

**USH 51: STH 29 W TO STH 29 E (MARATHON COUNTY)  
CONTINUOUS (24 HOUR) 1 LANE CLOSURE  
DIVERSION ROUTE: BUS 51 - STH 52**

**MAY**  
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		ALTERNATE ROUTE		SITE CAPA CITY	FLOW MAIN ROUTE	FLOW DIVER -TING	TOTAL DIVN FLOW	AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	MAIN ROUTE		ALTERNATE ROUTE		
	DEMAND FLOW	PCT HEAVY	NORMAL FLOW	PCT HEAVY							WITHOUT WORK ZN	WITH WORK ZN	SITE	WITHOUT WORK ZN	WITH WORK ZN
MID-1 AM	189	0.0	80	0.0	3000	189	0	80	0.36	0	70.2	64.4	49.7	31.4	31.4
1-2 AM	110	0.0	59	0.0	3000	110	0	59	0.36	0	70.2	64.4	49.7	32.0	32.0
2-3 AM	107	0.0	46	0.0	3000	107	0	46	0.36	0	70.2	64.4	49.7	32.3	32.3
3-4 AM	173	0.0	58	0.0	3000	173	0	58	0.36	0	70.2	64.4	49.7	32.0	32.0
4-5 AM	343	0.0	148	0.0	3000	343	0	148	0.36	0	70.2	64.4	49.7	29.6	29.6
5-6 AM	757	0.0	325	0.0	3000	757	0	325	0.35	0	69.8	64.1	49.7	24.9	24.9
6-7 AM	1702	0.0	702	0.0	3000	1702	0	702	0.34	0	68.6	63.4	49.7	16.8	16.8
7-8 AM	1767	0.0	817	0.0	3000	1767	0	817+	0.34	0	68.6	63.3	49.7	14.5	14.5
8-9 AM	1457	0.0	645	0.0	3000	1457	0	645	0.34	0	68.9	63.6	49.7	17.9	17.9
9-10 AM	1492	0.0	669	0.0	3000	1492	0	669	0.34	0	68.9	63.5	49.7	17.5	17.5
10-11 AM	1708	0.0	765	0.0	3000	1708	0	765	0.34	0	68.6	63.3	49.7	15.6	15.6
11A-NOON	1814	0.0	908	0.0	3000	1814	0	908+	0.34	0	68.5	63.3	49.7	12.9	12.9
NOON-1PM	1918	0.0	983	0.0	3000	1918	0	983+	0.34	0	68.4	63.2	49.7	12.4	12.4
1-2 PM	1996	0.0	1011	0.0	3000	1996	0	1011+	0.33	0	68.2	63.2	49.7	12.0	12.0
2-3 PM	2275	0.0	1222	0.0	3000	2275	0	1222+	0.33	0	67.9	62.9	49.7	11.2	11.2
3-4 PM	2616	0.0	1408	0.0	3000	2616	0	1408+	0.48	0	67.5	60.5	44.2	11.2	11.2
4-5 PM	2763	0.0	1456	0.0	3000	2763	0	1456+	0.57	0	67.3	59.2	41.2	11.2	11.2
5-6 PM	2558	0.0	1218	0.0	3000	2558	0	1218+	0.44	0	67.6	61.1	45.5	11.2	11.2
6-7 PM	1842	0.0	868	0.0	3000	1842	0	868+	0.34	0	68.4	63.3	49.7	13.5	13.5
7-8 PM	1468	0.0	705	0.0	3000	1468	0	705	0.34	0	68.9	63.6	49.7	16.8	16.8
8-9 PM	1233	0.0	603	0.0	3000	1233	0	603	0.35	0	69.2	63.8	49.7	18.7	18.7
9-10 PM	855	0.0	449	0.0	3000	855	0	449	0.35	0	69.7	64.1	49.7	21.7	21.7
10-11 PM	630	0.0	353	0.0	3000	630	0	353	0.36	0	69.9	64.3	49.7	24.2	24.2
11PM-MID	377	0.0	212	0.0	3000	377	0	212	0.36	0	70.2	64.4	49.7	27.9	27.9

+ INDICATES DIVERSION FLOW EXCEEDS USER-SPECIFIED WARNING LIMIT

*----- SITE BREAKDOWN DELAYS -----*	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0.0
RANGE OF DIVN DELAY - MIN (VEH-H) MAX	0.0
AV BREAKDOWNS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV DIVN DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

*----- SITE ACCIDENT DELAYS -----*	
ACCIDENT DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN (VEH-H) MAX	0.0
RANGE OF DIVN DELAY - MIN (VEH-H) MAX	0.0
AV ACCIDENTS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV DIVN DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0240
MAIN ROUTE WITH WORKS	0.0219
DIVERSION	0.1493

PIA: Personal Injury Accidents

IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY ( DOLLARS)	\$2,886
CONGESTED HOURS PER DAY*	0

\*Delays Exceeding 15 Minutes

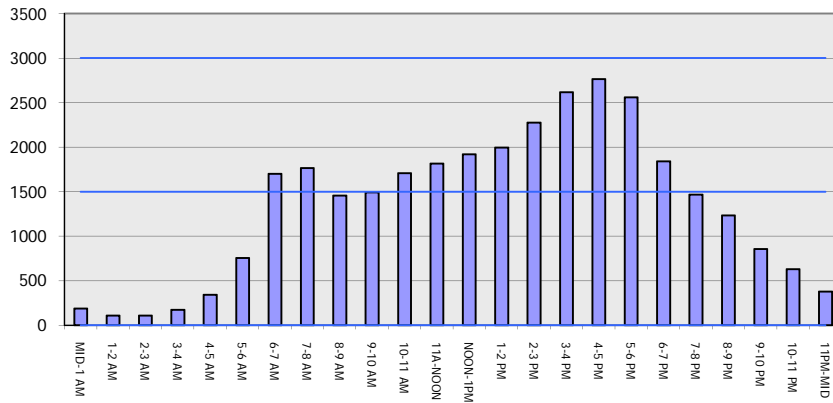
**USH 51: STH 29 W TO STH 29 E (MARATHON COUNTY)  
 CONTINUOUS (24 HOUR) 1 LANE CLOSURE  
 DIVERSION ROUTE: BUS 51 - STH 52**

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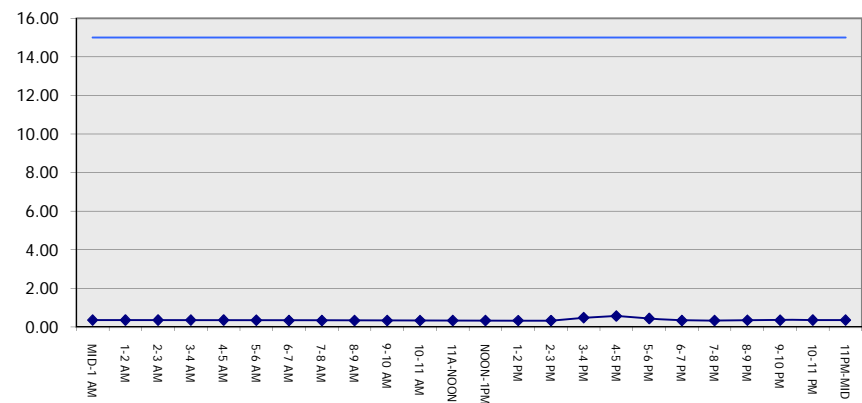
**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**

**FRIDAY SOUTHBOUND DIRECTION**

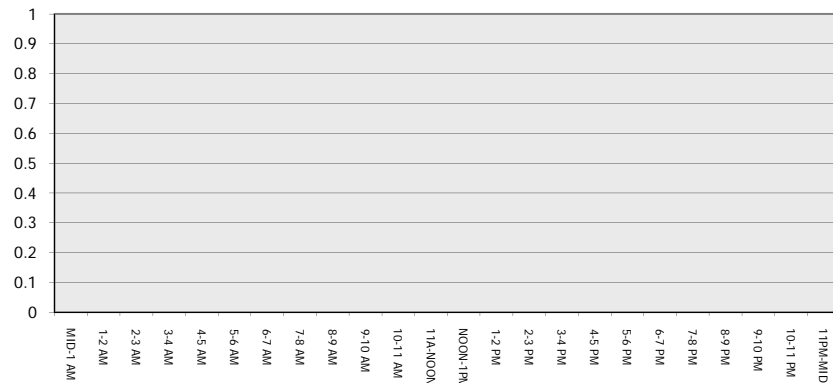
**Main Route - Traffic Demand (Vehicles Per Hour)**



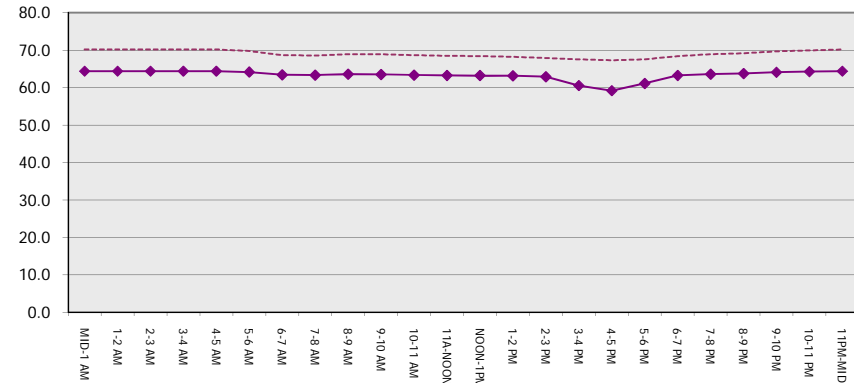
**Main Route Average Delay Per Vehicle (Minutes)**



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



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



<b>USH 51: STH 29 W TO STH 29 E (MARATHON COUNTY)</b> <b>CONTINUOUS (24 HOUR) 1 LANE CLOSURE</b> <b>DIVERSION ROUTE: BUS 51 - STH 52</b>	<b>MAY</b>  Analyzed for 2009 Construction Season
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<b>SUMMARY OF TRAFFIC MODEL OUTPUT</b>	
FRIDAY	NORTHBOUND DIRECTION

TIME OF DAY	FLOWS AND CAPACITY IN VEH/HR								AVERAGE SPEEDS IN MPH						
	MAIN		DIVERSION		SITE CAPA CITY	FLOW MAIN ROUTE	FLOW DIVER -TING	TOTAL DIVN FLOW	AV.DEL PER VEH (MINS)	AVERAGE QUEUE (VEH)	MAIN ROUTE		SITE	ALTERNATE ROUTE	
	DEMAND FLOW	PCT HEAVY	NORMAL FLOW	PCT HEAVY							WITHOUT WORK ZN	WITH WORK ZN		WITHOUT WORK ZN	WITH WORK ZN
MID-1 AM	343	0.0	72	0.0	3000	343	0	72	0.36	0	70.2	64.4	49.7	31.6	31.6
1-2 AM	197	0.0	68	0.0	3000	197	0	68	0.36	0	70.2	64.4	49.7	31.7	31.7
2-3 AM	162	0.0	61	0.0	3000	162	0	61	0.36	0	70.2	64.4	49.7	31.9	31.9
3-4 AM	206	0.0	82	0.0	3000	206	0	82	0.36	0	70.2	64.4	49.7	31.4	31.4
4-5 AM	272	0.0	168	0.0	3000	272	0	168	0.36	0	70.2	64.4	49.7	29.1	29.1
5-6 AM	782	0.0	460	0.0	3000	782	0	460	0.35	0	69.7	64.1	49.7	21.4	21.4
6-7 AM	1807	0.0	1004	0.0	3000	1807	0	1004+	0.34	0	68.5	63.3	49.7	12.0	12.0
7-8 AM	2321	0.0	1280	0.0	3000	2321	0	1280+	0.33	0	67.9	62.8	49.7	11.2	11.2
8-9 AM	1886	0.0	933	0.0	3000	1886	0	933+	0.34	0	68.4	63.2	49.7	12.7	12.7
9-10 AM	2091	0.0	872	0.0	3000	2091	0	872+	0.33	0	68.1	63.0	49.7	13.4	13.4
10-11 AM	2260	0.0	924	0.0	3000	2260	0	924+	0.33	0	67.9	62.9	49.7	12.8	12.8
11A-NOON	2383	0.0	947	0.0	3000	2383	0	947+	0.33	0	67.8	62.8	49.7	12.7	12.7
NOON-1PM	2501	0.0	1007	0.0	3000	2501	0	1007+	0.40	0	67.6	61.7	46.8	12.0	12.0
1-2 PM	2822	0.0	1053	0.0	2999	2822	0	1053+	0.61	0	67.3	58.7	40.2	11.4	11.4
2-3 PM	2996	0.0	1169	0.0	2999	2996	0	1169+	0.88	11	67.0	55.4	38.0	11.2	11.2
3-4 PM	3561	0.0	1327	0.0	3000	3561	0	1327+	5.64	308	66.3	28.5	37.3	11.2	11.2
4-5 PM	3496	0.0	1370	0.0	2999	3496	0	1370+	15.93	855	66.4	14.2	37.3	11.2	11.3
5-6 PM	3491	0.0	1177	0.0	3000	3491	0	1177+	25.25	1359	66.4	11.2	37.3	11.2	12.4
6-7 PM	3068	0.0	780	0.0	3000	2879	189	969+	29.17	1568	66.9	10.6	37.3	15.3	14.2
7-8 PM	2749	0.0	558	0.0	2999	2518	231	789	23.24	1245	67.3	11.6	37.3	19.6	16.1
8-9 PM	2446	0.0	386	0.0	3000	2395	51	437	12.75	690	67.7	16.6	37.6	23.3	22.2
9-10 PM	2067	0.0	296	0.0	3000	2067	0	296	1.46	90	68.2	50.4	48.4	25.6	25.6
10-11 PM	1474	0.0	250	0.0	3000	1474	0	250	0.34	0	68.9	63.6	49.7	26.9	26.9
11PM-MID	827	0.0	169	0.0	3000	827	0	169	0.35	0	69.7	64.1	49.7	29.1	29.1

+ INDICATES DIVERSION FLOW EXCEEDS USER-SPECIFIED WARNING LIMIT

*----- SITE BREAKDOWN DELAYS -----*	
BREAKDOWN DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN	0.0
(VEH-H) MAX	0.0
RANGE OF DIVN DELAY - MIN	0.0
(VEH-H) MAX	0.0
AV BREAKDOWNS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV DIVN DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

*----- SITE ACCIDENT DELAYS -----*	
ACCIDENT DURATION (MINS)	0
RANGE OF QUEUE DELAY - MIN	0.0
(VEH-H) MAX	0.0
RANGE OF DIVN DELAY - MIN	0.0
(VEH-H) MAX	0.0
AV ACCIDENTS PER DAY	0.00
AV QUEUE DELAY/DAY (VEH-H)	0.0
AV DIVN DELAY/DAY (VEH-H)	0.0
AV TOTAL DELAY/DAY (VEH-H)	0.0

AVERAGE ACCIDENT NUMBERS (PIA/DAY)	
MAIN ROUTE WITHOUT WORKS	0.0345
MAIN ROUTE WITH WORKS	0.0312
DIVERSION	0.1604

PIA: Personal Injury Accidents

IMPACTS ON ROAD USERS	
ROAD USER COSTS PER DAY ( DOLLARS)	\$85,678
CONGESTED HOURS PER DAY*	4

\*Delays Exceeding 15 Minutes

**USH 51: STH 29 W TO STH 29 E (MARATHON COUNTY)  
 CONTINUOUS (24 HOUR) 1 LANE CLOSURE  
 DIVERSION ROUTE: BUS 51 - STH 52**

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**GRAPHICAL REPRESENTATION OF TRAFFIC MODEL INPUT AND OUTPUT**  
**FRIDAY NORTHBOUND DIRECTION**

