

USH 41/45: CTH Q TO STH 145 (WAUKESHA AND MILWAUKEE COUNTIES) NIGHTTIME 2 LANE CLOSURE NO DIVERSION ROUTE (MAX QUEUE METHOD)	OCTOBER
	Analyzed for 2009 Construction Season

SUMMARY OF TRAFFIC MODEL OUTPUT

FRIDAY 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	431	0.0	1500	431	0	0.53	0	70.2	61.9	43.8	
1-2 AM	281	0.0	1500	281	0	0.51	0	70.2	62.2	44.3	
2-3 AM	307	0.0	1500	307	0	0.51	0	70.2	62.1	44.3	
3-4 AM	419	0.0	1500	419	0	0.52	0	70.2	61.9	43.8	
4-5 AM	818	0.0	1500	818	0	0.57	0	69.7	61.0	42.4	
5-6 AM	2735	0.0	OFF	2735	0	0.00	0	67.3	67.3	67.3	
6-7 AM	5613	0.0	OFF	5613	0	0.00	0	52.5	52.5	52.5	
7-8 AM	6113	0.0	OFF	6113	0	0.00	0	49.1	49.1	49.1	
8-9 AM	4053	0.0	OFF	4053	0	0.00	0	63.2	63.2	63.2	
9-10 AM	3216	0.0	OFF	3216	0	0.00	0	66.8	66.8	66.8	
10-11 AM	3174	0.0	OFF	3174	0	0.00	0	66.8	66.8	66.8	
11AM-NOON	3268	0.0	OFF	3268	0	0.00	0	66.7	66.7	66.7	
NOON-1PM	3544	0.0	OFF	3544	0	0.00	0	66.3	66.3	66.3	
1-2 PM	3554	0.0	OFF	3554	0	0.00	0	66.3	66.3	66.3	
2-3 PM	3990	0.0	OFF	3990	0	0.00	0	63.6	63.6	63.6	
3-4 PM	4179	0.0	OFF	4179	0	0.00	0	62.3	62.3	62.3	
4-5 PM	4181	0.0	OFF	4181	0	0.00	0	62.3	62.3	62.3	
5-6 PM	3858	0.0	OFF	3858	0	0.00	0	64.5	64.5	64.5	
6-7 PM	3307	0.0	OFF	3307	0	0.00	0	66.6	66.6	66.6	
7-8 PM	2340	0.0	1499	1888	451	12.83+	318	67.8	16.3	32.0	
8-9 PM	1801	0.0	1499	1500	301	16.35+	399	68.5	13.5	30.8	
9-10 PM	1750	0.0	1500	1500	250	16.36+	400	68.6	13.5	30.8	
10-11 PM	1421	0.0	1500	1421	0	15.12+	368	69.0	14.4	30.8	
11PM-MID	1133	0.0	1499	1133	0	5.23	160	69.3	29.9	35.6	

"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	0.0479
MAIN ROUTE WITH WORKS	0.0465
'DIVERSION'	0.0017
PIA: Personal Injury Accidents	
IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY	\$27,764
CONGESTED HOURS PER DAY*	4

*Delays Exceeding User-Specified Maximum

**USH 41/45: CTH Q TO STH 145 (WAUKESHA AND MILWAUKEE COUNTIES)
 NIGHTTIME 2 LANE CLOSURE
 NO DIVERSION ROUTE (MAX QUEUE METHOD)**

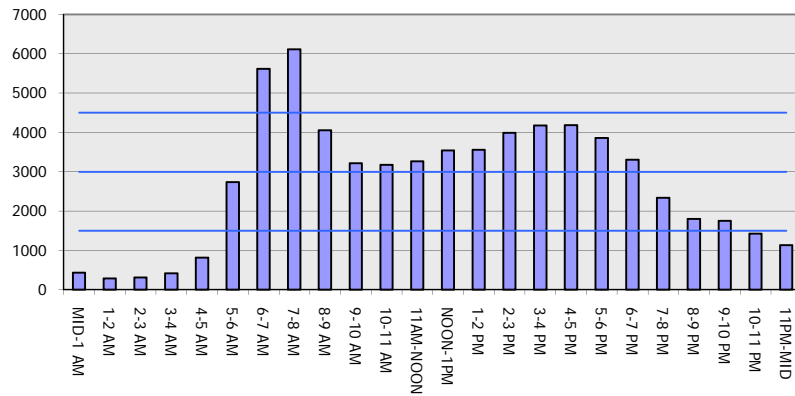
OCTOBER

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 Construction Season

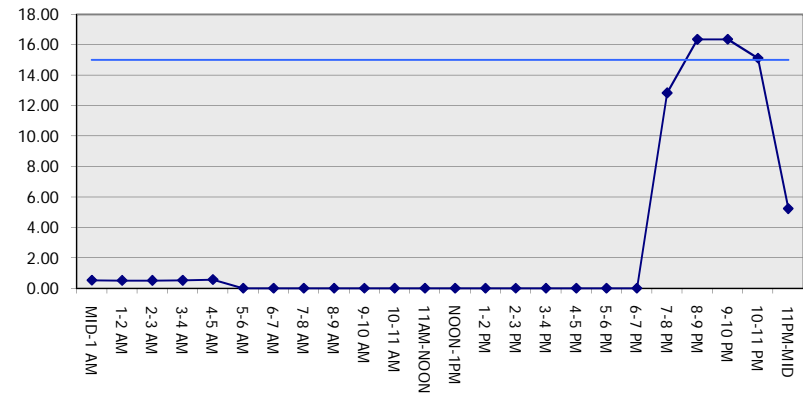
GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT

FRIDAY SOUTHBOUND DIRECTION

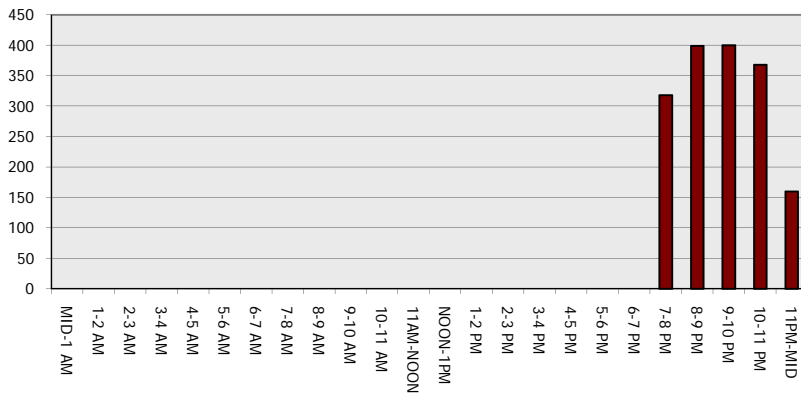
Main Route - Traffic Demand (Vehicles Per Hour)



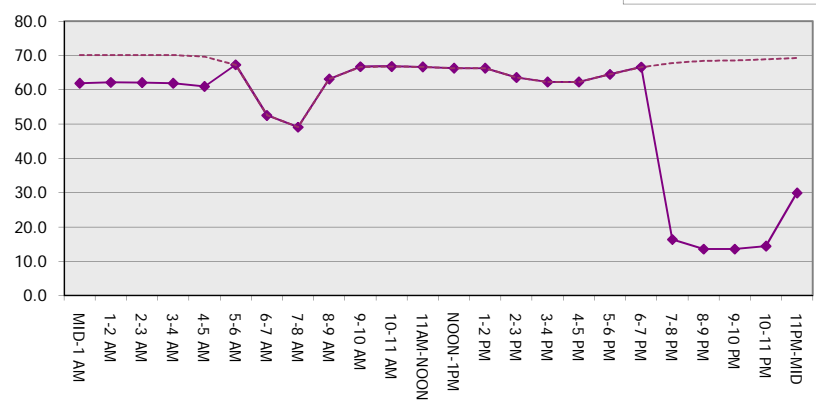
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



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SUMMARY OF TRAFFIC MODEL OUTPUT

FRIDAY 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	519	0.0	1500	519	0	0.55	0	70.1	61.5	43.4	
1-2 AM	362	0.0	1500	362	0	0.52	0	70.2	62.0	44.0	
2-3 AM	345	0.0	1500	345	0	0.51	0	70.2	62.0	44.1	
3-4 AM	369	0.0	1500	369	0	0.52	0	70.2	62.0	44.0	
4-5 AM	724	0.0	1500	724	0	0.56	0	69.9	61.2	42.7	
5-6 AM	1729	0.0	OFF	1729	0	0.00	0	68.6	68.6	68.6	
6-7 AM	2941	0.0	OFF	2941	0	0.00	0	67.1	67.1	67.1	
7-8 AM	3181	0.0	OFF	3181	0	0.00	0	66.8	66.8	66.8	
8-9 AM	2872	0.0	OFF	2872	0	0.00	0	67.2	67.2	67.2	
9-10 AM	2809	0.0	OFF	2809	0	0.00	0	67.3	67.3	67.3	
10-11 AM	3172	0.0	OFF	3172	0	0.00	0	66.8	66.8	66.8	
11AM-NOON	3665	0.0	OFF	3665	0	0.00	0	65.8	65.8	65.8	
NOON-1PM	3989	0.0	OFF	3989	0	0.00	0	63.6	63.6	63.6	
1-2 PM	4238	0.0	OFF	4238	0	0.00	0	61.9	61.9	61.9	
2-3 PM	5172	0.0	OFF	5172	0	0.00	0	55.5	55.5	55.5	
3-4 PM	6397	0.0	OFF	6397	0	0.00	0	47.1	47.1	47.1	
4-5 PM	7251	0.0	OFF	7251	0	0.00	0	41.3	41.3	41.3	
5-6 PM	6002	0.0	OFF	6002	0	0.00	0	49.9	49.9	49.9	
6-7 PM	4275	0.0	OFF	4275	0	0.00	0	61.7	61.7	61.7	
7-8 PM	2744	0.0	1499	1548	1195	15.55+	387	67.3	14.0	36.5	
8-9 PM	2202	0.0	1499	1885	316	12.49+	320	68.0	16.6	30.8	
9-10 PM	2192	0.0	1500	1500	692	16.33+	400	68.0	13.5	30.8	
10-11 PM	1592	0.0	1499	1444	147	16.13+	393	68.7	13.7	30.8	
11PM-MID	1146	0.0	1499	1146	0	8.59	234	69.3	21.9	34.3	

"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	0.0511
MAIN ROUTE WITH WORKS	0.0488
'DIVERSION'	0.0040
<small>PIA: Personal Injury Accidents</small>	
ECONOMIC IMPACT ON ROAD USERS	
ROAD USER COSTS PER DAY	\$33,953
CONGESTED HOURS PER DAY*	4

*Delays Exceeding User-Specified Maximum

USH 41/45: CTH Q TO STH 145 (WAUKESHA AND MILWAUKEE COUNTIES)
NIGHTTIME 2 LANE CLOSURE
NO DIVERSION ROUTE (MAX QUEUE METHOD)

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GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT
FRIDAY NORTHBOUND DIRECTION

