

IH 94: MN 96 TO STH 35 N NIGHTTIME 2 LANE CLOSURE NO DIVERSION ROUTE (MAX QUEUE METHOD)	AUGUST
	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	639	0.0	1499	639	0	22.61	620	69.9	5.0	35.3	
1-2 AM	450	0.0	1500	450	0	0.40	12	70.2	47.7	43.6	
2-3 AM	346	0.0	1500	346	0	0.26	0	70.2	53.8	44.1	
3-4 AM	343	0.0	1500	343	0	0.26	0	70.2	53.8	44.1	
4-5 AM	353	0.0	1500	353	0	0.26	0	70.2	53.8	44.1	
5-6 AM	411	0.0	1500	411	0	0.26	0	70.2	53.6	43.8	
6-7 AM	548	0.0	1500	548	0	0.27	0	70.0	53.2	43.3	
7-8 AM	879	0.0	1500	879	0	0.29	0	69.6	52.1	42.1	
8-9 AM	1385	0.0	1499	1385	0	0.58	4	69.0	41.3	34.0	
9-10 AM	2060	0.0	OFF	2060	0	0.00	0	68.2	68.1	68.1	
10-11 AM	3099	0.0	OFF	3099	0	0.00	0	66.9	66.9	66.9	
11AM-NOON	3993	0.0	OFF	3993	0	0.00	0	63.6	63.6	63.6	
NOON-1PM	4549	0.0	OFF	4549	0	0.00	0	59.8	59.8	59.8	
1-2 PM	5416	0.0	OFF	5416	0	0.00	0	53.8	53.8	53.8	
2-3 PM	6280	0.0	OFF	6280	0	0.00	0	47.9	47.9	47.9	
3-4 PM	6693	0.0	OFF	6693	0	0.00	0	45.1	45.1	45.1	
4-5 PM	7027	0.0	OFF	7027	0	0.00	0	42.8	42.8	42.8	
5-6 PM	6587	0.0	OFF	6587	0	0.00	0	45.8	45.8	45.8	
6-7 PM	5787	0.0	OFF	5787	0	0.00	0	51.3	51.3	51.3	
7-8 PM	4927	0.0	1499	2572	2355	44.48+	1178	57.2	4.0	30.8	
8-9 PM	4054	0.0	1499	1500	2554	48.08+	1251	63.2	3.9	30.8	
9-10 PM	2941	0.0	1499	1572	1370	47.37+	1227	67.1	3.9	30.8	
10-11 PM	1965	0.0	1499	1501	464	46.46+	1202	68.3	4.0	30.8	
11PM-MID	1377	0.0	1499	1377	0	43.51+	1124	69.0	4.0	30.8	

"OFF" INDICATES NO ROAD WORK (ALL LANES OPEN TO TRAFFIC) **+ INDICATES QUEUEING EXCEEDS USER-SPECIFIED MAXIMUM LIMIT**
WARNING: THE DEMAND FLOW IN ONE OR MORE HOURS EXCEEDS THE THEORETICAL CAPACITY OF THE MAIN ROUTE *WITHOUT* CONSTRUCTION

----- 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	0.0115
MAIN ROUTE WITH WORKS	0.0089
'DIVERSION'	0.0025
PIA: Personal Injury Accidents	
IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY	\$182,951
CONGESTED HOURS PER DAY*	5

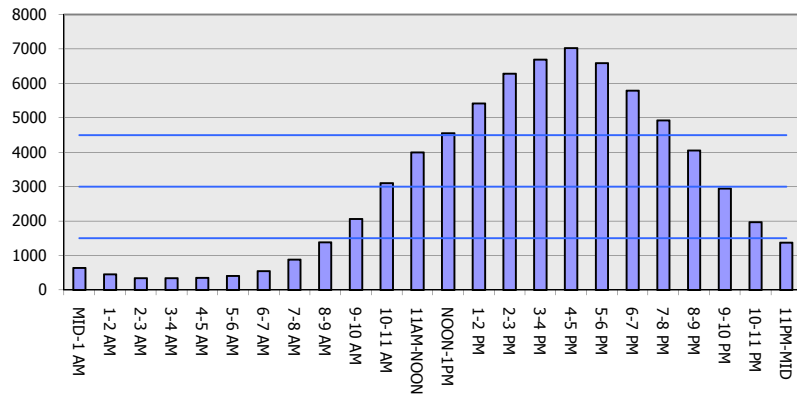
*Delays Exceeding User-Specified Maximum

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

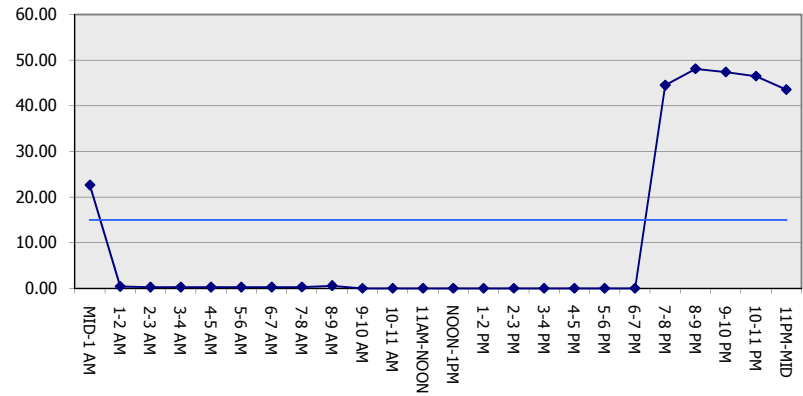
AUGUST
Analyzed for 2009
Construction Season

GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT
SUNDAY WESTBOUND DIRECTION

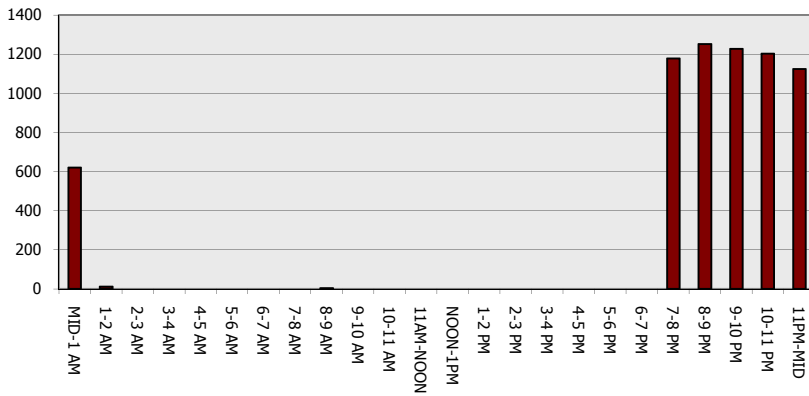
Main Route - Traffic Demand (Vehicles Per Hour)



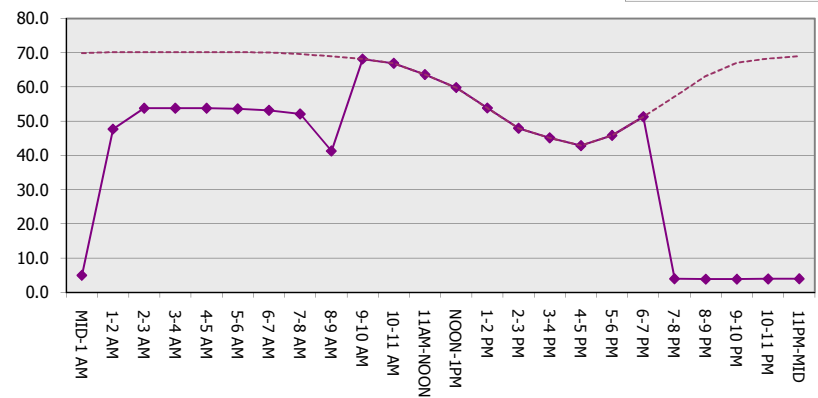
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



IH 94: MN 96 TO STH 35 N NIGHTTIME 2 LANE CLOSURE NO DIVERSION ROUTE (MAX QUEUE METHOD)	AUGUST
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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	622	0.0	1500	622	0	0.35	4	70.0	49.9	43.0
1-2 AM	409	0.0	1500	409	0	0.26	0	70.2	53.6	43.8
2-3 AM	309	0.0	1500	309	0	0.26	0	70.2	53.9	44.3
3-4 AM	263	0.0	1500	263	0	0.26	0	70.2	54.0	44.4
4-5 AM	279	0.0	1500	279	0	0.26	0	70.2	54.0	44.3
5-6 AM	437	0.0	1500	437	0	0.27	0	70.2	53.5	43.7
6-7 AM	920	0.0	1499	920	0	0.29	0	69.6	52.0	42.0
7-8 AM	1557	0.0	1499	1557	0	1.09	28	68.8	30.5	32.0
8-9 AM	2300	0.0	1500	2300	0	16.16	457	67.9	5.8	30.8
9-10 AM	3391	0.0	OFF	3391	0	1.68	160	66.5	23.2	23.2
10-11 AM	4358	0.0	OFF	4358	0	0.00	0	61.1	61.1	61.1
11AM-NOON	4561	0.0	OFF	4561	0	0.00	0	59.7	59.7	59.7
NOON-1PM	5029	0.0	OFF	5029	0	0.00	0	56.5	56.5	56.5
1-2 PM	4928	0.0	OFF	4928	0	0.00	0	57.2	57.2	57.2
2-3 PM	4498	0.0	OFF	4498	0	0.00	0	60.1	60.1	60.1
3-4 PM	4326	0.0	OFF	4326	0	0.00	0	61.3	61.3	61.3
4-5 PM	4170	0.0	OFF	4170	0	0.00	0	62.3	62.3	62.3
5-6 PM	3651	0.0	OFF	3651	0	0.00	0	65.9	65.9	65.9
6-7 PM	3273	0.0	OFF	3273	0	0.00	0	66.7	66.7	66.7
7-8 PM	2759	0.0	1499	2711	47	23.48+	658	67.3	5.0	30.8
8-9 PM	2306	0.0	1500	1495	811	46.54+	1204	67.9	4.0	30.8
9-10 PM	1628	0.0	1500	1480	149	46.23+	1196	68.7	4.0	30.8
10-11 PM	1126	0.0	1500	1126	0	39.68+	1025	69.3	4.1	30.8
11PM-MID	775	0.0	1500	775	0	16.27	465	69.7	5.8	35.3

"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	0.0092
MAIN ROUTE WITH WORKS	0.0075
'DIVERSION'	0.0004

PIA: Personal Injury Accidents

ECONOMIC IMPACT ON ROAD USERS	
ROAD USER COSTS PER DAY	\$88,872
CONGESTED HOURS PER DAY*	4

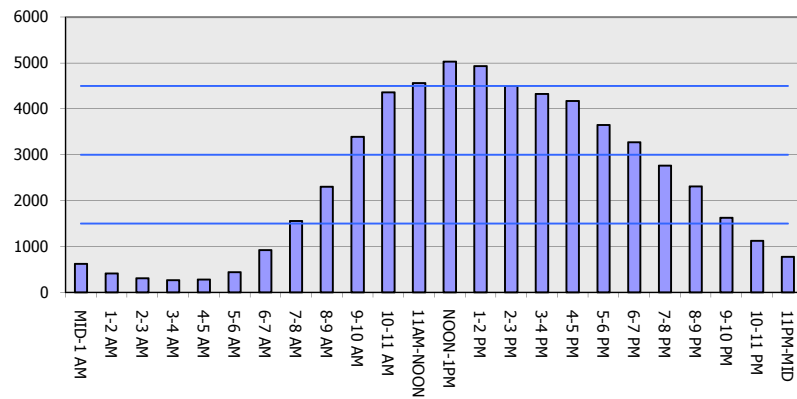
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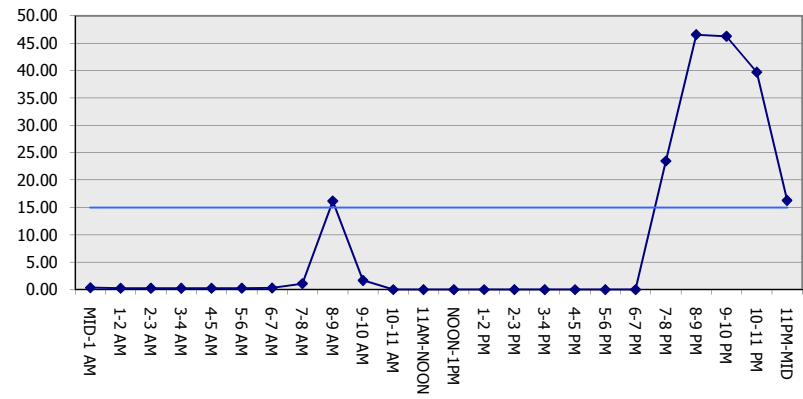
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GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT
SUNDAY EASTBOUND DIRECTION

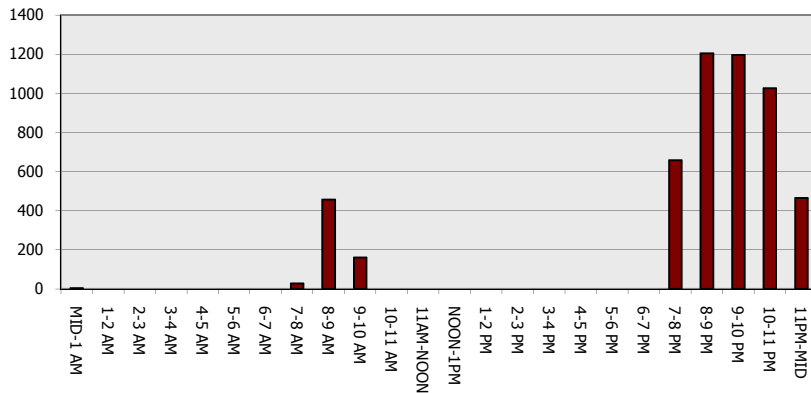
Main Route - Traffic Demand (Vehicles Per Hour)



Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)

