

USH 45: STH 190 TO NORTH AVE (MILWAUKEE COUNTY) NIGHTTIME 2 LANE CLOSURE NO DIVERSION ROUTE (MAX QUEUE METHOD)	OCTOBER
	Analyzed for 2009 Construction Season

SUMMARY OF TRAFFIC MODEL OUTPUT

SUNDAY SOUTHBOUND DIRECTION

TIME OF DAY	FLOWS AND CAPACITY IN VEH/HR						AVERAGE SPEEDS IN MPH			
	MAIN ROUTE		SITE CAPA CITY	FLOW		AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	MAIN ROUTE		SITE
	DEMAND FLOW	PCT HEAVY		MAIN ROUTE	'DIVER TED'			WITHOUT WORK ZONE	WITH WORK ZONE	
MID-1 AM	843	0.0	2000	843	0	0.57	0	69.7	53.0	42.2
1-2 AM	473	0.0	2000	473	0	0.53	0	70.2	54.2	43.6
2-3 AM	429	0.0	2000	429	0	0.52	0	70.2	54.3	43.8
3-4 AM	307	0.0	2000	307	0	0.51	0	70.2	54.6	44.3
4-5 AM	279	0.0	2000	279	0	0.51	0	70.2	54.7	44.3
5-6 AM	487	0.0	2000	487	0	0.53	0	70.1	54.1	43.5
6-7 AM	907	0.0	2000	907	0	0.58	0	69.6	52.8	42.0
7-8 AM	1158	0.0	2000	1158	0	0.65	0	69.3	51.0	39.8
8-9 AM	1706	0.0	1999	1706	0	1.21	0	68.6	41.4	29.1
9-10 AM	2589	0.0	OFF	2589	0	0.00	0	67.5	67.5	67.5
10-11 AM	3221	0.0	OFF	3221	0	0.00	0	66.8	66.8	66.8
11AM-NOON	3822	0.0	OFF	3822	0	0.00	0	64.8	64.8	64.8
NOON-1PM	4438	0.0	OFF	4438	0	0.00	0	60.5	60.5	60.5
1-2 PM	4493	0.0	OFF	4493	0	0.00	0	60.2	60.2	60.2
2-3 PM	4698	0.0	OFF	4698	0	0.00	0	58.7	58.7	58.7
3-4 PM	4446	0.0	OFF	4446	0	0.00	0	60.5	60.5	60.5
4-5 PM	4159	0.0	OFF	4159	0	0.00	0	62.4	62.4	62.4
5-6 PM	4034	0.0	OFF	4034	0	0.00	0	63.3	63.3	63.3
6-7 PM	3803	0.0	OFF	3803	0	0.00	0	64.9	64.9	64.9
7-8 PM	3010	0.0	1999	2597	414	12.84+	431	67.0	9.7	27.9
8-9 PM	2282	0.0	1999	1954	328	16.98+	557	67.9	8.4	27.9
9-10 PM	1641	0.0	1999	1641	0	12.43+	409	68.7	9.9	27.9
10-11 PM	1078	0.0	2000	1078	0	0.97	23	69.4	45.2	39.1
11PM-MID	663	0.0	2000	663	0	0.55	0	69.9	53.5	42.9

"OFF" INDICATES NO ROAD WORK (ALL LANES OPEN TO TRAFFIC)

+ INDICATES QUEUEING EXCEEDS USER-SPECIFIED MAXIMUM LIMIT

----- SITE BREAKDOWN DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0.0
AV BREAKDOWNS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

----- SITE ACCIDENT DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0
AV BREAKDOWNS PER DAY	0
AV QUEUE DELAY/DAY (VEH-H)	0
AV TOTAL DELAY/DAY (VEH-H)	0

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0184
MAIN ROUTE WITH WORKS	0.0172
'DIVERSION'	0.0006
<small>PIA: Personal Injury Accidents</small>	
IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY	\$27,598
CONGESTED HOURS PER DAY*	3

*Delays Exceeding User-Specified Maximum

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 NIGHTTIME 2 LANE CLOSURE
 NO DIVERSION ROUTE (MAX QUEUE METHOD)**

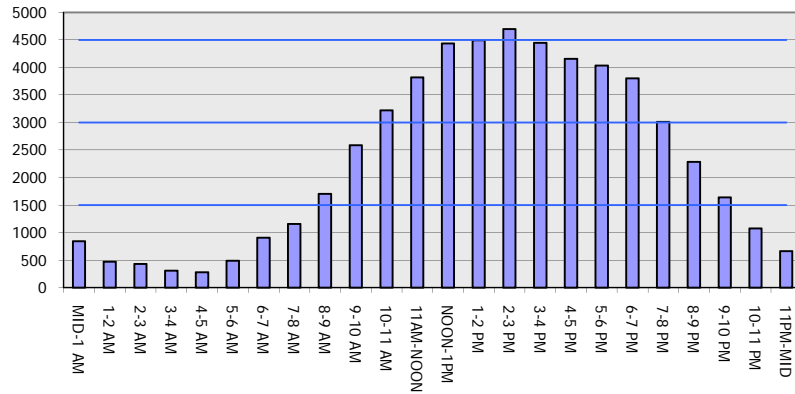
OCTOBER

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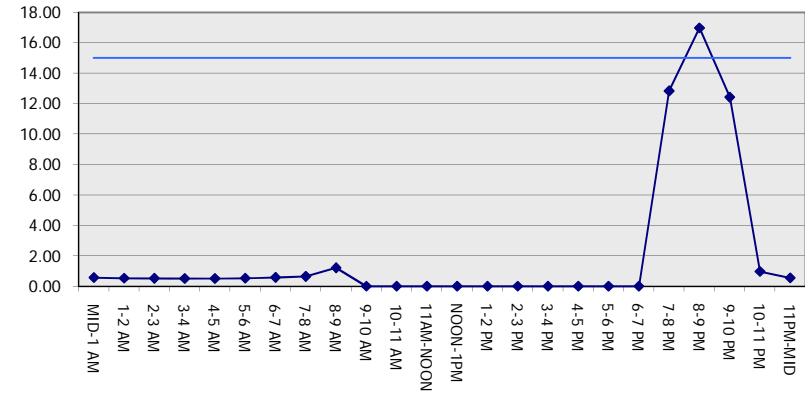
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

SUNDAY SOUTHBOUND DIRECTION

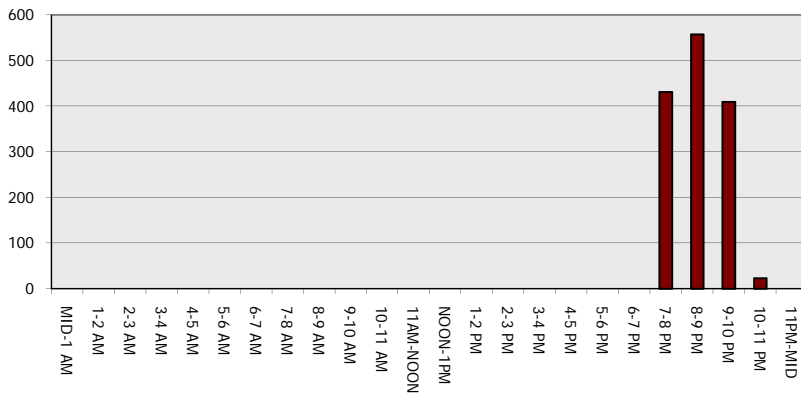
Main Route - Traffic Demand (Vehicles Per Hour)



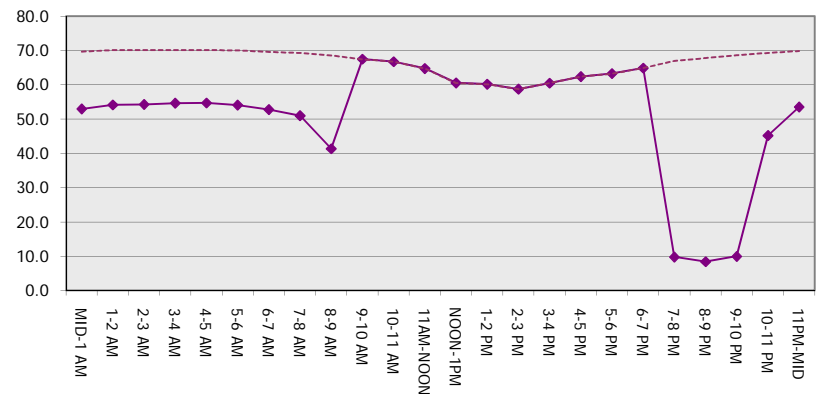
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



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SUMMARY OF TRAFFIC MODEL OUTPUT

SUNDAY NORTHBOUND DIRECTION

TIME OF DAY	FLOWS AND CAPACITY IN VEH/HR							AVERAGE SPEEDS IN MPH		
	MAIN ROUTE		SITE CAPA CITY	FLOW		AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	MAIN ROUTE		SITE
	DEMAND FLOW	PCT HEAVY		MAIN ROUTE	'DIVER TED'			WITHOUT WORK ZONE	WITH WORK ZONE	
MID-1 AM	1280	0.0	2000	1280	0	0.81	0	69.1	47.8	36.1
1-2 AM	827	0.0	2000	827	0	0.57	0	69.7	53.0	42.3
2-3 AM	827	0.0	2000	827	0	0.57	0	69.7	53.0	42.3
3-4 AM	560	0.0	2000	560	0	0.54	0	70.0	53.9	43.3
4-5 AM	548	0.0	2000	548	0	0.54	0	70.0	53.9	43.3
5-6 AM	738	0.0	2000	738	0	0.56	0	69.8	53.3	42.6
6-7 AM	1017	0.0	2000	1017	0	0.59	0	69.5	52.4	41.6
7-8 AM	1299	0.0	2000	1299	0	0.84	0	69.1	47.4	35.5
8-9 AM	1799	0.0	1999	1799	0	1.29	0	68.5	40.2	28.0
9-10 AM	2514	0.0	OFF	2514	0	0.00	0	67.6	67.6	67.6
10-11 AM	3073	0.0	OFF	3073	0	0.00	0	66.9	66.9	66.9
11AM-NOON	3394	0.0	OFF	3394	0	0.00	0	66.5	66.5	66.5
NOON-1PM	3889	0.0	OFF	3889	0	0.00	0	64.3	64.3	64.3
1-2 PM	3876	0.0	OFF	3876	0	0.00	0	64.4	64.4	64.4
2-3 PM	3915	0.0	OFF	3915	0	0.00	0	64.1	64.1	64.1
3-4 PM	4242	0.0	OFF	4242	0	0.00	0	61.9	61.9	61.9
4-5 PM	3919	0.0	OFF	3919	0	0.00	0	64.1	64.1	64.1
5-6 PM	3907	0.0	OFF	3907	0	0.00	0	64.1	64.1	64.1
6-7 PM	3180	0.0	OFF	3180	0	0.00	0	66.8	66.8	66.8
7-8 PM	2952	0.0	1999	2537	415	12.19+	415	67.1	10.1	27.9
8-9 PM	2235	0.0	2000	2015	220	17.05+	559	67.9	8.4	27.9
9-10 PM	1967	0.0	2000	1945	22	16.59+	543	68.3	8.5	27.9
10-11 PM	1566	0.0	1999	1566	0	9.08	308	68.8	12.3	27.9
11PM-MID	1073	0.0	2000	1073	0	0.64	2	69.4	51.3	41.3

"OFF" INDICATES NO ROAD WORK (ALL LANES OPEN TO TRAFFIC)

+ INDICATES QUEUEING EXCEEDS USER-SPECIFIED MAXIMUM LIMIT

----- SITE BREAKDOWN DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0.0
AV BREAKDOWNS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

----- SITE ACCIDENT DELAYS -----	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0
AV BREAKDOWNS PER DAY	0
AV QUEUE DELAY/DAY (VEH-H)	0
AV TOTAL DELAY/DAY (VEH-H)	0

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0182
MAIN ROUTE WITH WORKS	0.0168
'DIVERSION'	0.0005

PIA: Personal Injury Accidents

ECONOMIC IMPACT ON ROAD USERS	
ROAD USER COSTS PER DAY	\$34,116
CONGESTED HOURS PER DAY*	3

*Delays Exceeding User-Specified Maximum

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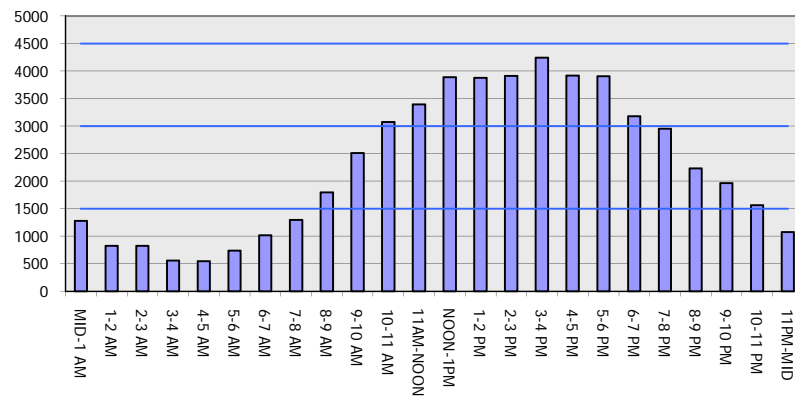
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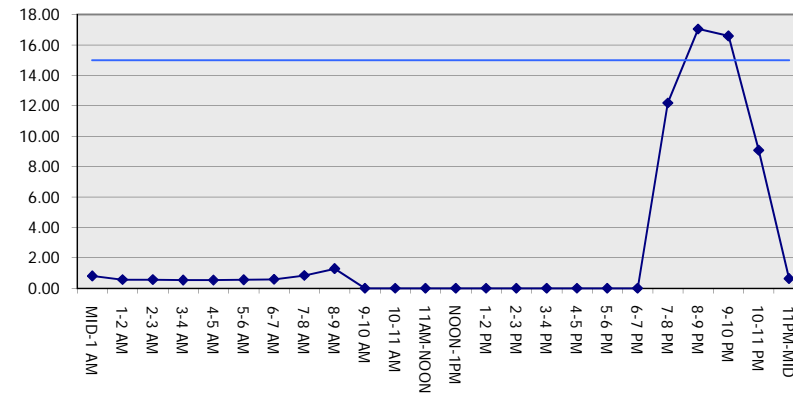
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SUNDAY NORTHBOUND DIRECTION

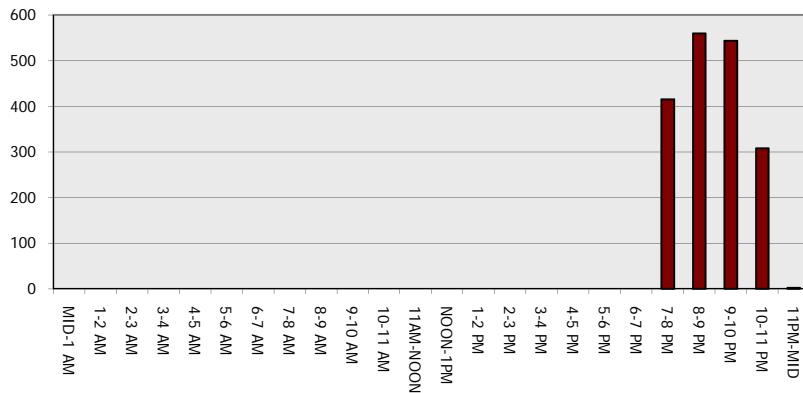
Main Route - Traffic Demand (Vehicles Per Hour)



Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)

