

IH 94: MN 96 TO STH 35 N NIGHTTIME 2 LANE CLOSURE NO DIVERSION ROUTE (MAX QUEUE METHOD)	OCTOBER
	Analyzed for 2009 Construction Season

SUMMARY OF TRAFFIC MODEL OUTPUT

SUNDAY WESTBOUND 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	497	0.0	1499	497	0	2.21	218	70.1	23.5	41.1	
1-2 AM	379	0.0	1500	379	0	0.26	0	70.2	53.7	44.0	
2-3 AM	326	0.0	1500	326	0	0.26	0	70.2	53.8	44.2	
3-4 AM	315	0.0	1500	315	0	0.26	0	70.2	53.9	44.2	
4-5 AM	316	0.0	1500	316	0	0.26	0	70.2	53.9	44.2	
5-6 AM	407	0.0	1500	407	0	0.26	0	70.2	53.6	43.8	
6-7 AM	533	0.0	1500	533	0	0.27	0	70.0	53.2	43.4	
7-8 AM	757	0.0	1500	757	0	0.28	0	69.8	52.5	42.5	
8-9 AM	1183	0.0	1499	1183	0	0.37	0	69.2	48.7	38.2	
9-10 AM	1895	0.0	OFF	1895	0	0.00	0	68.4	68.4	68.4	
10-11 AM	2684	0.0	OFF	2684	0	0.00	0	67.4	67.4	67.4	
11AM-NOON	3505	0.0	OFF	3505	0	0.00	0	66.4	66.4	66.4	
NOON-1PM	3921	0.0	OFF	3921	0	0.00	0	64.1	64.1	64.1	
1-2 PM	4503	0.0	OFF	4503	0	0.00	0	60.1	60.1	60.1	
2-3 PM	5120	0.0	OFF	5120	0	0.00	0	55.9	55.9	55.9	
3-4 PM	5705	0.0	OFF	5705	0	0.00	0	51.9	51.9	51.9	
4-5 PM	5894	0.0	OFF	5894	0	0.00	0	50.6	50.6	50.6	
5-6 PM	5620	0.0	OFF	5620	0	0.00	0	52.5	52.5	52.5	
6-7 PM	4940	0.0	OFF	4940	0	0.00	0	57.1	57.1	57.1	
7-8 PM	4540	0.0	1499	2405	2135	38.84+	1024	59.9	4.2	30.8	
8-9 PM	3705	0.0	1499	1574	2131	47.49+	1232	65.5	3.9	30.8	
9-10 PM	2664	0.0	1499	1593	1071	47.32+	1225	67.4	3.9	30.8	
10-11 PM	1764	0.0	1499	1526	238	46.22+	1195	68.6	4.0	30.8	
11PM-MID	1039	0.0	1499	1039	0	35.10	907	69.4	4.2	30.8	

"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	0.0099
MAIN ROUTE WITH WORKS	0.0076
'DIVERSION'	0.0021
<small>PIA: Personal Injury Accidents</small>	
IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY	\$156,141
CONGESTED HOURS PER DAY*	4

*Delays Exceeding User-Specified Maximum

**IH 94: MN 96 TO STH 35 N
NIGHTTIME 2 LANE CLOSURE
NO DIVERSION ROUTE (MAX QUEUE METHOD)**

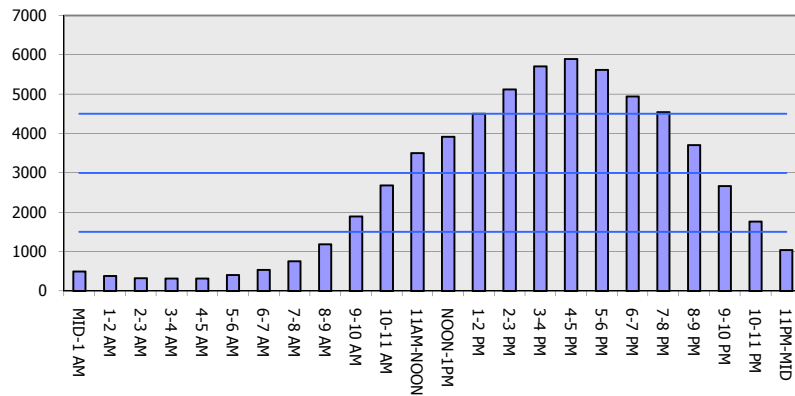
OCTOBER

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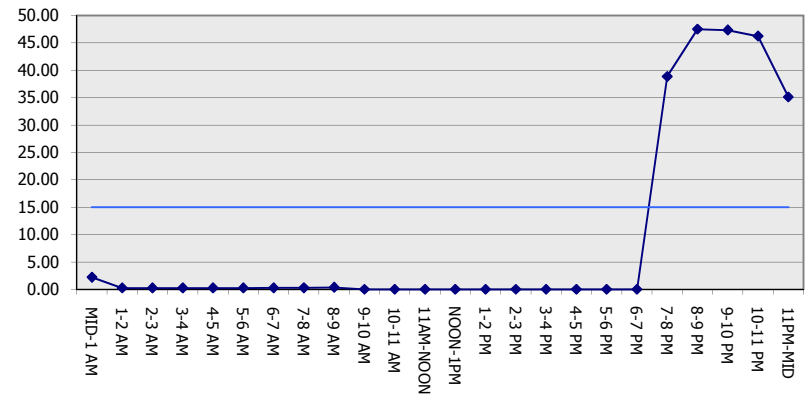
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

SUNDAY WESTBOUND DIRECTION

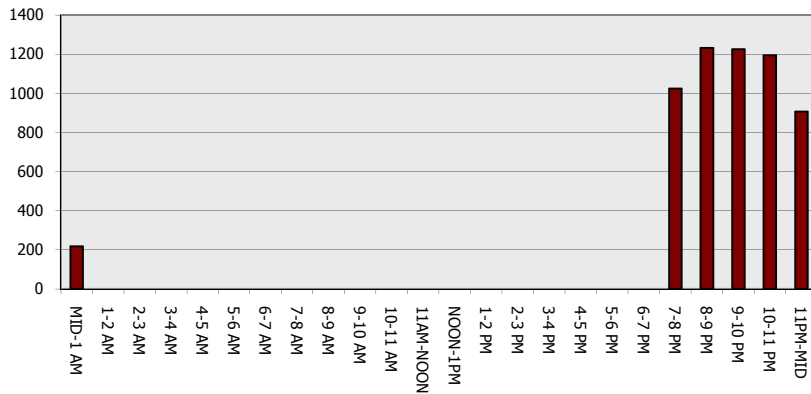
Main Route - Traffic Demand (Vehicles Per Hour)



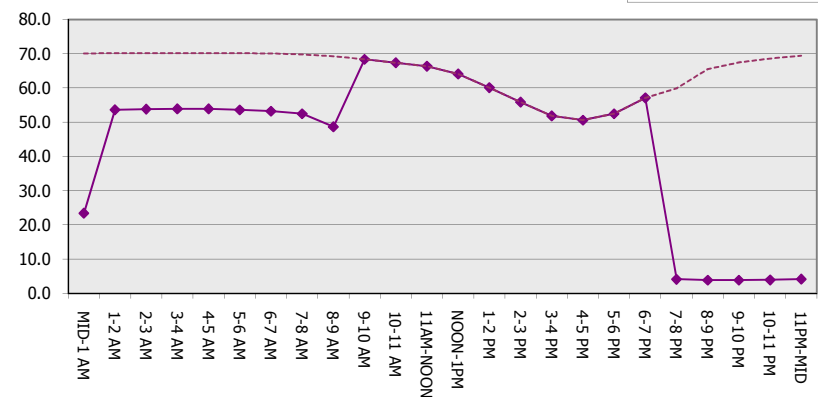
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



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SUMMARY OF TRAFFIC MODEL OUTPUT

SUNDAY EASTBOUND 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	573	0.0	1500	573	0	0.27	0	70.0	53.1	43.2
1-2 AM	358	0.0	1500	358	0	0.26	0	70.2	53.7	44.0
2-3 AM	298	0.0	1500	298	0	0.26	0	70.2	53.9	44.3
3-4 AM	247	0.0	1500	247	0	0.25	0	70.2	54.1	44.5
4-5 AM	307	0.0	1500	307	0	0.26	0	70.2	53.9	44.3
5-6 AM	424	0.0	1500	424	0	0.27	0	70.2	53.5	43.8
6-7 AM	735	0.0	1500	735	0	0.28	0	69.8	52.5	42.6
7-8 AM	1186	0.0	1499	1186	0	0.36	0	69.2	48.7	38.3
8-9 AM	1790	0.0	1499	1790	0	2.76	96	68.5	17.3	30.8
9-10 AM	2749	0.0	OFF	2749	0	0.13	12	67.3	58.5	58.5
10-11 AM	3663	0.0	OFF	3663	0	0.00	0	65.8	65.8	65.8
11AM-NOON	4182	0.0	OFF	4182	0	0.00	0	62.3	62.3	62.3
NOON-1PM	4306	0.0	OFF	4306	0	0.00	0	61.4	61.4	61.4
1-2 PM	4365	0.0	OFF	4365	0	0.00	0	61.0	61.0	61.0
2-3 PM	4341	0.0	OFF	4341	0	0.00	0	61.2	61.2	61.2
3-4 PM	4280	0.0	OFF	4280	0	0.00	0	61.6	61.6	61.6
4-5 PM	4179	0.0	OFF	4179	0	0.00	0	62.3	62.3	62.3
5-6 PM	3705	0.0	OFF	3705	0	0.00	0	65.5	65.5	65.5
6-7 PM	2977	0.0	OFF	2977	0	0.00	0	67.0	67.0	67.0
7-8 PM	2592	0.0	1499	2592	0	20.85	584	67.5	5.2	30.8
8-9 PM	1757	0.0	1500	1512	245	46.36+	1199	68.6	4.0	30.8
9-10 PM	1311	0.0	1500	1311	0	40.02+	1033	69.1	4.1	30.8
10-11 PM	986	0.0	1500	986	0	26.15	678	69.5	4.7	30.9
11PM-MID	648	0.0	1499	648	0	1.17	100	69.9	31.2	42.4

"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	0.0083
MAIN ROUTE WITH WORKS	0.0068
'DIVERSION'	0.0001

PIA: Personal Injury Accidents

ECONOMIC IMPACT ON ROAD USERS	
ROAD USER COSTS PER DAY	\$57,642
CONGESTED HOURS PER DAY*	2

*Delays Exceeding User-Specified Maximum

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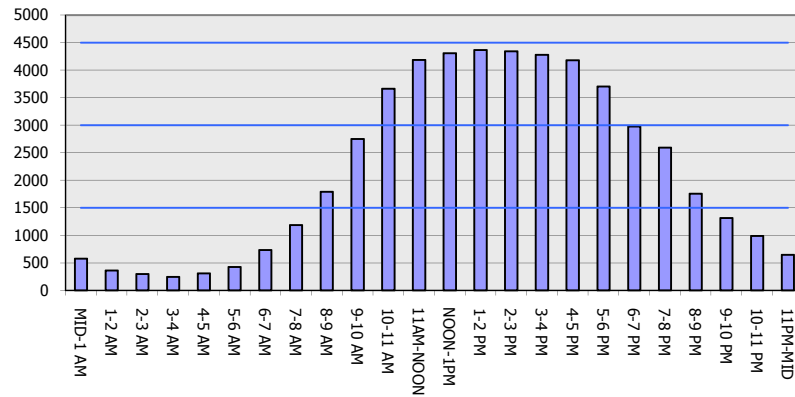
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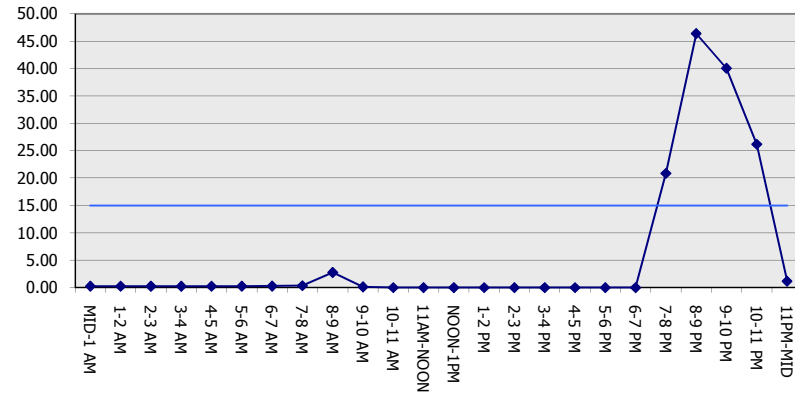
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

SUNDAY EASTBOUND DIRECTION

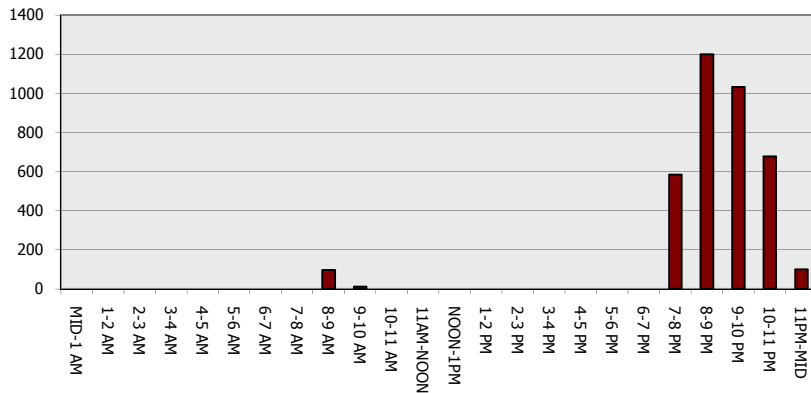
Main Route - Traffic Demand (Vehicles Per Hour)



Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)

