

**FINAL
Interchange Modification Report**

**APPENDICES
VOLUME III OF III**

**Interstate 75 Interchange with
State Road 52
In Pasco County, Florida**

Prepared for:
**Federal Highway Administration
Florida Department of Transportation**

October 2000

APPENDIX P

Loop 1 Alternative Design Traffic Analysis

APPENDIX Pa – Transyt-7F Analyses with HCS Signalized

APPENDIX Pb – HCS Freeway Analyses

APPENDIX Pc – HCS Ramp Analyses

APPENDIX Pa
Transyt-7F Analyses with HCS Signalized

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP108NBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 1 2008 AM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	210	440			800	240	350		700			
Lane W (ft)	12.0	12.0			12.0	12.0	12.0		12.0			
RTOR Vols			0			72			72			
Lost Time	3.00	3.00			3.00	3.00	3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		8.0A	51.0P		Green	18.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	330	1703	0.670	0.716	3.7	A	4.6	A
	T	2038	3585	0.238	0.568	5.0	A		
WB	T	2097	3689	0.422	0.568	5.8	B	5.6	B
	R	900	1583	0.197	0.568	4.9	A		
NB	L	782	3539	0.484	0.221	24.9	C	21.5	C
	R	1167	3167	0.640	0.368	19.7	C		

Intersection Delay = 11.5 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.508

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP108NBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 1 2008 PM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	240	360			840	300	580		680			
Lane W (ft)	12.0	12.0			12.0	12.0	12.0		12.0			
RTOR Vols			0			75			170			
Lost Time	3.00	3.00			3.00	3.00	3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		7.0A	47.0P		Green	23.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Cap	Flow	Ratio
EB	L		286	1703	0.885	0.663	20.0	C	11.8	B
	T		1887	3585	0.211	0.526	6.6	B		
WB	T		1942	3689	0.478	0.526	7.9	B	7.7	B
	R		833	1583	0.284	0.526	6.9	B		
NB	L		969	3539	0.649	0.274	24.3	C	20.1	C
	R		1300	3167	0.467	0.411	15.7	C		

Intersection Delay = 13.6 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.713

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP128NBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 1 2028 AM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	324	770		1101	354		675		765			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			72			72			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		15.0A	36.0P		Green	26.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	399	1703	0.855	0.632	18.7	C	15.9	C
	T	1472	3585	0.579	0.411	14.9	B		
WB	T	1515	3689	0.804	0.411	18.3	C	17.4	C
	R	650	1583	0.457	0.411	13.9	B		
NB	L	1080	3539	0.678	0.305	23.2	C	16.8	C
	R	1667	3167	0.494	0.526	11.1	B		

Intersection Delay = 16.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.802

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP128NBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 1 2028 PM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	405	529		1041	494		716		926			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			72			72			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		22.0P	37.0A		Green	33.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		

Cycle Length: 110 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

	Lane Group:	Adj Sat	v/c	g/C	Approach:				
		Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay
EB	L	452	1703	0.942	0.618	30.1	D	23.7	C
	T	1304	3585	0.449	0.364	19.0	C		
WB	T	1342	3689	0.858	0.364	26.1	D	25.8	D
	R	576	1583	0.771	0.364	25.3	D		
NB	L	1158	3539	0.671	0.327	25.3	D	17.2	C
	R	1842	3167	0.551	0.582	11.0	B		

Intersection Delay = 21.8 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.826

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP108SBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 1 2008 AM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	0	0	0	0	2	0	1
Volumes	580	350			470					300		240
Lane W (ft)	12.0	12.0			12.0					12.0		12.0
RTOR Vols			0			0						72
Lost Time	3.00	3.00			3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right		*			WB Right			
Green		17.0A	43.0P		Green	17.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Approach:				
		Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB	L	618	1703	0.989	0.726	22.9	C	14.2	B
	T	2604	3585	0.148	0.726	0.4	A		
WB	T	1786	3689	0.291	0.484	8.9	B	8.9	B
SB	L	697	3312	0.466	0.211	25.3	D	20.7	C
	R	671	1482	0.264	0.453	12.3	B		

Intersection Delay = 14.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.863

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP108SBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 1 2008 PM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	0	0	0	0	2	0	1
Volumes	350	360			720					240		210
Lane W (ft)	12.0	12.0			12.0					12.0		12.0
RTOR Vols			0			0						72
Lost Time	3.00	3.00			3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right		*			WB Right			
Green		11.0A	47.0P		Green	19.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane Group:	Adj Sat	v/c	g/C	Approach:				
					Delay	LOS	Delay	LOS	
	Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB	L	393	1703	0.936	0.705	20.9	C	10.5	B
	T	2528	3585	0.157	0.705	0.8	A		
WB	T	1942	3689	0.410	0.526	7.5	B	7.5	B
SB	L	767	3312	0.340	0.232	23.2	C	19.9	C
	R	608	1482	0.238	0.411	13.9	B		

Intersection Delay = 11.2 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.731

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP128SBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 1 2028 AM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	0	0	0	0	2	0	1
Volumes	716	600			850					494		405
Lane W (ft)	12.0	12.0			12.0					12.0		12.0
RTOR Vols			0			0						80
Lost Time	3.00	3.00			3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right		*			WB Right			
Green		35.0A	23.0P		Green	19.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Approach:				
						Mvmts	Cap	Flow	Ratio	Delay
EB	L		757	1703	0.996	0.705	25.1	D	13.7	B
	T		2528	3585	0.263	0.705	0.9	A		
WB	T		1010	3689	0.931	0.274	34.1	D	34.1	D
SB	L		767	3312	0.699	0.232	27.4	D	18.8	C
	R		983	1482	0.348	0.663	5.4	B		

Intersection Delay = 21.0 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.915

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP128SBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 1 2028 PM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	0	0	0	0	2	0	1
Volumes	675	580			993					354		324
Lane W (ft)	12.0	12.0			12.0					12.0		12.0
RTOR Vols			0			0						72
Lost Time	3.00	3.00			3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right			*		WB Right			
Green		37.0P	35.0A		Green	20.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		

Cycle Length: 110 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Approach:				
		Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB	L	700	1703	1.016	0.736	28.4	D	15.1	C
	T	2640	3585	0.243	0.736	0.3	A		
WB	T	1341	3689	0.818	0.364	24.6	C	24.6	C
SB	L	693	3312	0.555	0.209	30.3	D	21.6	C
	R	862	1482	0.307	0.582	9.0	B		

Intersection Delay = 19.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.908

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*****
*
* Release 7.10                (TRANSYT-7F)                15 March 1993 *
*
*          TRAFFIC SIGNAL SYSTEM OPTIMIZATION            *
*
*          PROGRAM                                         *
*
* Sponsored by:                Developed by: *
*
* U.S. Department of Transportation                University of Florida *
* Federal Highway Administration                Transportation Research Center *
*
*          Software Maintenance and User Support Furnished by: *
*          Center for Microcomputers in Transportation (McTrans) *
*          Transportation Research Center, University of Florida *
*          512 Weil Hall, Gainesville, FL 32611-2083 USA *
*          (904) 392-0378 *
*
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*          TRANSYT-7F Copyright 1980-1993, University of Florida. *
*          All Rights Reserved. *
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Date of Run: 11/13/99 Start Time of Run: 23:25:20 Data File: LP108AM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp108am.sy5, Date: Nov 13, 1999, Analyst:

1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

--- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp108am.sy5, Date: Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & I-75 SB OFF Ramp

INTERSECTION 3

13	3	53	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	13	305	312	302	0	0	0	0	0	1
22	3	3	3	4	0	22	306	302	-305	0	0	0	0	0	0
23	3	5	5	6	0	22	312	307	0	0	0	0	0	0	1
28	302	700	3585	368	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	305	700	1703	611	0	0	0	0	0	0	0	0	0	0	0
29	305	2	5	0	15	0	0	0	306	100	0	0	0	0	0
28	306	807	3689	495	0	706	495	55	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2280	3312	316	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2280	1482	253	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & WB SR 52 to SB I-75

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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--- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	807	5377	684	0	307	316	55	302	368	55	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	715	3689	495	0	1003	151	55	1006	344	55	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	715	1568	716	0	1003	218	55	1006	498	55	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & NB ON Ramp

File: Lp108am.sy5, Date: Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 10

13	10	42	1	0	6	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1006	1010	1002-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1905	3312	368	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1905	2963	737	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	715	3585	463	0	702	463	55	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	715	1703	221	0	702	221	55	0	0	0	0	0	0	0
29	1005	2	5	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	500	3689	842	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	500	1568	253	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
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--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE
 DEFAULT NORMAL OPTIMIZATION STEP SIZES.
 IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE
 LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
 IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 3 NODES AND 14 LINKS,
 INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
 IN THE ABOVE REPORT.

File: Lp108am.sy5, Date: Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	10.78	38	85.6	34.8	0	34.7828
<p>-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.</p>							
<p>--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.</p>							
100	33	11.14	38	86.0	35.1	0	35.1259
105	35	11.86	39	87.3	36.4	0	36.4197
110	37	12.14	38	87.8	36.9	0	36.9166
115	38	12.48	39	88.5	37.6	0	37.5988
120	40	13.82	38	89.2	38.3	0	38.3053
125	42	14.10	37	89.2	38.3	0	38.3157
130	43	14.58	38	90.1	39.2	0	39.1977

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 4.2 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp108am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)
SB LEFT : 53	136.47	7.66	87.3	3.09	35.2	272.(86)	7 182	9.38	
RGHT : 49	109.26	5.37	76.4	1.71	24.3	186.(74)	5 91	6.78	
EB THRU : 14	48.71	1.98	19.4	.35	3.4	91.(25)	3 56	2.77	
LEFT : 77	80.87	4.21	24.8	1.50	8.8	250.(41)	5 28	5.80	
WB THRU : 23	75.66	2.12	15.4	.75	5.4	206.(42)	6 65	6.96	
NODE 3: 77	450.96	21.35		7.40	13.0	1006.(49)		31.69	
EB THRU : 13	104.55	1.89	10.0	.00	.0	0.(0)	0 97	3.50	
WB THRU : 13	67.05	1.21	8.8	.00	.0	0.(0)	0 57	2.24	
RGHT : 46	96.99	1.88	9.4	.12	.6	69.(10)	7 29	4.63	
NODE 7: 46	268.60	4.98		.12	.2	69.(4)	SPECIAL: N	10.38	

File: Lp108am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ MODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 56		132.85	7.96	77.8	3.50	34.3	315.(86)	9	152	9.77
RGHT : 68		266.07	14.24	69.6	5.32	26.0	581.(79)	16	152	18.06
EB THRU : 23		62.72	1.77	13.8	.64	5.0	107.(23)	3	57	4.57
LEFT : 38		29.94	.70	11.4	.16	2.6	49.(22)	1	29	2.04
WB THRU : 40		79.53	5.25	22.4	2.58	11.0	427.(51)	12	40	7.51
RGHT : 28		23.90	1.51	21.5	.71	10.1	118.(47)	3	20	2.15
MODE 10: 68		595.00	31.44		12.92	16.1	1597.(55)			44.10

All MOEs are in units per hour.

File: Lp108am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1315
Total Travel Time	veh-hr/hr	58
Total Uniform Delay	veh-hr/hr	19
Total Random Delay	veh-hr/hr	1
Total Delay	veh-hr/hr	20
Average Delay	sec/veh	10.8
Passenger Delay	pax-hr/hr	25
Stops: Total	veh/hr	2672
Percentage	%	39
System Speed	mph	22.8
Fuel Consumption	gal/hr	86
Operating Cost	\$/hr	562
Performance Index	DI	35.3

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 74, Links = 685 Elapsed Time = .9 sec.

File: Lp108am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

an 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 8M 6 53 6 16M 6

Intvl Length (%): 8 6 57 6 17 6

Pin Settings (%): 100/0 8 14 71 77 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits	(sec):	14	59	22
Splits	(%):	14	63	23
:				
LINKS MOVING :		305	306	312
		312	302	307
		302	-305	

Yield Point = 8 sec 8 %.

File: Lp108am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 8M 6 51 6 18 6

Intvl Length (%): 8 6 55 6 19 6

Green Settings (%): 100/0 8 14 69 75 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 14 57 24

Splits (%): 14 61 25

LINKS MOVING : 1005 1006 1011
1011 1010 1003
1002
-1005

Yield Point = 70 sec 74 %.

File: Lp108am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10                (TRANSYT-7F)                15 March 1993 *
*
*          TRAFFIC SIGNAL SYSTEM OPTIMIZATION             *
*
*          PROGRAM                                         *
*
* Sponsored by:                                           Developed by: *
*
* U.S. Department of Transportation                       University of Florida *
* Federal Highway Administration                         Transportation Research Center *
*
* Software Maintenance and User Support Furnished by:   *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
* 512 Weil Hall, Gainesville, FL 32611-2083 USA        *
* (904) 392-0378                                         *
*
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*****

```

Date of Run: 11/13/99 Start Time of Run: 23:25:26 Data File: LP108PM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp108pm.sy5, Date:Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp108pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & SB OFF Ramp

INTERSECTION 3

13	3	72	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	13	305	312	302	0	0	0	0	0	1
22	3	3	3	4	0	22	306	302	-305	0	0	0	0	0	0
23	3	5	5	6	0	22	312	307	0	0	0	0	0	0	1
28	302	700	3585	379	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	305	700	1703	368	0	0	0	0	0	0	0	0	0	0	0
29	305	2	5	0	15	0	0	0	306	100	0	0	0	0	0
28	306	807	3689	758	0	706	758	55	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2280	3312	253	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2280	1482	221	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	807	5377	632	0	307	253	55	302	379	55	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	715	3689	758	0	1003	310	55	1006	448	55	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	715	1568	737	0	1003	301	55	1006	436	55	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & NB ON Ramp

File: Lp108pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 10

13	10	51	1	0	6	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1006	1010	1002-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1905	3539	611	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1905	3167	716	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	715	3725	379	0	702	379	55	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	715	1770	253	0	702	253	55	0	0	0	0	0	0	0
29	1005	2	5	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	500	3725	884	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	500	1583	316	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

LOT AND OPTION CARDS

52 1 0 100 0 0 0 0 0 0 0 0 0 0 0 0

72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING. IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

74 --- NOTE - THERE ARE A TOTAL OF 3 NODES AND 14 LINKS, INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED IN THE ABOVE REPORT.

File: Lp108pm.sy5, Date: Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------------	-------------------------	-------------------------------	-------------------------	---------------------------------	---------------------	------------------------------	----------------------

95	32	11.13	38	91.7	37.9	0	37.9334
----	----	-------	----	------	------	---	---------

-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	11.89	39	93.4	39.6	0	39.6044
-----	----	-------	----	------	------	---	---------

105	35	11.97	39	93.5	39.8	0	39.7982
-----	----	-------	----	------	------	---	---------

110	37	12.19	37	92.8	39.0	0	39.0272
-----	----	-------	----	------	------	---	---------

115	38	13.18	38	94.7	41.0	0	40.9609
-----	----	-------	----	------	------	---	---------

120	40	14.32	38	95.4	41.7	0	41.6651
-----	----	-------	----	------	------	---	---------

125	42	14.08	38	95.2	41.5	0	41.4575
-----	----	-------	----	------	------	---	---------

130	43	14.68	38	95.9	42.1	0	42.1336
-----	----	-------	----	------	------	---	---------

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 3.6 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp108pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
SB LEFT : 43		109.26	6.11	87.0	2.45	34.9	217.(86)	6	182	7.49
RGHT : 44		95.44	4.69	76.4	1.49	24.3	161.(73)	4	91	5.91
EB THRU : 14		50.16	1.99	18.9	.31	2.9	86.(23)	3	56	2.77
LEFT : 55		48.71	2.11	20.6	.48	4.7	153.(41)	2	28	3.19
WB THRU : 34		115.87	3.35	15.9	1.25	6.0	315.(42)	9	65	10.71
NODE 3:	55	419.43	18.25		5.98	10.9	931.(47)			30.07
EB THRU : 12		96.61	1.75	10.0	.00	.0	0.(0)	0	97	3.23
WB THRU : 21		102.68	1.86	8.8	.00	.0	0.(0)	0	57	3.44
RGHT : 47		99.83	1.88	9.2	.08	.4	26.(3)	5	29	3.88
NODE 7:	47	299.12	5.49		.08	.1	26.(1)	SPECIAL: N		10.55

File: Lp108pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ MODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 75		220.58	13.62	80.3	6.23	36.7	539.(88)	15	152	16.61
RGHT : 58		258.49	13.25	66.6	4.58	23.0	530.(74)	14	152	16.92
EB THRU : 19		51.34	1.58	15.0	.65	6.2	103.(27)	3	57	4.13
LEFT : 48		34.27	.91	12.9	.29	4.1	79.(31)	2	29	2.85
WB THRU : 43		83.49	5.81	23.6	3.01	12.2	477.(54)	13	40	8.25
RGHT : 36		29.85	2.03	23.1	1.03	11.7	162.(51)	5	20	2.87
MODE 10: 75		678.02	37.19		15.78	18.0	1890.(60)			51.64

All MOEs are in units per hour.

File: Lp108pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1397
Total Travel Time	veh-hr/hr	61
Total Uniform Delay	veh-hr/hr	21
Total Random Delay	veh-hr/hr	1
Total Delay	veh-hr/hr	22
Average Delay	sec/veh	10.8
Passenger Delay	pax-hr/hr	26
Stops: Total	veh/hr	2847
Percentage	%	39
System Speed	mph	22.9
Fuel Consumption	gal/hr	92
Operating Cost	\$/hr	607
Performance Index	DI	38.5

Performance Index (PI): Disutility Index (DI):
Disutility Index Excess Fuel Consumption

No. of Simulations = 72, Links = 670 Elapsed Time = .8 sec.

File: Lp108pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number :	1	2	3	4	5	6
Intvl Length(sec):	7M	6	54	6	16M	6
Intvl Length (%) :	7	6	58	6	17	6
Pin Settings (%) :	100/0	7	13	71	77	94
Phase Start (No.):	1 ACT	2 NAP	3 ACT			
Interval Type :	V	Y	V	Y	V	Y

Splits	(sec):	13	60	22
Splits	(%):	13	64	23

LINKS MOVING :	305	306	312
	312	302	307
	302	-305	

Yield Point = 36 sec 38 %.

File: Lp108pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

 INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

 INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 7M 6 49 6 21 6

Intvl Length (%): 7 6 53 6 22 6

Min Settings (%): 100/0 7 13 66 72 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 55 27

Splits (%): 13 59 28

LINKS MOVING : 1005 1006 1011
 1011 1010 1003
 1002
 -1005

Yield Point = 0 sec 0 %.

File: Lp108pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10 (TRANSYT-7F) 15 March 1993 *
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
*
* Sponsored by: Developed by: *
*
* U.S. Department of Transportation University of Florida *
* Federal Highway Administration Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
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*****

```

Date of Run: 11/14/99 Start Time of Run: 9:35:37 Data File: LP128AM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

1	95	130	5	3	1	0	0	-1	1	1	60	0	0	0	1
---	----	-----	---	---	---	---	---	----	---	---	----	---	---	---	---

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION. LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & SB OFF Ramp

INTERSECTION 3

13	3	6	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	13	305	312	302	0	0	0	0	0	1
22	3	3	3	4	0	20	306	302	-305	0	0	0	0	0	0
23	3	5	5	6	0	13	312	307	0	0	0	0	0	0	1
28	302	700	3585	632	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	305	700	1703	754	0	0	0	0	0	0	0	0	0	0	0
29	305	2	5	0	15	0	0	0	306	100	0	0	0	0	0
28	306	807	3689	895	0	706	895	55	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2280	3312	520	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2280	1482	426	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	807	5377	1152	0	307	520	55	302	632	55	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	715	3689	895	0	1003	340	55	1006	555	55	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	715	1568	975	0	1003	371	55	1006	604	55	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & NB ON Ramp

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

 INTERSECTION 10

13	10	76	1	0	4	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1006	1010	1002-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1905	3539	711	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1905	3167	805	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	715	3725	811	0	702	811	55	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	715	1770	341	0	702	341	55	0	0	0	0	0	0	0
29	1005	2	3	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	500	3725	1159	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	500	1583	373	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

 PLOT AND OPTION CARDS

52 1 0 100 0 0 0 0 0 0 0 0 0 0 0 0

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE
 DEFAULT NORMAL OPTIMIZATION STEP SIZES.
 IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE
 LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
 IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 3 NODES AND 14 LINKS,
 INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
 IN THE ABOVE REPORT.

file: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	17.93	48	159.8	82.6	1	82.6220
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
100	33	18.16	48	161.4	84.2	1	84.2022
105	35	20.31	48	164.8	87.6	2	87.6408
110	37	19.14	48	164.1	86.9	0	86.8788
115	38	45.79	49	218.2	141.1	2	141.0559
120	40	46.80	49	221.1	144.0	2	143.9623
125	42	166.10	49	475.3	398.1	1	398.1112
130	43	169.46	49	482.2	405.1	1	405.0532

 BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 78.3 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
SB LEFT : 88		224.56	15.20	105.2	7.67	53.1	487.(94)	13	182	17.55
RGHT : 50		183.97	7.61	64.3	1.44	12.2	232.(54)	7	91	9.92
EB THRU : 23		83.65	3.36	19.1	.55	3.2	154.(24)	4	56	4.70
LEFT : 97*		99.79	15.83	75.6	12.48	59.6	682.(91)	19	28	16.99
WB THRU : 68		136.81	7.65	30.8	5.18	20.8	586.(65)	16	65	19.38
NODE 3: 97*		728.78	49.64		27.32	30.5	2141.(66)			68.53
EB THRU : 21		176.09	3.18	10.0	.00	.0	0.(0)	0	97	5.89
WB THRU : 24		121.24	2.19	8.8	.00	.0	0.(0)	0	57	4.06
RGHT : 62		132.07	2.79	10.3	.41	1.5	173.(18)	10	29	7.96
NODE 7: 62		429.40	8.17		.41	.5	173.(6)			SPECIAL: N 17.91

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ MODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 83		256.68	16.65	84.3	8.05	40.7	645.(91)	18	152	20.02
RGHT : 60		290.62	14.57	65.1	4.82	21.6	583.(72)	16	152	18.72
EB THRU : 41		109.86	3.57	15.9	1.59	7.0	232.(29)	6	57	9.19
LEFT : 76		46.19	3.24	34.2	2.40	25.3	320.(94)	9	29	9.32
WB THRU : 58		109.47	8.37	26.0	4.70	14.6	713.(61)	20	40	11.85
RGHT : 44		35.23	2.54	24.5	1.36	13.1	207.(55)	6	20	3.58
MODE 10:	83	848.04	48.94		22.91	19.6	2700.(64)			72.68

All MOEs are in units per hour.

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:
 CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	2006
Total Travel Time	veh-hr/hr	107
Total Uniform Delay	veh-hr/hr	37
Total Random Delay	veh-hr/hr	13
Total Delay	veh-hr/hr	51
Average Delay	sec/veh	17.4
Passenger Delay	pax-hr/hr	61
Stops: Total	veh/hr	5014
Percentage	%	48
System Speed	mph	18.8
Fuel Consumption	gal/hr	159
Operating Cost	\$/hr	1036
Performance Index	DI	81.9

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 103, Links = 874 Elapsed Time = 3.5 sec.

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

 TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

 NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

 INTERSECTION CONTROLLER SETTINGS

 INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number :	1	2	3	4	5	6
Intvl Length(sec):	30	6	31	6	16	6
Intvl Length (%) :	32	6	33	6	17	6
Pin Settings (%) :	100/0	32	38	71	77	94
Phase Start (No.):	1 ACT	2 NAP	3 ACT			
Interval Type :	V	Y	V	Y	V	Y

splits	(sec):	36	37	22
Splits	(%):	38	39	23

LINKS MOVING :	305	306	312
	312	302	307
	302	-305	

Yield Point = 55 sec 58 %.

File: Lp128am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

 INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

 INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 9M 4 48 6 22 6

Intvl Length (%): 9 4 52 6 23 6

Green Settings (%): 100/0 9 13 65 71 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 54 28

Splits (%): 13 58 29

LINKS MOVING : 1005 1006 1011
 1011 1010 1003
 1002
 -1005

Yield Point = 17 sec 18 %.

File: Lp128am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10 (TRANSYT-7F) 15 March 1993 *
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
*
* Sponsored by: Developed by: *
*
* U.S. Department of Transportation University of Florida *
* Federal Highway Administration Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
* 512 Weil Hall, Gainesville, FL 32611-2083 USA *
* (904) 392-0378 *
*
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*****

```

Date of Run: 11/14/99 Start Time of Run: 9:36:41 Data File: LP128PM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp128pm.sy5, Date: Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp128pm.sy5, Date: Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & SB OFF Ramp

INTERSECTION 3

13	3	20	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	22	306	302	-305	0	0	0	0	0	0
22	3	3	3	4	0	13	305	312	302	0	0	0	0	0	1
23	3	5	5	6	0	13	312	307	0	0	0	0	0	0	1
28	302	700	3585	611	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	305	700	1703	711	0	0	0	0	0	0	0	0	0	0	0
29	305	2	5	0	15	0	0	0	306	100	0	0	0	0	0
28	306	807	3689	1044	0	706	1044	45	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2280	3312	373	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2280	1482	341	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	807	5377	983	0	307	373	45	302	610	45	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	715	3689	1044	0	1003	427	45	1006	617	45	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	715	1568	805	0	1003	329	45	1006	476	45	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & NB ON Ramp

File: Lp128pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 10

13	10	0	1	0	6	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1010	1002	1006-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1905	3539	757	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1905	3167	975	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	715	3725	557	0	702	557	45	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	715	1770	426	0	702	426	45	0	0	0	0	0	0	0
29	1005	2	5	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	500	3725	1096	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	500	1583	520	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

LOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING. IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 3 NODES AND 14 LINKS, INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED IN THE ABOVE REPORT.

File: Lp128pm.sy5, Date: Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	18.72	53	156.2	80.4	0	80.3573
<p>-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.</p>							
<p>--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.</p>							
100	33	20.13	53	158.7	82.8	0	82.8369
105	35	21.43	53	160.7	84.8	0	84.8034
110	37	21.54	52	160.7	84.8	0	84.7931
115	38	22.32	52	161.8	86.0	1	85.9587
120	40	166.17	51	459.2	383.4	2	383.3662
125	42	173.40	51	474.2	398.3	2	398.3308
130	43	184.19	51	496.7	420.8	2	420.8191

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 81.1 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp128pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
SB LEFT :119*		161.08	66.08	637.8	60.68	585.6	373.(100)	20	182	53.13
RGHT : 91		147.26	11.19	118.2	6.25	66.0	312.(92)	9	91	12.37
EB THRU : 21		80.87	2.99	17.6	.28	1.6	103.(17)	3	56	4.11
LEFT :129*		94.10	185.65	940.0	182.49	924.0	711.(100)	38>	280	141.43
WB THRU : 41		159.58	4.77	16.5	1.20	4.2	352.(34)	12	65	10.69
NODE 3:129*		642.90	270.68		250.91	293.3	1852.(60)			221.72
EB THRU : 18		150.26	3.36	12.3	.00	.0	0.(0)	0	97	5.16
WB THRU : 28		141.42	3.16	10.9	.00	.0	0.(0)	0	57	4.86
RGHT : 51		109.04	2.51	11.2	.07	.3	1.(0)	2	29	3.81
NODE 7: 51		400.72	9.03		.07	.1	1.(0)			SPECIAL: N 13.82

File: Lp128pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ LANE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)
NB LEFT : 88	273.29	18.90	89.9	9.74	46.3	700.(92)	19	152	22.24
RGHT : 75	351.99	18.80	69.4	7.00	25.8	782.(80)	22	152	23.93
EB THRU : 28	75.45	2.84	18.4	1.16	7.5	237.(43)	7	57	6.35
LEFT : 95*	57.71	8.59	72.6	7.30	61.7	347.(81)	9	29	11.59
WB THRU : 54	103.52	7.72	25.3	4.24	13.9	652.(59)	18	40	10.94
RGHT : 60	49.11	3.89	26.9	2.24	15.5	325.(62)	9	20	5.44
ODE 10: 95*	911.07	60.73		31.67	26.3	3043.(70)			80.50

All MOEs are in units per hour.

File: Lp128pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1955
Total Travel Time	veh-hr/hr	340
Total Uniform Delay	veh-hr/hr	42
Total Random Delay	veh-hr/hr	241
Total Delay	veh-hr/hr	283
Average Delay	sec/veh	99.3
Passenger Delay	pax-hr/hr	339
Stops: Total	veh/hr	4895
Percentage	%	48
System Speed	mph	5.7
Fuel Consumption	gal/hr	316
Operating Cost	\$/hr	1478
Performance Index	DI	240.2

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 90, Links = 797 Elapsed Time = 3.2 sec.

File: Lp128pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

An 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 62 6 7M 6 8M 6

Intvl Length (%): 67 6 7 6 8 6

Pin Settings (%): 100/0 67 73 80 86 94

Phase Start (No.): 1 NAP 2 ACT 3 ACT

Interval Type : V Y V Y V Y

Splits	(sec):	68	13	14
Splits	(%):	73	13	14

LINKS MOVING :	306	305	312
	302	312	307
	-305	302	

Yield Point = 3 sec 3 %.

File: Lp128pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

 INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

 INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 8M 6 47 6 22 6

Intvl Length (%): 8 6 51 6 23 6

Green Settings (%): 100/0 8 14 65 71 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 14 53 28

Splits (%): 14 57 29

LINKS MOVING : 1005 1010 1011
 1011 1002 1003
 1006
 -1005

Yield Point = 3 sec 3 %.

File: Lp128pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!

APPENDIX Pb
HCS Freeway Analyses

=====
 Post, Buckley, Schuh & Jernigan, Inc.
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 =====

File Name I75N52A.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2040	2440
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	748	895
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	10.69	12.79
Density (veh/mi/ln)	10.23	12.24
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75N52P.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2440	2040
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	895	748
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.79	10.69
Density (veh/mi/ln)	12.24	10.23
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75S52A.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2640	3160
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	968	1159
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	13.83	16.56
Density (veh/mi/ln)	13.23	15.84
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75S52P.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3160	2640
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1159	968
Level of Service (LOS)	C	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	16.56	13.83
Density (veh/mi/ln)	15.84	13.23
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75S52A.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	3160
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	1159
Level of Service (LOS)	A	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	16.56
Density (veh/mi/ln)	7.97	15.84
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75ABP.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	2640
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	968
Level of Service (LOS)	A	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	13.83
Density (veh/mi/ln)	9.53	13.23
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CEA.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	697
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	9.96
Density (veh/mi/ln)	7.97	9.53
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CEP.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	1590
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	583
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	8.33
Density (veh/mi/ln)	9.53	7.97
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75EDA.HC3
 Location..... I-75 SOUTH
 From/To..... RAMP E TO RAMP D
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	3160
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	1159
Level of Service (LOS)	A	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	16.56
Density (veh/mi/ln)	7.97	15.84
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75EDP.HC3
 Location..... I-75 SOUTH
 From/To..... RAMP E TO RAMP D
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	2640
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	968
Level of Service (LOS)	A	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	13.83
Density (veh/mi/ln)	9.53	13.23
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75S52A.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3902	4580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1431	1679
Level of Service (LOS)	C	D
Projected Speed at Flow Rate (mph)	69.5	68.2
Density (pc/mi/ln)	20.58	24.62
Density (veh/mi/ln)	19.69	23.56
Speed of prevailing traffic (mph)	69.5	68.2

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File Name I75S52P.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	4580	3902
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1679	1431
Level of Service (LOS)	D	C
Projected Speed at Flow Rate (mph)	68.2	69.5
Density (pc/mi/ln)	24.62	20.58
Density (veh/mi/ln)	23.56	19.69
Speed of prevailing traffic (mph)	68.2	69.5

=====
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=====
 File Name I75N52A.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3140	3837
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1151	1407
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	70.0	69.6
Density (pc/mi/ln)	16.44	20.21
Density (veh/mi/ln)	15.73	19.34
Speed of prevailing traffic (mph)	70.0	69.6

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File Name I75N52P.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3837	3140
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1407	1151
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.6	70.0
Density (pc/mi/ln)	20.21	16.44
Density (veh/mi/ln)	19.34	15.73
Speed of prevailing traffic (mph)	69.6	70.0

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File Name I75ABA.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	4580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

	Terrain Type	E	E	F	F	F
		T	R	HV	W	P
Dir 1	LEVEL	1.50		0.957	1.00	1.00
Dir 2		1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1679
Level of Service (LOS)	B	D
Projected Speed at Flow Rate (mph)	70.0	68.2
Density (pc/mi/ln)	12.90	24.62
Density (veh/mi/ln)	12.34	23.56
Speed of prevailing traffic (mph)	70.0	68.2

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File Name I75ABP.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	3902
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	1431
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	69.5
Density (pc/mi/ln)	15.39	20.58
Density (veh/mi/ln)	14.72	19.69
Speed of prevailing traffic (mph)	70.0	69.5

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File Name I75CEA.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1077
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.90	15.39
Density (veh/mi/ln)	12.34	14.72
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name I75CEP.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	903
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	12.90
Density (veh/mi/ln)	14.72	12.34
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I7EDA.HC3
 Location..... I-75 SOUTH
 From/To..... RAMP E TO RAMP D
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	4580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1679
Level of Service (LOS)	B	D
Projected Speed at Flow Rate (mph)	70.0	68.2
Density (pc/mi/ln)	12.90	24.62
Density (veh/mi/ln)	12.34	23.56
Speed of prevailing traffic (mph)	70.0	68.2

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 File Name I75EDP.HC3
 Location..... I-75 SOUTH
 From/To..... RAMP E TO RAMP D
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/ 8/99
 Other Information.... BUILD LOOP 1
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	3902
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	1431
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	69.5
Density (pc/mi/ln)	15.39	20.58
Density (veh/mi/ln)	14.72	19.69
Speed of prevailing traffic (mph)	70.0	69.5

APPENDIX Pc
HCS Ramp Analyses

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File Name ..... ISBOFFA.HC5
Location..... I-75 SB OFF RAMP @ SR 52
Analyst..... AJK
Time of Analysis..... 2008 AM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	2440	540	1260
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	9.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	2
Distance from Edge (ft)			6.0
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.
 Distance to downstream ramp is 722 ft.

=====
 File Name ISBOFFA.HC5

B. Adjustment Factors

Terrain Type	E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.957	1.00	1.00
Dnstrm		1.50	0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2440	70	3	12.0	1.00	0.957	1.00	2684
Ramp	OFF 540	50	1	12.0	1.00	0.957	1.00	594
Downstream	ON 1260			12.0	1.00	0.957	1.00	1386

Estimation of V12:

 PFD = 0.666 Using Equation: 7 V12 = 1985

Capacity Checks:

 VFO+VR = 2684 V12 = 1985

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 17
 Computed Speed (mph) 62

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File Name ..... ISBOFFP.HC5
Location..... I-75 SB OFF RAMP @ SR 52
Analyst..... AJK
Time of Analysis..... 2008 PM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	2040	450	1050
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	9.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.
 Distance to downstream ramp is 750 ft.

=====
 File Name ISBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	2040	70	3	12.0	1.00	0.957	1.00	2244
Ramp	450	50	1	12.0	1.00	0.957	1.00	495

Estimation of V12:

 PFD = 0.681 Using Equation: 7 V12 = 1686

Capacity Checks:

 VFO+VR = 2244 V12 = 1686

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 14
 Computed Speed (mph) 62

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File Name INBOFFA.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	2640	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 510 ft.

File Name INBOFFA.HC5

8. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.959	1.00	1.00
Ramp		1.50	0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2640	70 3	12.0	1.00	0.959	1.00	2897
Ramp	OFF 1050	50 1	12.0	1.00	0.959	1.00	1152

Estimation of V12:

PFD = 0.635 Using Equation: 7 V12 = 2259

Capacity Checks:

VFO+VR = 2897 V12 = 2259

LOS, Speed, and Density:

Level of Service (LOS) B
 Computed Density (pc/mi/ln) 19
 Computed Speed (mph) 61

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File Name INBOFFP.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3160	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 510 ft.

File Name INBOFFP.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.959	1.00	1.00
Ramp		1.50	0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3160	70	3 12.0	1.00	0.959	1.00	3468
Ramp	OFF 1260	50	1 12.0	1.00	0.959	1.00	1383

Estimation of V12:

PFD = 0.610 Using Equation: 7 V12 = 2654

Capacity Checks:

VFO+VR = 3468 V12 = 2654

LOS, Speed, and Density:

Level of Service (LOS) C
 Computed Density (pc/mi/ln) 22
 Computed Speed (mph) 60

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File Name INBONA.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1

A. Ramp Configuration Input Data

	Analysis	
	Freeway	Ramp
Traffic Volume	1590	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

File Name INBONA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1590	70	3	12.0	1.00	0.957	1749
Ramp	ON 450	50	1	12.0	1.00	0.985	481

Estimation of V12:

PFM = 0.617 Using Equation: 2 V12 = 1079

Capacity Checks:

VFO = 2230 VR12 = 1560

LOS, Speed, and Density:

Level of Service (LOS) A
 Computed Density (pc/mi/ln) 9
 Computed Speed (mph) 64

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File Name ..... INBONP.HC5
Location..... I-75 NB ON RAMP @ SR 52
Analyst..... AJK
Time of Analysis..... 2008 PM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 1

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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
Length of acceleration lane is 1411 ft.

=====
 File Name INBONP.HCS

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of Lanes	Lane Width (ft)	f _W	f _{HV}	f _P	Vol (pcph)
Freeway	1900	70	3 12.0	1.00	0.957	1.00	2090
Ramp	ON 540	50	1 12.0	1.00	0.985	1.00	577

Estimation of V12:

 PFM = 0.617 Using Equation: 2 V12 = 1290

Capacity Checks:

 VFO = 2667 VR12 = 1867

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 11
 Computed Speed (mph) 64

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File Name ISBUPA.HC5
 Location..... I-75 SB ON AND OFF UPSTREAM
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 689 ft.

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File Name ISBUPSTR.HC5
 Location..... I-75 SB ON AND OFF UPSTREAM
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1590	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	2	0
Distance from Edge (ft)	6.0	
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 689 ft.

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=====
 File Name INBOFFA.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/8/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3902	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 510 ft.

=====
 File Name INBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3902	70	3	12.0	1.00	0.959	1.00	4282
Ramp	1440	50	1	12.0	1.00	0.959	1.00	1580

Estimation of V12:

 PFD = 0.580 Using Equation: 7 V12 = 3148

Capacity Checks:

 VFO+VR = 4282 V12 = 3148

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 27
 Computed Speed (mph) 59

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 File Name INBOFFP.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/8/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	4580	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 510 ft.

=====
 File Name INBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4580	70	3	12.0	1.00	0.959	1.00	5026
Ramp	1642	50	1	12.0	1.00	0.959	1.00	1802

Estimation of V12:

 PFD = 0.551 Using Equation: 7 V12 = 3580

Capacity Checks:

 VFO+VR = 5026 V12 = 3580

LOS, Speed, and Density:

 Level of Service (LOS) D
 Computed Density (pc/mi/ln) 30
 Computed Speed (mph) 59

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 File Name INBONA.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/8/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

=====
 File Name INBONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2462	70	3	12.0	1.00	0.957	1.00	2708
Ramp	678	50	1	12.0	1.00	0.985	1.00	724

Estimation of V12:

 PFM = 0.617 Using Equation: 2 V12 = 1671

Capacity Checks:

 VFO = 3432 VR12 = 2395

LOS, Speed, and Density:

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	15
Computed Speed (mph)	64

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 File Name INBONP.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/8/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

File Name INBONP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2938	70	3	12.0	1.00	0.957	1.00	3232
Ramp	899	50	1	12.0	1.00	0.985	1.00	961

Estimation of V12:

PFM = 0.617 Using Equation: 2 V12 = 1994

Capacity Checks:

VFO = 4193 VR12 = 2955

LOS, Speed, and Density:

Level of Service (LOS) B
 Computed Density (pc/mi/ln) 19
 Computed Speed (mph) 63

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 File Name ISBDWSTA.HC5
 Location..... I-75 SB ON AND OFF DOWNSTREAM
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/8/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	3837	899	1642
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	3.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.
 Distance to downstream ramp is 722 ft.

=====
 File Name ISBDWSTA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00
Dnstrm		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3837	70	3	12.0	1.00	0.957	1.00	4221
Ramp	899	50	1	12.0	1.00	0.957	1.00	989
Downstream	1642			12.0	1.00	0.985	1.00	1754

Estimation of V12:

 PFD = 0.609 Using Equation: 7 V12 = 2957

Capacity Checks:

 VFO+VR = 4221 V12 = 2957

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 25
 Computed Speed (mph) 61

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File Name ISBDWSTP.HC5
 Location..... I-75 SB ON AND OFF DOWNSTREAM
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/8/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 1

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	3140	678	1440
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	3.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.
 Distance to downstream ramp is 722 ft.


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File Name ..... ISBUPSTA.HC5
Location..... I-75 SB ON AND OFF UPSTREAM
Analyst..... AJK
Time of Analysis..... 2028 AM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 689 ft.


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File Name ..... ISBUPSTP.HC5
Location..... I-75 SB ON AND OFF UPSTREAM
Analyst..... AJK
Time of Analysis..... 2028 PM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 1
=====
    
```

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 689 ft.

=====
 File Name ISBUPSTP.HC5

B. Adjustment Factors

		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2462	70	3	12.0	1.00	0.957	1.00	2708
Ramp	ON 1440	50	1	12.0	1.00	0.985	1.00	1539

Estimation of V12:

 PFM = 0.597 Using Equation: 2 V12 = 1616

Capacity Checks:

 VFO = 4247 VR12 = 3155

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 25
 Computed Speed (mph) 60

APPENDIX Q

Loop 2 Alternative Design Traffic Analysis

APPENDIX Qa – Transyt-7F Analyses with HCS Signalized

APPENDIX Qb – HCS Freeway Analyses

APPENDIX Qc – HCS Ramp Analyses

APPENDIX Qa
Transyt-7F Analyses with HCS Signalized

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) 2R 52 (N-S) I-75
 Analyst: AJK File Name: LP208NBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 2 2008 PM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	240	360		840	300		580		680			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			72			140			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		7.0A	45.0P		Green	25.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
		Cap	Flow	Ratio			Ratio	Delay	LOS
EB	L	279	1703	0.907	0.642	24.5	C	14.2	B
	T	1811	3585	0.220	0.505	7.5	B		
WB	T	1864	3689	0.498	0.505	9.1	B	9.4	B
	R	800	1583	0.300	0.505	10.5	B		
NB	L	1043	3539	0.603	0.295	22.6	C	18.7	C
	R	1367	3167	0.470	0.432	14.8	B		

Intersection Delay = 14.2 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.729

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) 2R 52 (N-S) I-75
 Analyst: AJK File Name: LP208NBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 2 2008 AM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	210	440		800	240		350		700			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			72			140			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*	*			NB Left	*		
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru		*			Thru			
Right		*			Right			
Peds					Peds			
NB Right	*				EB Right			
SB Right					WB Right			
Green		7.0A 53.0P			Green	22.0A		
Yellow/AR		6.0 6.0			Yellow/AR	6.0		

Cycle Length: 100 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
							Delay	LOS	
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	300	1703	0.737	0.690	6.7	B	6.0	B
	T	2008	3585	0.242	0.560	5.6	B		
WB	T	2066	3689	0.428	0.560	6.5	B	6.8	B
	R	887	1583	0.200	0.560	8.3	B		
NB	L	885	3539	0.428	0.250	24.2	C	20.8	C
	R	1203	3167	0.554	0.380	18.9	C		

Intersection Delay = 11.8 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.479

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP228NBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 2 2028 AM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	324	770		1101	354		675		765			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			72			266			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		15.0A	37.0P		Green	25.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
		Cap	Flow	Ratio			Ratio	Delay	LOS
EB	L	399	1703	0.855	0.642	18.1	C	15.2	C
	T	1509	3585	0.564	0.421	14.1	B		
WB	T	1553	3689	0.783	0.421	17.2	C	16.8	C
	R	667	1583	0.445	0.421	15.2	C		
NB	L	1043	3539	0.702	0.295	24.1	C	18.0	C
	R	1633	3167	0.363	0.516	10.5	B		

Intersection Delay = 16.7 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.802

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) 2R 52 (N-S) I-75
 Analyst: AJK File Name: LP228NBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 2 2028 PM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	405	529		1041	494		716		926			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			72			250			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		20.0A	34.0P		Green	28.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		

Cycle Length: 100 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	464	1703	0.918	0.630	24.3	C	19.9	C
	T	1326	3585	0.441	0.370	16.8	C		
WB	T	1365	3689	0.843	0.370	23.0	C	23.5	C
	R	586	1583	0.758	0.370	24.9	C		
NB	L	1097	3539	0.708	0.310	24.7	C	17.0	C
	R	1805	3167	0.446	0.570	9.5	B		

Intersection Delay = 20.2 sec/veh Intersection LOS = C
 Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.837

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP208SBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 2 2008 AM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes	930			420						300		240
Lane W (ft)	12.0			12.0						12.0		12.0
RTOR Vols	0			0								76
Lost Time	3.00			3.00						3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right		*			WB Right			
Green	10.0A	47.0P			Green	25.0A		
Yellow/AR	6.0	6.0			Yellow/AR	6.0		
Cycle Length: 100 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	
		Flow	Ratio	Ratio			Delay	LOS
EB	T	2366	3585	0.434	0.660	2.6	A	2.6 A
WB	T	1845	3689	0.252	0.500	8.3	B	8.3 B
SB	L	927	3312	0.350	0.280	21.9	C	19.0 C
	R	652	1482	0.265	0.440	13.5	B	

Intersection Delay = 8.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.409

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP208SBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 2 2008 PM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes	710			720						240		210
Lane W (ft)	12.0			12.0						12.0		12.0
RTOR Vols	0			0								72
Lost Time	3.00			3.00						3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right		*			WB Right			
Green		7.0A	49.0P		Green	21.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat		v/c	g/C	Approach:			
		Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay
EB	T	2453	3585	0.320	0.684	1.5	A	1.5	A
WB	T	2019	3689	0.394	0.547	6.5	B	6.5	B
SB	L	837	3312	0.312	0.253	22.0	C	19.5	C
	R	577	1482	0.251	0.389	15.0	B		

Intersection Delay = 7.2 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.335

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP228SBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 2 2028 AM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes	1316			850						494		405
Lane W (ft)	12.0			12.0						12.0		12.0
RTOR Vols	0			0								76
Lost Time	3.00			3.00						3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru	*	*			Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru	*				Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right			*		WB Right			
Green	45.0P	9.0A			Green	23.0A		
Yellow/AR	6.0	6.0			Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Approach:	Delay	LOS	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	2377	3585	0.612	0.663	3.0	A	3.0	A
WB	T	1864	3689	0.504	0.505	9.1	B	9.1	B
SB	L	906	3312	0.591	0.274	23.5	C	20.5	C
	R	639	1482	0.541	0.432	16.0	C		

Intersection Delay = 9.5 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.606

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP228SBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 2 2028 PM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes		1255			992					354		324
Lane W (ft)		12.0			12.0					12.0		12.0
RTOR Vols			0			0						72
Lost Time		3.00			3.00					3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right			*		WB Right			
Green		52.0P	8.0A		Green	22.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		

Cycle Length: 100 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane Group:	Adj Sat	v/c	g/C	Approach:				
Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB T	2474	3585	0.561	0.690	1.9	A	1.9	A
WB T	2029	3689	0.540	0.550	7.6	B	7.6	B
SB L	828	3312	0.464	0.250	24.5	C	21.7	C
R	578	1482	0.459	0.390	17.6	C		

Intersection Delay = 8.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.535

```

*****
*
* Release 7.10 (TRANSYT-7F) 15 March 1993 *
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
*
* Sponsored by: Developed by: *
*
* U.S. Department of Transportation University of Florida *
* Federal Highway Administration Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
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* Transportation Research Center, University of Florida *
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```

Date of Run: 11/14/99 Start Time of Run: 9:53: 6 Data File: LP208AM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp208am.sy5, Date: Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp208am.sy5, Date: Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & SB OFF Ramp

INTERSECTION 3

13	3	64	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	13	312	302	0	0	0	0	0	0	1
22	3	3	3	4	0	22	306	302	0	0	0	0	0	0	0
23	3	5	5	6	0	13	312	307	0	0	0	0	0	0	1
28	302	625	3585	979	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	306	492	3689	442	0	706	442	55	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2247	3312	316	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2247	1482	253	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & SB ON Ramp

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	492	7170	1295	0	307	316	55	302	979	55	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	361	3689	442	0	1906	442	55	0	0	0	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	361	1568	716	0	1906	716	55	0	0	0	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & NB ON Ramp

File: Lp208am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 10

13	10	49	1	0	6	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1006	1010	1002-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1902	3312	368	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1902	2963	737	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	381	3585	463	0	1902	463	55	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	381	1703	221	0	1902	221	55	0	0	0	0	0	0	0
29	1005	2	5	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	700	3689	842	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	700	1568	253	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 19

11	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	----	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 19 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	19	0	0	0	0	0	1902	1909	1906	0	0	0	0	0	0
28	1902	361	5377	684	0	702	684	55	0	0	0	0	0	0	0
29	1902	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1909	361	1524	611	0	702	611	55	0	0	0	0	0	0	0
29	1909	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1906	381	5534	1158	0	1003	352	55	1006	806	55	0	0	0	0
29	1906	2	3	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

File: Lp208am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp208am.sy5, Date: Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
--------------------------	-------------------------	-------------------------------	-------------------------	---------------------------------	---------------------	------------------------------	----------------------

95	32	7.85	26	87.8	35.1	0	35.0783
----	----	------	----	------	------	---	---------

-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	7.95	26	87.5	34.8	0	34.8061
-----	----	------	----	------	------	---	---------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

105	35	8.01	26	88.6	35.9	0	35.9160
-----	----	------	----	------	------	---	---------

110	37	9.16	25	89.2	36.5	0	36.5019
-----	----	------	----	------	------	---	---------

115	38	8.64	26	89.5	36.8	0	36.8176
-----	----	------	----	------	------	---	---------

120	40	10.07	26	91.9	39.2	0	39.2011
-----	----	-------	----	------	------	---	---------

125	42	9.70	26	91.8	39.1	0	39.0792
-----	----	------	----	------	------	---	---------

130	43	10.37	26	91.8	39.1	0	39.1343
-----	----	-------	----	------	------	---	---------

BEST CYCLE LENGTH = 100 SEC. CYCLE SENSITIVITY = 5.0 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp208am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
SB LEFT : 68		134.50	8.38	95.4	3.87	44.1	288.(91)	8	180	9.96
RGHT : 55		107.69	5.71	81.3	2.10	29.9	201.(79)	6	90	7.08
EB THRU : 35		116.19	4.73	17.4	.84	3.1	245.(25)	8	50	6.75
WB THRU : 19		41.20	1.22	9.9	.47	3.8	129.(29)	5	39	4.15
NODE 3:	68	399.58	20.03		7.27	13.2	864.(43)			27.94
EB THRU : 18		120.70	2.18	6.1	.00	.0	0.(0)	0	79	4.04
WB THRU : 12		30.21	.55	4.4	.00	.0	0.(0)	0	29	1.01
RGHT : 46		48.94	1.02	5.2	.14	.7	83.(12)	6	14	3.30
NODE 7:	46	199.85	3.75		.14	.2	83.(3)	SPECIAL: N		8.35

File: Lp208am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 53		132.63	8.06	78.8	3.61	35.3	311.(85)	9	152	9.82
RGHT : 69		265.61	14.74	72.0	5.83	28.5	594.(81)	17	152	18.48
EB THRU : 22		33.37	1.50	11.6	.89	6.9	150.(32)	5	30	4.58
LEFT : 40		15.93	.61	9.9	.32	5.2	97.(44)	2	15	2.59
WB THRU : 39		111.44	6.29	26.9	2.55	10.9	416.(49)	12	56	8.74
RGHT : 28		33.49	1.82	25.9	.70	9.9	114.(45)	3	28	2.51
NODE 10:	69	592.46	33.01		13.90	17.4	1681.(58)			46.73
EB THRU : 13		46.75	.85	4.4	.00	.0	0.(0)	0	43	1.56
RGHT : 40		41.76	.76	4.4	.00	.0	0.(0)	0	14	1.40
WB THRU : 21		83.47	1.51	4.7	.00	.0	0.(0)	0	46	2.79
NODE 19:	40	171.98	3.11		.00	.0	0.(0)	SPECIAL: N		5.76

ALL MOEs are in units per hour.

File: Lp208am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1364
Total Travel Time	veh-hr/hr	60
Total Uniform Delay	veh-hr/hr	20
Total Random Delay	veh-hr/hr	1
Total Delay	veh-hr/hr	21
Average Delay	sec/veh	7.8
Passenger Delay	pax-hr/hr	26
Stops: Total	veh/hr	2628
Percentage	%	27
System Speed	mph	22.8
Fuel Consumption	gal/hr	89
Operating Cost	\$/hr	578
Performance Index	DI	36.1

Performance Index (PI): Disutility Index (DI):

Disutility Index Excess Fuel Consumption

No. of Simulations = 88, Links = 920 Elapsed Time = 3.5 sec.

File: Lp208am.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 100 Seconds, 60 Steps

TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 100 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

- F : Fixed green.
- V : Variable green.
- Y : Yellow.
- R : All-red.

An 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number :	1	2	3	4	5	6
Intvl Length(sec):	9M	6	60	6	13M	6
Intvl Length (%) :	9	6	60	6	13	6
Pin Settings (%) :	100/0	9	15	75	81	94
Phase Start (No.):	1 ACT	2 NAP	3 ACT			
Interval Type :	V	Y	V	Y	V	Y

splits	(sec):	15	66	19
Splits	(%):	15	66	19

LINKS MOVING :	312	306	312
	302	302	307

Yield Point = 79 sec 79 %.

File: Lp208am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Interval Length(sec): 7M 6 55 6 20 6

Interval Length (%): 7 6 55 6 20 6

Green Settings (%): 100/0 7 13 68 74 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 61 26

Splits (%): 13 61 26

LINKS MOVING : 1005 1006 1011
1011 1010 1003
1002
-1005

Yield Point = 59 sec 59 %.

File: Lp208am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

INTERSECTION 19 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

File: Lp208am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

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*****
*
* Release 7.10 (TRANSYT-7F) 15 March 1993 *
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
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* Sponsored by: Developed by: *
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* U.S. Department of Transportation University of Florida *
* Federal Highway Administration Transportation Research Center *
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Date of Run: 11/13/99 Start Time of Run: 23:25:52 Data File: LP208PM.TIN

INPUT DATA REPORT FOR RUN 1

IELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp208pm.sy5, Date: Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & SB OFF Ramp

INTERSECTION 3

13	3	72	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	13	312	302	0	0	0	0	0	0	1
22	3	3	3	4	0	22	306	302	0	0	0	0	0	0	0
23	3	5	5	6	0	22	312	307	0	0	0	0	0	0	1
28	302	625	3585	747	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	306	492	3689	758	0	706	758	55	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2247	3312	253	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2247	1482	221	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & SB ON Ramp

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

-- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	492	7170	1000	0	307	253	55	302	747	55	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	361	3689	758	0	1906	758	55	0	0	0	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	361	1568	737	0	1906	737	55	0	0	0	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & NB ON Ramp

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 10

13	10	51	1	0	6	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1006	1010	1002-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1902	3312	611	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1902	2963	716	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	381	3585	379	0	1902	379	55	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	381	1703	253	0	1902	253	55	0	0	0	0	0	0	0
29	1005	2	5	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	700	3689	884	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	700	1568	316	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 19

11	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	----	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 19 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	19	0	0	0	0	0	1902	1909	1906	0	0	0	0	0	0
28	1902	361	5377	632	0	702	632	55	0	0	0	0	0	0	0
29	1902	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1909	361	1524	368	0	702	368	55	0	0	0	0	0	0	0
29	1909	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1906	381	5534	1495	0	1003	611	55	1006	884	55	0	0	0	0
29	1906	2	3	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	8.13	27	92.9	38.3	0	38.2979
-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
100	33	8.34	28	94.0	39.3	0	39.3476
105	35	8.70	27	93.4	38.7	0	38.7452
110	37	8.93	27	94.1	39.4	0	39.4434
115	38	9.12	26	94.0	39.3	0	39.3494
120	40	9.75	27	95.4	40.8	0	40.8337
125	42	9.96	27	95.7	41.1	0	41.0794
130	43	10.38	26	96.0	41.4	0	41.3667

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 2.9 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp208pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL AVG. (v-hr)(sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)
SB LEFT : 43	107.69	6.06	86.2	2.45	34.9	217.(86)	6 180	7.42
RGHT : 44	94.07	4.64	75.6	1.49	24.3	161.(73)	4 90	5.85
EB THRU : 28	88.66	3.76	18.1	.78	3.8	206.(28)	6 50	5.36
WB THRU : 34	70.65	2.55	12.1	1.27	6.0	210.(28)	7 39	7.24
NODE 3: 44	361.06	17.01		6.00	10.9	793.(40)		25.87
EB THRU : 14	93.21	1.69	6.1	.00	.0	0.(0)	0 79	3.12
WB THRU : 21	51.81	.94	4.4	.00	.0	0.(0)	0 29	1.73
RGHT : 47	50.37	.98	4.8	.07	.3	20.(3)	5 14	2.12
NODE 7: 47	195.39	3.60		.07	.1	20.(1) SPECIAL: N		6.97

File: Lp208pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 83		220.20	14.67	86.4	7.29	42.9	555.(91)	15	152	17.46
RGHT : 64		258.04	13.68	68.8	5.03	25.3	557.(78)	15	152	17.38
EB THRU : 19		27.32	1.62	15.4	1.13	10.7	182.(48)	5	30	5.17
LEFT : 47		18.24	.71	10.1	.38	5.4	111.(44)	2	15	2.97
WB THRU : 43		117.00	6.81	27.7	2.89	11.8	465.(53)	13	56	9.49
RGHT : 36		41.82	2.39	27.2	.99	11.2	159.(50)	4	28	3.32
NODE 10:	83	682.62	39.88		17.70	20.2	2030.(64)			55.79
EB THRU : 12		43.20	.78	4.4	.00	.0	0.(0)	0	43	1.45
RGHT : 24		25.15	.45	4.4	.00	.0	0.(0)	0	14	.84
WB THRU : 27		107.76	1.95	4.7	.00	.0	0.(0)	0	46	3.61
NODE 19:	27	176.11	3.18		.00	.0	0.(0)	SPECIAL: N		5.89

All MOEs are in units per hour.

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1415
Total Travel Time	veh-hr/hr	64
Total Uniform Delay	veh-hr/hr	22
Total Random Delay	veh-hr/hr	2
Total Delay	veh-hr/hr	24
Average Delay	sec/veh	8.4
Passenger Delay	pax-hr/hr	29
Stops: Total	veh/hr	2844
Percentage	%	28
System Speed	mph	22.2
Fuel Consumption	gal/hr	95
Operating Cost	\$/hr	616
Performance Index	DI	39.9

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 74, Links = 767 Elapsed Time = .9 sec.

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

RANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

In 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 7M 6 54 6 16M 6

Intvl Length (%): 7 6 58 6 17 6

Pin Settings (%): 100/0 7 13 71 77 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits	(sec):	13	60	22
Splits	(%):	13	64	23

LINKS MOVING :	312	306	312
	302	302	307

Yield Point = 93 sec 98 %.

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 7M 6 50 6 20 6

Intvl Length (%): 7 6 54 6 21 6

Green Settings (%): 100/0 7 13 67 73 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 56 26

Splits (%): 13 60 27

LINKS MOVING : 1005 1006 1011
1011 1010 1003
1002
-1005

Yield Point = 26 sec 27 %.

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

INTERSECTION 19 PRETIMED - SPLITS ARE FIXED

...
This node has only one phase, no signal timing.
_

File: Lp208pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10 (TRANST-7F) 15 March 1993 *
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
*
* Sponsored by: Developed by: *
*
* U.S. Department of Transportation University of Florida *
* Federal Highway Administration Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
* 512 Weil Hall, Gainesville, FL 32611-2083 USA *
* (904) 392-0378 *
*
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*
*****

```

Date of Run: 11/13/99 Start Time of Run: 23:26:43 Data File: LP228AM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp228am.sy5, Date: Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp228am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

* SR 52 & SB OFF Ramp

INTERSECTION 3

13	3	17	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	22	306	302	0	0	0	0	0	0	0
22	3	3	3	4	0	13	312	302	0	0	0	0	0	0	1
23	3	5	5	6	0	22	312	307	0	0	0	0	0	0	1
28	302	625	3585	1385	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	306	492	3689	895	0	706	895	55	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2247	3312	520	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2247	1482	426	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	492	7170	1905	0	307	520	55	302	1385	55	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	361	3689	895	0	1906	895	55	0	0	0	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	361	1568	975	0	1906	975	55	0	0	0	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & NB ON Ramp

File: Lp228am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 10

13	10	52	1	0	6	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1006	1010	1002-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1902	3312	711	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1902	2963	805	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	381	3585	811	0	1902	811	55	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	381	1703	341	0	1902	341	55	0	0	0	0	0	0	0
29	1005	2	5	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	700	3689	1159	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	700	1568	373	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 19

11	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	----	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 19 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	19	0	0	0	0	0	1902	1909	1906	0	0	0	0	0	0
28	1902	361	3585	1152	0	702	1152	55	0	0	0	0	0	0	0
29	1902	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1909	361	1524	754	0	702	754	55	0	0	0	0	0	0	0
29	1909	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1906	381	3689	1869	0	1003	711	55	1006	1158	55	0	0	0	0
29	1906	2	3	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

File: Lp228am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp228am.sy5, Date:Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	9.41	32	149.9	70.9	0	70.9104
<p>-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.</p>							
<p>--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.</p>							
100	33	10.28	32	152.2	73.2	0	73.1659
105	35	10.13	32	152.6	73.6	0	73.5672
110	37	10.74	32	152.7	73.7	0	73.6736
115	38	11.43	31	155.1	76.1	0	76.0599
120	40	11.97	32	159.0	79.9	0	79.9494
125	42	12.34	32	159.6	80.6	0	80.5953
130	43	12.43	32	160.3	81.3	0	81.3484

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 5.2 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp228am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)	
SB LEFT : 68		221.33	12.42	86.0	5.00	34.6	447.(86)	12	180	15.24
RGHT : 67		181.32	8.92	75.4	2.84	24.0	321.(75)	9	90	11.32
EB THRU : 56		164.37	8.46	22.0	2.95	7.7	628.(45)	18	50	12.38
WB THRU : 46		83.42	4.67	18.8	3.16	12.7	420.(47)	11	39	13.00
NODE 3:	68	650.45	34.48		13.96	15.6	1817.(56)			51.94
EB THRU : 27		177.56	3.21	6.1	.00	.0	0.(0)	0	79	5.94
WB THRU : 24		61.17	1.11	4.4	.00	.0	0.(0)	0	29	2.05
RGHT : 62		66.64	1.61	5.9	.40	1.5	167.(17)	10	14	5.67
NODE 7:	62	305.37	5.92		.40	.4	167.(4)	SPECIAL: N		13.66

Title: Lp228am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 85		256.24	16.71	84.6	8.12	41.1	638.(90)	18	152	20.01
RGHT : 66		290.12	15.00	67.1	5.27	23.6	613.(76)	17	152	19.19
EB THRU : 43		58.46	3.31	14.7	2.25	10.0	399.(49)	11	30	11.09
LEFT : 84		24.58	3.34	35.2	2.89	30.5	295.(86)	8	15	8.48
WB THRU : 60		153.40	10.14	31.5	5.00	15.5	737.(64)	21	56	14.02
RGHT : 45		49.37	3.07	29.7	1.42	13.7	212.(57)	6	28	4.23
NODE 10:	85	832.16	51.58		24.96	21.4	2893.(69)			77.03
EB THRU : 32		78.74	1.42	4.4	.00	.0	0.(0)	0	29	2.64
RGHT : 49		51.54	.93	4.4	.00	.0	0.(0)	0	14	1.73
WB THRU : 51		134.72	2.44	4.7	.00	.0	0.(0)	0	30	4.51
NODE 19:	51	264.99	4.79		.00	.0	0.(0)	SPECIAL: N		8.87

All MOEs are in units per hour.

File: Lp228am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	2053
Total Travel Time	veh-hr/hr	97
Total Uniform Delay	veh-hr/hr	35
Total Random Delay	veh-hr/hr	5
Total Delay	veh-hr/hr	39
Average Delay	sec/veh	9.5
Passenger Delay	pax-hr/hr	47
Stops: Total	veh/hr	4877
Percentage	%	33
System Speed	mph	21.2
Fuel Consumption	gal/hr	151
Operating Cost	\$/hr	1009
Performance Index	DI	72.5

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 81, Links = 842 Elapsed Time = .9 sec.

File: Lp228am.sy5, Date: Nov 13, 1999, Analyst:
 CYCLE: 95 Seconds, 60 Steps

 TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

 NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

- F : Fixed green.
- V : Variable green.
- Y : Yellow.
- R : All-red.

An 'M' by an interval length means this is the minimum time available.

 INTERSECTION CONTROLLER SETTINGS

 INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number :	1	2	3	4	5	6
Intvl Length(sec):	47	6	9M	6	21M	6
Intvl Length (%) :	51	6	9	6	22	6
Pin Settings (%) :	100/0	51	57	66	72	94
Phase Start (No.):	1 NAP	2 ACT	3 ACT			
Interval Type :	V	Y	V	Y	V	Y

Splits	(sec):	53	15	27
Splits	(%):	57	15	28

LINKS MOVING :	306	312	312
	302	302	307

Yield Point = 2 sec 2 %.

Title: Lp228am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 7M 6 47 6 23 6

Intvl Length (%): 7 6 51 6 24 6

Green Settings (%): 100/0 7 13 64 70 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 53 29

Splits (%): 13 57 30

LINKS MOVING : 1005 1006 1011
1011 1010 1003
1002
-1005

Yield Point = 81 sec 85 %.

File: Lp228am.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 95 Seconds, 60 Steps

INTERSECTION 19 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

File: Lp228am.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10                (TRANSYT-7F)                15 March 1993 *
*
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
*
* PROGRAM *
*
*
* Sponsored by:                Developed by: *
*
* U.S. Department of Transportation                University of Florida *
* Federal Highway Administration                Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
* 512 Weil Hall, Gainesville, FL 32611-2083 USA *
* (904) 392-0378 *
*
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*****

```

Date of Run: 11/13/99 Start Time of Run: 23:26:49 Data File: LP228PM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

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File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & SB OFF Ramp

INTERSECTION 3

13	3	109	1	0	6	0	6	0	6	0	0	0	0	0	0
21	3	1	1	2	0	22	306	302	0	0	0	0	0	0	0
22	3	3	3	4	0	13	312	302	0	0	0	0	0	0	1
23	3	5	5	6	0	22	312	307	0	0	0	0	0	0	1
28	302	625	3585	1321	0	0	0	0	0	0	0	0	0	0	0
29	302	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	306	492	3689	1044	0	706	1044	55	0	0	0	0	0	0	0
29	306	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	307	2247	3312	373	0	0	0	0	0	0	0	0	0	0	0
29	307	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	312	2247	1482	341	0	0	0	0	0	0	0	0	0	0	0
29	312	2	5	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & SB ON Ramp

INTERSECTION 7

11	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

-- 31 --- NOTE - NODE NO. 7 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	7	0	0	0	0	0	702	706	710	0	0	0	0	0	0
28	702	492	7170	1694	0	307	373	55	302	1321	55	0	0	0	0
29	702	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	706	361	3689	1044	0	1906	1044	55	0	0	0	0	0	0	0
29	706	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	710	361	1568	803	0	1906	803	55	0	0	0	0	0	0	0
29	710	2	3	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & NB ON Ramp

Title: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 10

13	10	0	1	0	6	0	6	0	6	0	0	0	0	0	0
21	10	1	1	2	0	13	1005	1011	0	0	0	0	0	0	1
22	10	3	3	4	0	22	1010	1002	1006-1005	0	0	0	0	0	0
23	10	5	5	6	0	13	1011	1003	0	0	0	0	0	0	1
28	1003	1902	3312	754	0	0	0	0	0	0	0	0	0	0	0
29	1003	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1011	1902	2963	975	0	0	0	0	0	0	0	0	0	0	0
29	1011	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1002	381	3585	557	0	1902	557	55	0	0	0	0	0	0	0
29	1002	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1005	381	1703	426	0	1902	426	55	0	0	0	0	0	0	0
29	1005	2	5	0	15	0	0	0	1006	100	0	0	0	0	0
28	1006	700	3689	1099	0	0	0	0	0	0	0	0	0	0	0
29	1006	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	1010	700	1568	520	0	0	0	0	0	0	0	0	0	0	0
29	1010	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 19

11	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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--- 31 --- NOTE - NODE NO. 19 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	19	0	0	0	0	0	1902	1909	1906	0	0	0	0	0	0
28	1902	361	3585	983	0	702	983	55	0	0	0	0	0	0	0
29	1902	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1909	361	1524	711	0	702	711	55	0	0	0	0	0	0	0
29	1909	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	1906	381	3689	1847	0	1003	752	55	1006	1095	55	0	0	0	0
29	1906	2	3	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
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95	32	10.36	31	144.7	67.7	0	67.6777
----	----	-------	----	-------	------	---	---------

-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

100	33	10.60	31	143.9	66.8	0	66.8440
-----	----	-------	----	-------	------	---	---------

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

105	35	12.73	32	153.7	76.6	2	76.6048
-----	----	-------	----	-------	------	---	---------

110	37	11.26	31	146.1	69.0	0	69.0488
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115	38	11.65	30	145.8	68.8	0	68.7663
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120	40	12.17	30	147.7	70.7	0	70.6668
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125	42	12.58	30	149.0	71.9	0	71.9029
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130	43	13.16	31	152.3	75.2	0	75.2037
-----	----	-------	----	-------	------	---	---------

 BEST CYCLE LENGTH = 100 SEC. CYCLE SENSITIVITY = 5.0 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)	
SB LEFT : 66		158.76	9.50	91.7	4.18	40.3	332.(89)	9	180	11.43
RGHT : 70		145.14	7.93	83.7	3.06	32.3	280.(82)	8	90	9.77
EB THRU : 49		156.78	7.05	19.2	1.79	4.9	451.(34)	14	50	10.25
WB THRU : 46		97.31	3.93	13.5	2.17	7.5	509.(49)	15	39	14.40
NODE 3: 70		557.99	28.40		11.20	13.1	1572.(51)			45.85
EB THRU : 24		157.89	2.86	6.1	.00	.0	0.(0)	0	79	5.28
WB THRU : 28		71.36	1.29	4.4	.00	.0	0.(0)	0	29	2.39
RGHT : 51		54.89	1.07	4.8	.07	.3	2.(0)	4	14	1.93
NODE 7: 51		284.13	5.21		.07	.1	2.(0)	SPECIAL: N		9.61

Title: Lp228pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 91		271.74	20.17	96.3	11.06	52.8	705.(93)	20	152	23.17
RGHT : 78		351.39	19.27	71.2	7.49	27.7	791.(81)	23	152	24.32
EB THRU : 30		40.15	2.72	17.6	2.00	12.9	257.(46)	8	30	7.63
LEFT : 94		30.71	7.33	61.9	6.77	57.3	406.(95)	12	15	13.61
WB THRU : 57		145.45	9.85	32.3	4.97	16.3	693.(63)	21	56	13.43
RGHT : 64		68.82	4.96	34.3	2.65	18.3	346.(66)	10	28	6.67
NODE 10:	94	908.26	64.30		34.94	29.0	3197.(74)			88.82
EB THRU : 27		67.19	1.21	4.4	.00	.0	0.(0)	0	29	2.25
RGHT : 47		48.60	.88	4.4	.00	.0	0.(0)	0	14	1.63
WB THRU : 50		133.13	2.41	4.7	.00	.0	0.(0)	0	30	4.46
NODE 19:	50	248.92	4.50		.00	.0	0.(0)	SPECIAL: N		8.33

All MOEs are in units per hour.

File: Lp228pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1999
Total Travel Time	veh-hr/hr	102
Total Uniform Delay	veh-hr/hr	36
Total Random Delay	veh-hr/hr	10
Total Delay	veh-hr/hr	46
Average Delay	sec/veh	11.5
Passenger Delay	pax-hr/hr	55
Stops: Total	veh/hr	4771
Percentage	%	33
System Speed	mph	19.5
Fuel Consumption	gal/hr	153
Operating Cost	\$/hr	994
Performance Index	DI	75.5

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 73, Links = 761 Elapsed Time = 1.0 sec.

File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 100 Seconds, 60 Steps

TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 100 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

When 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 3 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 58 6 8M 6 16M 6

Intvl Length (%): 58 6 8 6 16 6

Pin Settings (%): 100/0 58 64 72 78 94

Phase Start (No.): 1 NAP 2 ACT 3 ACT

Interval Type : V Y V Y V Y

splits	(sec):	64	14	22
splits	(%):	64	14	22

LINKS MOVING :	306	312	312
	302	302	307

Yield Point = 95 sec 95 %.

File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 100 Seconds, 60 Steps

INTERSECTION 7 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 10 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number :	1	2	3	4	5	6
Intvl Length(sec):	9M	6	49	6	24	6
Intvl Length (%) :	9	6	49	6	24	6
Min Settings (%) :	100/0	9	15	64	70	94
Phase Start (No.):	1 ACT	2 NAP	3 ACT			

Interval Type :	V	Y	V	Y	V	Y
Splits (sec):	15		55		30	
Splits (%) :	15		55		30	

LINKS MOVING :	1005	1010	1011
	1011	1002	1003
		1006	
		-1005	

Yield Point = 53 sec 53 %.

Title: Lp228pm.sy5, Date: Nov 13, 1999, Analyst:
CYCLE: 100 Seconds, 60 Steps

INTERSECTION 19 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

File: Lp228pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 100 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0

--- 92 --- NOTE - END OF JOB!

APPENDIX Qb
HCS Freeway Analyses

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=====
 File Name I75N52A.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2040	2440
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	748	895
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	10.69	12.79
Density (veh/mi/ln)	10.23	12.24
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75N52P.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2440	2040
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	895	748
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.79	10.69
Density (veh/mi/ln)	12.24	10.23
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75S52A.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2640	3160
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	968	1159
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	13.83	16.56
Density (veh/mi/ln)	13.23	15.84
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75S52P.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3160	2640
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1159	968
Level of Service (LOS)	C	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	16.56	13.83
Density (veh/mi/ln)	15.84	13.23
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75ABA.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	2580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	946
Level of Service (LOS)	A	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	13.51
Density (veh/mi/ln)	7.97	12.93
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75ABP.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	2290
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	840
Level of Service (LOS)	A	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	12.00
Density (veh/mi/ln)	9.53	11.48
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CEA.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	697
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	9.96
Density (veh/mi/ln)	7.97	9.53
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name I75CEP.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	1590
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	583
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	8.33
Density (veh/mi/ln)	9.53	7.97
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75EDA.HC3
 Location..... I-75
 From/To..... RAMP E TO RAMP D
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	2580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	946
Level of Service (LOS)	A	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	13.51
Density (veh/mi/ln)	7.97	12.93
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75EDP.HC3
 Location..... I-75
 From/To..... RAMP E TO RAMP D
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	2290
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	840
Level of Service (LOS)	A	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	12.00
Density (veh/mi/ln)	9.53	11.48
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75S52A.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3902	4580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1431	1679
Level of Service (LOS)	C	D
Projected Speed at Flow Rate (mph)	69.5	68.2
Density (pc/mi/ln)	20.58	24.62
Density (veh/mi/ln)	19.69	23.56
Speed of prevailing traffic (mph)	69.5	68.2

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=====
 File Name I75S52P.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	4580	3902
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1679	1431
Level of Service (LOS)	D	C
Projected Speed at Flow Rate (mph)	68.2	69.5
Density (pc/mi/ln)	24.62	20.58
Density (veh/mi/ln)	23.56	19.69
Speed of prevailing traffic (mph)	68.2	69.5

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=====
 File Name I75N52A.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3140	3837
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1151	1407
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	70.0	69.6
Density (pc/mi/ln)	16.44	20.21
Density (veh/mi/ln)	15.73	19.34
Speed of prevailing traffic (mph)	70.0	69.6

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=====
 File Name I75N52P.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3837	3140
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1407	1151
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.6	70.0
Density (pc/mi/ln)	20.21	16.44
Density (veh/mi/ln)	19.34	15.73
Speed of prevailing traffic (mph)	69.6	70.0

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File Name I75ABA.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	3864
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1417
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	69.6
Density (pc/mi/ln)	12.90	20.36
Density (veh/mi/ln)	12.34	19.48
Speed of prevailing traffic (mph)	70.0	69.6

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=====
 File Name I75ABP.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	3227
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	1183
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	16.90
Density (veh/mi/ln)	14.72	16.17
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name I75CEA.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F	
	T	R	HV	W	P	
Dir 1 LEVEL	1.50		0.957	1.00	1.00	
Dir 2	1.50		0.957	1.00	1.00	

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1077
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.90	15.39
Density (veh/mi/ln)	12.34	14.72
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CEP.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP E
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	903
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	12.90
Density (veh/mi/ln)	14.72	12.34
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75EDA.HC3
 Location..... I-75
 From/To..... RAMP E TO RAMP D
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	3864
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1417
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	69.6
Density (pc/mi/ln)	12.90	20.36
Density (veh/mi/ln)	12.34	19.48
Speed of prevailing traffic (mph)	70.0	69.6

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 File Name I75EDP.HC3
 Location..... I-75
 From/To..... RAMP E TO RAMP D
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 2
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	3227
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	1183
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	16.90
Density (veh/mi/ln)	14.72	16.17
Speed of prevailing traffic (mph)	70.0	70.0

APPENDIX Qc
HCS Ramp Analyses

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 File Name INBOFFA.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2640	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.

=====
 File Name INBOFFA.HC5

B. Adjustment Factors

	Terrain Type	E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2640	70	3	12.0	1.00	0.959	1.00	2897
Ramp	1050	50	1	12.0	1.00	0.959	1.00	1152

Estimation of V12:

 PFD = 0.635 Using Equation: 7 V12 = 2259

Capacity Checks:

 VFO+VR = 2897 V12 = 2259

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 19
 Computed Speed (mph) 61

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=====
 File Name INBOFFP.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3160	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.

=====
 File Name INBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	3160	70	3	12.0	1.00	0.959	1.00	3468
Ramp	OFF 1260	50	1	12.0	1.00	0.959	1.00	1383

Estimation of V12:

 PFD = 0.610 Using Equation: 7 V12 = 2654

Capacity Checks:

 VFO+VR = 3468 V12 = 2654

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 23
 Computed Speed (mph) 60

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 File Name INBONA.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1590	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

=====
 File Name INBONA.HC5

B. Adjustment Factors

	Terrain Type	E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1590	70	3	12.0	1.00	0.957	1.00	1749
Ramp	450	50	1	12.0	1.00	0.985	1.00	481

Estimation of V12:

PFM = 0.617 Using Equation: 2 V12 = 1079

Capacity Checks:

VFO = 2230 VR12 = 1560

LOS, Speed, and Density:

Level of Service (LOS) A
 Computed Density (pc/mi/ln) 9
 Computed Speed (mph) 64

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File Name INBONP.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

File Name INBONP.HC5

B. Adjustment Factors

	Terrain Type	E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1900	70	3	12.0	1.00	0.957	1.00	2090
Ramp	ON 540	50	1	12.0	1.00	0.985	1.00	577

Estimation of V12:

PFM = 0.617 Using Equation: 2 V12 = 1290

Capacity Checks:

VFO = 2667 VR12 = 1867

LOS, Speed, and Density:

Level of Service (LOS) B
 Computed Density (pc/mi/ln) 11
 Computed Speed (mph) 64

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File Name ISBONOFFA.HC5
 Location..... I-75 SB OFF DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	2440	540	680
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	3.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.
 Distance to downstream ramp is 820 ft.

=====

File Name ISBONOFFA.HC5

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Freeway	LEVEL	1.50	0.957	1.00	1.00
Ramp		1.50	0.957	1.00	1.00
Dnstrm		1.50	0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2440	70 3	12.0	1.00	0.957	1.00	2684
Ramp	OFF 540	50 1	12.0	1.00	0.957	1.00	594
Downstream	ON 680		12.0	1.00	0.985	1.00	727

Estimation of V12:

PFD = 0.666 Using Equation: 7 V12 = 1985

Capacity Checks:

VFO+VR = 2684 V12 = 1985

LOS, Speed, and Density:

Level of Service (LOS)	B
Computed Density (pc/mi/ln)	18
Computed Speed (mph)	62

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File Name ISBOFFDSA.HC5
 Location..... I-75 SB OFF DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	2040	450	700
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	3.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.
 Distance to downstream ramp is 820 ft.

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File Name IEBONA.HC5
 Location..... I-75 SB WB ON UP & DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Ramp
Traffic Volume	1900	680	
Peak-Hour Factor	0.95	0.95	
Percentage HV's	9.0	3.0	
Percentage RV's	0.0	0.0	
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	
Free-flow Speed (mph)	70	50	
Obstructions	0	0	
Distance from Edge (ft)			
Type of Ramp		ON	

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1530 ft.

=====
 File Name IEBONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1900	70 3	12.0	1.00	0.957	1.00	2090
Ramp	680	50 1	12.0	1.00	0.985	1.00	727

Estimation of V12:

 PFM = 0.620 Using Equation: 2 V12 = 1297

Capacity Checks:

 VFO = 2817 VR12 = 2024

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 11
 Computed Speed (mph) 64

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 File Name IEBONP.HC5
 Location..... I-75 SB WB ON UP & DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2008 P
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Ramp
Traffic Volume	1590	700	
Peak-Hour Factor	0.95	0.95	
Percentage HV's	9.0	3.0	
Percentage RV's	0.0	0.0	
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	
Free-flow Speed (mph)	70	50	
Obstructions	0	0	
Distance from Edge (ft)			
Type of Ramp		ON	

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1530 ft.

=====
 File Name IEBONP.HC5

B. Adjustment Factors

	Terrain Type	E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1590	70	3	12.0	1.00	0.957	1.00	1749
Ramp	700	50	1	12.0	1.00	0.985	1.00	748

Estimation of V12:

 PFM = 0.620 Using Equation: 2 V12 = 1085

Capacity Checks:

 VFO = 2497 VR12 = 1833

LOS, Speed, and Density:

 Level of Service (LOS) A
 Computed Density (pc/mi/ln) 10
 Computed Speed (mph) 65

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File Name ..... IWONA.HC5
Location..... I-75 SB EB ON UP & DOWNSTREAM
Analyst..... AJK
Time of Analysis..... 2008 AM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2580	580
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 607 ft.

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 File Name IWBONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2580	70	3	12.0	1.00	0.957	1.00	2838
Ramp	580	50	1	12.0	1.00	0.971	1.00	629

Estimation of V12:

 PFM = 0.594 Using Equation: 2 V12 = 1687

Capacity Checks:

 VFO = 3467 VR12 = 2316

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 19
 Computed Speed (mph) 62

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File Name ..... IWBONP.HC5
Location..... I-75 SB EB ON UP & DOWNSTREAM
Analyst..... AJK
Time of Analysis..... 2008 PM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2290	350
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 607 ft.

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 File Name INBOFFA.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3902	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.

=====
 File Name INBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3902	70	3	12.0	1.00	0.959	1.00	4282
Ramp	OFF 1440	50	1	12.0	1.00	0.959	1.00	1580

Estimation of V12:

 PFD = 0.580 Using Equation: 7 V12 = 3148

Capacity Checks:

 VFO+VR = 4282 V12 = 3148

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 27
 Computed Speed (mph) 59

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 File Name INBOFFP.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	4580	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.

=====
 File Name INBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	4580	70	3	12.0	1.00	0.959	1.00	5026
Ramp	1642	50	1	12.0	1.00	0.959	1.00	1802

Estimation of V12:

 PFD = 0.551 Using Equation: 7 V12 = 3580

Capacity Checks:

 VFO+VR = 5026 V12 = 3580

LOS, Speed, and Density:

Level of Service (LOS)	D
Computed Density (pc/mi/ln)	31
Computed Speed (mph)	59

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 File Name INBONA.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

=====
 File Name INBONA.HC5

B. Adjustment Factors

	Terrain Type	E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2462	70	3	12.0	1.00	0.957	1.00	2708
Ramp	678	50	1	12.0	1.00	0.985	1.00	724

Estimation of V12:

PFM = 0.617 Using Equation: 2 V12 = 1671

Capacity Checks:

VFO = 3432 VR12 = 2395

LOS, Speed, and Density:

Level of Service (LOS) B
 Computed Density (pc/mi/ln) 15
 Computed Speed (mph) 64

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=====
 File Name INBONP.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

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File Name ISBOFDSA.HC5
 Location..... I-75 SB OFF DOWNSTREAM
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	3837	899	926
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	3.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.
 Distance to downstream ramp is 820 ft.

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File Name ISBOFFDS.HC5
 Location..... I-75 SB OFF DOWNSTREAM
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Downstream Ramp
Traffic Volume	3140	678	765
Peak-Hour Factor	0.95	0.95	0.95
Percentage HV's	9.0	9.0	3.0
Percentage RV's	0.0	0.0	0.0
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	12.0
Free-flow Speed (mph)	70	50	
Obstructions	0	0	0
Distance from Edge (ft)			
Type of Ramp		OFF	ON

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.
 Distance to downstream ramp is 820 ft.

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 File Name IEBONA.HC5
 Location..... I-75 SB WB ON UP & DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Ramp
Traffic Volume	2938	926	
Peak-Hour Factor	0.95	0.95	
Percentage HV's	9.0	3.0	
Percentage RV's	0.0	0.0	
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	
Free-flow Speed (mph)	70	50	
Obstructions	0	0	
Distance from Edge (ft)			
Type of Ramp		ON	

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1530 ft.

=====
 File Name IEBONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2938	70 3	12.0	1.00	0.957	1.00	3232
Ramp	ON 926	50 1	12.0	1.00	0.985	1.00	989

Estimation of V12:

 PFM = 0.620 Using Equation: 2 V12 = 2005

Capacity Checks:

 VFO = 4221 VR12 = 2994

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 19
 Computed Speed (mph) 63

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 File Name IEBONP.HC5
 Location..... I-75 SB WB ON UP & DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp	Ramp
Traffic Volume	2462	765	
Peak-Hour Factor	0.95	0.95	
Percentage HV's	9.0	3.0	
Percentage RV's	0.0	0.0	
Number of Lanes	3	1	
Lane Width (ft)	12.0	12.0	
Free-flow Speed (mph)	70	50	
Obstructions	0	0	
Distance from Edge (ft)			
Type of Ramp		ON	

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1530 ft.

=====
 File Name IEBONP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2462	70	3	12.0	1.00	0.957	1.00	2708
Ramp	765	50	1	12.0	1.00	0.985	1.00	817

Estimation of V12:

 PFM = 0.620 Using Equation: 2 V12 = 1680

Capacity Checks:

 VFO = 3525 VR12 = 2497

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 15
 Computed Speed (mph) 64

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 File Name IWBONA.HC5
 Location..... I-75 SB EB ON UP & DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3864	716
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 607 ft.

=====
 File Name IWONA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.971	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3864	70	3	12.0	1.00	0.957	1.00	4250
Ramp	716	50	1	12.0	1.00	0.971	1.00	776

Estimation of V12:

 PFM = 0.594 Using Equation: 2 V12 = 2527

Capacity Checks:

 VFO = 5026 VR12 = 3303

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 27
 Computed Speed (mph) 60

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 File Name IWBONP.HC5
 Location..... I-75 SB EB ON UP & DOWNSTREAM
 Analyst..... AJK
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 2
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3227	675
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 607 ft.

APPENDIX R

Loop 3 Alternative Design Traffic Analyses

APPENDIX Ra – Transyt-7F Analyses with HCS Signalized

APPENDIX Rb – HCS Freeway Analyses

APPENDIX Rc – HCS Ramp Analyses

APPENDIX Ra
Transyt-7F Analyses with HCS Signalized

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP308NBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 3 2008 AM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	210	440		800	240		350		700			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			0			0			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		7.0A	44.0P		Green	26.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Approach:				
		Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB	L	284	1703	0.778	0.632	11.9	B	9.4	B
	T	1774	3585	0.274	0.495	8.3	B		
WB	T	1825	3689	0.484	0.495	9.5	B	9.9	B
	R	783	1583	0.323	0.495	11.1	B		
NB	L	1080	3539	0.351	0.305	19.6	C	17.0	C
	R	1400	3167	0.595	0.442	15.8	C		

Intersection Delay = 12.6 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.537

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Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP308NBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 3 2008 PM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	240	360		840	300		580		680			
Lane W (ft)	12.0	12.0		12.0	12.0		12.0		12.0			
RTOR Vols			0			0			0			
Lost Time	3.00	3.00		3.00	3.00		3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*	*		NB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		7.0A	45.0P		Green	25.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane Group:	Adj Sat	v/c	g/C	Approach:				
		Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB	L	279	1703	0.907	0.642	24.5	C	14.2	B
	T	1811	3585	0.220	0.505	7.5	B		
WB	T	1864	3689	0.498	0.505	9.1	B	9.6	B
	R	800	1583	0.395	0.505	11.2	B		
NB	L	1043	3539	0.603	0.295	22.6	C	19.0	C
	R	1367	3167	0.592	0.432	16.2	C		

Intersection Delay = 14.5 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.729

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP328NBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 3 2028 AM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	324	770			1101	354	675		765			
Lane W (ft)	12.0	12.0			12.0	12.0	12.0		12.0			
RTOR Vols			0			72			266			
Lost Time	3.00	3.00			3.00	3.00	3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*	*			NB Left	*		
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru			*		Thru			
Right			*		Right			
Peds					Peds			
NB Right	*				EB Right			
SB Right					WB Right			
Green	15.0A	37.0P			Green	25.0A		
Yellow/AR	6.0	6.0			Yellow/AR	6.0		
Cycle Length:	95 secs Phase combination order: #1 #2 #5							

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	L	399	1703	0.855	0.642	18.1	C	15.2	C
	T	1509	3585	0.564	0.421	14.1	B		
WB	T	1553	3689	0.783	0.421	17.2	C	16.8	C
	R	667	1583	0.445	0.421	15.2	C		
NB	L	1043	3539	0.702	0.295	24.1	C	18.0	C
	R	1633	3167	0.363	0.516	10.5	B		

Intersection Delay = 16.7 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.802

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP328NBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 3 2028 PM NB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	0	2	1	2	0	2	0	0	0
Volumes	405	529			1041	494	716		926			
Lane W (ft)	12.0	12.0			12.0	12.0	12.0		12.0			
RTOR Vols			0			72			250			
Lost Time	3.00	3.00			3.00	3.00	3.00		3.00			

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left		*			NB Left	*		
Thru					Thru			
Right					Right	*		
Peds					Peds			
WB Left					SB Left			
Thru					Thru			
Right			*		Right			
Peds			*		Peds			
NB Right		*			EB Right			
SB Right					WB Right			
Green		20.0A	34.0P		Green	28.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 100 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

	Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:		
								Mvmts	Cap	Flow
EB	L		464	1703	0.918	0.630	24.3	C	19.9	C
	T		1326	3585	0.441	0.370	16.8	C		
WB	T		1365	3689	0.843	0.370	23.0	C	23.5	C
	R		586	1583	0.758	0.370	24.9	C		
NB	L		1097	3539	0.708	0.310	24.7	C	17.0	C
	R		1805	3167	0.446	0.570	9.5	B		
Intersection Delay = 20.2 sec/veh Intersection LOS = C										
Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.837										

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP308SBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 3 2008 AM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes	930			470						300		240
Lane W (ft)	12.0			12.0						12.0		12.0
RTOR Vols	0			0								72
Lost Time	3.00			3.00						3.00		3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right		*			WB Right			
Green		7.0A	50.0P		Green	20.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane Group:	Adj Sat	v/c	g/C	Approach:				
Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay	LOS
EB T	2491	3585	0.413	0.695	1.4	A	1.4	A
WB T	2058	3689	0.253	0.558	5.5	B	5.5	B
SB L	802	3312	0.405	0.242	23.2	C	20.6	C
R	561	1482	0.315	0.379	15.9	C		

Intersection Delay = 7.1 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.411

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP308SBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 3 2008 PM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes	710			720						240	210	
Lane W (ft)	12.0			12.0						12.0	12.0	
RTOR Vols	0			0						72		
Lost Time	3.00			3.00						3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru			*		Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right		*			WB Right			
Green		7.0A	58.0P		Green	27.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		

Cycle Length: 110 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Delay	LOS	Approach:	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	2412	3585	0.325	0.673	2.1	A	2.1	A
WB	T	2046	3689	0.389	0.555	7.2	B	7.2	B
SB	L	903	3312	0.289	0.273	24.1	C	21.6	C
	R	579	1482	0.250	0.391	17.2	C		

Intersection Delay = 8.1 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.332

Post, Buckley, Schuh & Jernigan, Inc.

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP328SBA.HC9
 Area Type: Other 10-27-99 AM
 Comment: LOOP 3 2028 AM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes	1316			850						494	405	
Lane W (ft)	12.0			12.0						12.0	12.0	
RTOR Vols	0			0						72		
Lost Time	3.00			3.00						3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right			*		WB Right			
Green		45.0P	10.0A		Green	22.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		
Cycle Length: 95 secs Phase combination order: #1 #2 #5								

Intersection Performance Summary

Lane	Group:	Adj Sat	v/c	g/C	Approach:	Delay	LOS	Delay	LOS
Mvmts	Cap	Flow	Ratio	Ratio					
EB	T	2415	3585	0.602	0.674	2.6	A	2.6	A
WB	T	1864	3689	0.504	0.505	9.1	B	9.1	B
SB	L	872	3312	0.615	0.263	24.3	C	21.1	C
	R	639	1482	0.547	0.432	16.0	C		

Intersection Delay = 9.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.606

Streets: (E-W) SR 52 (N-S) I-75
 Analyst: AJK File Name: LP328SBP.HC9
 Area Type: Other 10-27-99 PM
 Comment: LOOP 3 2028 PM SB OFF RAMP

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	2	0	1
Volumes	1255			992						354	324	
Lane W (ft)	12.0			12.0						12.0	12.0	
RTOR Vols	0			0						72		
Lost Time	3.00			3.00						3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left			
Thru		*	*		Thru			
Right					Right			
Peds					Peds			
WB Left					SB Left	*		
Thru		*			Thru			
Right					Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right			*		WB Right			
Green		58.0P	7.0A		Green	32.0A		
Yellow/AR		6.0	6.0		Yellow/AR	6.0		

Cycle Length: 115 secs Phase combination order: #1 #2 #5

Intersection Performance Summary

Lane	Group:	Adj Sat		v/c		g/C		Approach:	
		Mvmts	Cap	Flow	Ratio	Ratio	Delay	LOS	Delay
EB	T	2307	3585	0.601	0.643	4.4	A	4.4	A
WB	T	1957	3689	0.560	0.530	10.0	B	10.0	B
SB	L	1008	3312	0.381	0.304	24.0	C	21.7	C
	R	618	1482	0.429	0.417	18.4	C		

Intersection Delay = 10.0 sec/veh Intersection LOS = B
 Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.531

```

*****
*
* Release 7.10 (TRANSYT-7F) 15 March 1993 *
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
*
* Sponsored by: Developed by: *
*
* U.S. Department of Transportation University of Florida *
* Federal Highway Administration Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
* 512 Weil Hall, Gainesville, FL 32611-2083 USA *
* (904) 392-0378 *
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*****

```

Date of Run: 11/13/99 Start Time of Run: 23:26:18 Data File: LP308AM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp308am.sy5, Date: Nov 13, 1999, Analyst:
1 95 130 10 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 103 +++ WARNING + THE CYCLE INCREMENT, 10, IS NOT EVENLY DIVISIBLE
INTO THE CYCLE RANGE. THE MAXIMUM CYCLE LENGTH
WILL NOT BE EVALUATED.

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

File: Lp308am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

2 1 5 0 0 0 0 0 0 0 0 0 0 0 0 0
10 0 4 0 1700 30 35 100 25 13 85 25 40 0 125 120
SR 52 & SB OFF Ramp

INTERSECTION 1

13 1 27 1 0 6 0 6 0 6 0 0 0 0 0 0
21 1 1 1 2 0 13 112 102 0 0 0 0 0 0 1
22 1 3 3 4 0 22 106 102 0 0 0 0 0 0 0
23 1 5 5 6 0 22 112 107 0 0 0 0 0 0 1
28 102 500 3585 979 0 0 0 0 0 0 0 0 0 0 0
29 102 2 5 0 15 0 0 0 0 0 0 0 0 0 0 0
28 106 459 3689 495 0 206 495 55 0 0 0 0 0 0 0
29 106 2 5 0 15 0 0 0 0 0 0 0 0 0 0 0
28 107 2280 3312 316 0 0 0 0 0 0 0 0 0 0 0
29 107 2 3 0 15 0 0 0 0 0 0 0 0 0 0 0
28 112 2280 1482 253 0 0 0 0 0 0 0 0 0 0 0
29 112 2 5 0 15 0 0 0 0 0 0 0 0 0 0 0
SR 52 & SB ON Ramp

INTERSECTION 2

11 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0
-- 31 --- NOTE - NODE NO. 2 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.
21 2 0 0 0 0 0 202 206 210 0 0 0 0 0 0
28 202 459 7170 1295 0 107 316 55 102 979 55 0 0 0 0
29 202 2 3 0 15 0 0 0 0 0 0 0 0 0 0 0
28 206 308 3689 495 0 606 495 55 0 0 0 0 0 0 0
29 206 2 3 0 15 0 0 0 0 0 0 0 0 0 0 0
28 210 308 1568 716 0 606 716 55 0 0 0 0 0 0 0

File: Lp308am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE
DEFAULT NORMAL OPTIMIZATION STEP SIZES.
IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE
LENGTH HAS BEEN SELECTED.

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 2 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp308am.sy5, Date:Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	7.97	28	87.9	37.3	0	37.3336
-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
105	35	8.91	28	89.3	38.8	0	38.7997
115	38	9.01	27	89.0	38.4	0	38.4215
125	42	9.86	27	91.0	40.5	0	40.4994

 BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 3.4 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
 CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
 INDICATED BY CARD TYPE 52.

File: Lp308am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

>PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)	
SB LEFT : 53		136.47	7.75	88.3	3.17	36.2	276.(87)	8	182	9.47
RGHT : 51		109.26	5.44	77.4	1.78	25.3	189.(75)	5	91	6.85
EB THRU : 36		92.47	4.12	15.1	1.02	3.7	279.(29)	9	40	6.09
WB THRU : 22		43.06	1.22	8.9	.44	3.2	70.(14)	2	37	3.08
NODE 1: 53		381.25	18.53		6.41	11.3	815.(40)			25.48
EB THRU : 18		112.65	2.04	5.7	.00	.0	0.(0)	0	73	3.77
WB THRU : 13		28.91	.52	3.8	.00	.0	0.(0)	0	25	.97
RGHT : 46		41.82	.94	4.7	.18	.9	113.(16)	8	12	3.66
NODE 2: 46		183.39	3.50		.18	.3	113.(5)	SPECIAL: N		8.40

File: Lp308am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 39		132.63	7.16	70.0	2.71	26.5	279.(76)	8	152	8.98
RGHT : 81		265.61	16.13	78.8	7.22	35.3	642.(87)	18	152	19.76
EB THRU : 20		42.00	1.40	10.9	.64	5.0	126.(27)	4	38	4.24
LEFT : 45		20.05	.84	13.6	.47	7.7	121.(55)	2	19	3.29
WB THRU : 46		79.53	6.25	26.7	3.59	15.3	509.(60)	14	40	8.69
RGHT : 33		23.90	1.77	25.2	.97	13.8	139.(55)	4	20	2.46
NODE 5:	81	563.71	33.55		15.61	19.5	1816.(63)			47.43
EB THRU : 13		39.95	.72	3.8	.00	.0	0.(0)	0	37	1.34
RGHT : 40		35.69	.67	3.9	.02	.1	0.(0)	1	12	1.21
WB THRU : 33		109.86	1.99	5.9	.00	.0	0.(0)	0	38	3.68
NODE 6:	40	185.50	3.38		.02	.0	0.(0)			SPECIAL: N 6.23

All MOEs are in units per hour.

File: Lp308am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1314
Total Travel Time	veh-hr/hr	59
Total Uniform Delay	veh-hr/hr	21
Total Random Delay	veh-hr/hr	1
Total Delay	veh-hr/hr	22
Average Delay	sec/veh	8.0
Passenger Delay	pax-hr/hr	27
Stops: Total	veh/hr	2744
Percentage	%	28
System Speed	mph	22.3
Fuel Consumption	gal/hr	88
Operating Cost	\$/hr	571
Performance Index	DI	37.0

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 78, Links = 797 Elapsed Time = .5 sec.

File: Lp308am.sy5, Date:Nov 13, 1999, Analyst:
 CYCLE: 95 Seconds, 60 Steps

 TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

 NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

- F : Fixed green.
- V : Variable green.
- Y : Yellow.
- R : All-red.

When 'M' by an interval length means this is the minimum time available.

 INTERSECTION CONTROLLER SETTINGS

 INTERSECTION 1 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
 PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
 SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
 TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number :	1	2	3	4	5	6
Intvl Length(sec):	7M	6	54	6	16M	6
Intvl Length (%) :	7	6	58	6	17	6
Pin Settings (%) :	100/0	7	13	71	77	94
Phase Start (No.):	1 ACT	2 NAP	3 ACT			
Interval Type :	V	Y	V	Y	V	Y

Splits	(sec):	13	60	22
Splits	(%):	13	64	23

LINKS MOVING :	112	106	112
	102	102	107

Yield Point = 17 sec 18 %.

File: Lp308am.sy5, Date: Nov 13, 1999, Analyst:
CYCLE: 95 Seconds, 60 Steps

INTERSECTION 2 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 7M 6 44 6 26 6

Intvl Length (%): 7 6 48 6 27 6

Green Settings (%): 100/0 7 13 61 67 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 50 32

Splits (%): 13 54 33

LINKS MOVING : 505 506 511
502 510 503
502
-505

Yield Point = 0 sec 0 %.

Title: Lp308am.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 95 Seconds, 60 Steps

INTERSECTION 6 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

File: Lp308am.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10                (TRANSYT-7F)                15 March 1993
*
*          TRAFFIC SIGNAL SYSTEM OPTIMIZATION
*
*                   PROGRAM
*
* Sponsored by:                Developed by:
*
* U.S. Department of Transportation                University of Florida
* Federal Highway Administration                Transportation Research Center
*
* Software Maintenance and User Support Furnished by:
* Center for Microcomputers in Transportation (McTrans)
* Transportation Research Center, University of Florida
* 512 Weil Hall, Gainesville, FL 32611-2083 USA
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*
*****

```

Date of Run: 11/13/99 Start Time of Run: 23:26: 0 Data File: LP308PM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

-- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

2 1 5 0 0 0 0 0 0 0 0 0 0 0 0 0
10 0 4 0 1900 30 35 100 25 13 85 25 40 0 125 120

SR 52 & SB OFF Ramp

INTERSECTION 1

13 1 89 1 0 6 0 6 0 6 0 0 0 0 0 0
21 1 1 1 2 0 13 112 102 0 0 0 0 0 0 1
22 1 3 3 4 0 22 106 102 0 0 0 0 0 0 0
23 1 5 5 6 0 22 112 107 0 0 0 0 0 0 1
28 102 500 3585 747 0 0 0 0 0 0 0 0 0 0 0
29 102 2 5 0 15 0 0 0 0 0 0 0 0 0 0
28 106 459 3689 758 0 206 758 55 0 0 0 0 0 0 0
29 106 2 5 0 15 0 0 0 0 0 0 0 0 0 0
28 107 2280 3312 253 0 0 0 0 0 0 0 0 0 0 0
29 107 2 3 0 15 0 0 0 0 0 0 0 0 0 0 0
28 112 2280 1482 221 0 0 0 0 0 0 0 0 0 0 0
29 112 2 5 0 15 0 0 0 0 0 0 0 0 0 0 0

SR 52 & SB ON Ramp

INTERSECTION 2

11 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 31 --- NOTE - NODE NO. 2 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21 2 0 0 0 0 0 202 206 210 0 0 0 0 0 0
28 202 459 7170 1000 0 107 253 55 102 747 55 0 0 0 0
29 202 2 3 0 15 0 0 0 0 0 0 0 0 0 0 0
28 206 308 3689 758 0 606 758 55 0 0 0 0 0 0 0
29 206 2 3 0 15 0 0 0 0 0 0 0 0 0 0 0
28 210 308 1568 737 0 606 737 55 0 0 0 0 0 0 0
29 210 2 3 0 15 0 0 0 0 0 0 0 0 0 0 0

SR 52 & NB ON Ramp

File: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 5

13	5	68	1	0	6	0	6	0	6	0	0	0	0	0	0
21	5	1	1	2	0	13	505	511	0	0	0	0	0	0	1
22	5	3	3	4	0	22	506	510	502	-505	0	0	0	0	0
23	5	5	5	6	0	13	511	503	0	0	0	0	0	0	1
28	503	1902	3312	611	0	0	0	0	0	0	0	0	0	0	0
29	503	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	511	1902	2963	716	0	0	0	0	0	0	0	0	0	0	0
29	511	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	502	479	3585	379	0	602	379	55	0	0	0	0	0	0	0
29	502	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	505	479	1703	253	0	602	253	55	0	0	0	0	0	0	0
29	505	2	5	0	15	0	0	0	506	100	0	0	0	0	0
28	506	500	3689	884	0	0	0	0	0	0	0	0	0	0	0
29	506	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	510	500	1568	316	0	0	0	0	0	0	0	0	0	0	0
29	510	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 6

11	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 6 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	6	0	0	0	0	0	602	609	606	0	0	0	0	0	0
28	602	308	5377	632	0	202	632	55	0	0	0	0	0	0	0
29	602	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	609	308	1524	368	0	202	368	55	0	0	0	0	0	0	0
29	609	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	606	479	3689	1495	0	503	611	55	506	884	55	0	0	0	0
29	606	2	3	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

File: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	8.45	28	92.3	40.0	0	40.0151
-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
100	33	8.65	27	92.0	39.7	0	39.7332
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
105	35	9.04	28	93.1	40.9	0	40.8630
110	37	9.21	27	92.0	39.7	0	39.7101
-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
115	38	9.38	27	92.8	40.5	0	40.5351
120	40	10.02	27	94.2	41.9	0	41.9215
125	42	10.08	26	93.3	41.1	0	41.0770
130	43	11.00	27	95.0	42.8	0	42.7552

BEST CYCLE LENGTH = 110 SEC. CYCLE SENSITIVITY = 2.6 %

-- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
INDICATED BY CARD TYPE 52.

File: Lp308pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 110 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)
SB LEFT : 49	109.26	6.64	94.5	2.98	42.4	223.(88)	7 182	7.91	
RGHT : 50	95.44	5.16	84.0	1.96	31.9	173.(78)	6 91	6.32	
EB THRU : 27	70.55	3.06	14.7	.69	3.3	183.(24)	6 40	4.42	
WB THRU : 32	65.94	2.27	10.8	1.08	5.1	177.(23)	6 37	6.32	
NODE 1: 50	341.19	17.13		6.71	12.2	755.(38)		24.97	
EB THRU : 14	86.99	1.57	5.7	.00	.0	0.(0)	0 73	2.91	
WB THRU : 21	44.27	.80	3.8	.00	.0	0.(0)	0 25	1.48	
RGHT : 47	43.05	.85	4.2	.07	.3	23.(3)	5 12	1.92	
NODE 2: 47	174.31	3.22		.07	.1	23.(1)	SPECIAL: N	6.31	

File: Lp308pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 110 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 78		220.20	14.77	87.0	7.39	43.5	548.(90)	17	152	17.49
RGHT : 65		258.04	14.36	72.2	5.71	28.7	557.(78)	18	152	17.88
EB THRU : 18		34.38	1.85	17.6	1.23	11.7	170.(45)	5	38	5.24
LEFT : 50		22.95	.96	13.6	.54	7.7	118.(46)	3	19	3.37
WB THRU : 42		83.49	5.89	24.0	3.09	12.6	452.(51)	14	40	8.18
RGHT : 35		29.85	2.05	23.4	1.05	12.0	154.(49)	5	20	2.85
NODE 5:	78	648.92	39.88		19.01	21.7	1998.(63)			55.01
EB THRU : 12		36.91	.67	3.8	.00	.0	0.(0)	0	37	1.24
RGHT : 24		21.49	.39	3.8	.00	.0	0.(0)	0	12	.72
WB THRU : 41		135.63	2.45	5.9	.00	.0	0.(0)	0	38	4.54
NODE 6:	41	194.04	3.51		.00	.0	0.(0)	SPECIAL: N		6.49

All MOEs are in units per hour.

File: Lp308pm.sy5, Date: Nov 13, 1999, Analyst:
 CYCLE: 110 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1358
Total Travel Time	veh-hr/hr	64
Total Uniform Delay	veh-hr/hr	24
Total Random Delay	veh-hr/hr	1
Total Delay	veh-hr/hr	26
Average Delay	sec/veh	9.2
Passenger Delay	pax-hr/hr	31
Stops: Total	veh/hr	2776
Percentage	%	27
System Speed	mph	21.3
Fuel Consumption	gal/hr	93
Operating Cost	\$/hr	599
Performance Index	DI	40.5

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 79, Links = 800 Elapsed Time = .9 sec.

Title: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 110 Seconds, 60 Steps

TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 110 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

F : Fixed green.

V : Variable green.

Y : Yellow.

R : All-red.

When 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 8M 6 68 6 16M 6

Intvl Length (%): 7 5 63 5 15 5

Pin Settings (%): 100/0 7 12 75 80 95

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

splits	(sec):	14	74	22
Splits	(%):	12	68	20

LINKS MOVING :	112	106	112
	102	102	107

Yield Point = 88 sec 80 %.

File: Lp308pm.sy5, Date: Nov 13, 1999, Analyst:
CYCLE: 110 Seconds, 60 Steps

INTERSECTION 2 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 7M 6 60 6 25 6

Intvl Length (%): 6 5 56 5 23 5

Min Settings (%): 100/0 6 11 67 72 95

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 66 31

Splits (%): 11 61 28

LINKS MOVING : 505 506 511
511 510 503
502
-505

Yield Point = 16 sec 15 %.

File: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 110 Seconds, 60 Steps

INTERSECTION 6 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

File: Lp308pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 110 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10 (TRANSYT-7F) 15 March 1993 *
*
* TRAFFIC SIGNAL SYSTEM OPTIMIZATION *
*
* PROGRAM *
*
* Sponsored by: Developed by: *
*
* U.S. Department of Transportation University of Florida *
* Federal Highway Administration Transportation Research Center *
*
* Software Maintenance and User Support Furnished by: *
* Center for Microcomputers in Transportation (McTrans) *
* Transportation Research Center, University of Florida *
* 512 Weil Hall, Gainesville, FL 32611-2083 USA *
* (904) 392-0378 *
*
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*****

```

Date of Run: 11/13/99 Start Time of Run: 23:26:56 Data File: LP328AM.TIN

INPUT DATA REPORT FOR RUN 1

FIELDS:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

File: Lp328am.sy5, Date:Nov 13, 1999, Analyst:
1 95 130 5 3 1 0 0 -1 1 1 60 0 0 0 1

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE
LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO
ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC
CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION.
LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD
TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH
THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp328am.sy5, Date: Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & SB OFF Ramp

INTERSECTION 1

13	1	37	1	0	6	0	6	0	6	0	0	0	0	0	0
21	1	1	1	2	0	22	106	102	0	0	0	0	0	0	0
22	1	3	3	4	0	13	112	102	0	0	0	0	0	0	1
23	1	5	5	6	0	22	112	107	0	0	0	0	0	0	1
28	102	500	3585	1385	0	0	0	0	0	0	0	0	0	0	0
29	102	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	106	459	3689	895	0	206	895	55	0	0	0	0	0	0	0
29	106	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	107	2280	3312	520	0	0	0	0	0	0	0	0	0	0	0
29	107	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	112	2280	1482	426	0	0	0	0	0	0	0	0	0	0	0
29	112	2	5	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & SB ON Ramp

INTERSECTION 2

11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

-- 31 --- NOTE - NODE NO. 2 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	2	0	0	0	0	0	202	206	210	0	0	0	0	0	0
28	202	459	7170	1905	0	107	520	55	102	1385	55	0	0	0	0
29	202	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	206	308	3689	895	0	606	895	55	0	0	0	0	0	0	0
29	206	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	210	308	1568	975	0	606	975	55	0	0	0	0	0	0	0
29	210	2	3	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & NB ON Ramp

File: Lp328am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 5

13	5	73	1	0	6	0	6	0	6	0	0	0	0	0	0
21	5	1	1	2	0	13	505	511	0	0	0	0	0	0	1
22	5	3	3	4	0	22	506	510	502	-505	0	0	0	0	0
23	5	5	5	6	0	13	511	503	0	0	0	0	0	0	1
28	503	1902	3312	711	0	0	0	0	0	0	0	0	0	0	0
29	503	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	511	1902	2963	805	0	0	0	0	0	0	0	0	0	0	0
29	511	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	502	479	3585	811	0	602	811	55	0	0	0	0	0	0	0
29	502	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	505	479	1703	341	0	602	341	55	0	0	0	0	0	0	0
29	505	2	5	0	15	0	0	0	506	100	0	0	0	0	0
28	506	500	3689	1159	0	0	0	0	0	0	0	0	0	0	0
29	506	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	510	500	1568	373	0	0	0	0	0	0	0	0	0	0	0
29	510	2	5	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & SB ON Ramp

INTERSECTION 6

11	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 6 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	6	0	0	0	0	0	602	609	606	0	0	0	0	0	0
28	602	308	5377	1152	0	202	1152	55	0	0	0	0	0	0	0
29	602	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	609	308	1524	754	0	202	754	55	0	0	0	0	0	0	0
29	609	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	606	479	3689	1869	0	503	711	55	506	1158	55	0	0	0	0
29	606	2	3	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

Title: Lp328am.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp328am.sy5, Date: Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX
95	32	9.73	31	145.8	70.3	0	70.3138
-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.							
100	33	10.19	31	147.0	71.5	0	71.5051
105	35	10.64	31	149.2	73.7	0	73.7099
110	37	10.91	31	149.9	74.4	0	74.4430
115	38	11.61	31	152.6	77.1	0	77.0829
120	40	11.89	32	153.8	78.3	0	78.2641
125	42	12.71	32	156.7	81.2	0	81.1701
130	43	12.85	32	157.6	82.2	0	82.1733

BEST CYCLE LENGTH = 95 SEC. CYCLE SENSITIVITY = 5.7 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS INDICATED BY CARD TYPE 52.

File: Lp328am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL AVG. (v-hr)(sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
SB LEFT : 79	224.56	13.48	93.3	5.95	41.2	468.(90)	13	182	16.18
RGHT : 74	183.97	9.57	80.8	3.40	28.7	341.(80)	9	91	11.95
EB THRU : 54	130.81	6.79	17.6	2.40	6.2	560.(40)	16	40	10.22
WB THRU : 44	77.86	4.61	18.5	3.20	12.9	410.(46)	12	37	12.64
NODE 1: 79	617.20	34.44		14.95	16.7	1778.(55)			50.99
EB THRU : 27	165.72	3.00	5.7	.00	.0	0.(0)	0	73	5.55
WB THRU : 24	52.28	.95	3.8	.00	.0	0.(0)	0	25	1.75
RGHT : 62	56.95	1.42	5.2	.39	1.4	158.(16)	10	12	5.17
NODE 2: 62	274.94	5.36		.39	.4	158.(4)	SPECIAL: N		12.46

File: Lp328am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 85		256.24	16.80	85.1	8.21	41.6	644.(91)	18	152	20.11
RGHT : 66		290.12	15.04	67.2	5.31	23.7	616.(77)	17	152	19.23
EB THRU : 43		73.57	3.43	15.2	2.10	9.3	334.(41)	10	38	10.28
LEFT : 82		30.94	3.59	37.9	3.03	32.0	320.(94)	9	19	9.26
WB THRU : 60		109.47	8.67	26.9	5.00	15.5	736.(64)	20	40	12.20
RGHT : 45		35.23	2.62	25.3	1.44	13.9	213.(57)	6	20	3.67
NODE 5:	85	795.56	50.15		25.09	21.5	2863.(68)			74.76
EB THRU : 21		67.29	1.22	3.8	.00	.0	0.(0)	0	37	2.25
RGHT : 49		44.04	.80	3.8	.00	.0	0.(0)	0	12	1.47
WB THRU : 51		169.56	3.07	5.9	.00	.0	0.(0)	0	38	5.68
NODE 6:	51	280.88	5.08		.00	.0	0.(0)	SPECIAL: N		9.40

All MOEs are in units per hour.

File: Lp328am.sy5, Date: Nov 13, 1999, Analyst:
 CYCLE: 95 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1969
Total Travel Time	veh-hr/hr	95
Total Uniform Delay	veh-hr/hr	35
Total Random Delay	veh-hr/hr	5
Total Delay	veh-hr/hr	40
Average Delay	sec/veh	9.7
Passenger Delay	pax-hr/hr	49
Stops: Total	veh/hr	4800
Percentage	%	32
System Speed	mph	20.7
Fuel Consumption	gal/hr	148
Operating Cost	\$/hr	980
Performance Index	DI	72.1

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 86, Links = 873 Elapsed Time = 1.0 sec.

File: Lp328am.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 95 Seconds, 60 Steps

RANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 95 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

- F : Fixed green.
- V : Variable green.
- Y : Yellow.
- R : All-red.

An 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 49 6 10M 6 18M 6

Intvl Length (%): 52 6 11 6 19 6

Pin Settings (%): 100/0 52 58 69 75 94

Phase Start (No.): 1 NAP 2 ACT 3 ACT

Interval Type : V Y V Y V Y

splits	(sec):	55	16	24
Splits	(%):	58	17	25

LINKS MOVING :	106	112	112
	102	102	107

Yield Point = 38 sec 40 %.

File: Lp328am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

```

-----
INTERSECTION      2  PRETIMED - SPLITS ARE FIXED
-----

```

This node has only one phase, no signal timing.

```

-----
INTERSECTION      5  ACTUATED - SPLITS OPTIMIZED
-----

```

```

-- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

```

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 7M 6 47 6 23 6

Intvl Length (%): 7 6 51 6 24 6

Green Settings (%): 100/0 7 13 64 70 94

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 13 53 29

Splits (%): 13 57 30

```

LINKS MOVING : 505 506 511
                511 510 503
                502
                -505

```

Yield Point = 15 sec 16 %.

File: Lp328am.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

INTERSECTION 6 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

File: Lp328am.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 95 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

```

*****
*
* Release 7.10                (TRANSYT-7F)                15 March 1993 *
*
*          TRAFFIC SIGNAL SYSTEM OPTIMIZATION              *
*
*          PROGRAM                                          *
*
* Sponsored by:                Developed by:              *
*
* U.S. Department of Transportation                University of Florida *
* Federal Highway Administration                Transportation Research Center *
*
*          Software Maintenance and User Support Furnished by: *
*          Center for Microcomputers in Transportation (McTrans) *
*          Transportation Research Center, University of Florida *
*          512 Weil Hall, Gainesville, FL 32611-2083 USA *
*          (904) 392-0378 *
*
*          TRANSYT/7 (C) British Crown Copyright. *
*          TRANSYT-7F Copyright 1980-1993, University of Florida. *
*          All Rights Reserved. *
*
*****

```

Date of Run: 11/13/99 Start Time of Run: 23:27: 2 Data File: LP328PM.TIN

```

-----
INPUT DATA REPORT FOR RUN 1
-----

```

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

File: Lp328pm.sy5, Date: Nov 13, 1999, Analyst:

1	95	130	5	3	1	0	0	-1	1	1	60	0	0	0	1
---	----	-----	---	---	---	---	---	----	---	---	----	---	---	---	---

>>> 106 +++ WARNING + THE SEC/STEPS FACTOR IN FIELD 6 IS TOO SMALL FOR CYCLE LENGTHS ABOVE 60 SECONDS. IT WILL BE INCREASED TO ALLOW A MAXIMUM OF 60 STEPS/CYCLE.

-- 7 --- NOTE - A STOP PENALTY OF '-1' WILL RESULT IN AUTOMATIC CALCULATION OF THE PI TO MINIMIZE FUEL CONSUMPTION. LINK SPECIFIC DELAY OR STOP WEIGHTS ON CARD TYPE 37 & 38 WILL STILL BE APPLIED, HOWEVER.

--- 12 --- NOTE - A VALUE OF '1' IN FIELD 16 CAUSES A DATA FILE WITH THE OPTIMIZED TIMING PLAN TO BE WRITTEN.

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	4	0	1900	30	35	100	25	13	85	25	40	0	125	120

SR 52 & NB OFF Ramp

INTERSECTION 1

13	1	108	1	0	6	0	6	0	6	0	0	0	0	0	0
21	1	1	1	2	0	22	106	102	0	0	0	0	0	0	0
22	1	3	3	4	0	13	112	102	0	0	0	0	0	0	1
23	1	5	5	6	0	22	112	107	0	0	0	0	0	0	1
28	102	500	3585	1321	0	0	0	0	0	0	0	0	0	0	0
29	102	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	106	459	3689	1044	0	206	1044	55	0	0	0	0	0	0	0
29	106	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	107	2280	3312	373	0	0	0	0	0	0	0	0	0	0	0
29	107	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	112	2280	1482	341	0	0	0	0	0	0	0	0	0	0	0
29	112	2	5	0	15	0	0	0	0	0	0	0	0	0	0

SR 52 & SB ON Ramp

INTERSECTION 2

11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

-- 31 --- NOTE - NODE NO. 2 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	2	0	0	0	0	0	202	206	210	0	0	0	0	0	0
28	202	459	7170	1694	0	107	373	55	102	1321	55	0	0	0	0
29	202	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	206	308	3689	1044	0	606	1044	55	0	0	0	0	0	0	0
29	206	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	210	308	1568	806	0	606	806	55	0	0	0	0	0	0	0
29	210	2	3	0	15	0	0	0	0	0	0	0	0	0	0

+ SR 52 & NB ON Ramp

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

INTERSECTION 5

13	5	0	1	0	6	0	6	0	6	0	0	0	0	0	0
21	5	1	1	2	0	13	505	511	0	0	0	0	0	0	1
22	5	3	3	4	0	22	510	502	506	-505	0	0	0	0	0
23	5	5	5	6	0	13	511	503	0	0	0	0	0	0	1
28	503	1902	3312	754	0	0	0	0	0	0	0	0	0	0	0
29	503	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	511	1902	2963	975	0	0	0	0	0	0	0	0	0	0	0
29	511	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	502	479	3585	557	0	602	557	55	0	0	0	0	0	0	0
29	502	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	505	479	1703	426	0	602	426	55	0	0	0	0	0	0	0
29	505	2	5	0	15	0	0	0	506	100	0	0	0	0	0
28	506	500	3689	1096	0	0	0	0	0	0	0	0	0	0	0
29	506	2	5	0	15	0	0	0	0	0	0	0	0	0	0
28	510	500	1568	520	0	0	0	0	0	0	0	0	0	0	0
29	510	2	5	0	15	0	0	0	0	0	0	0	0	0	0

* SR 52 & SB ON Ramp

INTERSECTION 6

11	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

--- 31 --- NOTE - NODE NO. 6 HAS ONE PHASE SPECIFIED (I.E., NO SIGNAL, CONTROL). ALL LINKS MUST BE LISTED ON CARD TYPE 21.

21	6	0	0	0	0	0	602	609	606	0	0	0	0	0	0
28	602	308	5377	983	0	202	983	55	0	0	0	0	0	0	0
29	602	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	609	308	1524	711	0	202	711	55	0	0	0	0	0	0	0
29	609	2	3	0	15	0	0	0	0	0	0	0	0	0	0
28	606	479	3689	1849	0	503	754	55	506	1095	55	0	0	0	0
29	606	2	3	0	15	0	0	0	0	0	0	0	0	0	0

PLOT AND OPTION CARDS

52	1	0	100	0	0	0	0	0	0	0	0	0	0	0	0
----	---	---	-----	---	---	---	---	---	---	---	---	---	---	---	---

--- 72 --- NOTE - A CARD TYPE 52 CAUSES RUN TO BE OPTIMIZED USING THE DEFAULT NORMAL OPTIMIZATION STEP SIZES. IF CARD TYPE 4 WAS CODED, IT IS IGNORED.

THE ABOVE WILL BE PROCESSED AFTER THE "BEST" CYCLE LENGTH HAS BEEN SELECTED.

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:

FIELDS:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

--- 70 --- NOTE - NO ERRORS DETECTED. TRANSYT-7F PERFORMS FINAL PROCESSING.
IF ANY ERRORS ARE DETECTED, FURTHER PROCESSING IS SUSPENDED.

--- 74 --- NOTE - THERE ARE A TOTAL OF 4 NODES AND 16 LINKS,
INCLUDING BOTTLENECKS, IF ANY, IN THIS RUN.

--- 77 --- NOTE - THERE WERE A TOTAL OF 1 WARNING MESSAGES ISSUED
IN THE ABOVE REPORT.

File: Lp328pm.sy5, Date: Nov 13, 1999, Analyst:

 CYCLE EVALUATION SUMMARY PERFORMANCE

CYCLE LENGTH (sec)	STEP SIZE (steps)	AVERAGE DELAY (sec/veh)	PERCENT STOPS (%)	FUEL CONSUMPTION (gal/hr)	DISUTILITY INDEX	NUMBER SATURATED LINKS	PERFORMANCE INDEX	
95	32	10.55	34	149.3	75.9	0	75.9382	
-- 86	---	NOTE	- THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.					
---	86	---	NOTE	- THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.				
100	33	12.02	33	150.4	76.9	1	76.9408	
105	35	11.21	31	142.9	69.5	0	69.4726	
---	86	---	NOTE	- THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.				
---	86	---	NOTE	- THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.				
110	37	13.02	33	154.4	81.0	1	81.0054	
115	38	11.56	30	141.2	67.8	0	67.8144	
---	86	---	NOTE	- THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.				
---	86	---	NOTE	- THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.				
120	40	12.19	30	143.9	70.5	0	70.5237	
125	42	12.71	30	144.8	71.4	0	71.4376	
130	43	12.89	30	145.4	72.0	0	71.9675	

BEST CYCLE LENGTH = 115 SEC. CYCLE SENSITIVITY = 6.1 %

--- 80 --- NOTE - TRANSYT-7F OPTIMIZES THE SYSTEM USING THE BEST
CYCLE LENGTH AND HILL-CLIMB STEP SIZES AS
INDICATED BY CARD TYPE 52.

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 115 Seconds, 60 Steps

<PERFORMANCE WITH OPTIMAL SETTINGS>

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST.CAP.	FUEL CONS. (gal)
SB LEFT : 76	161.08	10.82	104.4	5.42	52.3	342.(92)	11	182	12.48
RGHT : 80	147.26	9.41	99.3	4.47	47.2	300.(88)	10	91	10.99
EB THRU : 47	124.77	5.76	15.7	1.57	4.3	396.(30)	14	40	8.46
WB THRU : 43	90.82	2.49	8.6	.84	2.9	96.(9)	3	37	5.46
NODE 1: 80	523.93	28.47		12.30	14.4	1133.(37)			37.40
EB THRU : 24	147.36	2.66	5.7	.00	.0	0.(0)	0	73	4.93
WB THRU : 28	60.98	1.10	3.8	.00	.0	0.(0)	0	25	2.04
RGHT : 51	47.08	.93	4.2	.08	.4	10.(1)	8	12	1.82
NODE 2: 51	255.42	4.70		.08	.1	10.(0)	SPECIAL: N		8.79

File: Lp328pm.sy5, Date: Nov 13, 1999, Analyst:

CYCLE: 115 Seconds, 60 Steps

MOVEMENT/ NODE NOS.	V/C (%)	TOTAL TRAVEL (v-mi)	TRAVEL TIME TOTAL (v-hr)	AVG. AVG. (sec/v)	TOTAL DELAY (v-hr)	AVG. DELAY (sec/v)	UNIFORM STOPS NO. (%)	MAX BACK OF QUEUE EST. CAP.	FUEL CONS. (gal)	
NB LEFT : 82		271.74	18.17	86.8	9.06	43.3	669.(89)	22	152	21.51
RGHT : 62		351.39	16.89	62.4	5.11	18.9	632.(65)	21	152	21.70
EB THRU : 36		50.53	3.67	23.7	2.76	17.8	278.(50)	9	38	8.94
LEFT : 84		38.65	5.62	47.5	4.92	41.6	397.(93)	13	19	12.36
WB THRU : 68		103.52	11.75	38.6	8.28	27.2	842.(77)	28	40	14.93
RGHT : 76		49.11	6.32	43.7	4.67	32.3	420.(81)	14	20	7.74
NODE 5:	84	864.93	62.42		34.80	28.9	3238.(75)			87.18
EB THRU : 18		57.42	1.04	3.8	.00	.0	0.(0)	0	37	1.92
RGHT : 47		41.53	.75	3.8	.00	.0	0.(0)	0	12	1.39
WB THRU : 50		167.74	3.03	5.9	.00	.0	0.(0)	0	38	5.61
NODE 6:	50	266.69	4.82		.00	.0	0.(0)			SPECIAL: N 8.93

All MOEs are in units per hour.

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:
 CYCLE: 115 Seconds, 60 Steps

SYSTEM-WIDE PERFORMANCE: ALL NODES

PERFORMANCE MEASURES	UNITS	SYSTEM TOTALS
Total Travel	veh-mi/hr	1911
Total Travel Time	veh-hr/hr	100
Total Uniform Delay	veh-hr/hr	41
Total Random Delay	veh-hr/hr	6
Total Delay	veh-hr/hr	47
Average Delay	sec/veh	11.7
Passenger Delay	pax-hr/hr	57
Stops: Total	veh/hr	4381
Percentage	%	30
System Speed	mph	19.0
Fuel Consumption	gal/hr	142
Operating Cost	\$/hr	906
Performance Index	DI	68.9

Performance Index (PI): Disutility Index (DI):
 Disutility Index Excess Fuel Consumption

No. of Simulations = 96, Links = 977 Elapsed Time = 1.0 sec.

Title: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 115 Seconds, 60 Steps

TRANSYT-7F TRAFFIC SIGNAL TIMING TABLES

NETWORK-WIDE SIGNAL TIMING PARAMETERS

SYSTEM CYCLE LENGTH = 115 SECONDS

NO MASTER OFFSET REFERENCE CONTROLLER SPECIFIED

ALL OFFSETS ARE REFERENCED TO AN ARBITRARY TIME BASE.

NETWORK INCLUDES ACTUATED SIGNAL - GREEN TIMES ARE ESTIMATED.

Key to Interval Types:

- F : Fixed green.
- V : Variable green.
- Y : Yellow.
- R : All-red.

When 'M' by an interval length means this is the minimum time available.

INTERSECTION CONTROLLER SETTINGS

INTERSECTION 1 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number :	1	2	3	4	5	6
Intvl Length(sec):	73	6	8M	6	16M	6
Intvl Length (%) :	64	5	7	5	14	5
Pin Settings (%) :	100/0	64	69	76	81	95
Phase Start (No.):	1 NAP	2 ACT	3 ACT			
Interval Type :	V	Y	V	Y	V	Y

splits	(sec):	79	14	22
Splits	(%):	69	12	19

LINKS MOVING :	106	112	112
	102	102	107

Yield Point = 13 sec 11 %.

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:

CYCLE: 115 Seconds, 60 Steps

INTERSECTION 2 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

INTERSECTION 5 ACTUATED - SPLITS OPTIMIZED

--- 86 --- NOTE - THIS ACTUATED NODE'S SPLITS WERE OPTIMIZED AS EQUIVALENT
PRETIMED. THE PUNCH DATA FILE WILL HAVE THESE TIMING
SETTINGS ON CARD TYPE 1X, BUT IN ANY SUBSEQUENT RUN, THIS
TIMING WILL BE OVERRIDDEN BY THE ACTUATED TIMING MODEL.

Interval Number : 1 2 3 4 5 6

Intvl Length(sec): 21 6 45 6 31 6

Intvl Length (%): 18 5 40 5 27 5

Green Settings (%): 100/0 18 23 63 68 95

Phase Start (No.): 1 ACT 2 NAP 3 ACT

Interval Type : V Y V Y V Y

Splits (sec): 27 51 37

Splits (%): 23 45 32

LINKS MOVING : 505 510 511
511 502 503
506
-505

Yield Point = 86 sec 75 %.

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 115 Seconds, 60 Steps

INTERSECTION 6 PRETIMED - SPLITS ARE FIXED

This node has only one phase, no signal timing.

File: Lp328pm.sy5, Date:Nov 13, 1999, Analyst:
CYCLE: 115 Seconds, 60 Steps

TERMINATION CARD

90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

-- 92 --- NOTE - END OF JOB!

APPENDIX Rb
HCS Freeway Analyses

=====
 Post, Buckley, Schuh & Jernigan, Inc.
 5300 W.Cypress Street
 Suite 300
 Tampa, FL 33607-1066
 Ph: (813) 877-7275
 =====

=====
 File Name I75N52A.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 3
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2040	2440
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	748	895
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	10.69	12.79
Density (veh/mi/ln)	10.23	12.24
Speed of prevailing traffic (mph)	70.0	70.0

=====
 Post, Buckley, Schuh & Jernigan, Inc.
 5300 W.Cypress Street
 Suite 300
 Tampa, FL 33607-1066
 Ph: (813) 877-7275
 =====

File Name I75N52P.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2440	2040
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	895	748
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.79	10.69
Density (veh/mi/ln)	12.24	10.23
Speed of prevailing traffic (mph)	70.0	70.0

=====
 Post, Buckley, Schuh & Jernigan, Inc.
 5300 W.Cypress Street
 Suite 300
 Tampa, FL 33607-1066
 Ph: (813) 877-7275
 =====

=====
 File Name I75S52A.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 3
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2640	3160
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	968	1159
Level of Service (LOS)	B	C
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	13.83	16.56
Density (veh/mi/ln)	13.23	15.84
Speed of prevailing traffic (mph)	70.0	70.0

=====
 Post, Buckley, Schuh & Jernigan, Inc.
 5300 W.Cypress Street
 Suite 300
 Tampa, FL 33607-1066
 Ph: (813) 877-7275
 =====

=====
 File Name I75S52P.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 3
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3160	2640
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1159	968
Level of Service (LOS)	C	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	16.56	13.83
Density (veh/mi/ln)	15.84	13.23
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75ABA.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... AJK
 Time of Analysis,.... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information...% BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results

	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	697
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	9.96
Density (veh/mi/ln)	7.97	9.53
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75ABP.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	1590
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	583
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	8.33
Density (veh/mi/ln)	9.53	7.97
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CDA.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP D
 Analyst..... AJK
 Time of Analysis..... 2008 AM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1590	1900
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	583	697
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	8.33	9.96
Density (veh/mi/ln)	7.97	9.53
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CDP.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP D
 Analyst..... AJK
 Time of Analysis..... 2008 PM BUILD
 Date of Analysis..... 10/19/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	1900	1590
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E		F		F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	697	583
Level of Service (LOS)	A	A
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	9.96	8.33
Density (veh/mi/ln)	9.53	7.97
Speed of prevailing traffic (mph)	70.0	70.0

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 File Name I75S52A.HC3
 Location..... I-75
 From/To..... SR 54 TO SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3902	4580
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1431	1679
Level of Service (LOS)	C	D
Projected Speed at Flow Rate (mph)	69.5	68.2
Density (pc/mi/ln)	20.58	24.62
Density (veh/mi/ln)	19.69	23.56
Speed of prevailing traffic (mph)	69.5	68.2

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 File Name I75S52P.HC3
 Location..... I-75 SOUTH
 From/To..... SR 54 TO SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3
 =====

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	4580	3902
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1679	1431
Level of Service (LOS)	D	C
Projected Speed at Flow Rate (mph)	68.2	69.5
Density (pc/mi/ln)	24.62	20.58
Density (veh/mi/ln)	23.56	19.69
Speed of prevailing traffic (mph)	68.2	69.5

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File Name I75N52A.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3140	3837
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1151	1407
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	70.0	69.6
Density (pc/mi/ln)	16.44	20.21
Density (veh/mi/ln)	15.73	19.34
Speed of prevailing traffic (mph)	70.0	69.6

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File Name I75N52P.HC3
 Location..... I-75 NORTH
 From/To..... SR 52 TO CR 41
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	3837	3140
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1407	1151
Level of Service (LOS)	C	C
Projected Speed at Flow Rate (mph)	69.6	70.0
Density (pc/mi/ln)	20.21	16.44
Density (veh/mi/ln)	19.34	15.73
Speed of prevailing traffic (mph)	69.6	70.0

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File Name I75ABA.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1077
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.90	15.39
Density (veh/mi/ln)	12.34	14.72
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75ABP.HC3
 Location..... I-75
 From/To..... RAMP A TO RAMP B
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	903
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	12.90
Density (veh/mi/ln)	14.72	12.34
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CDA.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP D
 Analyst..... WFB
 Time of Analysis..... 2028 AM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2462	2938
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	903	1077
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	12.90	15.39
Density (veh/mi/ln)	12.34	14.72
Speed of prevailing traffic (mph)	70.0	70.0

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File Name I75CDP.HC3
 Location..... I-75
 From/To..... RAMP C TO RAMP D
 Analyst..... WFB
 Time of Analysis..... 2028 PM BUILD
 Date of Analysis..... 11/11/99
 Other Information.... BUILD LOOP 3

A. Geometrics and Traffic Input Data	Dir 1	Dir 2
Traffic Volume (vph)	2938	2462
Peak-Hour Factor or Peak 15-min Volume	0.95	0.95
Percentage of Trucks	9.0	9.0
Percentage of Recreational Vehicles	0.0	0.0
Number of Lanes	3	3
Free-Flow Speed (mph)	70.0	70.0
Lane Width (ft)	12.0	12.0
Obstructions-No (0), One (1) or Both (2)	0	0
Distance from Pavement Edge (ft)		
Driver Population Factor	1.00	1.00

B. Adjustment Factors

Terrain Type	E	E	F	F	F
	T	R	HV	W	P
Dir 1 LEVEL	1.50		0.957	1.00	1.00
Dir 2	1.50		0.957	1.00	1.00

C. Level of Service Results	Dir 1	Dir 2
Maximum Service Flow (MSF) (pcphpl)	1077	903
Level of Service (LOS)	B	B
Projected Speed at Flow Rate (mph)	70.0	70.0
Density (pc/mi/ln)	15.39	12.90
Density (veh/mi/ln)	14.72	12.34
Speed of prevailing traffic (mph)	70.0	70.0

APPENDIX Rc
HCS Ramp Analyses

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 File Name INBONA.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1590	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

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 File Name INBONP.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

=====
 File Name INBONP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.985	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	1900	70	3	12.0	1.00	0.957	1.00	2090
Ramp	540	50	1	12.0	1.00	0.985	1.00	577

Estimation of V12:

 PFM = 0.617 Using Equation: 2 V12 = 1290

Capacity Checks:

 VFO = 2667 VR12 = 1867

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 11
 Computed Speed (mph) 64

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File Name ..... INBOFFA.HC5
Location..... I-75 NB OFF RAMP @ SR 52
Analyst..... AJK
Time of Analysis..... 2008 AM
Driver Population Factor..... 1.00
Date of Analysis..... 10/23/99
Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
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A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2640	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
Length of deceleration lane is 492 ft.

=====
 File Name INBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	2640	70	3	12.0	1.00	0.959	1.00	2897
Ramp	1050	50	1	12.0	1.00	0.959	1.00	1152

Estimation of V12:

 PFD = 0.635 Using Equation: 7 V12 = 2259

Capacity Checks:

 VFO+VR = 2897 V12 = 2259

LOS, Speed, and Density:

 Level of Service (LOS) B
 Computed Density (pc/mi/ln) 19
 Computed Speed (mph) 61

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File Name INBOFFP.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3160	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.

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 File Name INBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	FFS (mph)	#of Lanes	Lane Width (ft)	f W	f HV	f P	Vol (pcph)
Freeway	3160	70	3	12.0	1.00	0.959	1.00	3468
Ramp	1260	50	1	12.0	1.00	0.959	1.00	1383

Estimation of V12:

 PFD = 0.610 Using Equation: 7 V12 = 2654

Capacity Checks:

 VFO+VR = 3468 V12 = 2654

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 23
 Computed Speed (mph) 60

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File Name ISBONA.HC5
 Location..... I-75 SB ON RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1900	1260
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 623 ft.

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 File Name ISBONP.HC5
 Location..... I-75 SB ON RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	1590	1050
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 623 ft.

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 File Name ISBOFFA.HC5
 Location..... I-75 SB OFF RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2440	540
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.

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 File Name ISBOFFP.HC5
 Location..... I-75 SB OFF RAMP @ SR 52
 Analyst..... AJK
 Time of Analysis..... 2008 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 10/23/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2040	450
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.

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File Name INBOFFA.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3902	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.

File Name INBOFFA.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	3902	70	3	12.0	1.00	0.959	1.00	4282
Ramp	OFF 1440	50	1	12.0	1.00	0.959	1.00	1580

Estimation of V12:

PF_D = 0.580 Using Equation: 7 V₁₂ = 3148

Capacity Checks:

V_{F0}+V_R = 4282 V₁₂ = 3148

LOS, Speed, and Density:

Level of Service (LOS)	C
Computed Density (pc/mi/ln)	27
Computed Speed (mph)	59

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 File Name INBOFFP.HC5
 Location..... I-75 NB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	4580	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	8.5	8.5
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 492 ft.

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 File Name INBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.959	1.00	1.00
Ramp		1.50		0.959	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	4580	70	3	12.0	1.00	0.959	1.00	5026
Ramp	OFF 1642	50	1	12.0	1.00	0.959	1.00	1802

Estimation of V12:

 PFD = 0.551 Using Equation: 7 V12 = 3580

Capacity Checks:

 VFO+VR = 5026 V12 = 3580

LOS, Speed, and Density:

 Level of Service (LOS) D
 Computed Density (pc/mi/ln) 31
 Computed Speed (mph) 59

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 File Name INBONA.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

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File Name INBONP.HC5
 Location..... I-75 NB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	3.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 1411 ft.

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 File Name ISBONA.HC5
 Location..... I-75 SB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3
 =====

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2938	1642
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 623 ft.

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File Name ISBONP.HC5
 Location..... I-75 SB ON RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	2462	1440
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	6.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		ON

Analysis ramp is a right-hand ramp.
 Length of acceleration lane is 623 ft.

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File Name ISBOFFA.HC5
 Location..... I-75 SB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 AM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3837	899
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.

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File Name ISBOFFP.HC5
 Location..... I-75 SB OFF RAMP @ SR 52
 Analyst..... WFB
 Time of Analysis..... 2028 PM
 Driver Population Factor..... 1.00
 Date of Analysis..... 11/11/99
 Other Information..... BUILD LOOP RAMP ALTERNATIVE 3

A. Ramp Configuration Input Data

	Freeway	Analysis Ramp
Traffic Volume	3140	678
Peak-Hour Factor	0.95	0.95
Percentage HV's	9.0	9.0
Percentage RV's	0.0	0.0
Number of Lanes	3	1
Lane Width (ft)	12.0	12.0
Free-flow Speed (mph)	70	50
Obstructions	0	0
Distance from Edge (ft)		
Type of Ramp		OFF

Analysis ramp is a right-hand ramp.
 Length of deceleration lane is 394 ft.

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 File Name ISBOFFP.HC5

B. Adjustment Factors

Terrain Type		E T	E R	F HV	F W	F P
Freeway	LEVEL	1.50		0.957	1.00	1.00
Ramp		1.50		0.957	1.00	1.00

C. Level of Service Results

Type	Vol (vph)	#of FFS Lanes (mph)	Lane Width (ft)	f W	f HV	f P	Vol (pcph)	
Freeway	3140	70	3	12.0	1.00	0.957	1.00	3454
Ramp	678	50	1	12.0	1.00	0.957	1.00	746

Estimation of V12:

 PFD = 0.639 Using Equation: 7 V12 = 2477

Capacity Checks:

 VFO+VR = 3454 V12 = 2477

LOS, Speed, and Density:

 Level of Service (LOS) C
 Computed Density (pc/mi/ln) 22
 Computed Speed (mph) 62