

final report

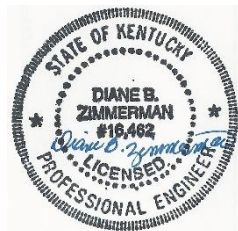
November 4, 2024

Traffic Impact Study

*Goodwill
Old Bardstown Road
Louisville, KY*

Prepared for

Louisville Metro Planning Commission



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INTRODUCTION

The development plan for the proposed Goodwill on Old Bardstown Road at the corner of Fairmount Road in Louisville, KY shows a 16,003 square foot store and three medical office buildings with 22,595 square feet. **Figure 1** displays a map of the site. Access to the site will be from two shared driveways on Old Bardstown Road and an entrance on Fairmount Road. The purpose of this study is to examine the traffic impacts of the development upon the adjacent highway system. For this study the impact area was defined to be the intersections of Old Bardstown Road with Fairmount Road (north and south) and the intersection of Fairmount Road with Old Bardstown Road, and the entrances.

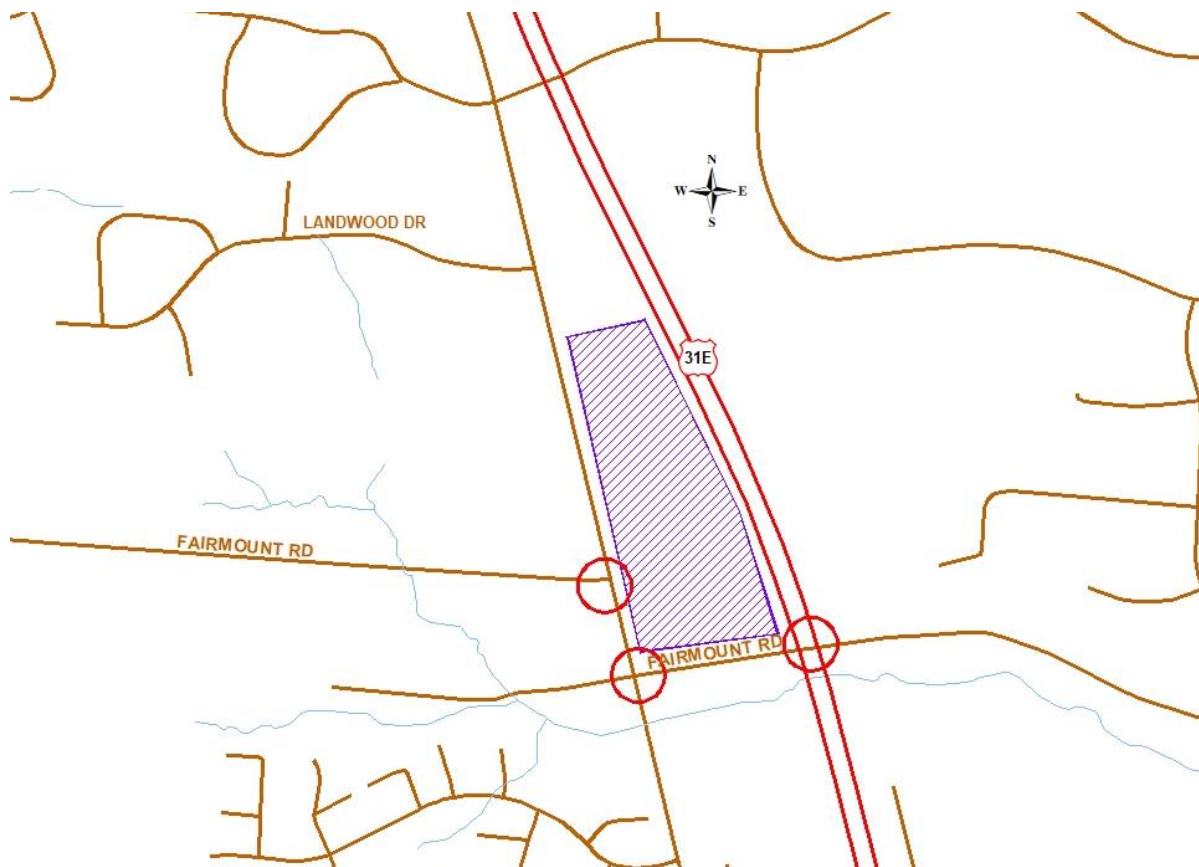


Figure 1. Site Map

EXISTING CONDITIONS

Old Bardstown Road is a Metro maintained road with an estimated 2024 ADT of 4,700 vehicles per day between Hillock and Thixton Lane as estimated from the Kentucky Transportation Cabinet (KYTC) 2023 count at station M67. The road is a two-lane highway with ten-foot lanes with a stabilized shoulder through the study area (provided by the Kentucky Transportation Cabinet). The speed limit is 45 mph. There are sidewalks on the west side, north of Fairmount Road (west). Both intersections with Fairmount Road are controlled with a stop sign.

Peak hour traffic counts for the intersections were obtained on Tuesday, October 8, 2024 (see Appendix). The peak hours of the intersections varied. **Figure 2** illustrates the existing a.m. and p.m. peak hour traffic volumes.

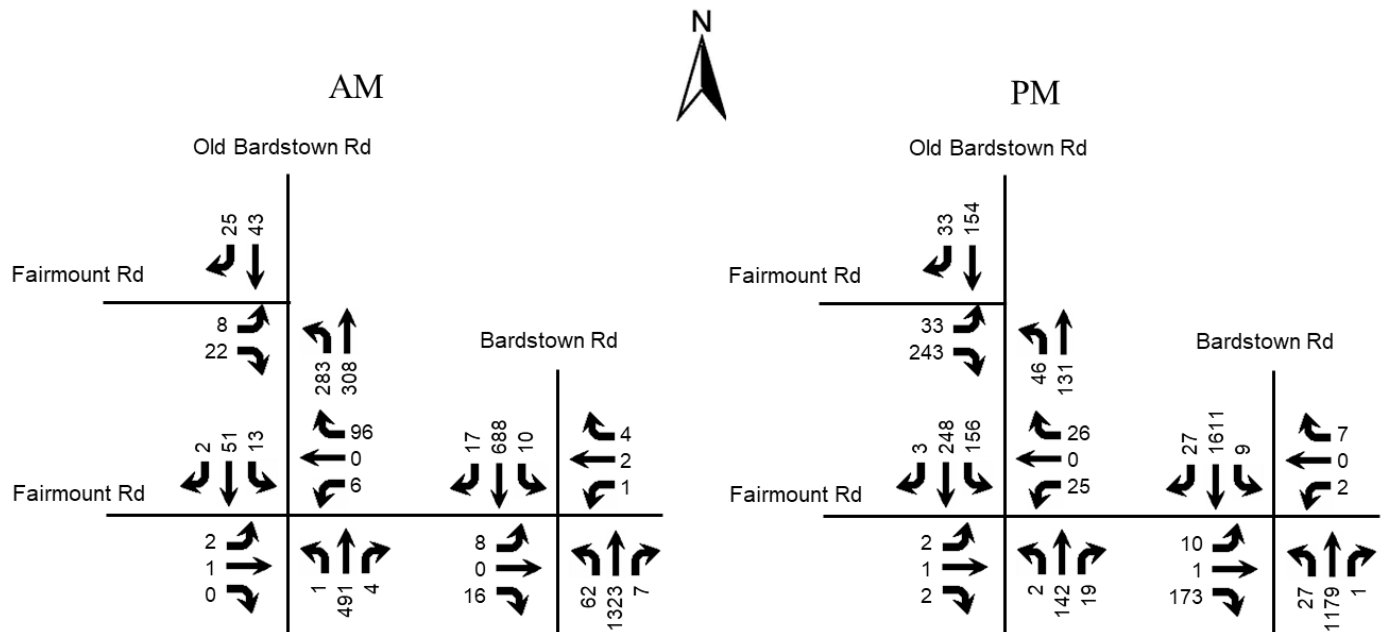


Figure 2. Existing Peak Hour Volumes

FUTURE CONDITIONS

The requested analysis year for this project is 2026. To predict traffic volumes in 2026, 2.2 percent annual growth in traffic was added to the 2024 volumes. **Figure 3** displays the 2026 No Build volumes.

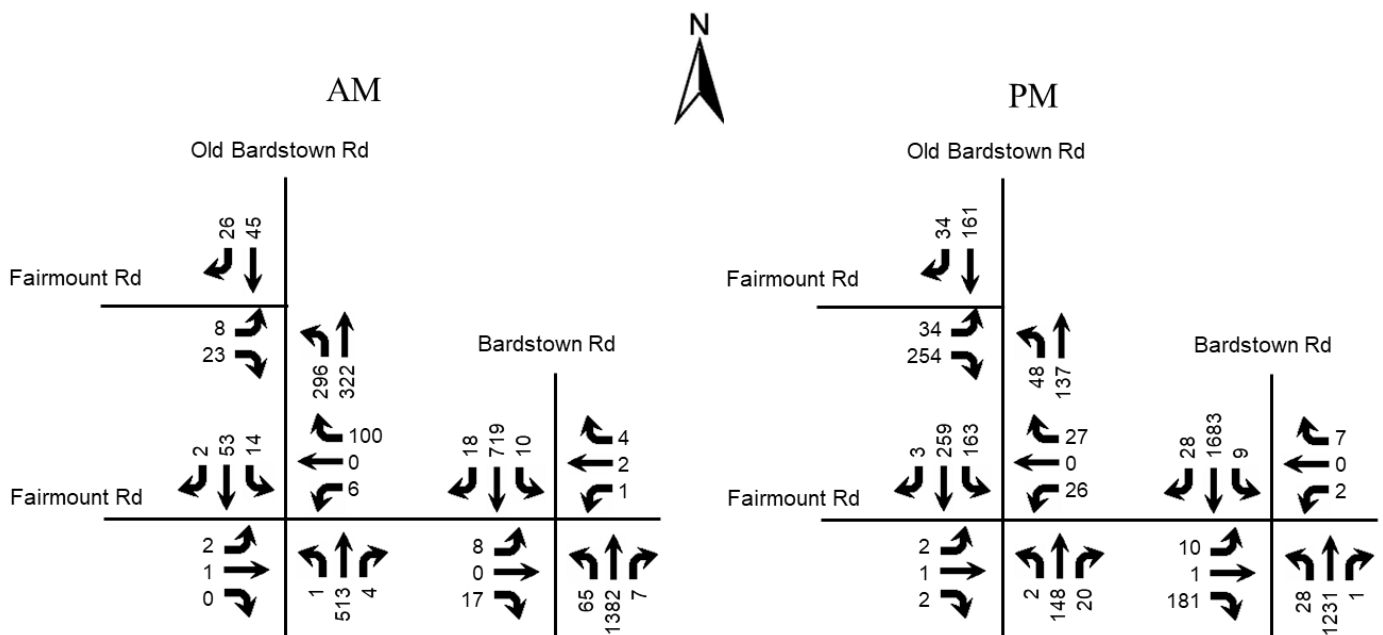


Figure 3. 2026 No Build Peak Hour Volumes

TRIP GENERATION

The Institute of Transportation Engineers Trip Generation Manual, 11th Edition contains trip generation rates for a wide range of developments. The land uses of "Variety Store (814)" was reviewed and determined to be the best match. The trip generation results are listed in **Table 1**. The primary trips were assigned to the highway network with the percentages shown in **Figure 4**. **Figure 5** shows the trips generated by this development and distributed throughout the road network during the peak hours. **Figure 6** displays the individual turning movements for the peak hours when the development is completed.

Table 1. Peak Hour Trips Generated by Site

Land Use	A.M. Peak Hour			P.M. Peak Hour		
	Trips	In	Out	Trips	In	Out
Variety Store (16,003 sq ft)	49	27	22	107	55	52
Medical Office (22,595 sq ft)	63	50	13	89	27	62
TOTAL	112	77	35	196	82	114

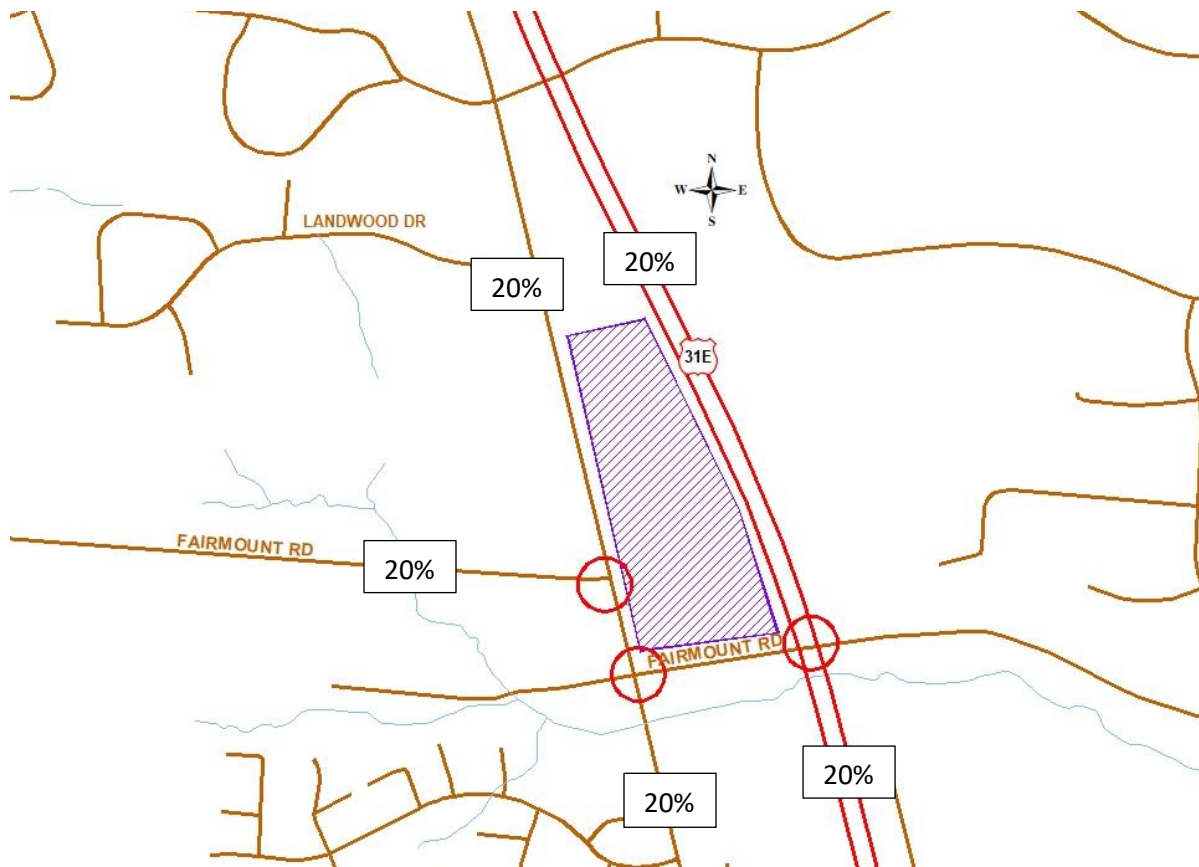


Figure 4. Trip Distribution Percentages

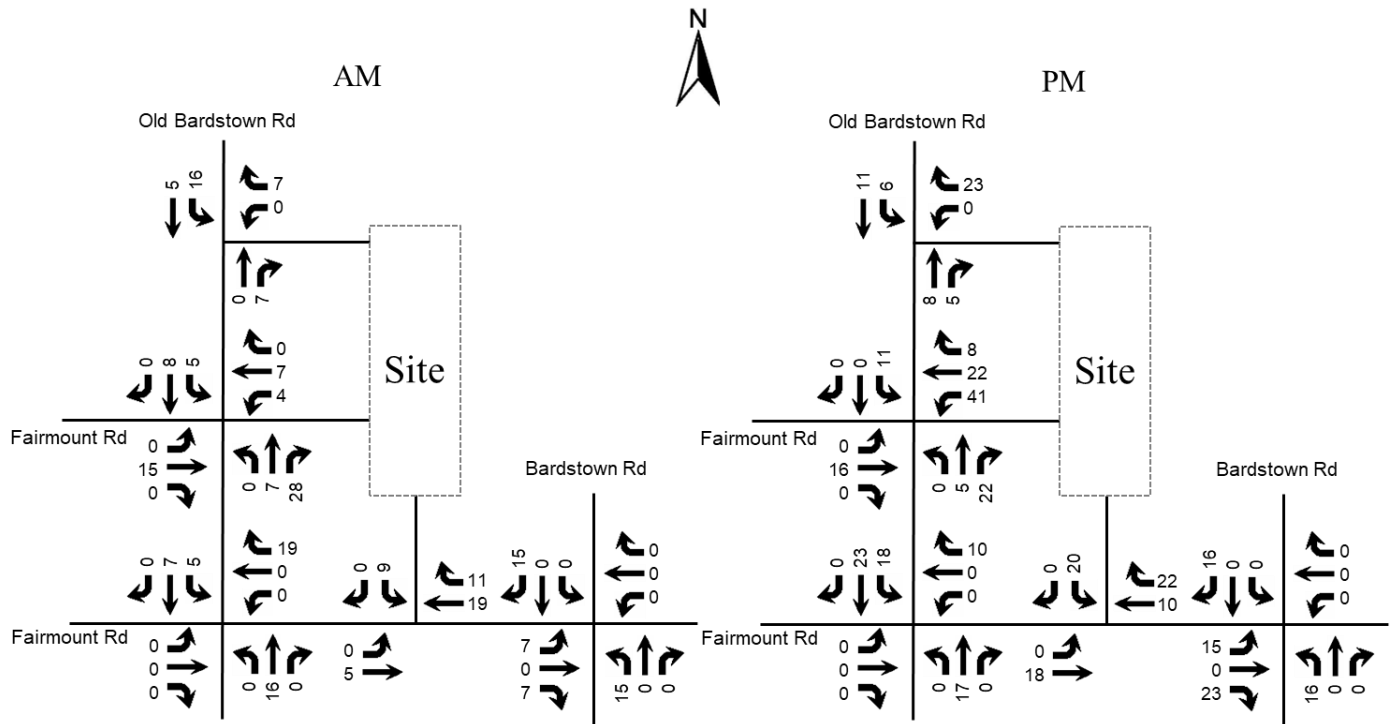


Figure 5. Peak Hour Trips Generated by Site

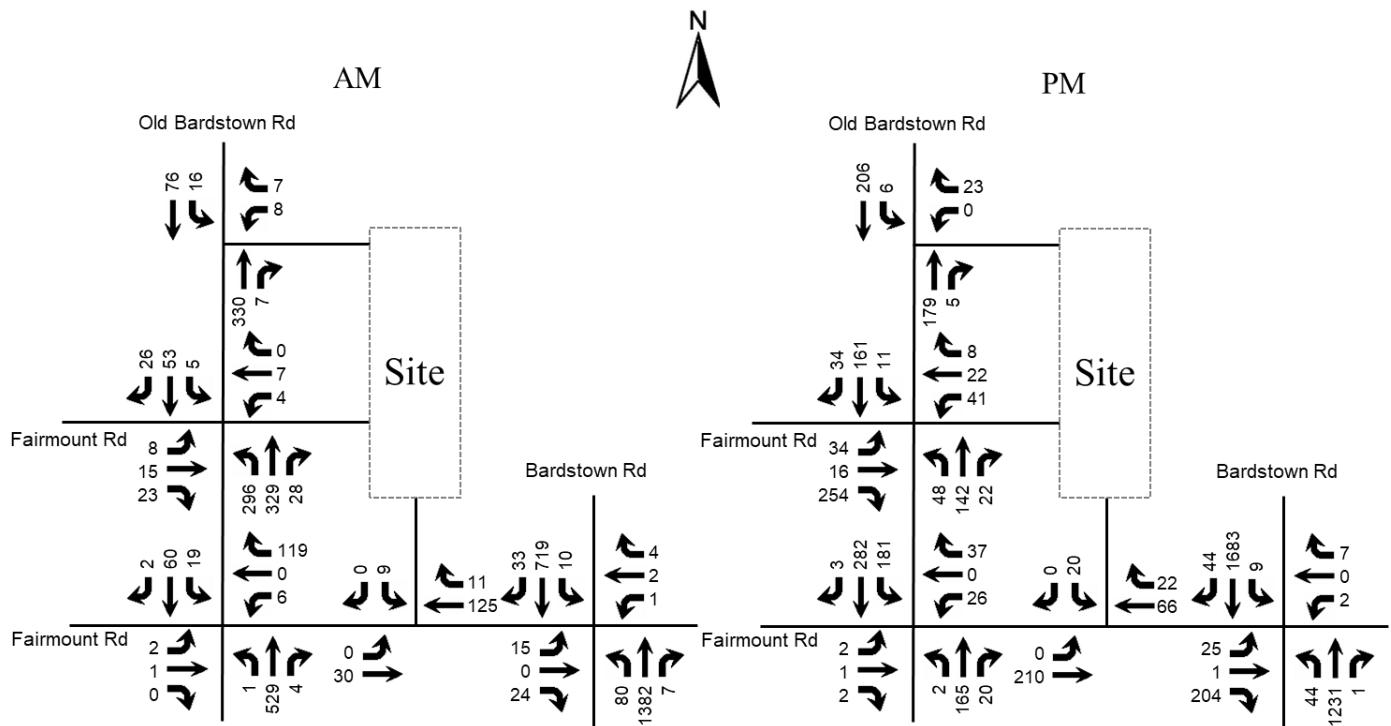


Figure 6. 2026 Peak Hour Build

ANALYSIS

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a “Level of Service”. Level of Service is a ranking scale from A through F, “A” is the best operating condition and “F” is the worst. Level of Service results depend upon the facility that is analyzed. In this case, the Level of Service is based upon the total delay experienced at an intersection.

To evaluate the impact of the proposed development, the vehicle delays at the intersections were determined using procedures detailed in the Highway Capacity Manual, 7th edition. Future delays and Level of Service were determined for the intersections using the HCS Streets, and TWSC, (version 2024) software. The delays and Level of Service are summarized in **Table 2**.

Table 2. Peak Hour Level of Service

Approach	A.M.			P.M.		
	2024 Existing	2026 No Build	2026 Build	2024 Existing	2026 No Build	2026 Build
Old Bardstown Rd at Fairmount Rd (East)						
Fairmount Road Eastbound	C 18.9	C 19.9	C 22.3	B 14.5	B 15.0	C 16.4
Fairmount Road Westbound	C 15.3	C 16.0	C 17.3	B 14.3	B 14.9	C 15.4
Old Bardstown Road Northbound	A 7.3	A 7.3	A 7.3	A 7.7	A 7.8	A 7.8
Old Bardstown Road Southbound	A 8.8	A 8.9	A 9.0	A 7.9	A 7.9	A 8.0
Old Bardstown Rd at Fairmount Rd (West)						
Fairmount Road Eastbound	C 15.1	C 15.8	D 33.8	B 11.9	B 12.2	B 13.5
Driveway Westbound			E 49.5			C 19.3
Old Bardstown Road Northbound	A 8.1	A 8.2	A 8.2	A 7.7	A 7.7	A 7.7
Old Bardstown Road Southbound			A 8.2			A 7.6
Old Bardstown Road at Entrance (North)						
Driveway Westbound			B 11.8			A 9.3
Old Bardstown Road Southbound			A 8.2			A 7.6
Fairmount Road at Entrance						
Fairmount Road Eastbound			A 7.5			A 7.4
Entrance Southbound			A 9.6			B 10.3

	A.M.			P.M.		
Approach	2024 Existing	2026 No Build	2026 Build	2024 Existing	2026 No Build	2026 Build
Bardstown Road at Fairmount Road						
Fairmount Road Eastbound	C 16.3	C 16.8	C 19.3	D 29.2	D 34.1	E 49.8
Fairmount Road Westbound	D 25.3	D 27.1	D 28.3	C 23.9	D 27.1	E 36.6
Bardstown Road Northbound	A 9.6	A 9.8	A 10.0	C 15.6	C 16.5	C 17.3
Bardstown Road Southbound	B 12.4	B 12.9	B 12.9	B 11.2	B 11.5	B 11.5

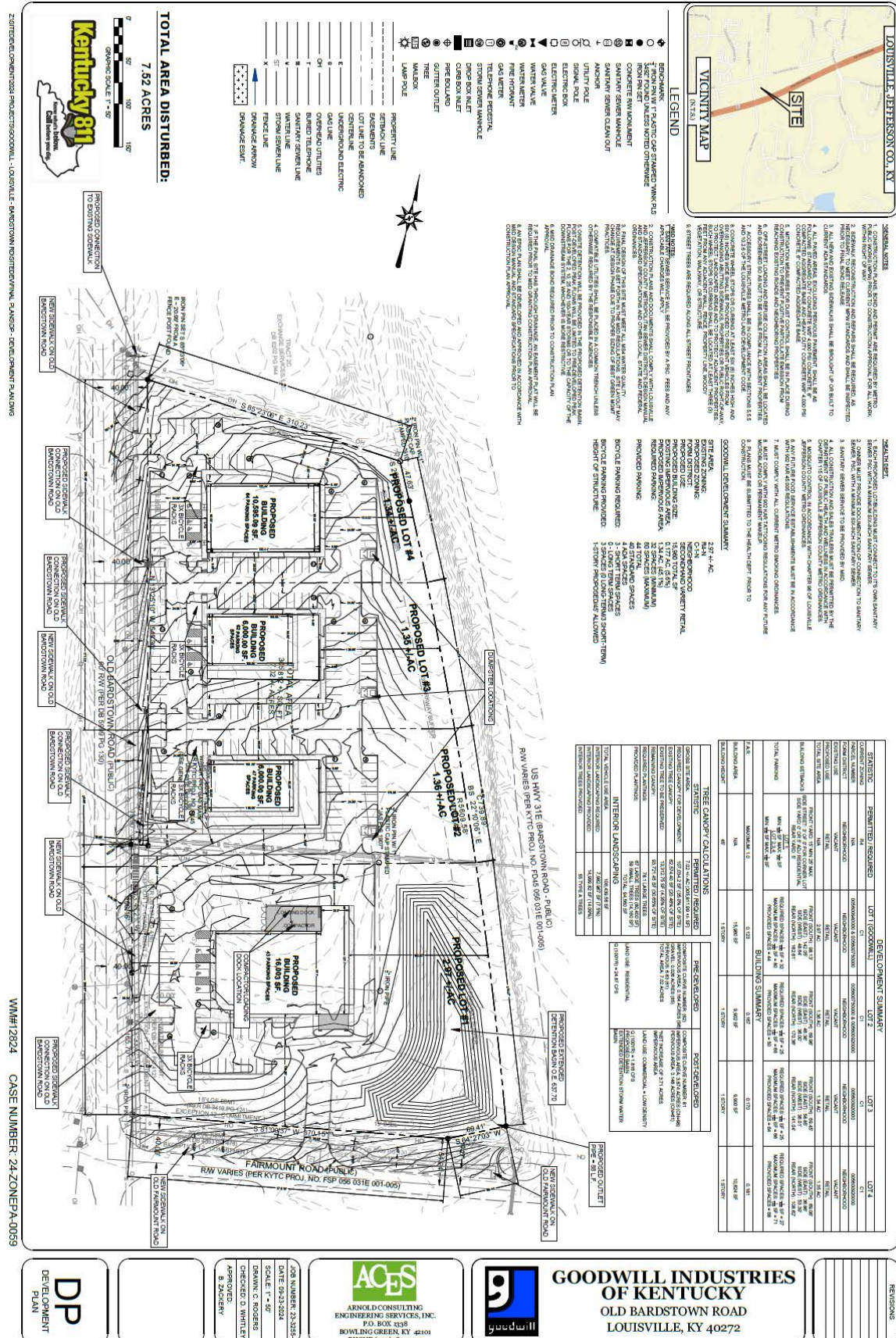
Key: Level of Service, Delay in seconds per vehicle

The entrances were evaluated for turn lanes using the Kentucky Transportation Cabinet Highway Design Guidance Manual dated July, 2020. Using the volumes in Figure 6, no turn lanes are required.

CONCLUSIONS

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2026, there will be an impact to the existing highway network. No roadway improvements are required to provide adequate capacity.

APPENDIX



Goodwill Old Bardstown Road
Traffic Impact Study

Traffic Counts

Classified Turn Movement Count || All vehicles

Louisville, KY



www.marrtraffic.com

Site 1

Old Bardstown Rd (South)
Old Bardstown Rd (North)
Fairmount Rd (West)
Fairmount Rd (East)



Date

Tuesday, October 8, 2024

Weather

Fair
62°F

[Click here for Detailed Weather](#)

Lat/Long

38.116076°, -85.571748°

[Click here for Map](#)



0700 - 0900 (Weekday 2h Session) (10-08-2024)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Old Bardstown Rd (South)				Old Bardstown Rd (North)				Fairmount Rd (West)				Fairmount Rd (East)								
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
0700 - 0715	0	143	0	0	143	3	7	1	0	11	0	0	0	0	0	0	0	25	0	25	179
0715 - 0730	0	160	0	0	160	4	11	1	0	16	0	0	0	0	0	1	0	32	0	33	209
0730 - 0745	1	103	2	0	106	3	14	0	0	17	1	1	0	0	2	2	0	28	0	30	155
0745 - 0800	0	85	2	0	87	3	19	0	0	22	1	0	0	0	1	3	0	11	0	14	124
Hourly Total	1	491	4	0	496	13	51	2	0	66	2	1	0	0	3	6	0	96	0	102	667
0800 - 0815	0	83	2	0	85	4	19	0	0	23	0	0	0	0	0	6	0	16	0	22	130
0815 - 0830	0	62	3	0	65	4	20	1	0	25	0	0	0	0	0	5	0	13	0	18	108
0830 - 0845	0	60	2	0	62	4	16	0	0	20	1	0	0	0	1	5	0	3	0	8	91
0845 - 0900	0	54	5	0	59	0	27	0	0	27	0	0	0	0	0	11	1	12	0	24	110
Hourly Total	0	259	12	0	271	12	82	1	0	95	1	0	0	0	1	27	1	44	0	72	439
Grand Total	1	750	16	0	767	25	133	3	0	161	3	1	0	0	4	33	1	140	0	174	1106
Approach %	0.13	97.78	2.09	0.00	-	15.53	82.61	1.86	0.00	-	75.00	25.00	0.00	0.00	-	18.97	0.57	80.46	0.00	-	
Intersection %	0.09	67.81	1.45	0.00	69.35	2.26	12.03	0.27	0.00	14.56	0.27	0.09	0.00	0.00	0.36	2.98	0.09	12.66	0.00	15.73	
Heavy Vehicle %	0	1	0	-	1	0	8	0	-	7	0	0	-	-	0	12	0	4	-	5	3
PHF	0.25	0.77	0.50	0.00	0.78	0.81	0.67	0.50	0.00	0.75	0.50	0.25	0.00	0.00	0.38	0.50	0.00	0.75	0.00	0.77	0.80

1600 - 1800 (Weekday 2h Session) (10-08-2024)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int Total
	Old Bardstown Rd (South)					Old Bardstown Rd (North)					Fairmount Rd (West)					Fairmount Rd (East)					
	Left 1.1	Thru 1.2	Right 1.3	U-Turn 1.4	App Total	Left 1.5	Thru 1.6	Right 1.7	U-Turn 1.8	App Total	Left 1.9	Thru 1.10	Right 1.11	U-Turn 1.12	App Total	Left 1.13	Thru 1.14	Right 1.15	U-Turn 1.16	App Total	
1600 - 1615	0	38	4	0	42	31	53	0	1	85	0	0	0	0	0	6	0	3	0	9	136
1615 - 1630	0	34	5	0	39	48	40	0	0	88	0	0	0	0	0	8	0	6	0	14	141
1630 - 1645	0	41	2	0	43	37	48	0	0	85	0	0	0	0	0	13	0	10	0	23	151
1645 - 1700	0	35	4	0	39	43	60	2	0	105	0	0	0	0	0	5	0	3	0	8	152
Hourly Total	0	148	15	0	163	159	201	2	1	363	0	0	0	0	0	32	0	22	0	54	580
1700 - 1715	0	37	2	0	39	46	59	1	0	106	0	1	0	0	1	7	0	5	0	12	158
1715 - 1730	0	38	6	0	44	39	61	1	0	101	1	0	1	0	2	6	0	6	0	12	159
1730 - 1745	1	33	5	0	39	38	62	0	0	100	0	0	0	0	0	7	0	5	0	12	151
1745 - 1800	1	34	6	0	41	33	66	1	0	100	1	0	1	0	2	5	0	10	0	15	158
Hourly Total	2	142	19	0	163	156	248	3	0	407	2	1	2	0	5	25	0	26	0	51	626
Grand Total	2	290	34	0	326	315	449	5	1	770	2	1	2	0	5	57	0	48	0	105	1206
Approach %	0.61	88.96	10.43	0.00	-	40.91	58.31	0.65	0.13	-	40.00	20.00	40.00	0.00	-	54.29	0.00	45.71	0.00	-	
Intersection %	0.17	24.05	2.82	0.00	27.03	26.12	37.23	0.41	0.08	63.85	0.17	0.08	0.17	0.00	0.41	4.73	0.00	3.98	0.00	8.71	
Heavy Vehicle %	0	2	0	-	2	2	2	0	100	2	0	0	0	-	0	5	-	2	-	4	2
PHF	0.50	0.93	0.79	0.00	0.93	0.85	0.94	0.75	0.00	0.96	0.50	0.25	0.50	0.00	0.63	0.89	0.00	0.65	0.00	0.85	0.98

Goodwill Old Bardstown Road Traffic Impact Study

Classified Turn Movement Count || All vehicles

Louisville, KY



Site 2

Old Bardstown Rd (South)
Old Bardstown Rd (North)
Fairmount Rd



Date

Tuesday, October 8, 2024

Lat/Long

38.116982°, -85.572034°

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Weather

Fair

62°F

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0700 - 0900 (Weekday 2h Session) (10-08-2024)

All vehicles

TIME	Northbound				Southbound				Eastbound				Int Total
	Old Bardstown Rd (South)				Old Bardstown Rd (North)				Fairmount Rd				
	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	
0700 - 0715	59	107	0	166	7	4	0	11	3	3	0	6	183
0715 - 0730	119	73	0	192	9	9	0	18	2	7	0	9	219
0730 - 0745	70	65	0	135	13	6	0	19	1	4	0	5	159
0745 - 0800	35	63	0	98	14	6	0	20	2	8	0	10	128
Hourly Total	283	308	0	591	43	25	0	68	8	22	0	30	689
0800 - 0815	26	72	0	98	19	4	0	23	1	3	0	4	125
0815 - 0830	19	57	0	76	25	6	0	31	1	0	0	1	108
0830 - 0845	9	52	0	61	20	8	0	28	11	1	0	12	101
0845 - 0900	14	52	0	66	25	5	0	30	6	2	0	8	104
Hourly Total	68	233	0	301	89	23	0	112	19	6	0	25	438
Grand Total	351	541	0	892	132	48	0	180	27	28	0	55	1127
Approach %	39.35	60.65	0.00	-	73.33	26.67	0.00	-	49.09	50.91	0.00	-	
Intersection %	31.14	48.00	0.00	79.15	11.71	4.26	0.00	15.97	2.40	2.48	0.00	4.88	
Heavy Vehicle %	1	2	-	1	7	10	-	8	0	7	-	4	3
PHF	0.59	0.72	0.00	0.77	0.77	0.69	0.00	0.85	0.67	0.69	0.00	0.75	0.79

1600 - 1800 (Weekday 2h Session) (10-08-2024)

All vehicles

TIME	Northbound				Southbound				Eastbound				Int Total
	Old Bardstown Rd (South)				Old Bardstown Rd (North)				Fairmount Rd				
	Left 2.1	Thru 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Right 2.8	U-Turn 2.9	App Total	
1600 - 1615	9	33	0	42	26	3	0	29	9	59	0	68	139
1615 - 1630	9	32	0	41	31	8	0	39	6	59	0	65	145
1630 - 1645	12	39	0	51	34	6	0	40	6	51	0	57	148
1645 - 1700	9	29	0	38	41	8	0	49	7	64	0	71	158
Hourly Total	39	133	0	172	132	25	0	157	28	233	0	261	590
1700 - 1715	13	29	0	42	40	10	0	50	10	64	0	74	166
1715 - 1730	12	34	0	46	39	9	0	48	10	64	0	74	168
1730 - 1745	15	24	0	39	45	4	0	49	5	53	0	58	146
1745 - 1800	16	25	0	41	52	9	0	61	7	47	0	54	156
Hourly Total	56	112	0	168	176	32	0	208	32	228	0	260	636
Grand Total	95	245	0	340	308	57	0	365	60	461	0	521	1226
Approach %	27.94	72.06	0.00	-	84.38	15.62	0.00	-	11.52	88.48	0.00	-	
Intersection %	7.75	19.98	0.00	27.73	25.12	4.65	0.00	29.77	4.89	37.60	0.00	42.50	
Heavy Vehicle %	3	2	-	2	3	2	-	2	2	2	-	2	2
PHF	0.88	0.84	0.00	0.87	0.94	0.83	0.00	0.94	0.83	0.95	0.00	0.93	0.95

Goodwill Old Bardstown Road Traffic Impact Study

Classified Turn Movement Count || All vehicles

Louisville, KY



Site 3

US-150 Bardstown Rd (South)
US-150 Bardstown Rd (North)
Fairmount Rd (West)
Fairmount Rd (East)



Date

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Weather

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0700 - 0900 (Weekday 2h Session) (10-08-2024)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int	Total
	US-150 Bardstown Rd (South)					US-150 Bardstown Rd (North)					Fairmount Rd (West)					Fairmount Rd (East)						
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total		
0700 - 0715	31	298	0	0	329	4	134	0	0	138	1	0	2	0	3	0	1	1	0	2	472	
0715 - 0730	29	315	0	0	344	1	170	1	0	172	0	0	4	0	4	0	2	0	0	2	522	
0730 - 0745	24	326	4	1	355	3	175	2	0	180	1	0	5	0	6	0	1	0	0	1	542	
0745 - 0800	11	303	2	0	316	5	186	2	0	193	2	0	3	0	5	0	1	0	0	1	515	
Hourly Total	95	1242	6	1	1344	13	665	5	0	683	4	0	14	0	18	0	5	1	0	6	2051	
0800 - 0815	15	321	0	0	336	1	167	7	0	175	3	0	4	0	7	0	0	2	0	2	520	
0815 - 0830	11	373	1	0	385	1	160	6	0	167	2	0	4	0	6	1	0	2	0	3	561	
0830 - 0845	2	314	0	0	316	1	164	6	0	171	3	0	3	0	6	0	0	1	0	1	494	
0845 - 0900	11	265	0	0	276	3	187	12	0	202	5	0	1	0	6	0	0	0	0	0	484	
Hourly Total	39	1273	1	0	1313	6	678	31	0	715	13	0	12	0	25	1	0	5	0	6	2059	
Grand Total	134	2515	7	1	2657	19	1343	36	0	1398	17	0	26	0	43	1	5	6	0	12	4110	
Approach %	5.04	94.66	0.26	0.04	-	1.36	96.07	2.58	0.00	-	39.53	0.00	60.47	0.00	-	8.33	41.67	50.00	0.00	-		
Intersection %	3.26	61.19	0.17	0.02	64.65	0.46	32.68	0.88	0.00	34.01	0.41	0.00	0.63	0.00	1.05	0.02	0.12	0.15	0.00	0.29		
Heavy Vehicle %	4	4	14	0	4	0	5	8	-	5	0	-	0	-	0	0	0	17	-	8	4	
PHF	0.64	0.89	0.44	0.25	0.90	0.50	0.92	0.61	0.00	0.93	0.67	0.00	0.80	0.00	0.86	0.25	0.50	0.50	0.00	0.58	0.95	

1600 - 1800 (Weekday 2h Session) (10-08-2024)

All vehicles

TIME	Northbound					Southbound					Eastbound					Westbound					Int
	US-150 Bardstown Rd (South)					US-150 Bardstown Rd (North)					Fairmount Rd (West)					Fairmount Rd (East)					
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total	Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total	
1600 - 1615	3	262	1	0	266	0	358	6	0	364	1	0	33	0	34	0	0	1	0	1	665
1615 - 1630	7	258	0	0	265	1	362	8	0	371	2	0	51	0	53	0	0	2	0	2	691
1630 - 1645	12	282	0	1	295	3	394	9	1	407	3	0	37	0	40	0	0	5	0	5	747
1645 - 1700	3	309	0	0	312	3	404	5	0	412	1	1	45	0	47	1	0	0	0	1	772
Hourly Total	25	1111	1	1	1138	7	1518	28	1	1554	7	1	166	0	174	1	0	8	0	9	2875
1700 - 1715	6	278	0	0	284	1	409	7	0	417	2	0	43	0	45	1	0	0	0	1	747
1715 - 1730	5	310	1	0	316	1	404	6	0	411	4	0	48	0	52	0	0	2	0	2	781
1730 - 1745	5	268	0	0	273	1	394	7	0	402	5	0	36	0	41	0	0	2	0	2	718
1745 - 1800	8	225	0	0	233	1	395	6	0	402	6	0	33	0	39	0	1	4	0	5	679
Hourly Total	24	1081	1	0	1106	4	1602	26	0	1632	17	0	160	0	177	1	1	8	0	10	2925
Grand Total	49	2192	2	1	2244	11	3120	54	1	3186	24	1	326	0	351	2	1	16	0	19	5800
Approach %	2.18	97.68	0.09	0.04	-	0.35	97.93	1.69	0.03	-	6.84	0.28	92.88	0.00	-	10.53	5.26	84.21	0.00	-	
Intersection %	0.84	37.79	0.03	0.02	38.69	0.19	53.79	0.93	0.02	54.93	0.41	0.02	5.62	0.00	6.05	0.03	0.02	0.28	0.00	0.33	
Heavy Vehicle %	6	2	50	0	3	0	1	2	0	1	0	0	2	-	2	0	0	6	-	5	2
PHF	0.54	0.95	0.25	0.25	0.95	0.67	0.98	0.75	0.25	0.99	0.63	0.25	0.90	0.00	0.88	0.50	0.00	0.35	0.00	0.45	0.98

TIS Simplified Traffic Forecast

Count Year	2024	Number of Counts	15
Opening Year	2026		
Design Year	2036	Growth Rate	2.16%
Years Back	15		

KYTC Traffic Count Station #1

STA ID	056262
Paste Count Data Here	
2024	
2023	3623
2022	
2021	
2020	3169
2019	
2018	
2017	2985
2016	
2015	
2014	2521
2013	
2012	
2011	2010
2010	
2009	
2008	2030
2007	
2006	
2005	2000
2004	
2003	2660
2002	
2001	
2000	1670

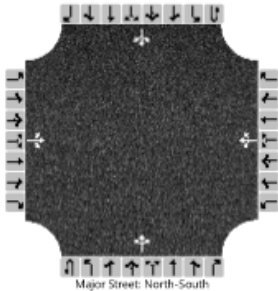
KYTC Traffic Count Station #2

STA ID	056M67
Paste Count Data Here	
2024	
2023	4569
2022	
2021	
2020	3858
2019	4519
2018	4480
2017	
2016	4043
2015	3797
2013	
2012	
2011	
2010	
2009	
2008	
2007	
2006	
2005	
2004	
2003	
2002	
2001	
2000	
1999	

KYTC Traffic Count Station #3

STA ID	056257
Paste Count Data Here	
2024	
2023	31314
2022	
2021	
2020	
2019	
2018	33295
2017	
2016	
2015	
2014	
2013	29024
2012	
2011	
2010	25900
2009	
2008	
2007	26000
2006	
2005	
2004	
2003	26700
2002	
2001	
2000	23200

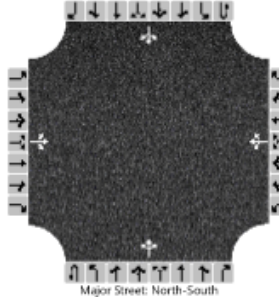
HCS Reports

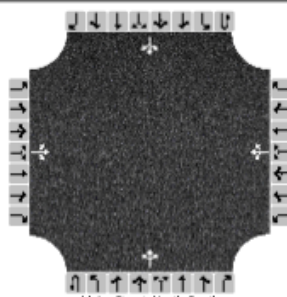
HCS Two-Way Stop-Control Report																				
General Information								Site Information												
Analyst	DBZ							Intersection	Old Bardstown Road at Fairmount (East)											
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction												
Date Performed	11/4/2024							East/West Street	Fairmount Road											
Analysis Year	2024							North/South Street	Old Bardstown Road											
Time Analyzed	AM Peak							Peak Hour Factor	0.80											
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25											
Project Description	Goodwill Old Bardstown Rd																			
Lanes																				
 Major Street: North-South																				
Vehicle Volumes and Adjustments																				
Approach	Eastbound				Westbound				Northbound				Southbound							
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R				
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6				
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0				
Configuration			LTR				LTR				LTR				LTR					
Volume (veh/h)		2	1	0		6	0	96		1	491	4		13	51	2				
Percent Heavy Vehicles (%)		0	0	0		0	0	3		0				0						
Proportion Time Blocked																				
Percent Grade (%)		0				0														
Right Turn Channelized																				
Median Type Storage		Undivided																		
Critical and Follow-up Headways																				
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1						
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.23		4.10				4.10						
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2						
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.33		2.20				2.20						
Delay, Queue Length, and Level of Service																				
Flow Rate, v (veh/h)			4				128			1				16						
Capacity, c (veh/h)			264				476			1548				971						
v/c Ratio			0.01				0.27			0.00				0.02						
95% Queue Length, Q ₉₅ (veh)			0.0				1.1			0.0				0.1						
95% Queue Length, Q ₉₅ (ft)			0.0				28.1													
Control Delay (s/veh)			18.9				15.3			7.3	0.0	0.0		8.8	0.2	0.2				
Level of Service (LOS)			C				C			A	A	A		A	A	A				
Approach Delay (s/veh)		18.9				15.3					0.0				1.8					
Approach LOS		C				C					A				A					

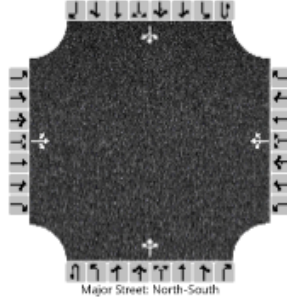
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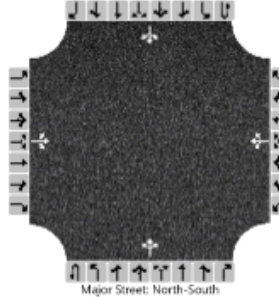
HCS™ TWSC Version 2024
Fairmount East AM 24.jtw

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HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection				Old Bardstown Road at Fairmount (East)				
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street				Fairmount Road				
Analysis Year	2026							North/South Street				Old Bardstown Road				
Time Analyzed	AM Peak No Build							Peak Hour Factor				0.80				
Intersection Orientation	North-South							Analysis Time Period (hrs)				0.25				
Project Description	Goodwill Old Bardstown Rd															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	1	0		6	0	100		1	513	4		14	53	2
Percent Heavy Vehicles (%)		0	0	0		0	0	3		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.23		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.33		2.20				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			4				133			1				18		
Capacity, c (veh/h)			245				459			1545				949		
v/c Ratio			0.02				0.29			0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.0				1.2			0.0				0.1		
95% Queue Length, Q ₉₅ (ft)			0.0				30.7									
Control Delay (s/veh)			19.9				16.0			7.3	0.0	0.0		8.9	0.2	0.2
Level of Service (LOS)			C				C			A	A	A		A	A	A
Approach Delay (s/veh)	19.9				16.0				0.0				1.9			
Approach LOS	C				C				A				A			

HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ								Intersection				Old Bardstown Road at Fairmount (East)			
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction							
Date Performed	11/4/2024								East/West Street				Fairmount Road			
Analysis Year	2026								North/South Street				Old Bardstown Road			
Time Analyzed	AM Peak Build								Peak Hour Factor				0.80			
Intersection Orientation	North-South								Analysis Time Period (hrs)				0.25			
Project Description	Goodwill Old Bardstown Rd															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	1	0		6	0	119		1	529	4		19	60	2
Percent Heavy Vehicles (%)		0	0	0		0	0	3		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.10	6.50	6.23		4.10				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.33		2.20				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			4				156			1				24		
Capacity, c (veh/h)			211				448			1534				933		
v/c Ratio			0.02				0.35			0.00				0.03		
95% Queue Length, Q ₉₅ (veh)			0.1				1.5			0.0				0.1		
95% Queue Length, Q ₉₅ (ft)			2.5				38.4									
Control Delay (s/veh)			22.3				17.3			7.3	0.0	0.0		9.0	0.2	0.2
Level of Service (LOS)			C				C			A	A	A		A	A	A
Approach Delay (s/veh)	22.3				17.3				0.0				2.3			
Approach LOS	C				C				A				A			

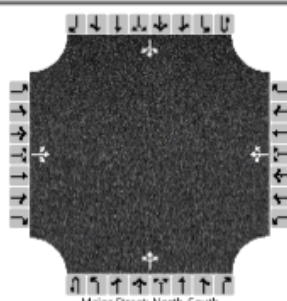
HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection				Old Bardstown Road at Fairmount (East)				
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street				Fairmount Road				
Analysis Year	2024							North/South Street				Old Bardstown Road				
Time Analyzed	PM Peak							Peak Hour Factor				0.98				
Intersection Orientation	North-South							Analysis Time Period (hrs)				0.25				
Project Description	Goodwill Old Bardstown Rd															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	1	2		25	0	26		2	142	19		156	248	3
Percent Heavy Vehicles (%)		0	0	0		4	0	4		0				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.14	6.50	6.24		4.10				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.54	4.00	3.34		2.20				2.23		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			5				52			2				159		
Capacity, c (veh/h)			384				439			1321				1408		
v/c Ratio			0.01				0.12			0.00				0.11		
95% Queue Length, Q ₉₅ (veh)			0.0				0.4			0.0				0.4		
95% Queue Length, Q ₉₅ (ft)			0.0				10.3									
Control Delay (s/veh)			14.5				14.3			7.7	0.0	0.0		7.9	1.0	1.0
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)	14.5				14.3				0.1				3.7			
Approach LOS	B				B				A				A			

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection				Old Bardstown Road at Fairmount (East)				
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street				Fairmount Road				
Analysis Year	2026							North/South Street				Old Bardstown Road				
Time Analyzed	PM Peak No Build							Peak Hour Factor				0.98				
Intersection Orientation	North-South							Analysis Time Period (hrs)				0.25				
Project Description	Goodwill Old Bardstown Rd															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	1	2		26	0	27		2	148	20		163	259	3
Percent Heavy Vehicles (%)		0	0	0		4	0	4		0				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.14	6.50	6.24		4.10				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.54	4.00	3.34		2.20				2.23		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			5				54			2				166		
Capacity, c (veh/h)			365				418			1308				1400		
v/c Ratio			0.01				0.13			0.00				0.12		
95% Queue Length, Q ₉₅ (veh)			0.0				0.4			0.0				0.4		
95% Queue Length, Q ₉₅ (ft)			0.0				10.3									
Control Delay (s/veh)			15.0				14.9			7.8	0.0	0.0		7.9	1.1	1.1
Level of Service (LOS)			B				B			A	A	A		A	A	A
Approach Delay (s/veh)	15.0				14.9				0.1				3.7			
Approach LOS	B				B				A				A			

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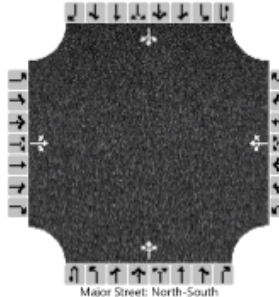
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Fairmount East PM 26 NB.jtw

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HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection				Old Bardstown Road at Fairmount (East)				
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street				Fairmount Road				
Analysis Year	2026							North/South Street				Old Bardstown Road				
Time Analyzed	PM Peak Build							Peak Hour Factor				0.98				
Intersection Orientation	North-South							Analysis Time Period (hrs)				0.25				
Project Description	Goodwill Old Bardstown Rd															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	1	2		26	0	37		2	165	20		181	282	3
Percent Heavy Vehicles (%)		0	0	0		4	0	4		0				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.20		7.14	6.50	6.24		4.10				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.54	4.00	3.34		2.20				2.23		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			5				64			2				185		
Capacity, c (veh/h)			321				409			1283				1379		
v/c Ratio			0.02				0.16			0.00				0.13		
95% Queue Length, Q ₉₅ (veh)			0.0				0.6			0.0				0.5		
95% Queue Length, Q ₉₅ (ft)			0.0				15.5									
Control Delay (s/veh)			16.4				15.4			7.8	0.0	0.0		8.0	1.3	1.3
Level of Service (LOS)			C				C			A	A	A		A	A	A
Approach Delay (s/veh)	16.4				15.4				0.1				3.9			
Approach LOS	C				C				A				A			
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HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ				Intersection				Old Bardstown Rd at Fairmount (west)							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC				Jurisdiction											
Date Performed	11/4/2024				East/West Street				Fairmount Road west							
Analysis Year	2024				North/South Street				Old Bardstown Road							
Time Analyzed	AM Peak				Peak Hour Factor				0.79							
Intersection Orientation	North-South				Analysis Time Period (hrs)				0.25							
Project Description	Goodwill Old Bardstown															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		8		22						283	308				43	25
Percent Heavy Vehicles (%)		0		4						1						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.24						4.11						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.34						2.21						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			38							358						
Capacity, c (veh/h)			395							1517						
v/c Ratio			0.10							0.24						
95% Queue Length, Q ₉₅ (veh)			0.3							0.9						
95% Queue Length, Q ₉₅ (ft)			7.7							22.7						
Control Delay (s/veh)			15.1							8.1	2.4					
Level of Service (LOS)			C							A	A					
Approach Delay (s/veh)		15.1								5.2						
Approach LOS		C								A						

HCS Two-Way Stop-Control Report																	
General Information									Site Information								
Analyst	DBZ								Intersection	Old Bardstown Rd at Fairmount (west)							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction								
Date Performed	11/4/2024								East/West Street	Fairmount Road west							
Analysis Year	2026								North/South Street	Old Bardstown Road							
Time Analyzed	AM Peak No Build								Peak Hour Factor	0.79							
Intersection Orientation	North-South								Analysis Time Period (hrs)	0.25							
Project Description	Goodwill Old Bardstown																
Lanes																	
<p>Major Street: North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0	
Configuration			LR							LT						TR	
Volume (veh/h)		8		23						296	322				45	26	
Percent Heavy Vehicles (%)		0		4						1							
Proportion Time Blocked																	
Percent Grade (%)	0																
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1		6.2						4.1							
Critical Headway (sec)		6.40		6.24						4.11							
Base Follow-Up Headway (sec)		3.5		3.3						2.2							
Follow-Up Headway (sec)		3.50		3.34						2.21							
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			39							375							
Capacity, c (veh/h)			374							1512							
v/c Ratio			0.10							0.25							
95% Queue Length, Q ₉₅ (veh)			0.3							1.0							
95% Queue Length, Q ₉₅ (ft)			7.7							25.2							
Control Delay (s/veh)			15.8							8.2	2.6						
Level of Service (LOS)			C							A	A						
Approach Delay (s/veh)	15.8								5.3								
Approach LOS	C								A								

HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ								Intersection				Old Bardstown Rd at Fairmount (west)			
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction							
Date Performed	11/4/2024								East/West Street				Fairmount Road west			
Analysis Year	2026								North/South Street				Old Bardstown Road			
Time Analyzed	AM Peak Build								Peak Hour Factor				0.79			
Intersection Orientation	North-South								Analysis Time Period (hrs)				0.25			
Project Description	Goodwill Old Bardstown															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		8	15	23		4	7	0		296	329	28		5	53	26
Percent Heavy Vehicles (%)		0	0	4		0	0	0		1				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.10	6.50	6.24		7.10	6.50	6.20		4.11				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.34		3.50	4.00	3.30		2.21				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			58				14			375				6		
Capacity, c (veh/h)			182				95			1499				1119		
v/c Ratio			0.32				0.15			0.25				0.01		
95% Queue Length, Q ₉₅ (veh)			1.3				0.5			1.0				0.0		
95% Queue Length, Q ₉₅ (ft)			33.0				12.5									
Control Delay (s/veh)			33.8				49.5			8.2	2.8	2.8		8.2	0.0	0.0
Level of Service (LOS)			D				E			A	A	A		A	A	A
Approach Delay (s/veh)	33.8				49.5				5.2				0.5			
Approach LOS	D				E				A				A			

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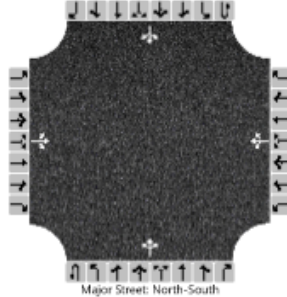
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HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection	Old Bardstown Rd at Fairmount (west)							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street	Fairmount Road west							
Analysis Year	2024							North/South Street	Old Bardstown Road							
Time Analyzed	PM Peak							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Goodwill Old Bardstown															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		33		243						46	131				154	33
Percent Heavy Vehicles (%)		3		3						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.22						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			291							48						
Capacity, c (veh/h)			811							1376						
v/c Ratio			0.36							0.04						
95% Queue Length, Q ₉₅ (veh)			1.6							0.1						
95% Queue Length, Q ₉₅ (ft)			41.0							2.5						
Control Delay (s/veh)			11.9							7.7	0.3					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		11.9								2.2						
Approach LOS		B								A						

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HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection	Old Bardstown Rd at Fairmount (west)							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street	Fairmount Road west							
Analysis Year	2026							North/South Street	Old Bardstown Road							
Time Analyzed	PM Peak No Build							Peak Hour Factor	0.95							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Goodwill Old Bardstown															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		34		254						48	137				161	34
Percent Heavy Vehicles (%)		3		3						2						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type Storage		Undivided														
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.22						
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			303							51						
Capacity, c (veh/h)			801							1366						
v/c Ratio			0.38							0.04						
95% Queue Length, Q ₉₅ (veh)			1.8							0.1						
95% Queue Length, Q ₉₅ (ft)			46.1							2.5						
Control Delay (s/veh)			12.2							7.7	0.3					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		12.2								2.2						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	DBZ							Intersection				Old Bardstown Rd at Fairmount (west)					
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction									
Date Performed	11/4/2024							East/West Street				Fairmount Road west					
Analysis Year	2026							North/South Street				Old Bardstown Road					
Time Analyzed	PM Peak Build							Peak Hour Factor				0.95					
Intersection Orientation	North-South							Analysis Time Period (hrs)				0.25					
Project Description	Goodwill Old Bardstown																
Lanes																	
 <p>Major Street: North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration			LTR				LTR				LTR				LTR		
Volume (veh/h)		34	16	254		41	22	8		48	142	22		11	161	34	
Percent Heavy Vehicles (%)		3	0	3		0	0	0		2				0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage	Undivided																
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1			
Critical Headway (sec)		7.13	6.50	6.23		7.10	6.50	6.20		4.12				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.53	4.00	3.33		3.50	4.00	3.30		2.22				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			320				75			51				12			
Capacity, c (veh/h)			740				327			1366				1416			
v/c Ratio			0.43				0.23			0.04				0.01			
95% Queue Length, Q ₉₅ (veh)			2.2				0.9			0.1				0.0			
95% Queue Length, Q ₉₅ (ft)			56.3				22.5										
Control Delay (s/veh)			13.5				19.3			7.7	0.3	0.3		7.6	0.1	0.1	
Level of Service (LOS)			B				C			A	A	A		A	A	A	
Approach Delay (s/veh)	13.5				19.3				2.0				0.5				
Approach LOS	B				C				A				A				

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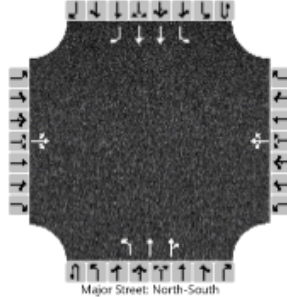
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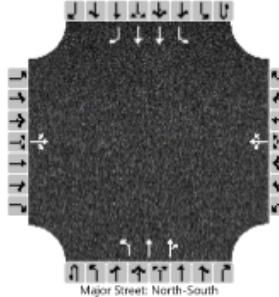
HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection	Old Bardstown at Entrance (North)							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street								
Analysis Year	2026							North/South Street								
Time Analyzed	AM Peak							Peak Hour Factor	0.79							
Intersection Orientation	North-South							Analysis Time Period (hrs)	0.25							
Project Description	Goodwill Old Bardstown															
Lanes																
<p>Major Street: North-South</p>																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						8		7			330	7		16	76	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized																
Median Type Storage						Undivided										
Critical and Follow-up Headways																
Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.40		6.20						4.10		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.50		3.30						2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						19								20		
Capacity, c (veh/h)						545								1144		
v/c Ratio						0.03								0.02		
95% Queue Length, Q ₉₅ (veh)						0.1								0.1		
95% Queue Length, Q ₉₅ (ft)						2.5								2.5		
Control Delay (s/veh)						11.8								8.2	0.2	
Level of Service (LOS)						B								A	A	
Approach Delay (s/veh)						11.8								1.6		
Approach LOS						B								A		

HCS Two-Way Stop-Control Report																	
General Information									Site Information								
Analyst	DBZ								Intersection	Old Bardstown at Entrance (North)							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction								
Date Performed	11/4/2024								East/West Street								
Analysis Year	2026								North/South Street								
Time Analyzed	PM Peak								Peak Hour Factor	0.95							
Intersection Orientation	North-South								Analysis Time Period (hrs)	0.25							
Project Description	Goodwill Old Bardstown																
Lanes																	
<p>Major Street: North-South</p>																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						0		23			179	5		6	206		
Percent Heavy Vehicles (%)						0		0						0			
Proportion Time Blocked																	
Percent Grade (%)					0												
Right Turn Channelized																	
Median Type Storage					Undivided												
Critical and Follow-up Headways																	
Base Critical Headway (sec)						7.1		6.2						4.1			
Critical Headway (sec)						6.40		6.20						4.10			
Base Follow-Up Headway (sec)						3.5		3.3						2.2			
Follow-Up Headway (sec)						3.50		3.30						2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)						24								6			
Capacity, c (veh/h)						856								1392			
v/c Ratio						0.03								0.00			
95% Queue Length, Q ₉₅ (veh)						0.1								0.0			
95% Queue Length, Q ₉₅ (ft)						2.5								0.0			
Control Delay (s/veh)						9.3								7.6	0.0		
Level of Service (LOS)						A								A	A		
Approach Delay (s/veh)					9.3								0.3				
Approach LOS					A								A				

HCS Two-Way Stop-Control Report																
General Information								Site Information								
Analyst	DBZ							Intersection	Fairmount Rd at Entrance							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction								
Date Performed	11/4/2024							East/West Street	Fairmount Road							
Analysis Year	2026							North/South Street	Entrance							
Time Analyzed	AM Peak							Peak Hour Factor	0.80							
Intersection Orientation	East-West							Analysis Time Period (hrs)	0.25							
Project Description	Goodwill Old Bardstown															
Lanes																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	30				125	11						9		0
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															
Critical and Follow-up Headways																
Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)		0													11	
Capacity, c (veh/h)		1420													793	
v/c Ratio		0.00													0.01	
95% Queue Length, Q ₉₅ (veh)		0.0													0.0	
95% Queue Length, Q ₉₅ (ft)															0.0	
Control Delay (s/veh)		7.5	0.0												9.6	
Level of Service (LOS)		A	A												A	
Approach Delay (s/veh)	0.0												9.6			
Approach LOS	A												A			

HCS Two-Way Stop-Control Report																	
General Information									Site Information								
Analyst	DBZ								Intersection	Fairmount Rd at Entrance							
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction								
Date Performed	11/4/2024								East/West Street	Fairmount Road							
Analysis Year	2026								North/South Street	Entrance							
Time Analyzed	PM Peak								Peak Hour Factor	0.98							
Intersection Orientation	East-West								Analysis Time Period (hrs)	0.25							
Project Description	Goodwill Old Bardstown																
Lanes																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0	
Configuration		LT						TR							LR		
Volume (veh/h)		0	210				66	22						20		0	
Percent Heavy Vehicles (%)		0												0		0	
Proportion Time Blocked																	
Percent Grade (%)													0				
Right Turn Channelized																	
Median Type Storage					Undivided												
Critical and Follow-up Headways																	
Base Critical Headway (sec)		4.1												7.1		6.2	
Critical Headway (sec)		4.10												6.40		6.20	
Base Follow-Up Headway (sec)		2.2												3.5		3.3	
Follow-Up Headway (sec)		2.20												3.50		3.30	
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)		0													20		
Capacity, c (veh/h)		1518													702		
v/c Ratio		0.00													0.03		
95% Queue Length, Q ₉₅ (veh)		0.0													0.1		
95% Queue Length, Q ₉₅ (ft)															2.5		
Control Delay (s/veh)		7.4	0.0												10.3		
Level of Service (LOS)		A	A												B		
Approach Delay (s/veh)	0.0												10.3				
Approach LOS	A												B				

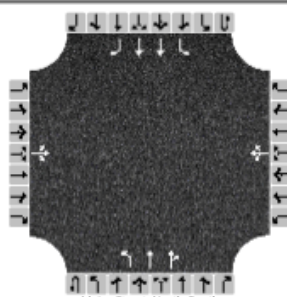
HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ								Intersection				Bardstown Road at Fairmount Rd			
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction							
Date Performed	11/4/2024								East/West Street				Fairmount Road			
Analysis Year	2024								North/South Street				Bardstown Road			
Time Analyzed	AM Peak								Peak Hour Factor				0.95			
Intersection Orientation	North-South								Analysis Time Period (hrs)				0.25			
Project Description	Goodwill Old Bardstown															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	1
Configuration			LTR				LTR			L	T	TR		L	T	R
Volume (veh/h)		8	0	16		1	2	4	0	62	1323	7	0	10	688	17
Percent Heavy Vehicles (%)		0	0	0		0	0	0	0	5			0	0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized													No			
Median Type Storage	Left + Thru								1							
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.50	6.50	6.90		7.50	6.50	6.90		4.20				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.25				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			25				7			65				11		
Capacity, c (veh/h)			343				184			841				494		
v/c Ratio			0.07				0.04			0.08				0.02		
95% Queue Length, Q ₉₅ (veh)			0.2				0.1			0.3				0.1		
95% Queue Length, Q ₉₅ (ft)			5.0				2.5			7.8				2.5		
Control Delay (s/veh)			16.3				25.3			9.6				12.4		
Level of Service (LOS)			C				D			A				B		
Approach Delay (s/veh)	16.3				25.3				0.4				0.2			
Approach LOS	C				D				A				A			

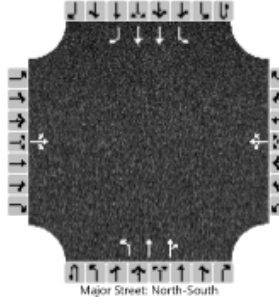
HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ								Intersection				Bardstown Road at Fairmount Rd			
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction							
Date Performed	11/4/2024								East/West Street				Fairmount Road			
Analysis Year	2026								North/South Street				Bardstown Road			
Time Analyzed	AM Peak No Build								Peak Hour Factor				0.95			
Intersection Orientation	North-South								Analysis Time Period (hrs)				0.25			
Project Description	Goodwill Old Bardstown															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	1
Configuration			LTR				LTR			L	T	TR		L	T	R
Volume (veh/h)		8	0	17		1	2	4	0	65	1382	7	0	10	719	18
Percent Heavy Vehicles (%)		0	0	0		0	0	0	0	5			0	0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized													No			
Median Type Storage	Left + Thru								1							
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.50	6.50	6.90		7.50	6.50	6.90		4.20				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.25				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			26				7			68				11		
Capacity, c (veh/h)			332				170			817				468		
v/c Ratio			0.08				0.04			0.08				0.02		
95% Queue Length, Q ₉₅ (veh)			0.3				0.1			0.3				0.1		
95% Queue Length, Q ₉₅ (ft)			7.5				2.5			7.8				2.5		
Control Delay (s/veh)			16.8				27.1			9.8				12.9		
Level of Service (LOS)			C				D			A				B		
Approach Delay (s/veh)	16.8				27.1				0.4				0.2			
Approach LOS	C				D				A				A			

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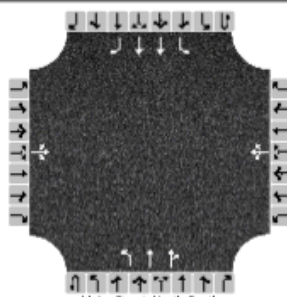
HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ								Intersection				Bardstown Road at Fairmount Rd			
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction							
Date Performed	11/4/2024								East/West Street				Fairmount Road			
Analysis Year	2026								North/South Street				Bardstown Road			
Time Analyzed	AM Peak Build								Peak Hour Factor				0.95			
Intersection Orientation	North-South								Analysis Time Period (hrs)				0.25			
Project Description	Goodwill Old Bardstown															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	1
Configuration			LTR				LTR			L	T	TR		L	T	R
Volume (veh/h)		15	0	24		1	2	4	0	80	1382	7	0	10	719	33
Percent Heavy Vehicles (%)		0	0	0		0	0	0	0	5			0	0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized													No			
Median Type Storage	Left + Thru								1							
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.50	6.50	6.90		7.50	6.50	6.90		4.20				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.25				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			41				7			84				11		
Capacity, c (veh/h)			293				162			805				468		
v/c Ratio			0.14				0.05			0.10				0.02		
95% Queue Length, Q ₉₅ (veh)			0.5				0.1			0.3				0.1		
95% Queue Length, Q ₉₅ (ft)			12.5				2.5			7.8				2.5		
Control Delay (s/veh)			19.3				28.3			10.0				12.9		
Level of Service (LOS)			C				D			A				B		
Approach Delay (s/veh)	19.3				28.3				0.5				0.2			
Approach LOS	C				D				A				A			

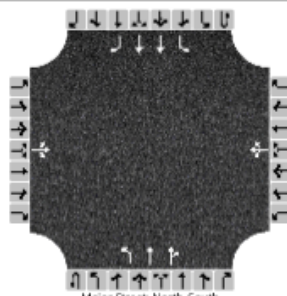
HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ								Intersection				Bardstown Road at Fairmount Rd			
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction							
Date Performed	11/4/2024								East/West Street				Fairmount Road			
Analysis Year	2024								North/South Street				Bardstown Road			
Time Analyzed	PM Peak								Peak Hour Factor				0.98			
Intersection Orientation	North-South								Analysis Time Period (hrs)				0.25			
Project Description	Goodwill Old Bardstown															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	1
Configuration			LTR				LTR			L	T	TR		L	T	R
Volume (veh/h)		10	1	173		2	0	7	0	27	1179	1	0	9	1611	27
Percent Heavy Vehicles (%)		0	0	0		0	0	0	0	5			0	0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized													No			
Median Type Storage	Left + Thru								1							
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.50	6.50	6.90		7.50	6.50	6.90		4.20				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.25				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			188				9			28				9		
Capacity, c (veh/h)			331				200			367				587		
v/c Ratio			0.57				0.05			0.08				0.02		
95% Queue Length, Q ₉₅ (veh)			3.3				0.1			0.2				0.0		
95% Queue Length, Q ₉₅ (ft)			82.5				2.5			5.2				0.0		
Control Delay (s/veh)			29.2				23.9			15.6				11.2		
Level of Service (LOS)			D				C			C				B		
Approach Delay (s/veh)	29.2				23.9				0.3				0.1			
Approach LOS	D				C				A				A			

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HCS Two-Way Stop-Control Report																
General Information									Site Information							
Analyst	DBZ								Intersection				Bardstown Road at Fairmount Rd			
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC								Jurisdiction							
Date Performed	11/4/2024								East/West Street				Fairmount Road			
Analysis Year	2026								North/South Street				Bardstown Road			
Time Analyzed	PM Peak No Build								Peak Hour Factor				0.98			
Intersection Orientation	North-South								Analysis Time Period (hrs)				0.25			
Project Description	Goodwill Old Bardstown															
Lanes																
																
Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	1
Configuration			LTR				LTR			L	T	TR		L	T	R
Volume (veh/h)		10	1	181		2	0	7	0	28	1231	1	0	9	1683	28
Percent Heavy Vehicles (%)		0	0	0		0	0	0	0	5			0	0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized													No			
Median Type Storage	Left + Thru								1							
Critical and Follow-up Headways																
Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.50	6.50	6.90		7.50	6.50	6.90		4.20				4.10		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.25				2.20		
Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)			196				9			29				9		
Capacity, c (veh/h)			312				172			343				560		
v/c Ratio			0.63				0.05			0.08				0.02		
95% Queue Length, Q ₉₅ (veh)			4.0				0.2			0.3				0.0		
95% Queue Length, Q ₉₅ (ft)			100.0				5.0			7.8				0.0		
Control Delay (s/veh)			34.1				27.1			16.5				11.5		
Level of Service (LOS)			D				D			C				B		
Approach Delay (s/veh)	34.1				27.1				0.4				0.1			
Approach LOS	D				D				A				A			

HCS Two-Way Stop-Control Report																	
General Information								Site Information									
Analyst	DBZ							Intersection				Bardstown Road at Fairmount Rd					
Agency/Co.	Diane B. Zimmerman Traffic Engineering LLC							Jurisdiction									
Date Performed	11/4/2024							East/West Street				Fairmount Road					
Analysis Year	2026							North/South Street				Bardstown Road					
Time Analyzed	PM Peak Build							Peak Hour Factor				0.98					
Intersection Orientation	North-South							Analysis Time Period (hrs)				0.25					
Project Description	Goodwill Old Bardstown																
Lanes																	
																	
Vehicle Volumes and Adjustments																	
Approach	Eastbound				Westbound				Northbound				Southbound				
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	2	0	0	1	2	1	
Configuration			LTR				LTR			L	T	TR		L	T	R	
Volume (veh/h)		25	1	204		2	0	7	0	44	1231	1	0	9	1683	44	
Percent Heavy Vehicles (%)		0	0	0		0	0	0	0	5			0	0			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized														No			
Median Type Storage		Left + Thru								1							
Critical and Follow-up Headways																	
Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1			
Critical Headway (sec)		7.50	6.50	6.90		7.50	6.50	6.90		4.20				4.10			
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2			
Follow-Up Headway (sec)		3.50	4.00	3.30		3.50	4.00	3.30		2.25				2.20			
Delay, Queue Length, and Level of Service																	
Flow Rate, v (veh/h)			235				9			45				9			
Capacity, c (veh/h)			299				123			338				560			
v/c Ratio			0.78				0.07			0.13				0.02			
95% Queue Length, Q ₉₅ (veh)			6.2				0.2			0.5				0.0			
95% Queue Length, Q ₉₅ (ft)			155.0				5.0			13.0				0.0			
Control Delay (s/veh)			49.8				36.6			17.3				11.5			
Level of Service (LOS)			E				E			C				B			
Approach Delay (s/veh)		49.8				36.6				0.6				0.1			
Approach LOS		E				E				A				A			
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Old Bardstown Road at Fairmount Road Entrance

Left Turn Lane Warrants

Input Fields

Left Turn Volume (vph)	11	Speed Limit (mph)	45
Advancing Volume (vph)	206	No. of through lanes	1
Opposing Volume (vph)	212	Percent Heavy Vehicles (decimal percent)	0.01

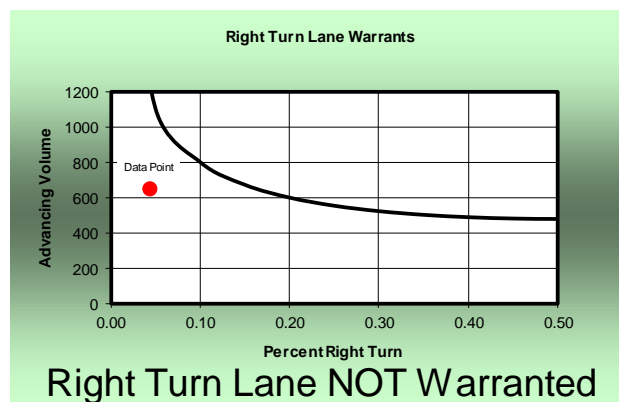


Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

Right Turn Lane Warrants

Input Fields



Right Turn Volume (vph)	28	Speed Limit (mph)	45
Advancing Volume (vph)	653		



Note: This spreadsheet is intended to supplement the guidance provided in the Auxiliary Turn Lane policy outlined in the KYTC Highway Design Manual. This policy should be fully reviewed and understood prior to using this application.

I, Diane Bridwell Zimmerman, certify that this Traffic Impact Study has been prepared under my direct supervision, that I am a Professional Engineer registered in the State of Kentucky and have successfully completed the Traffic Impact Study Requirements training course required by KYTC. Furthermore, I certify that this study has been completed in accordance with the KYTC Traffic Impact Study Requirements and in accordance with engineering standards of practice. The results presented have been determined to be accurate representations of existing and anticipated conditions based on the assumptions and methodologies presented in this report.

Diane Bridwell Zimmerman, Professional Engineer License #16462

 College of Engineering <small>Kentucky Transportation Center</small>	TECHNOLOGY TRANSFER PROGRAM
TRAFFIC IMPACT STUDY COURSE Certificate of Completion (3.5 PDH)	
Diane Zimmerman KY PE License No. 16462	TIM THARPE _____ Tim Tharpe, KYTC Director of Traffic Operations
Completed: 02/18/2022 Expires: 02/18/2026 Company: University of Kentucky	 _____ Adam Kirk, Instructor
The official status of this certificate can be verified with the KYTC Division of Traffic Operations	