

**IH 94: USH 18 TO CTH O (WAUKESHA COUNTY)
NIGHTTIME 2 LANE CLOSURE
NO DIVERSION (MAX QUEUE METHOD)**

AUGUST
Analyzed for 2009
Construction Season

SUMMARY OF TRAFFIC MODEL OUTPUT
SATURDAY 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 | 699 | 0.0 | 1500 | 699 | 0 | 0.55 | 0 | 69.9 | 58.7 | 42.8 | |
| 1-2 AM | 630 | 0.0 | 1500 | 630 | 0 | 0.55 | 0 | 69.9 | 58.9 | 43.0 | |
| 2-3 AM | 579 | 0.0 | 1500 | 579 | 0 | 0.54 | 0 | 70.0 | 59.1 | 43.2 | |
| 3-4 AM | 419 | 0.0 | 1500 | 419 | 0 | 0.52 | 0 | 70.2 | 59.4 | 43.8 | |
| 4-5 AM | 501 | 0.0 | 1500 | 501 | 0 | 0.53 | 0 | 70.1 | 59.2 | 43.5 | |
| 5-6 AM | 621 | 0.0 | 1500 | 621 | 0 | 0.55 | 0 | 70.0 | 58.9 | 43.0 | |
| 6-7 AM | 969 | 0.0 | 1500 | 969 | 0 | 0.58 | 0 | 69.6 | 58.0 | 41.8 | |
| 7-8 AM | 1064 | 0.0 | 1499 | 1064 | 0 | 0.66 | 0 | 69.4 | 56.8 | 39.9 | |
| 8-9 AM | 2257 | 0.0 | OFF | 2257 | 0 | 0.00 | 0 | 67.9 | 67.9 | 67.9 | |
| 9-10 AM | 1968 | 0.0 | OFF | 1968 | 0 | 0.00 | 0 | 68.3 | 68.3 | 68.3 | |
| 10-11 AM | 2108 | 0.0 | OFF | 2108 | 0 | 0.00 | 0 | 68.1 | 68.1 | 68.1 | |
| 11AM-NOON | 3381 | 0.0 | OFF | 3381 | 0 | 0.00 | 0 | 66.5 | 66.5 | 66.5 | |
| NOON-1PM | 4064 | 0.0 | OFF | 4064 | 0 | 0.00 | 0 | 63.1 | 63.1 | 63.1 | |
| 1-2 PM | 3299 | 0.0 | OFF | 3299 | 0 | 0.00 | 0 | 66.6 | 66.6 | 66.6 | |
| 2-3 PM | 2356 | 0.0 | OFF | 2356 | 0 | 0.00 | 0 | 67.8 | 67.8 | 67.8 | |
| 3-4 PM | 4194 | 0.0 | OFF | 4194 | 0 | 0.00 | 0 | 62.2 | 62.2 | 62.2 | |
| 4-5 PM | 3816 | 0.0 | OFF | 3816 | 0 | 0.00 | 0 | 64.8 | 64.8 | 64.8 | |
| 5-6 PM | 3421 | 0.0 | OFF | 3421 | 0 | 0.00 | 0 | 66.5 | 66.5 | 66.5 | |
| 6-7 PM | 2946 | 0.0 | 1499 | 1533 | 1413 | 16.00+ | 399 | 67.1 | 10.7 | 36.6 | |
| 7-8 PM | 2465 | 0.0 | 1499 | 1820 | 645 | 13.12+ | 334 | 67.7 | 12.6 | 33.6 | |
| 8-9 PM | 2245 | 0.0 | 1499 | 1500 | 745 | 16.34+ | 399 | 67.9 | 10.6 | 30.8 | |
| 9-10 PM | 2868 | 0.0 | 1500 | 1500 | 1368 | 16.30+ | 400 | 67.2 | 10.6 | 30.8 | |
| 10-11 PM | 2017 | 0.0 | 1500 | 1531 | 487 | 16.21+ | 396 | 68.2 | 10.6 | 30.8 | |
| 11PM-MID | 901 | 0.0 | 1499 | 901 | 0 | 3.68 | 155 | 69.6 | 30.9 | 37.8 | |

"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 | 0.0269 |
| MAIN ROUTE WITH WORKS | 0.0235 |
| 'DIVERSION' | 0.0058 |
| PIA: Personal Injury Accidents | |
| IMPACTS ON ROAD USERS | |
| ROAD USER COSTS PER DAY | \$53,047 |
| CONGESTED HOURS PER DAY* | 5 |

*Delays Exceeding User-Specified Maximum

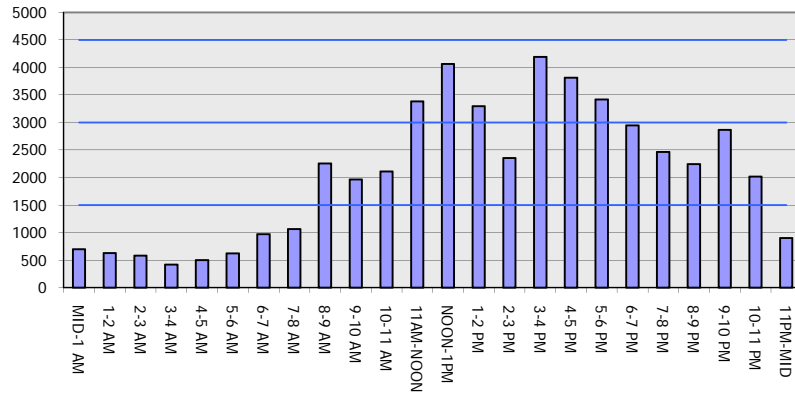
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NIGHTTIME 2 LANE CLOSURE
NO DIVERSION (MAX QUEUE METHOD)**

AUGUST

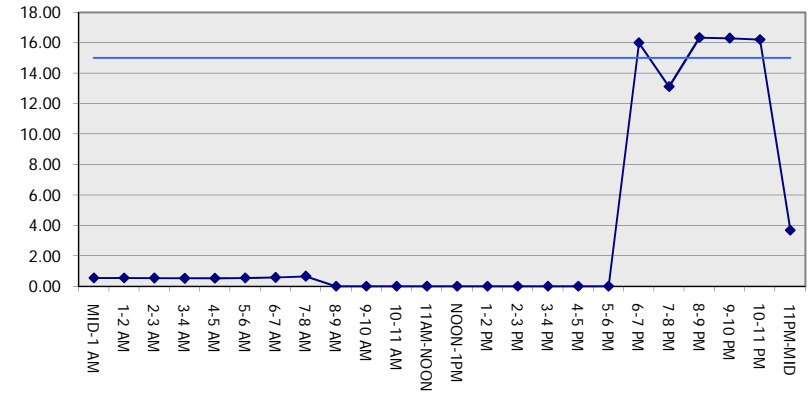
Analyzed for 2009
Construction Season

GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT
SATURDAY WESTBOUND DIRECTION

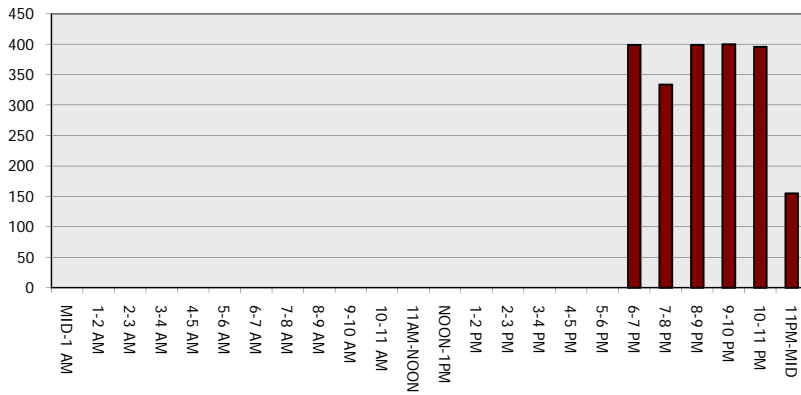
Main Route - Traffic Demand (Vehicles Per Hour)



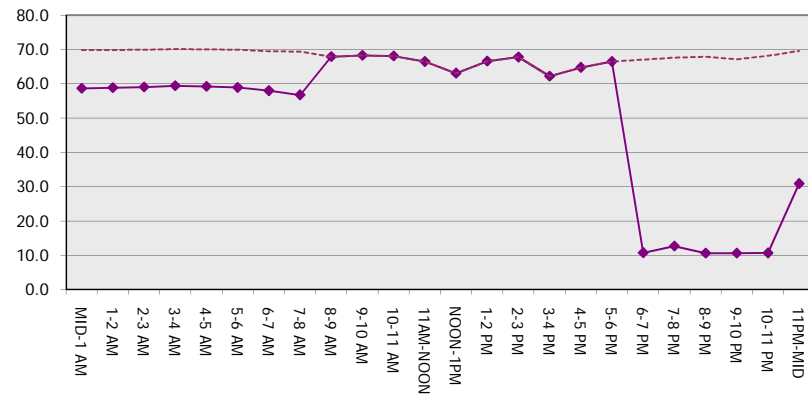
Main Route Average Delay Per Vehicle (Minutes)



Main Route - Average Queue Length (Vehicles)



Main Route - Average Speed (MPH)



| | |
|--|--|
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| | Analyzed for 2009 Construction Season |

SUMMARY OF TRAFFIC MODEL OUTPUT

SATURDAY 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 | 488 | 0.0 | 1500 | 488 | 0 | 0.53 | 0 | 70.1 | 59.3 | 43.5 |
| 1-2 AM | 447 | 0.0 | 1500 | 447 | 0 | 0.53 | 0 | 70.2 | 59.4 | 43.7 |
| 2-3 AM | 320 | 0.0 | 1500 | 320 | 0 | 0.51 | 0 | 70.2 | 59.7 | 44.2 |
| 3-4 AM | 279 | 0.0 | 1500 | 279 | 0 | 0.51 | 0 | 70.2 | 59.7 | 44.3 |
| 4-5 AM | 444 | 0.0 | 1500 | 444 | 0 | 0.53 | 0 | 70.2 | 59.4 | 43.7 |
| 5-6 AM | 557 | 0.0 | 1500 | 557 | 0 | 0.54 | 0 | 70.0 | 59.1 | 43.3 |
| 6-7 AM | 774 | 0.0 | 1500 | 774 | 0 | 0.56 | 0 | 69.8 | 58.5 | 42.5 |
| 7-8 AM | 840 | 0.0 | 1500 | 840 | 0 | 0.57 | 0 | 69.7 | 58.3 | 42.2 |
| 8-9 AM | 1984 | 0.0 | OFF | 1984 | 0 | 0.00 | 0 | 68.2 | 68.2 | 68.2 |
| 9-10 AM | 1839 | 0.0 | OFF | 1839 | 0 | 0.00 | 0 | 68.4 | 68.4 | 68.4 |
| 10-11 AM | 2074 | 0.0 | OFF | 2074 | 0 | 0.00 | 0 | 68.2 | 68.2 | 68.2 |
| 11AM-NOON | 3684 | 0.0 | OFF | 3684 | 0 | 0.00 | 0 | 65.7 | 65.7 | 65.7 |
| NOON-1PM | 4118 | 0.0 | OFF | 4118 | 0 | 0.00 | 0 | 62.7 | 62.7 | 62.7 |
| 1-2 PM | 3414 | 0.0 | OFF | 3414 | 0 | 0.00 | 0 | 66.5 | 66.5 | 66.5 |
| 2-3 PM | 2477 | 0.0 | OFF | 2477 | 0 | 0.00 | 0 | 67.6 | 67.6 | 67.6 |
| 3-4 PM | 4316 | 0.0 | OFF | 4316 | 0 | 0.00 | 0 | 61.4 | 61.4 | 61.4 |
| 4-5 PM | 4218 | 0.0 | OFF | 4218 | 0 | 0.00 | 0 | 62.0 | 62.0 | 62.0 |
| 5-6 PM | 3824 | 0.0 | OFF | 3824 | 0 | 0.00 | 0 | 64.7 | 64.7 | 64.7 |
| 6-7 PM | 3355 | 0.0 | 1499 | 1550 | 1805 | 16.47+ | 412 | 66.6 | 10.4 | 36.6 |
| 7-8 PM | 2818 | 0.0 | 1499 | 1586 | 1232 | 14.33+ | 380 | 67.3 | 11.7 | 36.0 |
| 8-9 PM | 2504 | 0.0 | 1499 | 1710 | 794 | 14.39+ | 366 | 67.6 | 11.7 | 34.0 |
| 9-10 PM | 2593 | 0.0 | 1499 | 1500 | 1093 | 16.32+ | 399 | 67.5 | 10.6 | 30.8 |
| 10-11 PM | 1859 | 0.0 | 1500 | 1556 | 304 | 15.83+ | 386 | 68.4 | 10.8 | 30.8 |
| 11PM-MID | 606 | 0.0 | 1499 | 606 | 0 | 2.36 | 111 | 70.0 | 38.6 | 42.0 |

"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 | 0.0270 |
| MAIN ROUTE WITH WORKS | 0.0233 |
| 'DIVERSION' | 0.0065 |

PIA: Personal Injury Accidents

| ECONOMIC IMPACT ON ROAD USERS | |
|-------------------------------|----------|
| ROAD USER COSTS PER DAY | \$54,372 |
| CONGESTED HOURS PER DAY* | 5 |

*Delays Exceeding User-Specified Maximum

**IH 94: USH 18 TO CTH O (WAUKESHA COUNTY)
NIGHTTIME 2 LANE CLOSURE
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AUGUST
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Construction Season

GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT
SATURDAY EASTBOUND DIRECTION

