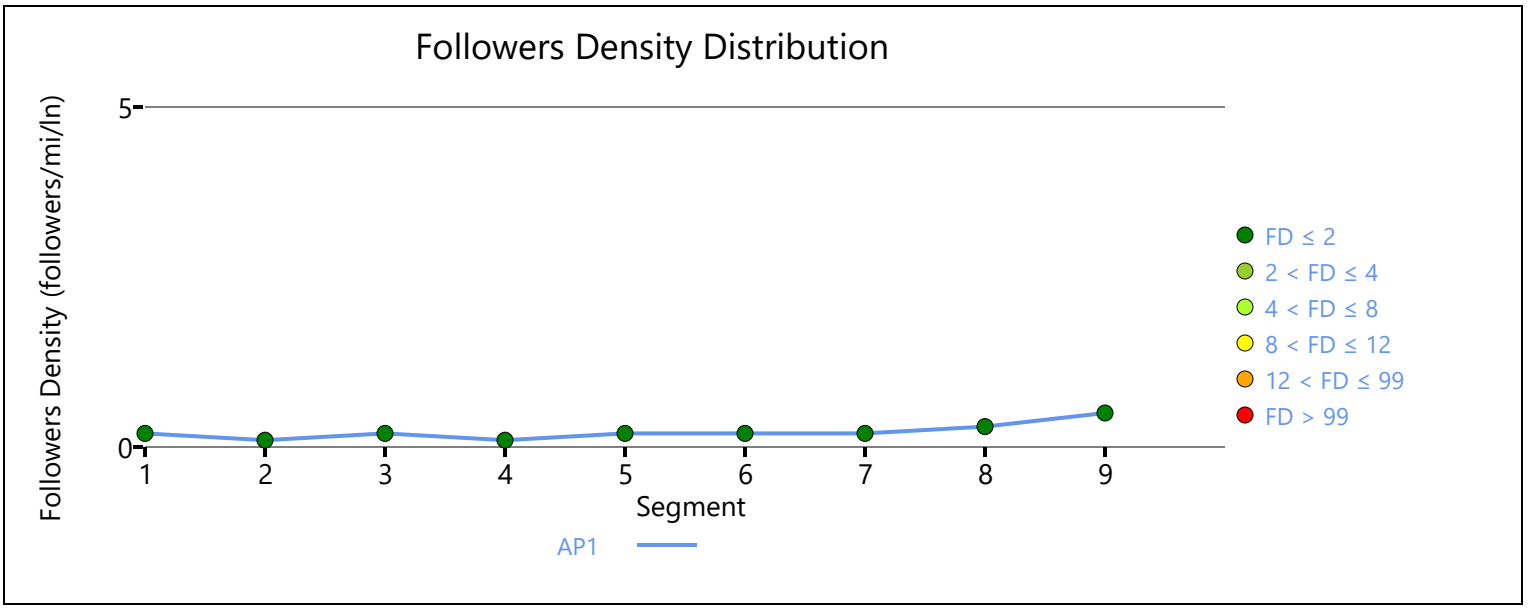
Vehicle Results

Average Speed, mi/h	24.4	Percent Followers, %	22.0
Segment Travel Time, minutes	0.87	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	80	0.00	0.2	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	KY 344	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	512
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	35	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	29.5
Speed Slope Coefficient (m)	2.10943	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46561	PF Power Coefficient (p)	0.62573
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	512	-	-	29.5

Vehicle Results

Average Speed, mi/h	29.5	Percent Followers, %	16.5
Segment Travel Time, minutes	0.20	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2518
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	27.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	35	Opposing Demand Flow Rate, veh/h	27
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	50.5
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.62179
PF Slope Coefficient (m)	-1.20383	PF Power Coefficient (p)	0.77717
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2518	-	-	50.5

Vehicle Results

Average Speed, mi/h	50.5	Percent Followers, %	8.5
Segment Travel Time, minutes	0.57	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	327
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	35	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.3
Speed Slope Coefficient (m)	3.29099	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46577	PF Power Coefficient (p)	0.71525
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	327	-	-	51.3

Vehicle Results

Average Speed, mi/h	51.3	Percent Followers, %	12.5
Segment Travel Time, minutes	0.07	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1592
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.3
Speed Slope Coefficient (m)	3.35025	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44258	PF Power Coefficient (p)	0.72248
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	52.3

Vehicle Results

Average Speed, mi/h	52.3	Percent Followers, %	12.5
Segment Travel Time, minutes	0.35	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1525
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	28
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.7
Speed Slope Coefficient (m)	2.91171	Speed Power Coefficient (p)	0.61936
PF Slope Coefficient (m)	-1.24427	PF Power Coefficient (p)	0.77686
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.7

Vehicle Results

Average Speed, mi/h	50.7	Percent Followers, %	9.2
Segment Travel Time, minutes	0.34	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.8
Speed Slope Coefficient (m)	3.20969	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47482	PF Power Coefficient (p)	0.71104
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	49.8

Vehicle Results

Average Speed, mi/h	49.8	Percent Followers, %	13.2
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	28
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	54.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.70657
PF Slope Coefficient (m)	-1.16319	PF Power Coefficient (p)	0.78625
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	54.6

Vehicle Results

Average Speed, mi/h	54.6	Percent Followers, %	8.4
Segment Travel Time, minutes	0.33	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	0.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.61619	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42067	PF Power Coefficient (p)	0.73029
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	57.3

Vehicle Results

Average Speed, mi/h	57.3	Percent Followers, %	12.1
Segment Travel Time, minutes	0.10	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2112
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	28
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.65161
PF Slope Coefficient (m)	-1.20105	PF Power Coefficient (p)	0.79250
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2112	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	8.5
Segment Travel Time, minutes	0.43	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.3
Speed Slope Coefficient (m)	3.23679	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47191	PF Power Coefficient (p)	0.71247
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

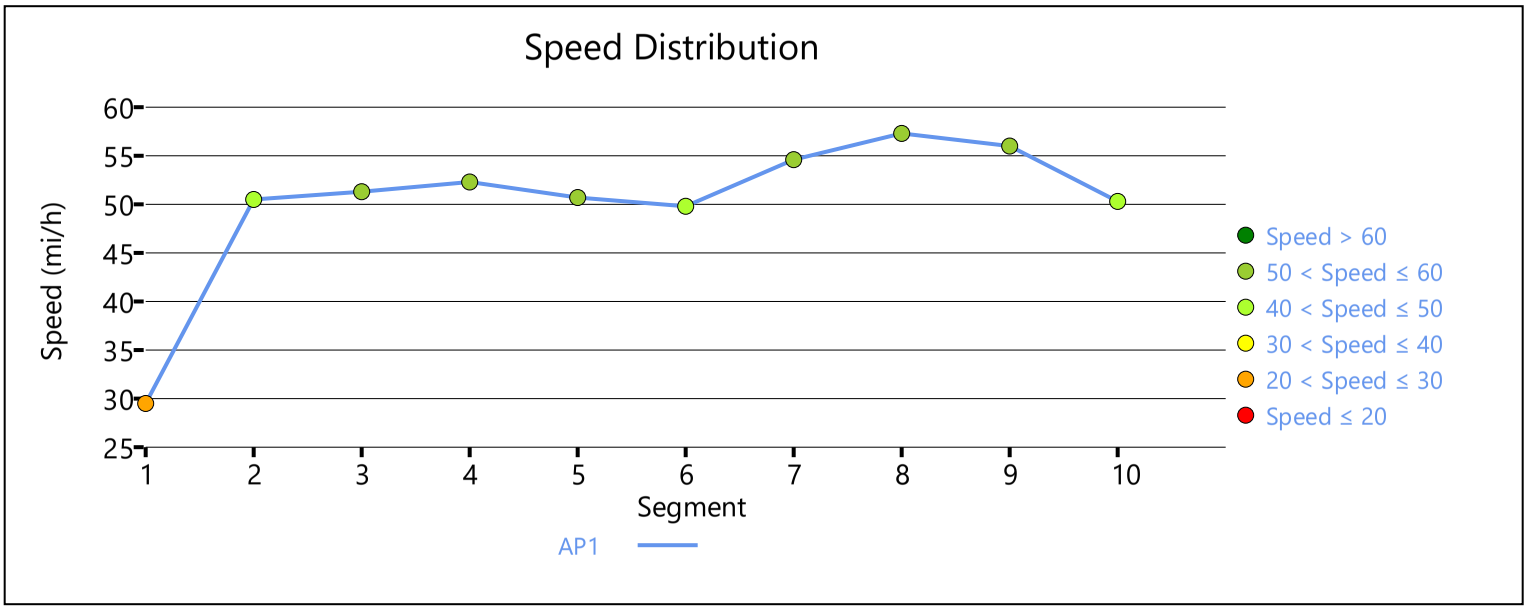
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	50.3

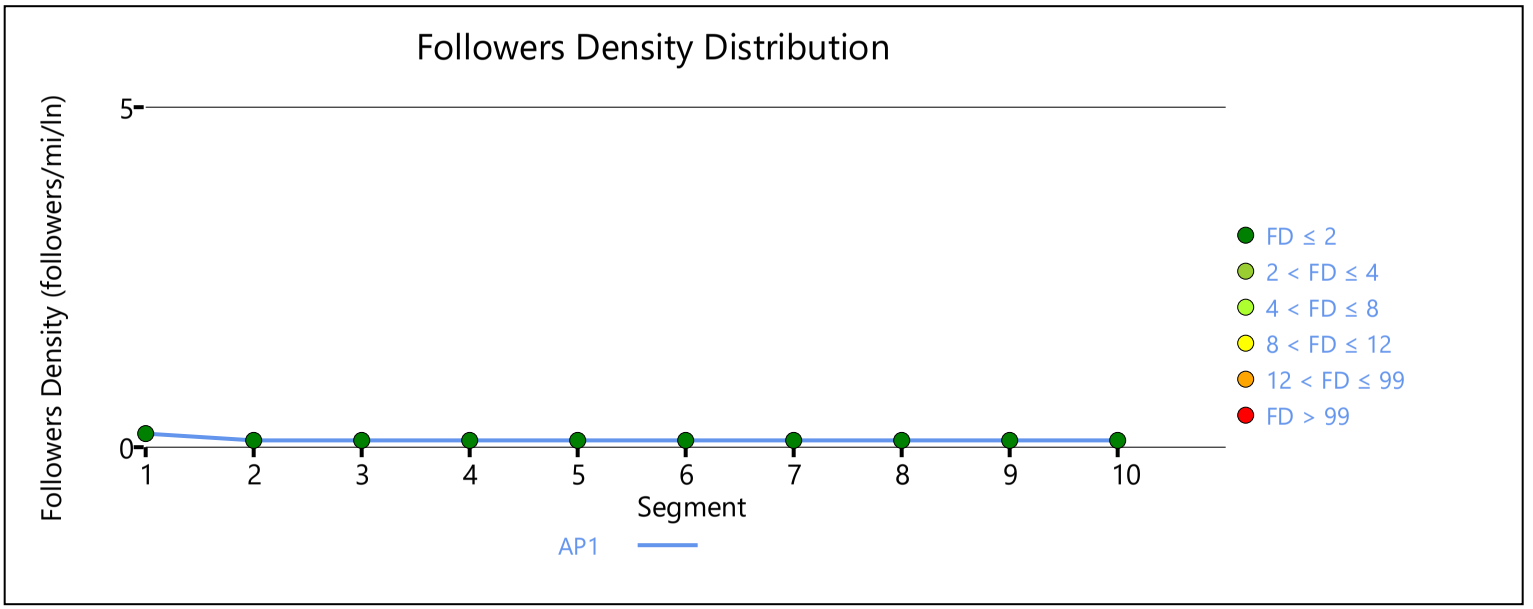
Vehicle Results

Average Speed, mi/h	50.3	Percent Followers, %	13.2
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	20	0.00	0.1	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	KY 344	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	512
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	57	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	29.5
Speed Slope Coefficient (m)	2.10943	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46561	PF Power Coefficient (p)	0.62573
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	512	-	-	29.5

Vehicle Results

Average Speed, mi/h	29.5	Percent Followers, %	21.8
Segment Travel Time, minutes	0.20	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2518
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	27.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	57	Opposing Demand Flow Rate, veh/h	43
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	50.5
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.60526
PF Slope Coefficient (m)	-1.21726	PF Power Coefficient (p)	0.77397
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2518	-	-	50.5

Vehicle Results

Average Speed, mi/h	50.5	Percent Followers, %	12.5
Segment Travel Time, minutes	0.57	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	327
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	57	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.3
Speed Slope Coefficient (m)	3.29099	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46577	PF Power Coefficient (p)	0.71525
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	327	-	-	51.3

Vehicle Results

Average Speed, mi/h	51.3	Percent Followers, %	17.3
Segment Travel Time, minutes	0.07	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1592
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.3
Speed Slope Coefficient (m)	3.35025	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44258	PF Power Coefficient (p)	0.72248
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	52.3

Vehicle Results

Average Speed, mi/h	52.3	Percent Followers, %	18.5
Segment Travel Time, minutes	0.35	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1525
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	48
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.7
Speed Slope Coefficient (m)	2.92891	Speed Power Coefficient (p)	0.60294
PF Slope Coefficient (m)	-1.26041	PF Power Coefficient (p)	0.77331
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.7

Vehicle Results

Average Speed, mi/h	50.7	Percent Followers, %	14.4
Segment Travel Time, minutes	0.34	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.8
Speed Slope Coefficient (m)	3.20969	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47482	PF Power Coefficient (p)	0.71104
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	49.8

Vehicle Results

Average Speed, mi/h	49.8	Percent Followers, %	19.4
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	48
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	54.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.67969
PF Slope Coefficient (m)	-1.18377	PF Power Coefficient (p)	0.78189
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	54.6

Vehicle Results

Average Speed, mi/h	54.6	Percent Followers, %	13.3
Segment Travel Time, minutes	0.33	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	0.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.61619	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42067	PF Power Coefficient (p)	0.73029
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	57.3

Vehicle Results

Average Speed, mi/h	57.3	Percent Followers, %	17.9
Segment Travel Time, minutes	0.10	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2112
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	48
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.63164
PF Slope Coefficient (m)	-1.21718	PF Power Coefficient (p)	0.78859
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2112	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	13.5
Segment Travel Time, minutes	0.43	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	67	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.3
Speed Slope Coefficient (m)	3.23679	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47191	PF Power Coefficient (p)	0.71247
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

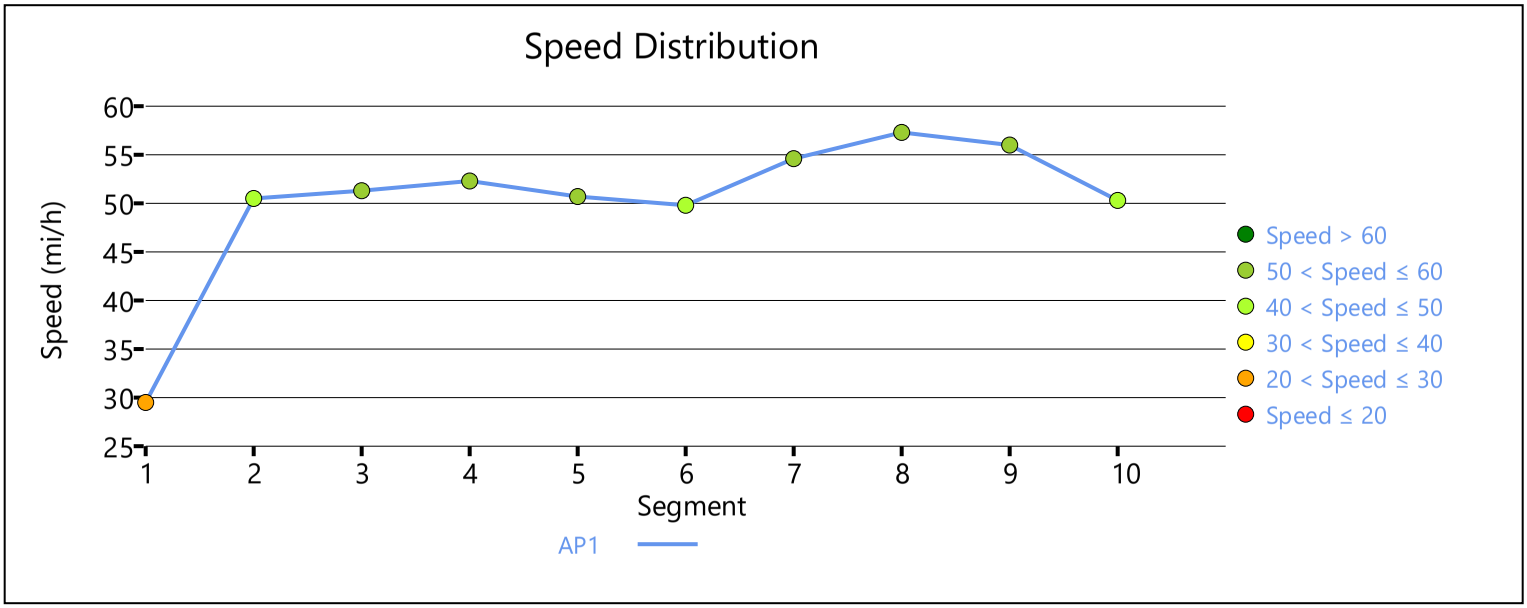
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	50.3

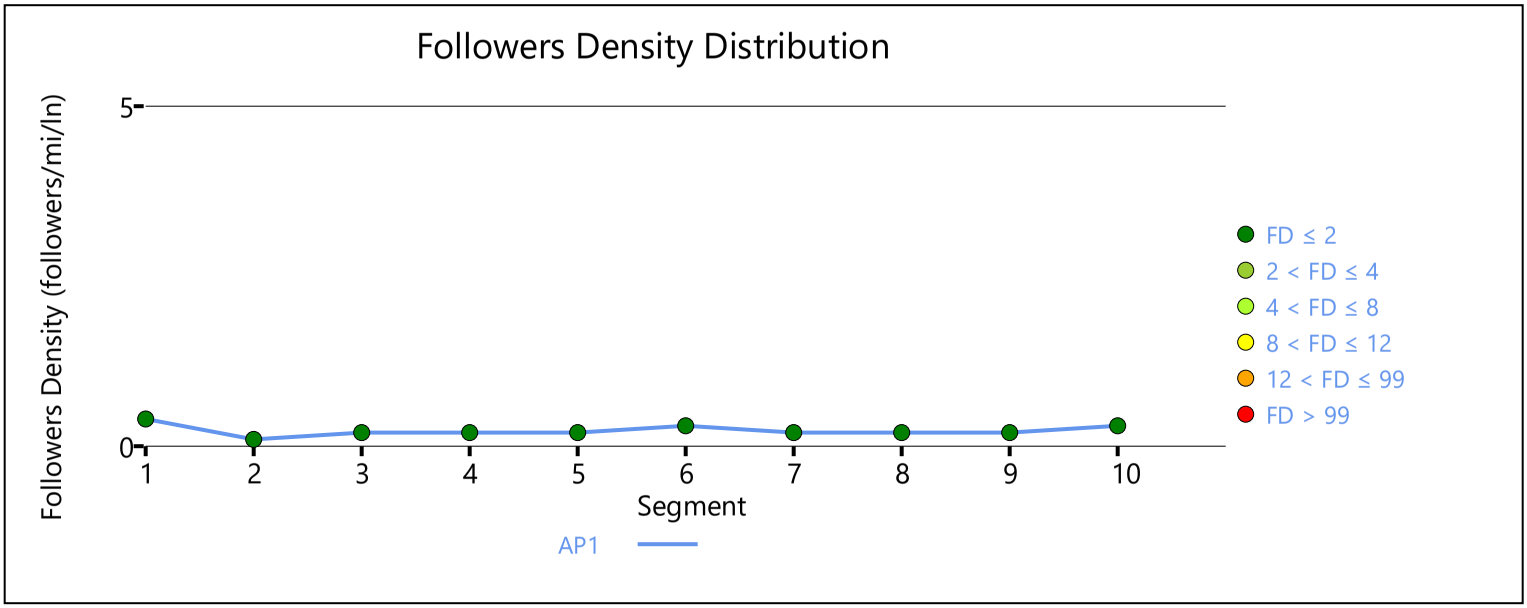
Vehicle Results

Average Speed, mi/h	50.3	Percent Followers, %	19.3
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	35	0.00	0.2	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	KY 57	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3833
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	61	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.1
Speed Slope Coefficient (m)	3.31561	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.37832	PF Power Coefficient (p)	0.73598
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3833	-	-	51.1

Vehicle Results

Average Speed, mi/h	51.1	Percent Followers, %	16.1
Segment Travel Time, minutes	0.85	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	61	Opposing Demand Flow Rate, veh/h	32
Peak Hour Factor	0.94	Total Trucks, %	3.50

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.3
Speed Slope Coefficient (m)	3.10797	Speed Power Coefficient (p)	0.61544
PF Slope Coefficient (m)	-1.25102	PF Power Coefficient (p)	0.78296
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	54.3

Vehicle Results

Average Speed, mi/h	54.3	Percent Followers, %	13.0
Segment Travel Time, minutes	0.11	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2580
Lane Width, ft	9	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	61	Opposing Demand Flow Rate, veh/h	32
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	59.3
Speed Slope Coefficient (m)	4.07289	Speed Power Coefficient (p)	0.78235
PF Slope Coefficient (m)	-1.11374	PF Power Coefficient (p)	0.81930
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2580	-	-	59.3

Vehicle Results

Average Speed, mi/h	59.3	Percent Followers, %	10.6
Segment Travel Time, minutes	0.49	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1400
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	61	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	60.1
Speed Slope Coefficient (m)	4.77922	Speed Power Coefficient (p)	0.53696
PF Slope Coefficient (m)	-1.47099	PF Power Coefficient (p)	0.73766
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1400	-	-	60.1

Vehicle Results

Average Speed, mi/h	60.1	Percent Followers, %	17.0
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1399
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	61	Opposing Demand Flow Rate, veh/h	32
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.68039
PF Slope Coefficient (m)	-1.22401	PF Power Coefficient (p)	0.79499
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1399	-	-	60.6

Vehicle Results

Average Speed, mi/h	60.6	Percent Followers, %	12.4
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4187
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	83	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.7
Speed Slope Coefficient (m)	3.56613	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34280	PF Power Coefficient (p)	0.74945
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4187	-	-	55.7

Vehicle Results

Average Speed, mi/h	55.7	Percent Followers, %	18.8
Segment Travel Time, minutes	0.85	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4905
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	39.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	83	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	25.1
Speed Slope Coefficient (m)	1.91896	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.32538	PF Power Coefficient (p)	0.62496
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4905	-	-	25.1

Vehicle Results

Average Speed, mi/h	25.1	Percent Followers, %	24.4
Segment Travel Time, minutes	2.22	Follower Density (FD), followers/mi/ln	0.8
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1162
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	83	Opposing Demand Flow Rate, veh/h	45
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.8
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.63900
PF Slope Coefficient (m)	-1.26501	PF Power Coefficient (p)	0.77411
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1162	-	-	55.8

Vehicle Results

Average Speed, mi/h	55.8	Percent Followers, %	16.8
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8686
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	83	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.69306	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.31619	PF Power Coefficient (p)	0.73942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8686	-	-	57.3

Vehicle Results

Average Speed, mi/h	57.3	Percent Followers, %	18.9
Segment Travel Time, minutes	1.72	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1177
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	83	Opposing Demand Flow Rate, veh/h	45
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.9
Speed Slope Coefficient (m)	2.93442	Speed Power Coefficient (p)	0.60522
PF Slope Coefficient (m)	-1.26835	PF Power Coefficient (p)	0.77025
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1177	-	-	50.9

Vehicle Results

Average Speed, mi/h	50.9	Percent Followers, %	17.0
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 11

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1420
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	11.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	83	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.3
Speed Slope Coefficient (m)	3.56256	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42277	PF Power Coefficient (p)	0.72994
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1420	-	-	56.3

Vehicle Results

Average Speed, mi/h	56.3	Percent Followers, %	20.6
Segment Travel Time, minutes	0.29	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 12

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10212
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	83	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.4
Speed Slope Coefficient (m)	3.60216	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33893	PF Power Coefficient (p)	0.72336
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10212	-	-	55.4

Vehicle Results

Average Speed, mi/h	55.4	Percent Followers, %	19.8
Segment Travel Time, minutes	2.10	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 13

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	608
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	189	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.42136
PF Slope Coefficient (m)	-1.52652	PF Power Coefficient (p)	0.71538
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	608	-	-	56.2

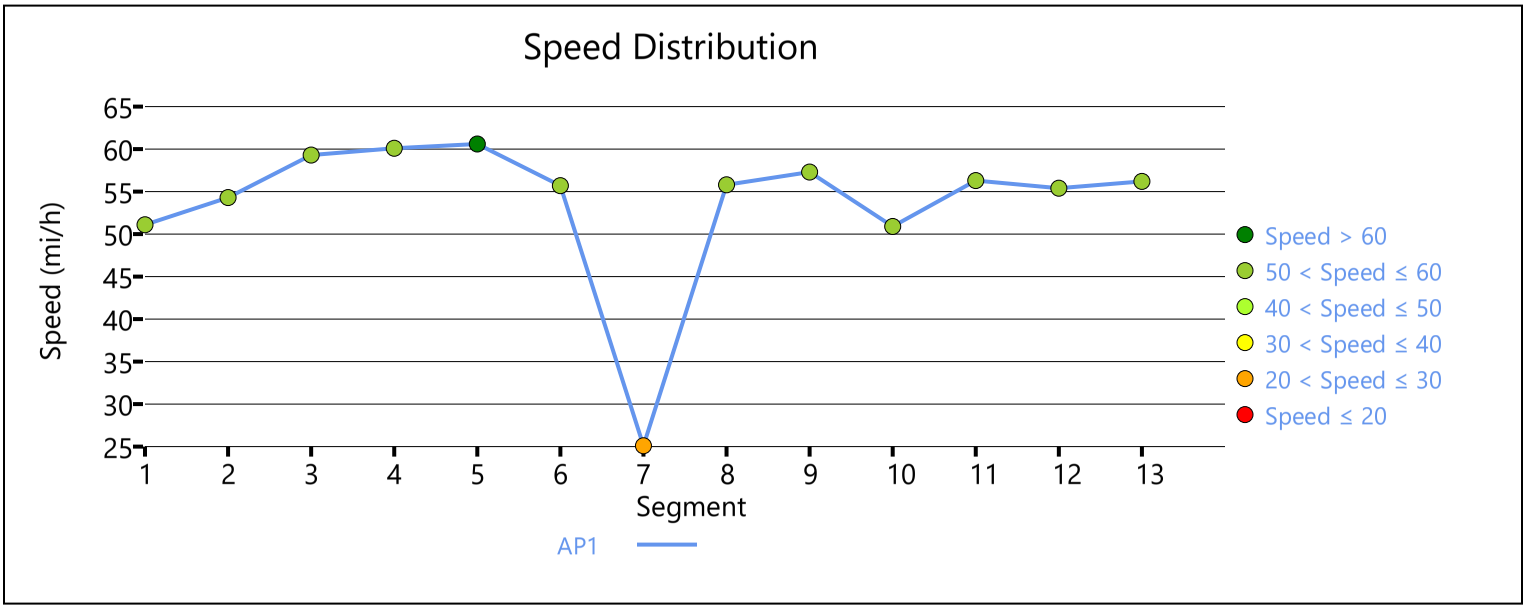
Vehicle Results

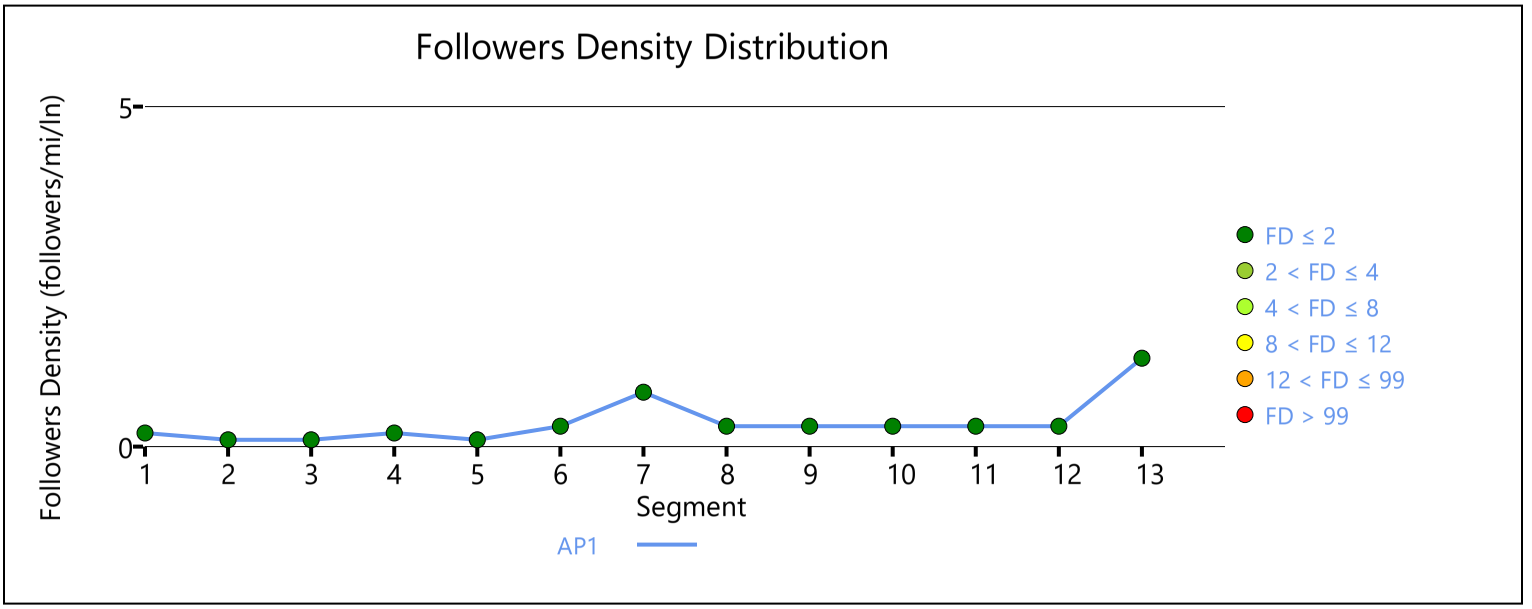
Average Speed, mi/h	56.2	Percent Followers, %	37.1
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Facility Results

T	VMT	VHD	Follower Density, followers/	LOS

	veh-mi/p	veh-h/p	mi/ln	
1	149	0.00	0.3	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	KY 57	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3833
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.1
Speed Slope Coefficient (m)	3.31561	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.37832	PF Power Coefficient (p)	0.73598
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3833	-	-	50.4

Vehicle Results

Average Speed, mi/h	50.4	Percent Followers, %	25.7
Segment Travel Time, minutes	0.86	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	68
Peak Hour Factor	0.94	Total Trucks, %	3.50

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.3
Speed Slope Coefficient (m)	3.13495	Speed Power Coefficient (p)	0.59025
PF Slope Coefficient (m)	-1.27577	PF Power Coefficient (p)	0.77756
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	53.9

Vehicle Results

Average Speed, mi/h	53.9	Percent Followers, %	22.3
Segment Travel Time, minutes	0.11	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2580
Lane Width, ft	9	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	68
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	59.3
Speed Slope Coefficient (m)	4.16555	Speed Power Coefficient (p)	0.74144
PF Slope Coefficient (m)	-1.14385	PF Power Coefficient (p)	0.81165
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2580	-	-	59.0

Vehicle Results

Average Speed, mi/h	59.0	Percent Followers, %	19.0
Segment Travel Time, minutes	0.50	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1400
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	60.1
Speed Slope Coefficient (m)	4.77922	Speed Power Coefficient (p)	0.53696
PF Slope Coefficient (m)	-1.47099	PF Power Coefficient (p)	0.73766
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1400	-	-	59.5

Vehicle Results

Average Speed, mi/h	59.5	Percent Followers, %	27.1
Segment Travel Time, minutes	0.27	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1399
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	68
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.64975
PF Slope Coefficient (m)	-1.24948	PF Power Coefficient (p)	0.78919
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1399	-	-	60.3

Vehicle Results

Average Speed, mi/h	60.3	Percent Followers, %	21.4
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4187
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.7
Speed Slope Coefficient (m)	3.56613	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34280	PF Power Coefficient (p)	0.74945
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4187	-	-	55.7

Vehicle Results

Average Speed, mi/h	55.7	Percent Followers, %	17.4
Segment Travel Time, minutes	0.85	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4905
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	39.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	25.1
Speed Slope Coefficient (m)	1.91896	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.32538	PF Power Coefficient (p)	0.62496
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4905	-	-	25.1

Vehicle Results

Average Speed, mi/h	25.1	Percent Followers, %	23.0
Segment Travel Time, minutes	2.22	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1162
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	40
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.8
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.64288
PF Slope Coefficient (m)	-1.26168	PF Power Coefficient (p)	0.77479
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1162	-	-	55.8

Vehicle Results

Average Speed, mi/h	55.8	Percent Followers, %	15.5
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8686
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.69306	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.31619	PF Power Coefficient (p)	0.73942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8686	-	-	57.3

Vehicle Results

Average Speed, mi/h	57.3	Percent Followers, %	17.5
Segment Travel Time, minutes	1.72	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1177
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	40
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.9
Speed Slope Coefficient (m)	2.93104	Speed Power Coefficient (p)	0.60842
PF Slope Coefficient (m)	-1.26517	PF Power Coefficient (p)	0.77093
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1177	-	-	50.9

Vehicle Results

Average Speed, mi/h	50.9	Percent Followers, %	15.7
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 11

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1420
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	11.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.3
Speed Slope Coefficient (m)	3.56256	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42277	PF Power Coefficient (p)	0.72994
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1420	-	-	56.3

Vehicle Results

Average Speed, mi/h	56.3	Percent Followers, %	19.2
Segment Travel Time, minutes	0.29	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 12

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10212
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	74	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.4
Speed Slope Coefficient (m)	3.60216	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33893	PF Power Coefficient (p)	0.72336
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10212	-	-	55.4

Vehicle Results

Average Speed, mi/h	55.4	Percent Followers, %	18.5
Segment Travel Time, minutes	2.10	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 13

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	608
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	230	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.14

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.42136
PF Slope Coefficient (m)	-1.52652	PF Power Coefficient (p)	0.71538
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	608	-	-	56.0

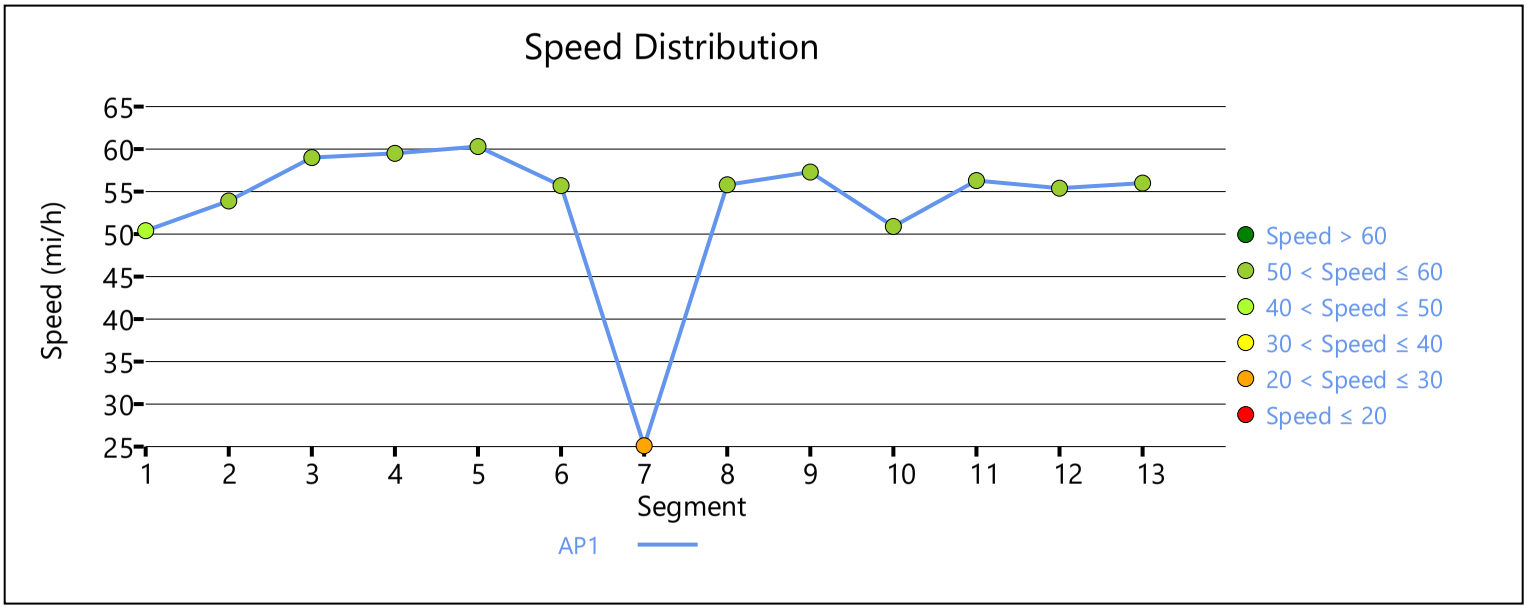
Vehicle Results

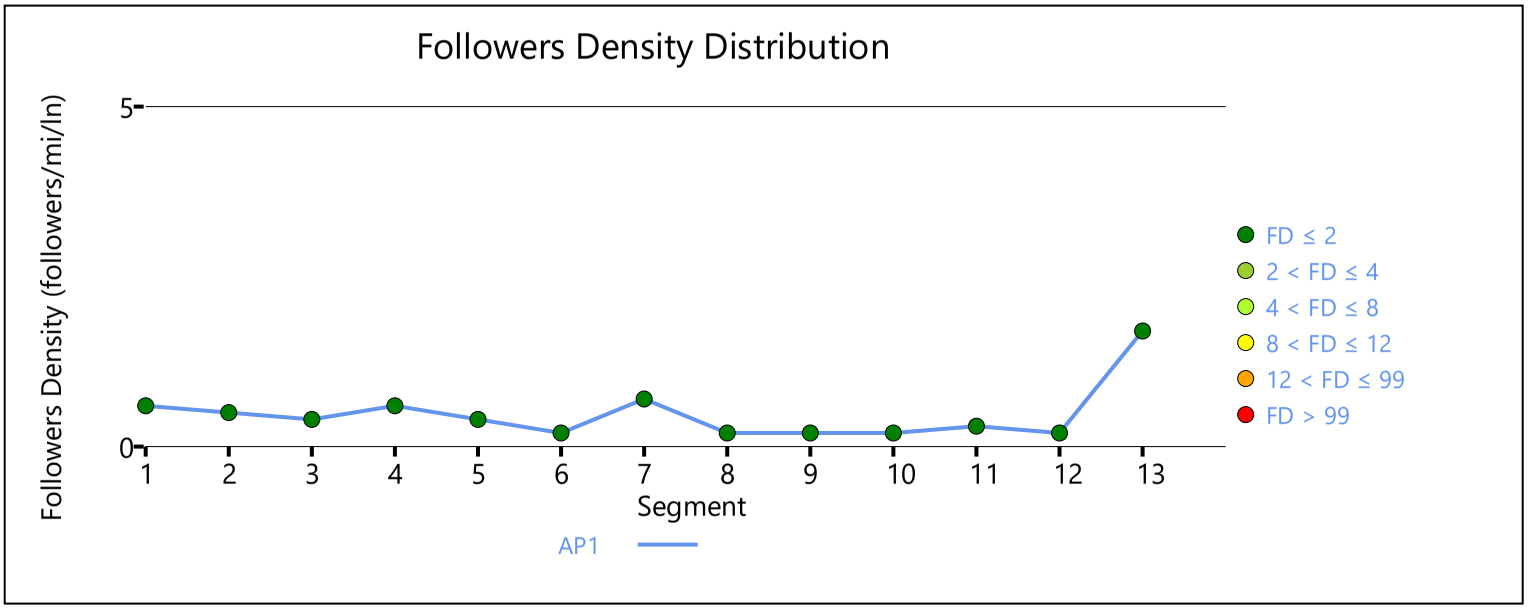
Average Speed, mi/h	56.0	Percent Followers, %	41.3
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	1.7
Vehicle LOS	A		

Facility Results

T	VMT	VHD	Follower Density, followers/	LOS

	veh-mi/p	veh-h/p	mi/ln	
1	165	0.01	0.4	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	CR 1037	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2558
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	14.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	15	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	18.9
Speed Slope Coefficient (m)	1.55508	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27783	PF Power Coefficient (p)	0.57790
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2558	-	-	18.9

Vehicle Results

Average Speed, mi/h	18.9	Percent Followers, %	10.6
Segment Travel Time, minutes	1.54	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	2	0.00	0.1	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	CR 1037	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2558
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	14.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	18	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	18.9
Speed Slope Coefficient (m)	1.55508	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27783	PF Power Coefficient (p)	0.57790
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2558	-	-	18.9

Vehicle Results

Average Speed, mi/h	18.9	Percent Followers, %	11.6
Segment Travel Time, minutes	1.54	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	2	0.00	0.1	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	CR 1036	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3025
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	12.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	20	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	19.4
Speed Slope Coefficient (m)	1.58682	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27434	PF Power Coefficient (p)	0.58479
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3025	-	-	19.4

Vehicle Results

Average Speed, mi/h	19.4	Percent Followers, %	12.2
Segment Travel Time, minutes	1.77	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	3	0.00	0.1	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	CR 1036	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3025
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	12.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	15	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	19.4
Speed Slope Coefficient (m)	1.58682	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27434	PF Power Coefficient (p)	0.58479
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3025	-	-	19.4

Vehicle Results

Average Speed, mi/h	19.4	Percent Followers, %	10.3
Segment Travel Time, minutes	1.77	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	2	0.00	0.1	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing AM
Project Description	CR 1030	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4172
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	7.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	13	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.5
Speed Slope Coefficient (m)	1.66165	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27316	PF Power Coefficient (p)	0.59682
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4172	-	-	20.5

Vehicle Results

Average Speed, mi/h	20.5	Percent Followers, %	9.2
Segment Travel Time, minutes	2.31	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	2	0.00	0.1	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Existing PM
Project Description	CR 1030	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4172
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	7.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	12	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.5
Speed Slope Coefficient (m)	1.66165	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27316	PF Power Coefficient (p)	0.59682
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4172	-	-	20.5

Vehicle Results

Average Speed, mi/h	20.5	Percent Followers, %	8.6
Segment Travel Time, minutes	2.31	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	2	0.00	0.0	A

CONSTRUCTION

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	CR 1027	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2575
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	6.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	41	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.9
Speed Slope Coefficient (m)	1.66210	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.30998	PF Power Coefficient (p)	0.59048
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2575	-	-	20.9

Vehicle Results

Average Speed, mi/h	20.9	Percent Followers, %	18.1
Segment Travel Time, minutes	1.40	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	5	0.00	0.4	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	CR 1027	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2575
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	6.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	54	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.9
Speed Slope Coefficient (m)	1.66210	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.30998	PF Power Coefficient (p)	0.59048
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2575	-	-	20.9

Vehicle Results

Average Speed, mi/h	20.9	Percent Followers, %	20.9
Segment Travel Time, minutes	1.40	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	6	0.00	0.5	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	KY 3301	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	33.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.4
Speed Slope Coefficient (m)	3.13556	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46639	PF Power Coefficient (p)	0.71076
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	48.4

Vehicle Results

Average Speed, mi/h	48.4	Percent Followers, %	12.9
Segment Travel Time, minutes	0.37	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1732
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.91212	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.23351	PF Power Coefficient (p)	0.78085
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1732	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	8.8
Segment Travel Time, minutes	0.39	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.7
Speed Slope Coefficient (m)	3.41926	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44983	PF Power Coefficient (p)	0.72120
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	53.7

Vehicle Results

Average Speed, mi/h	53.7	Percent Followers, %	12.3
Segment Travel Time, minutes	0.22	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1796
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	2.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.20182	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.21865	PF Power Coefficient (p)	0.79846
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1796	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	8.2
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2565
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.6
Speed Slope Coefficient (m)	3.43628	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.39290	PF Power Coefficient (p)	0.73652
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2565	-	-	53.6

Vehicle Results

Average Speed, mi/h	53.6	Percent Followers, %	11.3
Segment Travel Time, minutes	0.54	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2067
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.9
Speed Slope Coefficient (m)	3.03763	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.21680	PF Power Coefficient (p)	0.79330
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2067	-	-	52.9

Vehicle Results

Average Speed, mi/h	52.9	Percent Followers, %	8.3
Segment Travel Time, minutes	0.44	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4526
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.1
Speed Slope Coefficient (m)	3.48395	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35008	PF Power Coefficient (p)	0.74489
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4526	-	-	54.1

Vehicle Results

Average Speed, mi/h	54.1	Percent Followers, %	10.7
Segment Travel Time, minutes	0.95	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	3016
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.8
Speed Slope Coefficient (m)	3.04547	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.19121	PF Power Coefficient (p)	0.80322
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3016	-	-	52.8

Vehicle Results

Average Speed, mi/h	52.8	Percent Followers, %	7.9
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3185
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	34	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.0
Speed Slope Coefficient (m)	3.40708	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38055	PF Power Coefficient (p)	0.73849
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

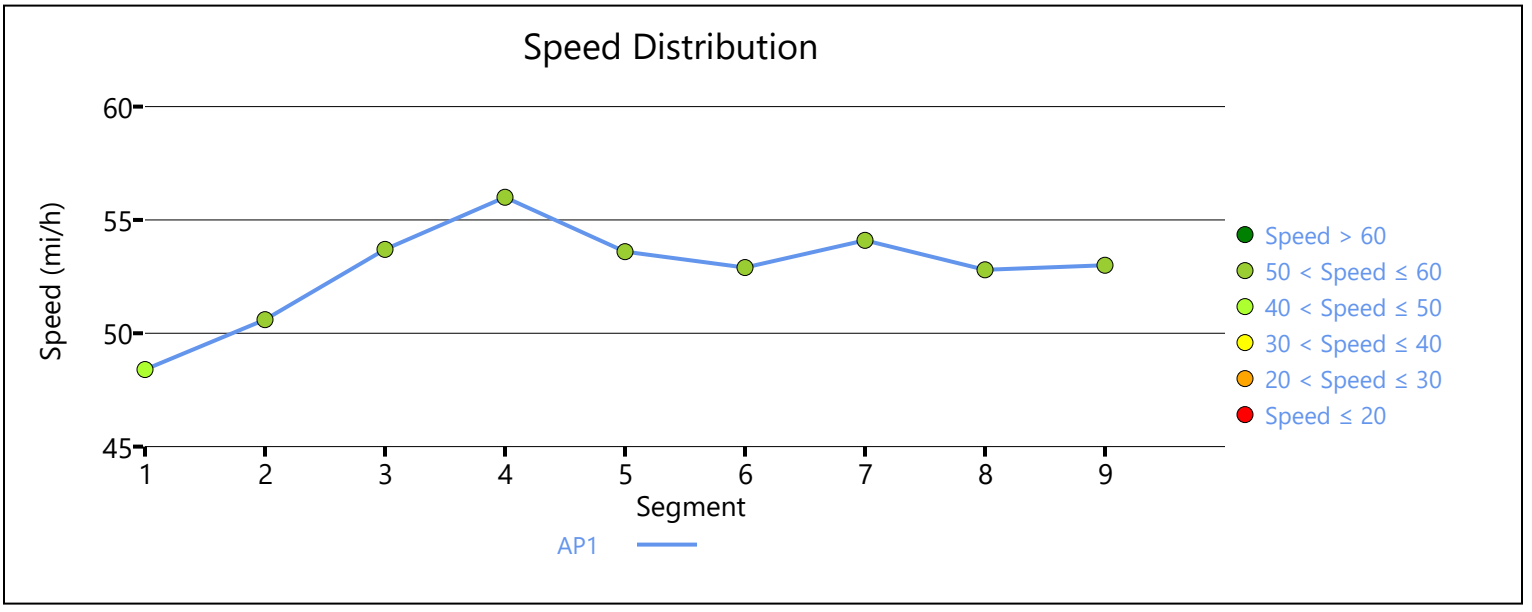
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3185	-	-	53.0

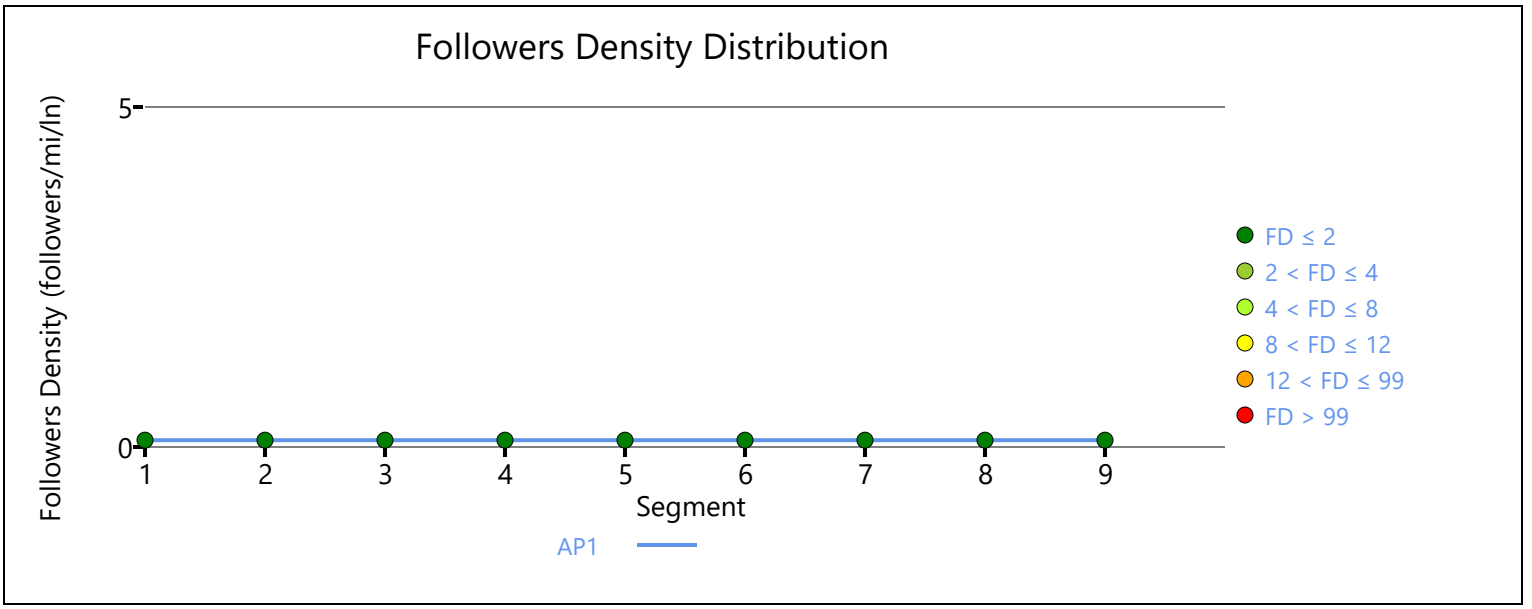
Vehicle Results

Average Speed, mi/h	53.0	Percent Followers, %	10.8
Segment Travel Time, minutes	0.68	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	34	0.00	0.1	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	KY 3301	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	33.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	48.4
Speed Slope Coefficient (m)	3.13556	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46639	PF Power Coefficient (p)	0.71076
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	48.4

Vehicle Results

Average Speed, mi/h	48.4	Percent Followers, %	13.2
Segment Travel Time, minutes	0.37	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1732
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.91212	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.23351	PF Power Coefficient (p)	0.78085
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1732	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	9.0
Segment Travel Time, minutes	0.39	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.7
Speed Slope Coefficient (m)	3.41926	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44983	PF Power Coefficient (p)	0.72120
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	53.7

Vehicle Results

Average Speed, mi/h	53.7	Percent Followers, %	12.7
Segment Travel Time, minutes	0.22	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1796
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	2.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.20182	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.21865	PF Power Coefficient (p)	0.79846
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1796	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	8.4
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2565
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.2

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.6
Speed Slope Coefficient (m)	3.43628	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.39290	PF Power Coefficient (p)	0.73652
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2565	-	-	53.6

Vehicle Results

Average Speed, mi/h	53.6	Percent Followers, %	11.6
Segment Travel Time, minutes	0.54	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2067
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.9
Speed Slope Coefficient (m)	3.03763	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.21680	PF Power Coefficient (p)	0.79330
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2067	-	-	52.9

Vehicle Results

Average Speed, mi/h	52.9	Percent Followers, %	8.6
Segment Travel Time, minutes	0.44	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4526
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.1
Speed Slope Coefficient (m)	3.48395	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35008	PF Power Coefficient (p)	0.74489
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4526	-	-	54.1

Vehicle Results

Average Speed, mi/h	54.1	Percent Followers, %	11.0
Segment Travel Time, minutes	0.95	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	3016
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	37	Opposing Demand Flow Rate, veh/h	26
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.8
Speed Slope Coefficient (m)	3.04547	Speed Power Coefficient (p)	0.62113
PF Slope Coefficient (m)	-1.19121	PF Power Coefficient (p)	0.80322
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3016	-	-	52.8

Vehicle Results

Average Speed, mi/h	52.8	Percent Followers, %	8.1
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3185
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	40	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	0.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.0
Speed Slope Coefficient (m)	3.40708	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38055	PF Power Coefficient (p)	0.73849
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

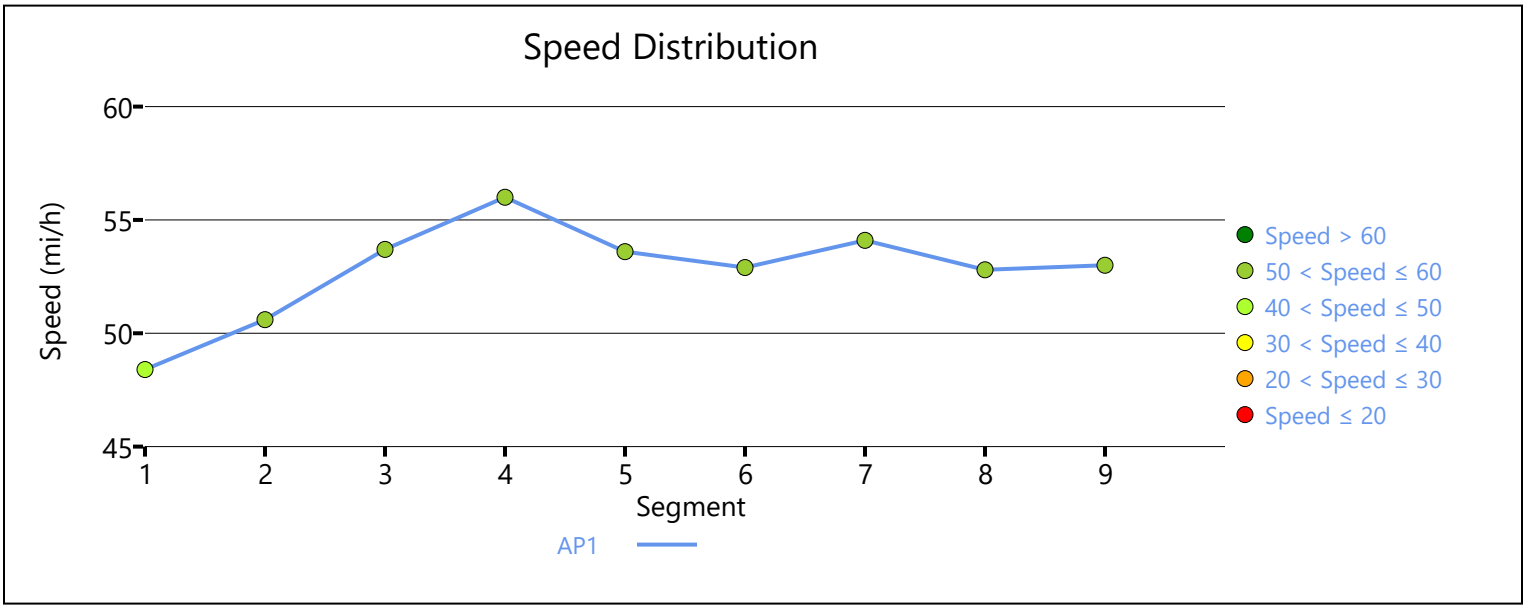
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3185	-	-	53.0

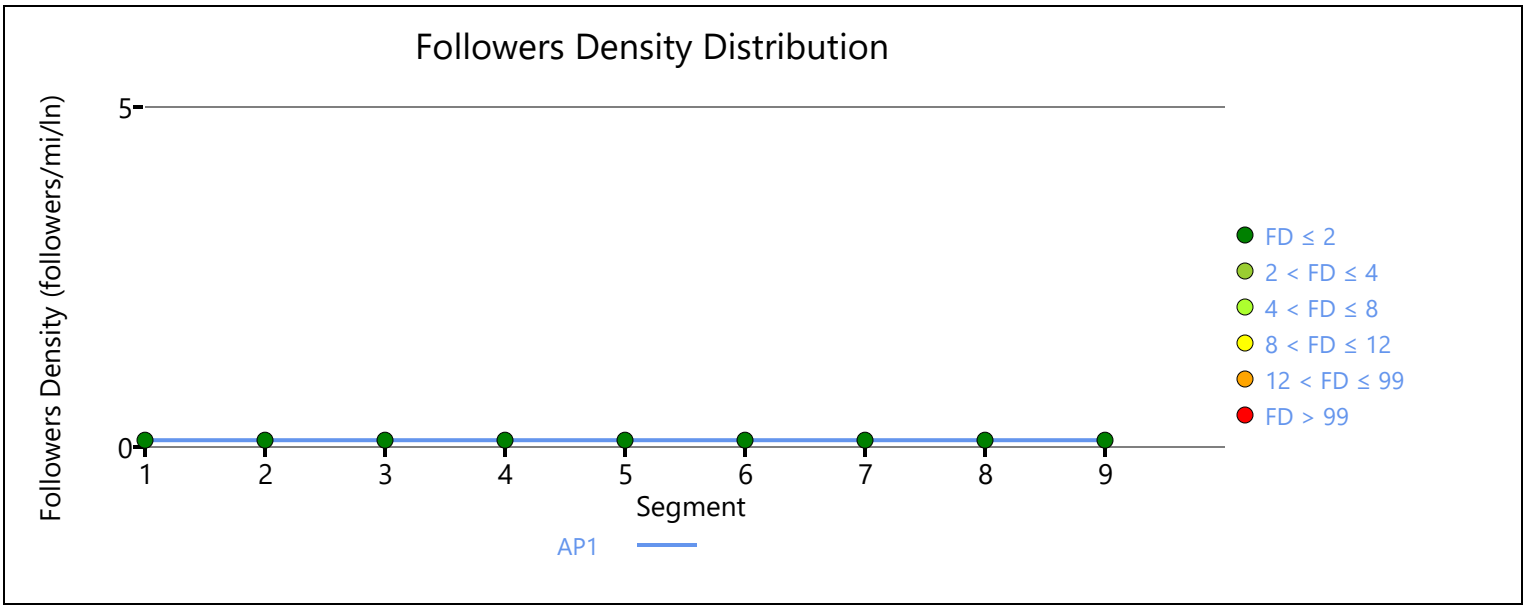
Vehicle Results

Average Speed, mi/h	53.0	Percent Followers, %	12.1
Segment Travel Time, minutes	0.68	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	36	0.00	0.1	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	KY 1237	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8337
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	18.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	19	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.7
Speed Slope Coefficient (m)	3.44540	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34677	PF Power Coefficient (p)	0.72875
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8337	-	-	52.7

Vehicle Results

Average Speed, mi/h	52.7	Percent Followers, %	7.3
Segment Travel Time, minutes	1.80	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8264
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	21.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	36	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.9
Speed Slope Coefficient (m)	3.40003	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35159	PF Power Coefficient (p)	0.72676
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

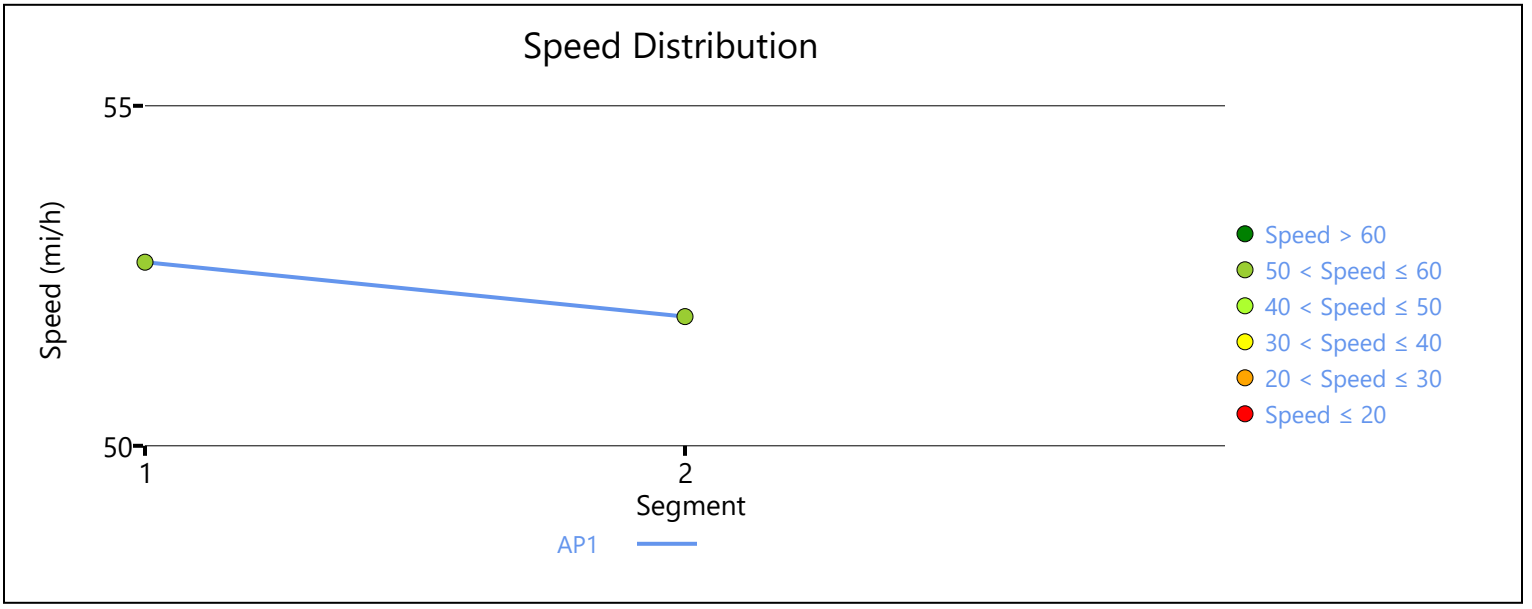
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8264	-	-	51.9

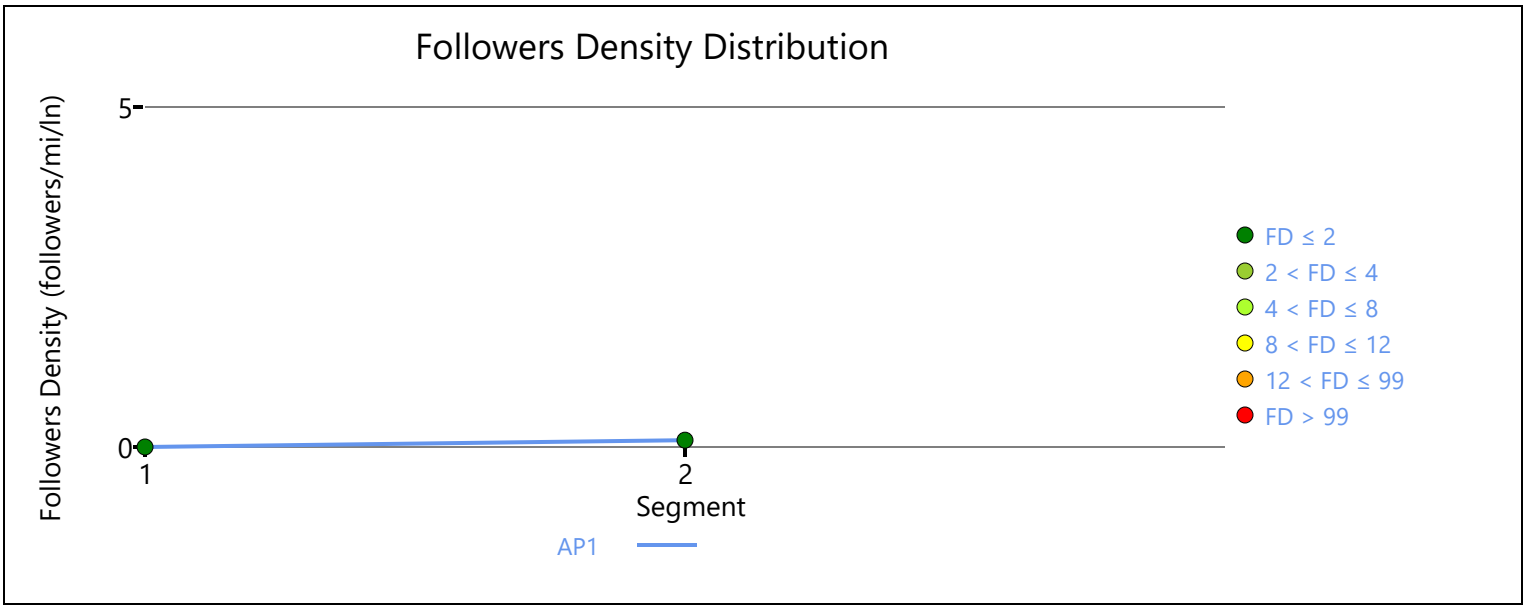
Vehicle Results

Average Speed, mi/h	51.9	Percent Followers, %	11.3
Segment Travel Time, minutes	1.81	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	20	0.00	0.1	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	KY 1237	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8337
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	18.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	32	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.7
Speed Slope Coefficient (m)	3.44540	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34677	PF Power Coefficient (p)	0.72875
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8337	-	-	52.7

Vehicle Results

Average Speed, mi/h	52.7	Percent Followers, %	10.3
Segment Travel Time, minutes	1.80	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8264
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	21.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	57	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.9
Speed Slope Coefficient (m)	3.40003	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35159	PF Power Coefficient (p)	0.72676
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

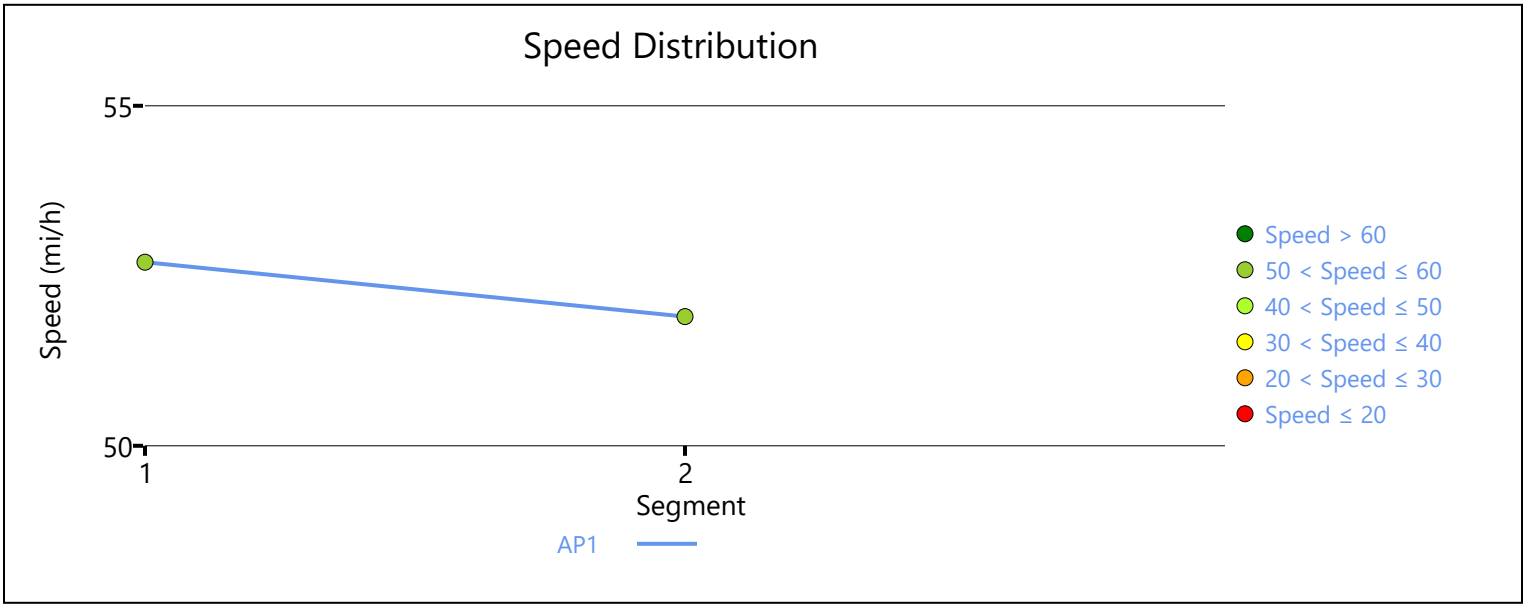
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8264	-	-	51.9

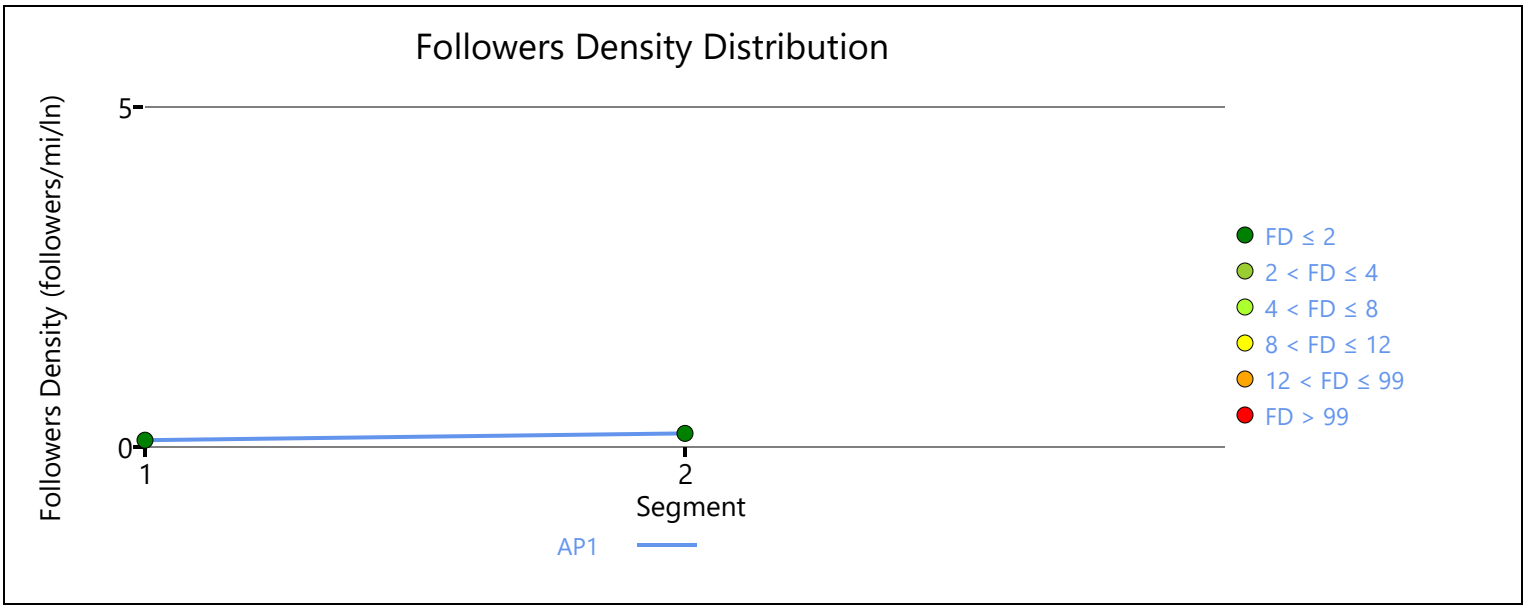
Vehicle Results

Average Speed, mi/h	51.9	Percent Followers, %	15.6
Segment Travel Time, minutes	1.81	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	33	0.00	0.1	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	KY 989	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5412
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	9	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.7
Speed Slope Coefficient (m)	3.52422	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33772	PF Power Coefficient (p)	0.74619
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5412	-	-	54.7

Vehicle Results

Average Speed, mi/h	54.7	Percent Followers, %	3.7
Segment Travel Time, minutes	1.13	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	6410
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	9	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.2
Speed Slope Coefficient (m)	3.51015	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33606	PF Power Coefficient (p)	0.74237
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

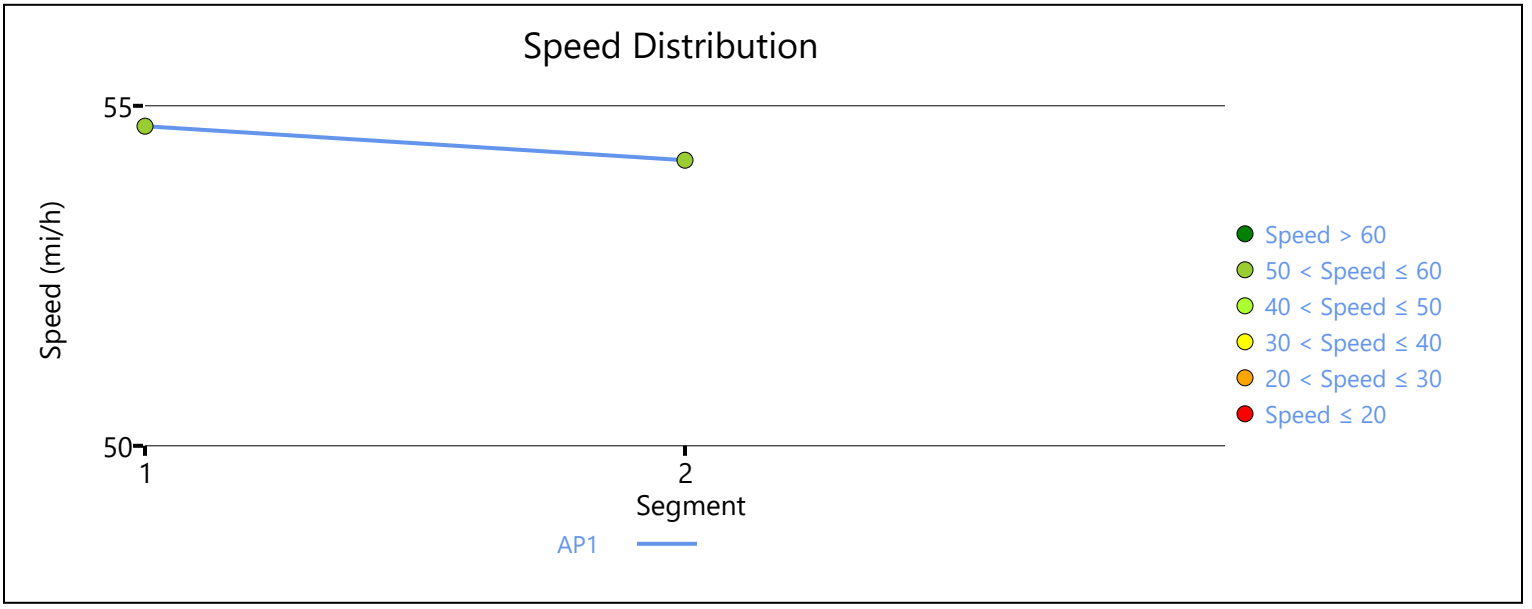
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6410	-	-	54.2

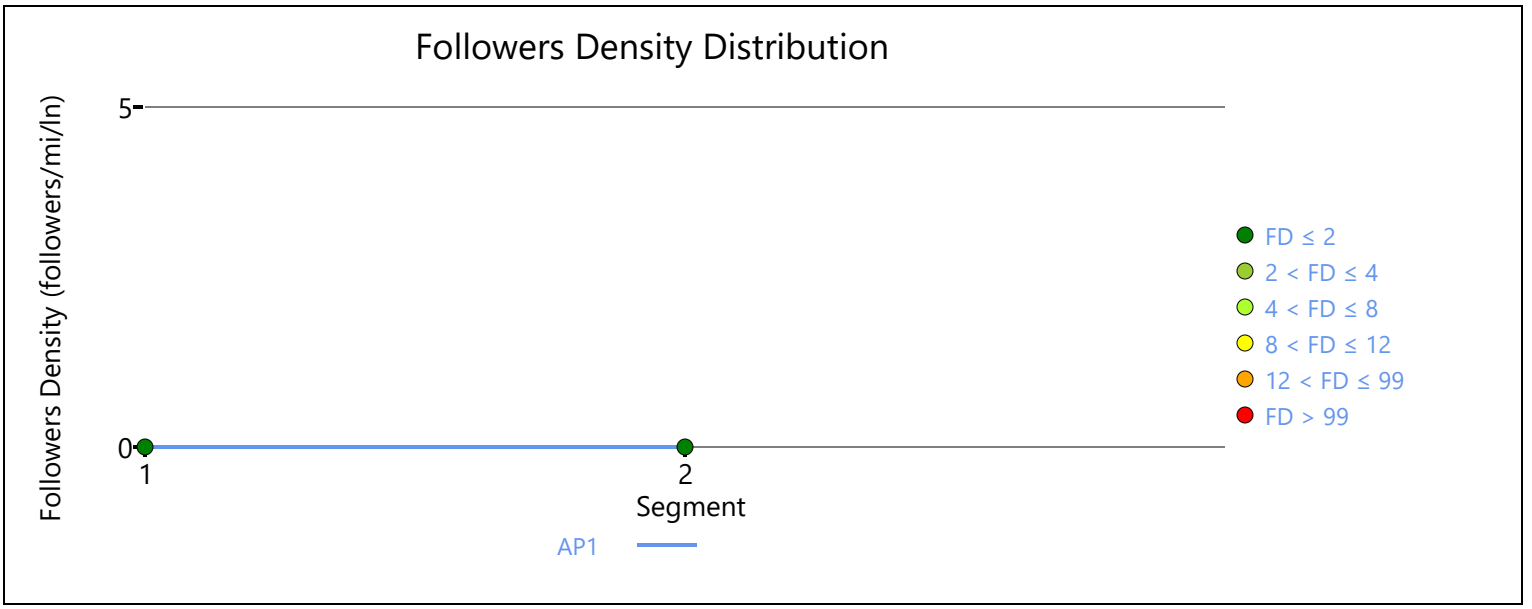
Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	3.8
Segment Travel Time, minutes	1.34	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	4	0.00	0.0	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	KY 989	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	5412
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	17	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.7
Speed Slope Coefficient (m)	3.52422	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33772	PF Power Coefficient (p)	0.74619
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	5412	-	-	54.7

Vehicle Results

Average Speed, mi/h	54.7	Percent Followers, %	6.2
Segment Travel Time, minutes	1.13	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	6410
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	17	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.2
Speed Slope Coefficient (m)	3.51015	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33606	PF Power Coefficient (p)	0.74237
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

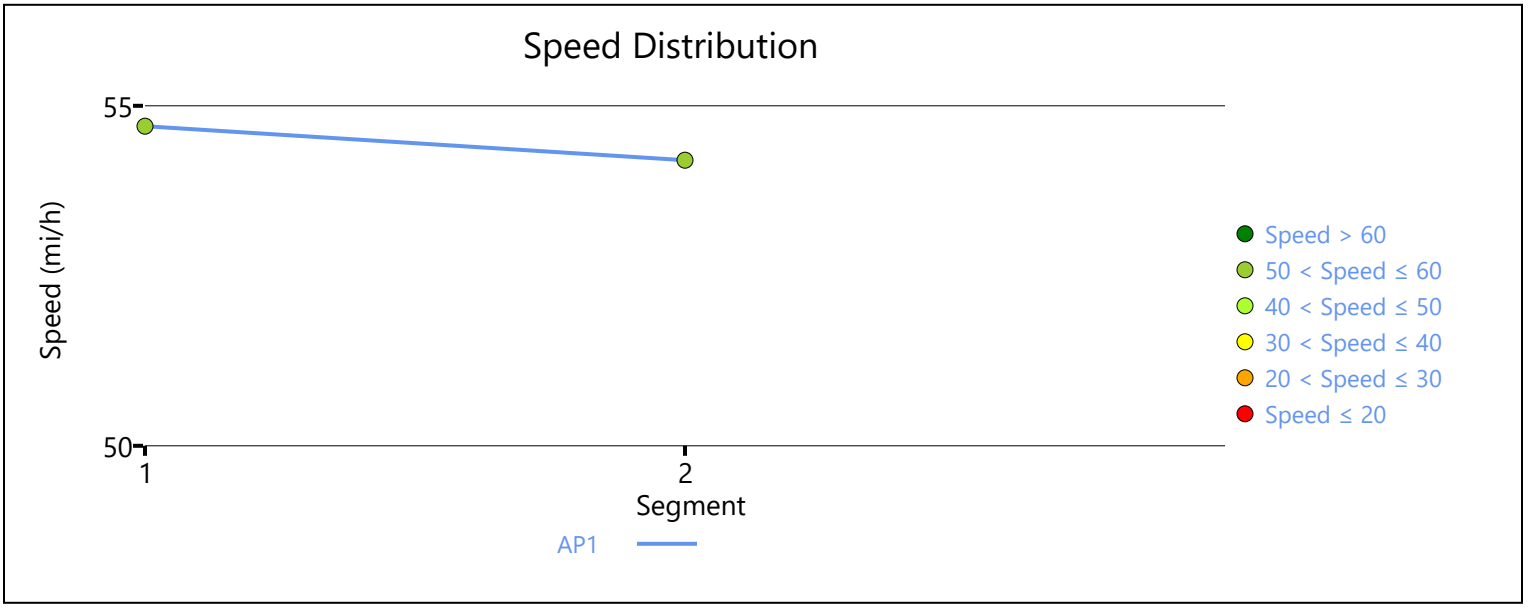
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	6410	-	-	54.2

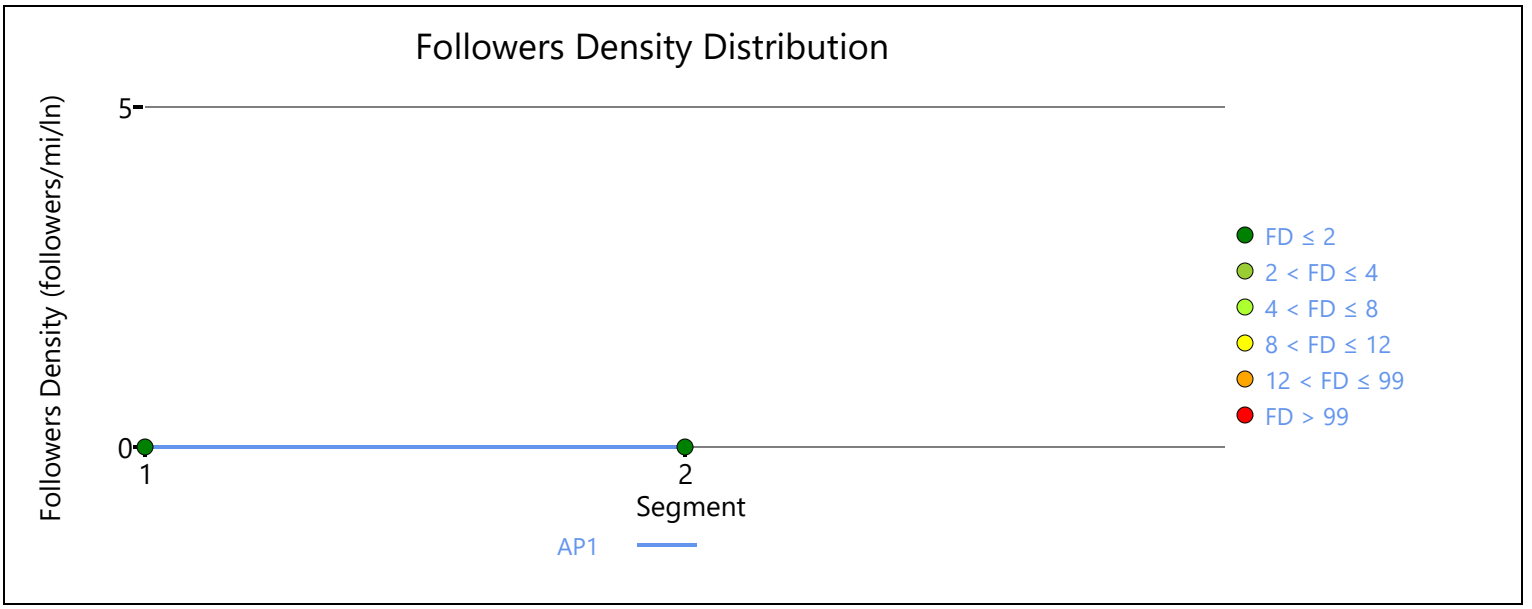
Vehicle Results

Average Speed, mi/h	54.2	Percent Followers, %	6.3
Segment Travel Time, minutes	1.34	Follower Density (FD), followers/mi/ln	0.0
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	9	0.00	0.0	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	KY 559	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2862
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	31.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.4
Speed Slope Coefficient (m)	3.20852	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.40969	PF Power Coefficient (p)	0.72659
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2862	-	-	49.4

Vehicle Results

Average Speed, mi/h	49.4	Percent Followers, %	18.8
Segment Travel Time, minutes	0.66	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2899
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	55
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.2
Speed Slope Coefficient (m)	3.03967	Speed Power Coefficient (p)	0.59843
PF Slope Coefficient (m)	-1.21582	PF Power Coefficient (p)	0.79548
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2899	-	-	52.2

Vehicle Results

Average Speed, mi/h	52.2	Percent Followers, %	13.9
Segment Travel Time, minutes	0.63	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4715
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.3
Speed Slope Coefficient (m)	3.44342	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35294	PF Power Coefficient (p)	0.74299
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4715	-	-	53.3

Vehicle Results

Average Speed, mi/h	53.3	Percent Followers, %	17.4
Segment Travel Time, minutes	1.01	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	317
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	55
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.2
Speed Slope Coefficient (m)	3.23168	Speed Power Coefficient (p)	0.59843
PF Slope Coefficient (m)	-1.26178	PF Power Coefficient (p)	0.78483
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	317	-	-	56.2

Vehicle Results

Average Speed, mi/h	56.2	Percent Followers, %	14.8
Segment Travel Time, minutes	0.06	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3168
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient (m)	3.52656	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36536	PF Power Coefficient (p)	0.74471
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3168	-	-	55.2

Vehicle Results

Average Speed, mi/h	55.2	Percent Followers, %	17.5
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	55
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.92941	Speed Power Coefficient (p)	0.59843
PF Slope Coefficient (m)	-1.26220	PF Power Coefficient (p)	0.77317
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	15.2
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	12302
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.1
Speed Slope Coefficient (m)	3.59986	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36038	PF Power Coefficient (p)	0.70449
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12302	-	-	55.1

Vehicle Results

Average Speed, mi/h	55.1	Percent Followers, %	19.2
Segment Travel Time, minutes	2.54	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1003
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	40.8
Speed Slope Coefficient (m)	2.72189	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.50480	PF Power Coefficient (p)	0.68051
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1003	-	-	40.8

Vehicle Results

Average Speed, mi/h	40.8	Percent Followers, %	22.2
Segment Travel Time, minutes	0.28	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1869
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	57.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	72	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.04

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	24.4
Speed Slope Coefficient (m)	1.84278	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38415	PF Power Coefficient (p)	0.60433
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.7
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

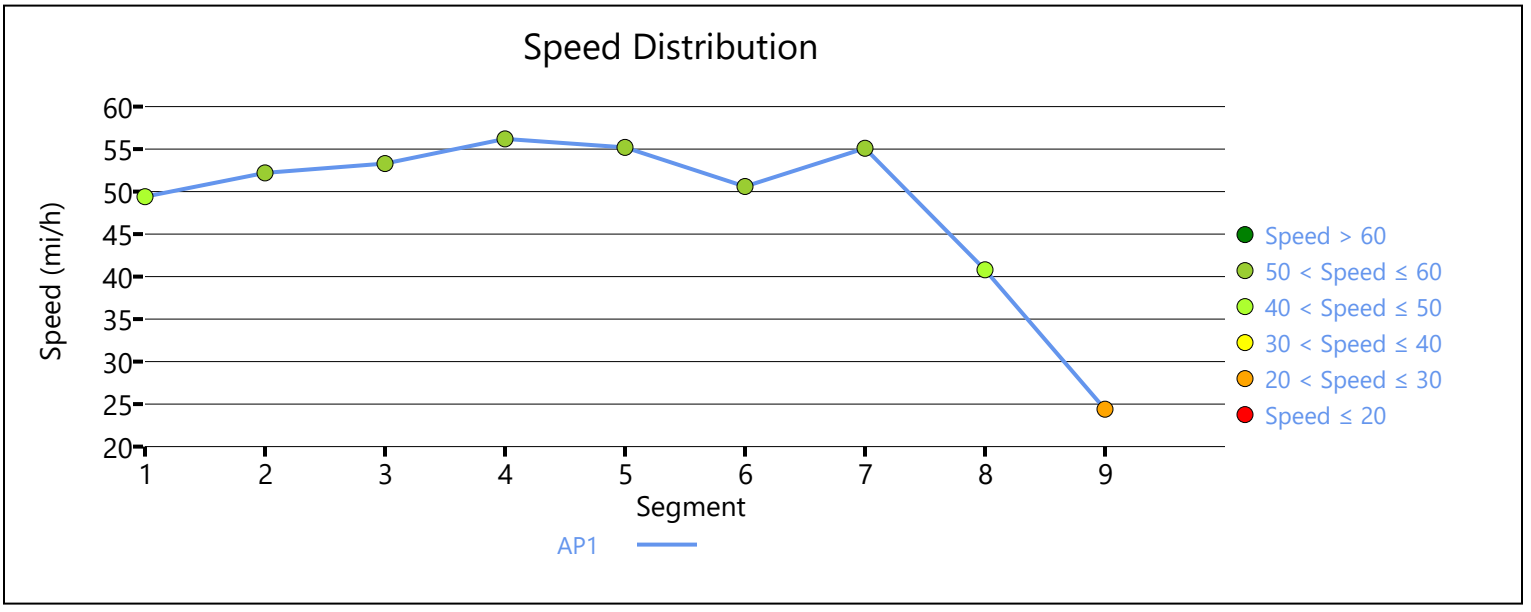
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1869	-	-	24.4

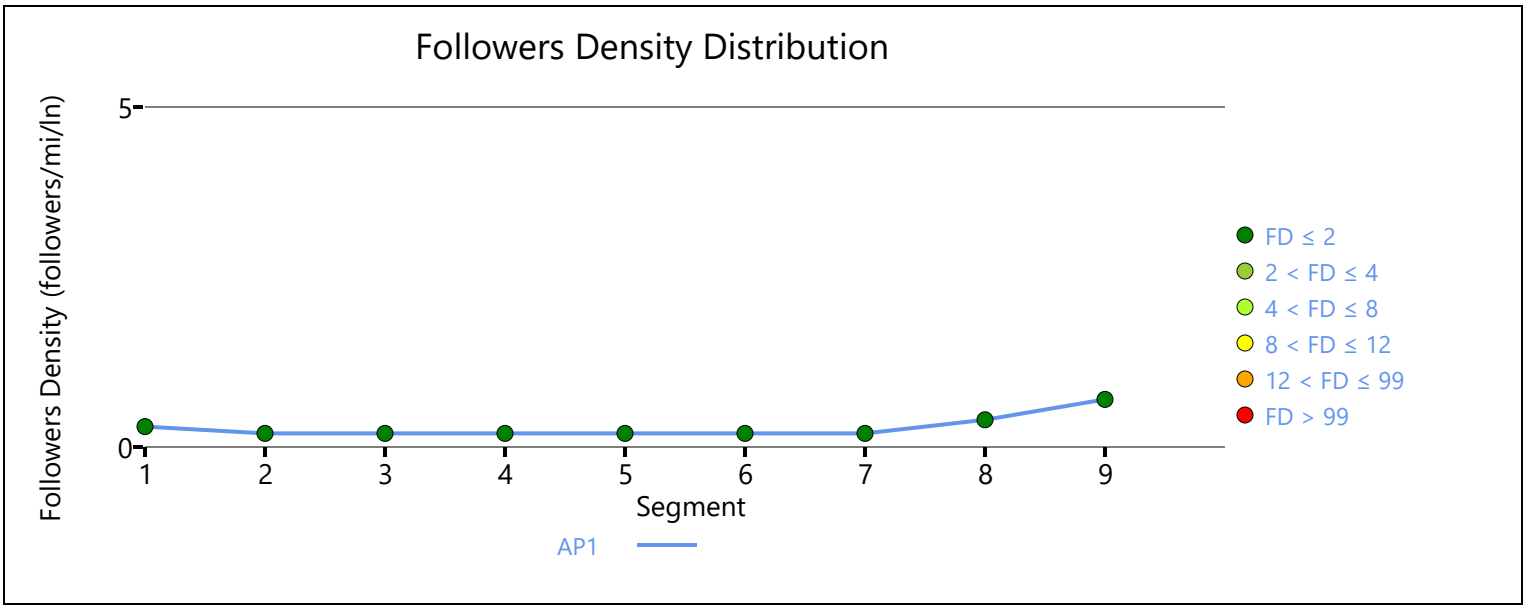
Vehicle Results

Average Speed, mi/h	24.4	Percent Followers, %	24.6
Segment Travel Time, minutes	0.87	Follower Density (FD), followers/mi/ln	0.7
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	98	0.00	0.3	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2022
Jurisdiction		Time Analyzed	Construction PM
Project Description	KY 559	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2862
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	31.5

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.4
Speed Slope Coefficient (m)	3.20852	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.40969	PF Power Coefficient (p)	0.72659
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2862	-	-	49.4

Vehicle Results

Average Speed, mi/h	49.4	Percent Followers, %	20.0
Segment Travel Time, minutes	0.66	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2899
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	60
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.2
Speed Slope Coefficient (m)	3.04360	Speed Power Coefficient (p)	0.59482
PF Slope Coefficient (m)	-1.21923	PF Power Coefficient (p)	0.79461
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2899	-	-	52.2

Vehicle Results

Average Speed, mi/h	52.2	Percent Followers, %	15.0
Segment Travel Time, minutes	0.63	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4715
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	15.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	53.3
Speed Slope Coefficient (m)	3.44342	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.35294	PF Power Coefficient (p)	0.74299
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4715	-	-	53.3

Vehicle Results

Average Speed, mi/h	53.3	Percent Followers, %	18.6
Segment Travel Time, minutes	1.01	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	317
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	60
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.2
Speed Slope Coefficient (m)	3.23561	Speed Power Coefficient (p)	0.59482
PF Slope Coefficient (m)	-1.26530	PF Power Coefficient (p)	0.78405
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	317	-	-	56.2

Vehicle Results

Average Speed, mi/h	56.2	Percent Followers, %	15.9
Segment Travel Time, minutes	0.06	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3168
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.2
Speed Slope Coefficient (m)	3.52656	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36536	PF Power Coefficient (p)	0.74471
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3168	-	-	55.2

Vehicle Results

Average Speed, mi/h	55.2	Percent Followers, %	18.6
Segment Travel Time, minutes	0.65	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	60
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.6
Speed Slope Coefficient (m)	2.93334	Speed Power Coefficient (p)	0.59482
PF Slope Coefficient (m)	-1.26579	PF Power Coefficient (p)	0.77239
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	16.3
Segment Travel Time, minutes	0.36	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	12302
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.1
Speed Slope Coefficient (m)	3.59986	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.36038	PF Power Coefficient (p)	0.70449
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	12302	-	-	55.1

Vehicle Results

Average Speed, mi/h	55.1	Percent Followers, %	20.3
Segment Travel Time, minutes	2.54	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1003
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	45	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	40.8
Speed Slope Coefficient (m)	2.72189	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.50480	PF Power Coefficient (p)	0.68051
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1003	-	-	40.8

Vehicle Results

Average Speed, mi/h	40.8	Percent Followers, %	23.5
Segment Travel Time, minutes	0.28	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1869
Lane Width, ft	10	Shoulder Width, ft	0
Speed Limit, mi/h	35	Access Point Density, pts/mi	57.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	79	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	24.4
Speed Slope Coefficient (m)	1.84278	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.38415	PF Power Coefficient (p)	0.60433
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

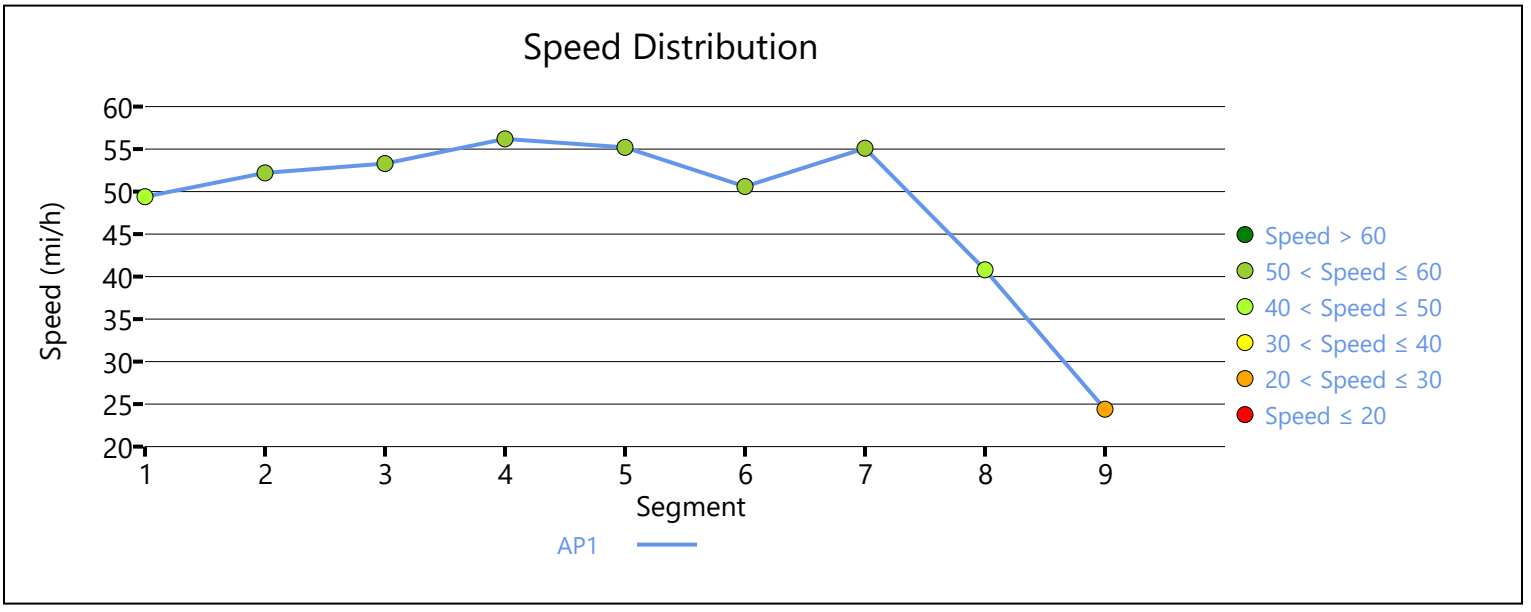
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1869	-	-	24.4

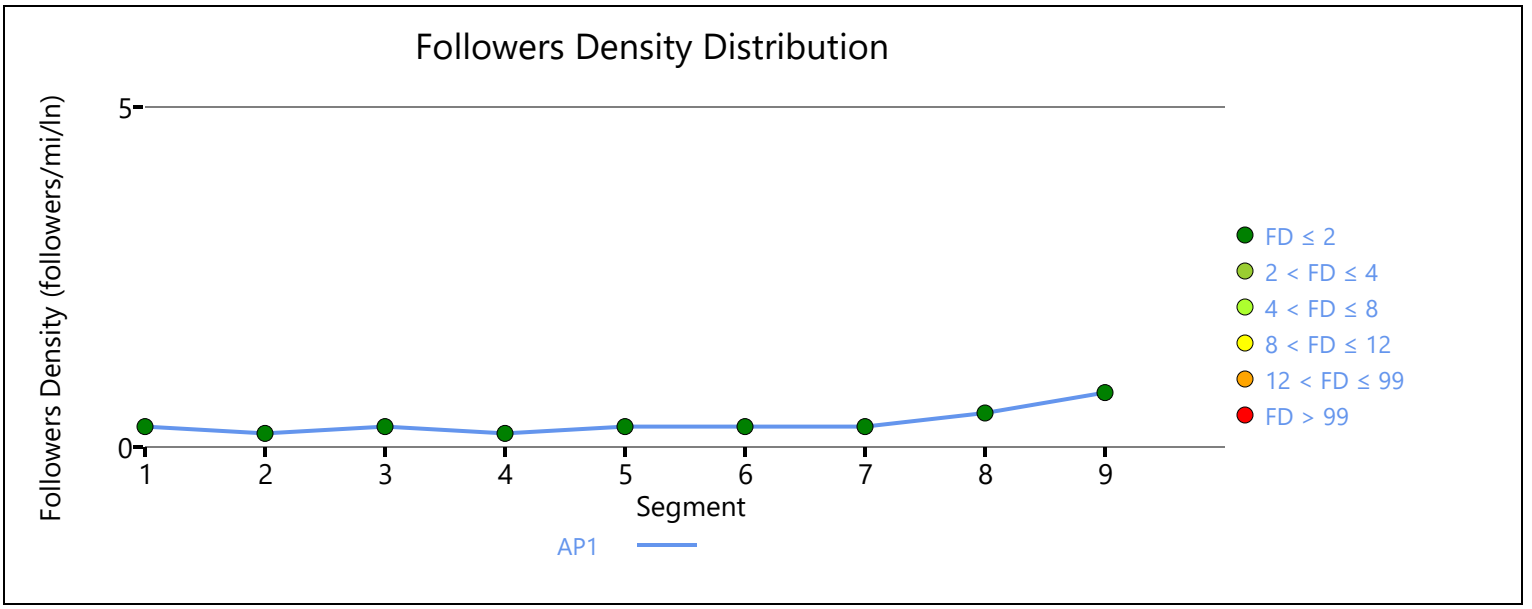
Vehicle Results

Average Speed, mi/h	24.4	Percent Followers, %	25.8
Segment Travel Time, minutes	0.87	Follower Density (FD), followers/mi/ln	0.8
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	108	0.00	0.3	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	KY 344	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	512
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	29.5
Speed Slope Coefficient (m)	2.10943	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46561	PF Power Coefficient (p)	0.62573
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	512	-	-	29.5

Vehicle Results

Average Speed, mi/h	29.5	Percent Followers, %	20.8
Segment Travel Time, minutes	0.20	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2518
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	27.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	40
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	50.5
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.60723
PF Slope Coefficient (m)	-1.21564	PF Power Coefficient (p)	0.77436
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2518	-	-	50.5

Vehicle Results

Average Speed, mi/h	50.5	Percent Followers, %	11.8
Segment Travel Time, minutes	0.57	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	327
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	53	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.3
Speed Slope Coefficient (m)	3.29099	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46577	PF Power Coefficient (p)	0.71525
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	327	-	-	51.3

Vehicle Results

Average Speed, mi/h	51.3	Percent Followers, %	16.5
Segment Travel Time, minutes	0.07	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1592
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	56	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.3
Speed Slope Coefficient (m)	3.35025	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44258	PF Power Coefficient (p)	0.72248
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	52.3

Vehicle Results

Average Speed, mi/h	52.3	Percent Followers, %	16.5
Segment Travel Time, minutes	0.35	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1525
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	56	Opposing Demand Flow Rate, veh/h	41
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.7
Speed Slope Coefficient (m)	2.92396	Speed Power Coefficient (p)	0.60760
PF Slope Coefficient (m)	-1.25581	PF Power Coefficient (p)	0.77432
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.7

Vehicle Results

Average Speed, mi/h	50.7	Percent Followers, %	12.7
Segment Travel Time, minutes	0.34	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	56	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.8
Speed Slope Coefficient (m)	3.20969	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47482	PF Power Coefficient (p)	0.71104
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	49.8

Vehicle Results

Average Speed, mi/h	49.8	Percent Followers, %	17.4
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	56	Opposing Demand Flow Rate, veh/h	41
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	54.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.68727
PF Slope Coefficient (m)	-1.17787	PF Power Coefficient (p)	0.78312
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	54.6

Vehicle Results

Average Speed, mi/h	54.6	Percent Followers, %	11.7
Segment Travel Time, minutes	0.33	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	0.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	56	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.61619	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42067	PF Power Coefficient (p)	0.73029
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	57.3

Vehicle Results

Average Speed, mi/h	57.3	Percent Followers, %	16.0
Segment Travel Time, minutes	0.10	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2112
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	56	Opposing Demand Flow Rate, veh/h	41
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.63731
PF Slope Coefficient (m)	-1.21256	PF Power Coefficient (p)	0.78971
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2112	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	11.8
Segment Travel Time, minutes	0.43	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	56	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.03

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.3
Speed Slope Coefficient (m)	3.23679	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47191	PF Power Coefficient (p)	0.71247
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

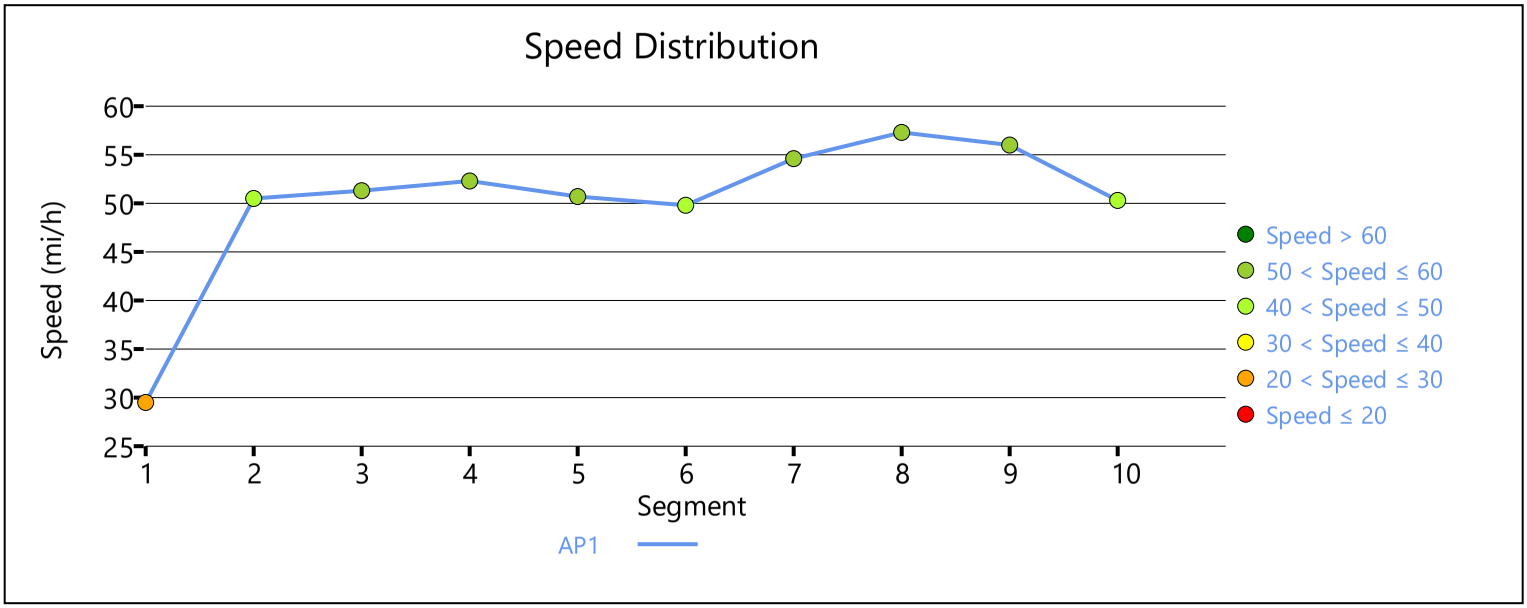
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	50.3

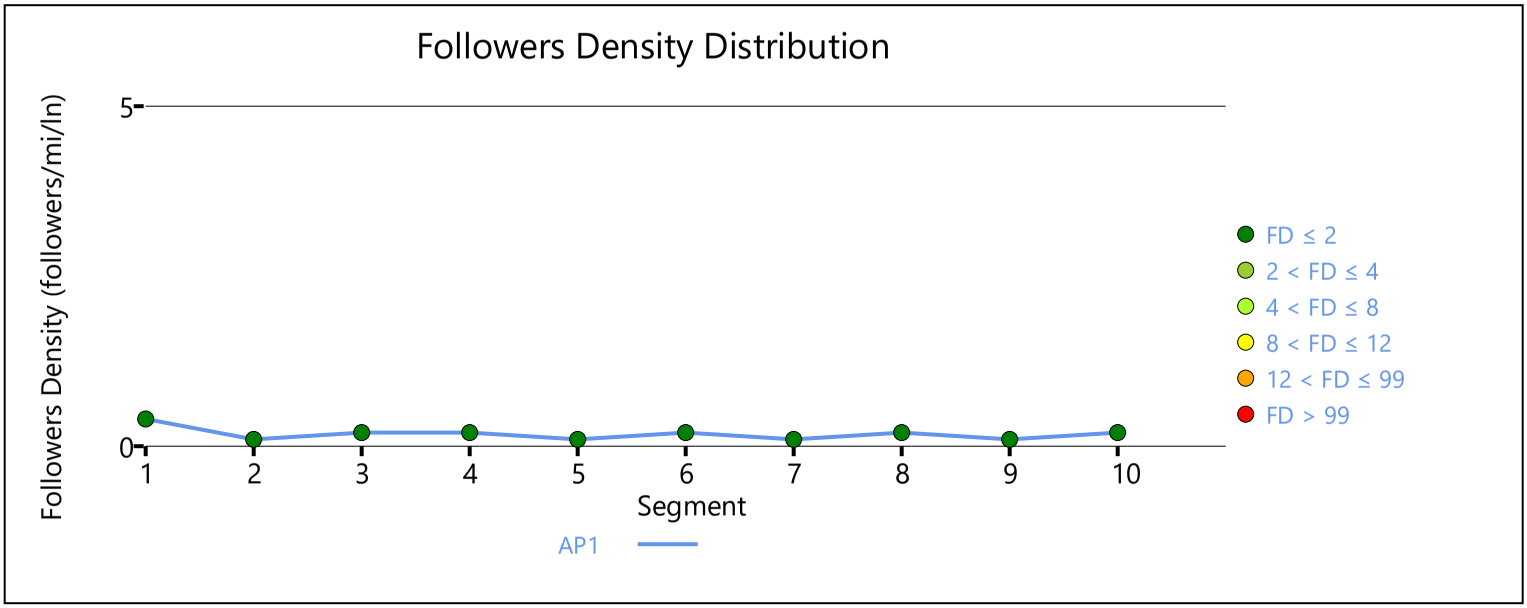
Vehicle Results

Average Speed, mi/h	50.3	Percent Followers, %	17.3
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	30	0.00	0.2	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	KY 344	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	512
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	86	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	29.5
Speed Slope Coefficient (m)	2.10943	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46561	PF Power Coefficient (p)	0.62573
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	512	-	-	29.5

Vehicle Results

Average Speed, mi/h	29.5	Percent Followers, %	27.1
Segment Travel Time, minutes	0.20	Follower Density (FD), followers/mi/ln	0.8
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2518
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	27.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	86	Opposing Demand Flow Rate, veh/h	64
Peak Hour Factor	0.94	Total Trucks, %	2.00

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	50.5
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.58813
PF Slope Coefficient (m)	-1.23157	PF Power Coefficient (p)	0.77061
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2518	-	-	50.5

Vehicle Results

Average Speed, mi/h	50.5	Percent Followers, %	17.0
Segment Travel Time, minutes	0.57	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	327
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	86	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.3
Speed Slope Coefficient (m)	3.29099	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.46577	PF Power Coefficient (p)	0.71525
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	327	-	-	51.3

Vehicle Results

Average Speed, mi/h	51.3	Percent Followers, %	22.4
Segment Travel Time, minutes	0.07	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1592
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	20.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	101	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	52.3
Speed Slope Coefficient (m)	3.35025	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.44258	PF Power Coefficient (p)	0.72248
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	52.1

Vehicle Results

Average Speed, mi/h	52.1	Percent Followers, %	24.1
Segment Travel Time, minutes	0.35	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1525
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	26.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	101	Opposing Demand Flow Rate, veh/h	72
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.7
Speed Slope Coefficient (m)	2.94536	Speed Power Coefficient (p)	0.58788
PF Slope Coefficient (m)	-1.27544	PF Power Coefficient (p)	0.77005
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	19.6
Segment Travel Time, minutes	0.34	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	30.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	101	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	49.8
Speed Slope Coefficient (m)	3.20969	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47482	PF Power Coefficient (p)	0.71104
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	49.6

Vehicle Results

Average Speed, mi/h	49.6	Percent Followers, %	25.1
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1584
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	10.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	101	Opposing Demand Flow Rate, veh/h	72
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	54.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.65542
PF Slope Coefficient (m)	-1.20321	PF Power Coefficient (p)	0.77793
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1584	-	-	54.5

Vehicle Results

Average Speed, mi/h	54.5	Percent Followers, %	18.3
Segment Travel Time, minutes	0.33	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	0.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	101	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.61619	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42067	PF Power Coefficient (p)	0.73029
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	57.1

Vehicle Results

Average Speed, mi/h	57.1	Percent Followers, %	23.4
Segment Travel Time, minutes	0.11	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2112
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	5.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	101	Opposing Demand Flow Rate, veh/h	72
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	56.0
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.61333
PF Slope Coefficient (m)	-1.23244	PF Power Coefficient (p)	0.78494
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2112	-	-	56.0

Vehicle Results

Average Speed, mi/h	56.0	Percent Followers, %	18.4
Segment Travel Time, minutes	0.43	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1056
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	101	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.06

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.3
Speed Slope Coefficient (m)	3.23679	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.47191	PF Power Coefficient (p)	0.71247
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

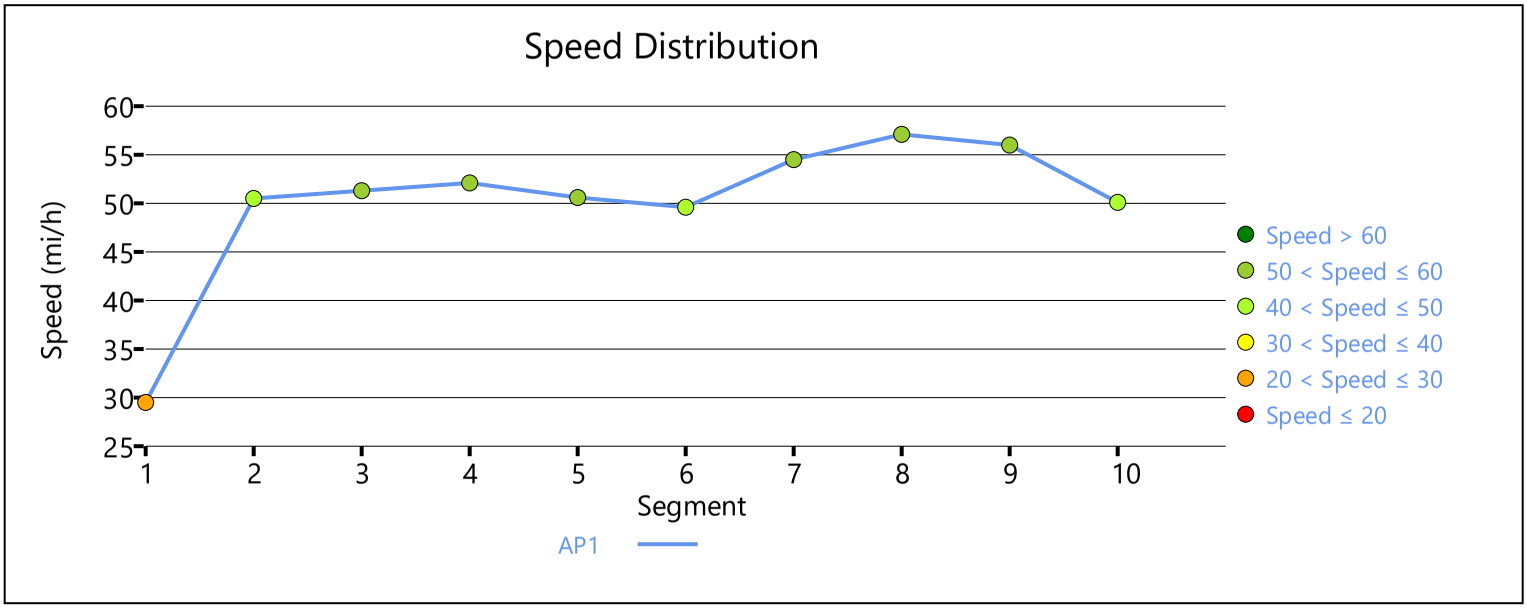
#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1056	-	-	50.1

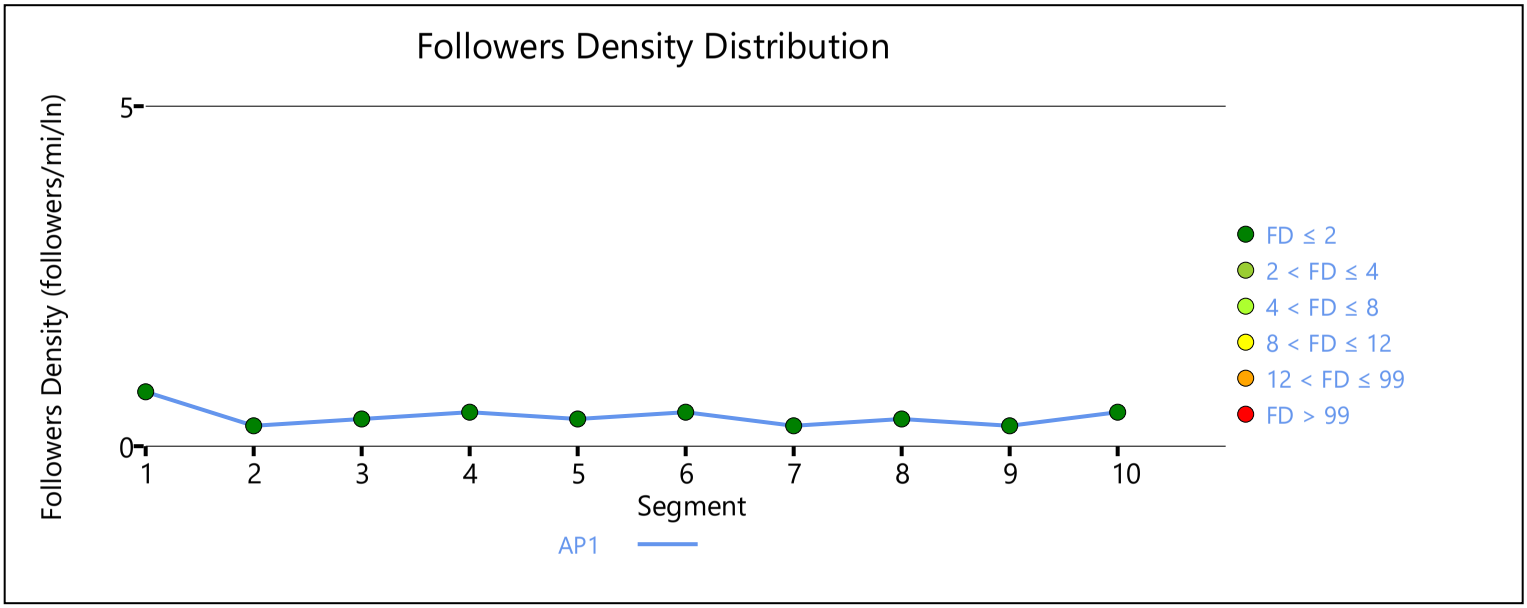
Vehicle Results

Average Speed, mi/h	50.1	Percent Followers, %	25.0
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	53	0.00	0.4	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	KY 57	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3833
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	91	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.1
Speed Slope Coefficient (m)	3.31561	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.37832	PF Power Coefficient (p)	0.73598
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3833	-	-	51.1

Vehicle Results

Average Speed, mi/h	51.1	Percent Followers, %	21.1
Segment Travel Time, minutes	0.85	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	91	Opposing Demand Flow Rate, veh/h	48
Peak Hour Factor	0.94	Total Trucks, %	3.50

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.3
Speed Slope Coefficient (m)	3.12113	Speed Power Coefficient (p)	0.60294
PF Slope Coefficient (m)	-1.26325	PF Power Coefficient (p)	0.78028
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	54.3

Vehicle Results

Average Speed, mi/h	54.3	Percent Followers, %	17.8
Segment Travel Time, minutes	0.11	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2580
Lane Width, ft	9	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	91	Opposing Demand Flow Rate, veh/h	48
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	59.3
Speed Slope Coefficient (m)	4.11812	Speed Power Coefficient (p)	0.76192
PF Slope Coefficient (m)	-1.12853	PF Power Coefficient (p)	0.81549
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2580	-	-	59.3

Vehicle Results

Average Speed, mi/h	59.3	Percent Followers, %	14.8
Segment Travel Time, minutes	0.49	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1400
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	91	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	60.1
Speed Slope Coefficient (m)	4.77922	Speed Power Coefficient (p)	0.53696
PF Slope Coefficient (m)	-1.47099	PF Power Coefficient (p)	0.73766
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1400	-	-	60.1

Vehicle Results

Average Speed, mi/h	60.1	Percent Followers, %	22.3
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1399
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	91	Opposing Demand Flow Rate, veh/h	48
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.05

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.66519
PF Slope Coefficient (m)	-1.23651	PF Power Coefficient (p)	0.79213
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1399	-	-	60.6

Vehicle Results

Average Speed, mi/h	60.6	Percent Followers, %	17.0
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.3
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4187
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.7
Speed Slope Coefficient (m)	3.56613	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34280	PF Power Coefficient (p)	0.74945
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4187	-	-	54.9

Vehicle Results

Average Speed, mi/h	54.9	Percent Followers, %	24.6
Segment Travel Time, minutes	0.87	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4905
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	39.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	25.1
Speed Slope Coefficient (m)	1.91896	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.32538	PF Power Coefficient (p)	0.62496
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4905	-	-	24.7

Vehicle Results

Average Speed, mi/h	24.7	Percent Followers, %	30.3
Segment Travel Time, minutes	2.25	Follower Density (FD), followers/mi/ln	1.5
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1162
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	67
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.8
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.62152
PF Slope Coefficient (m)	-1.28024	PF Power Coefficient (p)	0.77103
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1162	-	-	55.5

Vehicle Results

Average Speed, mi/h	55.5	Percent Followers, %	22.6
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8686
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.69306	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.31619	PF Power Coefficient (p)	0.73942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8686	-	-	56.5

Vehicle Results

Average Speed, mi/h	56.5	Percent Followers, %	24.6
Segment Travel Time, minutes	1.75	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1177
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	67
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.9
Speed Slope Coefficient (m)	2.95000	Speed Power Coefficient (p)	0.59085
PF Slope Coefficient (m)	-1.28278	PF Power Coefficient (p)	0.76722
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1177	-	-	50.6

Vehicle Results

Average Speed, mi/h	50.6	Percent Followers, %	22.8
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Segment 11

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1420
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	11.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.3
Speed Slope Coefficient (m)	3.56256	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42277	PF Power Coefficient (p)	0.72994
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1420	-	-	55.5

Vehicle Results

Average Speed, mi/h	55.5	Percent Followers, %	26.7
Segment Travel Time, minutes	0.29	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Segment 12

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10212
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	124	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.4
Speed Slope Coefficient (m)	3.60216	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33893	PF Power Coefficient (p)	0.72336
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.6
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10212	-	-	54.6

Vehicle Results

Average Speed, mi/h	54.6	Percent Followers, %	25.7
Segment Travel Time, minutes	2.12	Follower Density (FD), followers/mi/ln	0.6
Vehicle LOS	A		

Segment 13

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	608
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	284	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.17

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.42136
PF Slope Coefficient (m)	-1.52652	PF Power Coefficient (p)	0.71538
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	2.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	608	-	-	55.8

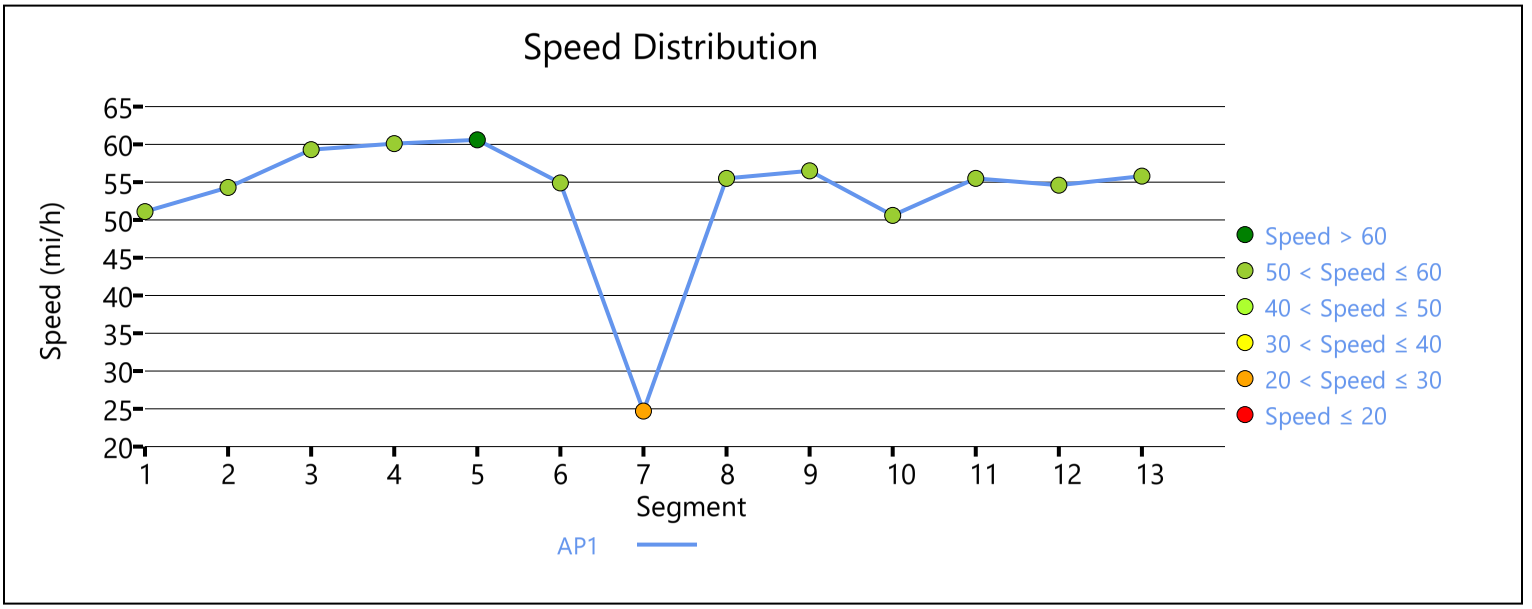
Vehicle Results

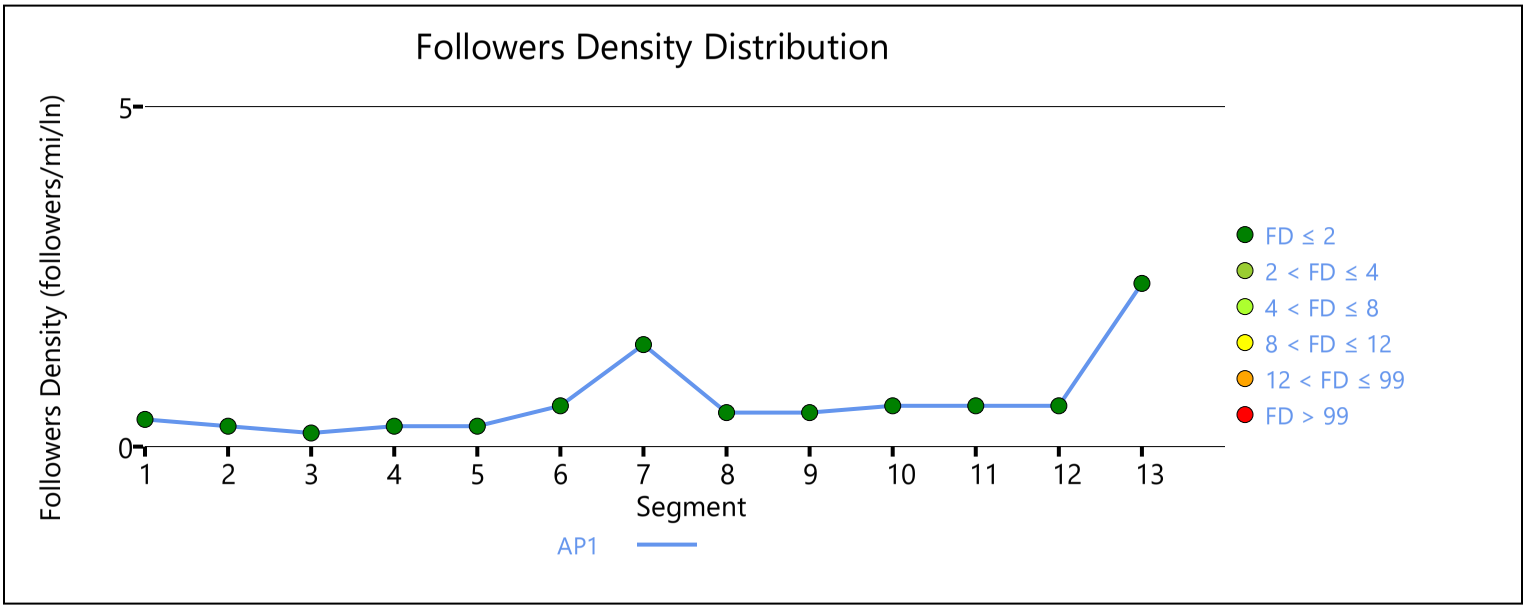
Average Speed, mi/h	55.8	Percent Followers, %	46.2
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	2.4
Vehicle LOS	B		

Facility Results

T	VMT	VHD	Follower Density, followers/	LOS

	veh-mi/p	veh-h/p	mi/ln	
1	223	0.06	0.6	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	KY 57	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3833
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	24.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	51.1
Speed Slope Coefficient (m)	3.31561	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.37832	PF Power Coefficient (p)	0.73598
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3833	-	-	49.9

Vehicle Results

Average Speed, mi/h	49.9	Percent Followers, %	33.1
Segment Travel Time, minutes	0.87	Follower Density (FD), followers/mi/ln	1.2
Vehicle LOS	A		

Segment 2

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	528
Lane Width, ft	9	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	102
Peak Hour Factor	0.94	Total Trucks, %	3.50

Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	54.3
Speed Slope Coefficient (m)	3.15417	Speed Power Coefficient (p)	0.57329
PF Slope Coefficient (m)	-1.29266	PF Power Coefficient (p)	0.77391
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.0
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	528	-	-	53.5

Vehicle Results

Average Speed, mi/h	53.5	Percent Followers, %	29.8
Segment Travel Time, minutes	0.11	Follower Density (FD), followers/mi/ln	1.0
Vehicle LOS	A		

Segment 3

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	2580
Lane Width, ft	9	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	102
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	59.3
Speed Slope Coefficient (m)	4.23153	Speed Power Coefficient (p)	0.71457
PF Slope Coefficient (m)	-1.16478	PF Power Coefficient (p)	0.80653
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.8
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2580	-	-	58.5

Vehicle Results

Average Speed, mi/h	58.5	Percent Followers, %	26.0
Segment Travel Time, minutes	0.50	Follower Density (FD), followers/mi/ln	0.8
Vehicle LOS	A		

Segment 4

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1400
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.7

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	3	Free-Flow Speed, mi/h	60.1
Speed Slope Coefficient (m)	4.77922	Speed Power Coefficient (p)	0.53696
PF Slope Coefficient (m)	-1.47099	PF Power Coefficient (p)	0.73766
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1400	-	-	58.8

Vehicle Results

Average Speed, mi/h	58.8	Percent Followers, %	34.8
Segment Travel Time, minutes	0.27	Follower Density (FD), followers/mi/ln	1.1
Vehicle LOS	A		

Segment 5

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1399
Lane Width, ft	12	Shoulder Width, ft	6
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	187	Opposing Demand Flow Rate, veh/h	102
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.11

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	60.6
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.62914
PF Slope Coefficient (m)	-1.26730	PF Power Coefficient (p)	0.78517
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.9
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1399	-	-	59.9

Vehicle Results

Average Speed, mi/h	59.9	Percent Followers, %	28.8
Segment Travel Time, minutes	0.27	Follower Density (FD), followers/mi/ln	0.9
Vehicle LOS	A		

Segment 6

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4187
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.9

Demand and Capacity

Directional Demand Flow Rate, veh/h	112	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.7
Speed Slope Coefficient (m)	3.56613	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.34280	PF Power Coefficient (p)	0.74945
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4187	-	-	55.1

Vehicle Results

Average Speed, mi/h	55.1	Percent Followers, %	22.9
Segment Travel Time, minutes	0.86	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 7

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4905
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	35	Access Point Density, pts/mi	39.8

Demand and Capacity

Directional Demand Flow Rate, veh/h	112	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	25.1
Speed Slope Coefficient (m)	1.91896	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.32538	PF Power Coefficient (p)	0.62496
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	1.3
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4905	-	-	24.8

Vehicle Results

Average Speed, mi/h	24.8	Percent Followers, %	28.6
Segment Travel Time, minutes	2.24	Follower Density (FD), followers/mi/ln	1.3
Vehicle LOS	A		

Segment 8

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1162
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	8.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	112	Opposing Demand Flow Rate, veh/h	61
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	55.8
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.62611
PF Slope Coefficient (m)	-1.27620	PF Power Coefficient (p)	0.77185
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.4
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1162	-	-	55.6

Vehicle Results

Average Speed, mi/h	55.6	Percent Followers, %	20.9
Segment Travel Time, minutes	0.24	Follower Density (FD), followers/mi/ln	0.4
Vehicle LOS	A		

Segment 9

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	8686
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	7.3

Demand and Capacity

Directional Demand Flow Rate, veh/h	112	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.69306	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.31619	PF Power Coefficient (p)	0.73942
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	8686	-	-	56.7

Vehicle Results

Average Speed, mi/h	56.7	Percent Followers, %	22.9
Segment Travel Time, minutes	1.74	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 10

Vehicle Inputs

Segment Type	Passing Zone	Length, ft	1177
Lane Width, ft	10	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	28.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	112	Opposing Demand Flow Rate, veh/h	61
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	50.9
Speed Slope Coefficient (m)	2.94585	Speed Power Coefficient (p)	0.59462
PF Slope Coefficient (m)	-1.27898	PF Power Coefficient (p)	0.76801
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1177	-	-	50.7

Vehicle Results

Average Speed, mi/h	50.7	Percent Followers, %	21.1
Segment Travel Time, minutes	0.26	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 11

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	1420
Lane Width, ft	12	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	11.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	112	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	56.3
Speed Slope Coefficient (m)	3.56256	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.42277	PF Power Coefficient (p)	0.72994
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	1420	-	-	55.8

Vehicle Results

Average Speed, mi/h	55.8	Percent Followers, %	25.0
Segment Travel Time, minutes	0.29	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 12

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	10212
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	12.4

Demand and Capacity

Directional Demand Flow Rate, veh/h	112	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.07

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	55.4
Speed Slope Coefficient (m)	3.60216	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.33893	PF Power Coefficient (p)	0.72336
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.5
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	10212	-	-	54.8

Vehicle Results

Average Speed, mi/h	54.8	Percent Followers, %	24.0
Segment Travel Time, minutes	2.12	Follower Density (FD), followers/mi/ln	0.5
Vehicle LOS	A		

Segment 13

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	608
Lane Width, ft	11	Shoulder Width, ft	1
Speed Limit, mi/h	55	Access Point Density, pts/mi	4.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	345	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	3.50
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.20

Intermediate Results

Segment Vertical Class	2	Free-Flow Speed, mi/h	57.3
Speed Slope Coefficient (m)	3.11550	Speed Power Coefficient (p)	0.42136
PF Slope Coefficient (m)	-1.52652	PF Power Coefficient (p)	0.71538
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	3.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	608	-	-	55.6

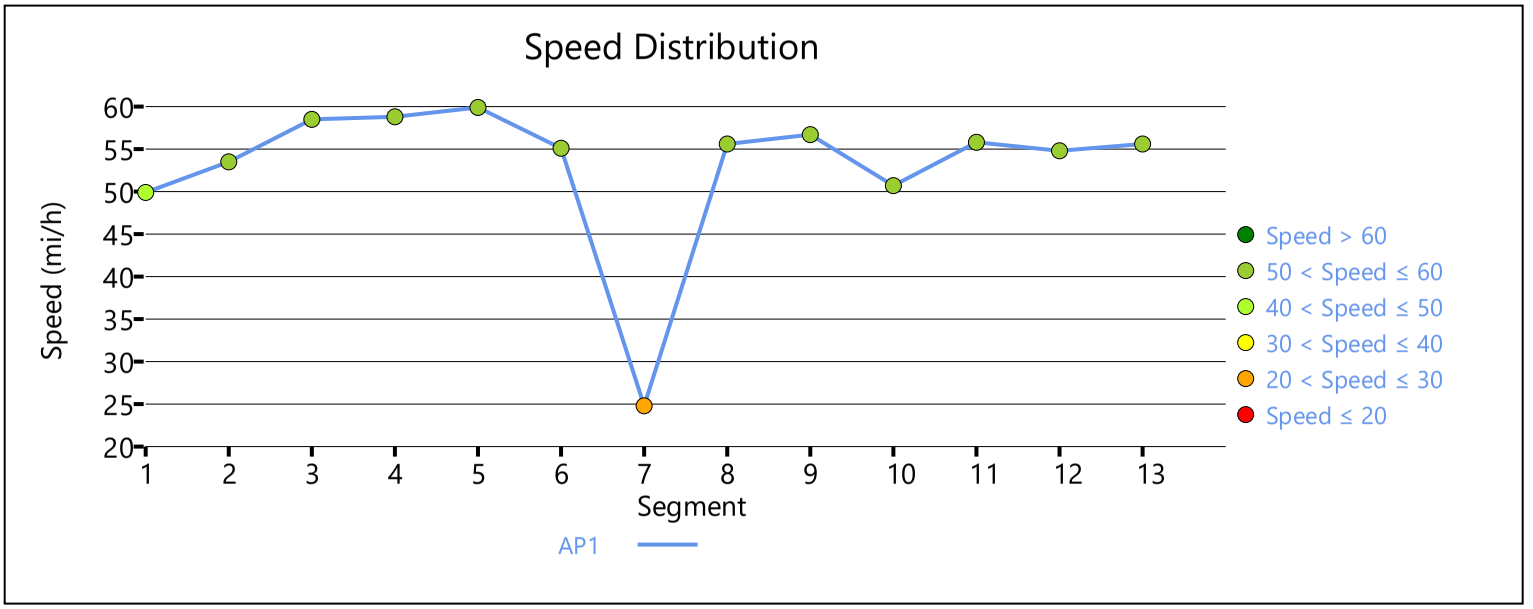
Vehicle Results

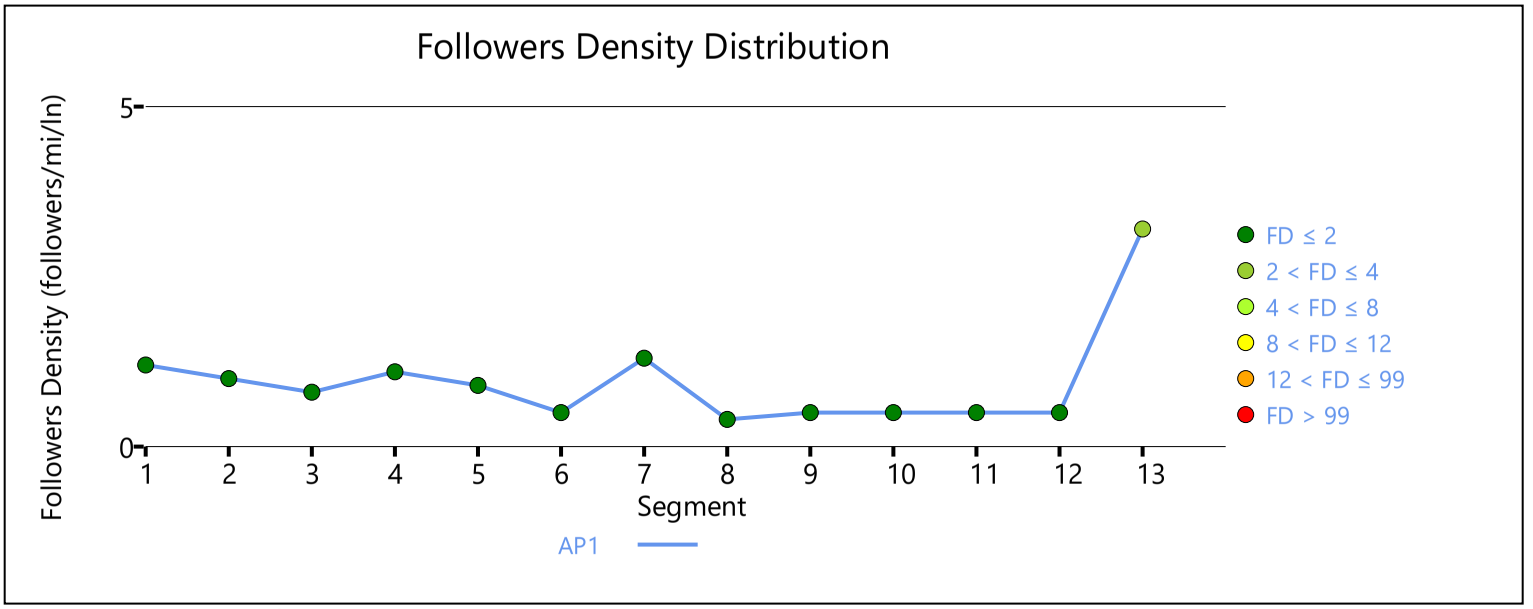
Average Speed, mi/h	55.6	Percent Followers, %	51.0
Segment Travel Time, minutes	0.12	Follower Density (FD), followers/mi/ln	3.2
Vehicle LOS	B		

Facility Results

T	VMT	VHD	Follower Density, followers/	LOS

	veh-mi/p	veh-h/p	mi/ln	
1	248	0.07	0.7	A





HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	CR 1037	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2558
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	14.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	22	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	18.9
Speed Slope Coefficient (m)	1.55508	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27783	PF Power Coefficient (p)	0.57790
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2558	-	-	18.9

Vehicle Results

Average Speed, mi/h	18.9	Percent Followers, %	13.2
Segment Travel Time, minutes	1.54	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	3	0.00	0.2	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	CR 1037	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	2558
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	14.0

Demand and Capacity

Directional Demand Flow Rate, veh/h	28	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	18.9
Speed Slope Coefficient (m)	1.55508	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27783	PF Power Coefficient (p)	0.57790
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	2558	-	-	18.9

Vehicle Results

Average Speed, mi/h	18.9	Percent Followers, %	14.8
Segment Travel Time, minutes	1.54	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	3	0.00	0.2	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	CR 1036	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3025
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	12.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	30	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.02

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	19.4
Speed Slope Coefficient (m)	1.58682	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27434	PF Power Coefficient (p)	0.58479
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.2
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3025	-	-	19.4

Vehicle Results

Average Speed, mi/h	19.4	Percent Followers, %	15.2
Segment Travel Time, minutes	1.77	Follower Density (FD), followers/mi/ln	0.2
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	4	0.00	0.2	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	CR 1036	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	3025
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	12.1

Demand and Capacity

Directional Demand Flow Rate, veh/h	22	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	19.4
Speed Slope Coefficient (m)	1.58682	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27434	PF Power Coefficient (p)	0.58479
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	3025	-	-	19.4

Vehicle Results

Average Speed, mi/h	19.4	Percent Followers, %	12.9
Segment Travel Time, minutes	1.77	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	3	0.00	0.1	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction AM
Project Description	CR 1030	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4172
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	7.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	21	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.5
Speed Slope Coefficient (m)	1.66165	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27316	PF Power Coefficient (p)	0.59682
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4172	-	-	20.5

Vehicle Results

Average Speed, mi/h	20.5	Percent Followers, %	11.8
Segment Travel Time, minutes	2.31	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	4	0.00	0.1	A

HCS Two-Lane Highway Report

Project Information

Analyst	ATW	Date	5/4/2022
Agency	Stantec	Analysis Year	2023
Jurisdiction		Time Analyzed	Construction PM
Project Description	CR 1030	Units	U.S. Customary

Segment 1

Vehicle Inputs

Segment Type	Passing Constrained	Length, ft	4172
Lane Width, ft	9	Shoulder Width, ft	0
Speed Limit, mi/h	25	Access Point Density, pts/mi	7.6

Demand and Capacity

Directional Demand Flow Rate, veh/h	18	Opposing Demand Flow Rate, veh/h	-
Peak Hour Factor	0.94	Total Trucks, %	2.00
Segment Capacity, veh/h	1700	Demand/Capacity (D/C)	0.01

Intermediate Results

Segment Vertical Class	1	Free-Flow Speed, mi/h	20.5
Speed Slope Coefficient (m)	1.66165	Speed Power Coefficient (p)	0.41674
PF Slope Coefficient (m)	-1.27316	PF Power Coefficient (p)	0.59682
In Passing Lane Effective Length?	No	Total Segment Density, veh/mi/ln	0.1
%Improvement to Percent Followers	0.0	%Improvement to Speed	0.0

Subsegment Data

#	Segment Type	Length, ft	Radius, ft	Superelevation, %	Average Speed, mi/h
1	Tangent	4172	-	-	20.5

Vehicle Results

Average Speed, mi/h	20.5	Percent Followers, %	10.8
Segment Travel Time, minutes	2.31	Follower Density (FD), followers/mi/ln	0.1
Vehicle LOS	A		

Facility Results

T	VMT veh-mi/p	VHD veh-h/p	Follower Density, followers/ mi/ln	LOS
1	3	0.00	0.1	A