

**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**  
MON-THUR 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	567	0.0	2000	567	0	0.54	0	70.0	53.8	43.2
1-2 AM	405	0.0	2000	405	0	0.52	0	70.2	54.3	43.8
2-3 AM	374	0.0	2000	374	0	0.52	0	70.2	54.5	44.0
3-4 AM	463	0.0	2000	463	0	0.53	0	70.2	54.2	43.7
4-5 AM	837	0.0	2000	837	0	0.57	0	69.7	53.0	42.2
5-6 AM	2369	0.0	OFF	2369	0	0.00	0	67.8	67.8	67.8
6-7 AM	5197	0.0	OFF	5197	0	0.00	0	55.3	55.3	55.3
7-8 AM	5757	0.0	OFF	5757	0	0.00	0	51.5	51.5	51.5
8-9 AM	5304	0.0	OFF	5304	0	0.00	0	54.6	54.6	54.6
9-10 AM	4244	0.0	OFF	4244	0	0.00	0	61.9	61.9	61.9
10-11 AM	4000	0.0	OFF	4000	0	0.00	0	63.5	63.5	63.5
11AM-NOON	4258	0.0	OFF	4258	0	0.00	0	61.8	61.8	61.8
NOON-1PM	4411	0.0	OFF	4411	0	0.00	0	60.7	60.7	60.7
1-2 PM	4273	0.0	OFF	4273	0	0.00	0	61.7	61.7	61.7
2-3 PM	5114	0.0	OFF	5114	0	0.00	0	55.9	55.9	55.9
3-4 PM	4992	0.0	OFF	4992	0	0.00	0	56.8	56.8	56.8
4-5 PM	4218	0.0	OFF	4218	0	0.00	0	62.0	62.0	62.0
5-6 PM	3928	0.0	OFF	3928	0	0.00	0	64.0	64.0	64.0
6-7 PM	4189	0.0	OFF	4189	0	0.00	0	62.2	62.2	62.2
7-8 PM	2848	0.0	1999	2549	300	12.31+	417	67.2	10.1	27.9
8-9 PM	2218	0.0	2000	2002	216	17.09+	561	68.0	8.4	27.9
9-10 PM	1972	0.0	2000	1949	24	16.60+	543	68.3	8.5	27.9
10-11 PM	1543	0.0	1999	1543	0	8.53	294	68.8	12.9	27.9
11PM-MID	1238	0.0	2000	1238	0	0.78	1	69.2	48.5	37.6

"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	0.0250
MAIN ROUTE WITH WORKS	0.0240
'DIVERSION'	0.0004
PIA: Personal Injury Accidents	
IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY	\$28,291
CONGESTED HOURS PER DAY*	3

\*Delays Exceeding User-Specified Maximum

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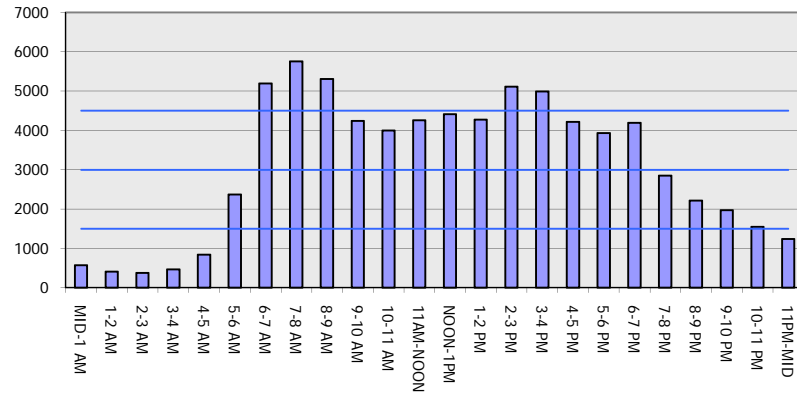
**OCTOBER**

Analyzed for 2009  
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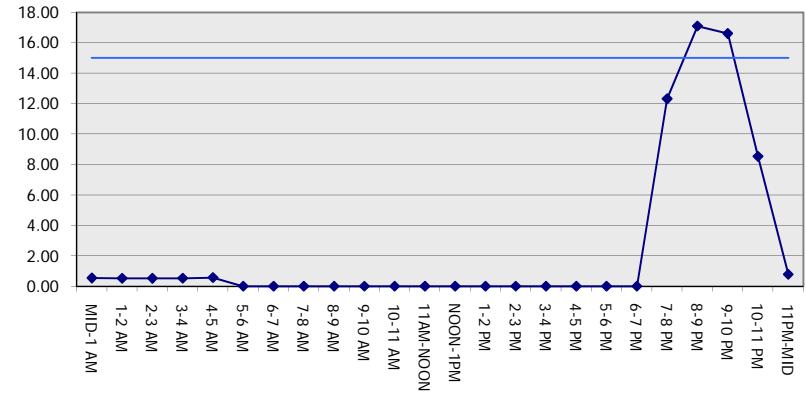
**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**

**MON-THUR SOUTHBOUND DIRECTION**

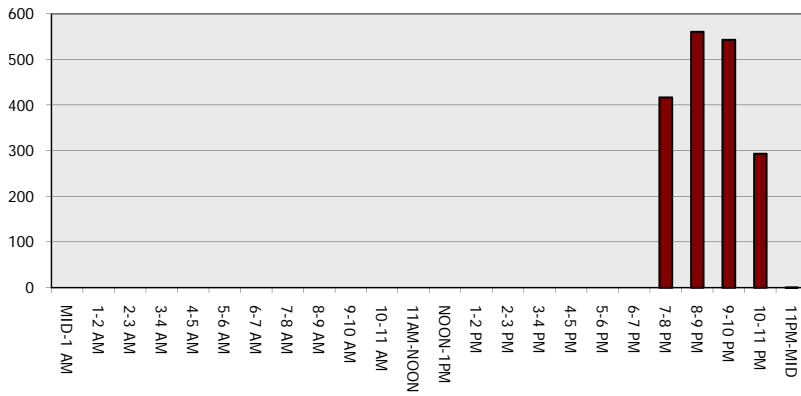
**Main Route - Traffic Demand (Vehicles Per Hour)**



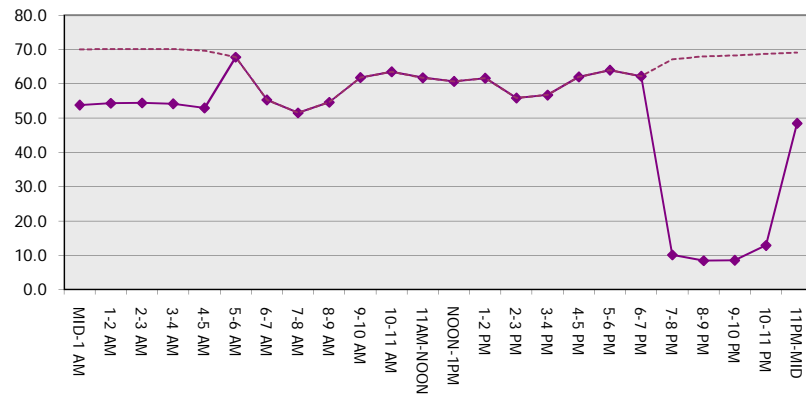
**Main Route Average Delay Per Vehicle (Minutes)**



**Main Route - Average Queue Length (Vehicles)**



**Main Route - Average Speed (MPH)**



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

**SUMMARY OF TRAFFIC MODEL OUTPUT**

MON-THUR                      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	776	0.0	2000	776	0	0.56	0	69.7	53.2	42.5
1-2 AM	613	0.0	2000	613	0	0.55	0	70.0	53.7	43.1
2-3 AM	583	0.0	2000	583	0	0.54	0	70.0	53.8	43.2
3-4 AM	662	0.0	2000	662	0	0.55	0	69.9	53.5	42.9
4-5 AM	1231	0.0	1999	1231	0	0.83	0	69.2	47.4	36.0
5-6 AM	3178	0.0	OFF	3178	0	0.00	0	66.8	66.8	66.8
6-7 AM	5326	0.0	OFF	5326	0	0.00	0	54.5	54.5	54.5
7-8 AM	6196	0.0	OFF	6196	0	0.00	0	48.5	48.5	48.5
8-9 AM	5445	0.0	OFF	5445	0	0.00	0	53.7	53.7	53.7
9-10 AM	4235	0.0	OFF	4235	0	0.00	0	61.9	61.9	61.9
10-11 AM	3977	0.0	OFF	3977	0	0.00	0	63.7	63.7	63.7
11AM-NOON	4182	0.0	OFF	4182	0	0.00	0	62.3	62.3	62.3
NOON-1PM	4369	0.0	OFF	4369	0	0.00	0	61.0	61.0	61.0
1-2 PM	4404	0.0	OFF	4404	0	0.00	0	60.8	60.8	60.8
2-3 PM	5230	0.0	OFF	5230	0	0.00	0	55.1	55.1	55.1
3-4 PM	5952	0.0	OFF	5952	0	0.00	0	50.2	50.2	50.2
4-5 PM	6393	0.0	OFF	6393	0	0.00	0	47.2	47.2	47.2
5-6 PM	6190	0.0	OFF	6190	0	0.00	0	48.6	48.6	48.6
6-7 PM	4592	0.0	OFF	4592	0	0.00	0	59.5	59.5	59.5
7-8 PM	3163	0.0	1999	2597	566	13.76+	456	66.8	9.4	27.9
8-9 PM	2699	0.0	1999	1994	705	17.11+	562	67.4	8.4	27.9
9-10 PM	2546	0.0	1999	1995	551	17.10+	561	67.6	8.4	27.9
10-11 PM	1955	0.0	1999	1873	82	16.26+	531	68.3	8.6	27.9
11PM-MID	1335	0.0	1999	1335	0	3.52	189	69.1	24.1	32.3

"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	0.0285
MAIN ROUTE WITH WORKS	0.0269
'DIVERSION'	0.0015

PIA: Personal Injury Accidents

ECONOMIC IMPACT ON ROAD USERS	
ROAD USER COSTS PER DAY	\$40,175
CONGESTED HOURS PER DAY*	4

\*Delays Exceeding User-Specified Maximum

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**OCTOBER**

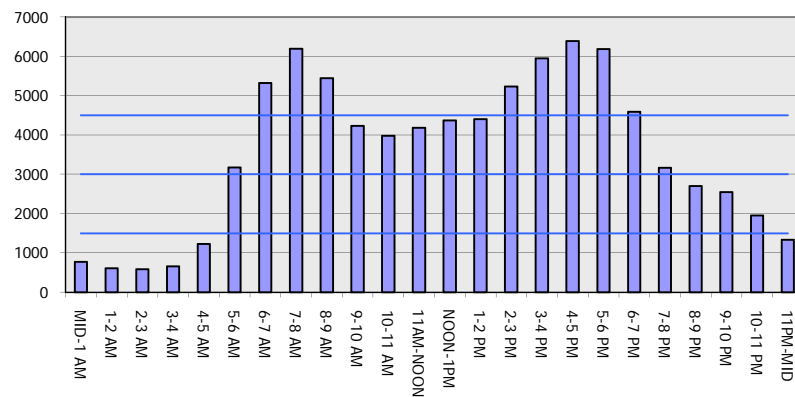
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**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**

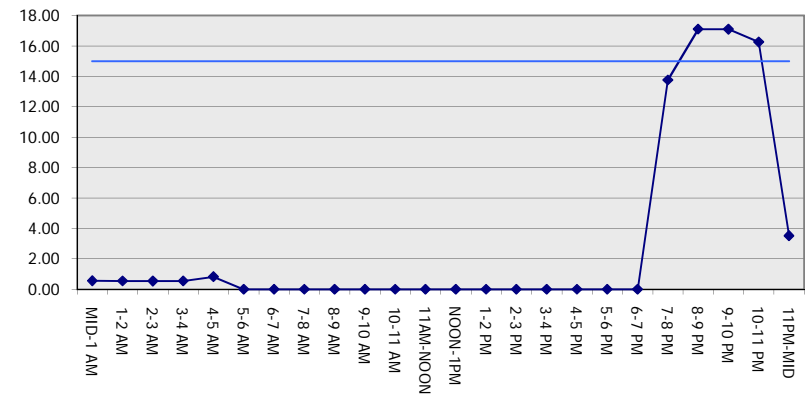
**MON-THUR**

**NORTHBOUND DIRECTION**

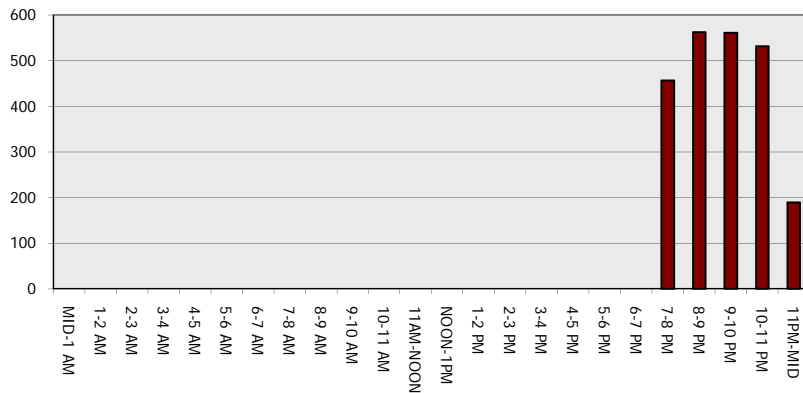
**Main Route - Traffic Demand (Vehicles Per Hour)**



**Main Route Average Delay Per Vehicle (Minutes)**



**Main Route - Average Queue Length (Vehicles)**



**Main Route - Average Speed (MPH)**

