

I-41 Traffic and Engineering Study
Year 2028 No Build
Synchro* Intersection Peak Hour Traffic Operations (HCM6)

Year 2028 No Build Intersection Operations																
Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR
IH 41 NB ramps & CTH S (Freedom Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	1	1	0	0	1	1	0	<1	1	0	0	0
				Volume (vph)	290	120	-	-	230	130	50	0	100	-	-	-
				Total Delay LOS	9.4	0	-	-	0	0	39.7	39.7	9.5	-	-	-
			PM	Volume (vph)	150	160	-	-	190	170	60	0	130	-	-	-
				Total Delay LOS	8.7	0	-	-	0	0	21.6	21.6	10.1	-	-	-
					A	A	-	-	A	A	C	C	B	-	-	-
IH-41 SB ramps & CTH S (Freedom Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1
				Volume (vph)	-	350	90	150	130	-	-	-	-	60	0	-
				Total Delay LOS	-	0	0	9.1	0	-	-	-	-	26.9	26.9	-
			PM	Volume (vph)	-	210	80	120	130	-	-	-	100	0	-	
				Total Delay LOS	-	0	0	8.3	0	-	-	-	20.7	20.7	-	
					-	A	A	A	A	-	-	-	C	C	-	
IH 41 NB ramps & CTH U (County Line Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	<1>	0	0	0	0	0	1	1	1	1	0
				Volume (vph)	40	0	70	-	-	-	-	130	250	60	300	-
				Total Delay LOS	14.4	14.4	14.4	-	-	-	-	0	0	8.4	0	-
			PM	Volume (vph)	80	0	70	-	-	-	-	220	130	70	280	-
				Total Delay LOS	18.8	18.8	18.8	-	-	-	-	0	0	8.3	0	-
					C	C	C	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & CTH U (County Line Rd)	No Build (2028)	Stop Controlled	AM	Lane Configurations	0	0	0	0	<1>	0	1	1	0	0	1	1
				Volume (vph)	-	-	-	100	0	70	70	100	-	-	260	-
				Total Delay LOS	-	-	-	15.5	15.5	15.5	8.3	0	-	-	0	-
			PM	Volume (vph)	-	-	-	220	0	140	80	220	-	-	130	-
				Total Delay LOS	-	-	-	33.4	33.4	33.4	7.8	0	-	-	0	-
					-	-	-	D	D	D	A	A	-	-	A	-
IH 41 NB ramps & CTH J (Hyland Ave)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	<1>	0	0	0	0	0	1>	0	0	<1	0
				Volume (vph)	150	0	120	-	-	-	-	290	350	80	180	-
				Total Delay LOS	6.8	6.8	6.8	-	-	-	-	16.5	16.5	5.1	5.1	-
			PM	Volume (vph)	160	0	300	-	-	-	-	210	220	90	460	-
				Total Delay LOS	16.2	16.2	16.2	-	-	-	-	9.1	9.1	8.1	8.1	-
					C	C	C	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & CTH J (Hyland Ave)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1>	0	0	<1	0	0	1>	0
				Volume (vph)	-	-	-	130	0	60	180	260	-	-	130	230
				Total Delay LOS	-	-	-	7.5	7.5	7.5	6.6	6.6	-	-	11.1	11.1
			PM	Volume (vph)	-	-	-	320	0	110	100	270	-	-	230	230
				Total Delay LOS	-	-	-	14.9	14.9	14.9	6.4	6.4	-	-	21.3	21.3
					-	-	-	B	B	B	A	A	-	-	C	C
IH 41 NB ramps & WIS 55 (Delanglade St)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	1	0
				Volume (vph)	50	0	270	-	-	-	-	500	130	30	250	-
				Total Delay LOS	4.3	4.3	6.9	-	-	-	-	5.9	4	3.1	4.9	-
			PM	Volume (vph)	90	0	370	-	-	-	-	570	120	30	350	-
				Total Delay LOS	5.2	5.2	9.7	-	-	-	-	7.8	3.9	3.1	5.8	-
					A	A	A	-	-	-	-	A	A	A	A	-
IH 41 SB ramps & WIS 55 (Delanglade St)	No Build (2028)	Roundabout*	AM	Lane Configurations	0	0	0	0	<1	1	0	<2	0	0	1	1
				Volume (vph)	-	-	-	80	0	70	270	280	-	-	200	140
				Total Delay LOS	-	-	-	5.4	5.4	4.2	4.8	4.9	-	-	6.2	5
			PM	Volume (vph)	-	-	-	190	0	50	410	250	-	-	190	80
				Total Delay LOS	-	-	-	7.8	7.8	3.9	6	4.6	-	-	7.9	5
					-	-	-	A	A	A	A	A	-	-	A	A
IH 41 NB ramps & CTH N (Freedom Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	<1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	110	-	170	-	-	-	-	480	190	80	250	-
				Total Delay LOS	20.6	-	0	-	-	-	-	11.6	0	10.9	3.3	-
			PM	Volume (vph)	430	-	360	-	-	-	-	460	140	90	570	-
				Total Delay LOS	63.4	-	0	-	-	-	-	14.4	0	14.1	5.8	-
					E	-	A	-	-	-	-	B	A	B	A	-
IH 41 SB ramps & CTH N (Freedom Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	0	<1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	120	-	70	320	270	-	-	210	270
				Total Delay LOS	-	-	-	20.3	-	0	12	3.5	-	-	10.7	0
			PM	Volume (vph)	-	-	-	C	-	A	B	A	-	-	B	A
				Total Delay LOS	-	-	-	350	-	120	340	550	-	-	310	200
					-	-	-	24.6	-	0	20.5	7	-	-	15.1	0
IH 41 NB ramps & CTH E (Ballard Rd)	No Build (2028)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	540	-	350	-	-	-	-	650	270	810	290	-
				Total Delay LOS	46	-	0	-	-	-	-	17.3	0	81.6	0.1	-
			PM	Volume (vph)	420	-	150	-	-	-	-	1140	190	580	790	-
				Total Delay LOS	39.6	-	0	-	-	-	-	74.9	0	41.9	18.7	-
					D	-	A	-	-	-	-	F	A	D	B	-
IH 41 SB ramps & CTH E (Ballard Rd)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	230	-	660	160	1030	-	-	870	550
				Total Delay LOS	-	-	-	30.7	-	0	18	25.8	-	-	41	0
			PM	Volume (vph)	-	-	-	230	-	510	450	1110	-	-	1140	660
				Total Delay LOS	-	-	-	34	-	0	34.9	14.5	-	-	34.5	0
					-	-	-	C	-	A	C	B	-	-	C	A
IH 41 NB ramps & WIS 47 (Richmond St)	No Build (2028)	Signalized	AM	Lane Configurations	2	1	1	0	0	0	0	2	1	1	2	0
				Volume (vph)	270	-	150	-	-	-	-	560	420	300	620	-
				Total Delay LOS	42.7	-	0	-	-	-	-	23.8	0	10	13.7	-
			PM	Volume (vph)	480	-	260	-	-	-	-	920	510	300	1060	-
				Total Delay LOS	40.6	-	0	-	-	-	-	40.3	0	17.9	12.8	-
					D	-	A	-	-	-	-	D	A	B	B	-
IH 41 SB ramps & WIS 47 (Richmond St)	No Build (2028)	Signalized	AM	Lane Configurations	0	0	0	2	1	1	1	2	0	0	2	1
				Volume (vph)	-	-	-	280	-	240	380	450	-	-	640	460
				Total Delay LOS	-	-	-	42.3	-	0	5.6	0.1	-	-	20.8	0
			PM	Volume (vph)	-	-	-	520	-	290	230	1170	-	-	840	310
				Total Delay LOS	-	-	-	40.9	-	0	9.7	1.1	-	-	30.2	0
					-	-	-	D	-	A	A	A	-	-	C	A

*Note: Roundabout intersections were analyzed using HCS7 software, not Synchro.

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Intersection	Scenario	Traffic Control	Peak Hour	Lane Group	EBL	East EBT	EBR	WBL	West WBT	WBR	NBL	North NBT	NBR	SBL	South SBT	SBR	
IH 41 NB ramps & WIS 15 (Northland Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	<1	1	0	0	0	
				Volume (vph)	600	830	-	-	840	150	190	-	440	-	-	-	
				Total Delay	161	5.2	-	-	24.3	0	36.4	-	0	-	-	-	
				LOS	F	A	-	-	C	A	D	-	A	-	-	-	
				PM	Volume (vph)	890	970	-	-	1350	300	300	-	800	-	-	-
					Total Delay	310.6	0.3	-	-	111.4	0	43.6	-	0	-	-	-
IH 41 SB ramps & WIS 15 (Northland Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	2	1	0	0	0	1	0	1	
				Volume (vph)	200	1240	-	-	650	380	-	-	-	190	-	810	
				Total Delay	8.9	7.9	-	-	12.9	0	-	-	-	21.2	-	0	
				LOS	A	A	-	-	B	A	-	-	-	C	-	A	
				PM	Volume (vph)	230	1700	-	-	1170	480	-	-	-	160	-	890
					Total Delay	24.6	1.6	-	-	26	0	-	-	-	43.3	-	0
IH 41 NB ramps & WIS 96 (Wisconsin Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	1	0	0	0	
				Volume (vph)	170	640	-	-	740	70	290	-	380	-	-	-	
				Total Delay	8	8.7	-	-	24.7	21.2	42.2	-	0	-	-	-	
				LOS	A	A	-	-	C	C	D	-	A	-	-	-	
				PM	Volume (vph)	730	1070	-	-	1800	310	420	-	490	-	-	-
					Total Delay	63.8	18.9	-	-	57.3	30.1	41.9	-	0	-	-	-
IH 41 SB ramps & WIS 96 (Wisconsin Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	0	<1	1	
				Volume (vph)	-	650	210	380	650	-	-	-	-	160	-	290	
				Total Delay	-	30.7	0	6.2	0.2	-	-	-	-	35.6	-	106	
				LOS	-	C	A	A	A	-	-	-	-	D	-	F	
				PM	Volume (vph)	-	1580	420	600	1620	-	-	-	-	220	-	500
					Total Delay	-	73.1	0	25	8.5	-	-	-	-	36.7	-	257.3
IH 41 NB ramps & WIS 125 (College Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	2	0	0	3	1	1	<1	2	0	0	0	
				Volume (vph)	180	580	-	-	650	120	300	-	430	-	-	-	
				Total Delay	8.5	6.6	-	-	24	0	33.5	-	0	-	-	-	
				LOS	A	A	-	-	C	A	C	-	A	-	-	-	
				PM	Volume (vph)	560	1010	-	-	1380	290	510	-	490	-	-	-
					Total Delay	34.8	9.9	-	-	66.5	0	31.4	-	0	-	-	-
IH 41 SB ramps & WIS 125 (College Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	3	1	1	2	0	0	0	0	1	<1	2	
				Volume (vph)	-	550	160	290	660	-	-	-	-	210	-	340	
				Total Delay	-	27.5	0	41.5	4.9	-	-	-	-	36.7	-	0	
				LOS	-	C	A	D	A	-	-	-	-	D	-	A	
				PM	Volume (vph)	-	1380	600	440	1450	-	-	-	-	190	-	210
					Total Delay	-	33.3	0	14.2	0	-	-	-	-	35.9	-	0
IH 41 NB off ramp & CTH BB (Prospect Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	1	0	0	1	0	1	0	1	0	0	0	
				Volume (vph)	-	260	-	-	520	-	210	-	450	-	-	-	
				Total Delay	-	5.7	-	-	7.7	-	13.4	-	0	-	-	-	
				LOS	-	A	-	-	A	-	B	-	A	-	-	-	
				PM	Volume (vph)	-	380	-	-	670	-	200	-	400	-	-	-
					Total Delay	-	5.9	-	-	8.9	-	15.3	-	0	-	-	-
IH 41 NB on ramp & CTH BB (Prospect Ave)	No Build (2028)	Signalized	AM	Lane Configurations	1	1	0	0	1	1	0	0	0	0	0	0	
				Volume (vph)	420	260	-	-	650	80	-	-	-	-	-	-	
				Total Delay	13	0.3	-	-	12.1	5.1	-	-	-	-	-	-	
				LOS	B	A	-	-	B	A	-	-	-	-	-	-	
				PM	Volume (vph)	630	380	-	-	710	160	-	-	-	-	-	-
					Total Delay	13.9	0.3	-	-	17.2	7.8	-	-	-	-	-	-
IH 41 SB off ramps & CTH BB (Prospect Ave)	No Build (2028)	Signalized	AM	Lane Configurations	0	1	1	1	1	0	0	0	0	0	<1	1	
				Volume (vph)	-	550	210	160	490	-	-	-	-	130	-	460	
				Total Delay	-	112.3	27.1	50.7	21.4	-	-	-	-	18.7	-	49.2	
				LOS	-	F	C	D	C	-	-	-	-	B	-	D	
				PM	Volume (vph)	-	830	410	330	380	-	-	-	-	180	-	310
					Total Delay	-	175.2	26.6	135.9	8.8	-	-	-	-	23.8	-	29.7