

Transportation Concept Report



*California Department of Transportation
District 7
Office of Advance Planning
System Planning Unit*



November 1998

MEMORANDUM

Date: November 23, 1998

To: **RAJA M. MITWASI**
Chief, Division of Planning and Public Transportation

TONY HARRIS
District Director

From: **DEPARTMENT OF TRANSPORTATION – District 7**
System Planning Unit
Office of Advance Planning

Subject: **Approval of Interstate 5 Transportation Concept Report**

Submitted for your review and approval is the Transportation Concept Report for Interstates 5 (I-5).

This approved Transportation Concept Report will serve as the Department's basic guide to the development of this route.

Approved by:

RAJA M. MITWASI
Division of Planning and Public Transportation

TONY HARRIS
District Director

Interstate 5 Transportation Concept Report



TRANSPORTATION CONCEPT REPORT

INTERSTATE 5

Summary of Contents

I.	DOCUMENT SUMMARY.....	I-1
II.	DOCUMENT PURPOSE.....	II-1
III.	SEGMENT SUMMARIES	III-1
IV.	ROUTE DESCRIPTION.....	IV-1
V.	CONGESTION	V-1
VI.	IMPROVEMENTS	VI-1
VII.	SOCIO-ECONOMICS	VII-1
VIII.	ACCIDENT RATES AND SAFETY	VIII-1
IX.	REGIONAL POLICIES, GOALS AND STRATEGIES	IX-1
X.	POLICY CONFLICTS IN THE REGIONAL PLANNING PROCESS	X-1
XI.	TRANSPORTATION CONCEPT AND CONCLUSION	XI-1
XII.	APPENDICES.....	XII-1

TRANSPORTATION CONCEPT REPORT

INTERSTATE 5

Table of Contents

I.	DOCUMENT SUMMARY.....	I-1
II.	DOCUMENT PURPOSE	II-1
III.	SEGMENT SUMMARIES.....	III
	A. INTRODUCTION.....	III-1
	B. TCR SEGMENTATION MAP	III-2A
	C. CONCEPT SUMMARY - LEVEL OF SERVICE	III-2B
	D. CONCEPT SUMMARY - SEGMENT CONFIGURATION.....	III-2C
	E. SEGMENT SUMMARIES	III-3
IV.	ROUTE DESCRIPTION.....	IV-1
	A. PURPOSE OF ROUTE.....	IV-2
	B. FUNCTIONAL CLASSIFICATION.....	IV-3
	C. PARK AND RIDE/BICYCLE FACILITIES.....	IV-4
V.	CONGESTION.....	V
	A. CONGESTION MEASURES	V-1
	B. CONGESTION MAPS	V-2
	C. DURATION AND SPEED	V-34
	D. DEMAND/CAPACITY	V-35
	E. LEVEL OF SERVICE (LOS)	V-36
	F. HOURS OF DELAY.....	V-37
VI.	IMPROVEMENTS	VI-1
	A. SUMMARY	VI-2
	B. PROGRAMMED IMPROVEMENTS.....	VI-4

C.	PROGRAMMED PROJECTS	VI-6
D.	ILLUSTRATED IMPROVEMENT SCENARIOS	VI-7
VII.	SOCIO-ECONOMICS	VII-1
A.	SANTA CLARITA VALLEY RSA & LANCASTER RSA	VII-2
B.	BURBANK RSA & NORTHEAST SAN FERNANDO VALLEY RSA	VII-3
C.	EAST CENTRAL (LA) RSA & NORWALK-WHITTIER RSA	VII-4
D.	LOS ANGELES CBD RSA & GLENDALE RSA	VII-5
VIII.	ACCIDENT RATES AND SAFETY	VIII
A.	INTRODUCTION	VIII-1
B.	FATAL & INJURY	VIII-2
C.	TOTAL ACCIDENTS	VIII-3
D.	HIGHER THAN AVERAGE	VIII-4
IX.	REGIONAL THRESHOLD CRITERIA AND POLICIES	IX-1
X.	POLICY CONFLICTS IN THE REGIONAL PLANNING PROCESS	X-1
XI.	TRANSPORTATION CONCEPT AND CONCLUSIONS	XI-1
XII.	APPENDICES	XII
A.	BIBLIOGRAPHY	XII-1
B.	GLOSSARY	XII-4
C.	HOV MAP	XII-21
D.	LEGISLATIVE MANDATE	XII-22
E.	LEVEL OF SERVICE	XII-23
F.	SEGMENT SUMMARY INFORMATION SERVICES	XII-24
G.	APPENDIX	XII-27
H.	SYSTEM PLANNING OVERVIEW	XII-39

I. Document Summary

DOCUMENT SUMMARY

While this Transportation Concept Report is divided into twelve major sections, three of the sections – **III, VI and XI** – are the heart of the document. They include detailed Segment Summaries (Section III), lists of suggested Improvements (Section VI) and the Transportation Concept and Conclusions (Section XI). All of the other sections provide a context for analyzing the Interstate 5 (I-5) corridor and document the data resources studied.

The basic aim of this document is to suggest a configuration for I-5 that will meet projected demands within a framework of common sense and regional policy. The concept selected –Alternative #2– generally conforms to regional plans and provides substantial congestion relief over the 20-year planning period.

Alternative #2 includes the following: An additional mixed flow lane between the Orange County Line and the I-605 Freeway; Truck Lanes between the Orange County Line and Kern County Line; and 2 HOV lane between the Orange County Line and SR-126 North; and 3 HOV lanes in the four most congested segments, from I-10 to SR-2 and from I-405 to SR-14.

II. Document Purpose

DOCUMENT PURPOSE

This Transportation Concept Report (TCR)¹ is an *internal Caltrans planning tool*

intended to provide an initial look at developments within the I-5 corridor over the next twenty years. Its primary focus is on identifying "need"—defined as the difference between forecast demand and capacity. It analyzes this need in three primary ways:

1. It documents current conditions.
2. It contrasts projected future demand with planned facilities (capacity).
3. It proposes future development alternatives to address the shortfalls between demand and capacity.

As an initial step in the planning process, its observations and conclusions serve as the jumping off point for more complex and specific reports such as:

1. Feasibility Studies
2. Major Investment Studies
3. Project Studies.

In preparing this report, District 7 System Planning Staff has researched Federal, State, Regional and Departmental plans and documents. Staff has attempted to provide thorough documentation of all sources of important information and policies. This documentation is provided in footnotes and in the Appendix, Section XII.

The heart of this TCR is a series of proposed alternatives for development of I-5. The alternatives are included in the Segment Summaries, Section III. The alternatives cover a wide range: Alternative #1 is based on existing plans—primarily the SCAG RTP, the LACMTA Long Range and HOV Plans, and the Caltrans District System Management Plan.

¹ This TCR is an update of the "Route 5 Concept Report", June 20, 1991.

The Attain LOS "D" alternative is based on the number of "lane equivalents" necessary to reach LOS "D"—by definition, the lowest *adequate* level of service rating (see Appendix, XII-23)². The Ultimate Transportation Corridor (UTC) alternative is considered the maximum reasonable development of a highway facility within the corridor. The UTC is intended to identify potential right of way problems.

² **Please Note:** The Attain LOS "D" alternative is provided as a way to illustrate future congestion and capacity needs and **not as a suggestion for programming.**

III. Segment Summaries

SEGMENT SUMMARIES

This TCR analyzes I-5 conditions using the "segment" as the study unit. Segments are generally defined as "freeway interchange to freeway interchange", "county line to freeway interchange" or "freeway interchange to end of freeway". The map on the previous page illustrates these segments.

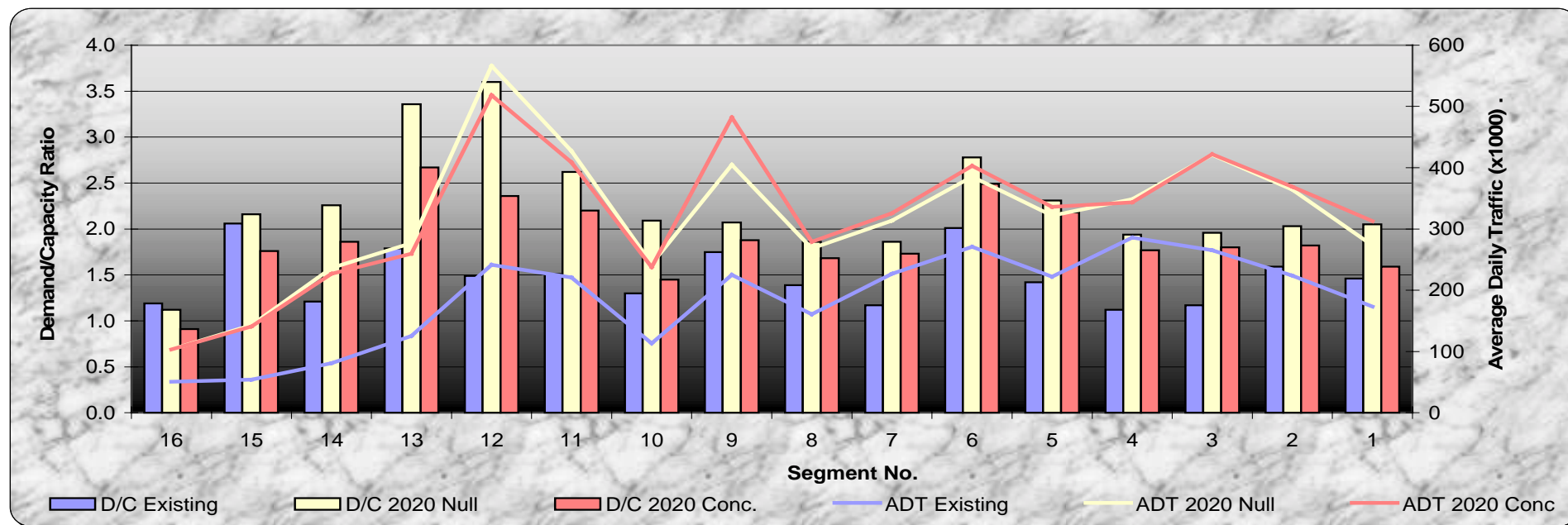
Each of the summaries that follows describes the segment's current and projected operating characteristics, existing configuration, projected traffic demand and proposed alternative improvements.

Documentation of sources for information in these summaries is in Section XII, beginning on XII-22.



Interstate 5

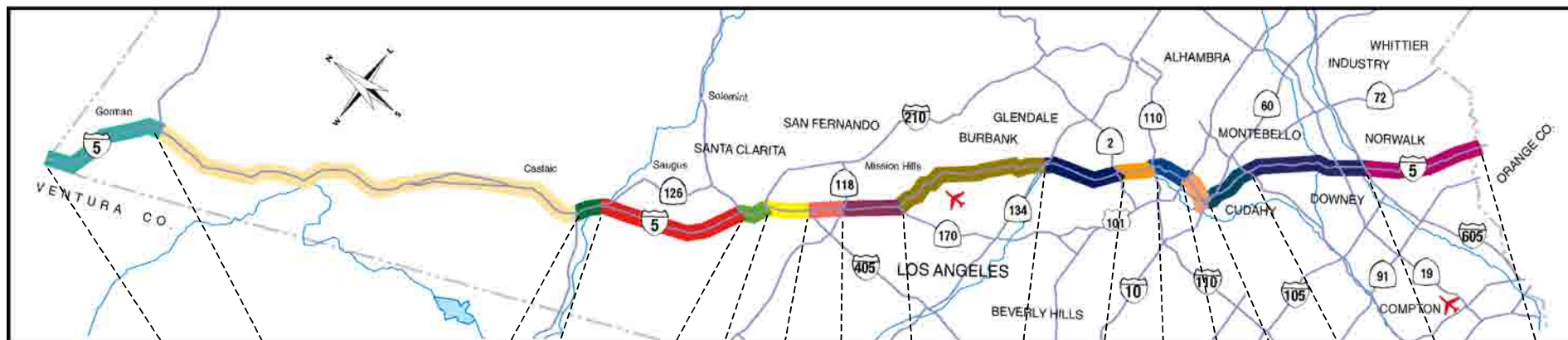
Concept Summary - Level of Service



Segment #	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Existing																
Demand / Capacity	1.19	2.06	1.21	1.79	1.49	1.51	1.30	1.75	1.39	1.17	2.01	1.42	1.12	1.17	1.59	1.46
Avg. Daily Traffic (x1,000)	50	54	81	125	242	221	113	225	161	227	271	222	286	266	224	173
Number of Lanes	4	4	4	4	6	5	3	5	4	5	4	4	5	5	4	3
Pk.hour Level Of Service	F0	F3	F0	F3	F3	F3	F1	F3	F2	F0	F3	F2	F0	F0	F3	F3
2020 Null With Route 710 (Main Line)																
Demand / Capacity	1.12	2.16	2.26	3.36	3.60	2.62	2.09	2.07	1.86	1.86	2.78	2.31	1.94	1.96	2.03	2.05
Avg. Daily Traffic (x1,000)	103	143	236	277	567	428	243	405	268	314	385	322	349	421	364	273
Number of Lanes	4	4	4	4	6	5	3	5	4	5	4	4	5	5	4	3
Pk.hour Level Of Service	F0	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3
2020 Concept (Alternate #2)																
Demand / Capacity	0.91	1.76	1.86	2.67	2.36	2.20	1.45	1.88	1.68	1.73	2.49	2.18	1.77	1.80	1.82	1.59
Avg. Daily Traffic (x1,000)	103	141	227	260	519	409	238	482	279	326	403	336	343	422	369	313
Number of Lanes	5	5	5	5	8	6	5	7	5	6	5	5	6	6	5	5
Pk.hour Level Of Service	D	F3	F3	F3	F3	F3	F2	F3	F3	F3	F0	F3	F3	F3	F3	F3

Interstate 5

Concept Summary - Segment Configuration



Segment #	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Existing																
Demand / Capacity	1.19	2.06	1.21	1.79	1.49	1.51	1.30	1.75	1.39	1.17	2.01	1.42	1.12	1.17	1.59	1.46
Avg. Daily Traffic (x1,000)	50	54	81	125	242	221	113	225	161	227	271	222	286	266	224	173
Number of Lanes	4	4	4	4	6	5	3	5	4	5	4	4	5	5	4	3
Pk.hour Level Of Service	F0	F3	F0	F3	F3	F3	F1	F3	F2	F0	F3	F2	F0	F0	F3	F3
2020 Null With Route 710 (Main Line)																
Demand / Capacity	1.12	2.16	2.26	3.36	3.60	2.62	2.09	2.07	1.86	1.86	2.78	2.31	1.94	1.96	2.03	2.05
Avg. Daily Traffic (x1,000)	103	143	236	277	567	428	243	405	268	314	385	322	349	421	364	273
Number of Lanes	4	4	4	4	6	5	3	5	4	5	4	4	5	5	4	3
Pk.hour Level Of Service	F0	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3	F3
2020 Concept (Alternate #2)																
Demand / Capacity	0.91	1.76	1.86	2.67	2.36	2.20	1.45	1.88	1.68	1.73	2.49	2.18	1.77	1.80	1.82	1.59
Avg. Daily Traffic (x1,000)	103	141	227	260	519	409	238	482	279	326	403	336	343	422	369	313
Number of Lanes	5	5	5	5	8	6	5	7	5	6	5	5	6	6	5	5
Pk.hour Level Of Service	D	F3	F3	F3	F3	F3	F2	F3	F3	F3	F0	F3	F3	F3	F3	F3

INTERSTATE 5 - SEGMENT 1 SUMMARY - P.1

DESCRIPTION	
Limits:	Orange Co. Line to I-605
Post Mile:	0.00 - 6.85

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	128' - 225'
Median / Outside Shoulder:	12' - 60' / 10'
Design Speed (MPH)	70
Bridge Structures:	22

Corridor Characteristics	
Trucks (% of ADT):	11%
Express Transit (lines):	3 (460,466,721)
Hours of Operation:	MTA 460: commute + nightowl
	MTA 466: commute
	OCTA 721: commute
Rail Service:	Metrolink, Amtrak
Park & Ride Lots (Spaces):	#L48 (100), #L123 (260)

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.31	1.46	0.47	1.38

INTERSTATE 5 - SEGMENT 1 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	173,400	0	270,400	20,100	273,000	18,200
Lanes Configuration (ea. direction)	3	0	3	1	3	1

Volume							
AM Peak Hour	N	6,250		7,950	750	7,900	750
AM Peak Hour	S	7,400		9,750	1,700	9,850	1,400
PM Peak Hour	N	6,150		10,150	1,250	10,400	1,100
PM Peak Hour	S	7,100		9,250	750	9,350	700

Speed		
AM Average	N	46
AM Average	S	33
PM Average	N	47
PM Average	S	36

27
13
11
16

27
13
10
16

Service Characteristics							
Level Of Service, AM	N	F0		F3	B	F3	B
Level Of Service, AM	S	F3		F3	E	F3	D
Level Of Service, PM	N	F0		F3	C	F3	C
Level Of Service, PM	S	F2		F3	B	F3	B
Directional Split (%) AM	N, S	.458 (N)		.449 (N)	.306 (N)	.445 (N)	.354 (N)
Directional Split (%) PM	N, S	.464 (N)		.523 (N)	.626 (N)	.527 (N)	.604 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 1 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	321,000	23,800	313,000	25,800		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	2	5 + 1 truck	2

Volume							
AM Peak Hour	N	9,450	800	8,300	750		
AM Peak Hour	S	12,750	1,850	10,850	2,150		
PM Peak Hour	N	13,900	1,640	13,450	1,800		
PM Peak Hour	S	11,750	850	11,750	850		

Speed					
AM Average	N	> 50	>50		
AM Average	S	30	43		
PM Average	N	23	26		
PM Average	S	37	37		

Service Characteristics							
Level Of Service, AM	N	F0	B	E	A		
Level Of Service, AM	S	F3	F0	F1	C		
Level Of Service, PM	N	F3	E	F3	B		
Level Of Service, PM	S	F2	B	F2	A		
Directional Split (%) AM	N, S	.425 (N)	.302 (N)	.434 (N)	.260 (N)		
Directional Split (%) PM	N, S	.542 (N)	.661 (N)	.535 (N)	.683 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 2 SUMMARY - P.1

DESCRIPTION	
Limits:	I - 605 to I -710
Post Mile:	6.85 - 13.78

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	124' - 255'
Median / Outside Shoulder:	3' - 12' / 2' - 11'
Design Speed (MPH)	70
Bridge Structures:	29

Corridor Characteristics	
Trucks (% of ADT):	9%
Express Transit (lines):	4 (460, 462, 466, 721)
Hours of Operation:	MTA 460: commute + nightowl
	MTA 462: commute + extended hours
	MTA 466: commute
	OCTA 721: commute
Rail Service:	Metrolink, Amtrak
Park & Ride Lots (Spaces):	#L16 (50), #L25 (83), #L26 (29)

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.31	1.34	0.4	1.17

INTERSTATE 5 - SEGMENT 2 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	224,000		357,200		363,900	
Lanes Configuration (ea. direction)	4	0	4	0	4	0

Volume							
AM Peak Hour	N	10,900		10,850		10,850	
AM Peak Hour	S	7,350		12,750		13,200	
PM Peak Hour	N	7,800		13,500		13,900	
PM Peak Hour	S	10,900		12,550		12,650	

Speed					
AM Average	N	26		26	26
AM Average	S	> 50		15	13
PM Average	N	50		12	11
PM Average	S	26		16	15

Service Characteristics							
Level Of Service, AM	N	F3		F3		F3	
Level Of Service, AM	S	F0		F3		F3	
Level Of Service, PM	N	F0		F3		F3	
Level Of Service, PM	S	F3		F3		F3	
Directional Split (%) AM	N, S	.597 (N)		.460 (N)		.452 (N)	
Directional Split (%) PM	N, S	.417 (N)		.519 (N)		.523 (N)	

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 2 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	375,400	27,100	368,900	31,400		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	2	5 + 1 truck	2

Volume							
AM Peak Hour	N	11,400	850	10,400	800		
AM Peak Hour	S	14,200	2,100	13,050	2,550		
PM Peak Hour	N	15,750	1,850	15,600	2,300		
PM Peak Hour	S	14,000	1,000	14,050	1,000		

Speed					
AM Average	N	40		46	
AM Average	S	22		29	
PM Average	N	16		16	
PM Average	S	24		23	

Service Characteristics							
Level Of Service, AM	N	F1	B	F0	A		
Level Of Service, AM	S	F3	F0	F3	C		
Level Of Service, PM	N	F3	F0	F3	C		
Level Of Service, PM	S	F3	C	F3	A		
Directional Split (%) AM	N, S	.445 (N)	.302 (N)	.444 (N)	.241 (N)		
Directional Split (%) PM	N, S	.529 (N)	.661 (N)	.526 (N)	.694 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 3 SUMMARY - P.1

DESCRIPTION	
Limits:	I -710 to East L. A. I/C
Post Mile:	13.78 - 16.47

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	136' - 300'
Median / Outside Shoulder:	12' - 99' (I/C split)/ 10' - 11'
Design Speed (MPH)	70
Bridge Structures:	21

Corridor Characteristics		
Trucks (% of ADT):	9%	
Express Transit (lines):	7 (460, 462, 466, 470, 471, 701, 721)	
Hours of Operation:	MTA 460: commute + nightowl	OCTA 701: commute
	MTA 462: commute + extended hours	OCTA 721: commute
	MTA 466: commute	
	MTA 470: commute + nightowl	
	MTA 471: commute + nightowl	
Rail Service:	Metrolink, Amtrak	
Park & Ride Lots (Spaces):	#L17 (50)	

Purpose	
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements	

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.43	1.96	0.53	1.52

INTERSTATE 5 - SEGMENT 3 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	265,500		438,100		421,200	
Lanes Configuration (ea. direction)	5	0	5	0	5	0

Volume							
AM Peak Hour	N	10,000		12,950		12,600	
AM Peak Hour	S	8,350		16,550		16,400	
PM Peak Hour	N	9,100		17,000		16,750	
PM Peak Hour	S	9,000		14,800		14,300	

Speed							
AM Average	N	49		30		32	
AM Average	S	> 50		13		13	
PM Average	N	> 50		12		12	
PM Average	S	> 50		20		22	

Service Characteristics							
Level Of Service, AM	N	F0		F3		F3	
Level Of Service, AM	S	E		F3		F3	
Level Of Service, PM	N	F0		F3		F3	
Level Of Service, PM	S	F0		F3		F3	
Directional Split (%) AM	N, S	.545 (N)		.438 (N)		.435 (N)	
Directional Split (%) PM	N, S	.503 (N)		.534 (N)		.539 (N)	

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 3 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	435,500	26,300	422,200	32,200		
Lanes Configuration (ea. direction)	5 + 1 truck	1	5 + 1 truck	2	6 + 1 truck	2

Volume							
AM Peak Hour	N	13,300	450	12,300	450		
AM Peak Hour	S	17,800	2,300	16,300	2,900		
PM Peak Hour	N	19,100	2,100	18,450	2,750		
PM Peak Hour	S	15,950	750	16,000	750		

Speed					
AM Average	N	42		47	
AM Average	S	19		26	
PM Average	N	15		17	
PM Average	S	28		27	

Service Characteristics							
Level Of Service, AM	N	F1	A	F0	A		
Level Of Service, AM	S	F3	F1	F3	D		
Level Of Service, PM	N	F3	F0	F3	D		
Level Of Service, PM	S	F3	B	F3	A		
Directional Split (%) AM	N, S	.428 (N)	.170 (N)	.430 (N)	.134 (N)		
Directional Split (%) PM	N, S	.545 (N)	.744 (N)	.536 (N)	.788 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 4 SUMMARY - P.1

DESCRIPTION	
Limits:	East L.A. I/C to I-10
Post Mile:	16.47 - 18.45

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	185'-300'
Median / Outside Shoulder:	6' - 99' (I/C split) / 8'-12'
Design Speed (MPH)	70
Bridge Structures:	21

Corridor Characteristics	
Trucks (% of ADT):	8%
Express Transit (lines):	5 (460, 462, 466, 701, 721)
Hours of Operation:	MTA 460: commute + nightowl
	MTA 462: commute + extended hours
	MTA 466: commute
	OCTA 701: commute
	OCTA 721: commute
Rail Service:	Metrolink, Amtrak
Park & Ride Lots (Spaces):	none

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.50	2.25	0.50	1.45

INTERSTATE 5 - SEGMENT 4 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	286,000		357,500		348,600	
Lanes Configuration (ea. direction)	5	0	5	0	5	0

Volume							
AM Peak Hour	N	7,800		10,450		10,400	
AM Peak Hour	S	9,450		15,900		16,300	
PM Peak Hour	N	9,700		16,750		16,750	
PM Peak Hour	S	8,550		13,000		13,700	

Speed		
AM Average	N	> 50
AM Average	S	> 50
PM Average	N	> 50
PM Average	S	> 50

47
16
13
30

47
14
13
26

Service Characteristics							
Level Of Service, AM	N	D		F0		F0	
Level Of Service, AM	S	F0		F3		F3	
Level Of Service, PM	N	F0		F3		F3	
Level Of Service, PM	S	E		F3		F3	
Directional Split (%) AM	N, S	.452 (N)		.397 (N)		.390 (N)	
Directional Split (%) PM	N, S	.532 (N)		.563 (N)		.550 (N)	

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210
 Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 4 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	355,900	26,000	343,400	32,800		
Lanes Configuration (ea. direction)	5 + 1 truck	1	5 + 1 truck	2	6 + 1 truck	2

Volume							
AM Peak Hour	N	10,250	300	9,050	300		
AM Peak Hour	S	17,500	2,400	16,650	3,150		
PM Peak Hour	N	18,900	2,250	18,350	2,950		
PM Peak Hour	S	15,150	600	15,200	600		

Speed					
AM Average	N	> 50	> 50		
AM Average	S	21	25		
PM Average	N	16	18		
PM Average	S	33	32		

Service Characteristics							
Level Of Service, AM	N	E	A		A		
Level Of Service, AM	S	F3	F2	F3	D		
Level Of Service, PM	N	F3	F1	F3	D		
Level Of Service, PM	S	F3	A	F3	A		
Directional Split (%) AM	N, S	.370 (N)	.118 (N)	.352 (N)	.083 (N)		
Directional Split (%) PM	N, S	.556 (N)	.788 (N)	.548 (N)	.826 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 5 SUMMARY - P.1

DESCRIPTION	
Limits:	I - 10 to I - 110
Post Mile:	18.45 - 20.44

Classification	
Functional Classification:	NHS Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	175' - 300'
Median / Outside Shoulder:	6' - 22' / 10'
Design Speed (MPH)	70
Bridge Structures:	18

Corridor Characteristics	
Trucks (% of ADT):	8%
Express Transit (lines):	2 (785, 794)
Hours of Operation:	AV 785: commute
	SC 794: commute
Rail Service:	Metrolink, Amtrak
Park & Ride Lots (Spaces):	none

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.28	1.08	0.38	1.11

INTERSTATE 5 - SEGMENT 5 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	222,000		355,100	36,500	321,900	31,100
Lanes Configuration (ea. direction)	4	0	4	1	4	1

Volume							
AM Peak Hour	N	8,000		8,850	900	7,800	700
AM Peak Hour	S	8,900		16,700	2,800	15,450	2,550
PM Peak Hour	N	9,850		17,150	3,000	16,000	2,550
PM Peak Hour	S	7,100		12,900	1,050	11,800	800

Speed		
AM Average	N	50
AM Average	S	43
PM Average	N	35
PM Average	S	> 50

43
5
4
15

> 50
7
6
21

Service Characteristics							
Level Of Service, AM	N	F0		F1	B	F0	B
Level Of Service, AM	S	F1		F3	F3	F3	F3
Level Of Service, PM	N	F2		F3	F3	F3	F3
Level Of Service, PM	S	F0		F3	C	F3	B
Directional Split (%) AM	N, S	.473 (N)		.347 (N)	.240 (N)	.336 (N)	.221 (N)
Directional Split (%) PM	N, S	.581 (N)		.571 (N)	.745 (N)	.576 (N)	.759 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 5 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	351,000	32,700	336,100	42,200		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	2 [3]	5 + 1 truck	3

Volume							
AM Peak Hour	N	8,650	400	8,500	150		
AM Peak Hour	S	17,400	3,050	15,200	3,950		
PM Peak Hour	N	19,700	2,750	18,850	3,900		
PM Peak Hour	S	13,400	800	13,450	850		

Speed					
AM Average	N	> 50		> 50	
AM Average	S	11		18	
PM Average	N	6		8	
PM Average	S	28		27	

Service Characteristics							
Level Of Service, AM	N	E	A	E	A []		
Level Of Service, AM	S	F3	F3	F3	F0 []		
Level Of Service, PM	N	F3	F3	F3	F0 []		
Level Of Service, PM	S	F3	B	F3	A []		
Directional Split (%) AM	N, S	.332 (N)	.112 (N)	.358 (N)	.040 (N)		
Directional Split (%) PM	N, S	.595 (N)	.773 (N)	.583 (N)	.823 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
 Speeds are estimated and are for comparative purposes only
 [] Concept selected

INTERSTATE 5 - SEGMENT 6 SUMMARY - P.1

DESCRIPTION	
Limits:	I - 110 to SR - 2
Post Mile:	20.44 -22.55

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	150' - 300'
Median / Outside Shoulder:	18' - 22'8' -10'
Design Speed (MPH)	70
Bridge Structures:	4

Corridor Characteristics	
Trucks (% of ADT):	12%
Express Transit (lines):	7 (410, 413, 418, 419, 785, 794, 799)
Hours of Operation:	MTA 410: commute
	SC 794: commute
	LX 413: commute
	SC 799: commute
	MTA 418: commute
	LX 419: commute
	AV 785: commute
Rail Service:	Metrolink, Amtrak
Park & Ride Lots (Spaces):	none

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.26	1.03	0.41	1.19

INTERSTATE 5 - SEGMENT 6 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	271,000		403,900	42,800	385,200	36,800
Lanes Configuration (ea. direction)	4	0	4	1	4	1

Volume							
AM Peak Hour	N	10,250		9,900	1,100	9,350	1,050
AM Peak Hour	S	13,600		18,450	3,050	17,350	2,950
PM Peak Hour	N	12,600		19,550	3,300	18,850	2,600
PM Peak Hour	S	11,450		13,650	1,500	12,950	1,250

Speed					
AM Average	N	30		32	37
AM Average	S	11		3	4
PM Average	N	15		2	2
PM Average	S	21		11	13

Service Characteristics							
Level Of Service, AM	N	F3		F3	C	F2	C
Level Of Service, AM	S	F3		F3	F3	F3	F3
Level Of Service, PM	N	F3		F3	F3	F3	F3
Level Of Service, PM	S	F3		F3	D	F3	C
Directional Split (%) AM	N, S	.430 (N)		.349 (N)	.265 (N)	.351 (N)	.263 (N)
Directional Split (%) PM	N, S	.524 (N)		.589 (N)	.685 (N)	.593 (N)	.675 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 6 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	423,200	34,000	403,200	41,800		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	2 [3]	5 + 1 truck	3

Volume							
AM Peak Hour	N	10,750	400	10,400	150		
AM Peak Hour	S	20,250	3,050	16,200	4,100		
PM Peak Hour	N	22,500	2,600	21,100	3,400		
PM Peak Hour	S	15,000	1,150	14,900	1,250		

Speed							
AM Average	N	43		46			
AM Average	S	5		13			
PM Average	N	3		4			
PM Average	S	18		18			

Service Characteristics							
Level Of Service, AM	N	F1	A	F0	A []		
Level Of Service, AM	S	F3	F3	F3	F0 []		
Level Of Service, PM	N	F3	F3	F3	E []		
Level Of Service, PM	S	F3	C	F3	B []		
Directional Split (%) AM	N, S	.346 (N)	.119 (N)	.391 (N)	.039 (N)		
Directional Split (%) PM	N, S	.600 (N)	.695 (N)	.586 (N)	.733 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

[] Concept selected

INTERSTATE 5 - SEGMENT 7 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 2 to SR - 134
Post Mile:	22.55 - 27.08

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	180' - 370'
Median / Outside Shoulder:	22' / 8' -10'
Design Speed (MPH)	70
Bridge Structures:	19

Corridor Characteristics	
Trucks (% of ADT):	12%
Express Transit (lines):	7 (410, 413, 418, 419, 785, 794, 799)
Hours of Operation:	MTA 410: commute SC 799: commute
	LX 413: commute
	MTA 418: commute
	LX 419: commute
	AV 785: commute
	SC 794: commute
Rail Service:	Metrolink, Amtrak
Park & Ride Lots (Spaces):	#L36 (313)

Purpose	
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements	

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.26	0.86	0.32	0.94

INTERSTATE 5 - SEGMENT 7 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	226,800		308,000	2,400	313,700	19,100
Lanes Configuration (ea. direction)	5	0	5	1	5	1

Volume							
AM Peak Hour	N	10,000		9,000	300	8,950	250
AM Peak Hour	S	10,000		14,450	2,150	15,050	1,650
PM Peak Hour	N	10,000		15,700	1,800	15,950	1,400
PM Peak Hour	S	9,950		12,550	850	12,550	750

Speed							
AM Average	N	49		> 50		> 50	
AM Average	S	49		21		18	
PM Average	N	49		16		15	
PM Average	S	49		32		32	

Service Characteristics							
Level Of Service, AM	N	F0		F0	A	F0	A
Level Of Service, AM	S	F0		F3	F0	F3	E
Level Of Service, PM	N	F0		F3	F0	F3	D
Level Of Service, PM	S	F0		F3	B	F3	B
Directional Split (%) AM	N, S	.500 (N)		.384 (N)	.117 (N)	.373 (N)	.124 (N)
Directional Split (%) PM	N, S	.501 (N)		.556 (N)	.675 (N)	.559 (N)	.650 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 7 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	339,200	18,300	325,600	21,600		
Lanes Configuration (ea. direction)	5 + 1 truck	1	5 + 1 truck	2	5 + 1 truck	2

Volume							
AM Peak Hour	N	9,550	0	8,850	0		
AM Peak Hour	S	16,150	1,900	13,950	2,100		
PM Peak Hour	N	18,950	1,500	17,750	1,900		
PM Peak Hour	S	14,000	500	14,000	550		

Speed					
AM Average	N	> 50	> 50		
AM Average	S	27	38		
PM Average	N	15	20		
PM Average	S	38	38		

Service Characteristics							
Level Of Service, AM	N	D	A	D	A		
Level Of Service, AM	S	F3	F0	F1	C		
Level Of Service, PM	N	F3	D	F3	C		
Level Of Service, PM	S	F2	A	F2	A		
Directional Split (%) AM	N, S	.372 (N)	.002 (N)	.388 (N)	.000 (N)		
Directional Split (%) PM	N, S	.575 (N)	.744 (N)	.559 (N)	.779 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 8 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 134 to SR - 170
Post Mile:	27.08 - 36.36

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	170' - 360'
Median / Outside Shoulder:	12' - 99' (I/C split) /10'
Design Speed (MPH)	70
Bridge Structures:	41

Corridor Characteristics	
Trucks (% of ADT):	11%
Express Transit (lines):	6 (413, 418, 419, 785, 794, 799)
Hours of Operation:	LX 413: commute
	MTA 418: commute
	LX 419: commute
	AV 785:commute
	SC 794: commute
	SC 799: commute
Rail Service:	Metrolink, Amtrak
Park & Ride Lots (Spaces):	#L7 (303)

Purpose	
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements	

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.27	0.74	0.32	0.92

INTERSTATE 5 - SEGMENT 8 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	161,000		263,900	23,500	268,400	19,000
Lanes Configuration (ea. direction)	4	0	4	1	4	1

Volume							
AM Peak Hour	N	6,400		6,650	200	6,500	200
AM Peak Hour	S	8,300		11,350	2,050	11,950	1,800
PM Peak Hour	N	9,400		12,250	2,050	12,650	1,500
PM Peak Hour	S	6,400		9,150	600	8,950	550

Speed		
AM Average	N	> 50
AM Average	S	46
PM Average	N	37
PM Average	S	> 50

> 50
22
17
39

> 50
18
15
41

Service Characteristics							
Level Of Service, AM	N	E		E	A	E	A
Level Of Service, AM	S	F0		F3	F0	F3	F0
Level Of Service, PM	N	F2		F3	F0	F3	D
Level Of Service, PM	S	E		F1	A	F1	A
Directional Split (%) AM	N, S	.435 (N)		.369 (N)	.079 (N)	.353 (N)	.091 (N)
Directional Split (%) PM	N, S	.595 (N)		.572 (N)	.770 (N)	.586 (N)	.734 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210
 Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 8 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane
Average Daily Traffic (ADT)	289,000	19,900	278,900	24,300		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	2	5 + 1 truck	2

Volume							
AM Peak Hour	N	6,950	50	7,000	50		
AM Peak Hour	S	13,350	2,000	11,600	2,600		
PM Peak Hour	N	14,900	1,750	14,250	2,050		
PM Peak Hour	S	10,350	450	10,350	500		

Speed							
AM Average	N	> 50		> 50			
AM Average	S	27		38			
PM Average	N	19		22			
PM Average	S	46		46			

Service Characteristics							
Level Of Service, AM	N	D	A	D	A		
Level Of Service, AM	S	F3	F0	F2	C		
Level Of Service, PM	N	F3	F0	F3	C		
Level Of Service, PM	S	F0	A	F0	A		
Directional Split (%) AM	N, S	.343 (N)	.025 (N)	.376 (N)	.018 (N)		
Directional Split (%) PM	N, S	.590 (N)	.796 (N)	.579 (N)	.808 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
 Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 9 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 170 to SR - 118
Post Mile:	36.36 - 39.37

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	270' - 320'
Median / Outside Shoulder:	15' - 99' (I/C split) / 9' -13'
Design Speed (MPH)	70
Bridge Structures:	21

Corridor Characteristics	
Trucks (% of ADT):	12%
Express Transit (lines):	4 (419, 785, 794, 799)
Hours of Operation:	LX 419: commute
	AV 785: commute
	SC 794: commute
	SC 799: commute
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	none

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.22	0.67	0.27	0.82

INTERSTATE 5 - SEGMENT 9 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	225,000		398,200	30,600	404,800	25,400
Lanes Configuration (ea. direction)	5	0	5	1	5	1

Volume							
AM Peak Hour	N	7,650		9,600	250	9,450	200
AM Peak Hour	S	14,850		17,150	2,400	16,850	2,200
PM Peak Hour	N	10,850		17,050	2,650	17,500	1,900
PM Peak Hour	S	9,000		13,000	1,000	12,800	1,000

Speed				
AM Average	N	> 50	> 50	> 50
AM Average	S	19	11	11
PM Average	N	43	11	10
PM Average	S	> 50	28	30

Service Characteristics							
Level Of Service, AM	N	D		F0	A	F0	A
Level Of Service, AM	S	F3		F3	F2	F3	F1
Level Of Service, PM	N	F1		F3	F3	F3	F0
Level Of Service, PM	S	F0		F3	C	F3	C
Directional Split (%) AM	N, S	.340 (N)		.359 (N)	.095 (N)	.359 (N)	.082 (N)
Directional Split (%) PM	N, S	.547 (N)		.567 (N)	.728 (N)	.578 (N)	.659 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 9 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	497,500	28,700	481,900	38,600		
Lanes Configuration (ea. direction)	6 + 1 truck	1	6 + 1 truck	2	6 + 1 truck	2

Volume							
AM Peak Hour	N	11,500	0	11,700	0		
AM Peak Hour	S	22,900	2,450	20,350	4,150		
PM Peak Hour	N	23,050	2,600	22,250	3,200		
PM Peak Hour	S	16,600	850	16,600	950		

Speed					
AM Average	N	> 50	> 50		
AM Average	S	13	20		
PM Average	N	13	14		
PM Average	S	36	36		

Service Characteristics							
Level Of Service, AM	N	E	A	E	A		
Level Of Service, AM	S	F3	F2	F3	F0		
Level Of Service, PM	N	F3	F3	F3	E		
Level Of Service, PM	S	F2	B	F2	A		
Directional Split (%) AM	N, S	.335 (N)	.000 (N)	.366 (N)	.000 (N)		
Directional Split (%) PM	N, S	.581 (N)	.751 (N)	.572 (N)	.774 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
 Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 10 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 118 to I - 405
Post Mile:	39.37 -41.60

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	225' - 360'
Median / Outside Shoulder:	22'9' - 10'
Design Speed (MPH)	70
Bridge Structures:	11

Corridor Characteristics	
Trucks (% of ADT):	13%
Express Transit (lines):	5 (573, 785, 786, 794, 799)
Hours of Operation:	LX 573: commute + extended hours
	AV 785: commute
	AV 786: commute
	SC 794: commute
	SC 799: commute
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	#L103 (400)

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.26	0.61	0.29	0.86

INTERSTATE 5 - SEGMENT 10 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	113,000		231,200	17,700	242,600	8,200
Lanes Configuration (ea. direction)	3	0	3	1	3	1

Volume							
AM Peak Hour	N	3,700		4,200	0	4,100	0
AM Peak Hour	S	6,600		10,050	2,150	10,500	1,050
PM Peak Hour	N	5,650		9,850	1,450	10,600	600
PM Peak Hour	S	3,600		6,850	300	6,500	200

Speed					
AM Average	N	> 50		> 50	> 50
AM Average	S	42		12	10
PM Average	N	> 50		13	9
PM Average	S	> 50		39	43

Service Characteristics							
Level Of Service, AM	N	C			A	D	A
Level Of Service, AM	S	F1		F3	F1	F3	C
Level Of Service, PM	N	F0		F3	D	F3	A
Level Of Service, PM	S	C		F1	A	F1	A
Directional Split (%) AM	N, S	.359 (N)		.926 (N)	.000 (N)	.281 (N)	.000 (N)
Directional Split (%) PM	N, S	.611 (N)	D	.591 (N)	.830 (N)	.619 (N)	.747 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 10 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	252,500	18,700	237,500	26,300		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	2	5 + 1 truck	2

Volume							
AM Peak Hour	N	4,300	0	4,300	0		
AM Peak Hour	S	13,200	2,050	9,750	3,350		
PM Peak Hour	N	12,950	1,600	12,250	2,100		
PM Peak Hour	S	7,500	350	7,500	400		

Speed		
AM Average	N	> 50
AM Average	S	27
PM Average	N	29
PM Average	S	> 50

Service Characteristics							
Level Of Service, AM	N	B	A	B	A		
Level Of Service, AM	S	F3	F0	F0	E		
Level Of Service, PM	N	F3	E	F2	C		
Level Of Service, PM	S	D	A	D	A		
Directional Split (%) AM	N, S	.245 (N)	.000 (N)	.306 (N)	.000 (N)		
Directional Split (%) PM	N, S	.633 (N)	.824 (N)	.620 (N)	.845 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 11 SUMMARY - P.1

DESCRIPTION	
Limits:	I - 405 to I - 210
Post Mile:	41.60 - R44.01

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	260' - 360'
Median / Outside Shoulder:	22' - 30' / 8' - 10'
Design Speed (MPH)	70
Bridge Structures:	5

Corridor Characteristics	
Trucks (% of ADT):	13%
Express Transit (lines):	9 (573, 785, 786, 787, 791, 793, 794, 798, 799)
Hours of Operation:	LX 573: commute + extended hours SC 794: commute
	AV 785: commute SC 798: commute + extended hours
	AV 786: commute SC 799: commute
	AV 787: commute
	SC 791: commute
	SC 793: commute
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	#L103 (400)

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.25	0.74	0.29	0.87

INTERSTATE 5 - SEGMENT 11 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	221,000		403,400	34,400	427,500	16,700
Lanes Configuration (ea. direction)	5	0	5	1	5	1

Volume							
AM Peak Hour	N	6,200		6,850	0	6,800	0
AM Peak Hour	S	12,350		21,150	3,800	22,200	1,900
PM Peak Hour	N	12,800		19,650	3,050	20,700	1,350
PM Peak Hour	S	7,000		11,750	550	11,550	400

Speed					
AM Average	N	> 50		> 50	> 50
AM Average	S	33		4	3
PM Average	N	30		6	5
PM Average	S	> 50		37	38

Service Characteristics							
Level Of Service, AM	N	C			A	D	A
Level Of Service, AM	S	F3		F3	F3	F3	F0
Level Of Service, PM	N	F3		F3	F3	F3	D
Level Of Service, PM	S	D		F2	A	F2	A
Directional Split (%) AM	N, S	.334 (N)	D	.244 (N)	.000 (N)	.235 (N)	.000 (N)
Directional Split (%) PM	N, S	.646 (N)		.626 (N)	.843 (N)	.642 (N)	.781 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 11 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	438,100	33,200	408,700	44,300		
Lanes Configuration (ea. direction)	5 + 1 truck	1	5 + 1 truck	2 [3]	6 + 1 truck	3

Volume							
AM Peak Hour	N	6,850	0	6,850	0		
AM Peak Hour	S	25,550	3,350	20,600	5,300		
PM Peak Hour	N	23,950	3,050	22,350	3,750		
PM Peak Hour	S	12,500	600	12,500	650		

Speed							
AM Average	N	> 50		> 50			
AM Average	S	4		11			
PM Average	N	5		7			
PM Average	S	46		46			

Service Characteristics							
Level Of Service, AM	N	C	A	C	A []		
Level Of Service, AM	S	F3	F3	F3	F3 []		
Level Of Service, PM	N	F3	F3	F3	F0 []		
Level Of Service, PM	S	F0	A	F0	A []		
Directional Split (%) AM	N, S	.212 (N)	.000 (N)	.249 (N)	.000 (N)		
Directional Split (%) PM	N, S	.657 (N)	.838 (N)	.641 (N)	.854 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

[] Concept selected

INTERSTATE 5 - SEGMENT 12 SUMMARY - P.1

DESCRIPTION	
Limits:	I - 210 to SR - 14
Post Mile:	R44.01 - R45.58

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Flat
Mainline R/W	Variable
Median / Outside Shoulder:	30' - 36' / 10'
Design Speed (MPH)	70
Bridge Structures:	7

Corridor Characteristics		
Trucks (% of ADT):	13%	
Express Transit (lines):	11 (573, 785, 786, 787, 791, 793, 794, 795, 796, 798, 799)	
Hours of Operation:	LX 573: commute + extended hours	SC 794: commute
	AV 785: commute	SC 795: commute
	AV 786: commute	SC 796: commute
	AV 787: commute	SC 798: commute + extended hours
	SC 791: commute	SC 799: commute
	SC 793: commute	
	Rail Service:	Metrolink
Park & Ride Lots (Spaces):	none	

Purpose	
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements	

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.34	1.02	0.26	0.79

INTERSTATE 5 - SEGMENT 12 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	241,500		528,700	29,800	566,600	12,900
Lanes Configuration (ea. direction)	6	0	6	1	6	1

Volume							
AM Peak Hour	N	5,500		7,950	150	7,950	150
AM Peak Hour	S	15,150		33,300	3,350	36,550	1,400
PM Peak Hour	N	13,100		31,150	2,700	34,050	1,100
PM Peak Hour	S	10,600		16,650	300	16,950	150

Speed		
AM Average	N	> 50
AM Average	S	31
PM Average	N	42
PM Average	S	> 50

> 50
1
2
23

> 50
1
1
22

Service Characteristics							
Level Of Service, AM	N	B		D	A	D	A
Level Of Service, AM	S	F3		F3	F3	F3	D
Level Of Service, PM	N	F1		F3	F3	F3	C
Level Of Service, PM	S	F0		F3	A	F3	A
Directional Split (%) AM	N, S	.266 (N)		.193 (N)	.046 (N)	.179 (N)	.085 (N)
Directional Split (%) PM	N, S	.553 (N)		.652 (N)	.904 (N)	.667 (N)	.868 (N)

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 12 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	546,400	25,700	518,600	29,200		
Lanes Configuration (ea. direction)	6 +2 truck	1	6 + 2 truck	2 [3]	6 + 2 truck	3

Volume							
AM Peak Hour	N	8,000	0	7,150	0		
AM Peak Hour	S	34,650	4,200	27,950	4,850		
PM Peak Hour	N	33,500	1,450	31,900	1,550		
PM Peak Hour	S	16,750	400	16,650	450		

Speed							
AM Average	N	> 50		> 50			
AM Average	S	4		10			
PM Average	N	4		5			
PM Average	S	45		46			

Service Characteristics							
Level Of Service, AM	N	C	A	B	A []		
Level Of Service, AM	S	F3	F3	F3	F2 []		
Level Of Service, PM	N	F3	D	F3	B []		
Level Of Service, PM	S	F0	A	F0	A []		
Directional Split (%) AM	N, S	.188 (N)	.000 (N)	.203 (N)	.000 (N)		
Directional Split (%) PM	N, S	.667 (N)	.777 (N)	.657 (N)	.779 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

[] Concept selected

INTERSTATE 5 - SEGMENT 13 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 14 to SR - 126 (S)
Post Mile:	R45.58 - R53.57

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Mountainous
Mainline R/W	Variable
Median / Outside Shoulder:	36' - 60' / 10'
Design Speed (MPH)	70
Bridge Structures:	11

Corridor Characteristics	
Trucks (% of ADT):	14%
Express Transit (lines):	4 (573, 791, 794, 796)
Hours of Operation:	LX 573: commute + extended hours
	SC 791: commute
	SC 794: commute
	SC 796: commute
Rail Service:	Metrolink
Park & Ride Lots (Spaces):	#L107 (250)

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.23	0.62	0.27	0.78

INTERSTATE 5 - SEGMENT 13 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	125,400		265,300		277,100	
Lanes Configuration (ea. direction)	4	0	4	0	4	0

Volume							
AM Peak Hour	N	6,800		4,350		4,300	
AM Peak Hour	S	5,450		16,700		18,050	
PM Peak Hour	N	9,600		15,750		17,500	
PM Peak Hour	S	3,050		8,500		8,500	

Speed							
AM Average	N	44		> 50		> 50	
AM Average	S	> 50		1		1	
PM Average	N	17		2		1	
PM Average	S	> 50		26		26	

Service Characteristics							
Level Of Service, AM	N	F1		D		D	
Level Of Service, AM	S	F0		F3		F3	
Level Of Service, PM	N	F3		F3		F3	
Level Of Service, PM	S	C		F3		F3	
Directional Split (%) AM	N, S	.555 (N)		.206 (N)		.192 (N)	
Directional Split (%) PM	N, S	.759 (N)		.650 (N)		.674 (N)	

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 13 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	266,600	15,600	259,500	8,500		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	1 [2]	5 + 1 truck	2

Volume							
AM Peak Hour	N	4,450	0	4,550	0		
AM Peak Hour	S	18,400	1,800	15,150	1,000		
PM Peak Hour	N	17,900	1,450	17,900	800		
PM Peak Hour	S	8,750	150	8,750	50		

Speed					
AM Average	N	> 50	> 50		
AM Average	S	3	7		
PM Average	N	3	3		
PM Average	S	42	42		

Service Characteristics							
Level Of Service, AM	N	C	A	C	A []		
Level Of Service, AM	S	F3	F1	F3	C []		
Level Of Service, PM	N	F3	F0	F3	C []		
Level Of Service, PM	S	F1	A	F1	A []		
Directional Split (%) AM	N, S	.195 (N)	.000 (N)	.232 (N)	.000 (N)		
Directional Split (%) PM	N, S	.672 (N)	.910 (N)	.672 (N)	.914 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

[] Concept selected

INTERSTATE 5 - SEGMENT 14 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 126 (S) to SR - 126 (N)
Post Mile:	R53.57 - R55.48

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Mountainous
Mainline R/W	Variable
Median / Outside Shoulder:	36' / 10'
Design Speed (MPH)	70
Bridge Structures:	6

Corridor Characteristics	
Trucks (% of ADT):	14%
Express Transit (lines):	none
Hours of Operation:	n/a
Rail Service:	none
Park & Ride Lots (Spaces):	none

Purpose	
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements	

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.17	0.65	0.23	0.68

INTERSTATE 5 - SEGMENT 14 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	81,000		232,500		236,200	
Lanes Configuration (ea. direction)	4	0	4	0	4	0

Volume							
AM Peak Hour	N	4,800		6,550		6,700	
AM Peak Hour	S	6,500		10,750		10,600	
PM Peak Hour	N	4,900		11,450		12,150	
PM Peak Hour	S	5,800		9,500		9,300	

Speed							
AM Average	N	> 50		46		45	
AM Average	S	47		11		12	
PM Average	N	> 50		9		7	
PM Average	S	> 50		18		19	

Service Characteristics							
Level Of Service, AM	N	D		F0		F0	
Level Of Service, AM	S	F0		F3		F3	
Level Of Service, PM	N	D		F3		F3	
Level Of Service, PM	S	F0		F3		F3	
Directional Split (%) AM	N, S	.425 (N)		.378 (N)		.388 (N)	
Directional Split (%) PM	N, S	.458 (N)		.546 (N)		.566 (N)	

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 14 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	233,400	7,800	226,700	4,200		
Lanes Configuration (ea. direction)	4 + 1 truck	1	4 + 1 truck	1 [2]	5 + 1 truck	2

Volume							
AM Peak Hour	N	6,050	0	5,900	0		
AM Peak Hour	S	12,100	850	9,600	550		
PM Peak Hour	N	12,850	750	12,450	350		
PM Peak Hour	S	9,200	50	9,000	50		

Speed							
AM Average	N	> 50		> 50			
AM Average	S	17		34			
PM Average	N	13		15			
PM Average	S	38		39			

Service Characteristics							
Level Of Service, AM	N	D	A	D	A []		
Level Of Service, AM	S	F3	C	F2	B []		
Level Of Service, PM	N	F3	C	F3	A []		
Level Of Service, PM	S	F2	A	F1	A []		
Directional Split (%) AM	N, S	.333 (N)	.000 (N)	.379 (N)	.000 (N)		
Directional Split (%) PM	N, S	.583 (N)	.925 (N)	.580 (N)	.919 (N)		

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

[] Concept selected

INTERSTATE 5 - SEGMENT 15 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 126 (N) to SR - 138 (S)
Post Mile:	R55.48 - R81.49

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Mountainous
Mainline R/W	Variable
Median / Outside Shoulder:	36' - 69' (crossover) / 8' - 10'
Design Speed (MPH)	70
Bridge Structures:	18

Corridor Characteristics	
Trucks (% of ADT):	29%
Express Transit (lines):	none
Hours of Operation:	n/a
Rail Service:	none
Park & Ride Lots (Spaces):	none

Purpose	
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements	

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.15	0.4	0.15	0.35

INTERSTATE 5 - SEGMENT 15 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	54,100		140,400		143,300	
Lanes Configuration (ea. direction)	4	0	4	0	4	0

Volume							
AM Peak Hour	N	7,100		3,850		3,850	
AM Peak Hour	S	4,200		5,700		6,400	
PM Peak Hour	N	4,800		7,050		7,450	
PM Peak Hour	S	7,000		5,150		5,150	

Speed							
AM Average	N	10		> 50		> 50	
AM Average	S	46		23		15	
PM Average	N	37		10		8	
PM Average	S	11		31		31	

Service Characteristics							
Level Of Service, AM	N	F3		F0		F0	
Level Of Service, AM	S	F0		F3		F3	
Level Of Service, PM	N	F2		F3		F3	
Level Of Service, PM	S	F3		F3		F3	
Directional Split (%) AM	N, S	.628 (N)		.404 (N)		.376 (N)	
Directional Split (%) PM	N, S	.407 (N)		.579 (N)		.592 (N)	

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 15 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	143,000		141,100			
Lanes Configuration (ea. direction)	4 + 1 truck	0	4 + 1 truck	0	5 + 1 truck	0

Volume							
AM Peak Hour	N	3,850		3,850			
AM Peak Hour	S	6,250		5,450			
PM Peak Hour	N	7,700		7,600			
PM Peak Hour	S	5,100		5,100			

Speed					
AM Average	N	> 50	> 50		
AM Average	S	33	44		
PM Average	N	18	18		
PM Average	S	48	48		

Service Characteristics							
Level Of Service, AM	N	D		D			
Level Of Service, AM	S	F2		F1			
Level Of Service, PM	N	F3		F3			
Level Of Service, PM	S	F0		F0			
Directional Split (%) AM	N, S	.381 (N)		.414 (N)			
Directional Split (%) PM	N, S	.601 (N)		.599 (N)			

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210
 Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 16 SUMMARY - P.1

DESCRIPTION	
Limits:	SR - 138 (S) to Kern Co. Line
Post Mile:	R81.49 - R88.61

Classification	
Functional Classification:	NHS, Urban Interstate
MPAH Designation:	State Freeway
Other Systems:	STAA, STRAHNET, IRRS, ICES, Lifeline

Physical Characteristics	
Terrain:	Mountainous
Mainline R/W	Variable
Median / Outside Shoulder:	22' - 69' / 10'
Design Speed (MPH)	70
Bridge Structures:	7

Corridor Characteristics	
Trucks (% of ADT):	33%
Express Transit (lines):	none
Hours of Operation:	n/a
Rail Service:	none
Park & Ride Lots (Spaces):	none

Purpose
International, Interstate, Interregional, Intraregional Travel (commute and non-commute) and Goods Movements

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
0.27	0.58	0.17	0.38

INTERSTATE 5 - SEGMENT 16 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o Route 710)		2020 NULL (with Route 710)	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	50,400		103,400		103,300	
Lanes Configuration (ea. direction)	4	0	4	0	4	0

Volume							
AM Peak Hour	N	3,200		3,150		3,150	
AM Peak Hour	S	4,400		2,900		2,900	
PM Peak Hour	N	3,600		4,150		4,150	
PM Peak Hour	S	4,400		3,850		3,850	

Speed		
AM Average	N	> 50
AM Average	S	48
PM Average	N	> 50
PM Average	S	48

> 50
> 50
> 50
> 50

> 50
> 50
> 50
> 50

Service Characteristics							
Level Of Service, AM	N	D		D		D	
Level Of Service, AM	S	F0		D		D	
Level Of Service, PM	N	E		F0		F0	
Level Of Service, PM	S	F0		F0		F0	
Directional Split (%) AM	N, S	.421 (N)		.520 (N)		.520 (N)	
Directional Split (%) PM	N, S	.450 (N)		.519 (N)		.519 (N)	

NOTES: 2020 Null Alternates are modeled, respectively, without and with I-710 gap closure built between I-10 and I-210
 Speeds are estimated and are for comparative purposes only

INTERSTATE 5 - SEGMENT 16 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Average Daily Traffic (ADT)	103,300		103,400			
Lanes Configuration (ea. direction)	4 + 1 truck	0	4 + 1 truck	0	5 + 1 truck	0

Volume							
AM Peak Hour	N	3,100		3,150			
AM Peak Hour	S	2,900		2,900			
PM Peak Hour	N	4,150		4,200			
PM Peak Hour	S	3,850		3,850			

Speed					
AM Average	N	> 50	> 50		
AM Average	S	> 50	> 50		
PM Average	N	> 50	> 50		
PM Average	S	> 50	> 50		

Service Characteristics							
Level Of Service, AM	N	C		C			
Level Of Service, AM	S	C		C			
Level Of Service, PM	N	D		D			
Level Of Service, PM	S	D		D			
Directional Split (%) AM	N, S	.518 (N)		.519 (N)			
Directional Split (%) PM	N, S	.519 (N)		.520 (N)			

NOTES: 2020 Concept Alternates 1 & 2 are both modeled with I-710 gap closure built between I-10 and I-210

Speeds are estimated and are for comparative purposes only

IV. Route Description

ROUTE DESCRIPTION

Pursuant to Statutes relating to the California Department of Transportation, Route 5 runs from the international boundary near Tijuana, Mexico to the Oregon state line via National City, San Diego, Los Angeles, the westerly side of the San Joaquin Valley, Sacramento and Yreka; also passing near Santa Ana, Glendale, Woodland, and Red Bluff.

This transportation Concept report (TCR) addresses the portion of Route 5 located in Los Angeles County. In District 7, Route 5, spans a distance of 88.6 miles from the Orange County Line in the south to the Kern County Line in the north. It is known as the Santa Ana Freeway from the Orange County Line to the downtown Los Angeles Central Business District (CBD) and the Golden State Freeway from the CBD north to the Kern County Line. For the purposes of analysis in this report, Route 5 is divided into these two freeway names.

The route traverses 10 incorporated cities in District 7: La Mirada, Santa Fe Springs, Norwalk, Downey, Commerce, Los Angeles, Burbank, Glendale, and Santa Clarita. Route 5 also traverses the communities of East Los Angeles, Castaic, and Gorman.

PURPOSE OF ROUTE

Route 5 is a major north south Interstate route that is used for international, interstate, intraregional and travel and shipping. In addition, it is used as a commuter route.

The purpose of Route 5 is shown in the following table:

Santa Ana Freeway

<u>Seg.</u>	<u>P.M.</u>	<u>Description</u>	<u>Rte. Purpose</u>	<u>Facility Type</u>
1-3	0.00-16.47	Orange Co. Line to East LA Interchange	Interstate/Interregional/ Interregional and commute travel	Freeway

Golden State Freeway

<u>Seg.</u>	<u>P.M.</u>	<u>Description</u>	<u>Rte. Purpose</u>	<u>Facility Type</u>
4-14	16.47-R55.48	East LA Interchange To Route 126	Interstate/Interregional/ Interregional and commute travel	Freeway
15-16	R55.48-R88.61	Route 126 to Kern Co. Line	Interstate/Interregional	Freeway

FUNCTIONAL CLASSIFICATION

Route 5 is part of the Federal Aid Interstate (FAI) system, which is a subset of the National Highway System. For the purpose of this analysis, the route has been divided into 16 segments based on traffic volume, connections to local streets of State Highways, freeway interchanges, and the county boundary. The criteria for segmentation and functional class for each segment is shown in the following table:

Santa Ana Freeway

<u>Seg.</u>	<u>P.M.</u>	<u>Criteria</u>	<u>Functional Class</u>
1-3	0.00-16.47	County Line to Freeway Interchange	P1P - Urban Principal Arterial

Golden State Freeway

<u>Seg.</u>	<u>P.M.</u>	<u>Criteria</u>	<u>Functional Class</u>
4-13	16.47-R52.47	Freeway Interchange to Freeway Interchange	P1P - Urban Principal Arterial
13-15	R52.47-R59.03	Freeway Interchange to Freeway Interchange	P3 - Urban Principal Arterial
15	R55.48-81.49	Freeway Interchange to Freeway Interchange	PA - Rural Principal Arterial
16	R81.49-R88.61	Freeway Interchange to County Line	PA – Rural Principal Arterial

INTERSTATE 5

PARK AND RIDE/BICYCLE FACILITIES

Lot Name	#	Seg	PM	City	Operator	Bike Lockers	# Stalls	Transit Service
La Mirada	48	1	1.7	La Mirada	LACMTA	0	100	MTA
Norwalk – Santa Fe Springs Transportation Center	123	1	4.9	Norwalk	Metrolink	0	260	Metrolink
Lakewood – West	25	2	8.3	Downey	State	0	83	MTA
Lakewood – East	26	2	8.3	Downey	State	0	29	MTA
Citadel	16	2	12.6	Commerce	Crow-Staley	0	50	MTA
Commerce Amtrak	17	3	14.2	Commerce	Amtrak	0	50	Amtrak, Metrolink, MTA, Commerce Minicipal
Glendale Amtrak	36	7	24.5	Glendale	Amtrak	0	313	Glendale Express Shuttle, Glendale Beeline, MTA, Amtrak, Metrolink
Burbank Metrolink	7	8	29.3	Burbank	Metrolink	0	303	Commuter Express, MTA, Burbank Metrolink Shuttle, Media District Shuttle, Unified Shuttle, Pasadena TMA Shuttle, Metrolink
San Fernando Metrolink	103	10	41.4	Sylmar	Metrolink	0	400	Commuter Express, Highway Hummer, MTA, Metrolink
College of the Canyons	107	13	52.4	Valencia	Santa Clarita College District	0	250	Santa Clarita Transit

V. Congestion

CONGESTION MEASURES

This section is divided into five (5) sub-sections:

Segment Congestion Maps

Page V-2 to V-33

These illustrate segment operating conditions during peak hours on incident-free days. On the maps, speed is indicated by color and length of delay is indicated by width.

Speed and Duration Chart

Page V-34

This chart segment speeds and duration of speed conditions during peak hours.

Demand/Capacity Ratios

Page V-35

This chart illustrates the "demand to capacity ratio" for each segment during peak hours.

Level of Service (LOS)

Page V-36

This chart illustrates the level of service operating characteristics for each segment.

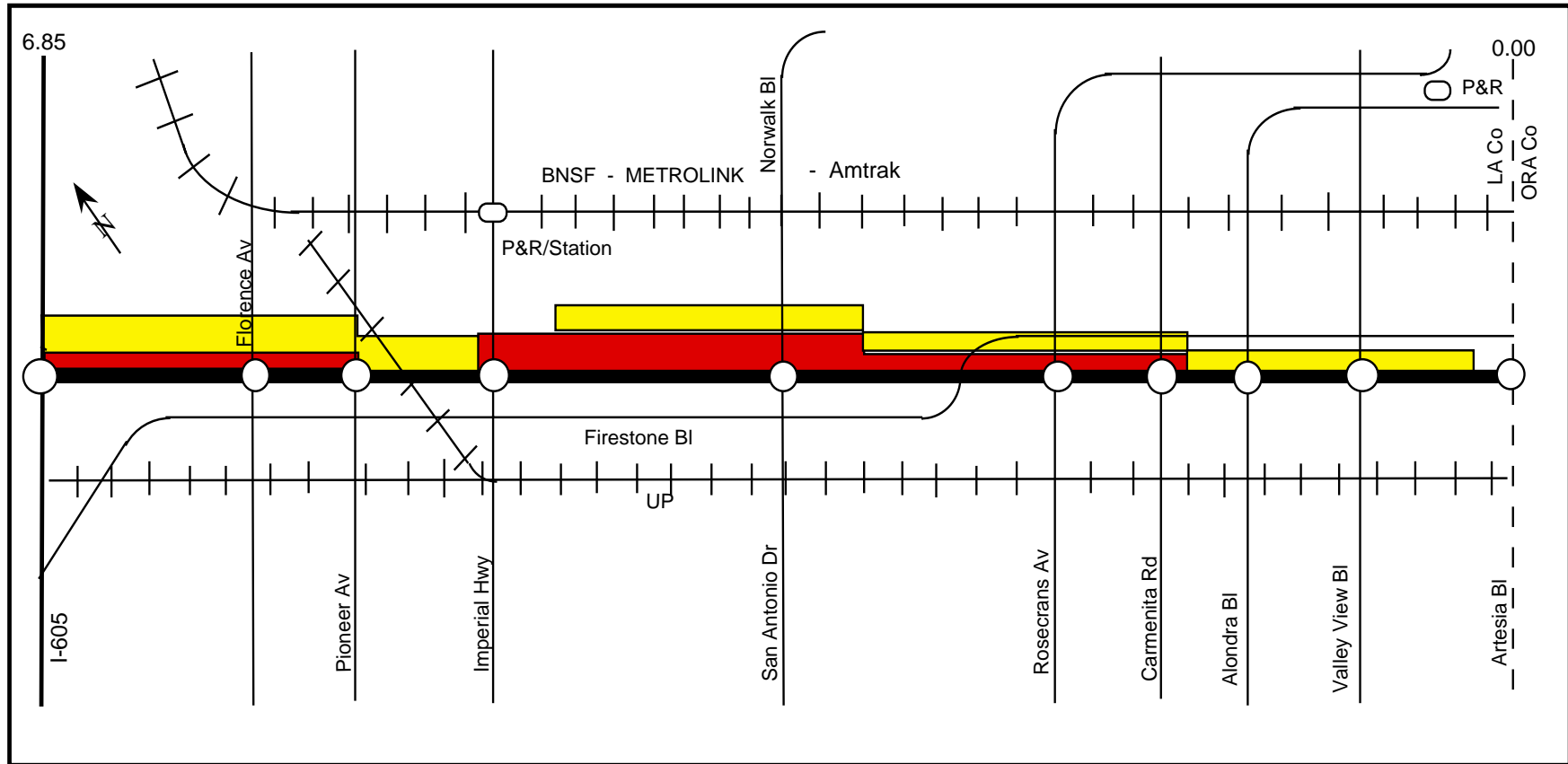
Hours of Delay

Page V-37

This chart measures commuters' hours of delay.¹

1 Footnote 1995 Congestion AM + PM

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 1 Los Angeles County Line to I-605



20 to 35 MPH
 Less than 20 MPH
 Freeway center line

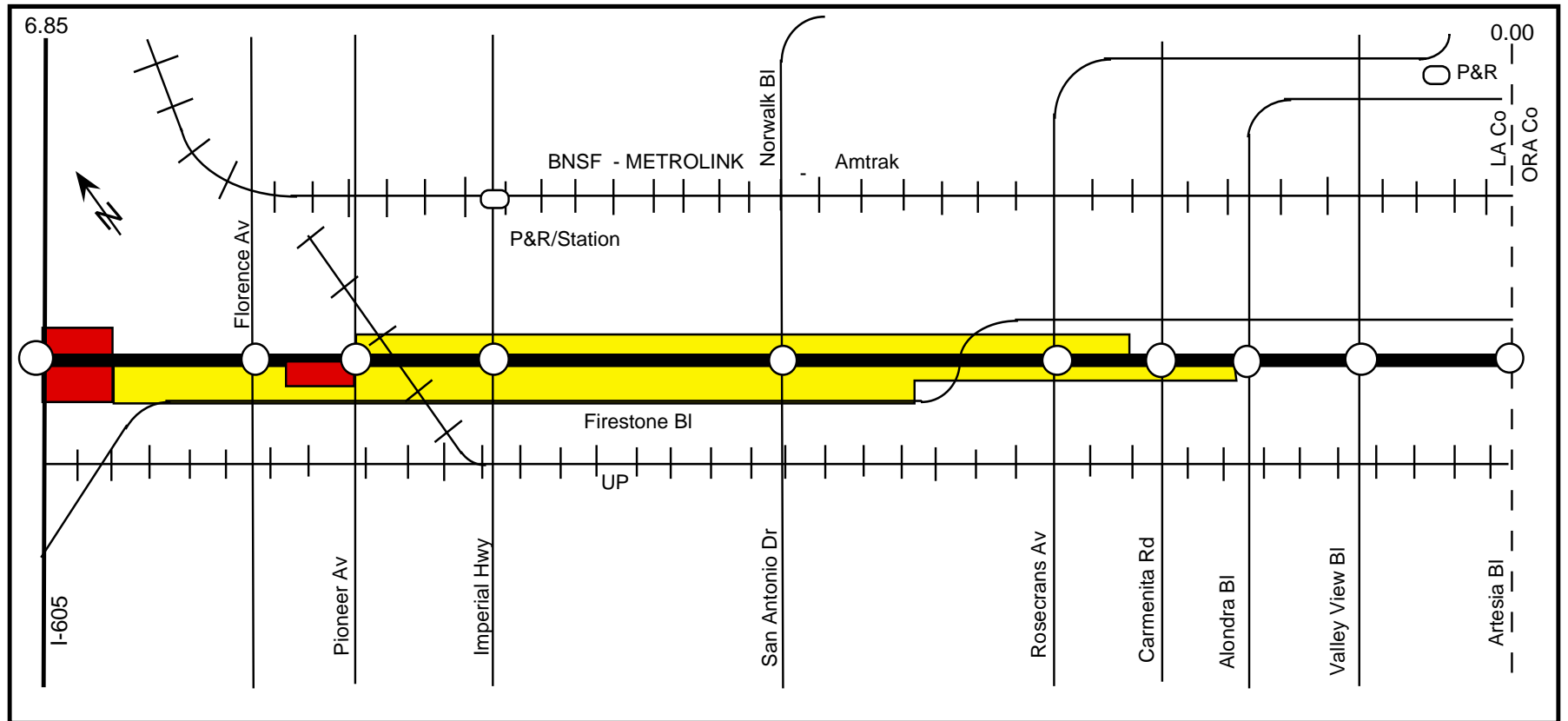
P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours

2 - 3 hours

more than 3 hours

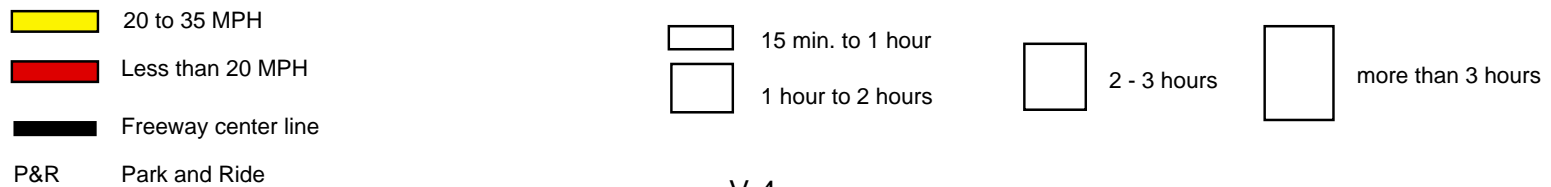
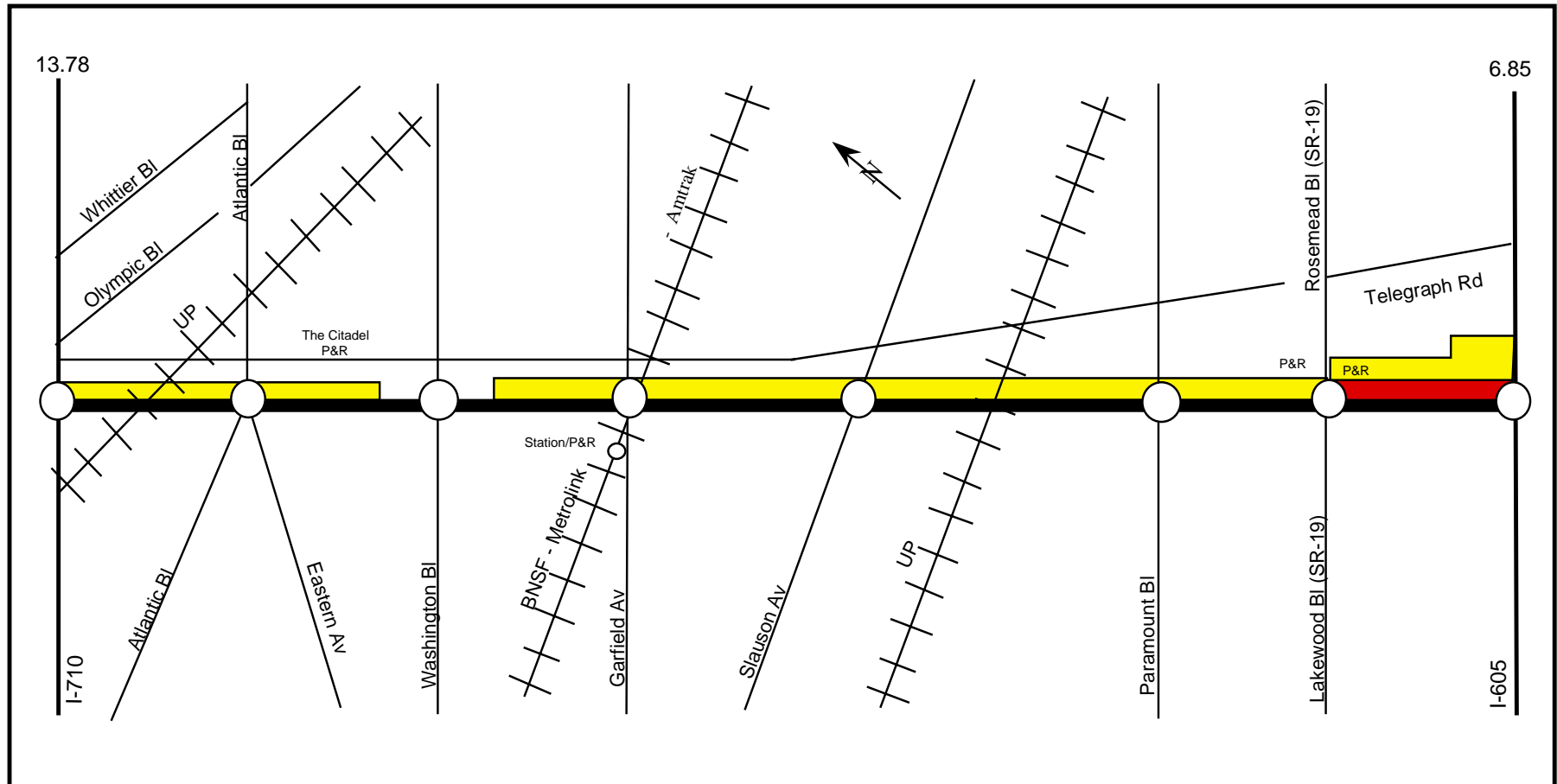
INTERSTATE 5 PM PEAK CONGESTION SEGMENT 1 Los Angeles County Line to I-605



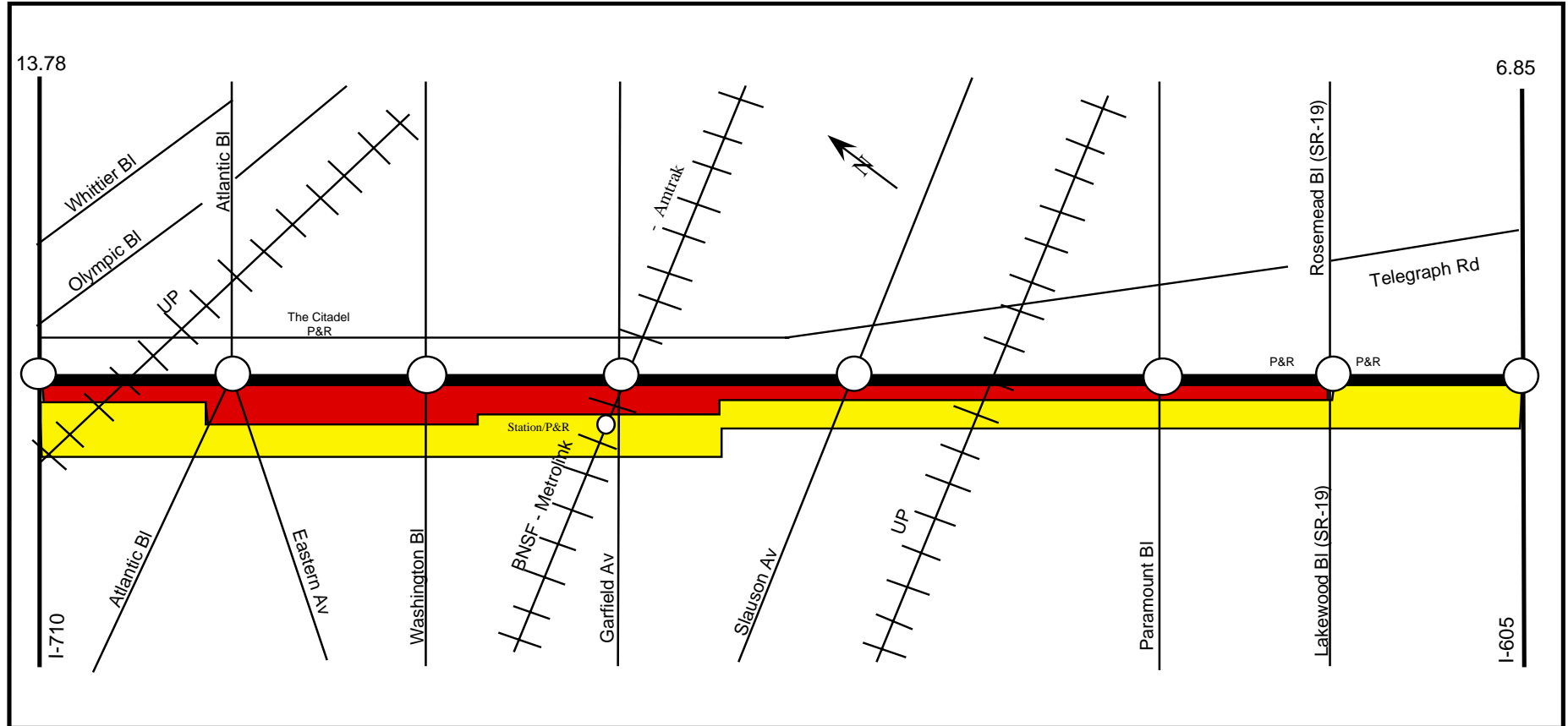
20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours
 2 - 3 hours
 more than 3 hours

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 2 I-605 to I-710



INTERSTATE 5 PM PEAK CONGESTION SEGMENT 2 I-605 to I-710



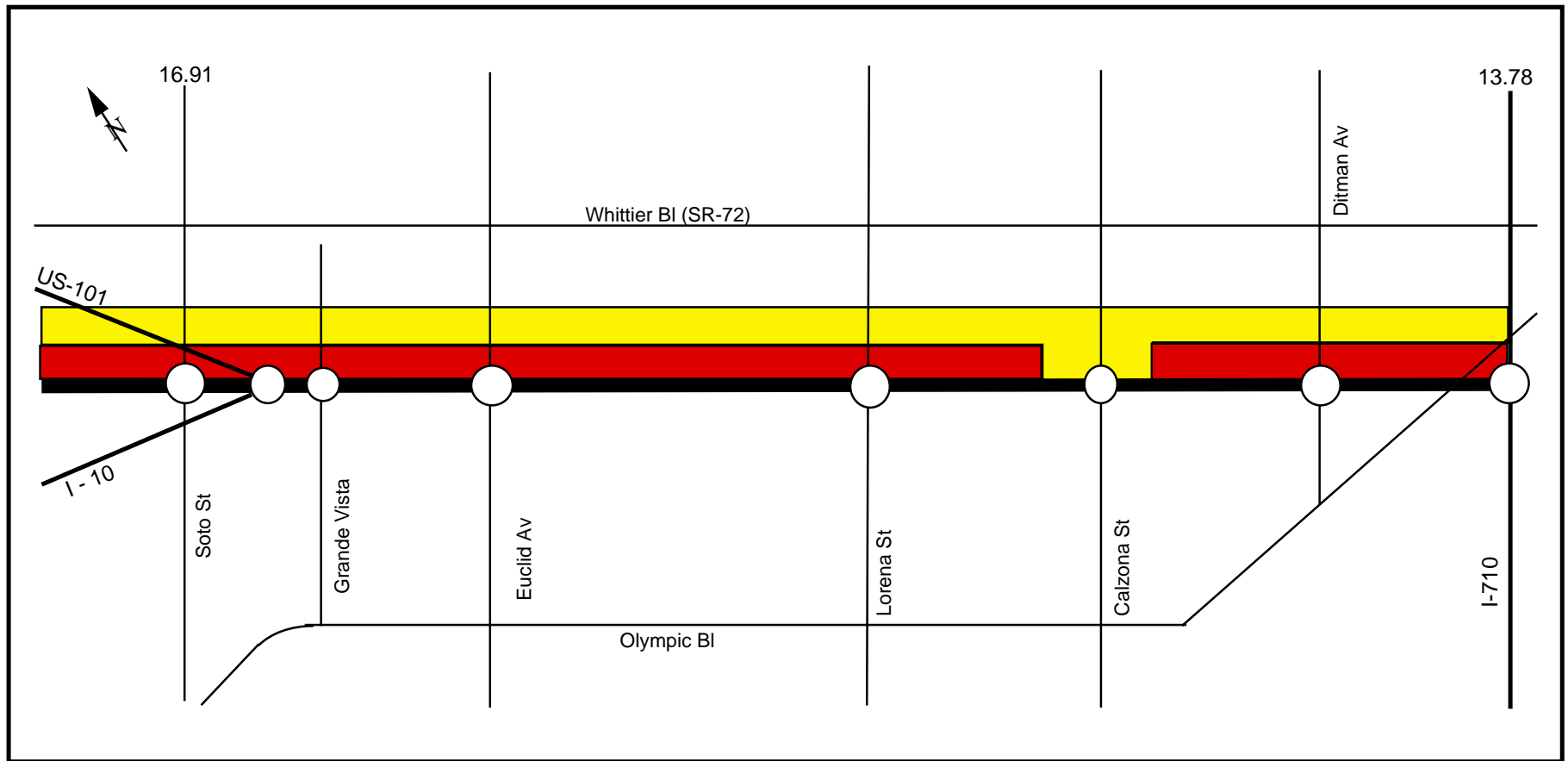
20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 3 I-710 to East Los Angeles I/C

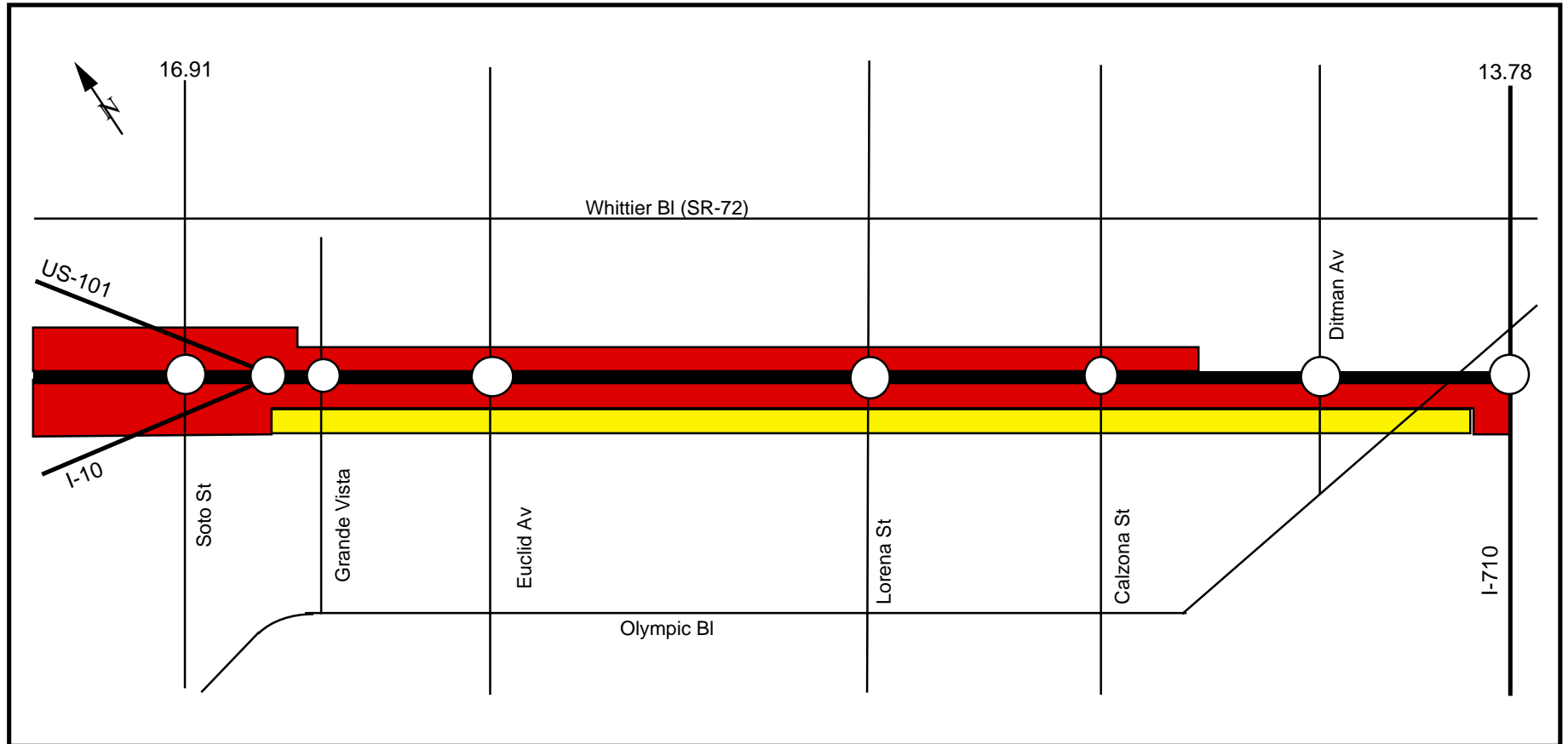


20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours

2 - 3 hours
 more than 3 hours

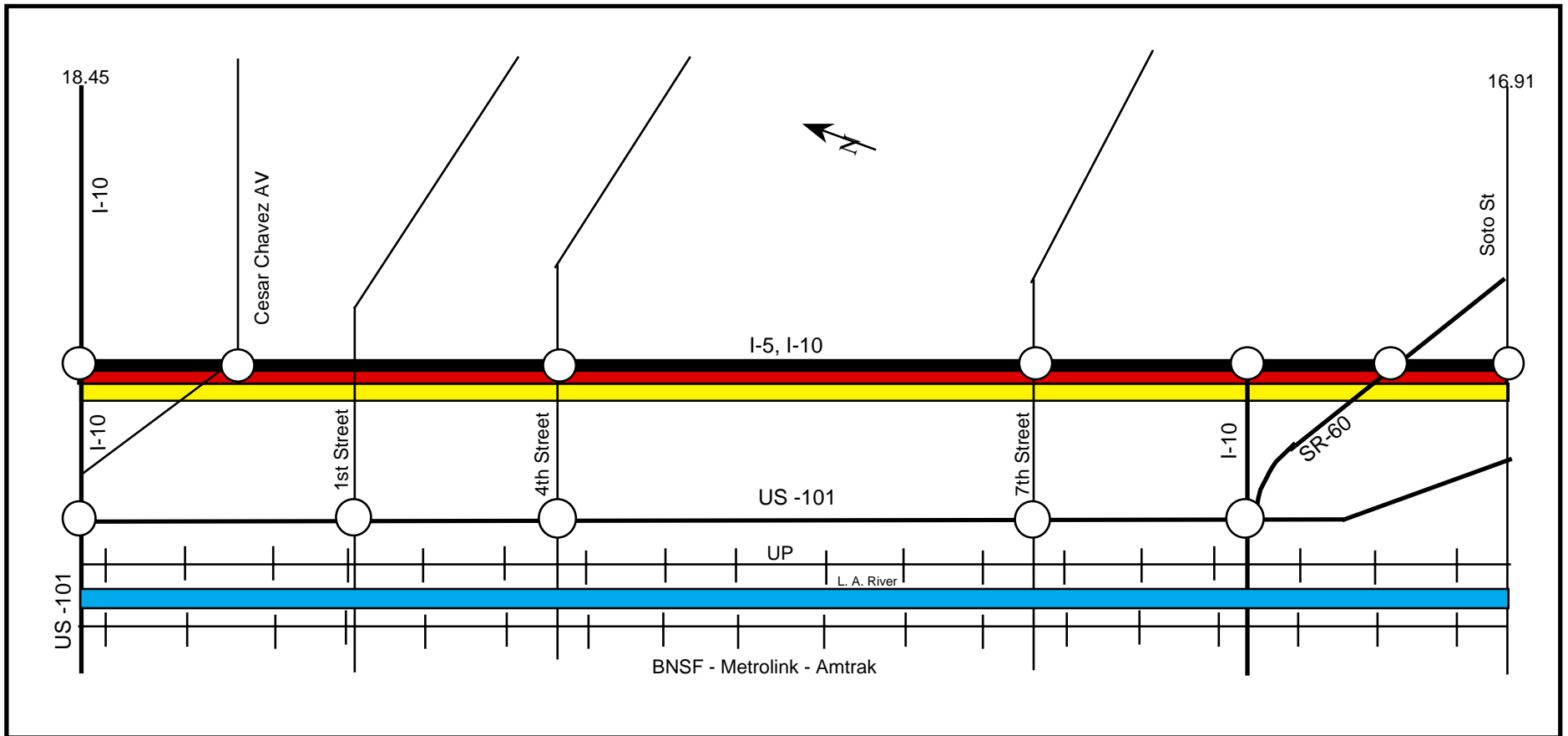
INTERSTATE 5 PM PEAK CONGESTION SEGMENT 3 I-710 to East Los Angeles I/C



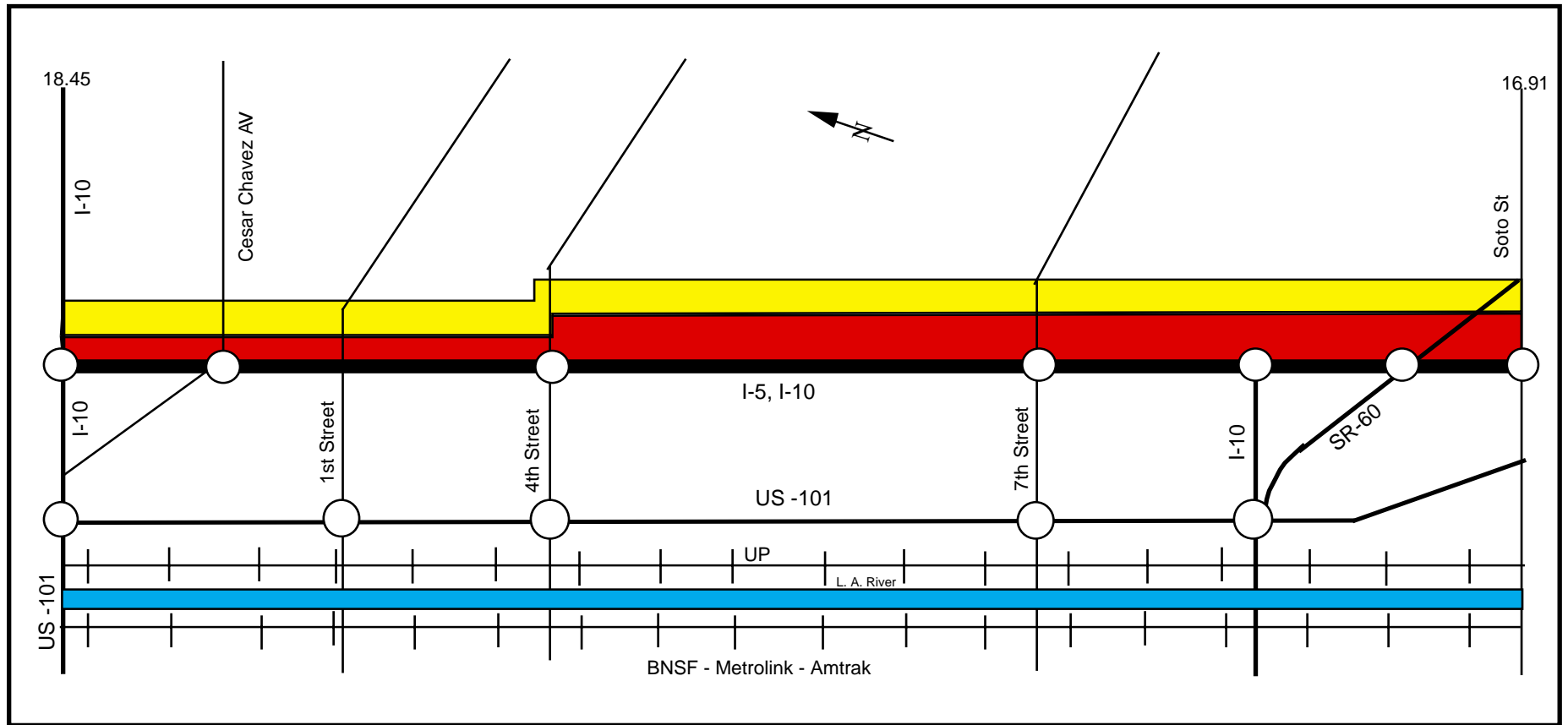
20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours
 2 - 3 hours
 more than 3 hours

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 4 East Los Angeles I/C to I-10



INTERSTATE 5 PM PEAK CONGESTION SEGMENT 4 East Los Angeles I/C to I-10



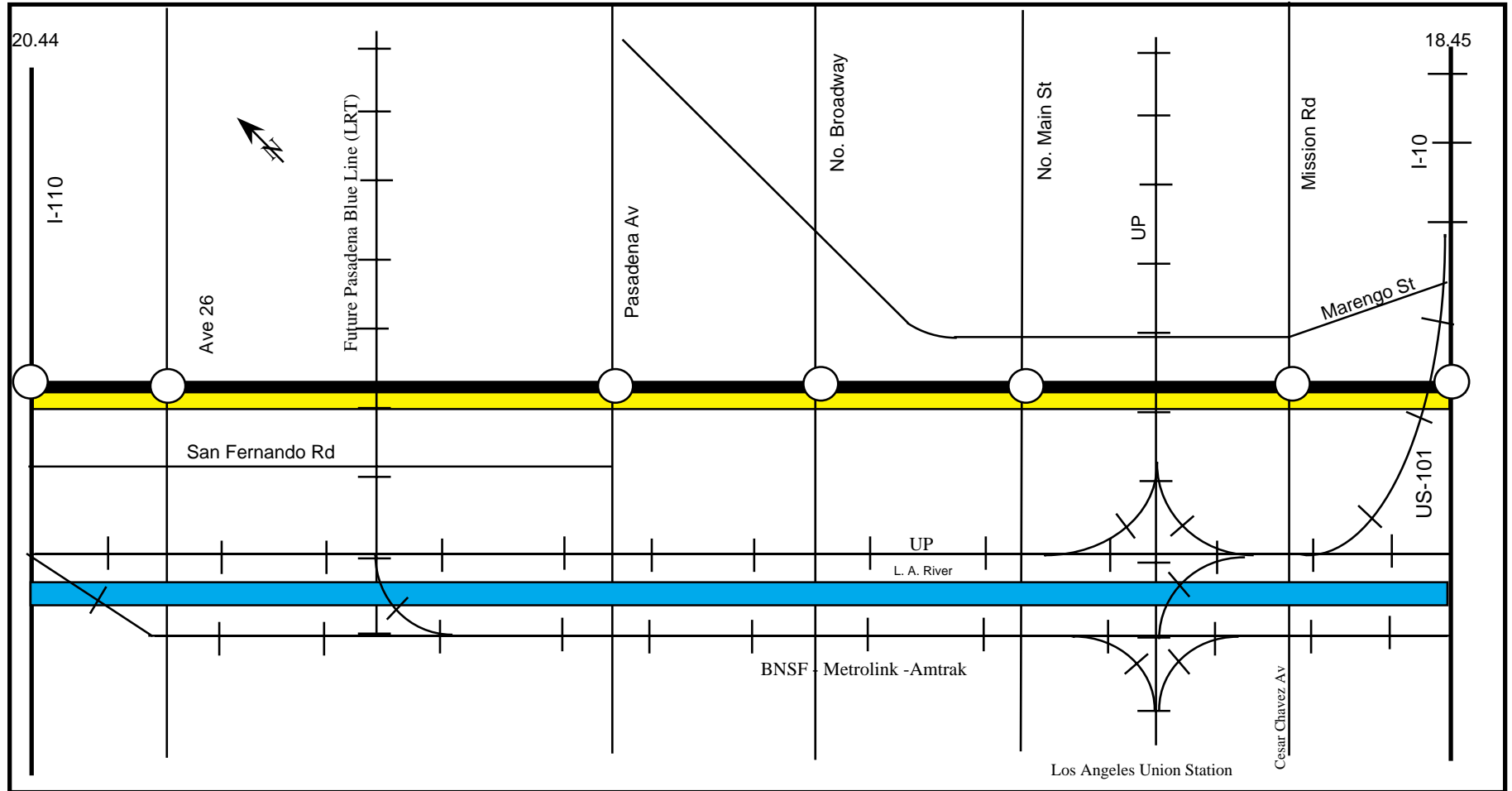
20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours

2 - 3 hours

more than 3 hours

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 5 I-10/U.S.-101 I/C to I-110



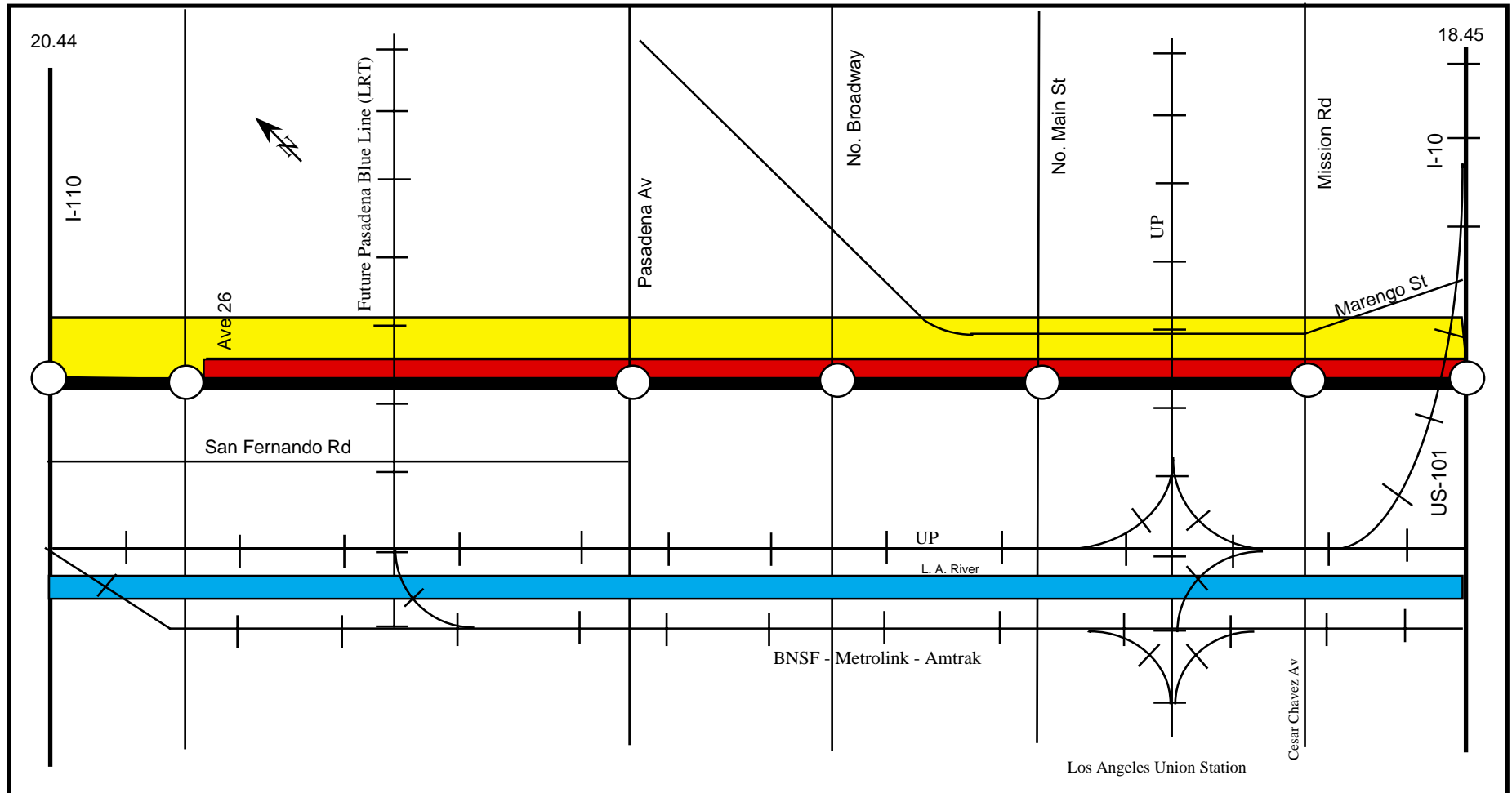
20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours

2 - 3 hours

more than 3 hours

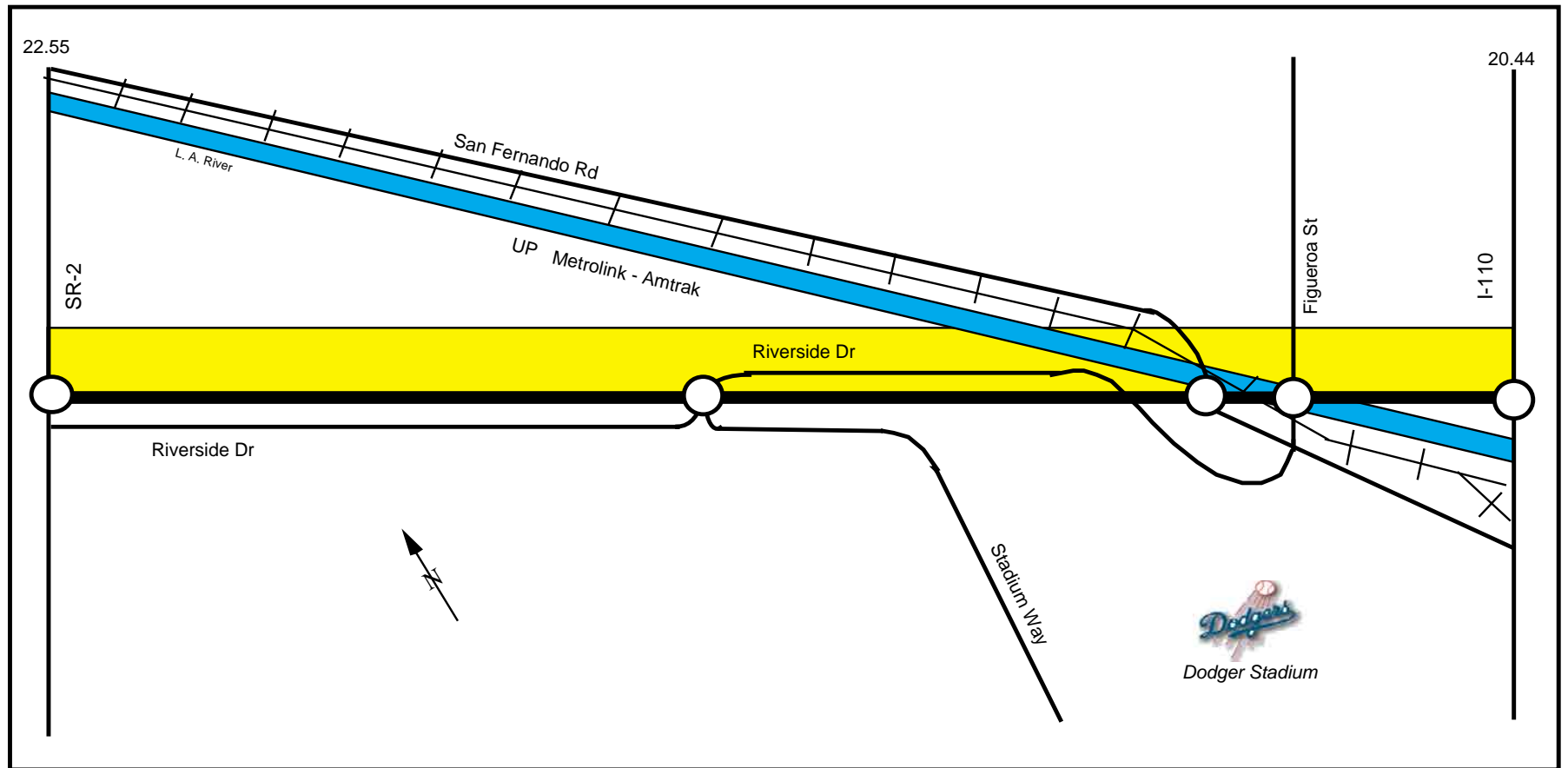
INTERSTATE 5 PM PEAK CONGESTION SEGMENT 5 I-10/U.S.-101 I/C to I-110



20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours
 2 - 3 hours
 more than 3 hours

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 6 I-110 to SR-2



20 to 35 MPH

Less than 20 MPH

Freeway center line

P&R Park and Ride

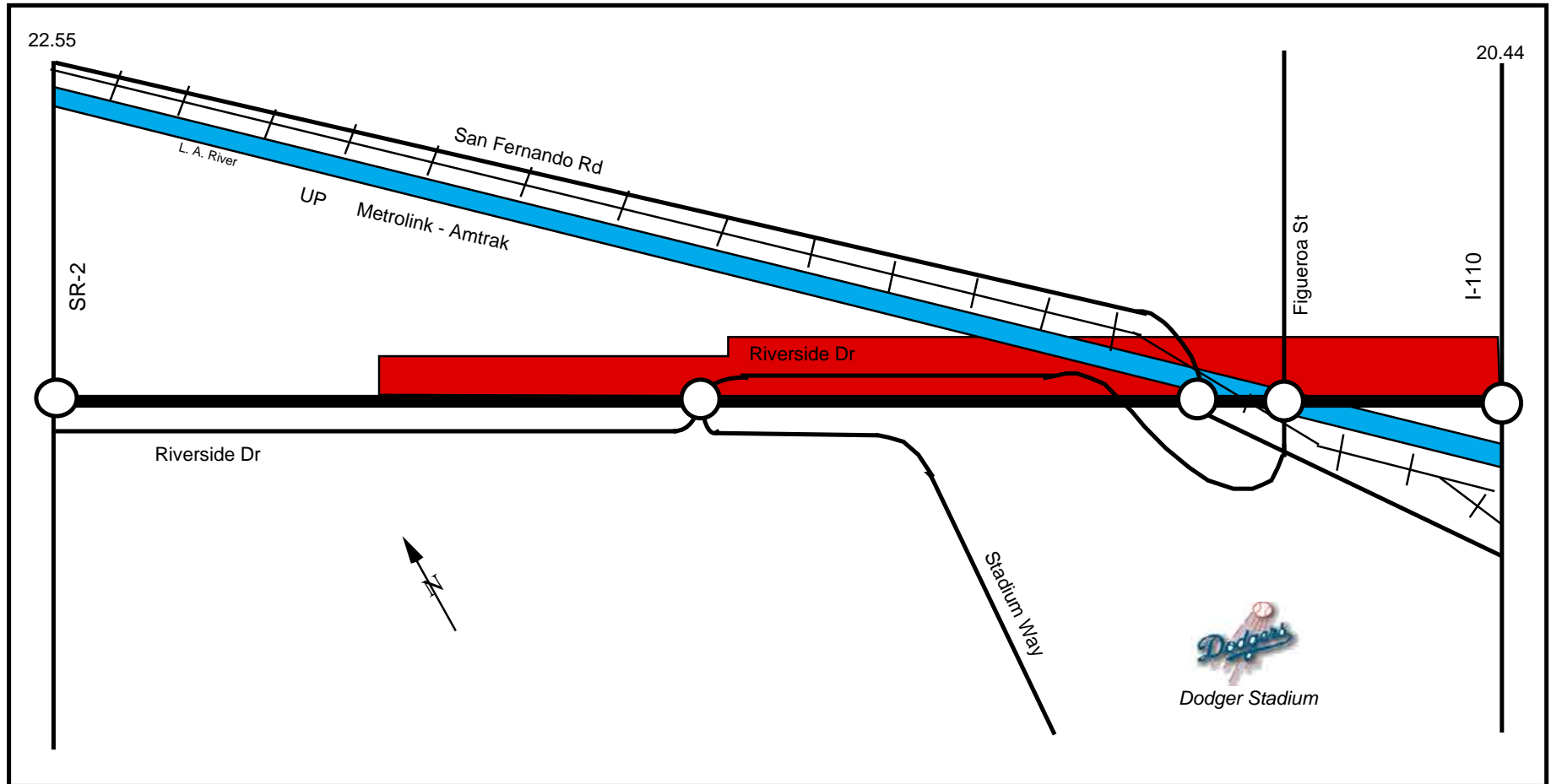
15 min. to 1 hour

1 hour to 2 hours

2 - 3 hours

more than 3 hours

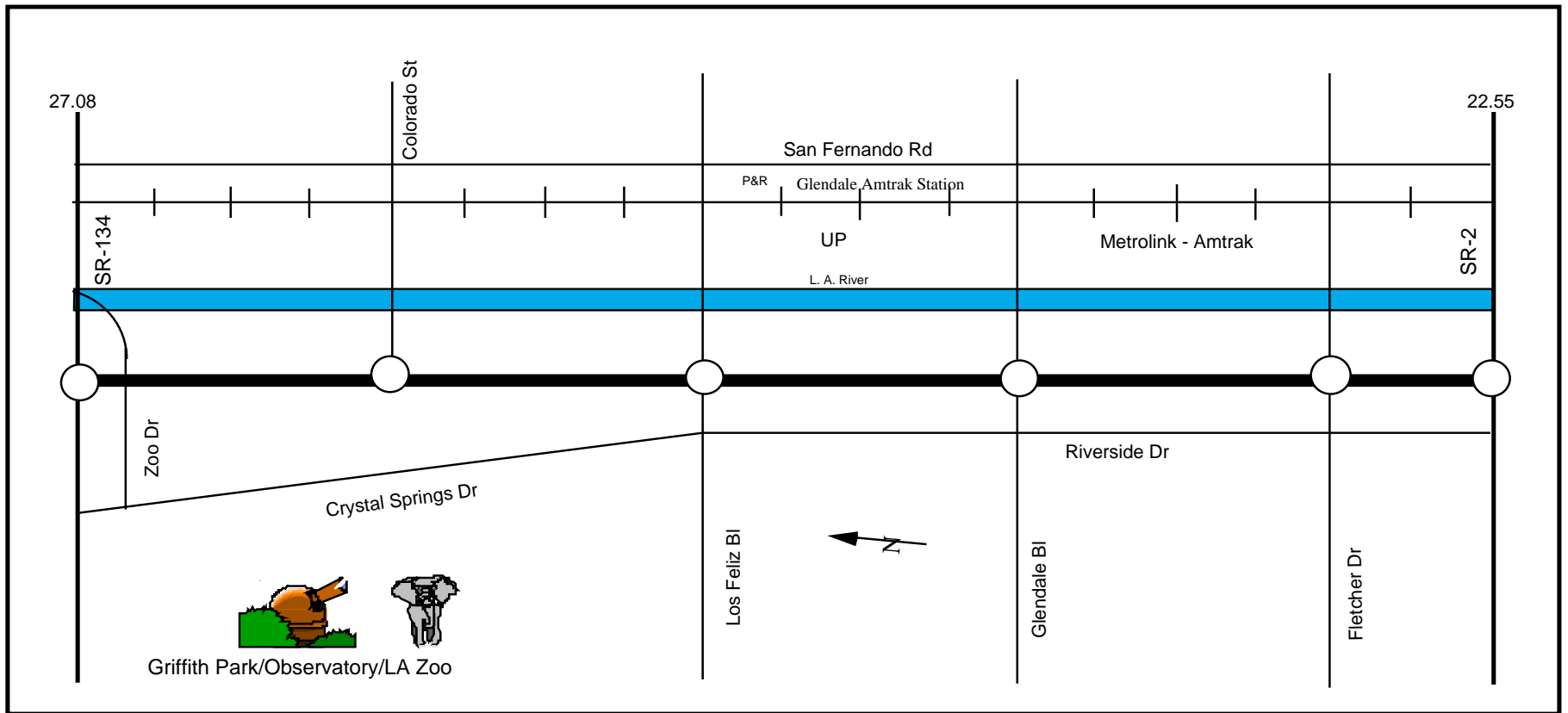
INTERSTATE 5 PM PEAK CONGESTION SEGMENT 6 I-110 to SR-2



20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

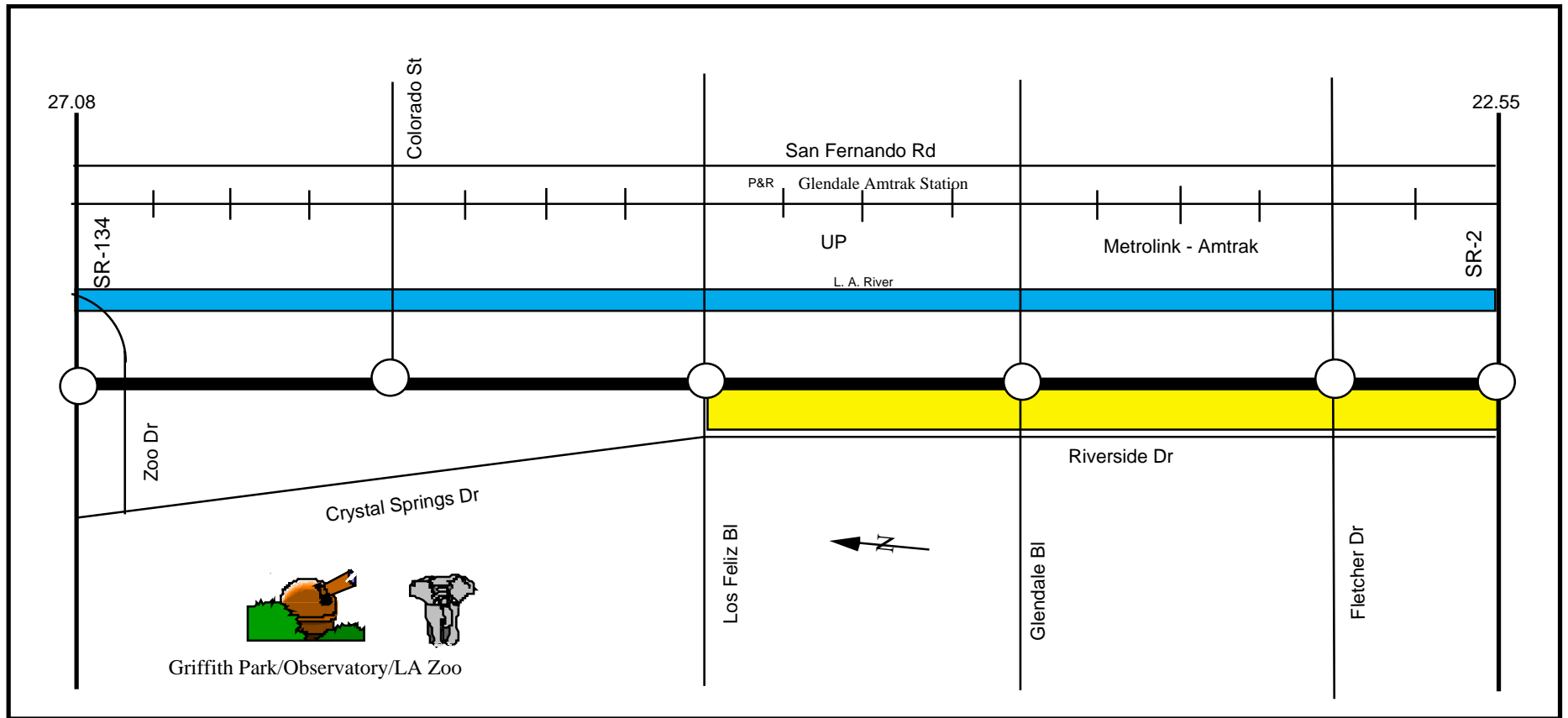
 15 min. to 1 hour	 2 - 3 hours	 more than 3 hours
 1 hour to 2 hours		

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 7* SR-2 to SR-134

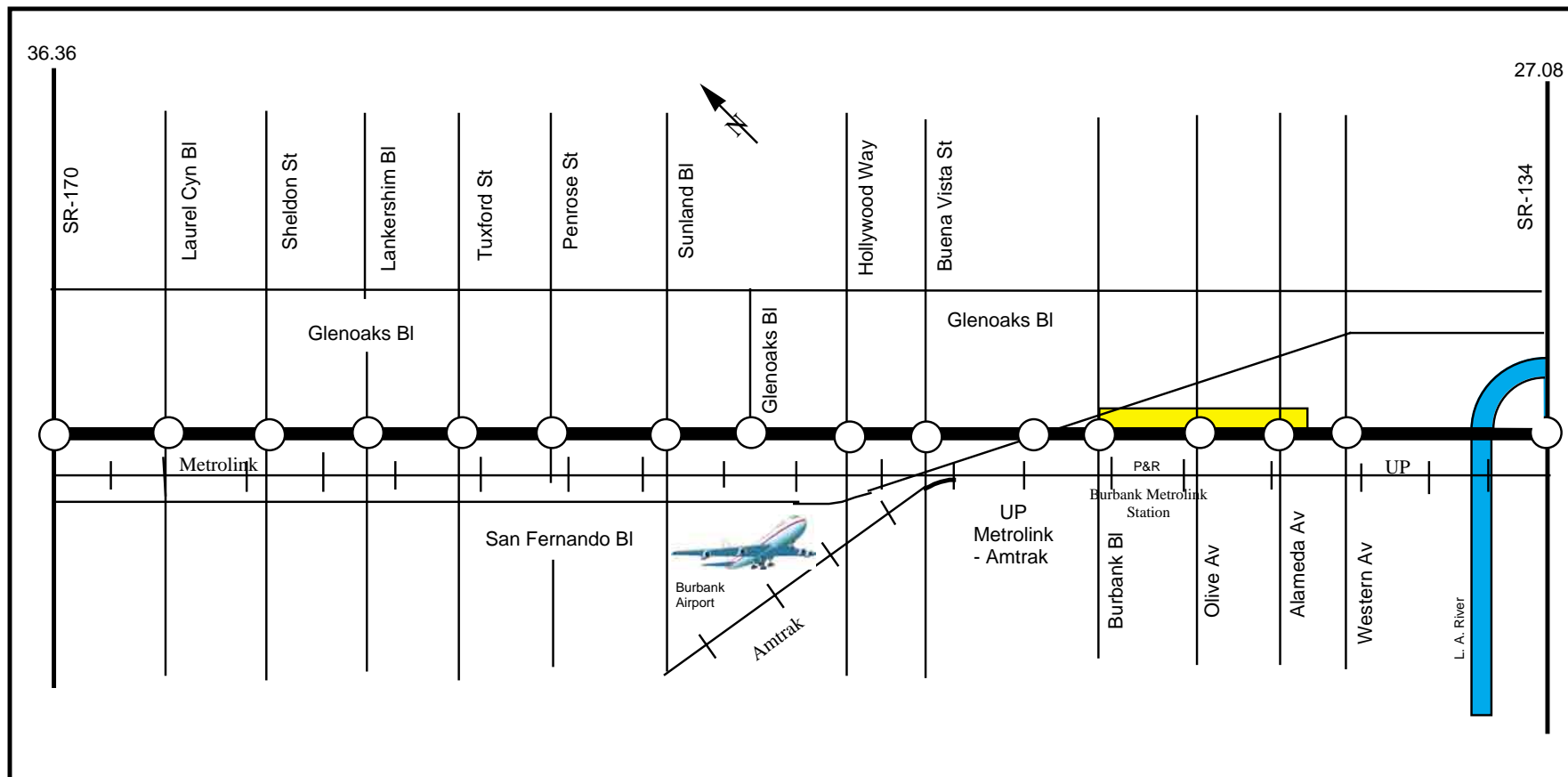


* Segment traffic does not meet threshold congestion criteria. However, significant congestion does exist at a higher average speed.

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 7 SR-2 to SR-134



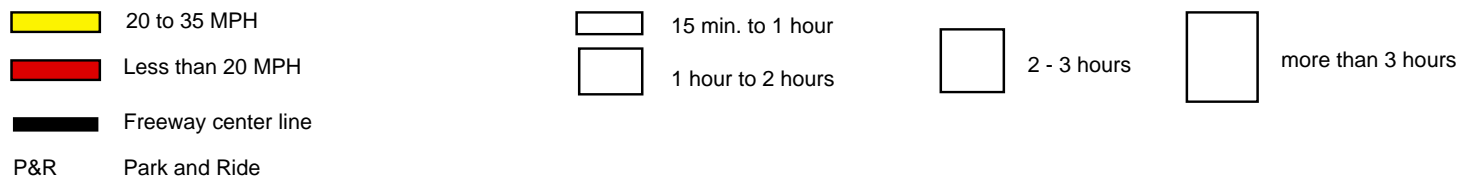
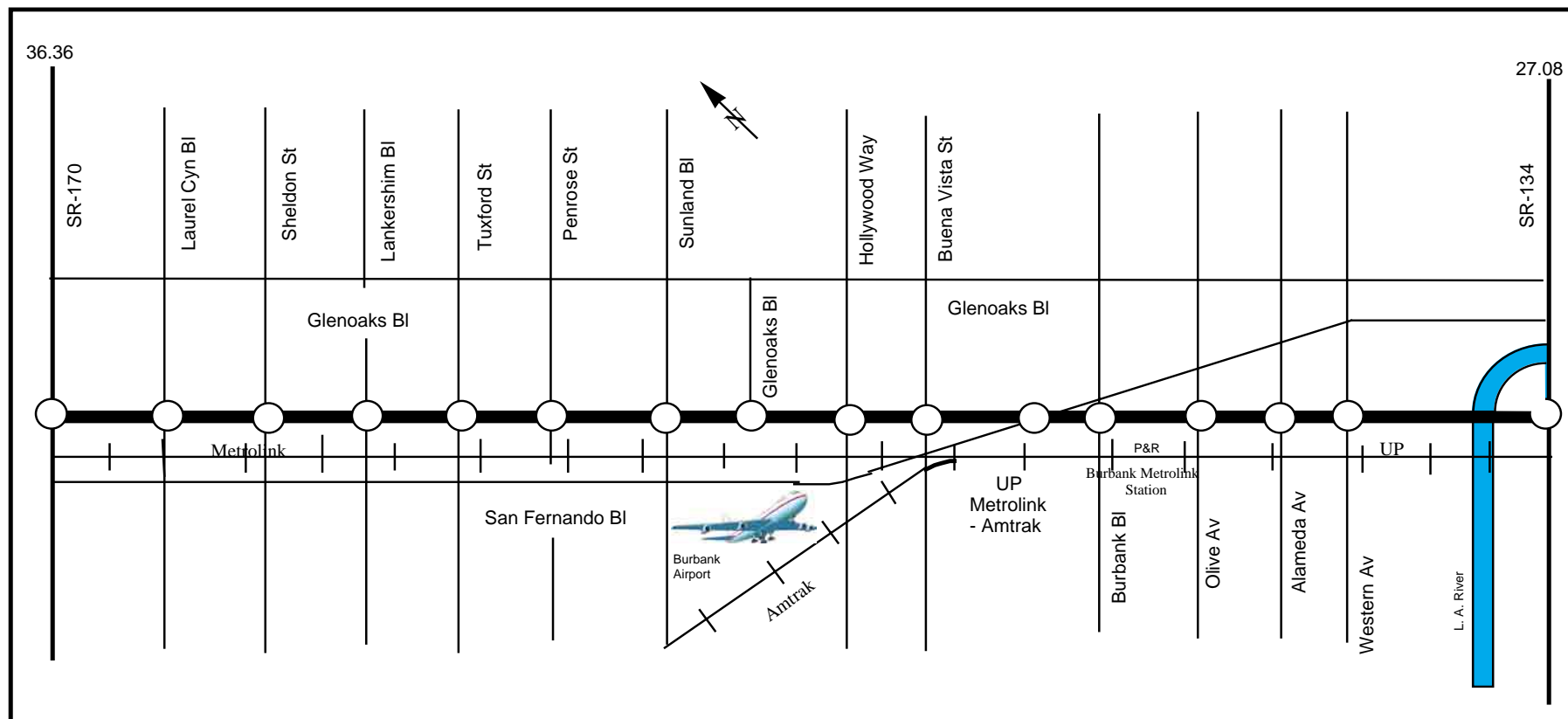
INTERSTATE 5 AM PEAK CONGESTION SEGMENT 8 SR-134 to SR-170



20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

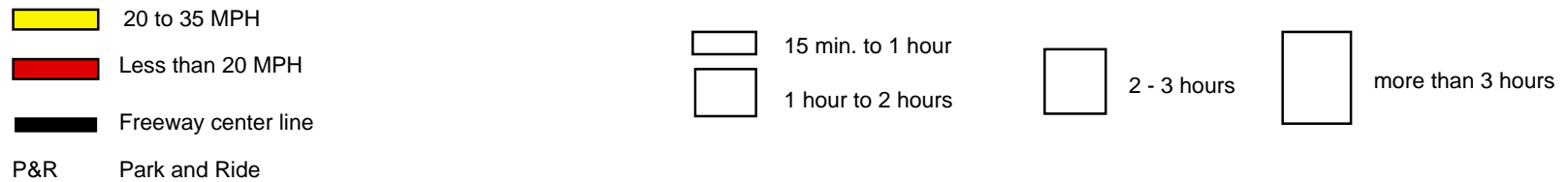
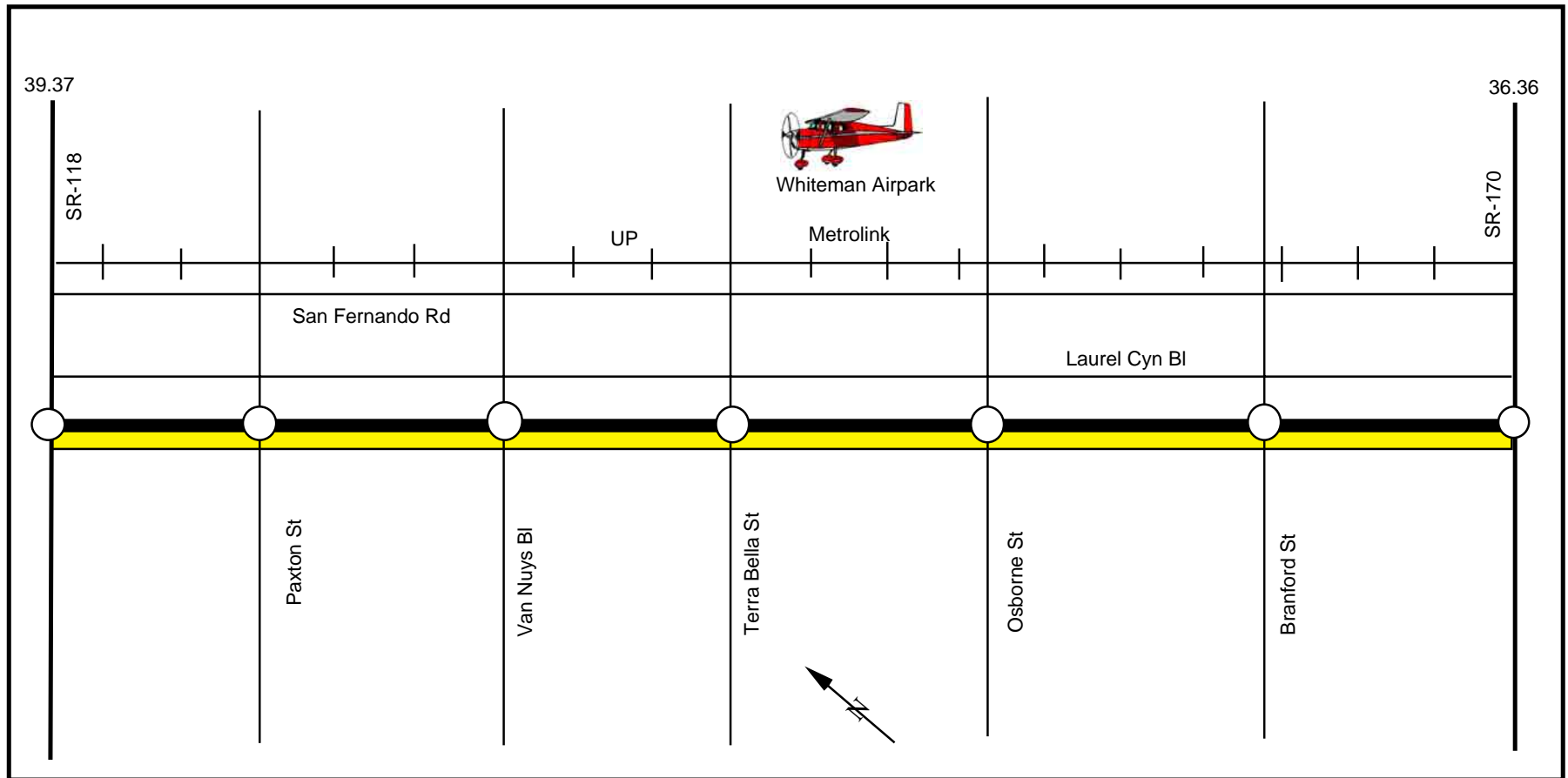
 15 min. to 1 hour	 2 - 3 hours
 1 hour to 2 hours	 more than 3 hours

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 8* SR-134 to SR-170

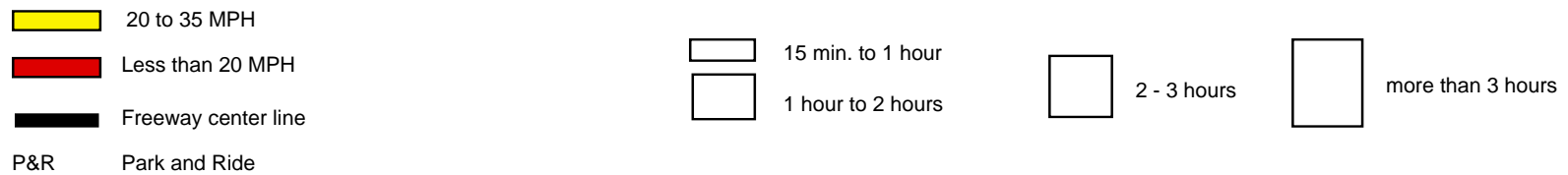
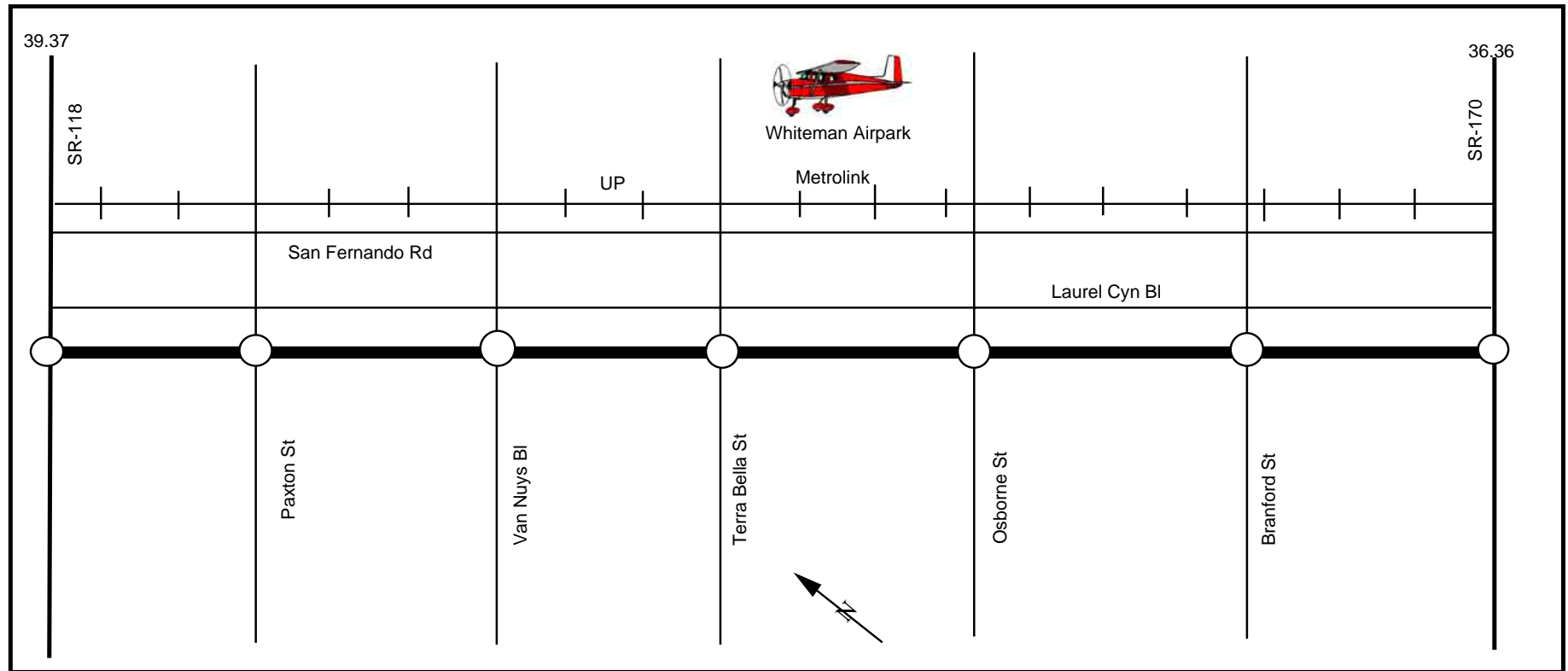


* Segment traffic does not meet threshold congestion criteria. However, significant congestion does exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 9 SR-170 to SR-118

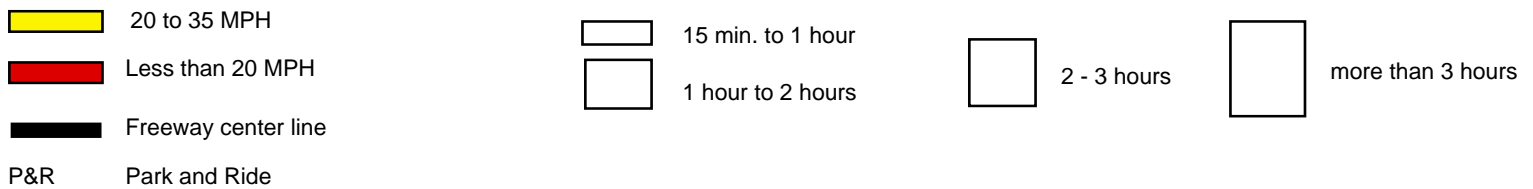
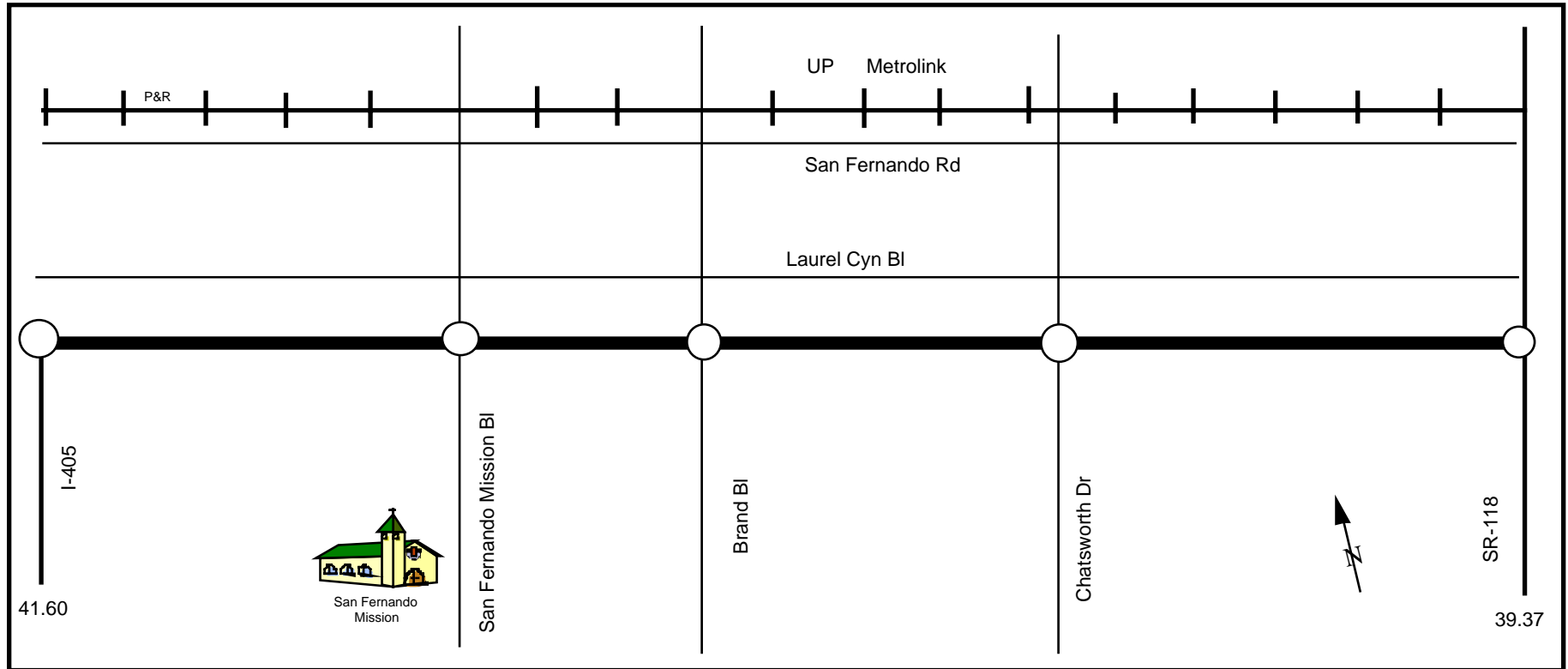


INTERSTATE 5 PM PEAK CONGESTION SEGMENT 9* SR-170 to SR-118



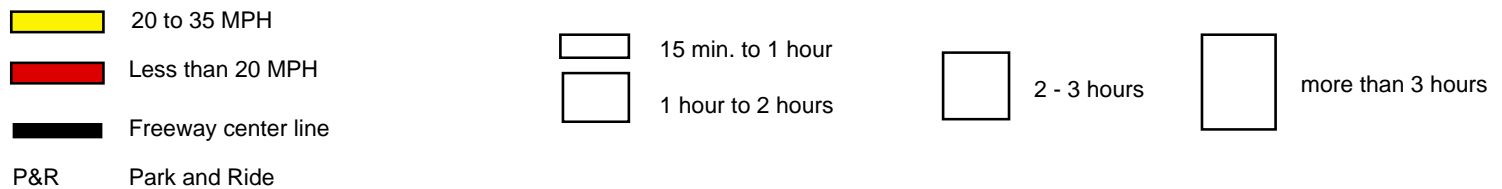
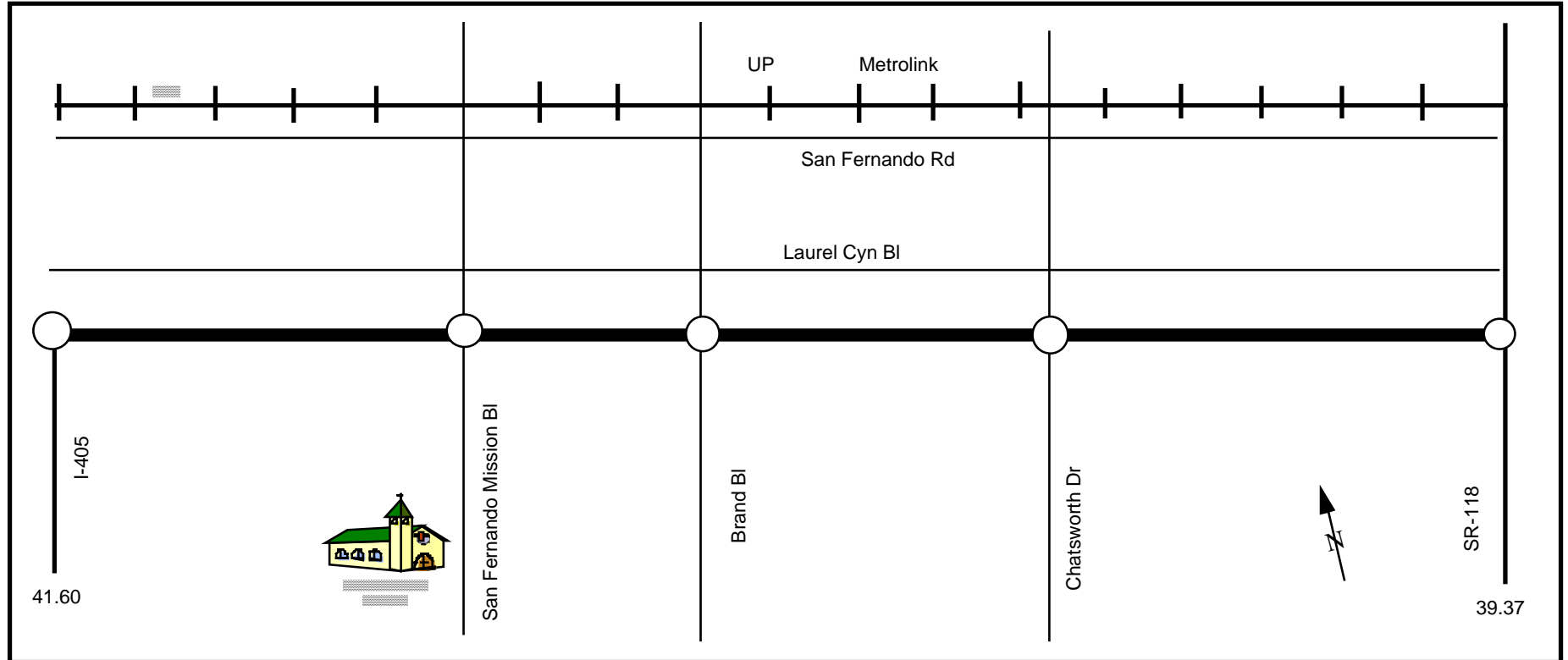
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 10* SR-118 to I-405



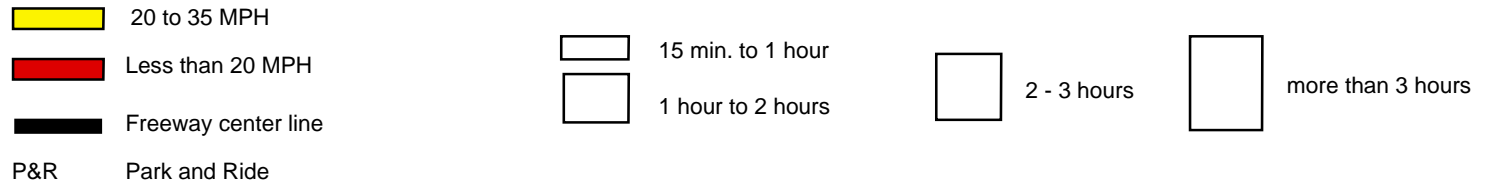
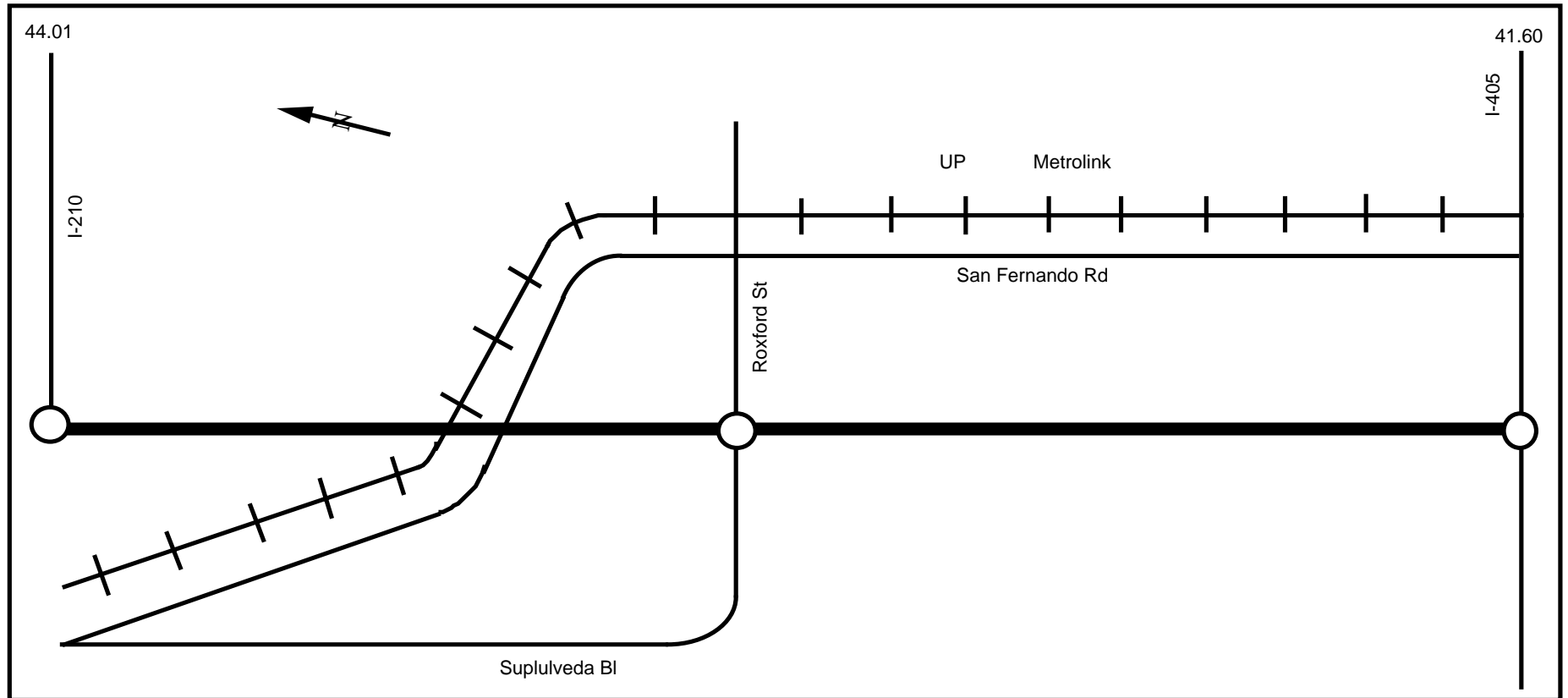
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 10* SR-118 to I-405



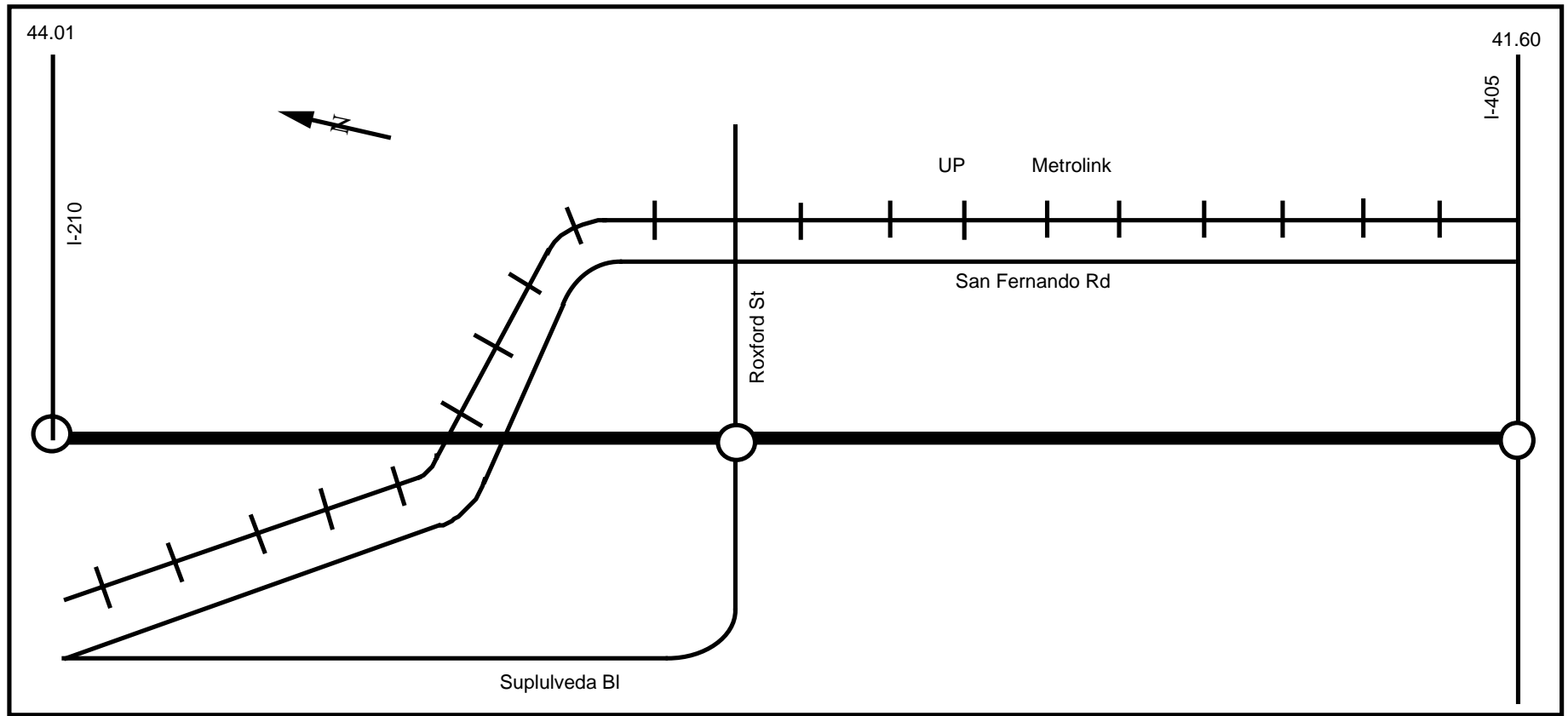
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 11* I-405 to I-210



* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 11* I-405 to I-210

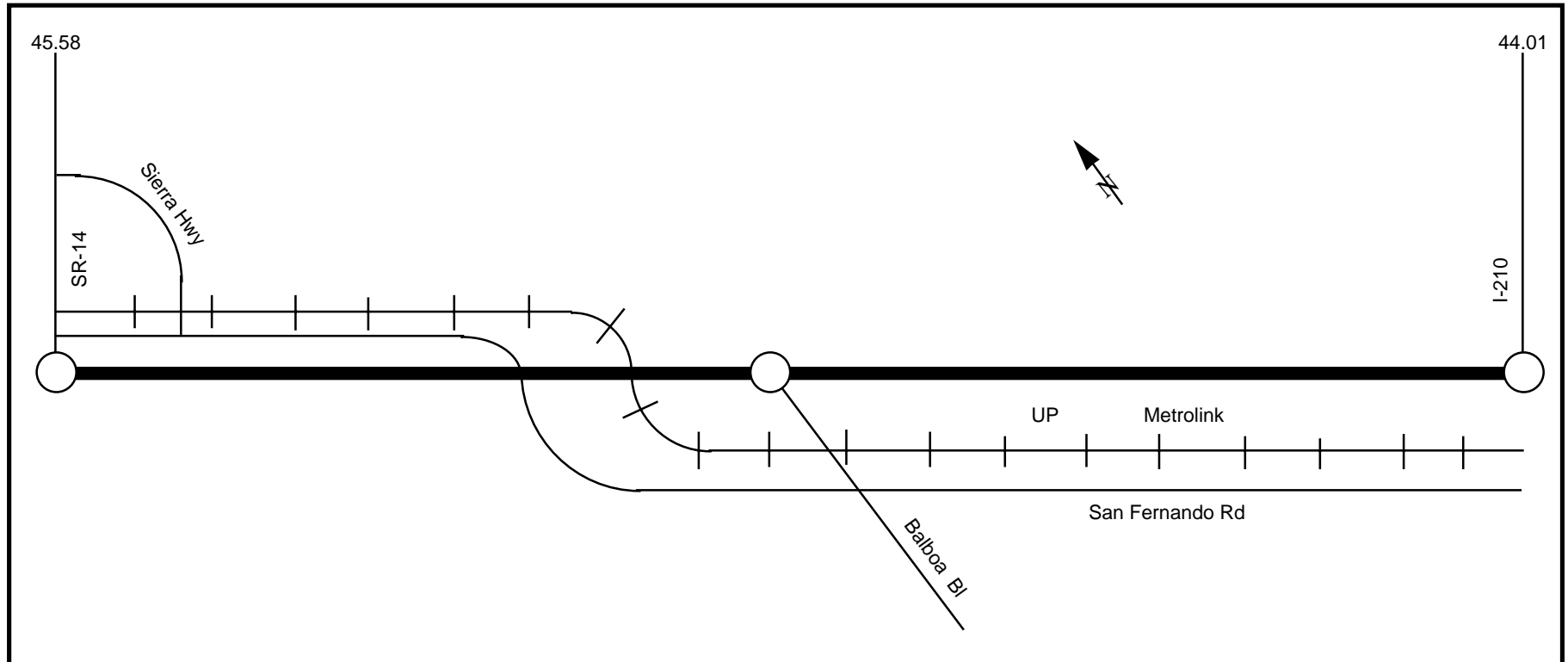


20 to 35 MPH
 Less than 20 MPH
 Freeway center line
 P&R Park and Ride

15 min. to 1 hour
 1 hour to 2 hours
 2 - 3 hours
 more than 3 hours

* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 12* I-210 to SR-14



20 to 35 MPH

Less than 20 MPH

Freeway center line

P&R Park and Ride

15 min. to 1 hour

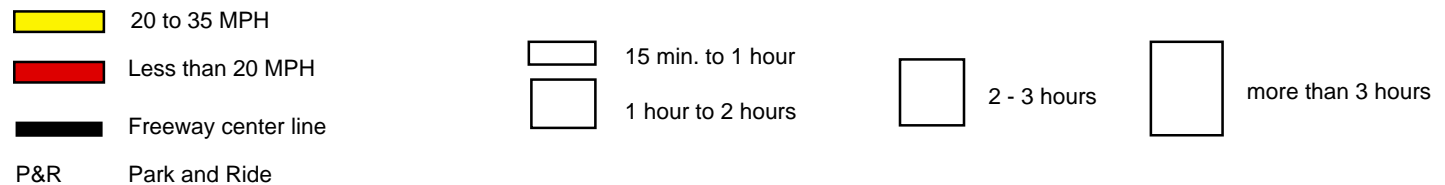
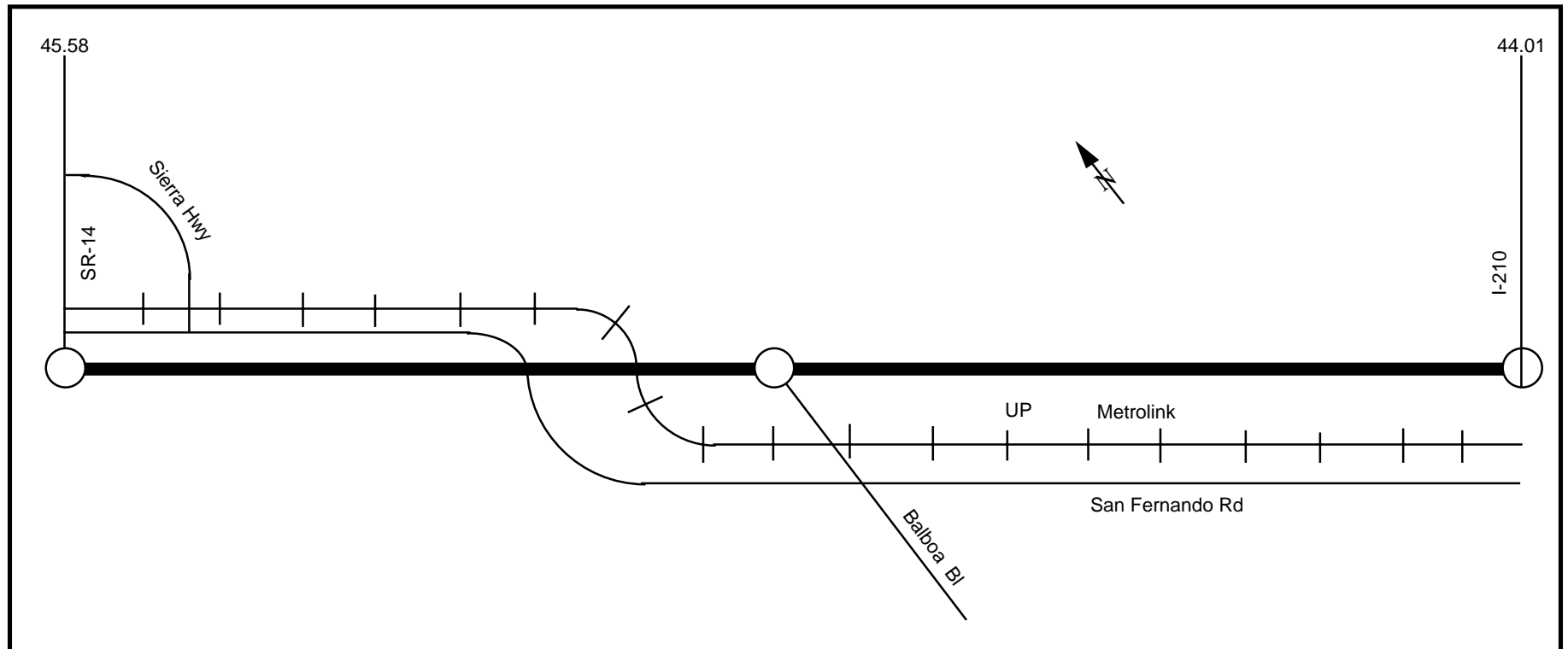
1 hour to 2 hours

2 - 3 hours

more than 3 hours

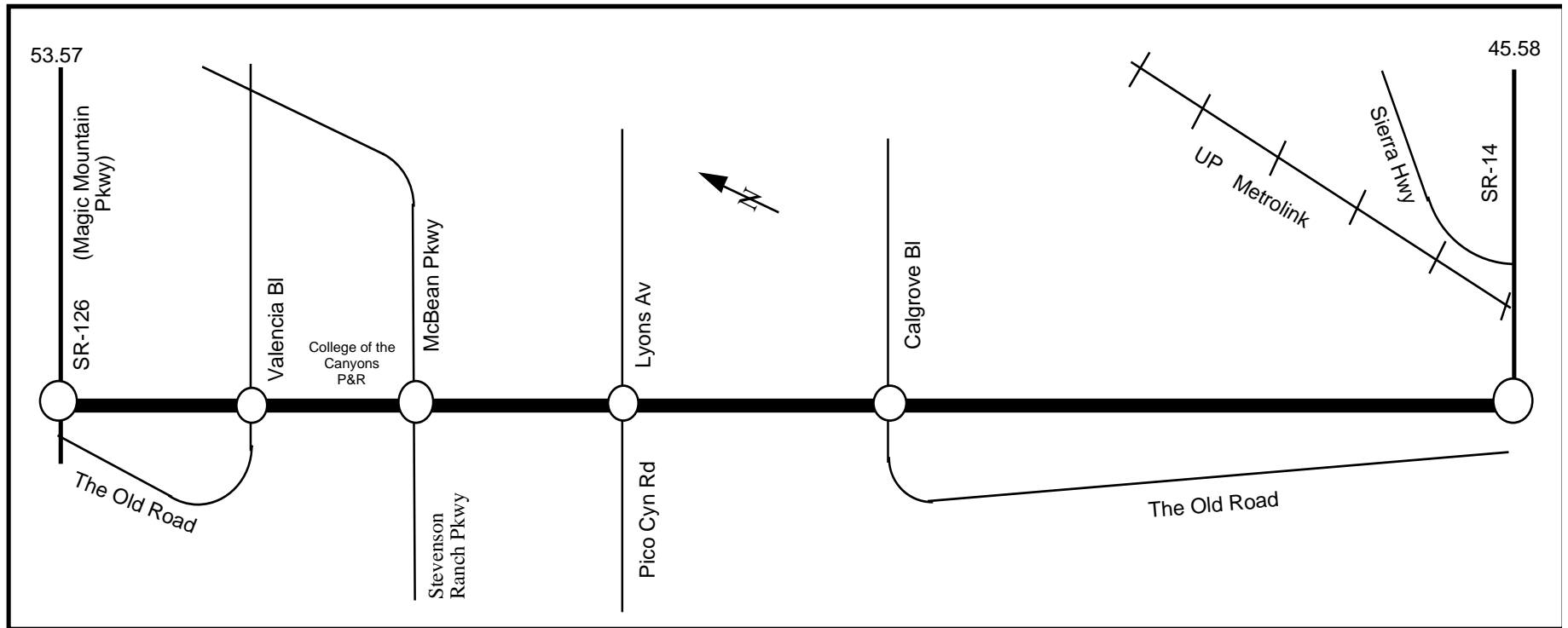
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 12* I-210 to SR-14



* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 13* SR-14 to SR-126 S



20 to 35 MPH

Less than 20 MPH

Freeway center line

P&R Park and Ride

15 min. to 1 hour

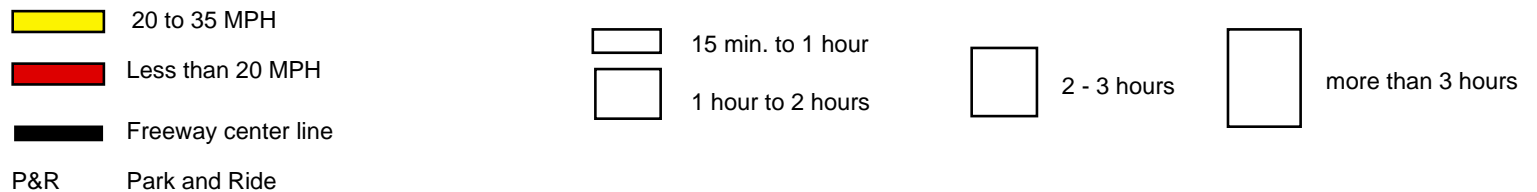
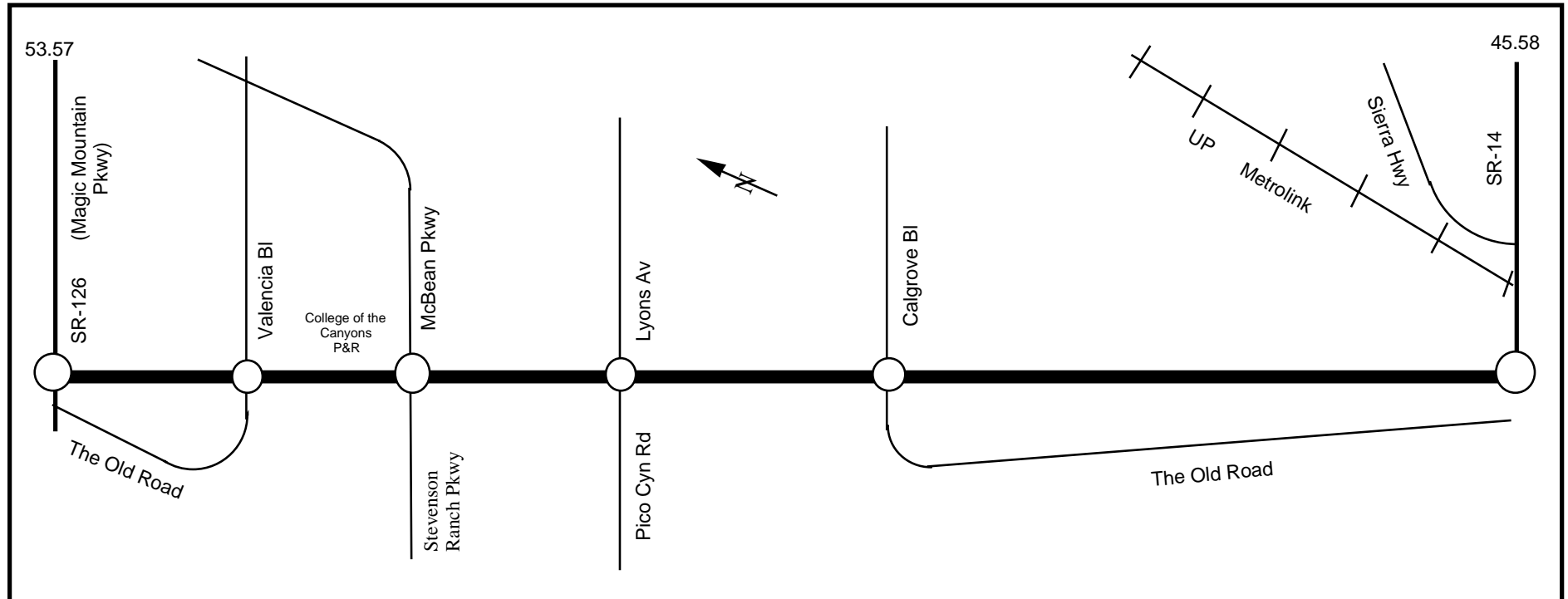
1 hour to 2 hours

2 - 3 hours

more than 3 hours

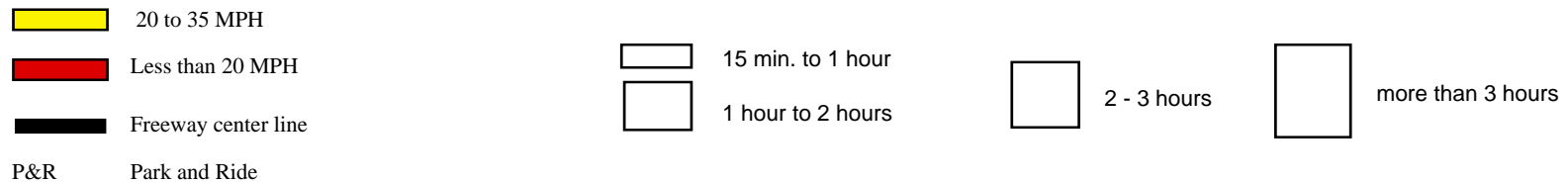
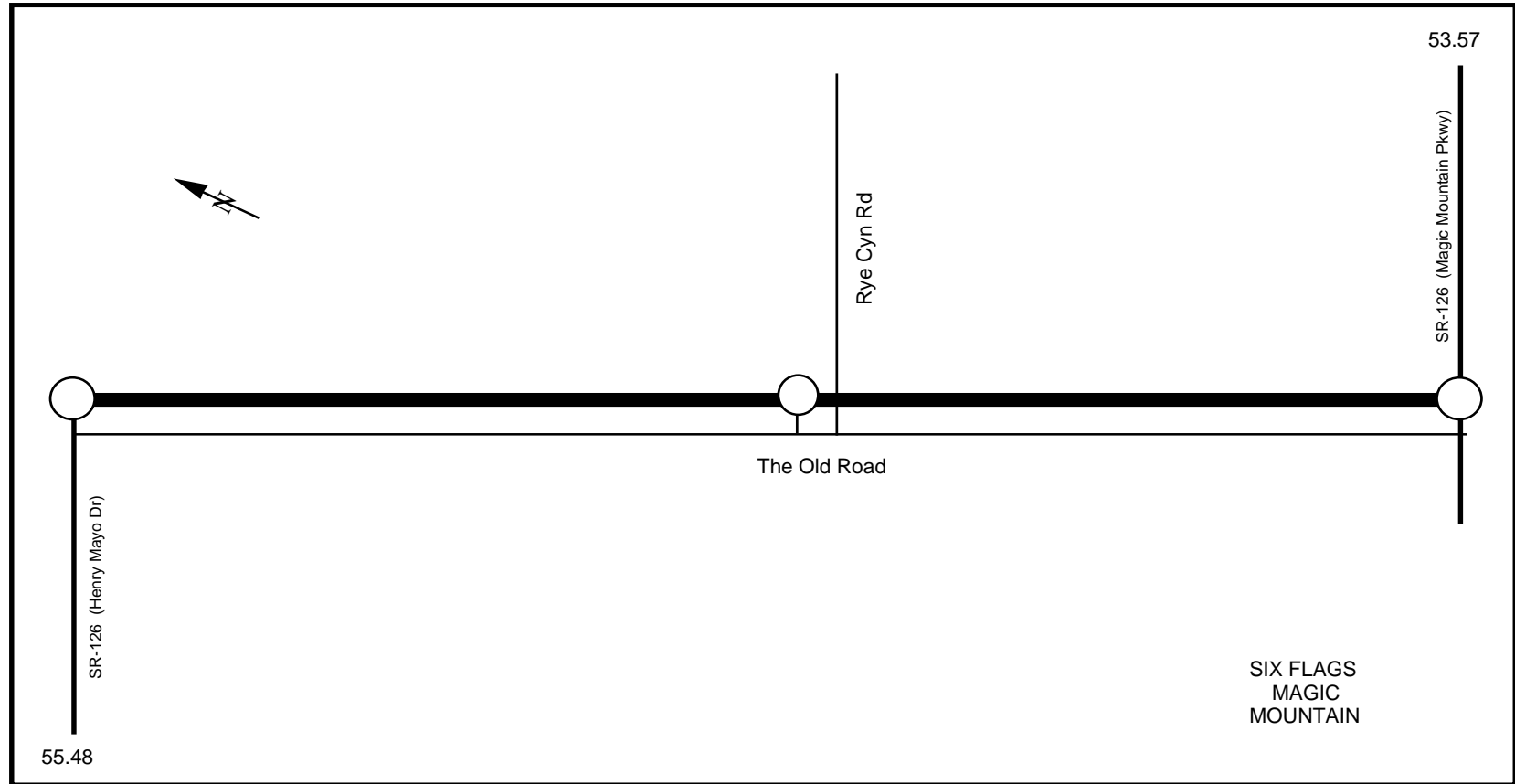
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 13* SR-14 to SR-126 S



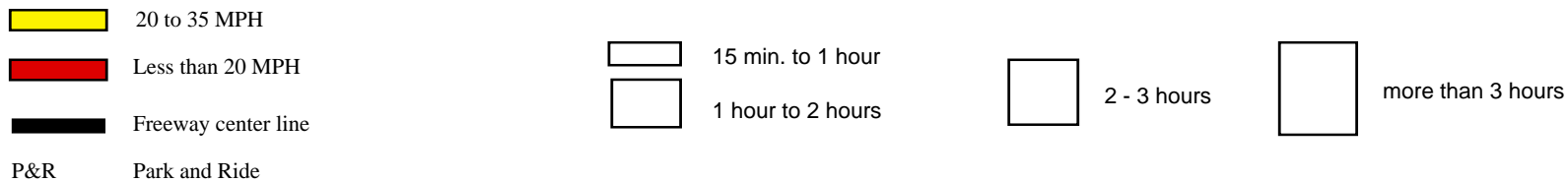
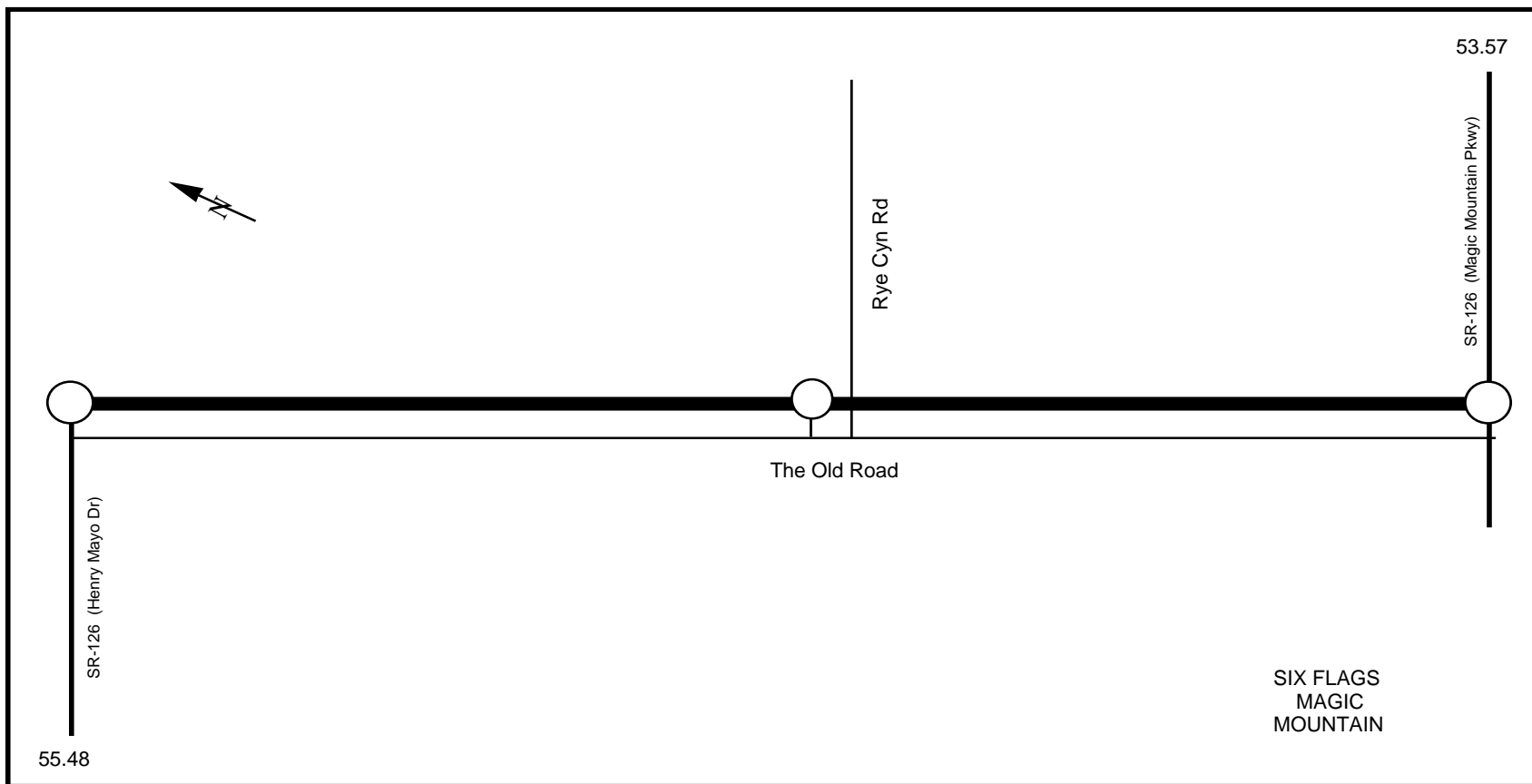
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 14* SR-126 S to SR-126 N



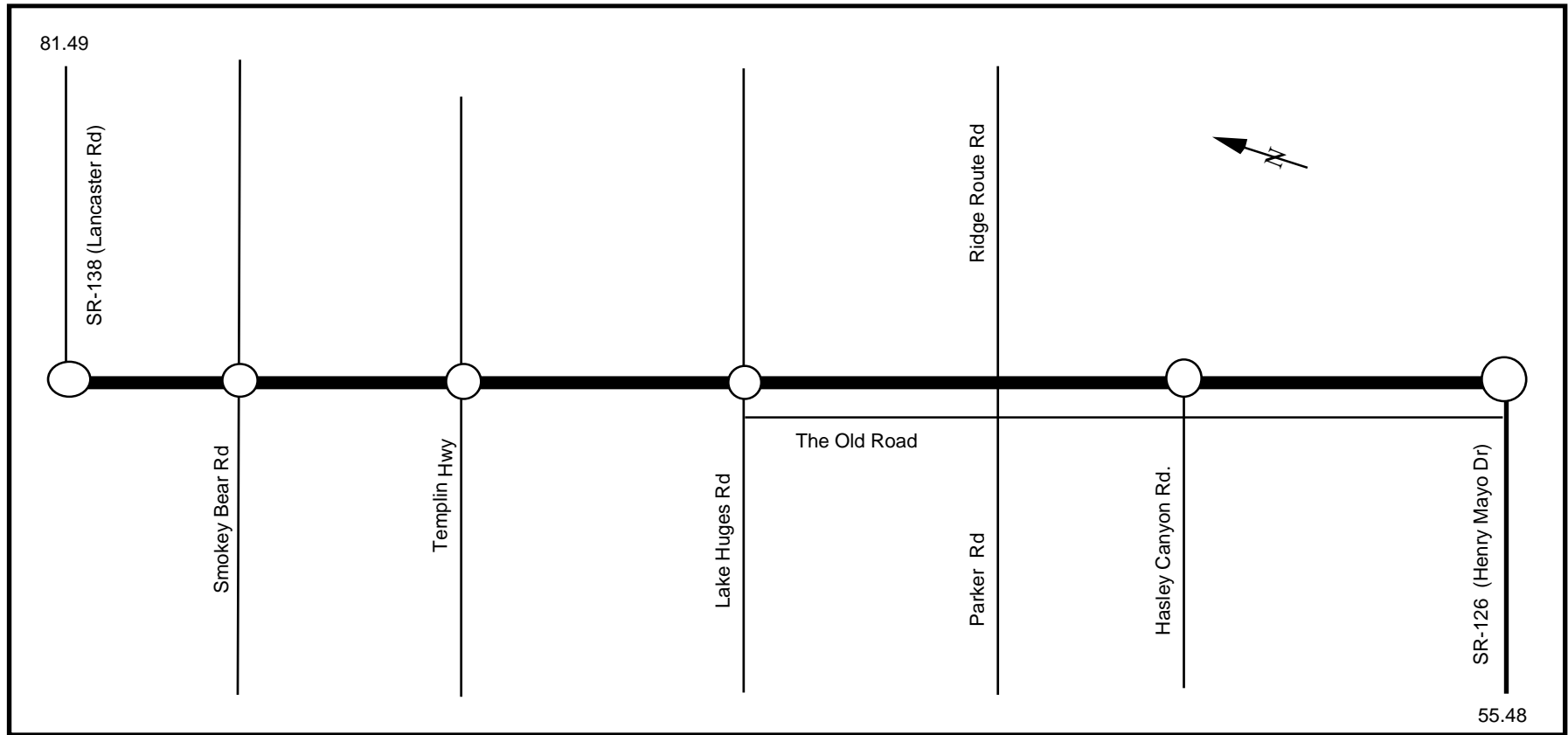
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.


INTERSTATE 5 PM PEAK CONGESTION SEGMENT 14* SR-126 S to SR-126 N





* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 15* SR-126 N to SR-138





 20 to 35 MPH


 Less than 20 MPH

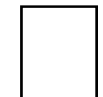
 Freeway center line

P&R Park and Ride

 15 min. to 1 hour

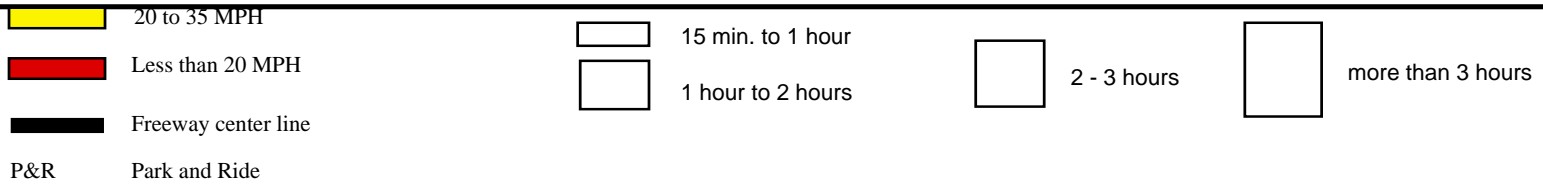
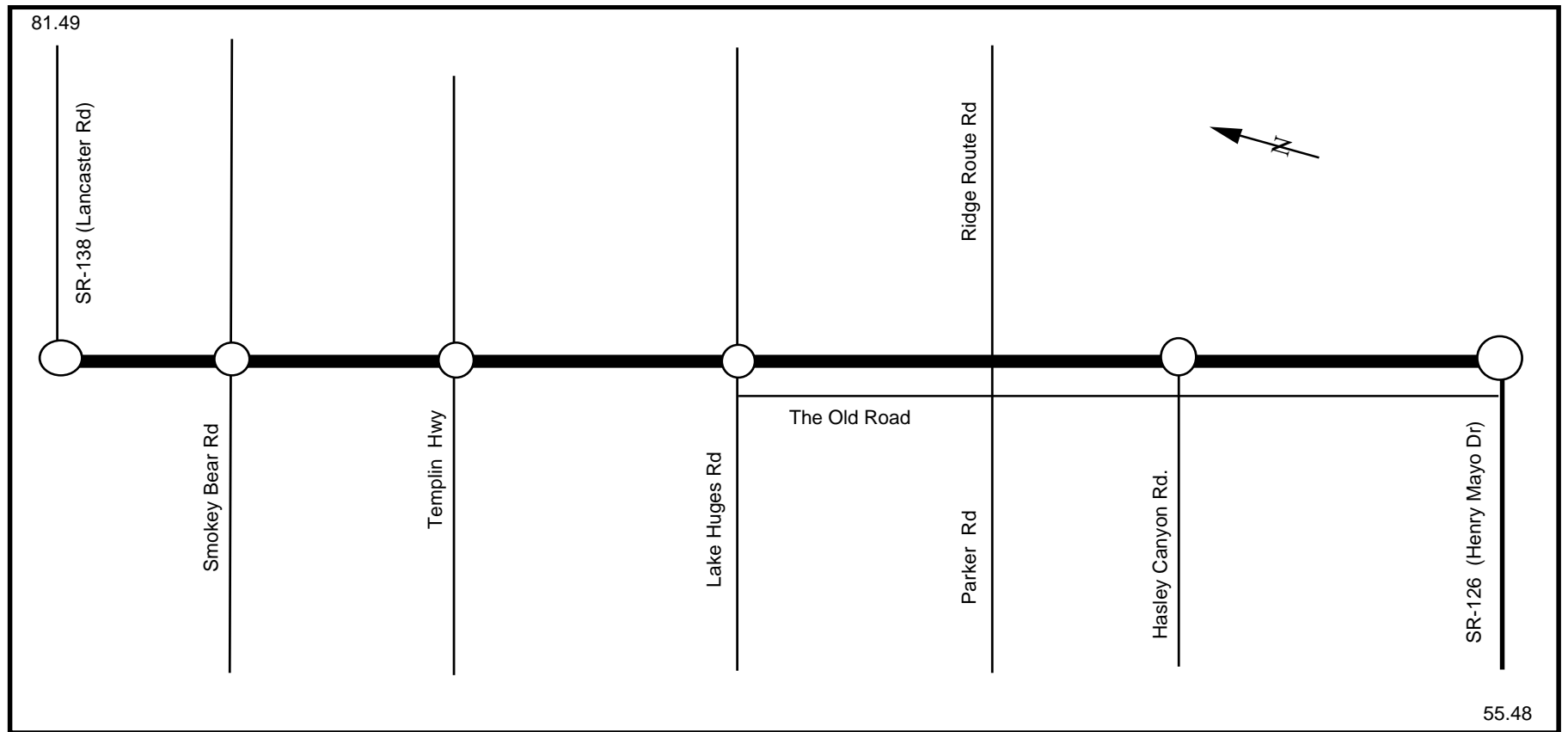
 1 hour to 2 hours

 2 - 3 hours

 more than 3 hours

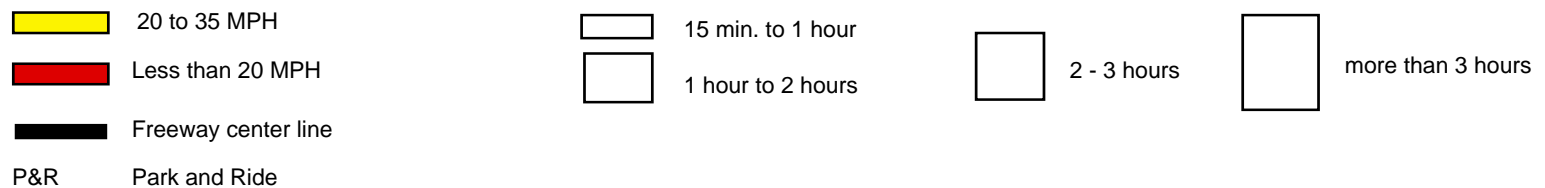
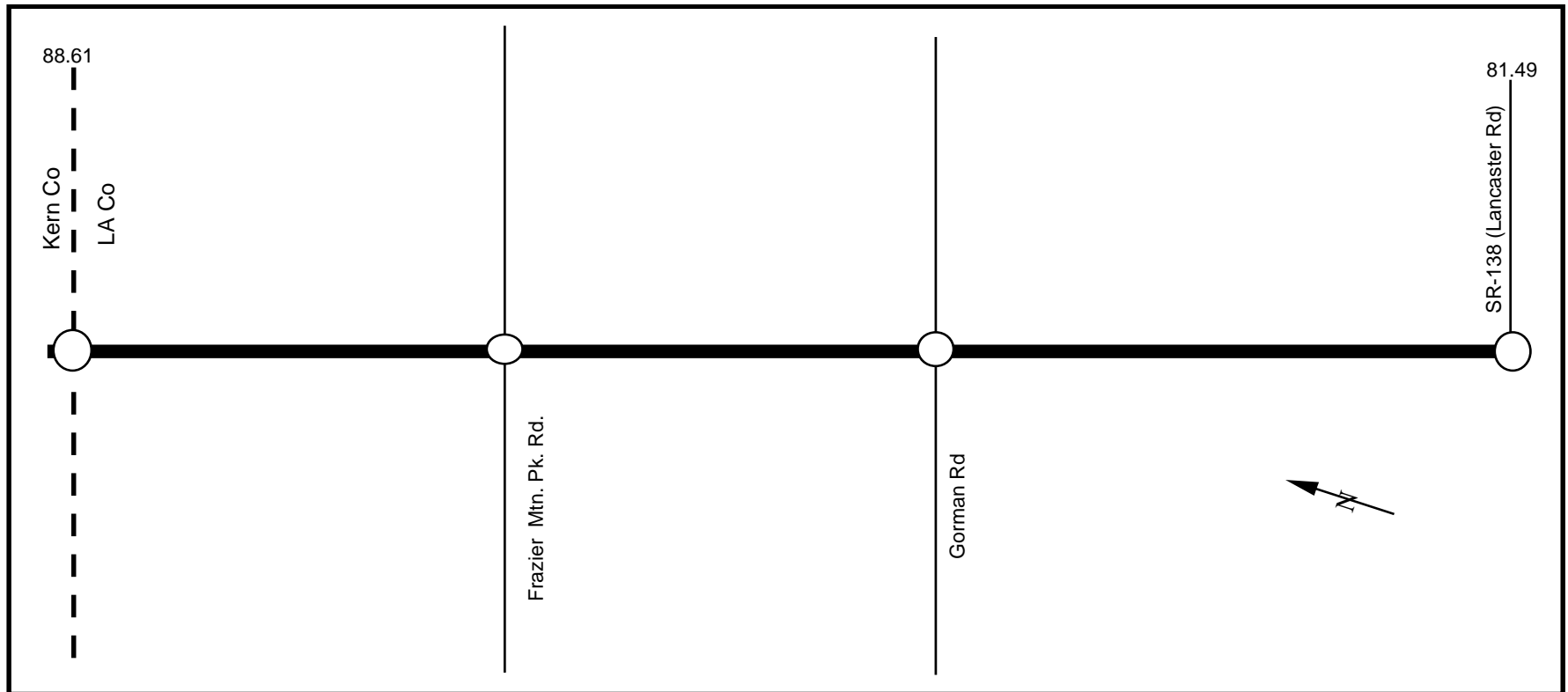
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 15* SR-126 N to SR-138



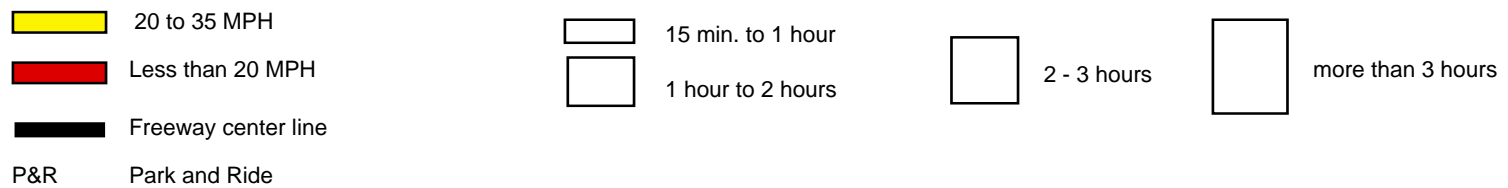
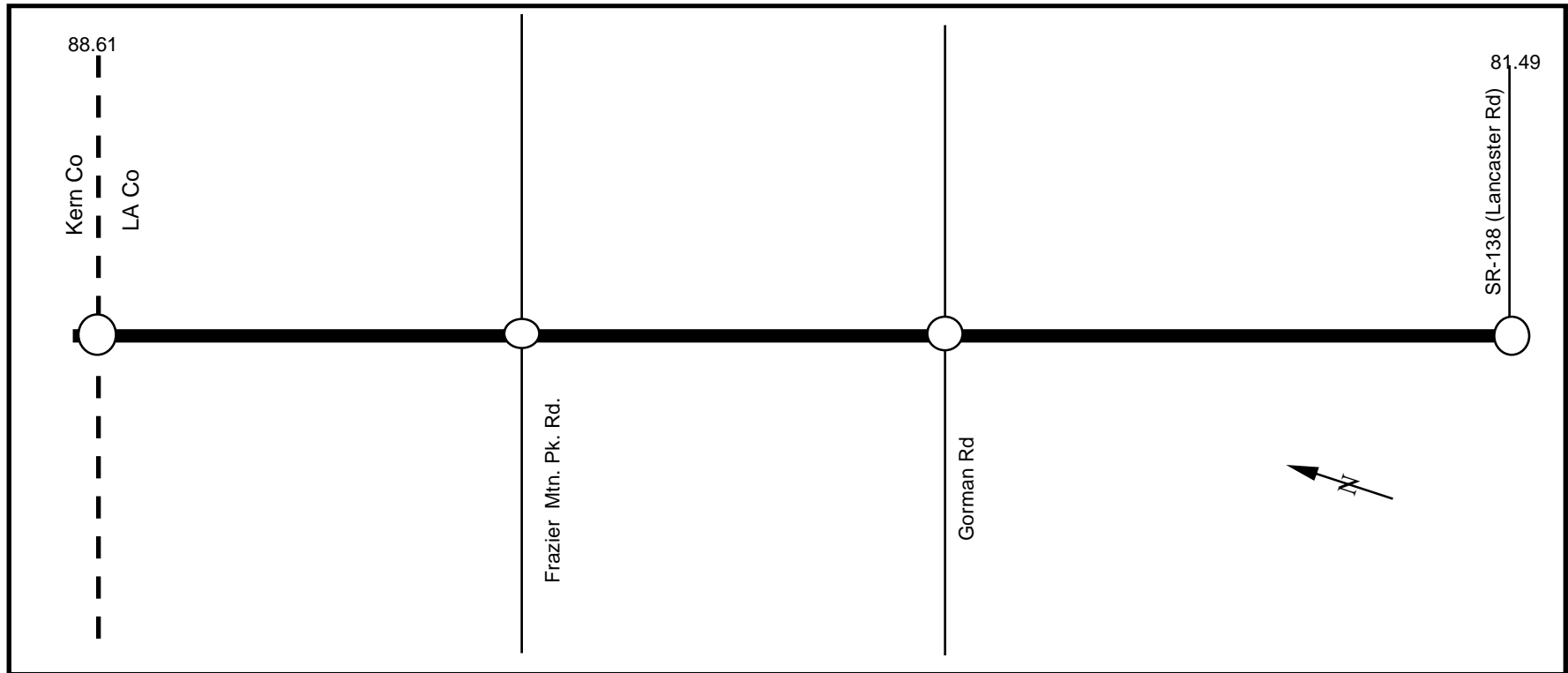
* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 AM PEAK CONGESTION SEGMENT 16* SR-138 to Kern County Line



* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 PM PEAK CONGESTION SEGMENT 16* SR-138 to Kern County Line



* Segment traffic does not meet threshold congestion criteria. However, significant congestion may exist at a higher average speed.

INTERSTATE 5 - CONGESTION MEASURES

SPEED AND DURATION								
	DURATION (hours)		AVERAGE SPEEDS (mph)					
	1995* EXISTING		2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	< 20mph	< 35 mph	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	1-2	2-3	10	>50	23	49	26	>50
Segment 2	1-2	>3	11	N/A	16	42	16	>50
Segment 3	2-3	>3	12	N/A	15	36	17	>50
Segment 4	1-2	>3	13	N/A	16	34	18	>50
Segment 5	.25-1	2-3	6	29	6	17	8	46
Segment 6	2-3	>3	2	18	3	16	4	43
Segment 7	0	1-2	15	>50	15	48	20	>50
Segment 8	0	.25-1	15	50	19	45	22	>50
Segment 9	0	.25-1	10	39	13	26	14	42
Segment 10	0	0	9	>50	27	43	33	>50
Segment 11	0	0	3	47	4	11	7	25
Segment 12	0	0	1	>50	4	4	5	31
Segment 13	0	0	1	N/A	3	36	3	>50
Segment 14	0	0	7	N/A	13	>50	15	>50
Segment 15	0	0	8	N/A	18	N/A	18	N/A
Segment 16	0	0	>50	N/A	>50	N/A	>50	N/A

These values are estimates and are to be used for comparative purposes only

* : Worst condition during peak hours

INTERSTATE 5 - CONGESTION MEASURES

DEMAND / CAPACITY RATIOS							
	1995* EXISTING	2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	1.46	2.05	0.83	1.64	1.09	1.59	0.64
Segment 2	1.59	2.03	N/A	1.84	1.23	1.82	0.75
Segment 3	1.17	1.96	N/A	1.86	1.34	1.80	0.85
Segment 4	1.12	1.94	N/A	1.82	1.39	1.77	0.91
Segment 5	1.42	2.31	1.47	2.28	1.76	2.18	1.14
Segment 6	2.01	2.78	1.74	2.66	1.80	2.49	1.21
Segment 7	1.17	1.86	0.96	1.85	1.11	1.73	0.61
Segment 8	1.39	1.86	1.06	1.76	1.18	1.68	0.77
Segment 9	1.75	2.07	1.30	1.95	1.54	1.88	1.23
Segment 10	1.30	2.09	0.62	1.56	1.21	1.45	0.99
Segment 11	1.51	2.62	1.12	2.52	1.98	2.20	1.57
Segment 12	1.49	3.60	0.83	2.56	2.48	2.36	1.43
Segment 13	1.79	3.36	N/A	2.74	1.34	2.67	0.74
Segment 14	1.21	2.26	N/A	1.91	0.63	1.86	0.41
Segment 15	2.06	2.16	N/A	1.78	N/A	1.76	N/A
Segment 16	1.19	1.12	N/A	0.90	N/A	0.91	N/A

* : Worst condition during peak hours

INTERSTATE 5 - CONGESTION MEASURES

LEVEL OF SERVICE							
	1995* EXISTING	2020 NULL* (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	F3	F3	D	F3	F0	F3	C
Segment 2	F3	F3	N/A	F3	F0	F3	C
Segment 3	F0	F3	N/A	F3	F1	F3	D
Segment 4	F0	F3	N/A	F3	F2	F3	D
Segment 5	F2	F3	F3	F3	F3	F3	F0
Segment 6	F3	F3	F3	F3	F3	F3	F0
Segment 7	F0	F3	E	F3	F0	F3	C
Segment 8	F2	F3	F0	F3	F0	F3	C
Segment 9	F3	F3	F1	F3	F3	F3	F0
Segment 10	F1	F3	C	F3	F0	F3	E
Segment 11	F3	F3	F0	F3	F3	F3	F3
Segment 12	F3	F3	D	F3	F3	F3	F2
Segment 13	F3	F3	N/A	F3	F1	F3	C
Segment 14	F0	F3	N/A	F3	C	F3	B
Segment 15	F3	F3	N/A	F3	N/A	F3	N/A
Segment 16	F0	F0	N/A	D	N/A	D	N/A

* : Worst condition during peak hours

INTERSTATE 5 - CONGESTION MEASURES

HOURS OF DELAY							
	1995* EXISTING	2020 NULL * (with I-710)		2020 CONCEPT* Alternate 1		2020 CONCEPT* Alternate 2	
	Main Line	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)	Main Line	HOV Lane(s)
Segment 1	750	6,050	0	2,650	50	2,150	0
Segment 2	1,750	7,300	N/A	5,150	100	5,100	0
Segment 3	150	3,050	N/A	2,650	50	2,150	0
Segment 4	100	2,050	N/A	1,750	50	1,450	0
Segment 5	250	4,800	100	5,950	250	4,100	50
Segment 6	2,150	19,250	250	15,100	300	10,450	50
Segment 7	250	3,700	0	4,400	50	2,800	0
Segment 8	1,000	6,000	50	5,150	100	4,000	0
Segment 9	1,650	4,450	50	4,250	150	3,750	100
Segment 10	100	2,250	0	650	50	400	0
Segment 11	550	17,000	0	14,450	600	6,850	300
Segment 12	400	56,500	0	12,750	1,550	9,250	100
Segment 13	3,350	142,000	N/A	46,750	150	45,450	0
Segment 14	50	2,950	N/A	1,500	0	1,200	0
Segment 15	15,650	21,250	N/A	8,050	N/A	7,950	N/A
Segment 16	150	100	N/A	50	N/A	50	N/A

These values are estimates and are to be used for comparative purposes only

* : Worst condition during peak hours

VI. Improvements

IMPROVEMENTS

This section contains three "improvement" listings:

- **Summary of Concept Improvements:** (Pages VI-2 & 3) This summarizes improvements from the Segment Summaries and from the final "Illustrated Improvement Section".
- **Programmed Improvements:** (Pages IV-4 & 5) This section lists improvements that are currently programmed on I-5.
- **Illustrated Improvement Section:** Beginning at page VI-7, this section is intended to illustrate the scale of the congestion problem on I-5. The "Concept" illustrates the preferred Transportation Concept for the target segment. The next two illustrations describe the lane equivalents necessary to either maintain the current level of congestion or to attain LOS "D". **Neither of the latter illustrations is intended to suggest projects for programming.** They are intended to provide a visual image of the needs in the I-5 corridor.

Summary of Concept Improvements

Segment	Limits	Existing Facility	Alternative Concept #1	Alternative Concept #2	Maintain Current D/C	LOS "D" Attainment
1	Orange County Line to I-605	3MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 2HOV + 1TL or 5MF + 2HOV	6MF + 1HOV + 1TL or 7MF + 1HOV	8MF + 2HOV + 1TL or 9MF + 2HOV
2	I-605 to I-710	4MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 2HOV + 1TL or 5MF + 2HOV	7MF + 1HOV + 1TL or 8MF + 1HOV	9MF + 2HOV + 1TL or 10MF + 2HOV
3	I-710 to E. Los Angeles I/C	5MF	5MF + 1HOV + 1TL or 6MF + 1HOV	5MF + 2HOV + 1TL or 6MF + 2HOV	10MF + 1HOV + 1TL or 11MF + 1HOV	11MF + 2HOV + 1TL or 12MF + 2HOV
4	E. Los Angeles I/C to I-10	5MF	5MF + 1HOV + 1TL or 6MF + 1HOV	5MF + 2HOV + 1TL or 6MF + 2HOV	9MF + 1HOV + 1TL or 10MF + 1HOV	11MF + 2HOV + 1TL or 12MF + 2HOV
5	I-10 to I-110	4MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 3HOV + 1TL or 5MF + 3HOV	7MF + 1HOV + 1TL or 8MF + 1HOV	12MF + 2HOV + 1TL or 13MF + 2HOV
6	I-110 to SR-2	4MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 3HOV + 1TL or 5MF + 3HOV	7MF + 1HOV + 1TL or 8MF + 1HOV	14MF + 2HOV + 1TL or 15MF + 2HOV
7	SR-2 to SR-134	5MF	5MF + 1HOV + 1TL or 6MF + 1HOV	5MF + 2HOV + 1TL or 6MF + 2 HOV	9MF + 1HOV + 1TL or 10MF + 1HOV	11MF + 2HOV + 1TL or 12MF + 2HOV
8	SR-134 to SR-170	4MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 2HOV + 1TL or 5MF + 2HOV	6MF + 1HOV + 1TL or 7MF + 1HOV	9MF + 2HOV + 1TL or 10MF + 2HOV
9	SR-170 to SR-118	5MF	6MF + 1HOV + 1TL or 7MF + 1HOV	6MF + 2HOV + 1TL or 7MF + 2HOV	10MF + 1HOV + 1TL or 11MF + 1HOV	14MF + 2HOV + 1TL or 15MF + 2HOV
10	SR-118 to I-405	3MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 2HOV + 1TL or 5MF + 2HOV	6MF + 1HOV + 1TL or 7MF + 1HOV	8MF + 2HOV + 1TL or 9MF + 2HOV

Summary of Concept Improvements (cont.)

Segment	Limits	Existing Facility	Alternative Concept #1	Alternative Concept #2	Maintain Current D/C	LOS "D" Attainment
11	I-405 to I-210	5MF	5MF + 1HOV + 1TL or 6MF + 1HOV	5MF + 3HOV + 1TL or 6MF + 3HOV	10MF + 1HOV + 1TL or 11MF + 1HOV	16MF + 3HOV + 1TL or 17MF + 3HOV
12	I-210 to SR-14	6MF	6MF + 1HOV + 2TL or 8MF + 1HOV	6MF + 3HOV + 2TL or 8MF + 3HOV	14MF + 1HOV + 2TL or 16MF + 1HOV	20MF + 3HOV + 2TL or 22MF + 3HOV
13	SR-14 to SR-126 (S)	4MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 2HOV + 1TL or 5MF + 2HOV	12MF + 1HOV + 1TL or 13MF + 1HOV	14MF + 2HOV + 1TL or 15MF + 2HOV
14	SR-126 (S) to SR-126 (N)	4MF	4MF + 1HOV + 1TL or 5MF + 1HOV	4MF + 2HOV + 1TL or 5MF + 2HOV	10MF + 1HOV + 1TL or 11MF + 1HOV	10MF + 1HOV + 1TL or 11MF + 1HOV
15	SR-126 (N) to SR-138	4MF	4MF + 1TL or 5MF	4MF + 1TL or 5MF	6MF + 1TL or 7MF	9MF + 1TL or 10MF
16	SR-138 to Kern County Line	4MF	4MF + 1TL or 5MF	4MF + 1TL or 5MF	4MF + 1TL or 5MF	4MF + 1TL or 5MF

TL: Truck Lanes

D/C: Demand / Capacity

PROGRAMMED IMPROVEMENTS

The following table lists major **Interstate 5** capacity enhancement and operational improvement projects programmed for construction beginning in Fiscal Year 96/97 and later. These seven programming documents¹ provide a mechanism for project funding within the region. The following is a brief description of each.

Regional Transportation Improvement Program (RTIP) – A four-year list of proposed transportation projects. The Regional Transportation Planning Agency (RTPA) submits the RTIP to the California Transportation Commission (CTC) as a request for State Funding. If RTIP projects have federal funding components, they will also appear in the FTIP once selected for the STIP (see below).

Interregional Improvement Program (IIP) – A four-year program developed by Caltrans, that includes project developed through the Interregional Road System Plan, Intercity Rail, Soundwall, Toll Bridge, and Aeronautics programs.

State transportation Improvement Program (STIP) – A four-year list of transportation projects proposed in RTIP's and PSTIP's that the CTC adopts. Those projects that have federal funding components will also appear in the FTIP and FSTIP.

State Highway Operation and Protection Program (SHOPP) – A four-year program limited to projects related to State highway safety and rehabilitation.

¹ The Governor approved Senate Bill 45 on October 2, 1997. The Bill significantly changes transportation funding in California. The California Department of Transportation, in cooperation with the California Transportation Commission (CTC), transportation planning agencies and county transportation commissions and local governments shall develop guidelines for the development of the State Transportation Improvement Program (STIP) and the incorporation of projects into the STIP. The CTC shall adopt the guidelines by December 31, 1998.

Federal Transportation Improvement Program (FTIP) – A three-year list of all transportation projects proposed for federal funding under ISTEA, within the planning area of an MPO. An MPO develops the FTIP and the Director of Caltrans approves it. In air quality non-attainment areas, the plan must conform to a State Implementation Plan.

Federal State Transportation Improvement Program (FSTIP) – A three-year list of transportation projects proposed for funding under ISTEA developed by the State in cooperation with MPO's and in consultation with local non-urbanized governments. The FSTIP includes all FTIP projects as well as other federally funded rural projects.

PROGRAMMED PROJECTS

Interstate 5

Segment	EA ²	PPNO ³	CO	ROUTE	POST MILE	Description	Estimate \$	Start	Complete ⁴
1	168811	2008	LA	005	0.1/3.4	Interim High Occupancy Vehicle (HOV) lanes	\$60.3M		1/05
1	016882	2008A	LA	005	3.4/6.8	Construct HOV	\$67.0M	2004	
2	016830	2008B	LA	005	6.8/8.3	Construct HOV	\$31.4M	2004	
4-5	061231	0128M	LA	005	17.0/19.7	Replacement Planting and Upgrade Irrigation	\$1.1M		6/02
6-8	174501	2064	LA	005	20.5/28.5	Upgrade 2 changeable message signs and install 2 turnouts for maintenance access	\$0.45M		6/99
7-8	121800	0142F	LA	005	26.7/36.4	Construct HOV	\$28.9M		9/05
8	017860	2120	LA	005	27.4/28.1	Modify Western Ave. U.C.	\$29.7M	2003	
8-13	176241	2093	LA	005	28.7/48.0	Rehabilitate Roadway	\$2.6M		8/00
9	121900	0158K	LA	005	36.4/39.4	Construct HOV	\$21.4M		12/05
10-12	122001	0162P	LA	005	39.4/45.6	Construct HOV	\$13.4M		4/03
11-12	101670	0978T	LA	005	42.1/44.4	Widen Freeway from 6 to 10 lanes with HOV	\$24.1M		5/07
15	142901	0176P	LA	005	61.7/62.6	Reconstruct Northbound lanes and fill embankment	\$9.7M		9/01
15-16	175301	2079	LA	005	73.6/88.6	Rehabilitate Roadway	\$3.7M		8/99
16	174201	2060	LA	005	81.5/88.6	Rehabilitate Bridge Deck	\$4.5M		5/01

EA ²: Expenditure Authorization

PPNO ³: Planning and Program Number

Complete ⁴: Target Completion Date

Improvements

Legend

Concept

Proposed concept facility based on demand and policy.

Maintain Current Level Of Congestion

Freeway lane equivalents necessary to maintain the current Demand/Capacity Ratio.

LOS "D" Attainment:

Freeway lane equivalents necessary to attain Level Of Service "D".



Single
Occupancy = 2,000 vehicles
Vehicle per lane per
Lane hour



Heavy = 50,000 - 100,000
Rail passenger per day*



High
Speed (shown for information only)
Rail



High Occupancy = 1,650
Vehicle Lane vehicles per
lane per hour



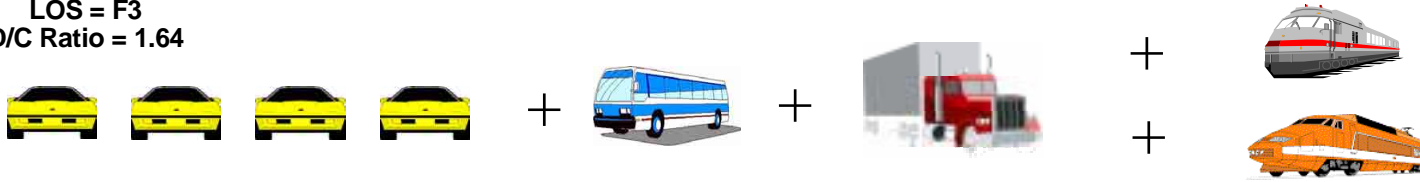
Truck = 1,500 vehicles per
Lane lane per hour

* This represents the approximate range between actual ridership on the LACMTA Blue Line (47,000) and the 100,000 passengers per day estimated by SCAG in this corridor. Current ridership on the Metrolink - Santa Clarita line is approximately 3,800 daily.

Interstate 5
SEGMENT 1
Orange County Line to I-605
In Each Direction

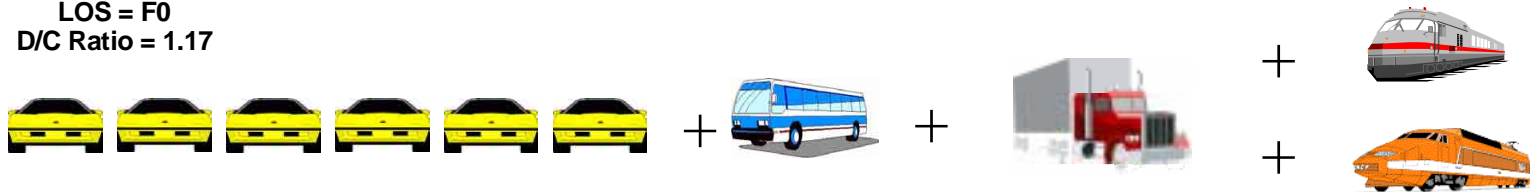
CONCEPT

LOS = F3
D/C Ratio = 1.64



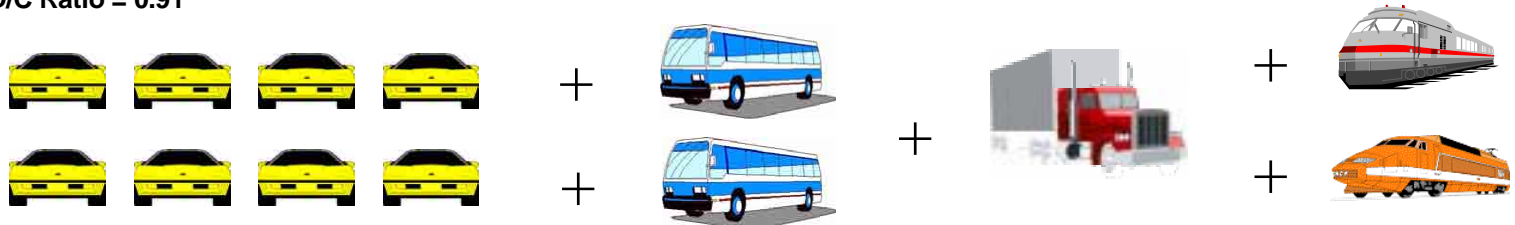
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
D/C Ratio = 1.17



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.91



**INTERSTATE 5
SEGMENT 2
I-605 to I-710
In Each Direction**

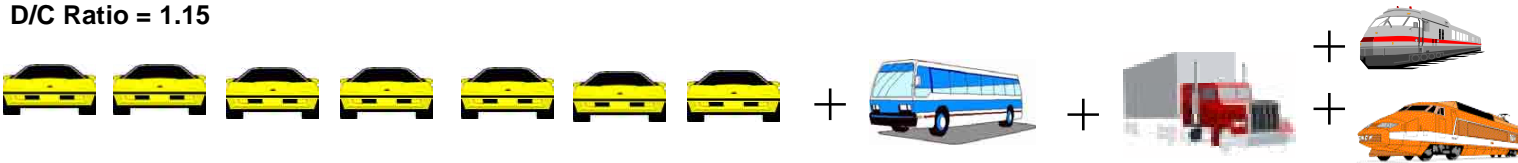
CONCEPT

LOS = F3
D/C Ratio = 1.84



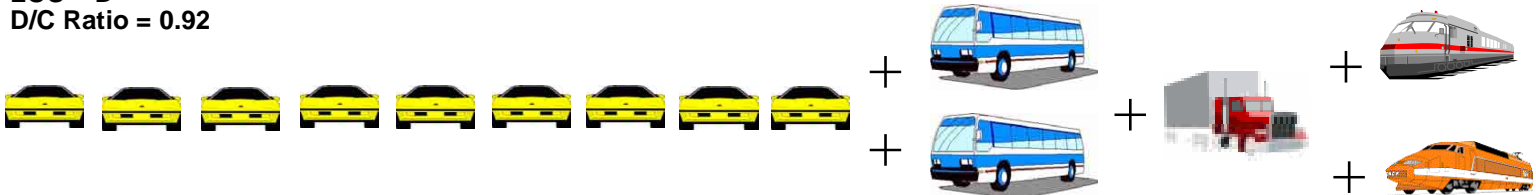
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
D/C Ratio = 1.15



LOS "D" ATTAINMENT

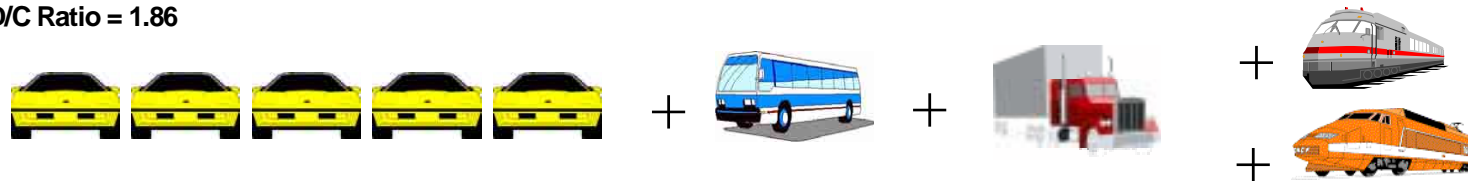
LOS = D
D/C Ratio = 0.92



Interstate 5
SEGMENT 3
 I-710 to East LA Interchange
In Each Direction

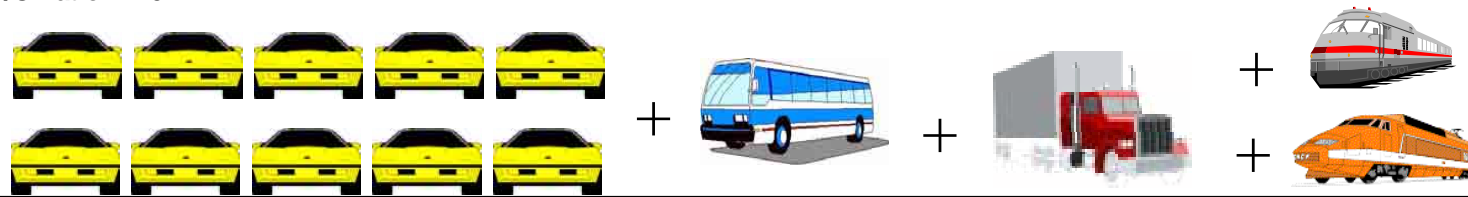
CONCEPT

LOS = F3
 D/C Ratio = 1.86



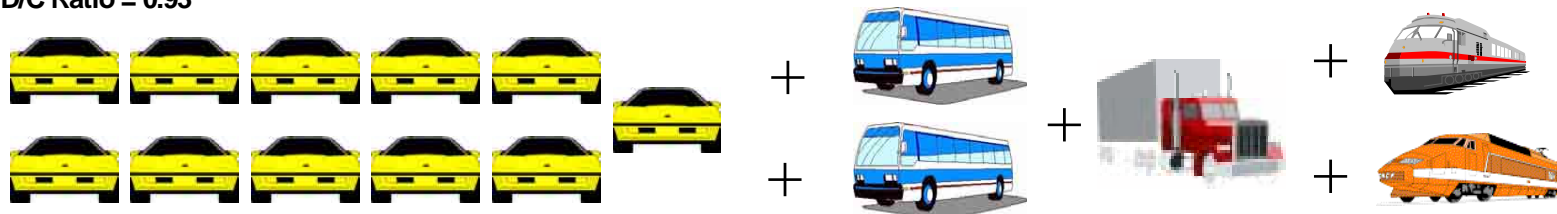
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
 D/C Ratio = 1.01



LOS "D" ATTAINMENT

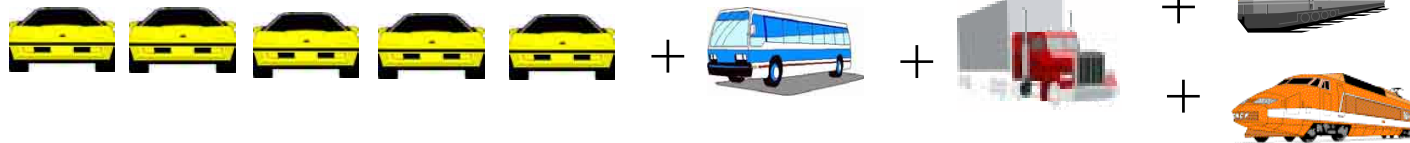
LOS = D
 D/C Ratio = 0.93



Interstate 5
SEGMENT 4
 East LA interchange to I-10
In Each Direction

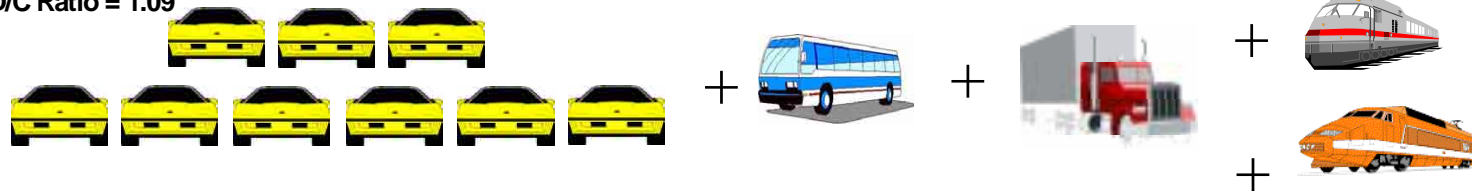
CONCEPT

LOS = F3
 D/C Ratio = 1.82



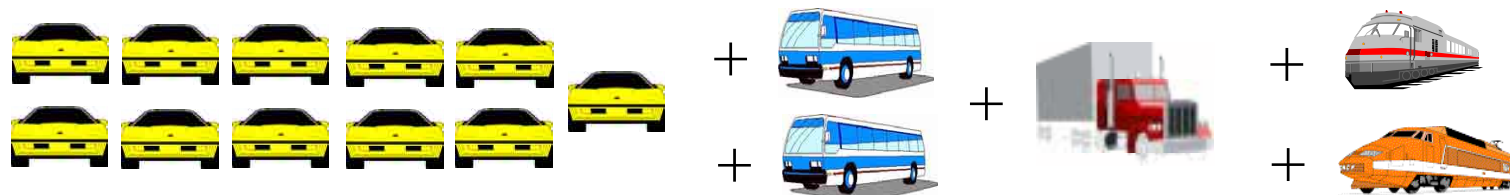
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
 D/C Ratio = 1.09



LOS "D" ATTAINMENT

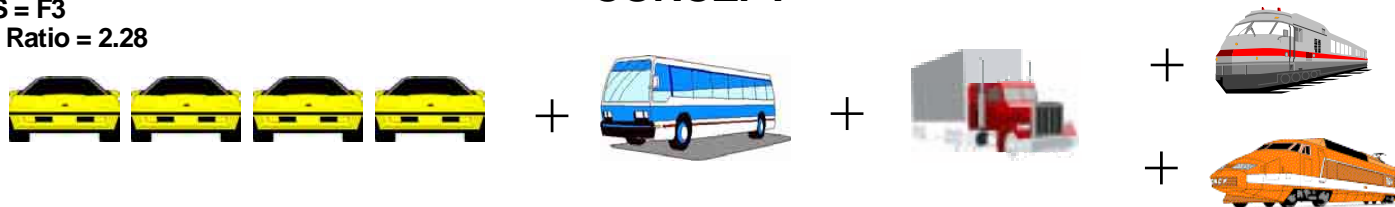
LOS = D
 D/C Ratio = 0.91



Interstate 5
SEGMENT 5
 I-10 to SR-110
In Each Direction

CONCEPT

LOS = F3
 D/C Ratio = 2.28



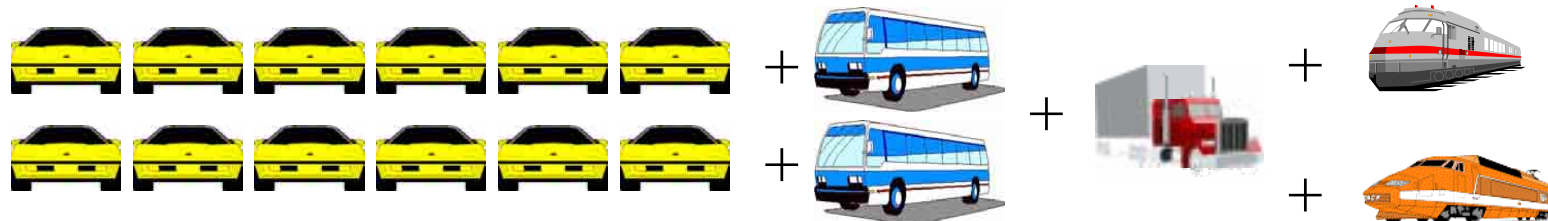
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F2
 D/C Ratio = 1.42



LOS "D" ATTAINMENT

LOS = D
 D/C Ratio = 0.88



Interstate 5
SEGMENT 6
 SR-110 to SR-2
In Each Direction

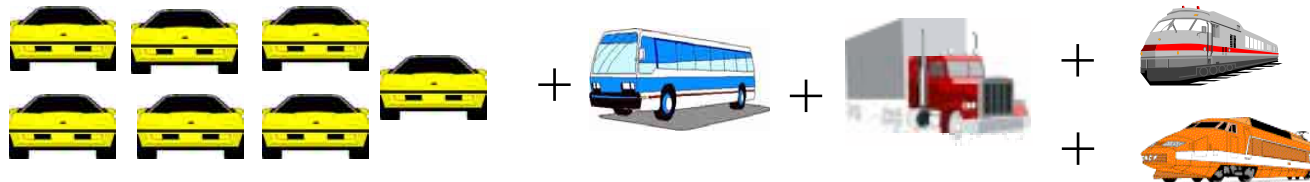
CONCEPT

LOS = F3
 D/C Ratio = 2.66



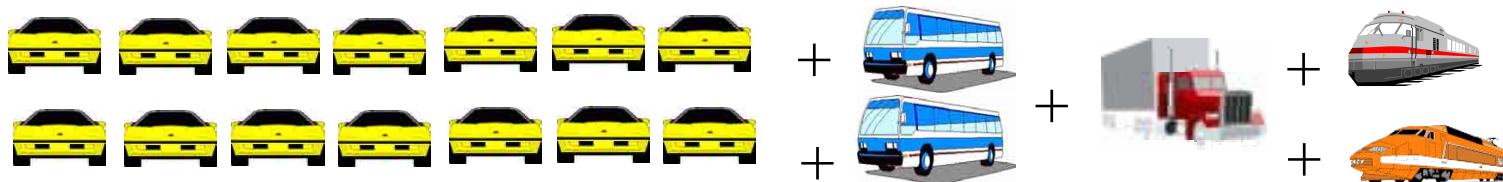
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F3
 D/C Ratio = 1.66



LOS "D" ATTAINMENT

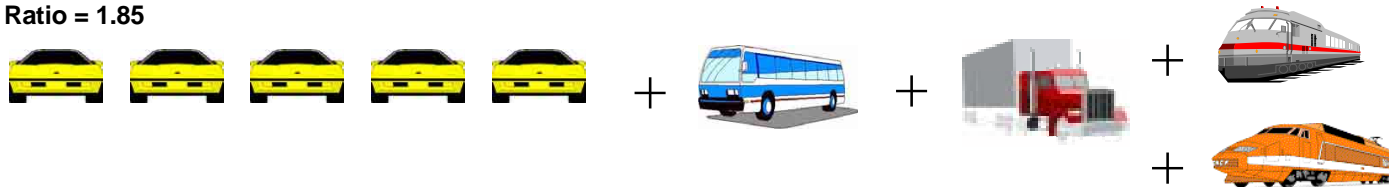
LOS = D
 D/C Ratio = 0.87



Interstate 5
SEGMENT 7
 SR-2 to SR-134
In Each Direction

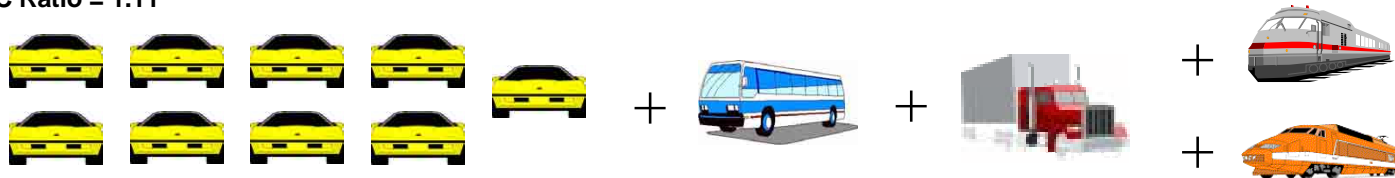
CONCEPT

LOS = F3
 D/C Ratio = 1.85



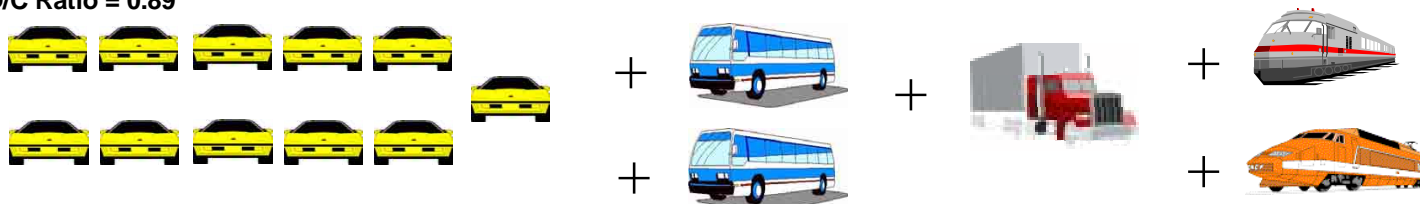
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
 D/C Ratio = 1.11



LOS "D" ATTAINMENT

LOS = D
 D/C Ratio = 0.89



Interstate 5
SEGMENT 8
 SR-134 to SR-170
In Each Direction

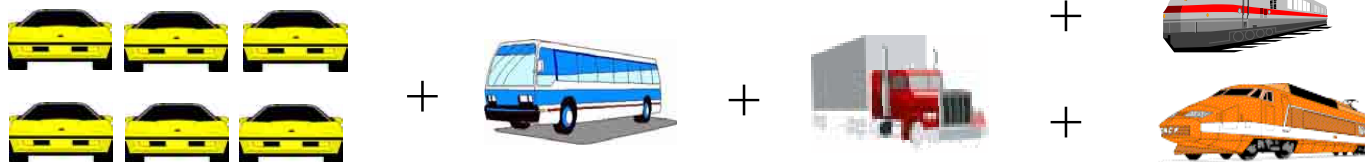
CONCEPT

LOS = F3
 D/C Ratio = 1.76



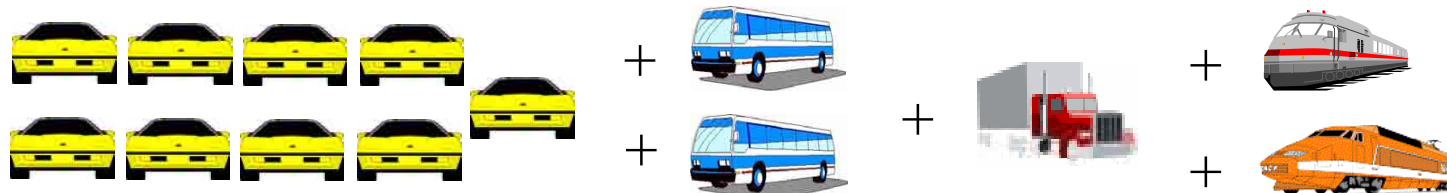
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
 D/C Ratio = 1.25



LOS "D" ATTAINMENT

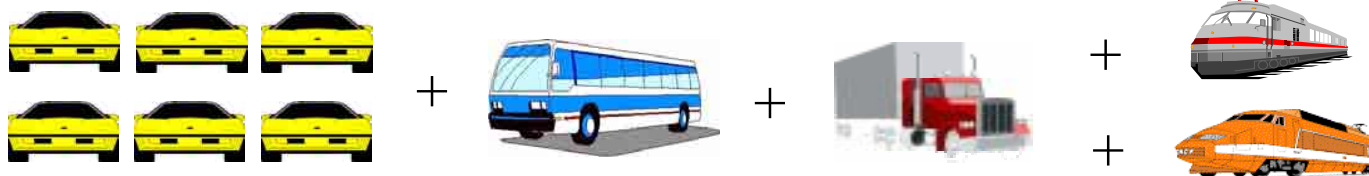
LOS = D
 D/C Ratio = 0.93



Interstate 5
SEGMENT 9
 SR-170 to SR-118
In Each Direction

CONCEPT

LOS = F3
 D/C Ratio = 1.95



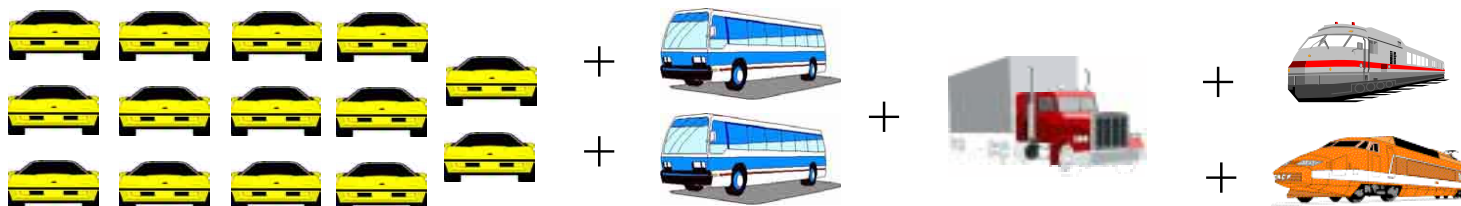
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
 D/C Ratio = 1.24



LOS "D" ATTAINMENT

LOS = D
 D/C Ratio = 0.91



Interstate 5
SEGMENT 10
 SR-118 to I-405
In Each Direction

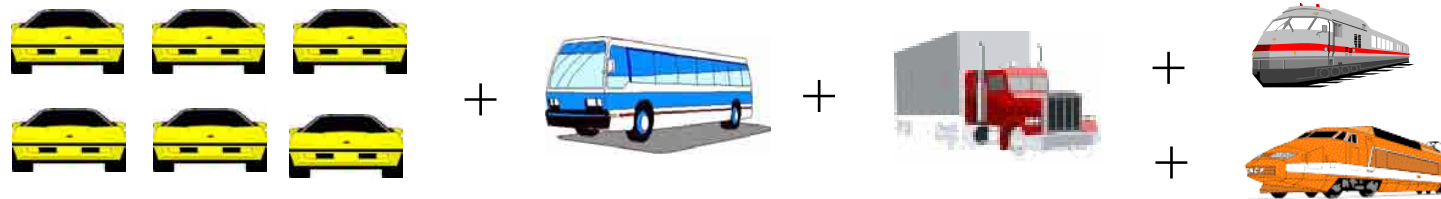
CONCEPT

LOS = F3
 D/C Ratio = 1.56



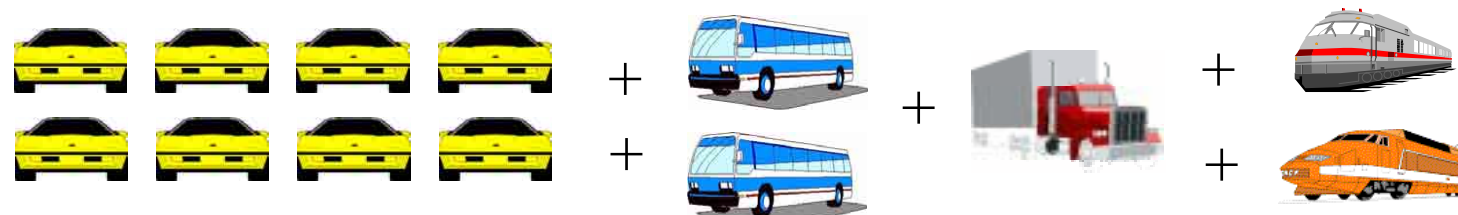
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F0
 D/C Ratio = 1.11



LOS "D" ATTAINMENT

LOS = D
 D/C Ratio = 0.87



Interstate 5
SEGMENT 11
 I-405 to I-210
In Each Direction

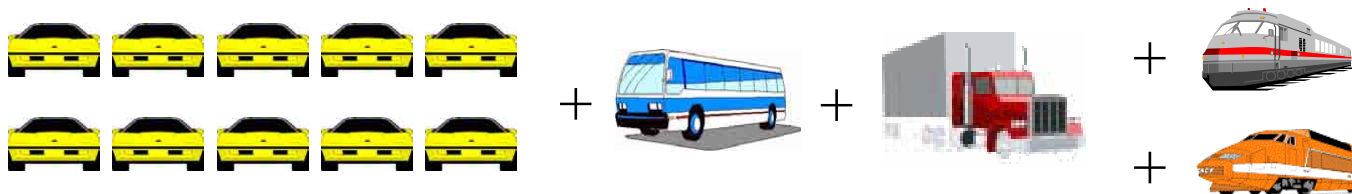
CONCEPT

LOS = F3
 D/C Ratio = 2.52



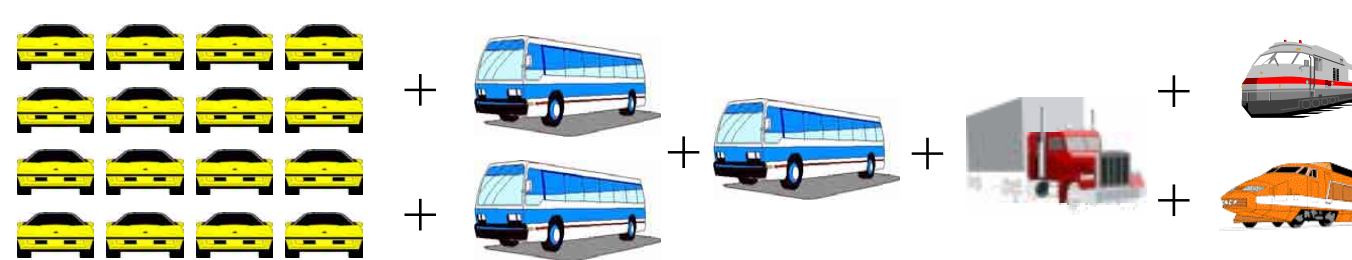
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F2
 D/C Ratio = 1.37



LOS "D" ATTAINMENT

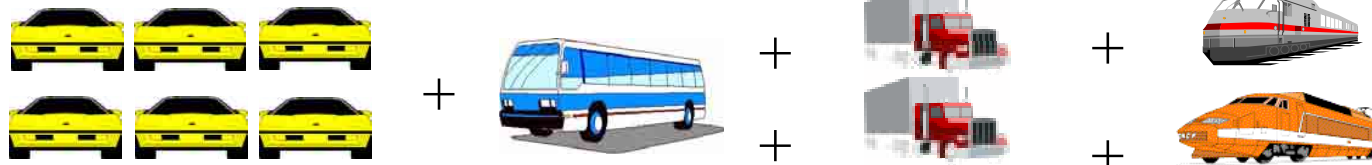
LOS = D
 D/C Ratio = 0.89



Interstate 5
SEGMENT 12
 I-210 to SR-14
In Each Direction

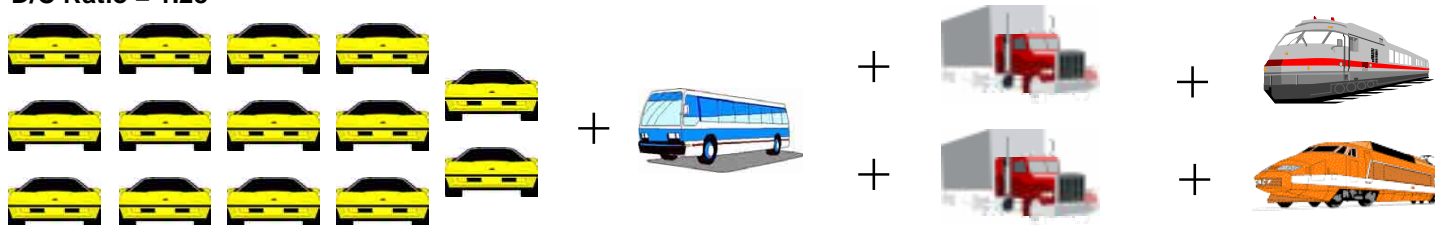
CONCEPT

LOS = F3
 D/C Ratio = 2.56



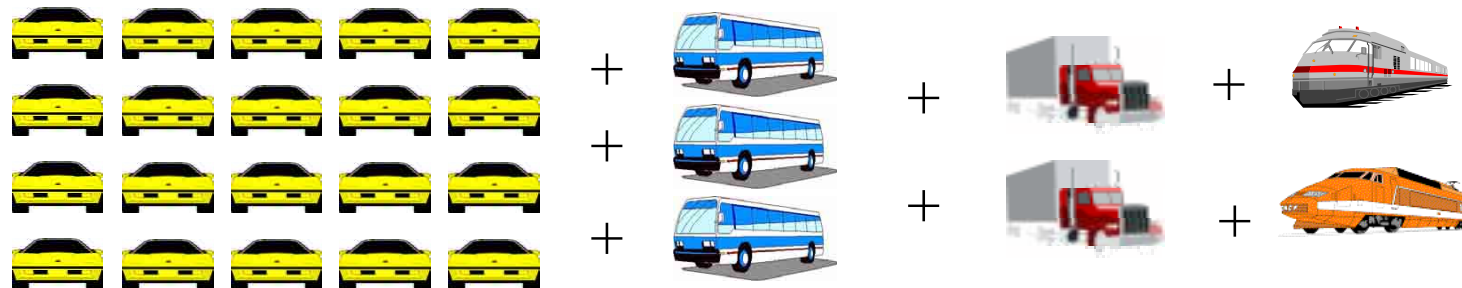
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F1
 D/C Ratio = 1.28



LOS "D" ATTAINMENT

LOS = D
 D/C Ratio = 0.93



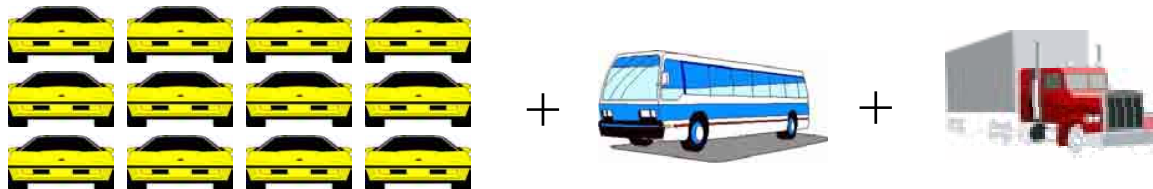
Interstate 5
SEGMENT 13
SR-14 to SR-126S
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 2.74

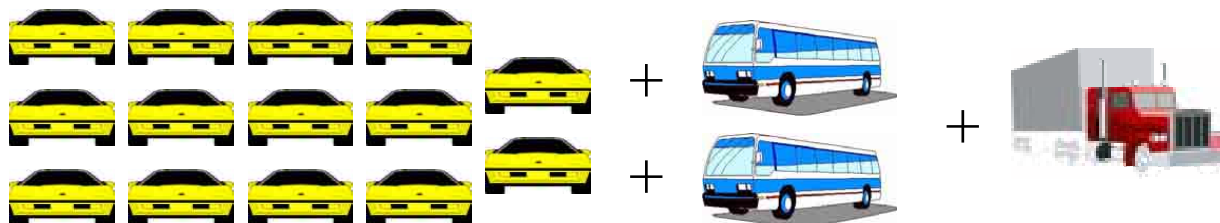


MAINTAIN CURRENT LEVEL OF CONGESTION
LOS = F0
D/C Ratio = 1.05



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.91



Interstate 5
SEGMENT 14
SR-126S to SR-126N
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 1.91



MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = D
D/C Ratio = 0.87



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.87



Interstate 5
SEGMENT 15
SR-126N to SR-138S
In Each Direction

CONCEPT

LOS = F3
D/C Ratio = 1.78



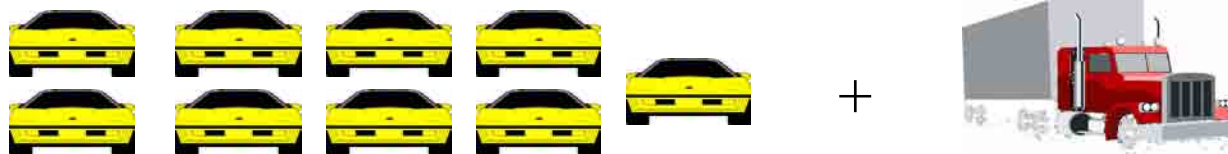
MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = F1
D/C Ratio = 1.27



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.89



Interstate 5
SEGMENT 16
SR-138S to Kern county line
In Each Direction

CONCEPT

LOS = D
D/C Ratio = 0.90



MAINTAIN CURRENT LEVEL OF CONGESTION

LOS = D
D/C Ratio = 0.90



LOS "D" ATTAINMENT

LOS = D
D/C Ratio = 0.90



VII. Socio-Economics

SOCIO-ECONOMICS

Interstate 5 traverses eight of the Southern California Association of Government's (SCAG) Regional Statistical Areas (RSA). Following are graphs illustrating projected growth in these areas between 1990 and 2020. Included are data on housing, population and employment.

Please note that the growth rate for Housing ranges from an increase of 16% in the Norwalk-Whittier RSA to an increase of 205% in the Santa Clarita Valley RSA. Population growth estimates range from an increase of 23% in the Norwalk-Whittier RSA to a high of 236% in the Santa Clarita Valley RSA. Employment changes range from a decrease of 3% in the Los Angeles Central Business District RSA to an increase of 182% in the Santa Clarita Valley RSA.

The effects of the very large increases in jobs, population and housing in the Santa Clarita Valley are reflected in the corresponding increases in projected traffic in Segments 11, 12 and 13. These three segments funnel traffic between the Santa Clarita and San Fernando valleys.

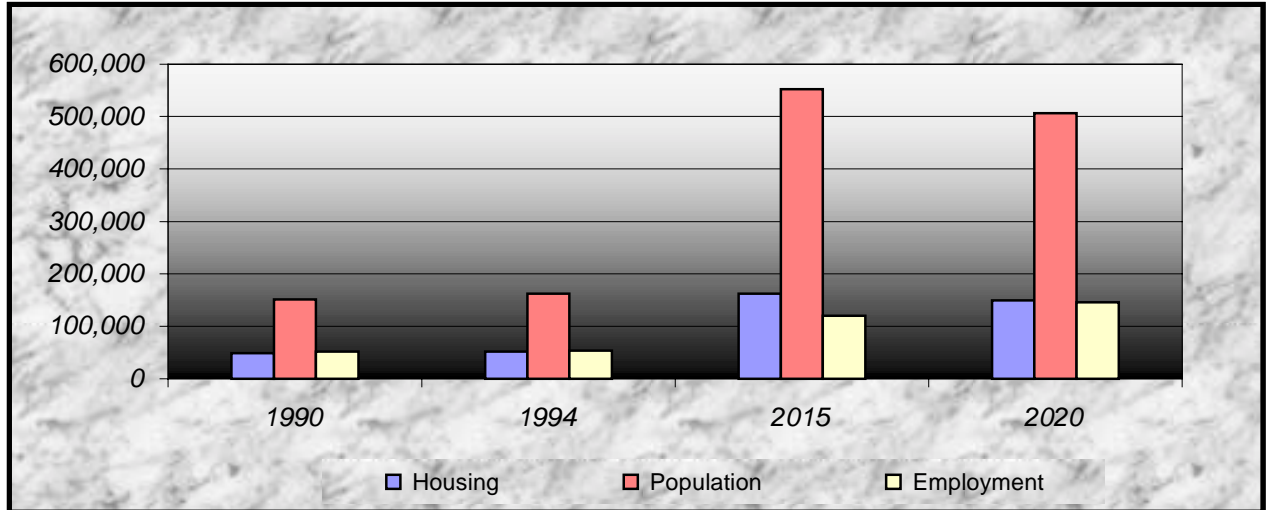
Two of the RSA's have significant differences in the rate of growth between at least two of the socio-economic factors:

- The Northeast San Fernando Valley RSA has a projected population growth rate (47%) that is nearly twice its rate of housing increase (26%) and more than four times its employment increase (11%).
- The Los Angeles Central Business District RSA has sizeable housing (59%) and population (43%) increases together with a significant job loss (-3%).

These graphs are provided to give perspective to socio-economic conditions in the I-5 corridor.

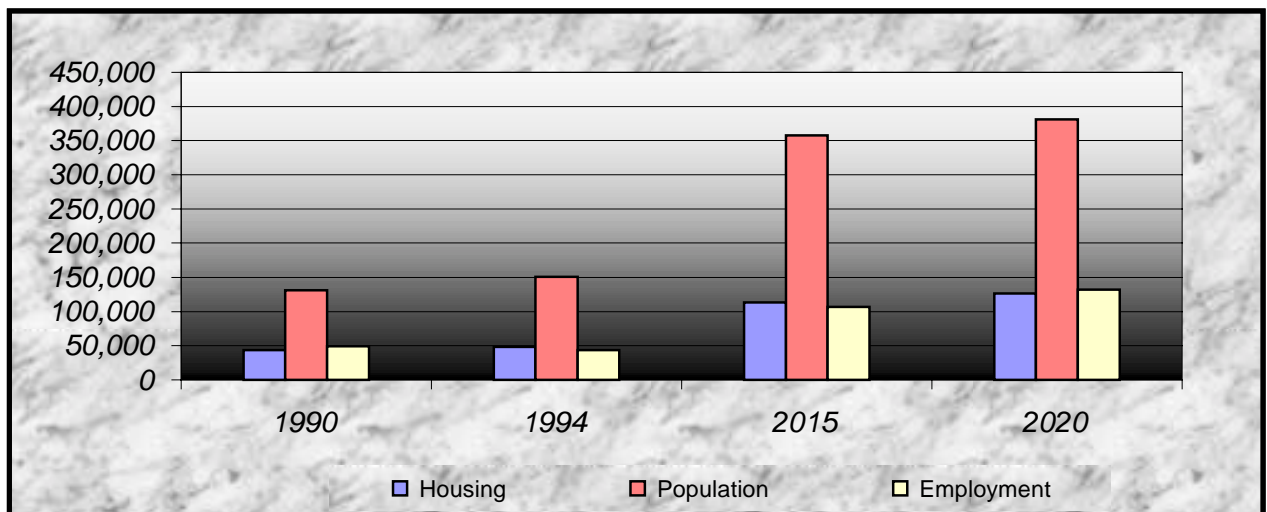
INTERSTATE 5 SOCIO-ECONOMIC DATA

Santa Clarita Valley Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	48,879	51,852	162,530	149,215	205%
Population	151,053	162,435	552,504	506,901	236%
Employment	51,596	53,333	120,275	145,644	182%

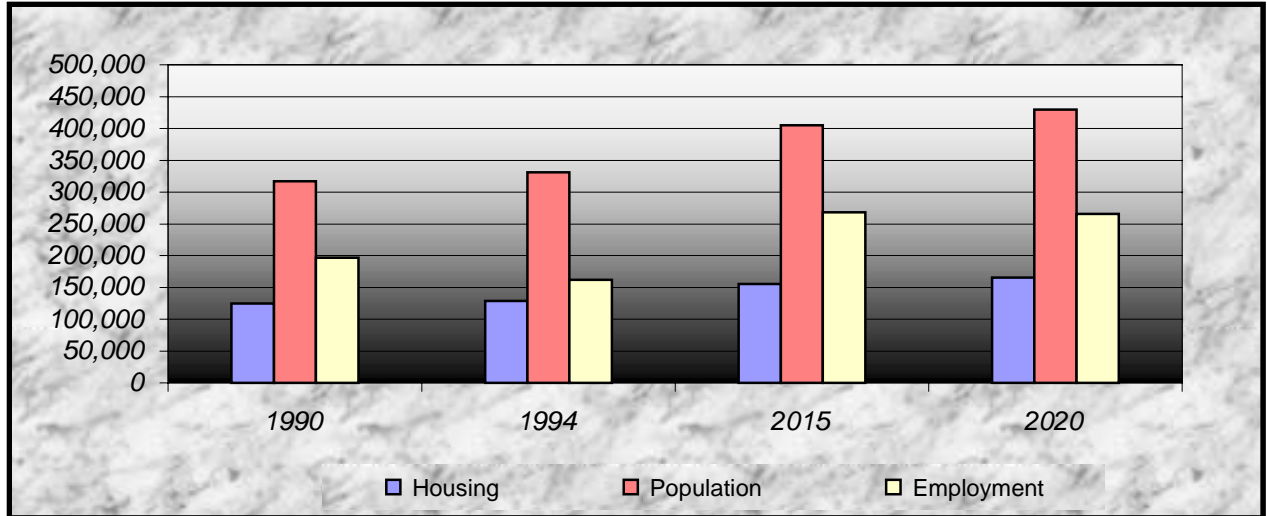
Lancaster Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	43,954	48,351	113,662	126,282	187%
Population	131,351	150,926	357,636	381,227	190%
Employment	49,264	43,556	106,479	132,434	169%

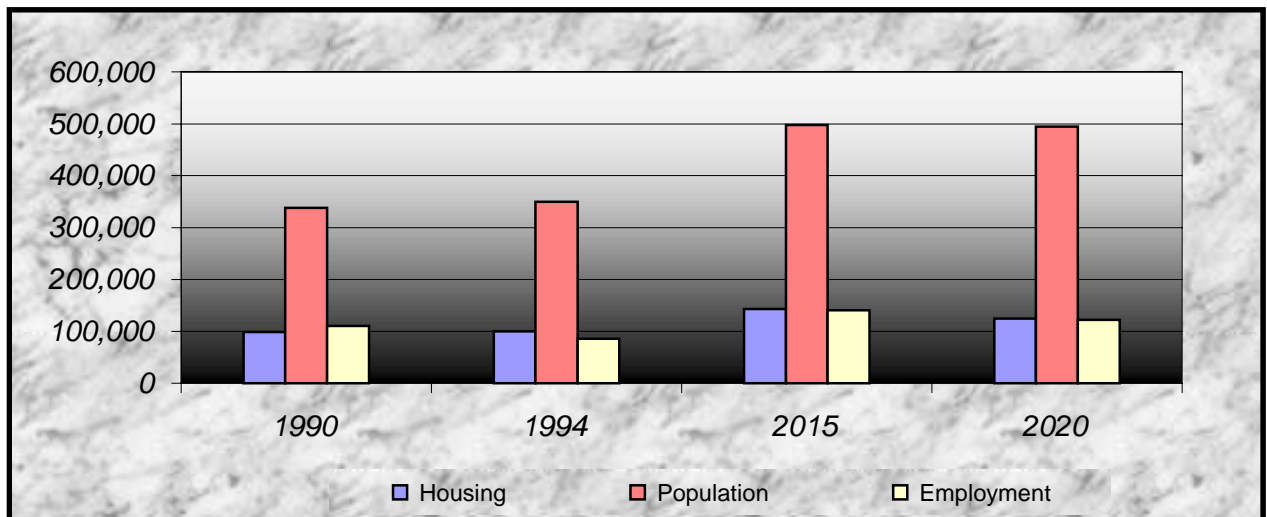
INTERSTATE 5 SOCIO-ECONOMIC DATA

Burbank Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	124,910	128,797	155,581	165,657	33%
Population	317,289	331,003	405,181	429,386	35%
Employment	196,899	162,103	268,175	265,537	35%

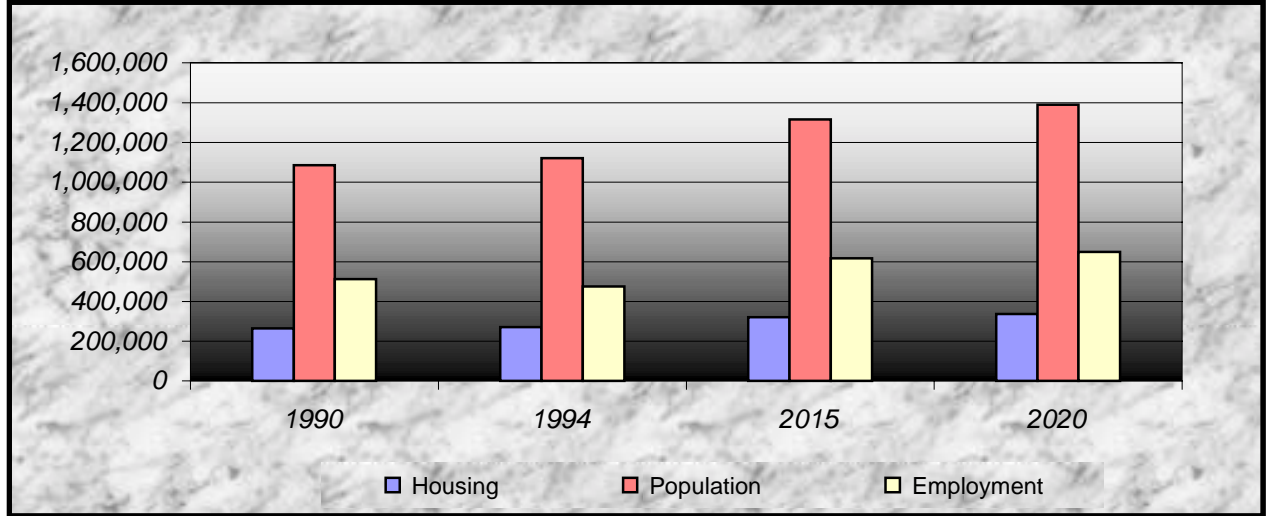
Northeast San Fernando Valley Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	99,110	100,169	143,601	124,428	26%
Population	337,412	349,842	497,540	494,529	47%
Employment	110,276	85,417	140,615	122,233	11%

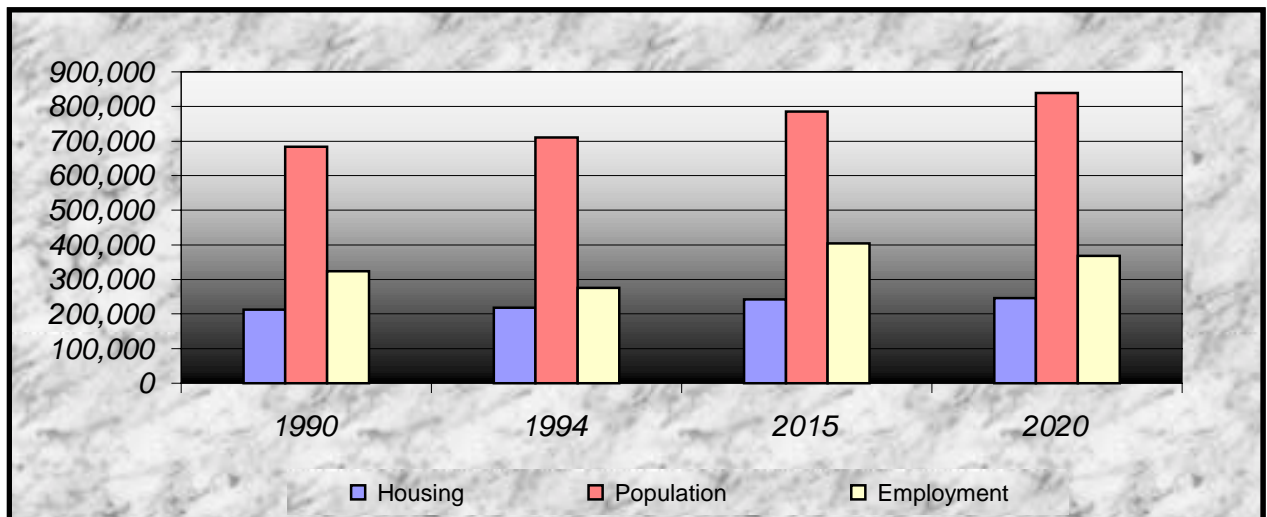
INTERSTATE 5 SOCIO-ECONOMIC DATA

East Central (LA) Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	265,560	271,307	320,652	335,931	26%
Population	1,084,539	1,120,854	1,316,545	1,388,562	28%
Employment	512,332	475,425	616,206	648,787	27%

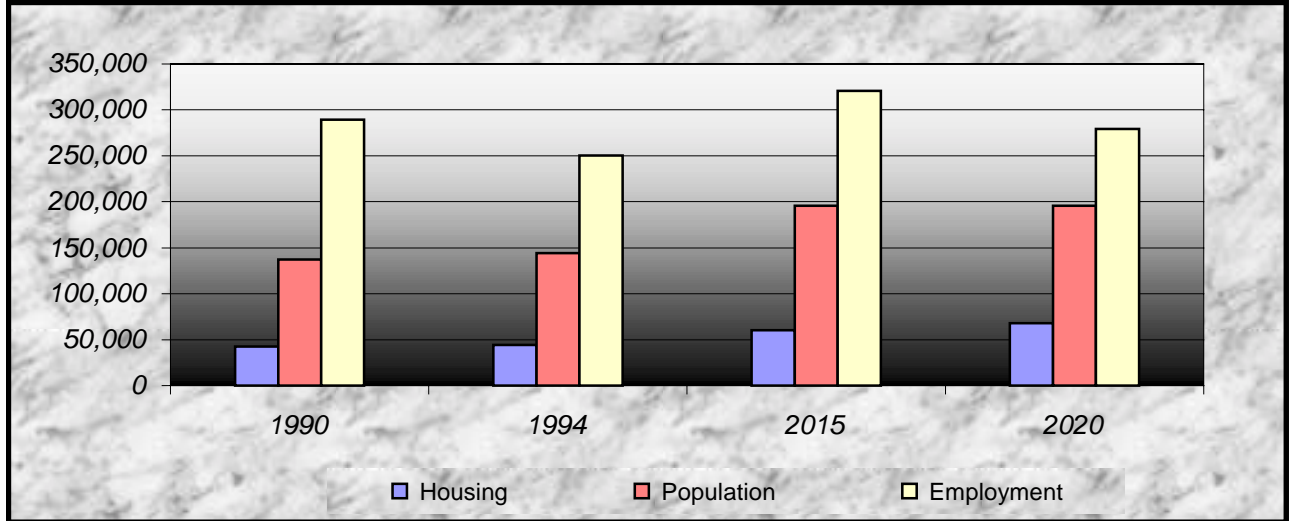
Norwalk-Whittier Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	212,798	218,227	242,101	245,843	16%
Population	682,912	710,257	785,612	839,359	23%
Employment	323,653	275,746	404,464	368,465	14%

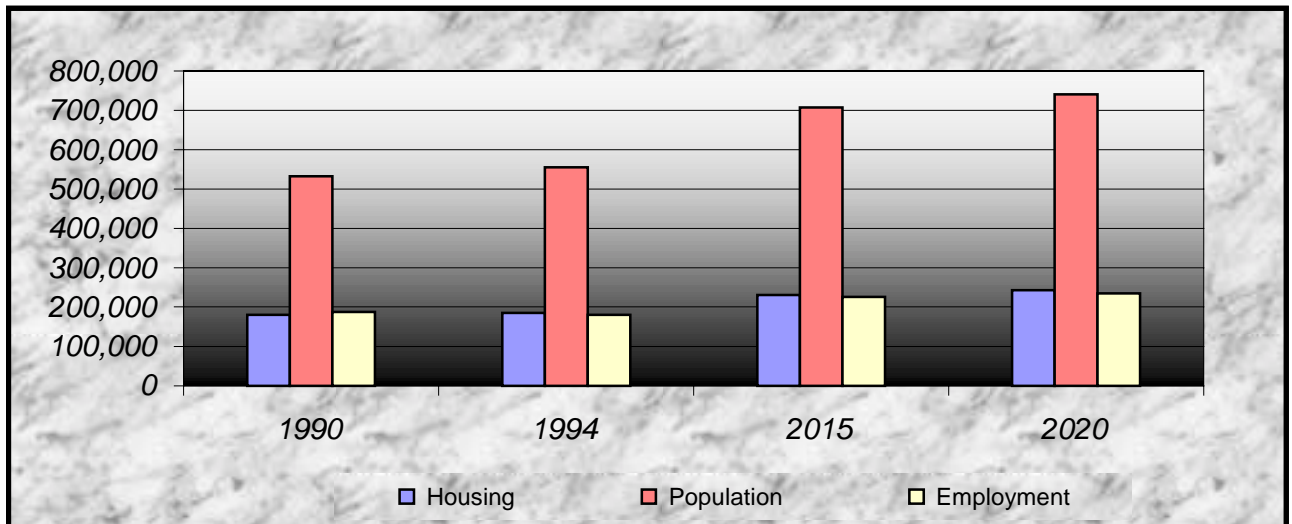
INTERSTATE 5 SOCIO-ECONOMIC DATA

Los Angeles Central Business District Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	42,736	44,475	60,229	67,964	59%
Population	137,261	144,436	195,732	195,644	43%
Employment	289,137	250,327	320,841	279,092	-3%

Glendale Regional Statistical Area (RSA) Demographics



	1990	1994	2015	2020	% Change
Housing	179,787	184,736	230,660	243,102	35%
Population	532,541	555,622	707,951	741,082	39%
Employment	187,495	180,331	226,215	235,426	26%

VIII. Accident Rates and Safety

ACCIDENT RATES AND SAFETY INTRODUCTION

Accident Data

District traffic safety and accident data are based on the Traffic Accident Surveillance and Analysis System (TASAS). This data base provides accident rates using a three-year average along selected routes. The TASAS data, that is displayed graphically on the following pages, covers the period of January 1, 1994 through December 31, 1996.

First Graph: Fatal Plus Injury Per Million Vehicle Miles

The first graph, "Fatal Plus Injury Per Million Vehicle Miles" (F+I/MVM), shows the rate of fatal and non-fatal injuries on I-5 during the coverage period. This graph has two graph lines, "Average" and "Actual". The "Actual" is based on specific data for accidents on I-5. The "Average" line represents a Statewide Average Accident Rate (SWA) for highway segments of the same type with similar characteristics in the state.

Second Graph: Total Accidents Per Million Vehicles Miles

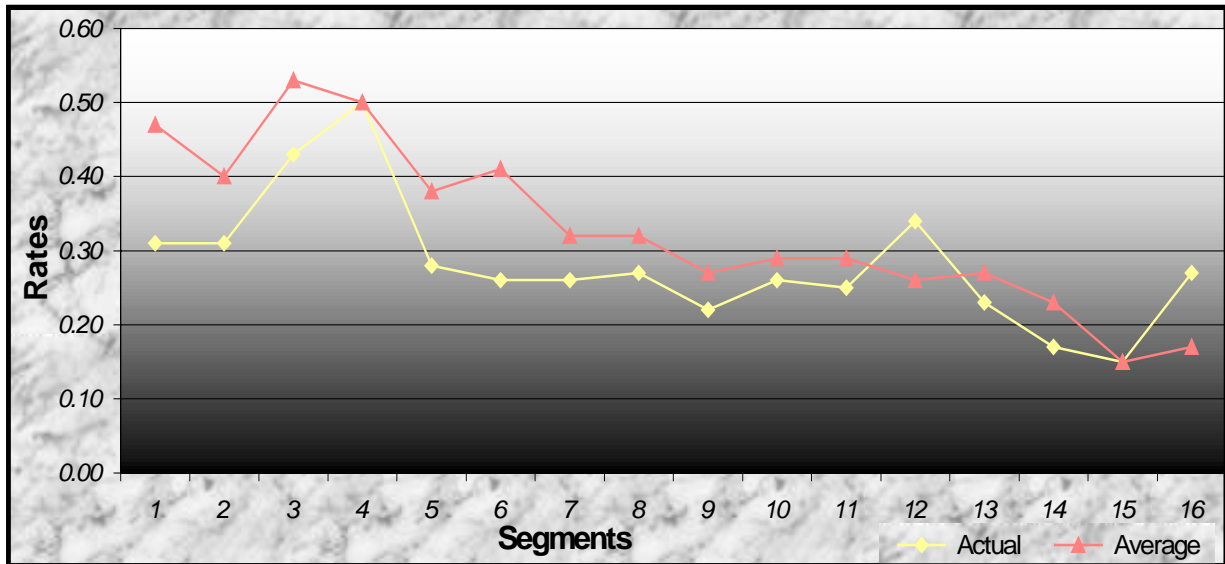
The second graph, "Total Accidents Per Million Vehicle Miles" (Total/MVM) includes all accidents (fatal, non-fatal injury and accidents without injuries) within the coverage period. As in the first graph, the "Actual" is based on specific I-5 data and "Average" represents a statewide average for comparable road segments.

Safety

The accident data provided in this TCR is intended to support informed and responsible decision-making by transportation planners and programmers. Research into the connection between congestion and safety is being performed by Caltrans and within the national and international transportation communities. Future TCR's will document the state of that research.

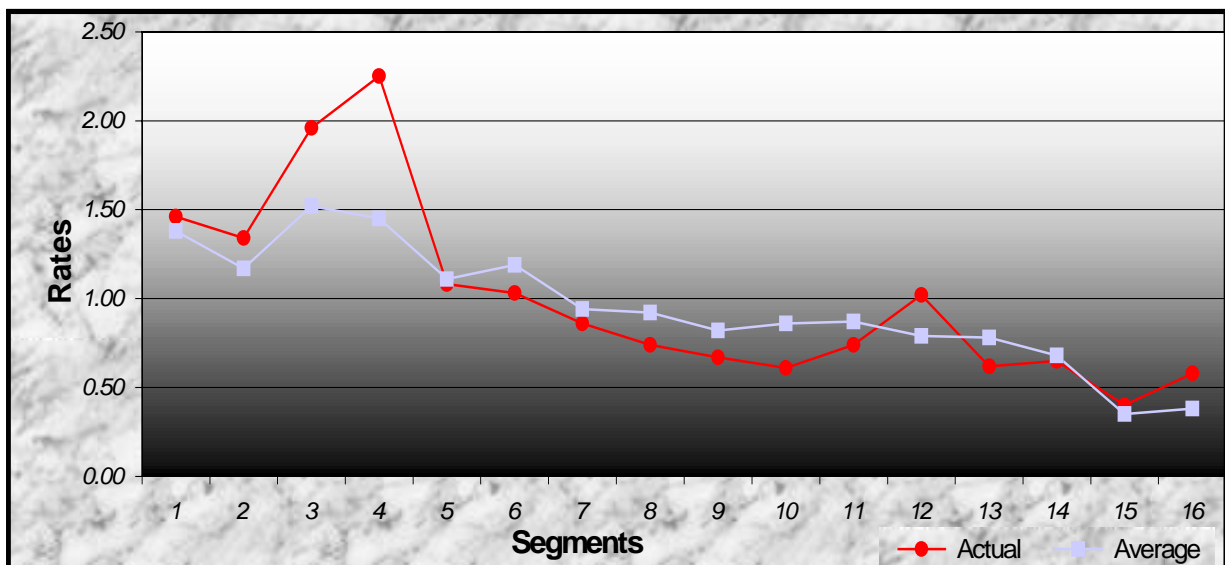
INTERSTATE 5 ACCIDENT RATES

Fatal + Injury (Per Million Vehicle Miles)



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Actual	0.31	0.31	0.43	0.50	0.28	0.26	0.26	0.27	0.22	0.26	0.25	0.34	0.23	0.17	0.15	0.27
Average	0.47	0.40	0.53	0.50	0.38	0.41	0.32	0.32	0.27	0.29	0.29	0.26	0.27	0.23	0.15	0.17

Total Accidents (Per Million Vehicle Miles)



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Actual	1.46	1.34	1.96	2.25	1.08	1.03	0.86	0.74	0.67	0.61	0.74	1.02	0.62	0.65	0.40	0.58
Average	1.38	1.17	1.52	1.45	1.11	1.19	0.94	0.92	0.82	0.86	0.87	0.79	0.78	0.68	0.35	0.38

INTERSTATE 5

ACCIDENT LOCATIONS HIGHER THAN AVERAGE

Fatal plus Injury per Million Vehicle Miles (F+I/MVM)

Chart VIII-2

SEGMENT 11	ROUTE 405 - ROUTE 210
SEGMENT 12	ROUTE 210 - ROUTE 14
SEGMENT 13	ROUTE 14 – ROUTE 126 SOUTH
SEGMENT 15	ROUTE 126 NORTH - ROUTE 138 SOUTH
SEGMENT 16	ROUTE 138 SOUTH - KERN COUNTY LINE

ACCIDENT LOCATIONS HIGHER THAN AVERAGE

Total Accidents per Million Vehicle Miles (Total/MVM)

Chart VIII-3

SEGMENT 1	ORANGE COUNTY LINE - ROUTE 605
SEGMENT 2	ROUTE 605 – ROUTE 710
SEGMENT 3	ROUTE 710 - EAST LOS ANGELES INTERCHANGE
SEGMENT 4	EAST LOS ANGELES INTERCHANGE - ROUTE 10
SEGMENT 5	ROUTE 10 - ROUTE 110
SEGMENT 11	ROUTE 405 - ROUTE 210
SEGMENT 12	ROUTE 210 - ROUTE 14
SEGMENT 13	ROUTE 14 - ROUTE 126 SOUTH
SEGMENT 14	ROUTE 126 SOUTH - ROUTE 126 NORTH
SEGMENT 15	ROUTE 126 NORTH - ROUTE 138 SOUTH
SEGMENT 16	ROUTE 138 SOUTH - KERN COUNTY LINE

IX. Regional Threshold Criteria and Policies

Interstate 5 Regional Threshold Criteria and Policies

I. CALTRANS: California Transportation Plan:

- 1) Provide safety and security
- 2) Maintain system/investment
- 3) Manage network as a seamless intermodal system
- 4) Develop airport ground access

II. CALTRANS: District System Management Plan:

- 1) District 7 has established **LOS F0** with freeway speeds of approximately 25 mph lasting from 15 minutes to 1 hour as the minimum acceptable LOS for the Freeway System.¹
- 2) HOV Criteria for implementing HOV lanes:²
 - a. High Demand Congested Corridors not served by urban or commuter rail
 - b. System connectivity
 - c. Cost effectiveness
 - d. Safety
 - e. Public agency input
- 3) Route 5 Gap Closure: Orange County Line to I-605³
- 4) Goods Movement:⁴
 - a. Primary Goods Movement Corridor: I-710 to Kern county Line.
 - b. Secondary Goods Movement Corridor: Orange County Line to I-710

¹ District System Management Plan, California Department of Transportation, District 7, August 5, 1996, page 4.

² Op. Cit., page 16

³ Op. Cit., page 17

⁴ Op. Cit., page 36

- 5) Truck Lanes: Trucks-Only: Under investigation on I-170, Ports to Commerce and in the I-5 and SR-60 corridors⁵

III. SCAG: Regional Transportation Plan:

- 1) Truck Lanes on I-5, SR-60 to 126 (1 lane in each direction, if free access; 2 lanes in each direction if tolled)⁶
- 2) HOV Connectors on I-5 at: SR-170, SR-14 (to possible toll lanes) and SR-134⁷
- 3) Add mixed flow lanes to increase capacity (with restrictions), close gaps and for connectivity⁸
- 4) High Speed Rail: On I-5 from Union Station to SR-14 and on SR-14 to Lancaster/Palmdale⁹
- 5) Operations and maintenance: Pay now or pay later¹⁰
- 6) RTP 20-Year Budget¹¹ (in \$Billion):

⁵ Op. Cit., page 37

⁶ Community Link 21, Draft 1998 Regional Transportation Plan, Southern California Association of Governments, November 6, 1997, page I-24.

⁷ Op. Cit., page I-19

⁸ Op. Cit., page I-20

⁹ Op. Cit., page I-26

¹⁰ Op. Cit., page 4-7

¹¹ Op. Cit., page I-34

Category	Budget (\$Billion)	Percentage
Smart Shuttle	\$3.9	17%
Freeways (Mixed Flow and HOV)	\$3.4	15%
Transitways	\$3.1	14%
Maintenance	\$3.0	13%
Local Roadways (Including Airport Access)	\$2.5	11%
Red Line MOS-4	\$1.8	8%
Truck Facilities	\$1.8	8%
Commuter Rail	\$1.4	6%
Grade Separations	\$0.6	3%
Signal Synchronization	\$0.4	2%
Transit Centers / Park and Ride	\$0.3	1%
Rideshare	\$0.2	1%
TOTAL	\$22.4	100%

7.) 76% Freight increase through the ports and 200% freight increase at the airports.

IV. LA Metropolitan Transportation Authority: MTA HOV Plan

Primary Corridor Criteria¹²

- 1) Travel time Savings: Only build where building a lane would provide a travel time savings of 0.3 minutes per mile on the proposed facility compared to adjacent general purposed lanes.
- 2) Lane Volume:
 - a. 600 vpm minimum
 - b. 1500 vehicles (at 2+) *to take an existing freeway lane*

¹² A Recommended HOV System for Los Angeles County, LACMTA, October 23, 1996, page 13.

- 3) Person Movement:
 - a. Minimum person movement of 2000 persons per hour is needed to satisfy criteria for *add-a-lane* projects.
 - b. Minimum of 3000 people in 2+ HOV are necessary to consider projects what would take a lane from existing facilities
- 4) Transit System Integration: Goal of: operation time reductions between HOV and adjacent general purpose lane.

Secondary Corridor Criteria¹³

- 1) 20 mph for bus round trips: **Minimum LOS E**
- 2) Implementation of an HOV facility should not adversely impact general purpose lane operations or capacity. Criteria is met as long as mainline general purpose capacity is not reduced.
- 3) HOV enforcement is necessary requiring dedicated enforcement areas or wide enough shoulders to monitor and apprehend violators; this criteria will not be satisfied with reduced standard shoulders and no facilities for enforcement areas.
- 4) Transit Station/Park and Ride Lot integration with HOV facility: primary objective is to maximize the number of HOV's that can use a facility. This criteria will be satisfied with direct access or bypass HOV lane on general purpose ramps entering the freeway.

13 Op. Cit., page 13

System Criteria/Goals¹⁴

- 1) Primary means of linking HOV facility is by gap closure and freeway to freeway HOV connectors
- 2) Inter-county connectivity at county lines
- 3) System-wide time savings
- 4) Regional mobility
- 5) VMT--should reduce VMT for the entire freeway system
- 6) Mode shift impact
- 7) Transit system integration

HOV I/C Criteria/Goal¹⁵

- 1) Travel time savings
- 2) Threshold ramp volume
- 3) Threshold person movement
- 4) Recommend: I-5 to and from Burbank Airport with arterial HOV connection
- 5) Recommend: Ramp metering on all of I-5 north to Castaic

System Development: I-5 HOV--First Tier

- 1) Long Range recommendation: OCL to I-605
- 2) I-10 north to SR-126 or SR-14
- 3) Between SR-2 and SR-134 this will serve as a link in the greater I-5 system, particularly as it approaches downtown Los Angeles

System Development: I-5 HOV--Second Tier

- 1) From I-605 to I-710

¹⁴ Op. Cit., page 18

¹⁵ Op. Cit., page 20

System Development: I-5 HOV-Arterial Projects¹⁶

- 1) Between I-5 and I-105 in Norwalk
- 2) Glendale Boulevard Corridor: Glendale Freeway and CBD and I-5 to the CBD
- 3) I-5 and Burbank Airport

HOV Lane Projects: Projects Recommended for Development 2001 to 2005¹⁷

- 1) SR-134 to SR-170
- 2) SR-170 to SR-118
- 3) SR-118 to SR-14
- 4) Orange County Line to I-605

Implementation Approach:

- 1) Re-stripe and widen for addition of one lane (§6.7.2, page 91)

V. 1997 Final Proposed Congestion Management Plan

- 1) LOS "E" unless base year is lower

VI. TEA 21--Generally:

- 1) Maintain TDM
- 2) Provide for intelligent transportation systems (ITS)
- 3) Expands funding to include intermodal terminals at seaports

¹⁶ Op. Cit., page 64

¹⁷ Op. Cit., page 69

INTERSTATE 5 POLICY / PROCEDURES

Caltrans Status of HOV Projects			SCAG Regional Transportation Plan (RTP)				
	<i>HOV</i>	<i>HOV I/C</i>	<i>HOV</i>	<i>HOV I/C</i>	<i>MIXED FLOW</i>	<i>GOODS MOVEMENT</i>	<i>HIGH SPEED RAIL</i>
Segment 1	HOV INTERIM		HOV		Mixed Flow		HIGH SPEED RAIL
Segment 2						Truck Lane	HIGH SPEED RAIL
Segment 3						Truck Lane	HIGH SPEED RAIL
Segment 4						Truck Lane	HIGH SPEED RAIL
Segment 5	HOV					Truck Lane	HIGH SPEED RAIL
Segment 6	HOV					Truck Lane	HIGH SPEED RAIL
Segment 7	HOV					Truck Lane	HIGH SPEED RAIL
Segment 8	HOV			I/C @ SR-170		Truck Lane	HIGH SPEED RAIL
Segment 9	HOV					Truck Lane	HIGH SPEED RAIL
Segment 10	HOV					Truck Lane	HIGH SPEED RAIL
Segment 11	HOV					Truck Lane	HIGH SPEED RAIL
Segment 12	HOV	I/C @ SR-14		I/C @ SR-14		Truck Lane	HIGH SPEED RAIL
Segment 13						Truck Lane	
Segment 14						Truck Lane	
Segment 15							
Segment 16							

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

District System Management Plan (DSMP)						
	<i>HOV</i>	<i>HOV I/C</i>	<i>GOODS MOVEMENT</i>	<i>EXISTING Commuter Rail</i>	<i>EXISTING Intercity Rail</i>	<i>HIGH SPEED RAIL</i>
Segment 1	HOV		*Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 2	HOV		*Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 3	HOV		Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 4	HOV		Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 5	HOV		Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 6	HOV		Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 7	HOV		Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 8	HOV	I/C @ SR-170	Truck Lane	Metrolink	AMTRAK	HIGH SPEED RAIL
Segment 9	HOV	I/C @ SR-118	Truck Lane	Metrolink		HIGH SPEED RAIL
Segment 10	HOV	I/C @ I-405	Truck Lane	Metrolink		HIGH SPEED RAIL
Segment 11	HOV		Truck Lane	Metrolink		HIGH SPEED RAIL
Segment 12	HOV	I/C @ SR-14	Truck Lane	Metrolink		HIGH SPEED RAIL
Segment 13	HOV		Truck Lane	Metrolink		
Segment 14			Truck Lane			
Segment 15			Truck Lane			
Segment 16			Truck Lane			

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA Long Range Transportation Plan (LRTP)				State Transportation Improvement Plan (STIP)	
	HOV	HOV I/C	EXISTING Commuter Rail	HOV	HOV I/C
Segment 1	HOV Interim		Metrolink	HOV Interim	
Segment 2			Metrolink	HOV Interim	
Segment 3			Metrolink		
Segment 4			Metrolink		
Segment 5	HOV		Metrolink	HOV	
Segment 6	HOV		Metrolink	HOV	
Segment 7	HOV		Metrolink	HOV	
Segment 8	HOV		Metrolink	HOV	
Segment 9	HOV	I/C @ SR-118	Metrolink	HOV	
Segment 10	HOV	I/C @ I-405	Metrolink	HOV	
Segment 11	HOV		Metrolink	HOV	
Segment 12	HOV	I/C @ SR-14	Metrolink	HOV	I/C @ SR-14
Segment 13			Metrolink		
Segment 14					
Segment 15					
Segment 16					

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA HOV PLAN						
	SCENARIO A			SCENARIO B1		
	HOV	HOV I/C	EXISTING Commuter Rail	HOV	HOV I/C	EXISTING Commuter Rail
Segment 1	HOV		Metrolink			Metrolink
Segment 2			Metrolink			Metrolink
Segment 3			Metrolink			Metrolink
Segment 4			Metrolink			Metrolink
Segment 5	HOV		Metrolink	POTENTIAL HOV		Metrolink
Segment 6	HOV		Metrolink	POTENTIAL HOV		Metrolink
Segment 7	HOV		Metrolink	POTENTIAL HOV		Metrolink
Segment 8	HOV	I/C @ SR-170	Metrolink	POTENTIAL HOV	I/C @ SR-170	Metrolink
Segment 9	HOV	I/C @ SR-118	Metrolink	HOV	POTENTIAL I/C @ SR-118	Metrolink
Segment 10	HOV	I/C @ I-405	Metrolink	HOV	POTENTIAL I/C @ I-405	Metrolink
Segment 11	HOV		Metrolink	HOV		Metrolink
Segment 12	HOV	I/C @ SR-14	Metrolink	HOV	POTENTIAL I/C @ SR-14	Metrolink
Segment 13			Metrolink	ADD HOV		Metrolink
Segment 14				ADD HOV		
Segment 15						
Segment 16						

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA HOV PLAN			
	SCENARIO B2		
	<i>HOV</i>	<i>HOV I/C</i>	<i>EXISTING Commuter Rail</i>
Segment 1	HOV		Metrolink
Segment 2	ADD HOV		Metrolink
Segment 3	ADD HOV		Metrolink
Segment 4	ADD HOV		Metrolink
Segment 5	HOV		Metrolink
Segment 6	HOV		Metrolink
Segment 7	HOV		Metrolink
Segment 8	HOV	I/C @ SR-170	Metrolink
Segment 9	HOV	POTENTIAL I/C @ SR-118	Metrolink
Segment 10	HOV	POTENTIAL I/C @ I-405	Metrolink
Segment 11	HOV		Metrolink
Segment 12	HOV	I/C @ SR-14	Metrolink
Segment 13	ADD HOV		Metrolink
Segment 14	ADD HOV		
Segment 15			
Segment 16			

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA HOV PLAN			
	SCENARIO B3		
	HOV	HOV I/C	EXISTING Commuter Rail
Segment 1	HOV		Metrolink
Segment 2	ADD HOV		Metrolink
Segment 3			Metrolink
Segment 4			Metrolink
Segment 5	HOV		Metrolink
Segment 6	HOV		Metrolink
Segment 7	HOV		Metrolink
Segment 8	HOV	I/C @ SR-170	Metrolink
Segment 9	HOV	POTENTIAL I/C @ SR-118	Metrolink
Segment 10	HOV	POTENTIAL I/C @ I-405	Metrolink
Segment 11	HOV		Metrolink
Segment 12	HOV	POTENTIAL I/C @ SR-14	Metrolink
Segment 13	ADD HOV		Metrolink
Segment 14	ADD HOV		
Segment 15			
Segment 16			

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA HOV PLAN			
	SCENARIO C1		
	<i>HOV</i>	<i>HOV I/C</i>	<i>EXISTING Commuter Rail</i>
Segment 1	POTENTIAL HOV		Metrolink
Segment 2			Metrolink
Segment 3			Metrolink
Segment 4			Metrolink
Segment 5	POTENTIAL HOV		Metrolink
Segment 6	POTENTIAL HOV	I/C @ SR-2	Metrolink
Segment 7	HOV	I/C @ SR-134	Metrolink
Segment 8	POTENTIAL HOV	I/C @ SR-170	Metrolink
Segment 9	HOV	I/C @ SR-118	Metrolink
Segment 10	HOV	I/C @ I-405	Metrolink
Segment 11	HOV		Metrolink
Segment 12	HOV	I/C @ SR-14	Metrolink
Segment 13			Metrolink
Segment 14			
Segment 15			
Segment 16			

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA HOV PLAN			
	SCENARIO C2		
	<i>HOV</i>	<i>HOV I/C</i>	<i>EXISTING Commuter Rail</i>
Segment 1	POTENTIAL HOV		Metrolink
Segment 2			Metrolink
Segment 3			Metrolink
Segment 4			Metrolink
Segment 5	POTENTIAL HOV		Metrolink
Segment 6	POTENTIAL HOV	ADD I/C @ SR-2	Metrolink
Segment 7	HOV	ADD I/C @ SR-134	Metrolink
Segment 8	POTENTIAL HOV	I/C @ SR-170	Metrolink
Segment 9	HOV	I/C @ SR-118	Metrolink
Segment 10	HOV	I/C @ I-405	Metrolink
Segment 11	HOV		Metrolink
Segment 12	HOV	I/C @ SR-14	Metrolink
Segment 13			Metrolink
Segment 14			
Segment 15			
Segment 16			

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA HOV PLAN			
	SCENARIO D1		
	<i>HOV</i>	<i>HOV I/C</i>	<i>EXISTING Commuter Rail</i>
Segment 1	HOV	ADD 105 ARTERIAL HOV I/C	Metrolink
Segment 2	ADD HOV	HOV/RAIL INTERFACE NEAR I-710	Metrolink
Segment 3			Metrolink
Segment 4		HOV/RAIL INTERFACE NEAR I-10	Metrolink
Segment 5	POTENTIAL HOV		Metrolink
Segment 6	POTENTIAL HOV		Metrolink
Segment 7	POTENTIAL HOV		Metrolink
Segment 8	POTENTIAL HOV	I/C @ SR-170	Metrolink
Segment 9	HOV	POTENTIAL I/C @ SR-118	Metrolink
Segment 10	HOV	I/C @ I-405	Metrolink
Segment 11	HOV		Metrolink
Segment 12	HOV	I/C @ SR-14	Metrolink
Segment 13			Metrolink
Segment 14			
Segment 15			
Segment 16			

* Secondary Corridor

INTERSTATE 5 POLICY / PROCEDURES

MTA HOV PLAN						
	OPTION 1			OPTION 2		
	<i>HOV</i>	<i>HOV I/C</i>	<i>EXISTING Commuter Rail</i>	<i>HOV</i>	<i>HOV I/C</i>	<i>EXISTING Commuter Rail</i>
Segment 1	HOV		Metrolink	HOV		Metrolink
Segment 2			Metrolink			Metrolink
Segment 3			Metrolink			Metrolink
Segment 4			Metrolink			Metrolink
Segment 5	HOV		Metrolink	HOV		Metrolink
Segment 6	HOV		Metrolink	HOV		Metrolink
Segment 7	HOV		Metrolink	HOV		Metrolink
Segment 8	HOV	I/C @ SR-170	Metrolink	HOV	I/C @ SR-170	Metrolink
Segment 9	HOV		Metrolink	HOV		Metrolink
Segment 10	HOV	I/C @ I-405	Metrolink	HOV	I/C @ I-405	Metrolink
Segment 11	HOV		Metrolink	HOV		Metrolink
Segment 12	HOV	I/C @ SR-14	Metrolink	HOV	I/C @ SR-14	Metrolink
Segment 13	HOV		Metrolink	HOV		Metrolink
Segment 14	HOV			HOV		
Segment 15						
Segment 16						

* Secondary Corridor

X. Policy Conflicts in the Regional Planning Process

CONFLICTS IN REGIONAL PLANNING

"Los Angeles already has an effective mass transportation System. It's called the freeways."

Franklin White, Former LACMTA Executive Director

Before considering the various planning and programming policies in Los Angeles County, it is instructive to consider some statistics relating to the existing system:

- Ridership on the Red, Green and Blue Lines exceeded **25,000,000** in 1996.
- Trips on the Freeway system exceeded **35,000,000** yesterday. (And the day before, and the day before that...)
- Percentage of trips carried by **all forms of transit** in Los Angeles: **<6%**
- Percentage of transportation funds programmed in Los Angeles County for use on **Transit: 89-90%**¹
- Percentage of trips in **cars and trucks: >94%**
- Percentage of transportation funds programmed in Los Angeles County for use on the **Freeway System: 10-11%**²
- Percentage of Regional funds **Planned** for all **Road Related Modes** under the 1998 SCAG RTP: **70%**
- Percentage of Regional funds **Planned** for **Rail Modes: 30%**

¹ Up through the 1994 STIP cycle.

² Up through the 1994 STIP cycle.

There has been a quiet revolution in transportation policy in Los Angeles since the 1994 STIP cycle. Old assumptions, such as: "you can't build out of congestion", "rail is the answer" and "NO transit facilities on freeways", have been challenged head-on. As the last set of funding percentages indicate, the Region's transportation planning community has shown a willingness to re-think old "givens" and to re-prioritize transportation spending.

In fact, spending has begun to track usage and productivity and there appears to be a willingness to experiment with innovative "compromises" that benefit from the advantages and efficiencies of the various road and transit modes.

The 1998 RTP recommends using the most diverse approaches to ground transportation ever proposed in Los Angeles, including:

Buses	Smart Shuttles	Added Mixed Flow Lanes
Intelligent Transportation Systems	Busways	High Speed Rail
High Occupancy Toll Lanes	Toll Roads	Light Rail
Heavy Rail	IVHS	Commuter Rail
HOV Lanes	Truck Lanes	Arterial Transitways

The RTP shows that the old stock arguments for making small improvements in the largest system have been superseded by recommendations to make large-scale improvements in the largest system.

What these changes--and the current controversies over subway construction-- demonstrate is that the transformations in spending authority mandated by ISTEA and the state's Transportation Blueprint for the twenty-first Century also mandated changes in responsibility and, more importantly, accountability.

Los Angeles's transportation community--SCAG, LACMTA, Caltrans, AAA, county cities, transit riders and transit providers—have agreed, through the RTP process, to an open-minded search for transportation solutions. In the I-5 context, this will mean finding ways to address congestion and demand problems that are not restricted to "transit-only" or "TDM-only" schemes.

While the conflict over transportation goals and values has diminished in the region, several critical questions remain to be addressed:

- What is the region's position on the Federal restrictions on mixed-flow-lane development? Should the position be amended? The restrictions?
- Who should be responsible for programming decisions affecting state highways? Transit systems? What input should various interests have?
- Should tolls be used to reduce demand on over-crowded highway facilities?
- If transportation demand cannot/will not be controlled, then what are the priorities for increasing system capacity?
- How can the transportation community demonstrate that it is responsive and accountable to the residents of the region? Is the transportation community responsive and accountable to the residents of the region?
- How can the transportation community measure its success in addressing transportation problems?

XI. Transportation Concept and Conclusion

TRANSPORTATION CONCEPT AND CONCLUSIONS

Transportation Concept

Alternative #2 (see pages VI-2 and VI-3) is recommended as the Transportation Concept for I-5 for the following reasons:

- 1) It closes the mixed-flow lane gap between the Orange County Line and the I-605 Freeway in Los Angeles County;
- 2) It provides substantial congestion relief over the 20-year planning period¹;
- 3) By using 2 HOV lanes, this alternative provides the substantial operational benefits that a single HOV lane would lack. The double HOV lane will allow passing-essential when cars and buses are mixed in traffic; and it would be sufficiently wide to allow possible eventual conversion to an automated system; and
- 4) It provides additional HOV capacity in segments where I-5 intersects with those state routes which will also be carrying high HOV volumes.

¹ Please note that truck lanes were modeled by adding one mixed flow lane. Therefore, one-mixed-flow-lane can be substituted for one-truck-lane when considering the benefits of the alternative.

Conclusions

Taken together, the Segment Summaries and the Illustrated Improvements, highlight the dilemma posed by I-5. The route is currently operating at LOS "F3"² on nearly all of its segments and traffic demand on it is projected to increase by approximately 40% over the next 20 years. To simply *maintain* the current level of congestion would require a near doubling of I-5's capacity. That is not a realistic possibility.

Providing truck and continuous HOV lanes appears to provide the best chance for some relief from projected congestion. A continuous HOV facility and/or a separate truck lane would increase the roadway's capacity in the short run--and relieve congestion. In the long run, such improvements could be adapted to new and innovative uses (e.g., as an automated vehicle facility, a busway, or a rail facility) without compromising the existing mixed flow lanes. Depending on how it is operated, a new continuous HOV lane could provide relief equal to four (4) new mixed flow lanes.³

However, as noted in Section X, regional and national policy differences will have to be settled--or at least responsibly and constructively addressed--before anything like a long range solution to I-5 congestion problems will be successful.

² LOS "F3" is equal to 3+ hours of forced flow traffic moving at less than 20 mph.

³ Status of the HOV System, Division of Operations, Office of Traffic Management, Caltrans District 7, February 26, 1998, page 6 (Describing the current operation of the LA-10, San Bernardino Busway).

XII. Appendices

BIBLIOGRAPHY

Advanced Transportation Systems Program Plan, 1996 Update: Framework for a California Partnership, California Department of Transportation, New Technology and Research Program, December 1996

1997 Air Quality Management Plan, South Coast Air Quality Management District, November 1996

California Trade and Goods Movement Study, California Department of Transportation and San Diego Association of Governments (prepared by Barton-Aschman Associates, Inc.), August 15, 1996

Congestion Management Program for Los Angeles County, Los Angeles County Metropolitan Transportation Authority, November 1995

District System Management Plan, California Department of Transportation, District 7, August 16, 1996

Double Decking, A Caltrans Planning Study, California Department of Transportation, May 1998

Goods Movement in Southern California, (Draft), California Department of Transportation District 7, May 1994

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) (P.L. 102-240)
December 1991

I-110 Transitway, Northern Terminus to Adams Boulevard, Initial

Study/Environmental Assessment, California Department of Transportation and U.S. Department of Transportation, Federal Highway Administration, May 2, 1991

1997 Long-Range Transportation Plan, Los Angeles County Metropolitan

Transportation Authority, January 22, 1997

Los Angeles Regional Transportation Study (LARTS)

Manual for Applying the California Transportation Commission's Policy Guidelines

for Funding Interchanges and Crossings, California Department of transportation, April 1984

NEXTEA (Re-Authorization of the Intermodal Surface Transportation Efficiency Act of 1991) (ISTEA) (P.L. 102-240), December 1991)

On the Optimal Ramp Control Problem: When Does Ramp Metering Work?

Discussion Paper on 950940, Gerald W. Bare, Senior Transpiration Engineer, California Department of Transportation, District 7

Project Development Procedures Manual, Chapter 4—Programming, California

Department of Transportation, July 1997

A Recommended HOV System for Los Angeles County, Los Angeles Metropolitan

Transportation Authority (prepared by The Parsons Brinckerhoff Study Team), October 23, 1996

Regional Market-Based Transportation Pricing, Final Report and Recommendations,

REACH Task Force (Reduce Emissions and Congestion on Highways), January 22, 1997

1998 Regional Transportation Plan, (Adopted), Southern California Association of Governments, April 16, 1998

Route 5 Route Concept Report, Santa Ana and Golden State Freeways, California Department of Transportation, District 7 June 20, 1991

Route 5 Route Concept Report, California Department of Transportation, District 12 June 20, 1991

Statutes Related to Programming and Funding Transportation Projects, California Department of Transportation, Transportation Programming Program, July 1996

GLOSSARY

AADT: (Average Annual Daily Traffic) Denotes that the daily traffic is averaged over one calendar year.

ADT: (Average Daily Traffic) The average number of vehicles passing a specified point during a 24-hour period.

Air Quality Management District (AQMD): A regional agency, which adopts and enforces regulations to achieve and maintain state and federal air quality standards.

Air Quality Management Plan (AQMP): The plan for attaining state air quality as required by the California Clean Air Act of 1988. The plan is adopted by air quality districts and is subject to approval by the California Air Resources Board.

ATIS: Advanced Traveler Information Systems

ATMS: Advanced Traffic Management Systems

AV: Antelope Valley Transit

AVCS: Automated Vehicle Control Systems

Average Vehicle Occupancy (AVO): The average number of persons occupying a passenger vehicle along a roadway segment intersection, or area, as typically monitored during a specified time period. For the purpose of the California Clean Air Act, passenger vehicles include autos, light duty trucks, passenger vans, buses, passenger rail vehicles and motorcycles.

Average Vehicle Ridership (AVR): The number of employees who report to a worksite divided by the number of vehicles driven by those employees, typically averaged over an established time period. This calculation includes crediting vehicle trip reductions from telecommuting, compressed workweeks and non-motorized transportation.

California Department of Transportation (Caltrans): As the owner/operator of the state highway system, state agency responsible for its safe operation and maintenance. Proposes projects for intercity rail, interregional roads, and sound walls. Also responsible for the SHOPP, Toll Bridge, and Aeronautics programs. Caltrans is the implementing agency for most state highway projects, regardless of program, and for the Intercity Rail program.

CBD: (Central Business District) The downtown core area of a city, generally an area of high land valuation, traffic flow, and concentration of retail business offices, theaters, hotels, and service businesses.

CCTV: Closed Circuit Television.

California Environmental Quality Act (CEQA): A statute that requires all jurisdictions in the State of California to evaluate the extent of environmental degradation posed by proposed development or project.

CHP: California Highway Patrol.

Capital Improvement Program (CIP): A seven-year program of projects to maintain or improve the traffic level of service and transit performance standards developed and to mitigate regional transportation impacts identified by the CMP Land Use Analysis Program, which conforms to transportation-related vehicle emissions air quality mitigation measures.

California Transportation Commission (CTC): A body established by Assembly Bill 402 (AB 402) and appointed by the Governor to advise and assist the Secretary of the Business, Transportation and Housing Agency and the Legislature in formulating and evaluating state policies and plans for transportation.

Commute Hours: AM and PM peak commute travel times. Generally, between the hours of 5:00 a.m. and 9:00 a.m. to 4:00 p.m. to 7:00 p.m., Monday through Friday.

COG: (Council of Governments) A voluntary consortium of local government representatives, from contiguous communities, meeting on a regular basis, and formed to cooperate on common planning and solve common development problems of their area. COGs can function as the RTPAs and MPOs in urbanized area.

Concept: A strategy for future improvements that will reduce congestion or maintain the existing level of service on a specific route.

Congestion: Defined by Caltrans as, reduced speeds of less than 35 mile per hour for longer than 15 minutes.

Congestion Management Agency (CMA): The agency responsible for developing the Congestion Management Program and coordinating and monitoring its implementation.

Congestion Management Program (CMP): A legislatively required countywide program, which addresses congestion problems.

CMS: Changeable Message Sign.

Congestion Management System (CMS): Required by ISTEA to be implemented by states to improve transportation planning.

Congestion Mitigation Air Quality program (CMAQ): Part of ISTEA, this is a funding program designed for projects that contribute to the attainment of air quality goals.

Demand-to-Capacity (D/C) Ratio: The relationship between the number of vehicle trips operating on a facility, versus the number of vehicle trips that can be accommodated on that facility.

District System Management Plan (DSMP): A part of the system planning process. A district's long-range plan for management of transportation systems in its jurisdiction.

Environmental Impact Report (EIR): A report prepared pursuant to CEQA that analyzes the level of environmental degradation expected to be caused by a proposed development or project.

Extended Commute: Service hours beyond the normal commute hours. Generally, in the evening, this refers to transit service until 10:00 p.m.

F+I Actual (Fatal Plus Injury Actual): Contains specific data for accidents that are State highway related. Each accident record contains a ramp, intersection or highway postmile address that ties it to the Highway database.

F+I Average (Fatal Plus Injury Average): The Statewide Average Accident Rate (SWA) is based on a rated segment. The accident-rating factor (ARF) indicates how the existing segment compares to other segments on the State Highway System. The ARF is a comparison of the segment's accident rate to the statewide average accident rate for roads of the same type and having similar characteristics. Accident severity as well as accident frequency is considered in calculating the ARF. If the total number of accidents is less than three, there will not be a calculation the ARF. If there are more than two, but less than twenty-five total accidents, an accident-rating factor will be generated, but there will not be an accident severity flag listed. If there are more than twenty-five accidents, an accident rating factor and severity flag will be generated.

F+I/MVM (Fatal Plus Injury Per Million Vehicle Miles): The fatality rate of those killed in vehicles plus the injury rate of those injured in vehicles.

FAI (Federal Aid Interstate): Highway program established in 1956 for national defense purposes, these roadways interconnect the major nationwide population and economic centers. A federal funding category for these routes.

FHWA: Federal Highway Administration.

Free-flow Speed: Speed that occurs when density and flow are “zero”.

Freeway Capacity: The maximum sustained 15 minute rate of flow that can be accommodated by a uniform freeway segment under prevailing traffic and roadway conditions in a specified direction.

FSP: (Freeway Service Patrol) A special team of tow truck drivers who continuously patrol freeways during commuter hours to help clear disabled automobiles.

FT: Foothill Transit.

GM: Gardena Municipal Bus Lines.

GRT: (Guaranteed Return Trip) A ridesharing strategy which provides a “Guaranteed Return Trip” to those who rideshare, in the case of an emergency or when overtime work hours are required.

High Occupancy Vehicle Lane (HOV): A lane of freeway reserved for the use of vehicles with more than a preset number of occupants; such vehicles often include buses, taxis and carpools.

HAR: Highway Advisory Radio.

Highway Capacity Manual (HCM): Revised in 1994 by the Transportation Research Board of the National Research Council, the HCM presents various methodologies for analyzing the operation (see Level of Service) of transportation systems as freeways, arterial, transit, and pedestrian facilities.

HOT Lanes: (High Occupancy Toll Lane) New HOV lanes that allow single occupant vehicles access for a fee.

HSR: (High Speed Rail) A regional system that will connect major regional activity centers and significant inter-/multi-modal transportation facilities.

I/C: (Interchange) A system of interconnecting roadways in conjunction with one or more grade separations providing for the interchange of traffic between two or more roadways on different levels.

ICES: (Intermodal Corridors of Economic Significance) Significant National Highway System Corridors that link intermodal facilities most directly, conveniently and efficiently to intrastate, interstate and international markets.

Intermodal Surface Transportation Efficiency Act (ISTEA): Federal legislation and funding Program adopted in 1991. It provides increased funding and program flexibility for multi-modal transportation programs. (Update: ISTEA expired on September 30, 1997. In December 1997, Congress passed and the President signed a six-month extension of the law, holding funding to current levels and keeping program structure and formulas intact. This extension expires on March 31, 1998, with an obligation deadline of May 1, 1998. Congress will then again face a situation of how to address the issue of keeping transportation funds flowing while debating multi-year reauthorization legislation).

Interregional Transportation Improvement Program (ITIP): An improvement program that makes up 25% of the STIP. 60% of this program is for improvements on Interregional Routes in non-urbanized areas and intercity rail. 40% is to fund projects of interregional significance (for the interregional movement of people and goods).

Intersection Capacity Utilization (ICU): A method for calculating the level of traffic congestion (see Level of Service) at an intersection.

IRRS (Interregional Road System): A series of interregional state highway routes, outside the urbanized areas, that provide access to, and links between, the state's economic centers, major recreational areas, and urban and rural regions.

ITMS: Intermodal Transportation Management System

ITS: (Intelligent Transportation Systems) The application of electronics and computer information systems to transportation.

ITSP: (Interregional Transportation Strategic Plan) Caltrans guiding framework for implementing the Interregional Improvement Program under Senate Bill 45.

IVHS (Intelligent Vehicle Highway Systems): The development of application of electronics, communications or information processing (including advanced traffic management systems, public transportation systems, satellite vehicle tracking systems, and advanced vehicle communications systems) used alone or in combination to improve the efficiency and safety of surface transportation systems.

LACMTA: Los Angeles County Metropolitan Transportation Authority.

LADOT: Los Angeles Department of Transportation.

Level of Service (LOS): A qualitative measure describing operational conditions within a traffic stream; generally described in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.

Local Implementation Report (LIR): A report that jurisdictions must submit to LACMTA to remain in conformance with Los Angeles County Congestion Management Program (CMP) requirements. This report is submitted on an annual basis, and contains a resolution of conformance, new development activity reporting, selected mitigation strategies and credit claims and future transportation improvements.

Los Angeles Regional Transportation Study (LARTS): An organization of transportation planners and data analysts who have developed and are charged with monitoring and forecasting travel in the Los Angeles area. It has primary responsibility for predicting future travel behavior within six counties (Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial) which comprises the Southern California Association of Governments (SCAG) region. It operates under the aegis of CALTRANS, District 7, and functions with the support of SCAG, U.S. Department of Transportation, and transit districts, cities and counties of the SCAG region.

LROP: Long Range Operations Plan

LX: Los Angeles Department of Transportation Commuter Express

Metropolitan Planning Organization (MPO): According to U.S. Code, the organization designated by the governor and local elected officials as responsible, together with the state, for transportation planning in an urbanized area. It serves as the forum for cooperative decision making by principal elected officials of general local government.

MF: (Mixed Flow) Traffic Movement having automobiles, trucks, buses, and motorcycles sharing traffic lanes.

Model, Land Use: A model used to predict the future spatial allocation of urban activities (land use), given total regional growth, the future transportation system, and other factors.

Model, Mode Choice: A model used to forecast the proportion of total person trips on each of the available transportation modes.

Model, Traffic: A mathematical equation or graphic technique used to simulate traffic movements, particularly those in urban areas or on a freeway.

Model: (1) A mathematical or conceptual presentation of relationships and actions within a system. It is used for analysis of the system or its evaluation under various conditions. (2) A mathematical description of a real-life situation, that uses data on past and present conditions to make a projection about the future.

MPO: (Metropolitan Planning Organization) According to U.S. Code, the organization designated by the governor and local elected officials as responsible, together with the state, for the transportation planning in an urbanized area. It serves as the forum for cooperative decision making by principal elected officials of general local government.

MPAH: Master Plan of Arterial Highways

MTA: Metropolitan Transportation Authority (Metro Bus Lines)

Multi-Modal: Pertaining to more than one mode of travel.

NHS: (National Highway System) Will consist of 155,000 miles (plus or minus 15 percent) of the major road in the U.S. Included will be all Interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network, and strategic highway connectors.

Night Owl: Evening transit service hours that extend beyond the normal commute service hours, but is less than 24 hour per day service.

Notice of Preparation (NOP): A notice informing potentially affected agencies that an Environmental Impact Report (EIR) is being prepared for a proposed development or project.

Null: A concept that includes only existing projects and those projects which may or may not be constructed but are programmed in the 1996 STIP.

OHC: Other Highway Construction

Passenger Miles Traveled (PMT): The number of miles traveled by all passengers on a transportation mode such as transit.

Peak (Peak Period, Rush Hours): (1) the period during which the maximum amount of travel occurs. It may be specified as the morning (a.m.) or afternoon or evening (p.m.) peak. (2) The period during which the demand for transportation service is the heaviest. (AM Peak period represents 6:30 a.m. to 8:30 a.m. and PM Peak period represents 3:00 p.m. to 6:00 p.m.)

Performance Indicator: Quantitative measures of how well an activity, task, or function is being performed. In transportation systems, it is usually computed by relating a measure of service output or use to a measure of service input or cost.

PM: (Post Mile) is the mileage measured from a county line or the beginning of a route to another county line or the ending of the route. Each post mile along a route in a county is unique location on the State Highway System.

PMT: (Passenger Miles Traveled) The number of miles traveled by all passengers on a transportation mode such as transit.

PPN: Planning and Program Number used in the State Transportation Improvement Program (STIP) to identify projects.

PSR: (Project Study Report) The pre-programming document required before a project may be included in the STIP.

Public Transportation: Transportation service to the public on a regular basis using vehicles that transport more than one person for compensation, usually but not exclusively over a set route or routes from one fixed point to another. Routes and schedules may be determined through a cooperative arrangement. Subcategories include public transit service, and paratransit services that are available to the general public.

RAS: Rehabilitation and Safety

Regional Statistical Area (RSA): An aggregation of census tracts for the purpose of subregional demographic and transportation analysis within the Southern California Association of Governments (SCAG) area.

Regional Transportation Improvement Program (RTIP): A list of proposed transportation projects submitted to the CTC by the regional transportation planning agency, as a request for state funding through the FCR and Urban and Commuter Rail Programs. The individual projects are first proposed by local jurisdictions (CMAs in urbanized counties), then evaluated and prioritized by the RTPA for submission to the CTC. The RTIP has a seven-year planning horizon, and is updated every two years.

Regional Transportation Plan (RTP): A comprehensive 20-year plan for the region, updated every two years by the regional transportation-planning agency. The RTP includes goals, objectives, and policies, and recommends specific transportation improvements.

Regional Transportation Planning Agency (RTPA): The agency responsible for the preparation of RTPs and RTIPs and designated by the State Business Transportation and Housing Agency to allocate transit funds. RTPAs can be local transportation commissions, COGs MPOS, or statutorily created agencies. In the Los Angeles area, SCAG is the RTPA.

Ridesharing: Two or more persons traveling by any mode, including but not limited to, automobile, vanpool, bus, taxi, jitney, and public transit.

RME: (Regional Mobility Element) SCAGs major policy and planning statement on the region's transportation issues and goals. It is comprised of a set of long-range policies, plans and programs that outline a vision of a regional transportation system compatible with federal and state mobility objectives. Formerly called the Regional Mobility Plan (RMP).

RMP: (Regional Mobility Plan) The equivalent to the federal and state required Regional Transportation Plan (RTP) for the SCAG region.

Roadway Characteristics: The geometric characteristics of the freeway segment under study, including the number and width of lanes, lateral clearances at the roadside and median, free-flow speeds, grades, and lane configurations.

SC: Santa Clarita Transit

SCRRA: Southern California Regional Rail Authority

SHELL: Subsystem of Highways for the movement of Extra Legal Loads

SHOPP: (State Highway Operation and Protection Program) A four-year program limited to projects related to State highway safety and rehabilitation.

SM: Santa Monica Transit.

Short Range Transit Program (S RTP): A five-year comprehensive plan required by the Federal Transit Administration for all transit operators receiving federal funds. The plans establish the operator's goals, policies, and objectives, analyze current and past performance, and describe short-term operational and capital improvement plans.

SJHTC: San Joaquin Hills Transportation Corridor

Smart Shuttle: A multiple occupant passenger vehicle equipped with advanced technology for more effective vehicle and fleet planning, scheduling and operation, as well as offering passengers more information and fare payment options.

South Coast Air Basin (SCAB): A geographic area defined by the San Jacinto Mountains to the east, the San Bernardino Mountains to the north, and the Pacific Ocean to the west and south. The entire SCAB is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

South Coast Air Quality Management District (SCAQMD): The agency responsible for preparing the Air Quality Management Plan (AQMP) for the South Coast Air Basin.

Southern California Association of Governments (SCAG): The Metropolitan Planning Organization (MPO) for Ventura, Los Angeles, Orange, San Bernardino, Riverside and Imperial counties that is responsible for preparing the RTIP and the RTP. SCAG also prepared land use and transportation control measures in the 1994 Air Quality Management Plan (AQMP).

SR: State Route

STAA: Surface Transportation Assistance Act

STRAHNET: Strategic Highway Corridor Network

State Transportation Improvement Program (STIP): A list of transportation projects, proposed in RTIPs and the PSTIP, which are approved for funding by the CTC.

Surface Transportation Program (STP): Part of ISTEA, this is a funding program intended for use by the states and cities for congestion relief in urban areas.

Traffic Accident Surveillance and Analysis System (TASAS): A system that provides a detailed list and/or summary of accidents that have occurred on highways, ramps, or intersections in the State Highway System. Accidents can be selected by location, highway characteristics, accident data codes or any combination of these.

TCR: (Transportation Concept Report) Formerly Route Concept Report (RCR) this report analyzes a transportation corridor service area, establishes a twenty-year transportation planning concept and identifies modal transportation options and applications needed to achieve the twenty-year concepts.

TEA-21: (Transportation Equity Act for the 21st Century) Signed by President Clinton on June 9, 1998. TEA-21 builds on the initiatives established in the ISTEA Act of 1991. This new Act combines the continuation and improvement of current programs with new initiatives to meet the challenges of improving safety as traffic continues to increase at record levels, protecting and enhancing communities and the natural environment as we provide transportation, and advancing America's economic growth and competitiveness domestically and internationally through efficient and flexible and transportation.

TMC: (Transportation Management Center) A focal point that can monitor traffic and road conditions, as well as train and transit schedules, and airport and shipping advisories. From here, information about accidents, road closures and emergency notifications is relayed to travelers.

TOS: (Traffic Operation System) Computer based signal operation.

TOT/MVM: Total Accidents Per Million Vehicle Miles.

Traffic Conditions: Any characteristics of the traffic stream that may affect capacity or operations, including the percentage composition of the traffic stream by vehicle type and driver characteristics (such as the differences between weekday commuters and recreational drivers).

Transit Performance Measurement Program (TPMP): A state mandated program to evaluate transit operator system performance on the basis of operating statistics. The program monitors transit system performance of Los Angeles County operators that receive state and federal funds and analyzes the institutional relationships among operators to ensure coordination.

Transportation Control Measure (TCM): A measure intended to reduce pollutant emissions from motor vehicles. Examples of TCMs include programs to encourage ridesharing or public transit usage, city or county trip reduction ordinances, and the use of cleaner burning fuels in motor vehicles.

Transportation Demand Management (TDM): Demand based techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of peak hours.

Transportation Impact Analysis (TIA): An analysis procedure to assist local jurisdictions in assessing the impact of land use decisions on the Congestion Management Program (CMP) system for Los Angeles County.

Transportation Management Association (TMA)/Organization (TMO): A private/non-profit association that has a financial dues structure joined together in a legal agreement for the purpose of achieving mobility and air quality goals and objectives within a designated area. There are fourteen operating TMA/TMO's in Los Angeles County.

Transportation System Management (TSM): That part of the urban transportation process undertaken to improve the efficiency of the existing transportation system. The intent is to make better use of the existing transportation system by using short-term, low capital transportation improvements that generally cost less and can be implemented more quickly than system development actions.

TL: Truck Lane.

TRO: Trip Reduction Ordinances

TT: Torrance Transit

TW: Transitway

Urban Transportation Planning System (UTPS): A tool for multi-modal transportation planning developed by the Urban Mass Transportation Administration (now the Federal Transit Administration) and the Federal Highway Administration. It is used for both long and short-range Planning, particularly system analysis and covers both computerized and manual planning methods. UTPS consists of computer programs, attendant documentation, user guides, and manuals that cover one or more of five analytical categories: highway network analysis, transit network analysis, demand estimation, data capture and manipulation, and sketch planning.

V/C: Volume Capacity

VCTC: Ventura County Transportation Commission

Vehicle Miles Traveled (VMT): (1) on highways, a measurement of the total miles traveled in all vehicles in the area for a specified time period. It is calculated by the number of vehicles multiplied by the miles traveled in a given area or on a given highway during the time period. (2) In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

Vehicle Occupancy: The number of people aboard a vehicle at a given time; also known as auto or automobile occupancy when the reference is to automobile travel only.

Vehicle Service Miles (VSM): The total miles traveled by transit service vehicles while in revenue service.

Vehicle Trip: A one-way movement of a vehicle between two points.



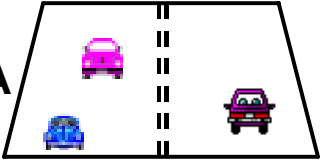
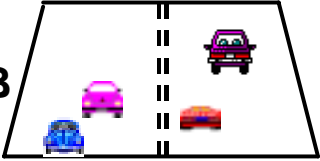
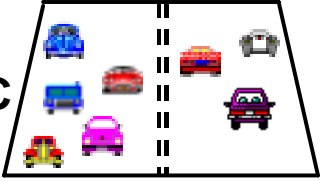
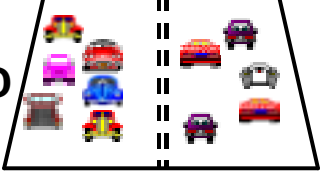
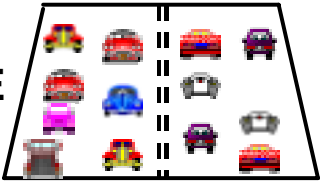

System Planning: The Legislative Mandate

Long-Term System Planning

Added: Statutes of 1987, Chapter 878

- 65086 (a) The Department of Transportation shall carry out long-term state highway system planning to identify future highway improvements and new transportation corridor through route concept reports.
- (b) The department, in conjunction with transportation planning agencies, shall develop specific project listing for the initiation of project studies reports resulting in project candidates for inclusion in regional transportation plans and the state transportation improvement program as required by Section 14529.

Level of Service

Level of Service	Flow Conditions	Operating Speed	Delay	Service Rating
A 	Highest quality of Service. Free traffic flow, low volumes and densities. Little or no restriction on maneuverability or speed.	55+	None	Good
B 	Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability.	50	None	Good
C 	Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing	45	Minimal	Adequate
D 	Approaching unstable flow. Speeds tolerable but subject to sudden and considerable variation. Less maneuverability and driver comfort.	40	Minimal	Adequate
E 	Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability and lower driver comfort.	35	Significant	Poor
F 	Forced traffic flow. Speed and flow may drop to zero with high densities.	<20	Considerable	Poor

SUMMARY SHEET SOURCES

SEGMENT 1 SUMMARY - P.1

DESCRIPTION	
Limits:	#1
Post Mile:	#2

Classification	
Functional Classification:	#3
MPAH Designation:	#4
Other Systems:	#5

Physical Characteristics	
Terrain:	#6
Mainline R/W	#7
Median / Outside Shoulder:	#8
Design Speed (MPH)	#9
Bridge Structures:	#10

Corridor Characteristics	
Trucks (% of ADT):	#11
Express Transit (lines):	#12
Hours of Operation:	#13
Rail Service:	#14
Park & Ride Lots (Spaces):	#15

Purpose
#16

Accident Rates			
per Million Vehicle Miles (MVM) (1/94 to 12/96)			
ACTUAL		AVERAGE	
Fatal + Injury	Total	Fatal + Injury	Total
#17	#18	#19	#20

SUMMARY SHEET SOURCES

SEGMENT 1 SUMMARY - P.2

TRAFFIC DATA						
	EXISTING		2020 NULL (w/o 710)		2020 NULL (with 710)	
	MAIN	HOV	MAIN	HOV	MAIN	HOV
Average Daily Traffic (ADT)	#21	#23	#25	#27	#29	#31
Lanes Configuration (ea. direction)	#22	#24	#26	#28	#30	#32

Volume							
AM Peak Hour	N	#33	#37	#41	#45	#49	#53
AM Peak Hour	S	#34	#38	#42	#46	#50	#54
PM Peak Hour	N	#35	#39	#43	#47	#51	#55
PM Peak Hour	S	#36	#40	#44	#48	#52	#56

Speed		
AM Average	N	#57
AM Average	S	#58
PM Average	N	#59
PM Average	S	#60

#61
#62
#63
#64

#65
#66
#67
#68

Service Characteristics							
Level Of Service, AM	N	#69	#75	#81	#87	#93	#99
Level Of Service, AM	S	#70	#76	#82	#88	#94	#100
Level Of Service, PM	N	#71	#77	#83	#89	#95	#101
Level Of Service, PM	S	#72	#78	#84	#90	#96	#102
Directional Split (%) AM	N, S	#73	#79	#85	#91	#97	#103
Directional Split (%) PM	N, S	#74	#80	#86	#92	#98	#104

SUMMARY SHEET SOURCES

SEGMENT 1 SUMMARY - P.3

TRAFFIC DATA						
	2020 CONCEPT (Alt1)		2020 CONCEPT (Alt2)		ULTIMATE	
	MAIN	HOV	MAIN	HOV	MAIN	HOV
Average Daily Traffic (ADT)	#105	#107	#109	#111	#113	#115
Lanes Configuration (ea. direction)	#106	#108	#110	#112	#114	#116

Volume							
AM Peak Hour	N	#117	#121	#125	#129	#133	#137
AM Peak Hour	S	#118	#122	#126	#130	#134	#138
PM Peak Hour	N	#119	#123	#127	#131	#135	#139
PM Peak Hour	S	#120	#124	#128	#132	#136	#140

Speed				
AM Average	N	#141	#145	#149
AM Average	S	#142	#146	#150
PM Average	N	#143	#147	#151
PM Average	S	#144	#148	#152

Service Characteristics							
Level Of Service, AM	N	#153	#159	#165	#171	#177	#183
Level Of Service, AM	S	#154	#160	#166	#172	#178	#184
Level Of Service, PM	N	#155	#161	#167	#173	#179	#185
Level Of Service, PM	S	#156	#162	#168	#174	#180	#186
Directional Split (%) AM	N, S	#157	#163	#169	#175	#181	#187
Directional Split (%) PM	N, S	#158	#164	#170	#176	#182	#188

APPENDIX

SUMMARY SHEET SOURCES

Summary sheet data entries and their sources are as indicated below:

1. Segment limits - System Planning
2. Post Miles - 1995 Traffic Volume book, 1995 State Highway Log, 1995 Route Segment Report, 1996 Highway Inventory
3. Functional Classification - 1992 Functional Classification System Map, NHS Map
4. MPAH Designation - County Master Plan of Arterial Highways Map
5. Other Systems - STAA Map, STRAHNET Map, IRRS Map, ICES List, Lifeline Map
6. Terrain - 1995 Route Segment Report, 1996 Highway Inventory
7. Mainline R/W - 1995 State Highway Log, 1996 Highway Inventory, R/W Maps
8. Median/Shoulder - 1995 State Highway Log, 1996 Highway Inventory
9. Design Speed - 1995 Route Segment Report, 1996 Highway Inventory
10. Bridge Structures - Office of Structure, Maintenance and Investigations
11. Trucks (% of ADT) - 1995 Daily Truck Traffic on State Highway System, 1996 Highway Inventory
12. Express Transit (lines) - 1996 MTA Route Maps, Individual Route Schedules (Various Operators)
13. Hours of Operation - Individual Route Schedules (Various Operators)
14. Rail Service - 1996 MTA Route Maps, 1996 Metrolink Schedules, 1996 AMTRAK Schedules
15. Park & Ride Lots (Spaces) - 1996 Park & Ride Map
16. Purpose - System Planning
17. Actual Fatal & Injury Accidents - 1997 TASAS Traffic Data
18. Actual Total Accidents - 1997 TASAS Traffic Data
19. Average Fatal & Injury Accidents - 1997 TASAS Traffic Data
20. Average Total Accidents - 1997 TASAS Traffic Data

21. Existing Mainline ADT - 1995 Traffic Volume book, 1995 Traffic Count Data
22. Existing Mainline Lanes - 1995 State Highway Log, 1996 Highway Inventory, 1995 Route Segment Report, 1996 Video Log
23. Existing HOV ADT - 1995 Traffic Volume book, 1995 Traffic Count Data
24. Existing HOV Lanes - 1995 State Highway Log, 1996 Highway Inventory, 1995 Route Segment Report, 1996 Video Log
25. 2020 Null without I-710 Mainline ADT - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
26. 2020 Null without I-710 Mainline Lanes - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
27. 2020 Null without I-710 HOV ADT - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
28. 2020 Null without I-710 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
29. 2020 Null with I-710 Mainline ADT - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
30. 2020 Null with I-710 Mainline Lanes - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
31. 2020 Null with I-710 HOV ADT - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
32. 2020 Null with I-710 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
33. Existing Mainline AM Peak Hour Volume (North) - 1995 Traffic Volume book, 1995 Traffic Count Data
34. Existing Mainline AM Peak Hour Volume (South) - 1995 Traffic Volume book, 1995 Traffic Count Data
35. Existing Mainline PM Peak Hour Volume (North) - 1995 Traffic Volume book, 1995 Traffic Count Data
36. Existing Mainline PM Peak Hour Volume (South) - 1995 Traffic Volume book, 1995 Traffic Count Data

37. Existing HOV AM Peak Hour Volume (North) - 1995 Traffic Volume book, 1995 Traffic Count Data
38. Existing HOV AM Peak Hour Volume (South) - 1995 Traffic Volume book, 1995 Traffic Count Data
39. Existing HOV PM Peak Hour Volume (North) - 1995 Traffic Volume book, 1995 Traffic Count Data
40. Existing HOV PM Peak Hour Volume (South) - 1995 Traffic Volume book, 1995 Traffic Count Data
41. 2020 Null without I-710 Mainline AM Peak Hour Volume (North) -1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
42. 2020 Null without I-710 Mainline AM Peak Hour Volume (South) -1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
43. 2020 Null without I-710 Mainline PM Peak Hour Volume (North) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
44. 2020 Null without I-710 Mainline PM Peak Hour Volume (South) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
45. 2020 Null without I-710 HOV AM Peak Hour Volume (North) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
46. 2020 Null without I-710 HOV AM Peak Hour Volume (South) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
47. 2020 Null without I-710 HOV PM Peak Hour Volume (North) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
48. 2020 Null without I-710 HOV PM Peak Hour Volume (South) - 1990 LARTS Base/2020 Null without I-710 Model, Spreadsheet Segment Calculations
49. 2020 Null with I-710 Mainline AM Peak Hour Volume (North) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
50. 2020 Null with I-710 Mainline AM Peak Hour Volume (South) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
51. 2020 Null with I-710 Mainline PM Peak Hour Volume (North) - 1990 LARTS Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations

52. 2020 Null with I-710 Mainline PM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
53. 2020 Null with I-710 HOV AM Peak Hour Volume (North) - 1990 LARTS
Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
54. 2020 Null with I-710 HOV AM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
55. 2020 Null with I-710 HOV PM Peak Hour Volume (North) - 1990 LARTS
Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
56. 2020 Null with I-710 HOV PM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Null with I-710 Model, Spreadsheet Segment Calculations
57. Existing Mainline AM Average Speed (North) - 1994 Highway Capacity Manual,
1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet
Segment Calculations
58. Existing Mainline AM Average Speed (South) - 1994 Highway Capacity Manual,
1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet
Segment Calculations
59. Existing Mainline PM Average Speed (North) - 1994 Highway Capacity Manual,
1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet
Segment Calculations
60. Existing Mainline PM Average Speed (South) - 1994 Highway Capacity Manual,
1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet
Segment Calculations
61. 2020 Null without I-710 Mainline AM Average Speed (North) - 1994 Highway
Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model
Runs, Spreadsheet Segment Calculations
62. 2020 Null without I-710 Mainline AM Average Speed (South) - 1994 Highway
Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model
Runs, Spreadsheet Segment Calculations
63. 2020 Null without I-710 Mainline PM Average Speed (North) - 1994 Highway
Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model
Runs, Spreadsheet Segment Calculations

64. 2020 Null without I-710 Mainline PM Average Speed (South) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
65. 2020 Null with I-710 Mainline AM Average Speed (North) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
66. 2020 Null with I-710 Mainline AM Average Speed (South) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
67. 2020 Null with I-710 Mainline PM Average Speed (North) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
68. 2020 Null with I-710 Mainline PM Average Speed (South) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
69. Existing Mainline AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
70. Existing Mainline AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
71. Existing Mainline PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
72. Existing Mainline PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
73. Existing Mainline AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
74. Existing Mainline PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
75. Existing HOV AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
76. Existing HOV AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

77. Existing HOV PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
78. Existing HOV PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
79. Existing HOV AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
80. Existing HOV PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
81. 2020 Null without I-710 Mainline AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
82. 2020 Null without I-710 Mainline AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
83. 2020 Null without I-710 Mainline PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
84. 2020 Null without I-710 Mainline PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
85. 2020 Null without I-710 Mainline AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
86. 2020 Null without I-710 Mainline PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
87. 2020 Null without I-710 HOV AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
88. 2020 Null without I-710 HOV AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
89. 2020 Null without I-710 HOV PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
90. 2020 Null without I-710 HOV PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
91. 2020 Null without I-710 HOV AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

92. 2020 Null without I-710 HOV PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
93. 2020 Null with I-710 Mainline AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
94. 2020 Null with I-710 Mainline AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
95. 2020 Null with I-710 Mainline PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
96. 2020 Null with I-710 Mainline PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
97. 2020 Null with I-710 Mainline AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
98. 2020 Null with I-710 Mainline PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
99. 2020 Null with I-710 HOV AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
100. 2020 Null with I-710 HOV AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
101. 2020 Null with I-710 HOV PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
102. 2020 Null with I-710 HOV PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
103. 2020 Null with I-710 HOV AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
104. 2020 Null with I-710 HOV PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
105. 2020 Concept Alternate 1 Mainline ADT - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
106. 2020 Concept Alternate 1 Mainline Lanes - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

107. 2020 Concept Alternate 1 HOV ADT - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
108. 2020 Concept Alternate 1 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
109. 2020 Concept Alternate 2 Mainline ADT - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
110. 2020 Concept Alternate 2 Mainline Lanes - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
111. 2020 Concept Alternate 2 HOV ADT - 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
112. 2020 Concept Alternate 2 HOV Lanes - 1997 Status of HOV Projects List, 1990 LARTS Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
113. Ultimate Mainline ADT - Not applicable
114. Ultimate Mainline Lanes - System Planning, 1991 Route Concept Report
115. Ultimate HOV ADT - Not applicable
116. Ultimate HOV Lanes - System Planning, 1991 Route Concept Report
117. 2020 Concept Alternate 1 Mainline AM Peak Hour Volume (North) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
118. 2020 Concept Alternate 1 Mainline AM Peak Hour Volume (South) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
119. 2020 Concept Alternate 1 Mainline PM Peak Hour Volume (North) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
120. 2020 Concept Alternate 1 Mainline PM Peak Hour Volume (South) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
121. 2020 Concept Alternate 1 HOV AM Peak Hour Volume (North) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
122. 2020 Concept Alternate 1 HOV AM Peak Hour Volume (South) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
123. 2020 Concept Alternate 1 HOV PM Peak Hour Volume (North) - 1990 LARTS Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations

- 124. 2020 Concept Alternate 1 HOV PM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Concept Alternate 1 Model, Spreadsheet Segment Calculations
- 125. 2020 Concept Alternate 2 Mainline AM Peak Hour Volume (North) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 126. 2020 Concept Alternate 2 Mainline AM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 127. 2020 Concept Alternate 2 Mainline PM Peak Hour Volume (North) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 128. 2020 Concept Alternate 2 Mainline PM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 129. 2020 Concept Alternate 2 HOV AM Peak Hour Volume (North) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 130. 2020 Concept Alternate 2 HOV AM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 131. 2020 Concept Alternate 2 HOV PM Peak Hour Volume (North) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 132. 2020 Concept Alternate 2 HOV PM Peak Hour Volume (South) - 1990 LARTS
Base/2020 Concept Alternate 2 Model, Spreadsheet Segment Calculations
- 133. Ultimate Mainline AM Peak Hour Volume (North) - Not applicable
- 134. Ultimate Mainline AM Peak Hour Volume (South) - Not applicable
- 135. Ultimate Mainline PM Peak Hour Volume (North) - Not applicable
- 136. Ultimate Mainline PM Peak Hour Volume (South) - Not applicable
- 137. Ultimate HOV AM Peak Hour Volume (North) - Not applicable
- 138. Ultimate HOV AM Peak Hour Volume (South) - Not applicable
- 139. Ultimate HOV PM Peak Hour Volume (North) - Not applicable
- 140. Ultimate HOV PM Peak Hour Volume (South) - Not applicable
- 141. 2020 Concept Alternate 1 Mainline AM Average Speed (North) - 1994 Highway
Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model
Runs, Spreadsheet Segment Calculations

142. 2020 Concept Alternate 1 Mainline AM Average Speed (South) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
143. 2020 Concept Alternate 1 Mainline PM Average Speed (North) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
144. 2020 Concept Alternate 1 Mainline PM Average Speed (South) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
145. 2020 Concept Alternate 2 Mainline AM Average Speed (North) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
146. 2020 Concept Alternate 2 Mainline AM Average Speed (South) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
147. 2020 Concept Alternate 2 Mainline PM Average Speed (North) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
148. 2020 Concept Alternate 2 Mainline PM Average Speed (South) - 1994 Highway Capacity Manual, 1995 Traffic Operations Speed Map, 1990/2020 LARTS Model Runs, Spreadsheet Segment Calculations
149. Ultimate Mainline AM Average Speed (North) - Not applicable
150. Ultimate Mainline AM Average Speed (South) - Not applicable
151. Ultimate Mainline PM Average Speed (North) - Not applicable
152. Ultimate Mainline PM Average Speed (South) - Not applicable
153. 2020 Concept Alternate 1 Mainline AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
154. 2020 Concept Alternate 1 Mainline AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
155. 2020 Concept Alternate 1 Mainline PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

156. 2020 Concept Alternate 1 Mainline PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
157. 2020 Concept Alternate 1 Mainline AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
158. 2020 Concept Alternate 1 Mainline PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
159. 2020 Concept Alternate 1 HOV AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
160. 2020 Concept Alternate 1 HOV AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
161. 2020 Concept Alternate 1 HOV PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
162. 2020 Concept Alternate 1 HOV PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
163. 2020 Concept Alternate 1 HOV AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
164. 2020 Concept Alternate 1 HOV PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
165. 2020 Concept Alternate 2 Mainline AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
166. 2020 Concept Alternate 2 Mainline AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
167. 2020 Concept Alternate 2 Mainline PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
168. 2020 Concept Alternate 2 Mainline PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
169. 2020 Concept Alternate 2 Mainline AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
170. 2020 Concept Alternate 2 Mainline PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations

- 171. 2020 Concept Alternate 2 HOV AM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
- 172. 2020 Concept Alternate 2 HOV AM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
- 173. 2020 Concept Alternate 2 HOV PM LOS (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
- 174. 2020 Concept Alternate 2 HOV PM LOS (South) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
- 175. 2020 Concept Alternate 2 HOV AM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
- 176. 2020 Concept Alternate 2 HOV PM Directional Split (North) - 1994 Highway Capacity Manual, Spreadsheet Segment Calculations
- 177. Ultimate Mainline AM LOS (North) - Not applicable
- 178. Ultimate Mainline AM LOS (South) - Not applicable
- 179. Ultimate Mainline PM LOS (North) - Not applicable
- 180. Ultimate Mainline PM LOS (South) - Not applicable
- 181. Ultimate Mainline AM Directional Split (North) - Not applicable
- 182. Ultimate Mainline PM Directional Split (North) - Not applicable
- 183. Ultimate HOV AM LOS (North) - Not applicable
- 184. Ultimate HOV AM LOS (South) - Not applicable
- 185. Ultimate HOV PM LOS (North) - Not applicable
- 186. Ultimate HOV PM LOS (South) - Not applicable
- 187. Ultimate HOV AM Directional Split (North) - Not applicable
- 188. Ultimate HOV PM Directional Split (North) - Not applicable

SYSTEM PLANNING: An Overview

PURPOSE:

System Planning provides the basis for an effective transportation decision-making process, which is responsive to the public demand for mobility of people and goods.

OBJECTIVE:

- Identify, analyze and display transportation problems on a consistent statewide basis to enable fully informed decisions on the programming of system improvements and on system operations and maintenance.
- Allow department management to make short-term decisions that are consistent with long-term objectives.
- Communicate with the public on the levels of transportation service, which the state can or cannot provide.

PRODUCTS:

1) District System Management Plan (DSMP)

The DSMP is a strategic and policy planning document that presents how the district envisions the transportation system will be maintained, managed and developed over the next twenty years and beyond. It is developed in partnership with regional and local transportation planning agencies, congestion management agencies, transit districts and air quality planning agencies. It considers the entire transportation infrastructure, regardless of jurisdiction, and addresses all modes and services which move people, services, and goods. As a management tool, it informs

federal, state, regional and local agencies, the public and the private sector of the district's plan for developing, managing and maintaining the transportation system.

2) Route Concept Report (RCR), Transportation Concept Report (TCR) or Corridor Study

RCR's, TCR's and Corridor Studies analyze a route or corridor and establish a twenty-year transportation planning concept. They identify modal options and various needs to accomplish the twenty-year concept. The concept analysis considers operating level of service (LOS), modal facility type, vehicle occupancy of all modes and capacity needs. The studies identify "unconstrained" needs.

3) Transportation System Development Plan (TSDP)

The TSDP identifies transportation system improvements for the various options analyzed in the DSMP and TCR's. It covers the four-years immediately following the seven-year STIP period and uses high and low funding scenarios. It provides a priority list for use in programming on- and off-system improvements.

Document Schedule:

DSMP Same as the SCAG Regional Transportation Plan.

TCR's Ongoing; updated as conditions change.

TSDP Precedes STIP priority list; due from the district by March 15th of odd numbered years.