

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Greenfield Avenue	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 249 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	3477	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.102	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.560	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	199	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	156	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.14	Density	N/A	PTSF	58.4	ATS	32.8	% FFS	82.1
FFS Delay	9.8	LOS Thresh. Delay	18.8	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	180	440	700	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	330	790	1250	2540
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	900	3300	7800	12300	25000
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Greenfield Avenue	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 249 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	7598	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.082	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.886	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	552	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	71	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.39	Density	N/A	PTSF	76.0	ATS	31.8	% FFS	79.5
FFS Delay	11.6	LOS Thresh. Delay	20.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	400	700	960	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	460	800	1090	1610
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1300	5700	9800	13300	19700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Greenfield Avenue	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 249 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	7598	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.102	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.519	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	402	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	373	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.28	Density	N/A	PTSF	71.1	ATS	30.3	% FFS	75.7
FFS Delay	14.4	LOS Thresh. Delay	23.4	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	160	420	660	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	310	810	1280	2740
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1000	3100	8000	12600	26900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Greenfield Avenue	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Boden Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 251 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	14089	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.064	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.640	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	577	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	325	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.41	Density	N/A	PTSF	80.8	ATS	38.8	% FFS	77.7
FFS Delay	10.3	LOS Thresh. Delay	10.3	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	110	290	690	1030	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	460	1080	1610	2220
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2900	7200	16900	25200	34700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Greenfield Avenue	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Boden Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 251 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	14089	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.106	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.530	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	792	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	702	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.56	Density	N/A	PTSF	86.2	ATS	34.9	% FFS	69.8
FFS Delay	15.6	LOS Thresh. Delay	15.6	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	280	610	880	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	530	1160	1670	2680
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	5000	11000	15800	25300
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Greenfield Avenue	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Boden Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 251 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	35491	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.069	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.621	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	1521	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	928	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.07	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	290	680	1010	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	470	1100	1630	2290
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2500	6900	16000	23700	33200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Greenfield Avenue	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Boden Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 251 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	35491	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.106	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.621	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	2336	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1426	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.64	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	290	680	1010	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	470	1100	1630	2290
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	4500	10400	15400	21700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Greenfield Avenue	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Boden Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 251 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	35491	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.069	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.621	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1521	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	928	Adjusted Capacity	1647

LOS Results

v/c Ratio	0.50	Density	20.1	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1210	2070	2920	3740	4340
6	1820	3110	4390	5610	6510
8	2440	4140	5850	7490	8680
Lanes	Annual Average Daily Traffic				
2					
4	17600	30000	42400	54300	62900
6	26400	45100	63700	81400	94400
8	35400	60000	84800	108600	125800

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Greenfield Avenue	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Boden Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu251 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	35491	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.106	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.621	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	2336	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1426	Adjusted Capacity	1647

LOS Results

v/c Ratio	0.77	Density	31.2	PTSF	N/A	ATS	49.5	% FFS	98.9
FFS Delay	0.4	LOS Thresh. Delay	6.4	Service Measure	Density	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1210	2070	2920	3740	4340
6	1820	3110	4390	5610	6510
8	2440	4140	5850	7490	8680
Lanes	Annual Average Daily Traffic				
2					
4	11500	19600	27600	35300	41000
6	17200	29400	41500	53000	61500
8	23100	39100	55200	70700	81900

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Boden Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Greenfield Avenue	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Campus Parkway	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 252 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.400	Median	Yes	AADT	17892	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.064	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.750	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	859	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	286	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.27	Density	10.8	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	4.8	Service Measure	Density	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1060	1800	2550	3260	3780
6	1590	2710	3830	4900	5670
8	2120	3620	5100	6520	7560
Lanes	Annual Average Daily Traffic				
2					

4	16600	28200	39900	51000	59100
6	24900	42400	59900	76600	88600
8	33200	56600	79700	101900	118200

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Boden Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Greenfield Avenue	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Campus Parkway	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 252 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.400	Median	Yes	AADT	17892	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.108	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.570	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1101	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	831	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.35	Density	13.8	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	4.8	Service Measure	Density	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1390	2370	3360	4290	4970
6	2090	3570	5040	6440	7460
8	2790	4760	6710	8580	9950
Lanes	Annual Average Daily Traffic				
2					

4	12900	22000	31200	39800	46100
6	19400	33100	46700	59700	69100
8	25900	44100	62200	79500	92200

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Boden Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Greenfield Avenue	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Campus Parkway	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 252 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.400	Median	Yes	AADT	54676	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.069	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.633	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	2388	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1385	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.75	Density	30.1	PTSF	N/A	ATS	49.7	% FFS	99.4
FFS Delay	0.2	LOS Thresh. Delay	5.0	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1250	2140	3020	3860	4480
6	1880	3210	4540	5800	6720
8	2520	4290	6040	7730	8960
Lanes	Annual Average Daily Traffic				
2					

4	18200	31100	43800	56000	65000
6	27300	46600	65800	84100	97400
8	36600	62200	87600	112100	129900

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Boden Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Greenfield Avenue	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Campus Parkway	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 252 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.400	Median	Yes	AADT	54676	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.108	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.546	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	3224	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	2681	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.01	Density	43.6	PTSF	N/A	ATS	46.3	% FFS	92.7
FFS Delay	2.3	LOS Thresh. Delay	7.1	Service Measure	Density	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1450	2480	3500	4470	5190
6	2180	3720	5260	6730	7790
8	2920	4970	7000	8960	10390
Lanes	Annual Average Daily Traffic				
2					

4	13500	23000	32500	41400	48100
6	20200	34500	48800	62400	72200
8	27100	46100	64900	83000	96300

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Boden Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Greenfield Avenue	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Campus Parkway	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 252 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.400	Median	Yes	AADT	54676	PHF	0.920
# Thru Lanes	6	Left Turn Impact	No	K	0.069	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.633	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	2388	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1385	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.50	Density	20.0	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	4.8	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1250	2140	3020	3860	4480
6	1880	3210	4540	5800	6720
8	2520	4290	6040	7730	8960
Lanes	Annual Average Daily Traffic				
2					

4	18200	31100	43800	56000	65000
6	27300	46600	65800	84100	97400
8	36600	62200	87600	112100	129900

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Boden Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Greenfield Avenue	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Campus Parkway	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 252 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.400	Median	Yes	AADT	54676	PHF	0.920
# Thru Lanes	6	Left Turn Impact	No	K	0.108	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.546	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	3224	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	2681	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.67	Density	26.9	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	4.8	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1450	2480	3500	4470	5190
6	2180	3720	5260	6730	7790
8	2920	4970	7000	8960	10390
Lanes	Annual Average Daily Traffic				
2					

4	13500	23000	32500	41400	48100
6	20200	34500	48800	62400	72200
8	27100	46100	64900	83000	96300

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Boden Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 253 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.600	Median	Yes	AADT	9982	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.065	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.670	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	435	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	214	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.29	Density	N/A	PTSF	73.4	ATS	40.5	% FFS	81.1
FFS Delay	10.1	LOS Thresh. Delay	10.1	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	330	740	1120	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	500	1110	1680	2230
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2800	7700	17100	25900	34400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Boden Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 253 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.600	Median	Yes	AADT	9982	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.110	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.510	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	560	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	538	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.38	Density	N/A	PTSF	76.7	ATS	38.4	% FFS	76.8
FFS Delay	13.0	LOS Thresh. Delay	13.0	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	290	620	890	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	570	1220	1750	2930
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	5200	11100	16000	26700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Boden Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 253 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.600	Median	Yes	AADT	28500	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.087	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.620	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	1537	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	942	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.03	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	110	300	710	1060	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	490	1150	1710	2410
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2100	5700	13300	19700	27800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Boden Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 253 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.600	Median	Yes	AADT	28500	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.110	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.644	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	2019	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1116	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.35	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	110	310	730	1090	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	490	1140	1700	2320
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	4500	10400	15500	21100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Boden Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 253 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.600	Median	No	AADT	28500	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.087	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.620	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1537	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	942	Adjusted Capacity	1647

LOS Results

v/c Ratio	0.51	Density	20.3	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	7.2	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1210	2070	2920	3750	4340
6	1830	3120	4390	5620	6520
8	2440	4150	5860	7500	8700
Lanes	Annual Average Daily Traffic				
2					
4	14000	23800	33600	43200	49900
6	21100	35900	50500	64600	75000
8	28100	47800	67400	86300	100000

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Boden Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu253 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.600	Median	No	AADT	28500	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.110	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.644	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	2019	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1116	Adjusted Capacity	1647

LOS Results

v/c Ratio	0.67	Density	26.6	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	7.2	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1170	1990	2820	3610	4180
6	1760	3000	4230	5410	6280
8	2350	4000	5640	7230	8370
Lanes	Annual Average Daily Traffic				
2					
4	10700	18100	25700	32900	38000
6	16000	27300	38500	49200	57100
8	21400	36400	51300	65800	76100

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 254 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	6272	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.057	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.590	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	211	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	147	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.14	Density	N/A	PTSF	58.9	ATS	43.2	% FFS	86.5
FFS Delay	5.6	LOS Thresh. Delay	5.6	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	300	690	1020	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	510	1170	1730	2530
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3000	9000	20600	30400	44400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 254 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	6272	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.115	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.650	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	469	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	252	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.32	Density	N/A	PTSF	74.3	ATS	40.2	% FFS	80.3
FFS Delay	8.8	LOS Thresh. Delay	8.8	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	310	730	1100	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	190	480	1130	1700	2300
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	4200	9900	14800	20000
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 254 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	29226	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.102	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.592	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	1765	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1216	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.18	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	300	690	1030	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	510	1170	1740	2520
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	5000	11500	17100	24800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 254 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	29226	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.115	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.623	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	2094	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1267	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.40	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	110	300	710	1070	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	490	1140	1720	2400
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1600	4300	10000	15000	20900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 254 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	29226	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.102	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.592	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1765	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1216	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.55	Density	22.1	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1340	2290	3230	4130	4790
6	2020	3430	4850	6200	7180
8	2690	4580	6460	8270	9580
Lanes	Annual Average Daily Traffic				
2					
4	13200	22500	31700	40500	47000
6	19900	33700	47600	60800	70400
8	26400	45000	63400	81100	94000

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu254 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	29226	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.115	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.623	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	2094	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1267	Adjusted Capacity	1734

LOS Results

v/c Ratio	0.66	Density	26.3	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1270	2170	3070	3920	4550
6	1920	3260	4610	5900	6830
8	2560	4350	6140	7850	9110
Lanes	Annual Average Daily Traffic				
2					
4	11100	18900	26700	34100	39600
6	16700	28400	40100	51400	59400
8	22300	37900	53400	68300	79300

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prairie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 255 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1552	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.053	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.650	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	53	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	29	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.04	Density	N/A	PTSF	40.8	ATS	46.7	% FFS	93.4
FFS Delay	4.8	LOS Thresh. Delay	4.8	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	110	300	690	1050	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	470	1070	1620	2190
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3300	8900	20200	30600	41400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prairie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 255 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1552	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.125	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.760	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	147	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	47	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.11	Density	N/A	PTSF	55.6	ATS	45.7	% FFS	91.3
FFS Delay	6.5	LOS Thresh. Delay	6.5	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	130	400	730	1150	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	530	970	1520	1870
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1500	4300	7800	12200	15000
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prairie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 255 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	24320	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.108	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.755	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	1983	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	644	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.39	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	130	400	730	1150	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	530	970	1530	1890
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	5000	9000	14200	17500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prairie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 255 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	24320	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.125	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.732	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	2225	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	815	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.56	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	370	730	1130	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	510	1000	1550	1940
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1400	4100	8000	12400	15600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Prairie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 255 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.000	Median	No	AADT	24320	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.108	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.755	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1983	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	644	Adjusted Capacity	1647

LOS Results

v/c Ratio	0.65	Density	26.2	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	12.0	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1000	1700	2400	3080	3570
6	1500	2560	3610	4610	5360
8	2000	3410	4810	6160	7140
Lanes	Annual Average Daily Traffic				
2					
4	9300	15800	22300	28600	33100
6	13900	23800	33500	42700	49700
8	18600	31600	44600	57100	66200

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Prairie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu255 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.000	Median	No	AADT	24320	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.125	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.732	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	2225	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	815	Adjusted Capacity	1647

LOS Results

v/c Ratio	0.73	Density	29.5	PTSF	N/A	ATS	49.8	% FFS	99.6
FFS Delay	0.3	LOS Thresh. Delay	12.3	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1030	1750	2480	3170	3680
6	1550	2640	3720	4760	5520
8	2070	3520	4960	6360	7370
Lanes	Annual Average Daily Traffic				
2					
4	8300	14000	19900	25400	29500
6	12400	21200	29800	38100	44200
8	16600	28200	39700	50900	59000

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Prairie Baptist Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cyntheanne Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 256 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.029	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.930	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	27	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	2	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.02	Density	N/A	PTSF	44.6	ATS	47.2	% FFS	94.4
FFS Delay	4.0	LOS Thresh. Delay	4.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	160	580	1000	1380	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	630	1080	1490	1530
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	6300	21800	37300	51400	52800

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Prairie Baptist Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cyntheanne Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 256 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.084	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.700	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	59	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	25	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.04	Density	N/A	PTSF	42.9	ATS	46.7	% FFS	93.4
FFS Delay	4.8	LOS Thresh. Delay	4.8	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	340	720	1100	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	490	1030	1580	2030
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2200	5900	12300	18900	24200

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Prairie Baptist Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cyntheanne Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 256 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1486	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.067	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.980	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	98	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	2	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.07	Density	N/A	PTSF	56.2	ATS	46.5	% FFS	93.1
FFS Delay	5.1	LOS Thresh. Delay	5.1	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	170	610	1050	1420	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	630	1080	1450	1450
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2700	9500	16200	21700	21700

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Prairie Baptist Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cyntheanne Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 256 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1486	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.105	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.622	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	97	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	59	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.07	Density	N/A	PTSF	46.0	ATS	46.0	% FFS	92.0
FFS Delay	5.9	LOS Thresh. Delay	5.9	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	290	680	1010	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	470	1100	1630	2290
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	4500	10500	15600	21900

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Cyntheanne Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Atlantic Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 257 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.020	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.850	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	17	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	3	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.01	Density	N/A	PTSF	41.5	ATS	47.3	% FFS	94.6
FFS Delay	3.9	LOS Thresh. Delay	3.9	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	150	510	810	1190	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	600	960	1400	1680
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	9000	30000	48000	70000	84000
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Cyntheanne Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Atlantic Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 257 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.046	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.570	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	26	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	20	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.02	Density	N/A	PTSF	34.0	ATS	47.1	% FFS	94.1
FFS Delay	4.3	LOS Thresh. Delay	4.3	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	280	640	940	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	500	1130	1650	2500
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4000	10900	24600	35900	54400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	146th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Cyntheanne Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Atlantic Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 257 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.021	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.857	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	18	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	3	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.01	Density	N/A	PTSF	41.7	ATS	47.3	% FFS	94.6
FFS Delay	3.9	LOS Thresh. Delay	3.9	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	150	520	820	1190	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	610	960	1390	1660
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	8600	29100	45800	66200	79100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	146th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Cyntheanne Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Atlantic Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 257 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.047	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.574	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	27	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	20	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.02	Density	N/A	PTSF	34.6	ATS	47.1	% FFS	94.1
FFS Delay	4.3	LOS Thresh. Delay	4.3	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	280	640	950	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	490	1120	1660	2480
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3900	10500	23900	35400	52800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cyntheanne Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	136th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 258 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	2278	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.082	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.620	Base Capacity	1700
Posted Speed	50	% NPZ	31	Peak Dir. Hrly. Vol.	116	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	71	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.08	Density	N/A	PTSF	38.2	ATS	52.3	% FFS	95.2
FFS Delay	3.2	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	200	490	850	1180	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	330	800	1380	1910	2300
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4100	9800	16900	23300	28100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cyntheanne Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	136th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 258 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	2278	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.610	Base Capacity	1700
Posted Speed	50	% NPZ	31	Peak Dir. Hrly. Vol.	139	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	89	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.10	Density	N/A	PTSF	41.3	ATS	51.9	% FFS	94.3
FFS Delay	3.8	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	200	490	840	1160	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	330	810	1380	1910	2330
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3400	8200	13800	19200	23400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cyntheanne Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	136th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 258 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	2841	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.082	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.639	Base Capacity	1700
Posted Speed	50	% NPZ	31	Peak Dir. Hrly. Vol.	149	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	84	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.11	Density	N/A	PTSF	42.9	ATS	51.9	% FFS	94.3
FFS Delay	3.7	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	210	510	870	1220	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	330	800	1370	1910	2230
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4100	9800	16800	23300	27200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Cyntheanne Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	136th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 258 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	2841	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.107	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.566	Base Capacity	1700
Posted Speed	50	% NPZ	31	Peak Dir. Hrly. Vol.	172	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	132	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.12	Density	N/A	PTSF	46.5	ATS	50.6	% FFS	92.0
FFS Delay	5.4	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	170	460	790	1080	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	310	820	1400	1910	2510
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2900	7700	13100	17900	23500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259a AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	1465	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.106	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.510	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	79	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	76	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.06	Density	N/A	PTSF	15.7	ATS	53.0	% FFS	96.4
FFS Delay	2.0	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	160	440	720	980	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	320	870	1420	1930	2790
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3100	8300	13400	18300	26400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259a PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	1465	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.156	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.510	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	117	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	112	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.08	Density	N/A	PTSF	21.8	ATS	52.0	% FFS	94.5
FFS Delay	3.1	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	160	440	720	980	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	320	870	1420	1930	2790
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2100	5600	9200	12400	17900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 259a AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	23000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.131	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.539	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	1624	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1389	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.14	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	180	460	760	1030	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	340	860	1420	1920	2640
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2600	6600	10900	14700	20200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 259a PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	23000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.156	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.573	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	2056	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1532	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.44	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	190	480	800	1100	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	340	840	1400	1920	2480
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2200	5400	9000	12400	15900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 259a AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	23000	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.131	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.539	Base Capacity	2100
Posted Speed	50	% NPZ	N/A	Peak Dir. Hrly. Vol.	1624	Local Adj. Factor	0.88
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1389	Adjusted Capacity	1730

LOS Results

v/c Ratio	0.51	Density	19.5	PTSF	N/A	ATS	55.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	4.4	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	830	1410	2000	2530	2800
3	1250	2120	3000	3790	4200
4	1660	2830	4000	5060	5600
Lanes	Hourly Volume In Both Directions				
2					
4	1540	2620	3720	4700	5200
6	2320	3940	5570	7040	7800
8	3080	5260	7430	9390	10390
Lanes	Annual Average Daily Traffic				
2					
4	11800	20000	28400	35900	39700
6	17800	30100	42600	53800	59600
8	23600	40200	56800	71700	79400

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu259a PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	23000	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.156	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.573	Base Capacity	2100
Posted Speed	50	% NPZ	N/A	Peak Dir. Hrly. Vol.	2056	Local Adj. Factor	0.88
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1532	Adjusted Capacity	1730

LOS Results

v/c Ratio	0.65	Density	24.7	PTSF	N/A	ATS	55.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	4.4	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	830	1410	2000	2530	2800
3	1250	2120	3000	3790	4200
4	1660	2830	4000	5060	5600
Lanes	Hourly Volume In Both Directions				
2					
4	1450	2470	3500	4420	4890
6	2190	3700	5240	6620	7330
8	2900	4940	6990	8840	9780
Lanes	Annual Average Daily Traffic				
2					
4	9300	15900	22500	28400	31400
6	14100	23800	33600	42500	47000
8	18600	31700	44900	56700	62700

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259b AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	Yes	AADT	1465	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.106	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.510	Base Capacity	1700
Posted Speed	50	% NPZ	100	Peak Dir. Hrly. Vol.	79	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	76	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.05	Density	N/A	PTSF	37.4	ATS	50.9	% FFS	92.5
FFS Delay	1.1	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	360	700	990	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	710	1380	1950	2930
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	6700	13100	18400	27700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 259b PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	Yes	AADT	1465	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.156	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.510	Base Capacity	1700
Posted Speed	50	% NPZ	100	Peak Dir. Hrly. Vol.	117	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	112	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.08	Density	N/A	PTSF	43.9	ATS	49.8	% FFS	90.6
FFS Delay	1.4	LOS Thresh. Delay	0.1	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	360	700	990	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	710	1380	1950	2930
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	4600	8900	12600	18800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 259b AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	Yes	AADT	22981	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.131	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.539	Base Capacity	1700
Posted Speed	50	% NPZ	100	Peak Dir. Hrly. Vol.	1623	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1388	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.09	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	370	740	1050	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	190	690	1380	1950	2770
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1500	5300	10600	14900	21200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 259b PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	Yes	AADT	22981	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.156	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.574	Base Capacity	1700
Posted Speed	50	% NPZ	100	Peak Dir. Hrly. Vol.	2058	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1527	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.38	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	110	370	770	1110	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	200	650	1350	1940	2600
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1300	4200	8700	12500	16700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 259b AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	Yes	AADT	22981	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.131	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.539	Base Capacity	2100
Posted Speed	50	% NPZ	N/A	Peak Dir. Hrly. Vol.	1623	Local Adj. Factor	0.88
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1388	Adjusted Capacity	1821

LOS Results

v/c Ratio	0.48	Density	18.5	PTSF	N/A	ATS	55.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	1.1	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	870	1490	2100	2660	2950
3	1310	2230	3150	3990	4420
4	1750	2980	4210	5330	5900
Lanes	Hourly Volume In Both Directions				
2					
4	1620	2770	3900	4940	5480
6	2440	4140	5850	7410	8210
8	3250	5530	7820	9890	10950
Lanes	Annual Average Daily Traffic				
2					
4	12400	21200	29800	37800	41900
6	18700	31700	44700	56600	62700
8	24900	42300	59700	75500	83600

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Olio Road	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Prarie Baptist Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu259b PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	Yes	AADT	22981	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.156	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.574	Base Capacity	2100
Posted Speed	50	% NPZ	N/A	Peak Dir. Hrly. Vol.	2058	Local Adj. Factor	0.88
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	1527	Adjusted Capacity	1821

LOS Results

v/c Ratio	0.61	Density	23.5	PTSF	N/A	ATS	55.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	1.1	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	870	1490	2100	2660	2950
3	1310	2230	3150	3990	4420
4	1750	2980	4210	5330	5900
Lanes	Hourly Volume In Both Directions				
2					
4	1520	2600	3660	4640	5140
6	2290	3890	5490	6960	7710
8	3050	5200	7340	9290	10280
Lanes	Annual Average Daily Traffic				
2					
4	9800	16700	23500	29800	33000
6	14700	25000	35200	44700	49500
8	19600	33400	47100	59600	65900

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Olio Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 260 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	10173	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.073	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.540	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	401	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	342	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.13	Density	5.3	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1390	2380	3360	4300	4990
6	2100	3580	5040	6450	7490
8	2800	4760	6730	8620	9990
Lanes	Annual Average Daily Traffic				
2					
4	19100	32700	46100	59000	68400
6	28800	49100	69100	88400	102700
8	38400	65300	92200	118100	136900

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Olio Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 260 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	10173	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.103	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.510	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	534	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	513	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.18	Density	7.1	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1480	2510	3550	4550	5280
6	2220	3790	5340	6830	7930
8	2970	5040	7120	9120	10570
Lanes	Annual Average Daily Traffic				
2					
4	14400	24400	34500	44200	51300
6	21600	36800	51900	66400	77000
8	28900	49000	69200	88600	102700

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Olio Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 260 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	15650	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.082	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.652	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	837	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	447	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.28	Density	11.0	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1160	1970	2780	3560	4130
6	1740	2970	4180	5340	6200
8	2320	3950	5570	7140	8270
Lanes	Annual Average Daily Traffic				
2					
4	14200	24100	34000	43500	50400
6	21300	36300	51000	65200	75700
8	28300	48200	68000	87100	100900

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Olio Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	146th Street	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 260 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	15650	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.103	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.591	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	953	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	659	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.31	Density	12.6	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	750	1280	1810	2320	2690
3	1130	1930	2720	3480	4040
4	1510	2570	3630	4650	5390
Lanes	Hourly Volume In Both Directions				
2					
4	1270	2170	3070	3930	4560
6	1920	3270	4610	5890	6840
8	2560	4350	6150	7870	9130
Lanes	Annual Average Daily Traffic				
2					
4	12400	21100	29900	38200	44300
6	18700	31800	44800	57200	66500
8	24900	42300	59800	76500	88700

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 261 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	7544	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.064	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.650	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	314	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	169	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.10	Density	3.9	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1220	2080	2940	3760	4360
6	1840	3130	4420	5650	6540
8	2450	4170	5880	7530	8730
Lanes	Annual Average Daily Traffic				
2					
4	19100	32600	46000	58800	68200
6	28800	49000	69100	88300	102200
8	38300	65200	91900	117700	136500

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 261 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	7544	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.103	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.510	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	396	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	381	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.12	Density	5.0	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1550	2650	3750	4790	5550
6	2340	3990	5630	7200	8340
8	3120	5320	7500	9590	11120
Lanes	Annual Average Daily Traffic				
2					
4	15100	25800	36500	46600	53900
6	22800	38800	54700	70000	81000
8	30300	51700	72900	93200	108000

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 261 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	32223	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.068	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.655	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1435	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	756	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.45	Density	18.0	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1210	2070	2920	3730	4330
6	1820	3100	4390	5610	6490
8	2430	4140	5840	7470	8660
Lanes	Annual Average Daily Traffic				
2					
4	17800	30500	43000	54900	63700
6	26800	45600	64600	82600	95500
8	35800	60900	85900	109900	127400

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Bergen Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Olio Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 261 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	32223	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.103	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.547	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1815	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	1503	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.57	Density	22.8	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1450	2470	3500	4470	5180
6	2180	3720	5250	6710	7770
8	2910	4960	6990	8940	10370
Lanes	Annual Average Daily Traffic				
2					
4	14100	24000	34000	43400	50300
6	21200	36200	51000	65200	75500
8	28300	48200	67900	86800	100700

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263a AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	4084	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.067	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.620	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	170	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	104	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.12	Density	N/A	PTSF	54.4	ATS	44.7	% FFS	89.4
FFS Delay	2.6	LOS Thresh. Delay	2.6	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	110	300	710	1060	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	490	1150	1710	2410
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2700	7400	17200	25600	36000

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263a PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	4084	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.128	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.530	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	277	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	246	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.19	Density	N/A	PTSF	63.8	ATS	41.9	% FFS	83.7
FFS Delay	4.2	LOS Thresh. Delay	4.2	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	290	640	930	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	550	1210	1760	2820
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1400	4300	9500	13800	22100

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 263a AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	11773	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.082	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.736	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	711	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	255	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.48	Density	N/A	PTSF	85.8	ATS	38.0	% FFS	76.1
FFS Delay	6.8	LOS Thresh. Delay	6.8	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	130	400	760	1190	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	550	1040	1620	2030
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2200	6800	12700	19800	24800

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Corporate Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 263a PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	11773	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.128	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.666	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	1004	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	503	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.67	Density	N/A	PTSF	91.0	ATS	34.7	% FFS	69.4
FFS Delay	9.5	LOS Thresh. Delay	9.5	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	330	740	1120	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	190	500	1120	1690	2240
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1500	4000	8800	13300	17600

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263b AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.100	Median	Yes	AADT	4084	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.067	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.620	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	170	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	104	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.05	Density	2.1	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	1.2	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1280	2180	3090	3940	4570
6	1920	3280	4630	5920	6860
8	2570	4380	6170	7890	9150
Lanes	Annual Average Daily Traffic				
2					

4	19200	32600	46200	58900	68300
6	28700	49000	69200	88400	102400
8	38400	65400	92100	117800	136600

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 263b PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	4084	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.128	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.530	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	277	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	246	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.09	Density	3.5	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	3.6	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1500	2550	3610	4610	5340
6	2250	3840	5420	6930	8020
8	3000	5120	7210	9230	10700
Lanes	Annual Average Daily Traffic				
2					

4	11800	20000	28300	36100	41800
6	17600	30000	42400	54200	62700
8	23500	40000	56400	72200	83600

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 263b AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.100	Median	Yes	AADT	11773	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.082	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.736	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	711	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	255	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.22	Density	8.9	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	1.2	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1080	1840	2600	3320	3850
6	1620	2760	3900	4990	5780
8	2170	3690	5200	6650	7710
Lanes	Annual Average Daily Traffic				
2					

4	13200	22500	31800	40500	47000
6	19800	33700	47600	60900	70500
8	26500	45100	63500	81100	94100

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Tegler Drive	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Bergen Boulevard	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 263b PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.100	Median	Yes	AADT	11773	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.128	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.666	Base Capacity	2000
Posted Speed	45	% NPZ	N/A	Peak Dir. Hrly. Vol.	1004	Local Adj. Factor	0.88
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	503	Adjusted Capacity	1734

LOS Results

v/c Ratio	0.31	Density	12.6	PTSF	N/A	ATS	50.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	1.2	Service Measure	Density	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	790	1350	1910	2440	2830
3	1190	2030	2870	3670	4250
4	1590	2710	3820	4890	5670
Lanes	Hourly Volume In Both Directions				
2					
4	1190	2030	2870	3670	4250
6	1790	3050	4310	5520	6390
8	2390	4070	5740	7350	8520
Lanes	Annual Average Daily Traffic				
2					

4	9300	15900	22500	28700	33300
6	14000	23900	33700	43200	50000
8	18700	31800	44900	57500	66600

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/20/2023 10:58:32 AM	From	Campus Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 266 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	3775	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.067	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.570	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	144	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	109	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.10	Density	N/A	PTSF	51.0	ATS	34.7	% FFS	86.7
FFS Delay	6.9	LOS Thresh. Delay	15.9	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	180	440	710	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	320	780	1250	2500
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1400	4800	11700	18700	37400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Campus Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 266 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	3775	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.136	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.540	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	277	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	236	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.20	Density	N/A	PTSF	65.1	ATS	31.7	% FFS	79.4
FFS Delay	11.7	LOS Thresh. Delay	20.7	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	170	430	680	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	320	800	1260	2630
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	800	2400	5900	9300	19400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/20/2023 10:58:32 AM	From	Campus Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 266 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	7412	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.091	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.588	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	397	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	278	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.28	Density	N/A	PTSF	71.4	ATS	30.6	% FFS	76.4
FFS Delay	13.9	LOS Thresh. Delay	22.9	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	190	450	730	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	330	770	1250	2420
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1000	3700	8500	13800	26600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Campus Parkway	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 266 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	7412	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.136	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.579	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	584	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	424	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.41	Density	N/A	PTSF	81.1	ATS	28.4	% FFS	71.0
FFS Delay	18.4	LOS Thresh. Delay	27.4	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	190	450	720	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	330	780	1250	2460
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	700	2500	5800	9200	18100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Promise Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	141st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	146th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 268 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	5724	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.076	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.570	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	248	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	187	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.18	Density	N/A	PTSF	63.2	ATS	42.1	% FFS	84.2
FFS Delay	6.8	LOS Thresh. Delay	6.8	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	280	640	940	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	500	1130	1650	2500
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2400	6600	14900	21800	32900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Promise Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	141st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	146th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 268 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	5724	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.121	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.500	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	346	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	346	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.25	Density	N/A	PTSF	66.9	ATS	40.9	% FFS	81.8
FFS Delay	8.0	LOS Thresh. Delay	8.0	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	270	580	830	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	160	540	1160	1660	2840
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1400	4500	9600	13800	23500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Promise Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	141st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	146th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 268 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	12198	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.085	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.576	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	597	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	440	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.42	Density	N/A	PTSF	81.4	ATS	38.2	% FFS	76.3
FFS Delay	11.2	LOS Thresh. Delay	11.2	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	280	650	950	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	180	490	1130	1650	2470
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2200	5800	13300	19500	29100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Promise Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	141st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	146th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 268 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	12198	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.121	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.541	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	798	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	677	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.56	Density	N/A	PTSF	86.5	ATS	35.0	% FFS	70.0
FFS Delay	15.4	LOS Thresh. Delay	15.4	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	280	620	900	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	520	1150	1670	2630
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1500	4300	9600	13900	21800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Howe Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 269 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	4627	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.087	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.550	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	221	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	181	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.16	Density	N/A	PTSF	60.2	ATS	32.3	% FFS	80.9
FFS Delay	10.6	LOS Thresh. Delay	19.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	170	430	690	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	310	790	1260	2590
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	3600	9100	14500	29800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Howe Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 269 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	4627	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.119	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.520	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	286	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	264	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.20	Density	N/A	PTSF	64.6	ATS	31.6	% FFS	79.0
FFS Delay	11.9	LOS Thresh. Delay	20.9	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	160	420	660	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	310	810	1270	2740
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	900	2700	6900	10700	23100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Howe Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 269 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	5414	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.087	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.520	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	245	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	226	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.17	Density	N/A	PTSF	61.9	ATS	32.1	% FFS	80.1
FFS Delay	11.2	LOS Thresh. Delay	20.2	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	160	420	660	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	310	810	1270	2740
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	3600	9400	14600	31500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Howe Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 269 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	5414	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.120	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.534	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	347	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	303	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.25	Density	N/A	PTSF	67.8	ATS	31.0	% FFS	77.5
FFS Delay	13.1	LOS Thresh. Delay	22.1	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	160	430	680	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	300	810	1280	2660
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	900	2600	6800	10700	22200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Howe Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 270 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	6561	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.072	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.720	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	340	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	132	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.24	Density	N/A	PTSF	71.5	ATS	37.2	% FFS	82.7
FFS Delay	8.4	LOS Thresh. Delay	12.4	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	320	600	970	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	450	840	1350	1980
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2000	6300	11700	18800	27500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Howe Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 270 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	6561	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.119	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.610	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	476	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	304	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.34	Density	N/A	PTSF	76.2	ATS	34.8	% FFS	77.4
FFS Delay	11.7	LOS Thresh. Delay	15.7	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	240	570	880	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	400	940	1450	2330
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	3400	7900	12200	19600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Howe Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 270 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	7908	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.075	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.616	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	365	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	228	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.26	Density	N/A	PTSF	71.4	ATS	35.9	% FFS	79.9
FFS Delay	10.1	LOS Thresh. Delay	14.1	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	240	570	880	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	130	390	930	1430	2310
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1800	5200	12400	19100	30800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Howe Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 270 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	7908	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.119	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.570	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	536	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	405	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.38	Density	N/A	PTSF	79.0	ATS	33.9	% FFS	75.4
FFS Delay	13.1	LOS Thresh. Delay	17.1	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	210	550	840	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	150	370	970	1480	2500
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1300	3200	8200	12500	21100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 271 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.500	Median	No	AADT	4119	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.081	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.700	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	234	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	100	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.17	Density	N/A	PTSF	62.8	ATS	39.1	% FFS	86.9
FFS Delay	18.1	LOS Thresh. Delay	30.1	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	300	590	950	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	130	430	850	1360	2030
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	5400	10500	16800	25100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 271 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.500	Median	No	AADT	4119	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.127	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.650	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	340	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	183	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.24	Density	N/A	PTSF	71.1	ATS	36.2	% FFS	80.5
FFS Delay	29.0	LOS Thresh. Delay	41.0	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	260	580	920	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	400	900	1420	2190
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	3200	7100	11200	17300
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 271 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.500	Median	No	AADT	11593	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.081	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.738	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	693	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	246	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.49	Density	N/A	PTSF	86.6	ATS	32.9	% FFS	73.1
FFS Delay	44.2	LOS Thresh. Delay	56.2	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	340	600	980	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	470	820	1330	1930
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1800	5900	10200	16500	23900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	141st Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Promise Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 271 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.500	Median	No	AADT	11593	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.130	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.587	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	885	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	622	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.62	Density	N/A	PTSF	89.4	ATS	29.6	% FFS	65.9
FFS Delay	62.1	LOS Thresh. Delay	74.1	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	220	550	850	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	380	940	1450	2420
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1100	3000	7300	11200	18700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 272 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	4976	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.065	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.650	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	210	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	113	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.15	Density	N/A	PTSF	60.3	ATS	33.9	% FFS	84.9
FFS Delay	8.0	LOS Thresh. Delay	17.0	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	230	460	770	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	360	710	1190	2190
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1600	5600	11000	18400	33700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 272 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	4976	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.103	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.530	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	272	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	241	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.19	Density	N/A	PTSF	64.3	ATS	31.8	% FFS	79.5
FFS Delay	11.6	LOS Thresh. Delay	20.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	160	420	670	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	310	800	1270	2680
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1000	3100	7800	12400	26100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 272 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	10466	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.066	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.545	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	376	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	314	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.27	Density	N/A	PTSF	69.5	ATS	30.7	% FFS	76.8
FFS Delay	13.6	LOS Thresh. Delay	22.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	170	430	690	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	320	790	1270	2610
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1600	4900	12000	19300	39600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Marilyn Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	141st Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 272 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	10466	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.103	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.590	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	636	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	442	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.45	Density	N/A	PTSF	83.0	ATS	27.9	% FFS	69.6
FFS Delay	19.6	LOS Thresh. Delay	28.6	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	190	450	730	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	330	770	1240	2410
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	900	3300	7500	12100	23400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Brooks School Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrel Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 273 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	10594	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.059	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.520	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	325	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	300	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.22	Density	N/A	PTSF	65.7	ATS	36.4	% FFS	80.8
FFS Delay	9.5	LOS Thresh. Delay	13.5	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	70	210	540	810	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	410	1040	1560	2870
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2400	7000	17700	26500	48700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Brooks School Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrel Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 273 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	10594	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.105	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.520	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	578	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	534	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.39	Density	N/A	PTSF	77.6	ATS	33.4	% FFS	74.2
FFS Delay	13.9	LOS Thresh. Delay	17.9	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	70	210	540	810	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	410	1040	1560	2870
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1400	4000	10000	14900	27400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Brooks School Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrel Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 273 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	18457	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.067	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.595	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	736	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	501	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.49	Density	N/A	PTSF	84.7	ATS	32.1	% FFS	71.4
FFS Delay	16.0	LOS Thresh. Delay	20.0	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	240	590	910	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	140	410	1000	1530	2510
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2100	6200	15000	22900	37500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Brooks School Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrel Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 273 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	18457	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.105	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.562	Base Capacity	1700
Posted Speed	40	% NPZ	100	Peak Dir. Hrly. Vol.	1089	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	849	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.73	Density	N/A	PTSF	91.7	ATS	26.8	% FFS	59.5
FFS Delay	27.2	LOS Thresh. Delay	31.2	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	220	570	870	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	150	400	1020	1550	2660
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1500	3900	9800	14800	25400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Corporate Pkwy	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrell Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 274 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	2512	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.020	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.660	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	33	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	17	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.02	Density	N/A	PTSF	38.2	ATS	37.1	% FFS	92.9
FFS Delay	2.1	LOS Thresh. Delay	7.5	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	250	480	820	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	380	730	1250	2260
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	5000	19000	36600	62600	113000
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Corporate Pkwy	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrell Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 274 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	2512	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.520	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	131	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	121	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.09	Density	N/A	PTSF	46.7	ATS	34.7	% FFS	86.7
FFS Delay	4.1	LOS Thresh. Delay	9.5	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	170	440	700	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	330	850	1350	2870
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1000	3400	8600	13600	28800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Corporate Pkwy	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrell Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 274 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	2512	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.020	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.660	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	33	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	17	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.02	Density	N/A	PTSF	38.2	ATS	37.1	% FFS	92.9
FFS Delay	2.1	LOS Thresh. Delay	7.5	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	250	480	820	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	380	730	1250	2260
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	5000	19000	36600	62600	113000
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Corporate Pkwy	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	136th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Harrell Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 274 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	2512	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.522	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	131	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	120	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.09	Density	N/A	PTSF	46.7	ATS	34.7	% FFS	86.8
FFS Delay	4.1	LOS Thresh. Delay	9.5	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	170	440	700	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	330	850	1350	2860
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1000	3400	8600	13600	28600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Brooks School Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 275 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	8609	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.011	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	1.000	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	95	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	0	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.07	Density	N/A	PTSF	56.7	ATS	36.7	% FFS	91.7
FFS Delay	4.1	LOS Thresh. Delay	13.1	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	450	810	1170	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	460	820	1180	1420
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	9100	41900	74600	107300	129100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Brooks School Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 275 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	8609	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.022	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	1.000	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	189	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	0	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.13	Density	N/A	PTSF	66.7	ATS	35.8	% FFS	89.6
FFS Delay	5.2	LOS Thresh. Delay	14.2	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	450	810	1170	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	460	820	1180	1420
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4600	21000	37300	53700	64600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Brooks School Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 275 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	14818	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.013	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.667	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	128	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	64	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.09	Density	N/A	PTSF	50.8	ATS	35.8	% FFS	89.4
FFS Delay	5.3	LOS Thresh. Delay	14.3	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	240	460	780	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	360	690	1170	2130
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	7000	27700	53100	90000	163900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	136th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Marilyn Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Brooks School Road	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 275 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	14818	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.022	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.788	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	257	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	69	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.18	Density	N/A	PTSF	66.2	ATS	34.5	% FFS	86.3
FFS Delay	7.1	LOS Thresh. Delay	16.1	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	70	340	530	820	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	440	680	1050	1810
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4100	20000	31000	47800	82300
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Brooks School Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Corporate Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 276 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	5679	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.035	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.740	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	147	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	52	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.10	Density	N/A	PTSF	54.2	ATS	35.8	% FFS	89.5
FFS Delay	5.3	LOS Thresh. Delay	14.3	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	70	310	500	860	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	420	680	1170	2020
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2900	12000	19500	33500	57800

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Brooks School Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Corporate Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 276 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	5679	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.116	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.560	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	369	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	290	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.25	Density	N/A	PTSF	69.1	ATS	31.0	% FFS	77.5
FFS Delay	13.1	LOS Thresh. Delay	22.1	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	190	460	740	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	340	830	1330	2670
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	800	3000	7200	11500	23100

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Brooks School Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Corporate Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 276 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	6431	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.045	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.763	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	221	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	69	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.15	Density	N/A	PTSF	61.8	ATS	35.0	% FFS	87.5
FFS Delay	6.4	LOS Thresh. Delay	15.4	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	70	330	530	860	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	440	700	1130	1960
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2300	9800	15600	25200	43600

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	136th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Brooks School Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Corporate Pkwy	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 276 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	6431	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.116	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.560	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	418	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	328	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.28	Density	N/A	PTSF	71.2	ATS	30.5	% FFS	76.3
FFS Delay	14.0	LOS Thresh. Delay	23.0	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	190	460	740	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	340	830	1330	2670
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	800	3000	7200	11500	23100

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Hoard Drive	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 277 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	3930	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.040	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.790	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	124	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	33	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.08	Density	N/A	PTSF	53.8	ATS	36.2	% FFS	90.5
FFS Delay	2.8	LOS Thresh. Delay	8.2	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	360	560	870	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	110	460	710	1110	1890
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2800	11600	17800	27800	47300
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Hoard Drive	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 277 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	3930	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.142	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.560	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	313	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	246	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.21	Density	N/A	PTSF	67.1	ATS	31.6	% FFS	78.9
FFS Delay	7.2	LOS Thresh. Delay	12.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	190	460	740	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	340	830	1330	2670
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	700	2400	5900	9400	18900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	136th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Hoard Drive	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 277 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	4549	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.054	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.799	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	196	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	49	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.13	Density	N/A	PTSF	60.8	ATS	35.4	% FFS	88.5
FFS Delay	3.5	LOS Thresh. Delay	8.9	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	80	360	580	870	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	110	460	730	1090	1870
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2100	8600	13600	20200	34700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	136th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Corporate Pkwy	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Hoard Drive	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 277 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	Yes	AADT	4549	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.148	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.567	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	382	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	292	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.26	Density	N/A	PTSF	69.7	ATS	30.9	% FFS	77.2
FFS Delay	8.0	LOS Thresh. Delay	13.4	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	190	460	740	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	340	820	1310	2630
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	700	2300	5600	8900	17800
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Seminole Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	161st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	169th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 279 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.067	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.550	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	37	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	30	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.03	Density	N/A	PTSF	34.7	ATS	46.9	% FFS	93.7
FFS Delay	3.9	LOS Thresh. Delay	3.9	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	280	630	910	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	510	1150	1660	2590
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2600	7700	17200	24800	38700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Seminole Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	161st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	169th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 279 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.072	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.530	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	38	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	34	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.03	Density	N/A	PTSF	33.5	ATS	46.8	% FFS	93.6
FFS Delay	3.9	LOS Thresh. Delay	3.9	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	90	280	610	880	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	530	1160	1670	2680
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2400	7400	16200	23200	37300
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Seminole Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	161st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	169th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 279 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	2152	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.079	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.718	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	122	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	48	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.09	Density	N/A	PTSF	51.4	ATS	45.9	% FFS	91.8
FFS Delay	5.2	LOS Thresh. Delay	5.2	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	360	720	1120	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	510	1010	1560	1980
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2200	6500	12800	19800	25100
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Seminole Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	161st Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	169th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 279 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	2152	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.118	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.617	Base Capacity	1700
Posted Speed	45	% NPZ	100	Peak Dir. Hrly. Vol.	157	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	97	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.11	Density	N/A	PTSF	53.8	ATS	44.8	% FFS	89.6
FFS Delay	6.7	LOS Thresh. Delay	6.7	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	100	290	670	1010	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	170	480	1090	1640	2310
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1500	4100	9300	13900	19600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Prairie Baptist Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	156th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 280 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1735	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.092	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.690	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	110	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	49	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.08	Density	N/A	PTSF	21.9	ATS	53.0	% FFS	96.3
FFS Delay	2.4	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	260	570	940	1310	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	380	830	1370	1900	2060
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4200	9100	14900	20700	22400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Prairie Baptist Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	156th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 280 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	1735	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.148	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.740	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	190	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	67	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.14	Density	N/A	PTSF	30.9	ATS	52.1	% FFS	94.7
FFS Delay	3.5	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	290	610	990	1380	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	400	830	1340	1870	1920
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2800	5700	9100	12700	13000
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Prairie Baptist Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	156th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 280 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	16378	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.117	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.847	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	1623	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	293	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.14	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	360	730	1120	1420	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	430	870	1330	1680	1680
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3700	7500	11400	14400	14400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Prairie Baptist Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	146th Street	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	156th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 280 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.950	Median	No	AADT	16378	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.148	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.666	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	1614	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	810	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.13	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	250	550	910	1270	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	380	830	1370	1910	2140
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2600	5700	9300	13000	14500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Prairie Baptist Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	146th Street	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	156th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 280 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.000	Median	No	AADT	16378	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.117	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.847	Base Capacity	2100
Posted Speed	50	% NPZ	N/A	Peak Dir. Hrly. Vol.	1623	Local Adj. Factor	0.88
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	293	Adjusted Capacity	1730

LOS Results

v/c Ratio	0.51	Density	19.5	PTSF	N/A	ATS	55.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	5.5	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	830	1410	2000	2530	2800
3	1250	2120	3000	3790	4200
4	1660	2830	4000	5060	5600
Lanes	Hourly Volume In Both Directions				
2					
4	980	1670	2370	2990	3310
6	1480	2510	3550	4480	4960
8	1960	3350	4730	5980	6620
Lanes	Annual Average Daily Traffic				
2					
4	8400	14300	20300	25600	28300
6	12700	21500	30400	38300	42400
8	16800	28700	40500	51200	56600

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Prairie Baptist Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	146th Street	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	156th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu280 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.000	Median	No	AADT	16378	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.148	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.666	Base Capacity	2100
Posted Speed	50	% NPZ	N/A	Peak Dir. Hrly. Vol.	1614	Local Adj. Factor	0.88
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	810	Adjusted Capacity	1730

LOS Results

v/c Ratio	0.51	Density	19.4	PTSF	N/A	ATS	55.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	5.5	Service Measure	Density	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	830	1410	2000	2530	2800
3	1250	2120	3000	3790	4200
4	1660	2830	4000	5060	5600
Lanes	Hourly Volume In Both Directions				
2					
4	1250	2120	3010	3800	4210
6	1880	3190	4510	5700	6310
8	2500	4250	6010	7600	8410
Lanes	Annual Average Daily Traffic				
2					
4	8500	14400	20400	25700	28500
6	12800	21600	30500	38600	42700
8	16900	28800	40700	51400	56900

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Union Chapel Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Town and Country Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Pleasant Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 281 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	8403	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.078	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.640	Base Capacity	1900
Posted Speed	40	% NPZ	N/A	Peak Dir. Hrly. Vol.	419	Local Adj. Factor	0.88
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	236	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.14	Density	5.8	PTSF	N/A	ATS	45.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	10.0	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	710	1220	1720	2220	2710
3	1070	1830	2580	3330	4060
4	1430	2440	3440	4450	5420
Lanes	Hourly Volume In Both Directions				
2					
4	1110	1910	2690	3470	4240
6	1680	2860	4040	5210	6350
8	2240	3820	5380	6960	8470
Lanes	Annual Average Daily Traffic				

2					
4	14300	24500	34500	44500	54400
6	21600	36700	51800	66800	81500
8	28800	49000	69000	89300	108600

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Union Chapel Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Town and Country Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Pleasant Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 281 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	8403	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.116	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.560	Base Capacity	1900
Posted Speed	40	% NPZ	N/A	Peak Dir. Hrly. Vol.	546	Local Adj. Factor	0.88
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	429	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.18	Density	7.6	PTSF	N/A	ATS	45.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	10.0	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	710	1220	1720	2220	2710
3	1070	1830	2580	3330	4060
4	1430	2440	3440	4450	5420
Lanes	Hourly Volume In Both Directions				
2					
4	1270	2180	3080	3970	4840
6	1920	3270	4610	5950	7250
8	2560	4360	6150	7950	9680
Lanes	Annual Average Daily Traffic				

2					
4	11000	18800	26600	34300	41800
6	16600	28200	39800	51300	62600
8	22100	37600	53100	68600	83500

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Union Chapel Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Town and Country Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Pleasant Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 281 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	14362	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.079	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.523	Base Capacity	1900
Posted Speed	40	% NPZ	N/A	Peak Dir. Hrly. Vol.	593	Local Adj. Factor	0.88
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	541	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.20	Density	8.3	PTSF	N/A	ATS	45.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	10.0	Service Measure	Density	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	710	1220	1720	2220	2710
3	1070	1830	2580	3330	4060
4	1430	2440	3440	4450	5420
Lanes	Hourly Volume In Both Directions				
2					
4	1360	2340	3290	4250	5190
6	2050	3500	4940	6370	7770
8	2740	4670	6580	8510	10370
Lanes	Annual Average Daily Traffic				

2					
4	17300	29700	41700	53800	65700
6	26000	44400	62600	80700	98400
8	34700	59200	83300	107800	131300

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Union Chapel Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Town and Country Boulevard	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Pleasant Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 281 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	Yes	AADT	14362	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.116	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.612	Base Capacity	1900
Posted Speed	40	% NPZ	N/A	Peak Dir. Hrly. Vol.	1020	Local Adj. Factor	0.88
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	646	Adjusted Capacity	1647

LOS Results

v/c Ratio	0.34	Density	14.2	PTSF	N/A	ATS	45.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	10.0	Service Measure	Density	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	710	1220	1720	2220	2710
3	1070	1830	2580	3330	4060
4	1430	2440	3440	4450	5420
Lanes	Hourly Volume In Both Directions				
2					
4	1170	2000	2820	3630	4430
6	1750	3000	4220	5450	6640
8	2340	3990	5630	7280	8860
Lanes	Annual Average Daily Traffic				

2					
4	10100	17300	24400	31300	38200
6	15100	25900	36400	47000	57300
8	20200	34400	48600	62800	76400

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282a AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	No	AADT	16797	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.066	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.650	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	721	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	388	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.51	Density	N/A	PTSF	86.0	ATS	27.3	% FFS	68.2
FFS Delay	8.4	LOS Thresh. Delay	12.0	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	230	460	770	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	360	710	1190	2190
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1600	5500	10800	18100	33200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282a PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	No	AADT	16797	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.088	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.610	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	902	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	576	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.63	Density	N/A	PTSF	90.1	ATS	24.8	% FFS	61.9
FFS Delay	11.1	LOS Thresh. Delay	14.7	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	210	450	750	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	350	740	1230	2330
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1100	4000	8500	14000	26500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 282a AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	No	AADT	18591	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.066	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.683	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	838	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	389	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.59	Density	N/A	PTSF	88.9	ATS	26.2	% FFS	65.5
FFS Delay	9.5	LOS Thresh. Delay	13.1	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	250	460	790	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	370	680	1160	2080
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1400	5700	10400	17600	31600
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	8th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 282a PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.200	Median	No	AADT	18591	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.107	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.545	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	1084	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	905	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.76	Density	N/A	PTSF	92.5	ATS	20.5	% FFS	51.3
FFS Delay	17.1	LOS Thresh. Delay	20.7	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	170	430	690	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	320	790	1270	2610
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1000	3000	7400	11900	24400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282b AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.100	Median	Yes	AADT	16797	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.066	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.650	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	721	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	388	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.48	Density	N/A	PTSF	85.0	ATS	27.7	% FFS	69.2
FFS Delay	4.0	LOS Thresh. Delay	5.8	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	240	480	810	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	370	740	1250	2300
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1600	5700	11300	19000	34900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 282b PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.100	Median	Yes	AADT	16797	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.088	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.610	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	902	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	576	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.60	Density	N/A	PTSF	89.1	ATS	25.3	% FFS	63.3
FFS Delay	5.2	LOS Thresh. Delay	7.0	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	220	470	780	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	370	780	1280	2450
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	4300	8900	14600	27900
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 282b AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.100	Median	Yes	AADT	18591	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.066	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.683	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	838	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	389	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.56	Density	N/A	PTSF	87.7	ATS	26.6	% FFS	66.6
FFS Delay	4.5	LOS Thresh. Delay	6.3	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	70	270	490	830	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	110	400	720	1220	2190
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	6100	11000	18500	33200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	8th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Walnut St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cherry St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 282b PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.100	Median	Yes	AADT	18591	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.107	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.545	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	1084	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	905	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.73	Density	N/A	PTSF	91.6	ATS	21.4	% FFS	53.4
FFS Delay	7.9	LOS Thresh. Delay	9.7	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	180	450	720	1490
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	340	830	1330	2740
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1000	3200	7800	12500	25700
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Christian St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Walnut St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 283 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	10493	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.077	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.610	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	493	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	315	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.35	Density	N/A	PTSF	77.0	ATS	29.6	% FFS	74.1
FFS Delay	9.4	LOS Thresh. Delay	14.8	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	210	450	750	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	350	740	1230	2330
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	4600	9700	16000	30300
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Christian St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Walnut St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 283 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	10493	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.089	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.610	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	570	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	364	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.40	Density	N/A	PTSF	80.8	ATS	28.8	% FFS	71.9
FFS Delay	10.5	LOS Thresh. Delay	15.9	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	210	450	750	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	350	740	1230	2330
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1100	4000	8400	13900	26200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	8th Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Christian St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Walnut St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 283 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	32909	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.077	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.704	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	1784	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	750	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.25	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	60	270	470	800	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	90	390	670	1140	2020
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1200	5100	8800	14900	26300
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	8th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Christian St	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Walnut St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 283 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	32909	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.098	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.530	Base Capacity	1700
Posted Speed	35	% NPZ	100	Peak Dir. Hrly. Vol.	1709	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	1516	Adjusted Capacity	1428

LOS Results

v/c Ratio	1.20	Density	N/A	PTSF	100.0	ATS	0.0	% FFS	0.0
FFS Delay	Infinity	LOS Thresh. Delay	Infinity	Service Measure	vcRatio	LOS	F		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	50	160	420	670	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	100	310	800	1270	2680
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1100	3200	8200	13000	27400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	8th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Christian St	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Walnut St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\AM\Fu 283 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	32909	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.077	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.704	Base Capacity	1900
Posted Speed	40	% NPZ	N/A	Peak Dir. Hrly. Vol.	1784	Local Adj. Factor	0.88
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	750	Adjusted Capacity	1565

LOS Results

v/c Ratio	0.62	Density	26.2	PTSF	N/A	ATS	45.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	680	1150	1630	2110	2570
3	1020	1730	2450	3170	3860
4	1360	2310	3270	4220	5150
Lanes	Hourly Volume In Both Directions				
2					
4	970	1640	2320	3000	3660
6	1450	2460	3490	4510	5490
8	1940	3290	4650	6000	7320
Lanes	Annual Average Daily Traffic				
2					
4	12600	21300	30200	39000	47600
6	18900	32000	45400	58600	71300
8	25200	42800	60400	78000	95100

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	8th Street	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Christian St	Analysis Type	Multilane Segment
Agency	A & F Engineering LLC	To	Walnut St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\230775-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future Mitigated\PM\Fu 283 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	32909	PHF	0.920
# Thru Lanes	4	Left Turn Impact	No	K	0.098	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.530	Base Capacity	1900
Posted Speed	40	% NPZ	N/A	Peak Dir. Hrly. Vol.	1709	Local Adj. Factor	0.88
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	1516	Adjusted Capacity	1565

LOS Results

v/c Ratio	0.59	Density	25.1	PTSF	N/A	ATS	45.0	% FFS	100.0
FFS Delay	0.0	LOS Thresh. Delay	6.0	Service Measure	Density	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1850 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2	680	1150	1630	2110	2570
3	1020	1730	2450	3170	3860
4	1360	2310	3270	4220	5150
Lanes	Hourly Volume In Both Directions				
2					
4	1290	2170	3080	3990	4850
6	1930	3270	4630	5990	7290
8	2570	4360	6170	7970	9720
Lanes	Annual Average Daily Traffic				
2					
4	13200	22200	31500	40800	49500
6	19700	33400	47300	61200	74400
8	26300	44500	63000	81400	99200

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Allisonville Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Riverwood Ave	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 284 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	7794	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.064	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.750	Base Capacity	1700
Posted Speed	45	% NPZ	72	Peak Dir. Hrly. Vol.	374	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	125	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.26	Density	N/A	PTSF	72.5	ATS	42.4	% FFS	84.7
FFS Delay	3.9	LOS Thresh. Delay	3.9	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	150	410	760	1170	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	200	550	1020	1560	1900
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3200	8600	16000	24400	29700

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Allisonville Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Riverwood Ave	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 284 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	7794	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.680	Base Capacity	1700
Posted Speed	45	% NPZ	72	Peak Dir. Hrly. Vol.	530	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	249	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.37	Density	N/A	PTSF	77.7	ATS	39.7	% FFS	79.4
FFS Delay	5.6	LOS Thresh. Delay	5.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	140	340	740	1110	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	210	500	1090	1640	2090
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2200	5000	11000	16400	21000

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Allisonville Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Riverwood Ave	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 284 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	14844	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.064	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.703	Base Capacity	1700
Posted Speed	45	% NPZ	72	Peak Dir. Hrly. Vol.	668	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	282	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.47	Density	N/A	PTSF	83.2	ATS	38.3	% FFS	76.7
FFS Delay	6.6	LOS Thresh. Delay	6.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	140	360	750	1130	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	200	520	1070	1610	2020
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3200	8200	16800	25200	31600

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Allisonville Road	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Riverwood Ave	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 284 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.300	Median	No	AADT	14844	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.122	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.612	Base Capacity	1700
Posted Speed	45	% NPZ	72	Peak Dir. Hrly. Vol.	1108	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	703	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.78	Density	N/A	PTSF	92.4	ATS	32.2	% FFS	64.4
FFS Delay	12.0	LOS Thresh. Delay	12.0	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	320	690	1020	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	200	530	1130	1670	2330
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	4400	9300	13700	19100

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Riverwood Ave	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	206th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 285 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.640	Median	No	AADT	7059	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.066	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.740	Base Capacity	1700
Posted Speed	45	% NPZ	71	Peak Dir. Hrly. Vol.	345	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	121	Adjusted Capacity	1547

LOS Results

v/c Ratio	0.24	Density	N/A	PTSF	70.7	ATS	42.8	% FFS	85.5
FFS Delay	7.8	LOS Thresh. Delay	7.8	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	150	400	760	1160	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	210	550	1030	1570	1920
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3200	8400	15700	23800	29100

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Riverwood Ave	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	206th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Existing\Ex 285 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.640	Median	No	AADT	7059	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.101	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.680	Base Capacity	1700
Posted Speed	45	% NPZ	71	Peak Dir. Hrly. Vol.	485	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	228	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.34	Density	N/A	PTSF	75.1	ATS	40.2	% FFS	80.4
FFS Delay	11.3	LOS Thresh. Delay	11.3	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	140	340	740	1110	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	210	500	1090	1640	2090
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2100	5000	10800	16300	20700

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Riverwood Ave	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	206th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 285 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.640	Median	No	AADT	12803	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.066	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.692	Base Capacity	1700
Posted Speed	45	% NPZ	71	Peak Dir. Hrly. Vol.	585	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	260	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.41	Density	N/A	PTSF	80.1	ATS	39.2	% FFS	78.4
FFS Delay	12.7	LOS Thresh. Delay	12.7	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	140	350	750	1120	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	210	510	1090	1620	2060
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3200	7800	16600	24600	31300

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	SK	Highway Name	Cumberland Road	Study Period	Kother
Date Prepared	12/4/2023 10:58:32 AM	From	Riverwood Ave	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	206th Street	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 285 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.640	Median	No	AADT	7059	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.128	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.610	Base Capacity	1700
Posted Speed	45	% NPZ	71	Peak Dir. Hrly. Vol.	551	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	352	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.39	Density	N/A	PTSF	78.9	ATS	39.3	% FFS	78.5
FFS Delay	12.6	LOS Thresh. Delay	12.6	Service Measure	PctFFS	LOS	C		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	120	320	690	1020	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	200	530	1140	1680	2330
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1600	4200	9000	13200	18300

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st St Extension	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Prairie Baptist Rd	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cyntheanne Rd	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 286 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.000	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.071	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.676	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	48	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	23	Adjusted Capacity	0

LOS Results

v/c Ratio	0.03	Density	N/A	PTSF	13.8	ATS	53.8	% FFS	97.9
FFS Delay	1.4	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	250	560	920	1290	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	370	830	1370	1910	2110
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	5300	11700	19300	27000	29800

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st St Extension	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Prairie Baptist Rd	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Cyntheanne Rd	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 286 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	1.000	Median	No	AADT	1000	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.102	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.637	Base Capacity	1700
Posted Speed	50	% NPZ	0	Peak Dir. Hrly. Vol.	65	Local Adj. Factor	0.91
Free Flow Speed	55	Class	3	Off Peak Dir. Hrly. Vol.	37	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.05	Density	N/A	PTSF	16.0	ATS	53.5	% FFS	97.3
FFS Delay	1.8	LOS Thresh. Delay	0.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	230	530	880	1220	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	370	840	1390	1920	2230
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3700	8300	13700	18900	21900

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Presley Drive Extension	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Phillip Dr	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	186th St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Northbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 287 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	1200	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.542	Base Capacity	1700
Posted Speed	35	% NPZ	0	Peak Dir. Hrly. Vol.	65	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	55	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.05	Density	N/A	PTSF	14.6	ATS	38.8	% FFS	96.9
FFS Delay	1.4	LOS Thresh. Delay	10.4	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	150	330	550	760	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	280	610	1020	1410	2620
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	2800	6200	10200	14200	26200
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Presley Drive Extension	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Phillip Dr	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	186th St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 287 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	1200	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.200	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.627	Base Capacity	1700
Posted Speed	35	% NPZ	0	Peak Dir. Hrly. Vol.	150	Local Adj. Factor	0.91
Free Flow Speed	40	Class	3	Off Peak Dir. Hrly. Vol.	90	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.11	Density	N/A	PTSF	27.1	ATS	37.5	% FFS	93.9
FFS Delay	2.9	LOS Thresh. Delay	11.9	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	190	380	620	870	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	310	610	990	1390	2270
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1600	3100	5000	7000	11400
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st St (Extension)	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Rd	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Brooks School Rd	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 288 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	3190	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.815	Base Capacity	1700
Posted Speed	40	% NPZ	0	Peak Dir. Hrly. Vol.	260	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	59	Adjusted Capacity	1547

LOS Results

v/c Ratio	0.18	Density	N/A	PTSF	35.9	ATS	41.9	% FFS	93.1
FFS Delay	3.0	LOS Thresh. Delay	7.0	Service Measure	PctFFS	LOS	A		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	310	600	900	1230	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	390	740	1110	1510	1750
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4000	7400	11200	15200	17600

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	141st St (Extension)	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Marilyn Rd	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	Brooks School Rd	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Westbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 288 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	3190	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.188	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.520	Base Capacity	1700
Posted Speed	40	% NPZ	0	Peak Dir. Hrly. Vol.	312	Local Adj. Factor	0.91
Free Flow Speed	45	Class	3	Off Peak Dir. Hrly. Vol.	288	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.22	Density	N/A	PTSF	47.9	ATS	38.5	% FFS	85.5
FFS Delay	6.8	LOS Thresh. Delay	10.8	Service Measure	PctFFS	LOS	B		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	160	360	600	820	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	310	700	1160	1580	2740
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	1700	3800	6200	8500	14600

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Pleasant Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Cherry Tree Ln	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	River Ave	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 289 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	16200	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.729	Base Capacity	1700
Posted Speed	45	% NPZ	0	Peak Dir. Hrly. Vol.	1181	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	439	Adjusted Capacity	1547

LOS Results

v/c Ratio	0.83	Density	N/A	PTSF	88.6	ATS	34.2	% FFS	68.4
FFS Delay	16.7	LOS Thresh. Delay	16.7	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	280	560	890	1250	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	390	770	1230	1720	1950
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4000	7800	12400	17200	19600

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Pleasant Street	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Cherry Tree Ln	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	River Ave	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 289 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.500	Median	No	AADT	16200	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.110	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.528	Base Capacity	1700
Posted Speed	45	% NPZ	0	Peak Dir. Hrly. Vol.	941	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	841	Adjusted Capacity	1428

LOS Results

v/c Ratio	0.66	Density	N/A	PTSF	85.7	ATS	33.1	% FFS	66.2
FFS Delay	18.4	LOS Thresh. Delay	18.4	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	170	410	680	920	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	330	780	1290	1750	2690
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3000	7100	11800	16000	24500

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Pleasant Street Extension	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	River Ave	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	8th St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Eastbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\AM\Fu 290 AM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	16120	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.100	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.728	Base Capacity	1700
Posted Speed	45	% NPZ	0	Peak Dir. Hrly. Vol.	1174	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	438	Adjusted Capacity	1547

LOS Results

v/c Ratio	0.82	Density	N/A	PTSF	88.4	ATS	34.3	% FFS	68.5
FFS Delay	26.5	LOS Thresh. Delay	26.5	Service Measure	PctFFS	LOS	D		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	280	550	890	1250	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	390	760	1230	1720	1960
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	4000	7600	12400	17200	19600

4
6
8

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.

HIGHPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst	TR	Highway Name	Presley Drive Extension	Study Period	Kother
Date Prepared	9/13/2023 10:58:32 AM	From	Phillip Dr	Analysis Type	Two-Lane Segment
Agency	A & F Engineering LLC	To	186th St	Program	HIGHPLAN 2012
Area Type	Transitioning/Urban	Peak Direction	Southbound	Version Date	12/12/2012
File Name	Z:\2023\23077S-City of Noblesville, Road Impact Fee Update, Noblesville\Capacity Analysis\HCS\Future\PM\Fu 290 PM.xhp				
User Notes					

Highway Data

Roadway Variables				Traffic Variables			
Segment Length	0.800	Median	No	AADT	16120	PHF	0.920
# Thru Lanes	2	Left Turn Impact	No	K	0.110	% Heavy Vehicles	3.0
Terrain	Level	Pass Lane Length	N/A	D	0.528	Base Capacity	1700
Posted Speed	45	% NPZ	0	Peak Dir. Hrly. Vol.	936	Local Adj. Factor	0.91
Free Flow Speed	50	Class	3	Off Peak Dir. Hrly. Vol.	837	Adjusted Capacity	1547

LOS Results

v/c Ratio	0.66	Density	N/A	PTSF	85.5	ATS	33.2	% FFS	66.3
FFS Delay	29.2	LOS Thresh. Delay	29.2	Service Measure	PctFFS	LOS	E		

Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1650 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	170	410	680	920	1420
2					
3					
4					
Lanes	Hourly Volume In Both Directions				
2	330	780	1290	1750	2690
4					
6					
8					
Lanes	Annual Average Daily Traffic				
2	3000	7100	11800	16000	24500
4					
6					
8					

* Cannot be achieved based on input data provided.

Performance measure results are no longer applicable with the presence of passing lanes. Refer to the service volume tables to obtain the LOS.