

Appendix C

HIGHWAY CAPACITY SOFTWARE REPORTS

- I-526 Eastbound
 - 2022 Existing AM Peak Hour (4-lane Freeway)
 - 2022 Existing PM Peak Hour (4-lane Freeway)
 - 2050 No Build AM Peak Hour (4-lane Freeway)
 - 2050 No Build AM Peak Hour (6-lane Freeway)
 - 2050 No Build AM Peak Hour (8-lane Freeway)
 - 2050 No Build PM Peak Hour (4-lane Freeway)
 - 2050 No Build PM Peak Hour (6-lane Freeway)
 - 2050 No Build PM Peak Hour (8-lane Freeway)
 - 2050 Alternative 1, 3 & 4 AM Peak Hour (6-lane Freeway)
 - 2050 Alternative 1, 3 & 4 AM Peak Hour (8-lane Freeway)
 - 2050 Alternative 1, 3 & 4 PM Peak Hour (6-lane Freeway)
 - 2050 Alternative 1, 3 & 4 PM Peak Hour (8-lane Freeway)
 - 2050 Alternative 2 & 6 AM Peak Hour (6-lane Freeway)
 - 2050 Alternative 2 & 6 AM Peak Hour (8-lane Freeway)
 - 2050 Alternative 2 & 6 PM Peak Hour (6-lane Freeway)
 - 2050 Alternative 2 & 6 PM Peak Hour (8-lane Freeway)
 - 2050 Alternative 1 & 2 with CD Roadway AM Peak Hour (6-lane Freeway)
 - 2050 Alternative 1 & 2 with CD Roadway PM Peak Hour (6-lane Freeway)
 - 2050 Alternative 5 AM Peak Hour (6-lane Freeway)
 - 2050 Alternative 5 AM Peak Hour (8-lane Freeway)
 - 2050 Alternative 5 PM Peak Hour (6-lane Freeway)
 - 2050 Alternative 5 PM Peak Hour (8-lane Freeway)
- I-526 Westbound
 - 2022 Existing AM Peak Hour (4-lane Freeway)
 - 2022 Existing PM Peak Hour (4-lane Freeway)
 - 2050 No Build AM Peak Hour (4-lane Freeway)
 - 2050 No Build AM Peak Hour (6-lane Freeway)
 - 2050 No Build AM Peak Hour (8-lane Freeway)
 - 2050 No Build PM Peak Hour (4-lane Freeway)
 - 2050 No Build PM Peak Hour (6-lane Freeway)
 - 2050 No Build PM Peak Hour (8-lane Freeway)
 - 2050 Alternative 1, 3 & 4 AM Peak Hour (6-lane Freeway)
 - 2050 Alternative 1, 3 & 4 AM Peak Hour (8-lane Freeway)
 - 2050 Alternative 1, 3 & 4 PM Peak Hour (6-lane Freeway)
 - 2050 Alternative 1, 3 & 4 PM Peak Hour (8-lane Freeway)

- 2050 Alternative 1with CD Roadway AM Peak Hour (6-lane Freeway)
- 2050 Alternative 1with CD Roadway AM Peak Hour (8-lane Freeway)
- 2050 Alternative 1with CD Roadway PM Peak Hour (6-lane Freeway)
- 2050 Alternative 1with CD Roadway PM Peak Hour (8-lane Freeway)
- 2050 Alternative 2 & 6 AM Peak Hour (6-lane Freeway)
- 2050 Alternative 2 & 6 AM Peak Hour (8-lane Freeway)
- 2050 Alternative 2 & 6 PM Peak Hour (6-lane Freeway)
- 2050 Alternative 2 & 6 PM Peak Hour (8-lane Freeway)
- 2050 Alternative 2 LPR CD as Add and WWT as Merge AM Peak Hour (6-lane Freeway)
- 2050 Alternative 2 LPR CD as Add and WWT as Merge AM Peak Hour (8-lane Freeway)
- 2050 Alternative 2 LPR CD as Add and WWT as Merge PM Peak Hour (6-lane Freeway)
- 2050 Alternative 2 LPR CD as Add and WWT as Merge PM Peak Hour (8-lane Freeway)
- 2050 Alternative 2 LPR CD as Merge and WWT as Add AM Peak Hour (6-lane Freeway)
- 2050 Alternative 2 LPR CD as Merge and WWT as Add AM Peak Hour (8-lane Freeway)
- 2050 Alternative 2 LPR CD as Merge and WWT as Add PM Peak Hour (6-lane Freeway)
- 2050 Alternative 2 LPR CD as Merge and WWT as Add PM Peak Hour (8-lane Freeway)
- 2050 Alternative 5 AM Peak Hour (6-lane Freeway)
- 2050 Alternative 5 AM Peak Hour (8-lane Freeway)
- 2050 Alternative 5 PM Peak Hour (6-lane Freeway)
- 2050 Alternative 5 PM Peak Hour (8-lane Freeway)
- 2050 Alternative 6 LPR CD as Add and WWT as Merge AM Peak Hour (6-lane Freeway)
- 2050 Alternative 6 LPR CD as Add and WWT as Merge AM Peak Hour (8-lane Freeway)
- 2050 Alternative 6 LPR CD as Add and WWT as Merge PM Peak Hour (6-lane Freeway)
- 2050 Alternative 6 LPR CD as Add and WWT as Merge PM Peak Hour (8-lane Freeway)
- 2050 Alternative 6 LPR CD as Merge and WWT as Add AM Peak Hour (6-lane Freeway)
- 2050 Alternative 6 LPR CD as Merge and WWT as Add AM Peak Hour (8-lane Freeway)
- 2050 Alternative 6 LPR CD as Merge and WWT as Add PM Peak Hour (6-lane Freeway)
- 2050 Alternative 6 LPR CD as Merge and WWT as Add PM Peak Hour (8-lane Freeway)

I-526

Eastbound

2022 Existing AM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2022 EB Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	2
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

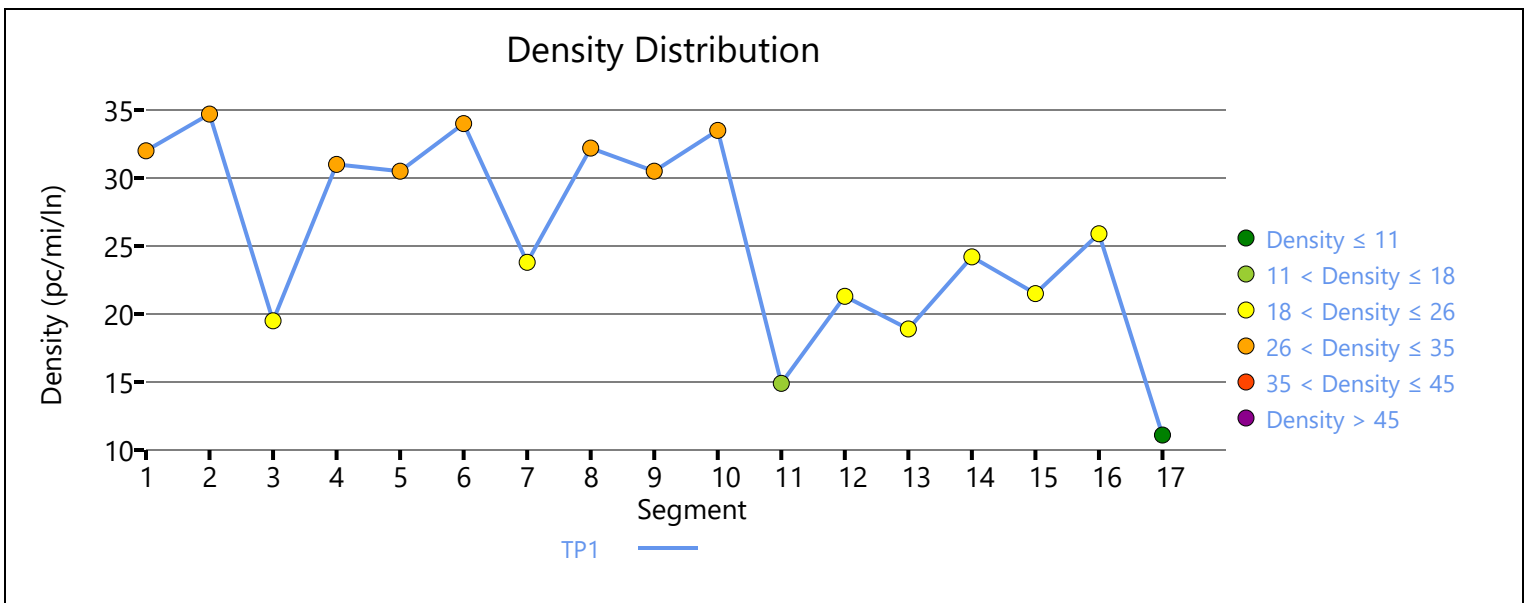
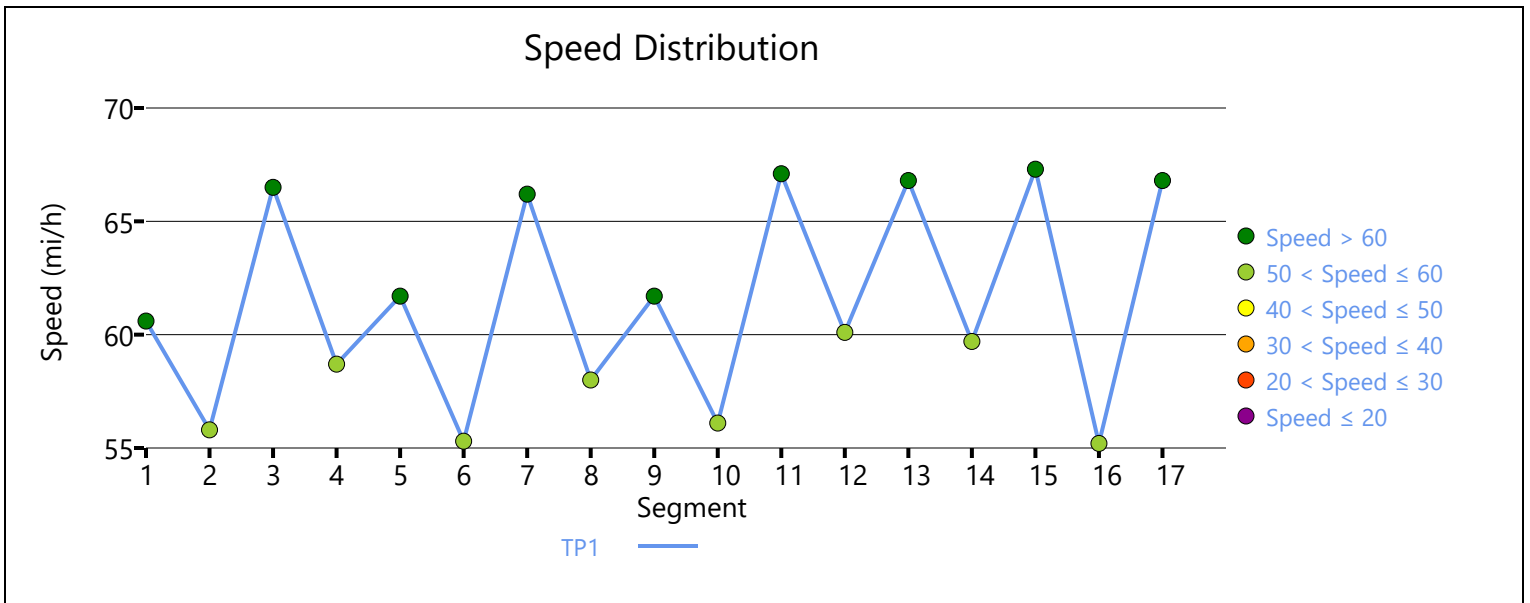
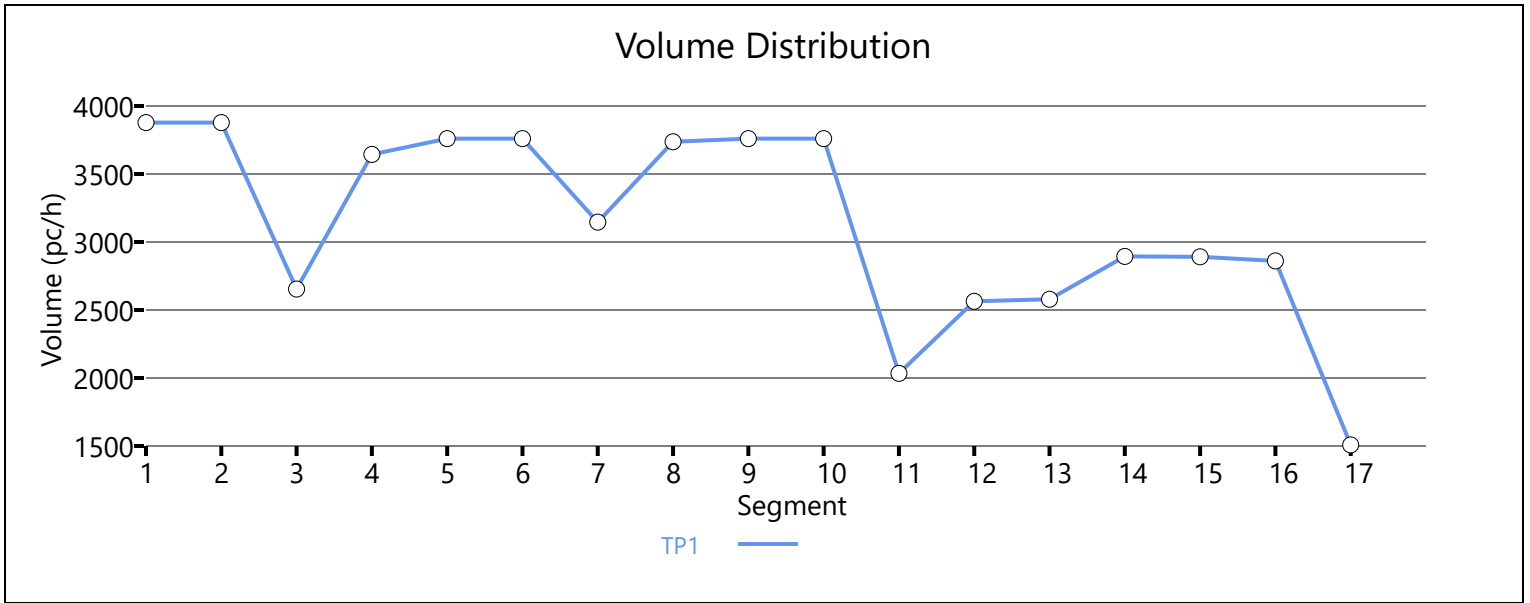
Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	3878	4612	0.84	60.6	32.0	D

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3878	1095	4550	1936	0.85	0.57	55.8	55.8	34.7	30.7	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2654		4612		0.58		66.5		19.5		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.980	3644	990	4550	1936	0.80	0.51	58.7	58.7	31.0	24.9	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3760		4612		0.82		61.7		30.5		D
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.513	3760	591	4550	1936	0.83	0.31	55.3	55.3	34.0	24.0	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		3146		4612		0.68		66.2		23.8		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.952	0.513	3737	591	4550	1936	0.82	0.31	58.0	58.0	32.2	25.6	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3760		4612		0.82		61.7		30.5		D
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.820	3760	1661	4550	2033	0.83	0.82	56.1	56.1	33.5	34.7	D
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		2034		4612		0.44		67.1		14.9		B

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	2564	530	4550	1936	0.56	0.27	60.1	60.1	21.3	19.6	B
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		2579		4612		0.56		66.8		18.9		C
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	2894	315	4550	2130	0.64	0.15	59.7	59.7	24.2	24.2	C
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		2891		4612		0.63		67.3		21.5		C
Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	2861	1352	4550	1936	0.63	0.70	55.2	55.2	25.9	26.9	C
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		1508		4612		0.33		66.8		11.1		B
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	60.6		27.2		24.5		5.70		D						
Facility Overall Results															
Space Mean Speed, mi/h					60.6			Density, veh/mi/ln			24.5				
Average Travel Time, min					5.70			Density, pc/mi/ln			27.2				
Messages															
Comments															



2022 Existing PM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2022 Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	2
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	3571	4612	0.77	63.4	28.2	D

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	3571	632	4550	1936	0.78	0.33	56.9	56.9	31.4	28.1	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2927		4612		0.63		66.7		21.8		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4325	1398	4550	1936	0.95	0.72	54.9	54.9	39.4	30.0	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4352		4612		0.94		55.0		39.6		E
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	4352	218	4550	1936	0.96	0.11	56.2	56.2	38.7	29.1	D
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4158		4612		0.90		57.4		36.2		E
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.513	4376	218	4550	1936	0.96	0.11	54.2	54.2	40.4	30.8	D
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4352		4612		0.94		55.0		39.6		E
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.976	4352	1657	4550	2033	0.96	0.82	56.1	56.1	38.8	39.8	E
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2671		4612		0.58		67.1		19.7		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	3152	481	4550	1936	0.69	0.25	59.0	59.0	26.7	24.2	C

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		3161		4612		0.69		66.1		23.9		C

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	3734	573	4550	2130	0.82	0.27	57.2	57.2	32.6	30.6	D

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		3744		4612		0.81		61.9		30.2		D

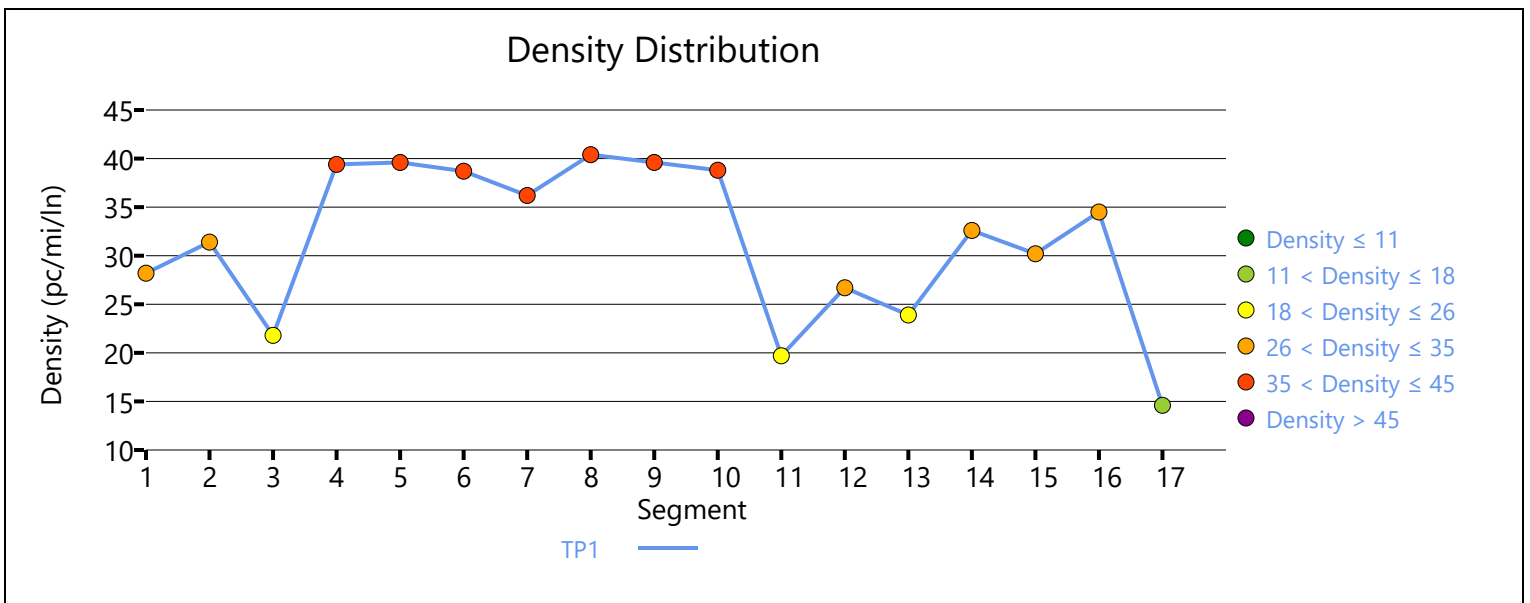
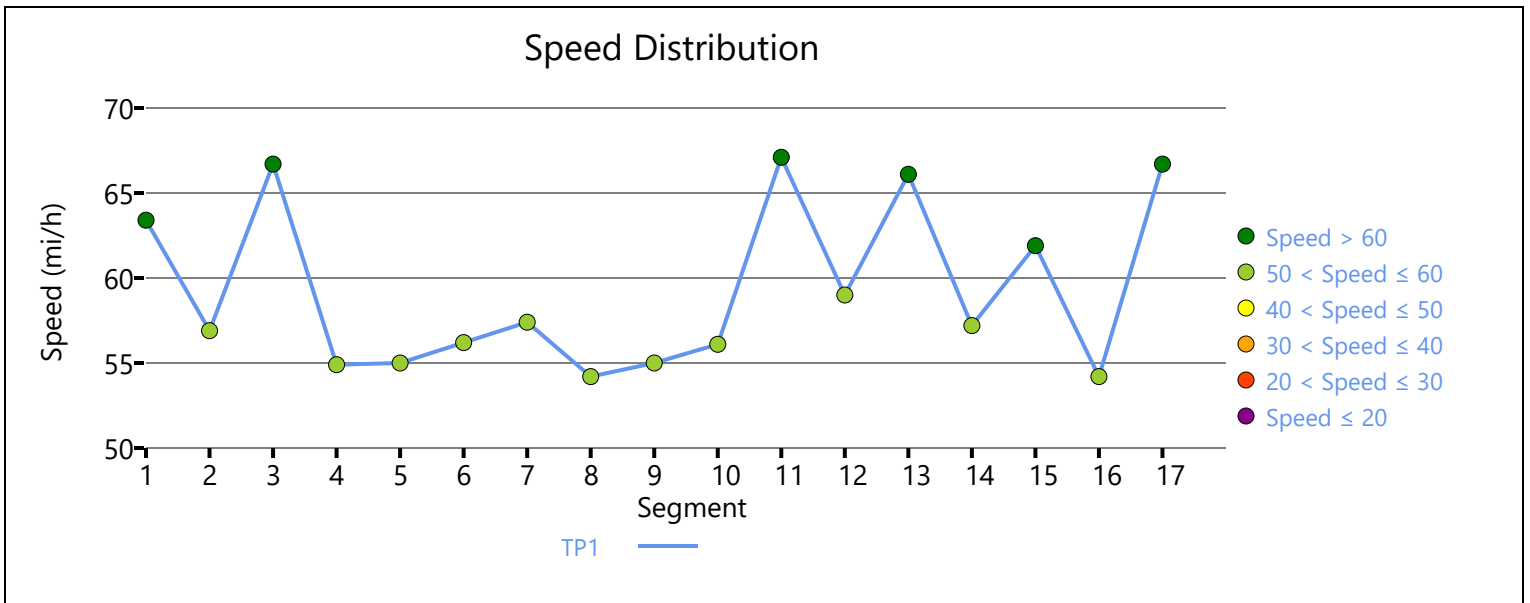
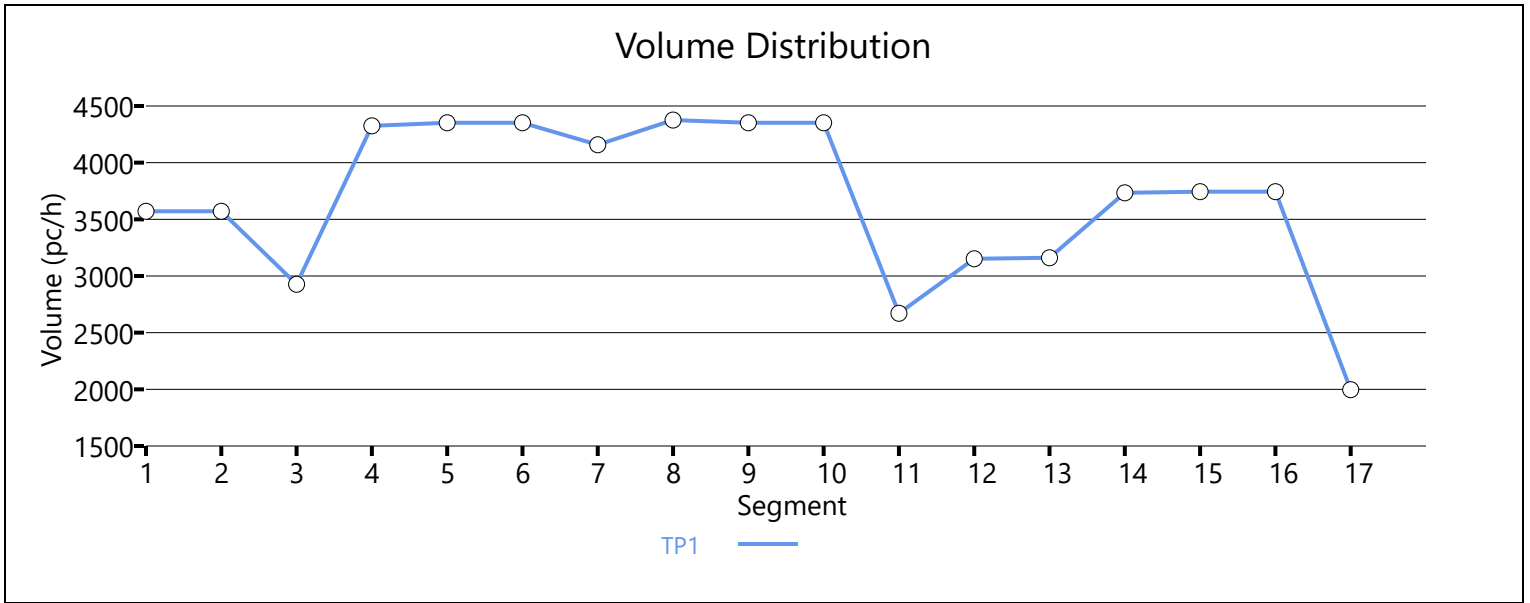
Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3744	1747	4550	1936	0.82	0.90	54.2	54.2	34.5	34.5	D

Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		1997		4612		0.43		66.7		14.6		B

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	57.3		33.5		32.3		6.00		D						

Facility Overall Results															
Space Mean Speed, mi/h					57.3			Density, veh/mi/ln			32.3				
Average Travel Time, min					6.00			Density, pc/mi/ln			33.5				

Messages															
Comments															



2050 No Build AM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	2
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	4236	4612	1.41	37.3	56.8	F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	4236	1709	4550	1936	0.93	0.88	54.3	54.3	39.0	33.8	F
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2527		4612		0.99		66.3		18.6		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.980	4071	1544	4550	1936	0.89	0.80	56.6	56.6	36.0	28.0	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4071		4612		1.37		58.5		34.8		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.513	4071	995	4550	1936	0.89	0.51	54.3	54.3	37.5	26.7	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		3076		4612		1.14		66.6		23.1		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.952	0.513	4071	995	4550	1936	0.89	0.51	56.3	56.3	36.2	28.1	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4071		4612		1.53		58.5		34.8		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.820	4071	3057	4550	2033	0.89	1.50	50.6	52.8	45.0	37.4	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1014		4612		0.69		66.5		7.4		A

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	1840	826	4550	1936	0.40	0.43	60.8	60.8	15.1	13.8	B

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		1840		4612		0.87		66.9		13.5		B

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	2331	491	4550	2130	0.51	0.23	60.4	60.4	19.3	19.7	B

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		2331		4612		0.98		67.7		17.1		B

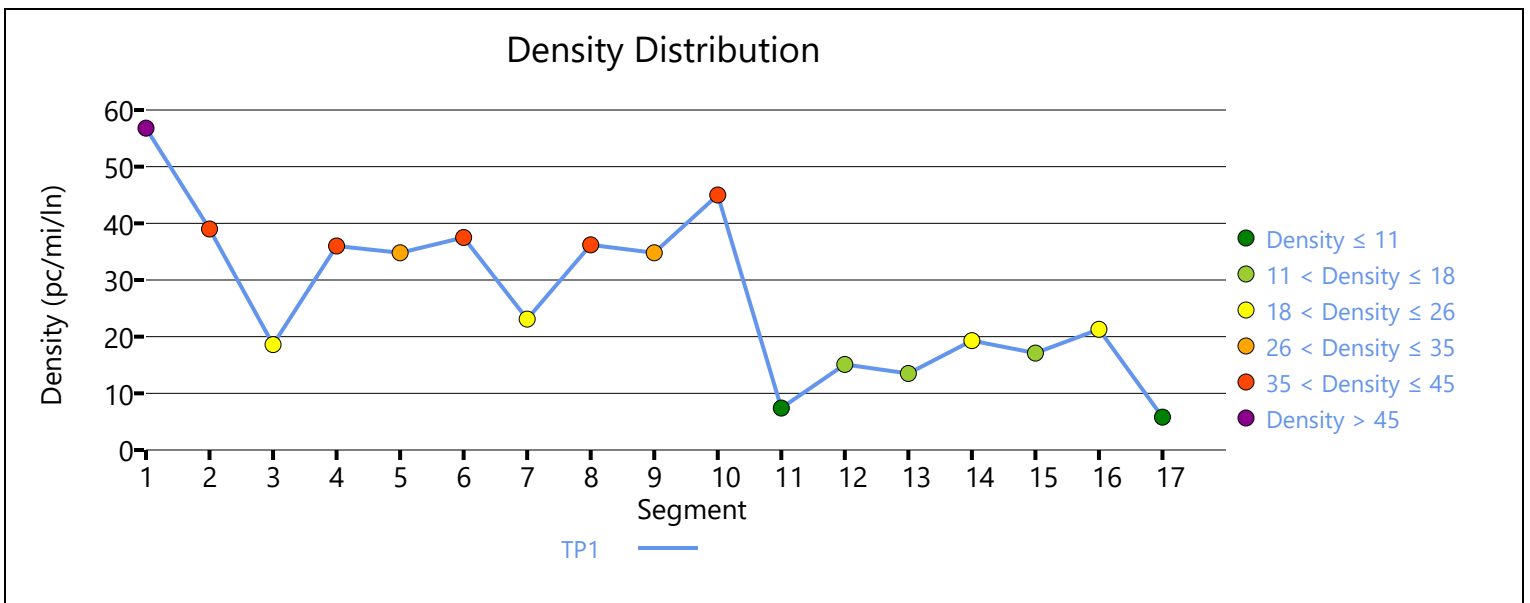
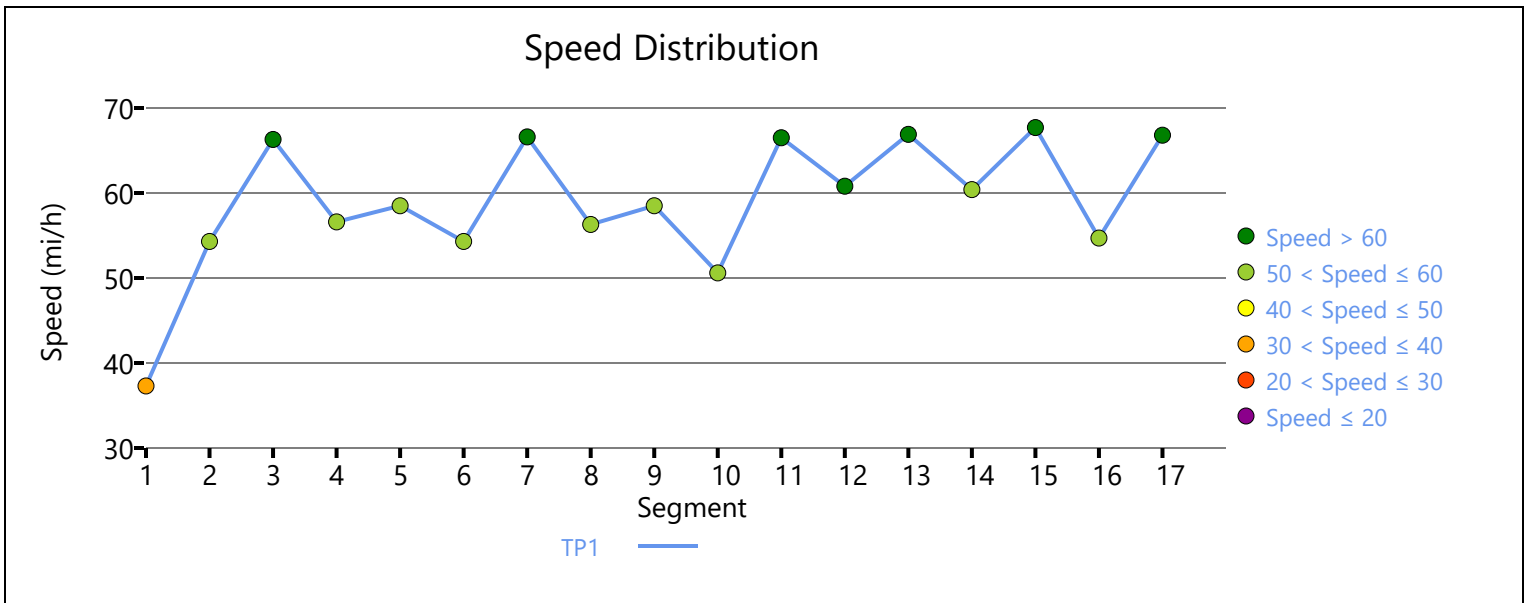
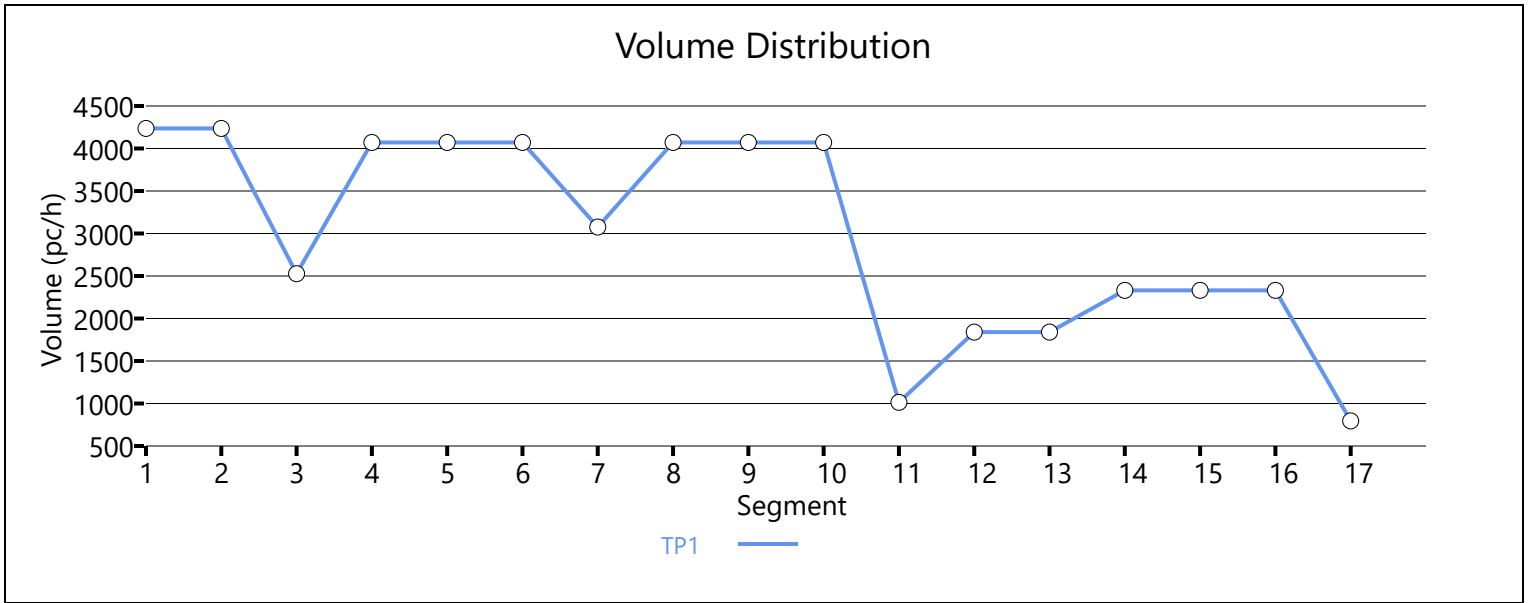
Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	2331	1536	4550	1936	0.51	0.79	54.7	54.7	21.3	22.3	C

Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		795		4612		0.63		66.8		5.8		A

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	55.6		29.6		25.7		6.20		F						

Facility Overall Results															
Space Mean Speed, mi/h					55.6			Density, veh/mi/ln			25.7				
Average Travel Time, min					6.20			Density, pc/mi/ln			29.6				

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.										
WARNING 4					Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.										



2050 No Build AM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 6 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	3
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	4236	4612	1.41	37.3	56.8	F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	4236	1709	4550	1936	0.93	0.88	54.3	54.3	39.0	33.8	F
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2527		4612		0.99		66.3		18.6		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.980	4071	1544	4550	1936	0.89	0.80	56.6	56.6	36.0	28.0	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4071		4612		1.37		58.5		34.8		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.513	4071	995	4550	1936	0.89	0.51	54.3	54.3	37.5	26.7	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		3076		4612		1.14		66.6		23.1		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.952	0.513	4071	995	4550	1936	0.89	0.51	56.3	56.3	36.2	28.1	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4071		6917		1.02		67.8		20.0		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.820	4071	3057	4550	2033	0.89	1.50	50.6	52.8	45.0	37.4	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1014		4612		0.69		66.5		7.4		A

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	1840	826	4550	1936	0.40	0.43	60.8	60.8	15.1	13.8	B

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		1840		4612		0.87		66.9		13.5		B

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	2331	491	4550	2130	0.51	0.23	60.4	60.4	19.3	19.7	B

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		2331		4612		0.98		67.7		17.1		B

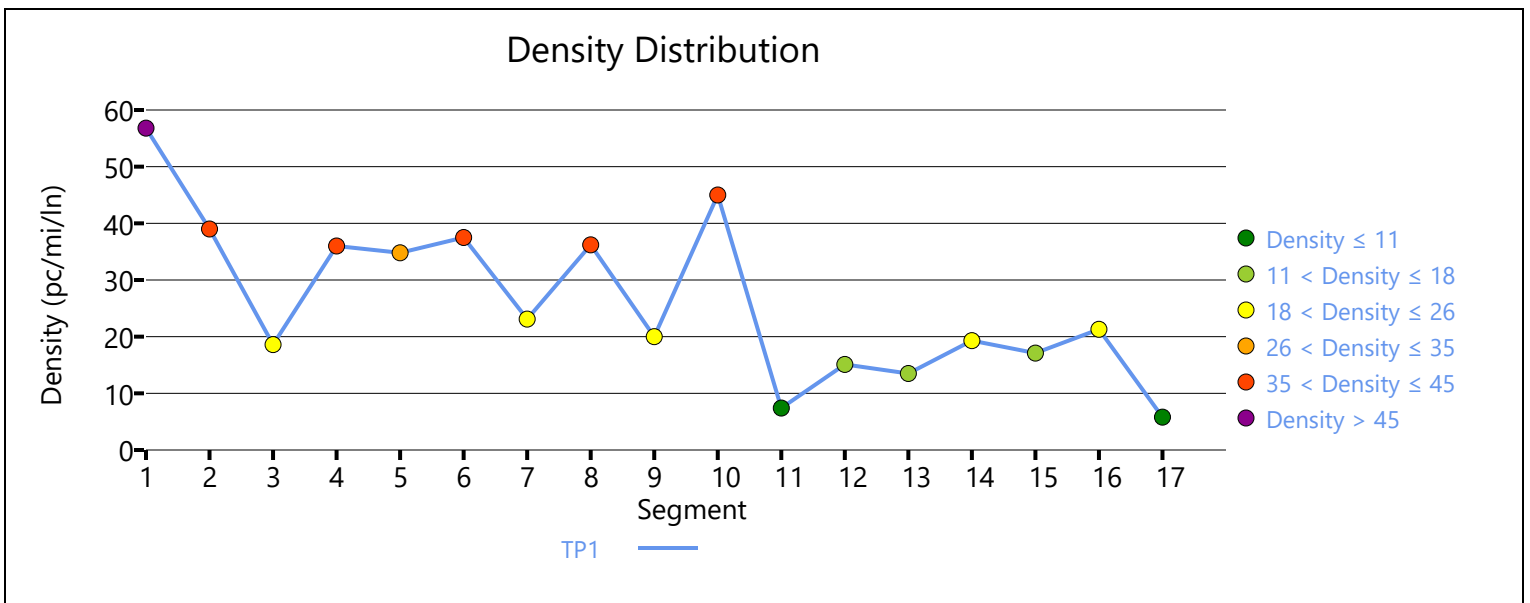
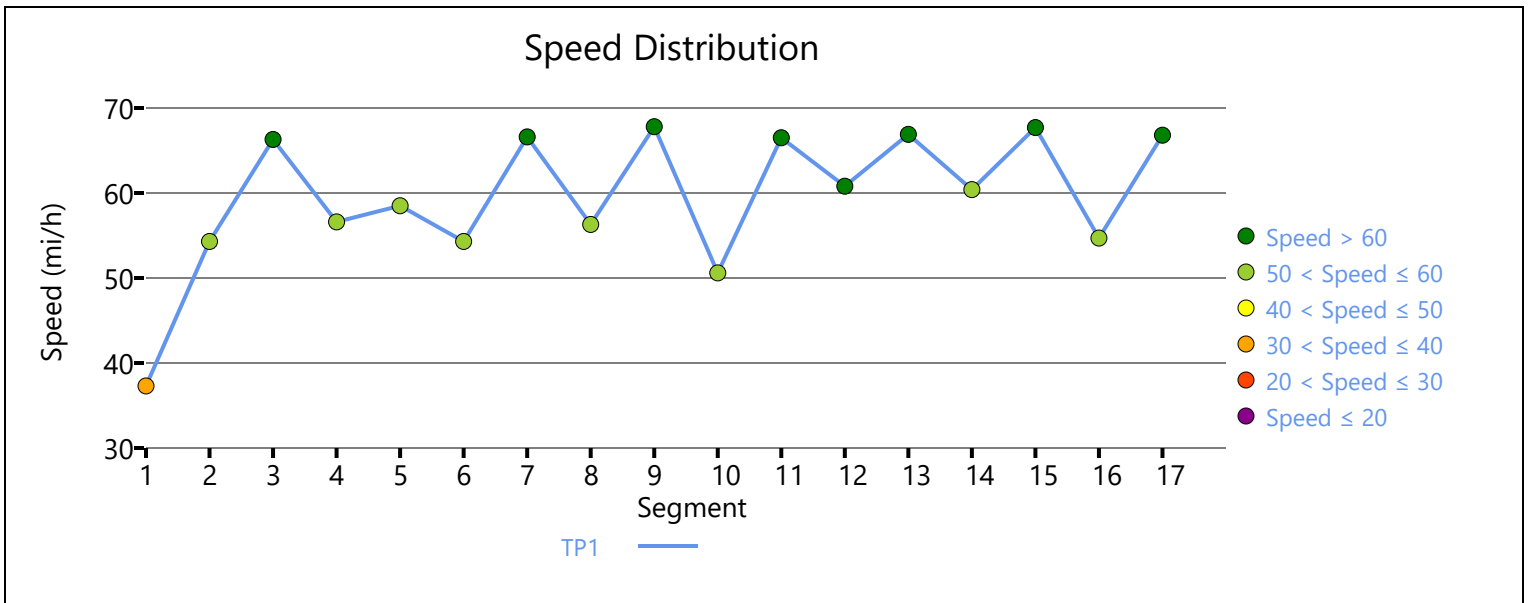
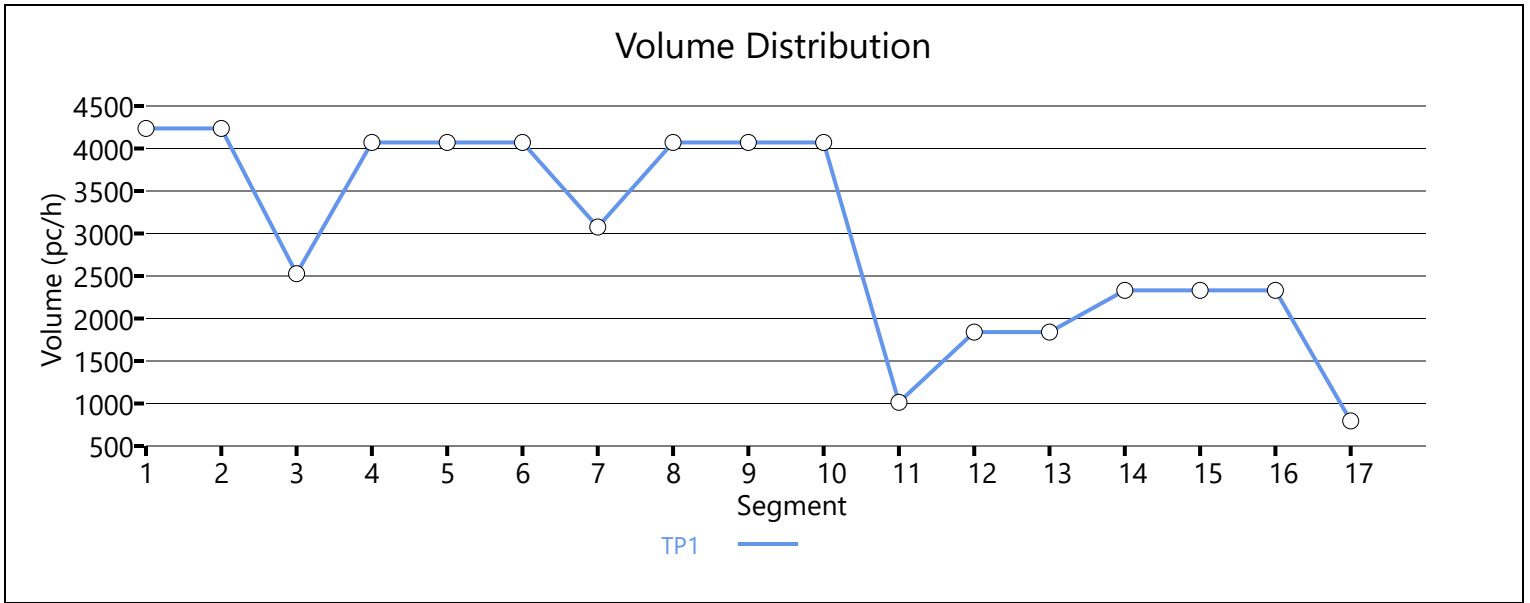
Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	2331	1536	4550	1936	0.51	0.79	54.7	54.7	21.3	22.3	C

Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		795		4612		0.63		66.8		5.8		A

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	57.8		25.2		21.9		6.00		F						

Facility Overall Results															
Space Mean Speed, mi/h					57.8			Density, veh/mi/ln			21.9				
Average Travel Time, min					6.00			Density, pc/mi/ln			25.2				

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.										
WARNING 4					Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.										



2050 No Build AM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 8 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	3
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	3
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	3
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	3
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	4
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	4
7	Basic	Basic	EB - Truck Lane	1790	4
8	Merge	Merge	EB Merge - Truck Lane End	1500	4
9	Basic	Basic	EB - Truck Lane to Long Point	7727	4
10	Diverge	Basic	EB Diverge - Long Point Off Ramp	1500	4
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	3
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	3
13	Basic	Basic	EB - Btw Long Point On Ramps	625	3
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	3
15	Basic	Basic	EB - Btw Long Point and US 17	1816	3
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	3
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	6486	6917	0.94	55.3	39.1	E

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6486	1709	6824	1936	0.95	0.88	58.9	54.3	36.7	33.4	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4577		6917		0.66		66.7		22.9		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.980	6121	1544	6824	1936	0.90	0.80	56.9	54.6	35.9	30.3	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		6302		9223		0.68		66.2		23.8		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.513	6302	995	9099	1936	0.69	0.51	61.8	54.3	25.5	20.1	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		5269		9223		0.57		67.8		19.4		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.952	0.513	6264	995	9099	1936	0.69	0.51	62.1	60.0	25.2	20.5	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		7076		9223		0.77		63.6		27.8		D
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.820	6302	3057	9223	2033	0.68	1.50	66.2	66.2	23.8	23.8	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		3172		6917		0.46		68.0		15.5		B

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	3998	826	6824	1936	0.59	0.43	61.5	59.8	21.7	20.8	C

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		4023		6917		0.58		67.0		19.7		C

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	4514	491	6824	2130	0.66	0.23	61.2	59.7	24.6	24.0	C

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.952		4509		6917		0.65		66.9		22.5		C

Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	4462	1536	6824	1936	0.65	0.79	58.9	54.7	25.3	30.0	D

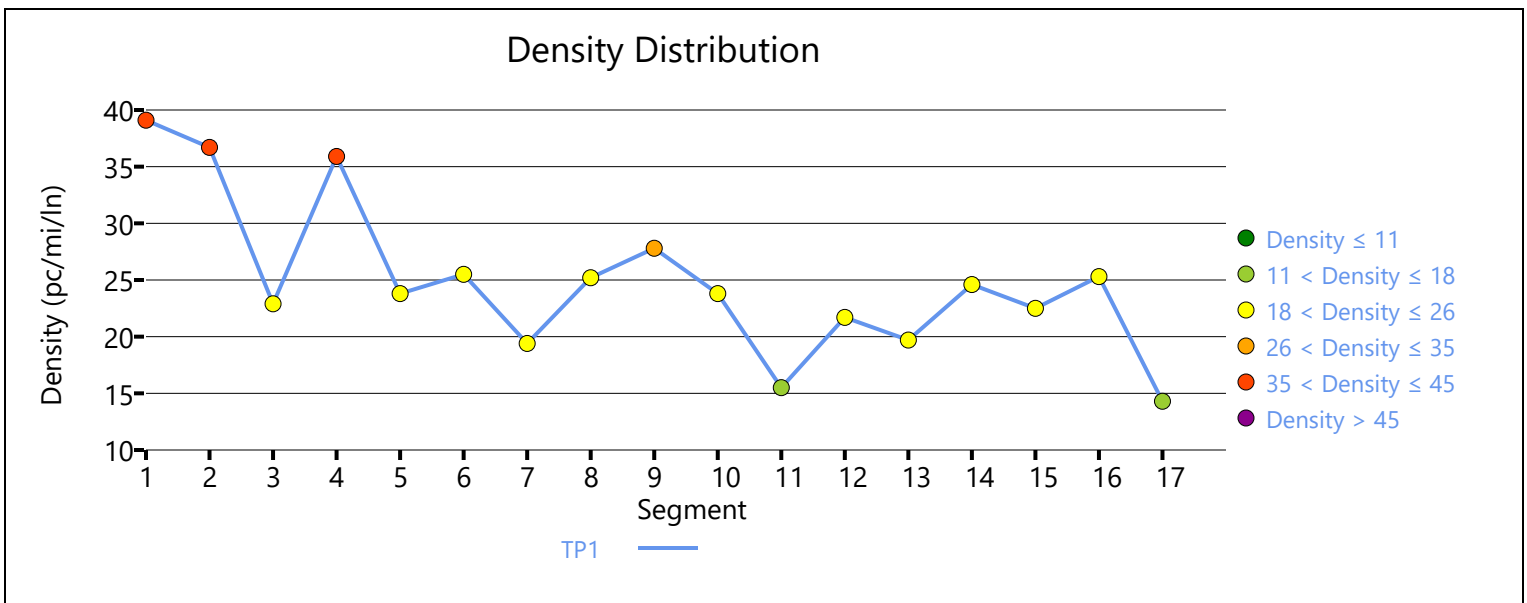
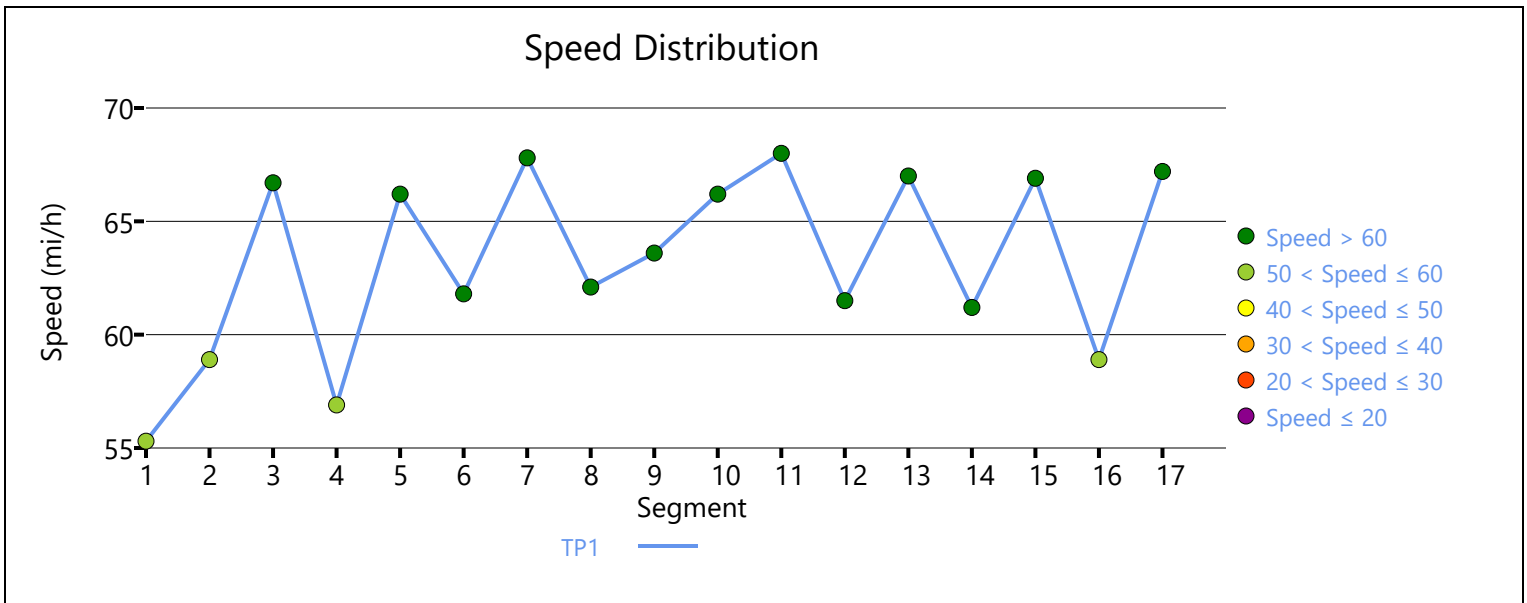
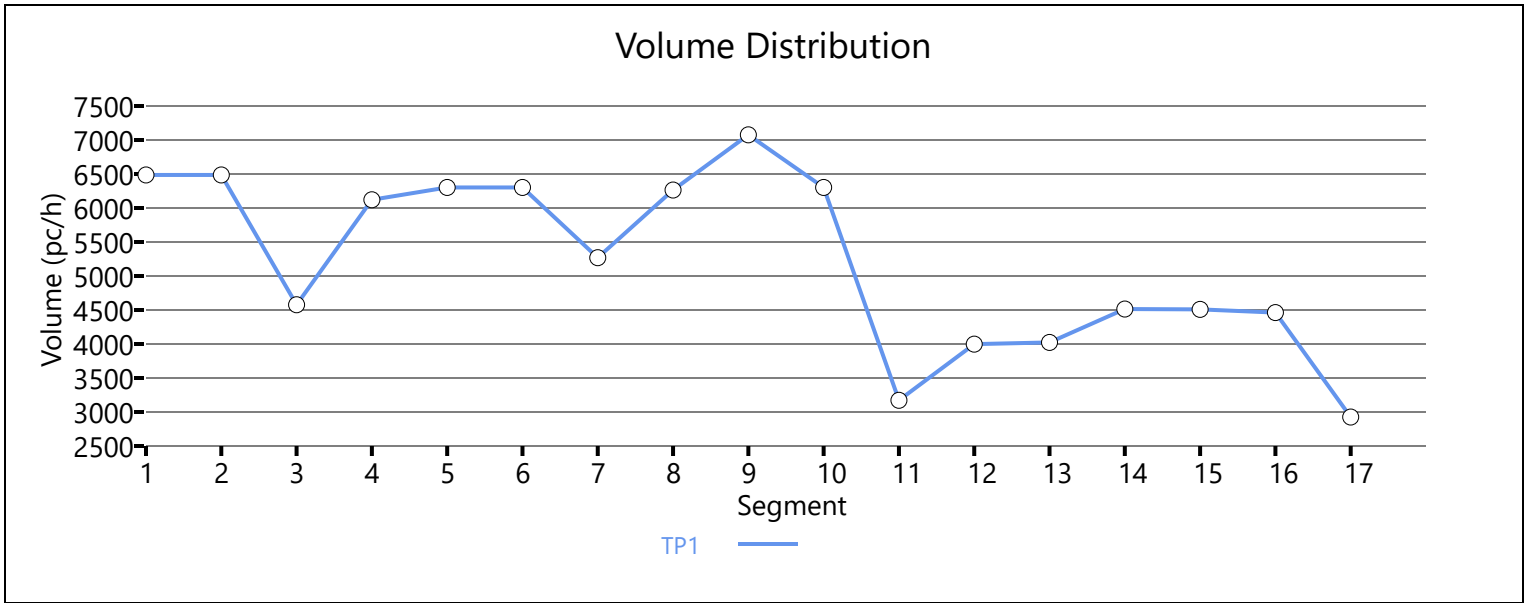
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		2926		6917		0.42		67.2		14.3		B

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	62.5		25.9		22.6		5.50		F						

Facility Overall Results															
Space Mean Speed, mi/h					62.5			Density, veh/mi/ln			22.6				
Average Travel Time, min					5.50			Density, pc/mi/ln			25.9				

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.										

Comments															



2050 No Build PM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	2
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	4246	4612	1.21	37.6	56.5	F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4218	986	4550	1936	1.23	0.51	44.1	56.0	47.8	45.5	F
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3164		4612		1.00		20.4		77.4		F
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.962	0.980	4236	1936	4550	1936	0.93	1.06	55.5	55.5	38.2	29.1	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4236		4612		1.45		56.5		37.5		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.513	4236	332	4550	1936	0.93	0.17	55.9	55.9	37.9	28.1	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3904		4612		1.39		60.3		32.4		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.513	4236	332	4550	1936	0.93	0.17	55.2	55.2	38.4	29.7	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		4236		4612		1.51		56.5		37.5		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.976	4236	2617	4550	2033	0.93	1.29	50.6	53.8	45.0	38.8	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		1619		4612		0.88		66.5		11.9		B

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	2369	750	4550	1936	0.52	0.39	60.3	60.3	19.6	17.9	F

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		2369		4612		1.04		66.8		17.4	

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	3262	893	4550	2130	0.72	0.42	58.8	58.8	27.7	26.8	F

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		3262		4612		1.24		65.6		24.9	

Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3262	2725	4550	1936	0.72	1.41	50.6	51.9	45.0	30.3	F

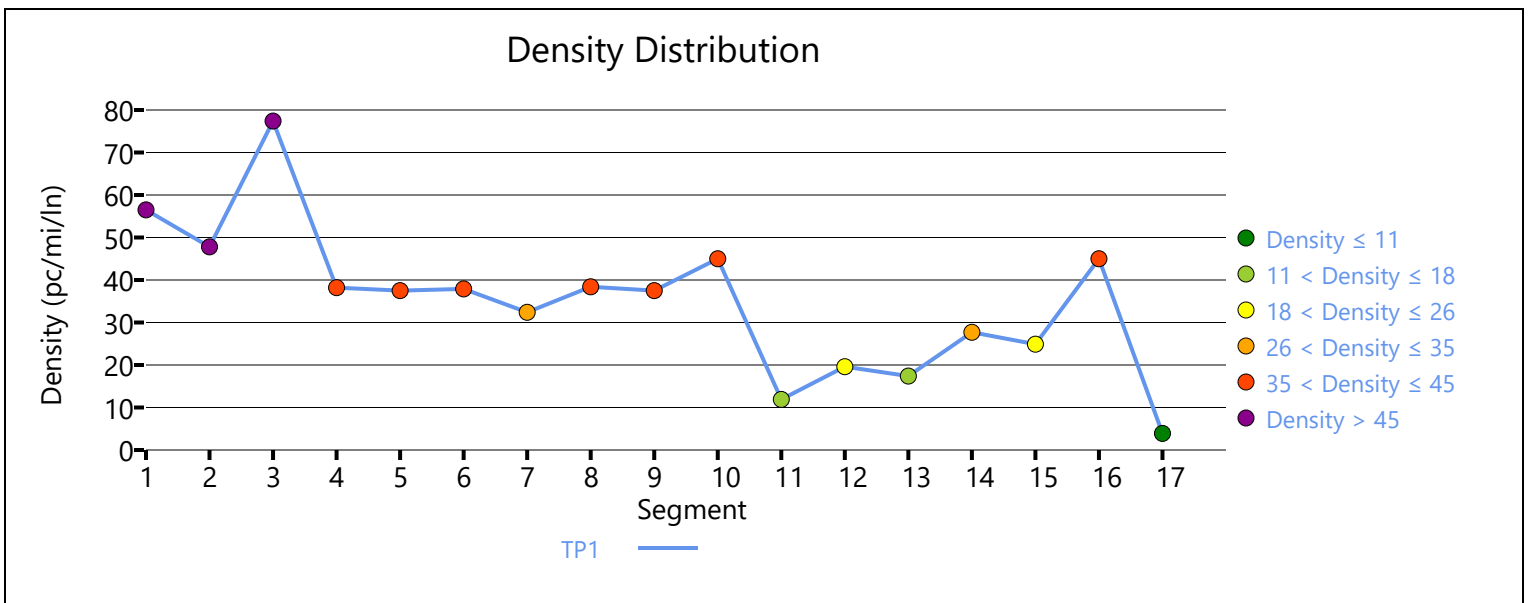
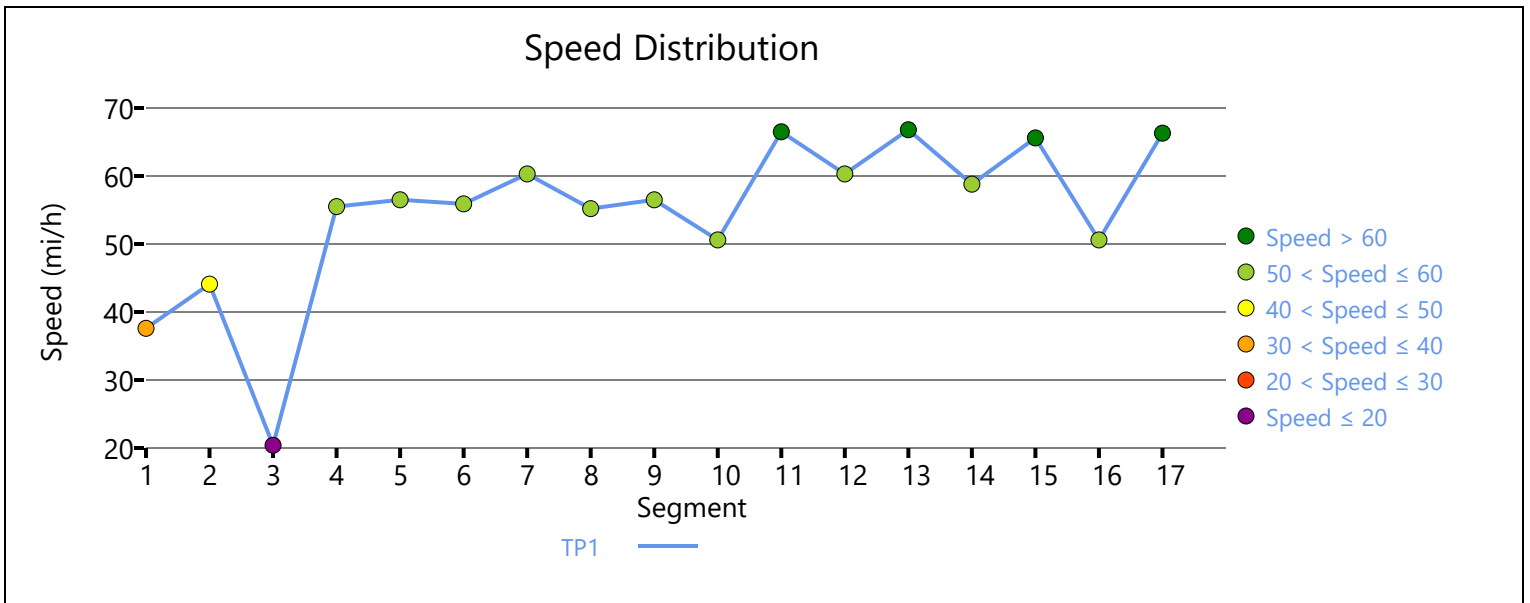
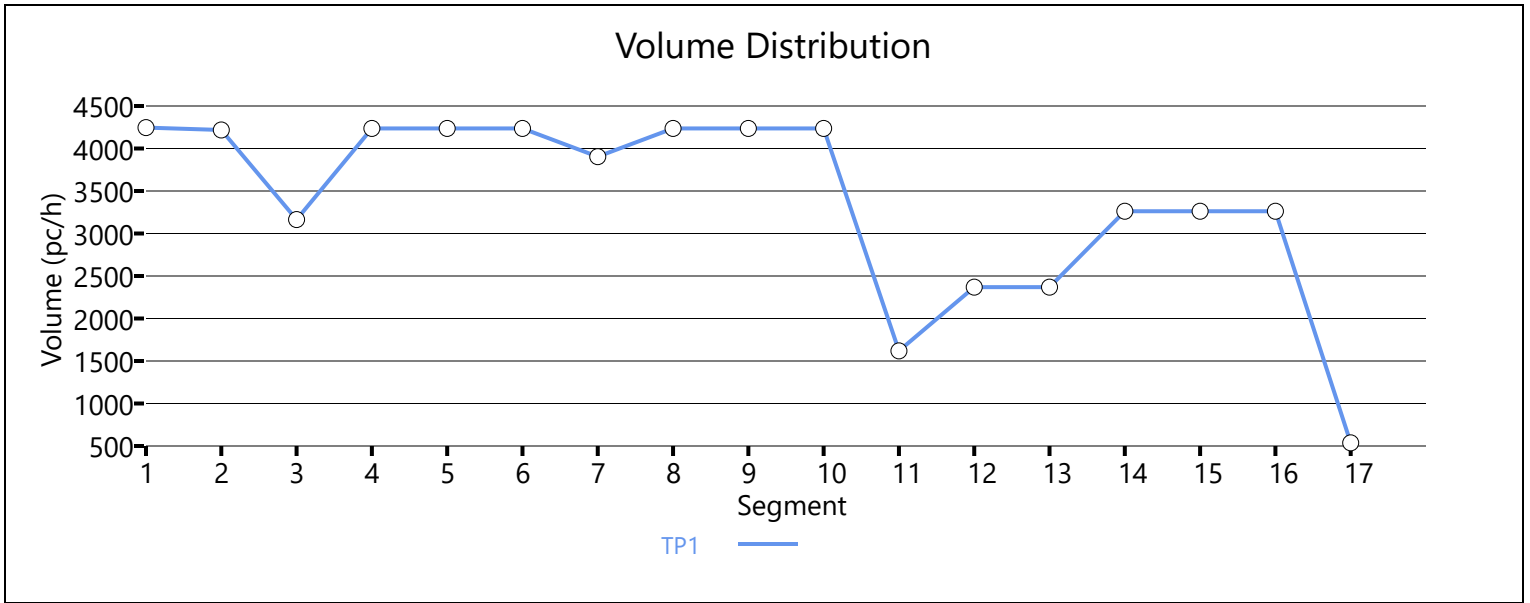
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		537		4612		0.65		66.3		3.9	

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	51.4		35.9		34.3		6.70		F						

Facility Overall Results															
Space Mean Speed, mi/h					51.4			Density, veh/mi/ln				34.3			
Average Travel Time, min					6.70			Density, pc/mi/ln				35.9			

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.										
WARNING 4					Merge capacity is less than merge demand for analysis period 1 on segment 4.										

WARNING 5	Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 6	Diverge capacity is less than diverge demand for analysis period 1 on segment 16. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
Comments	



2050 No Build PM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 6 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	3
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	4246	4612	1.21	37.6	56.5	F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4218	986	4550	1936	1.23	0.51	44.1	56.0	47.8	45.5	F
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3164		4612		1.00		20.4		77.4		F
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.962	0.980	4236	1936	4550	1936	0.93	1.06	55.5	55.5	38.2	29.1	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4236		4612		1.45		56.5		37.5		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.513	4236	332	4550	1936	0.93	0.17	55.9	55.9	37.9	28.1	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3904		4612		1.39		60.3		32.4		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.513	4236	332	4550	1936	0.93	0.17	55.2	55.2	38.4	29.7	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		4236		6917		1.01		67.5		20.9		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.976	4236	2617	4550	2033	0.93	1.29	50.6	53.8	45.0	38.8	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		1619		4612		0.88		66.5		11.9		B

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	2369	750	4550	1936	0.52	0.39	60.3	60.3	19.6	17.9	F

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		2369		4612		1.04		66.8		17.4	

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	3262	893	4550	2130	0.72	0.42	58.8	58.8	27.7	26.8	F

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		3262		4612		1.24		65.6		24.9	

Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3262	2725	4550	1936	0.72	1.41	50.6	51.9	45.0	30.3	F

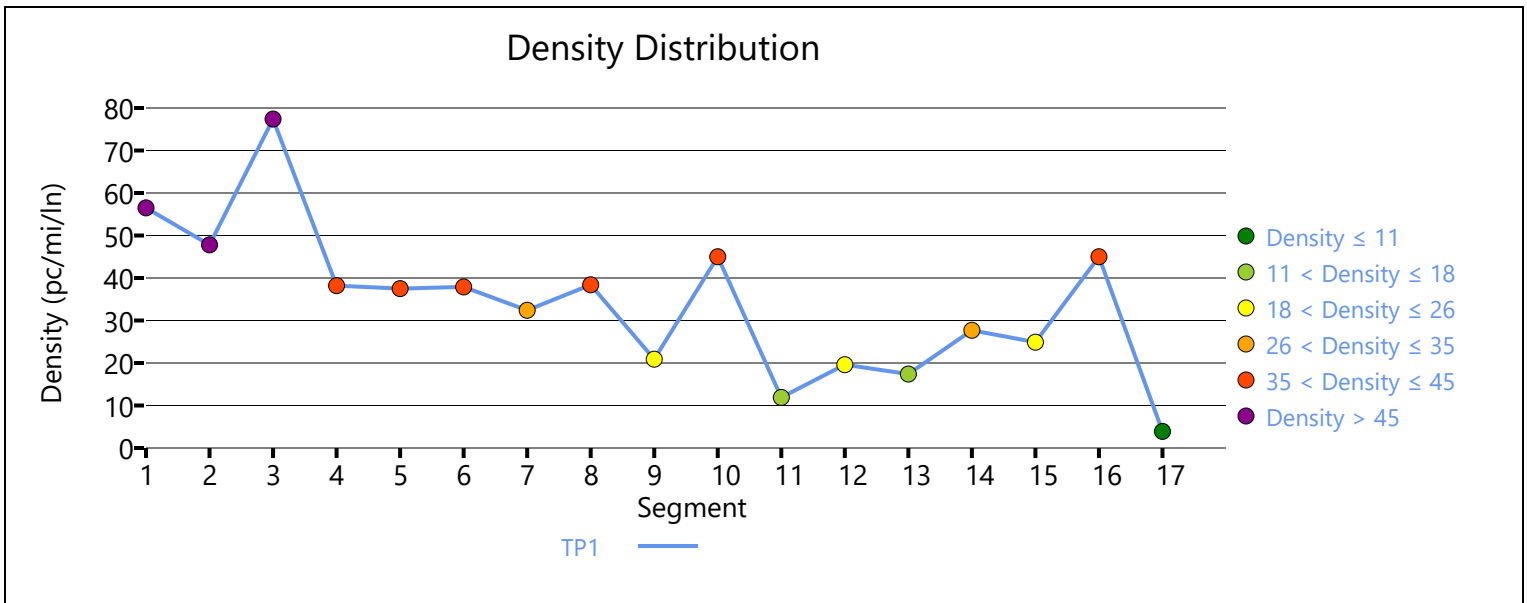
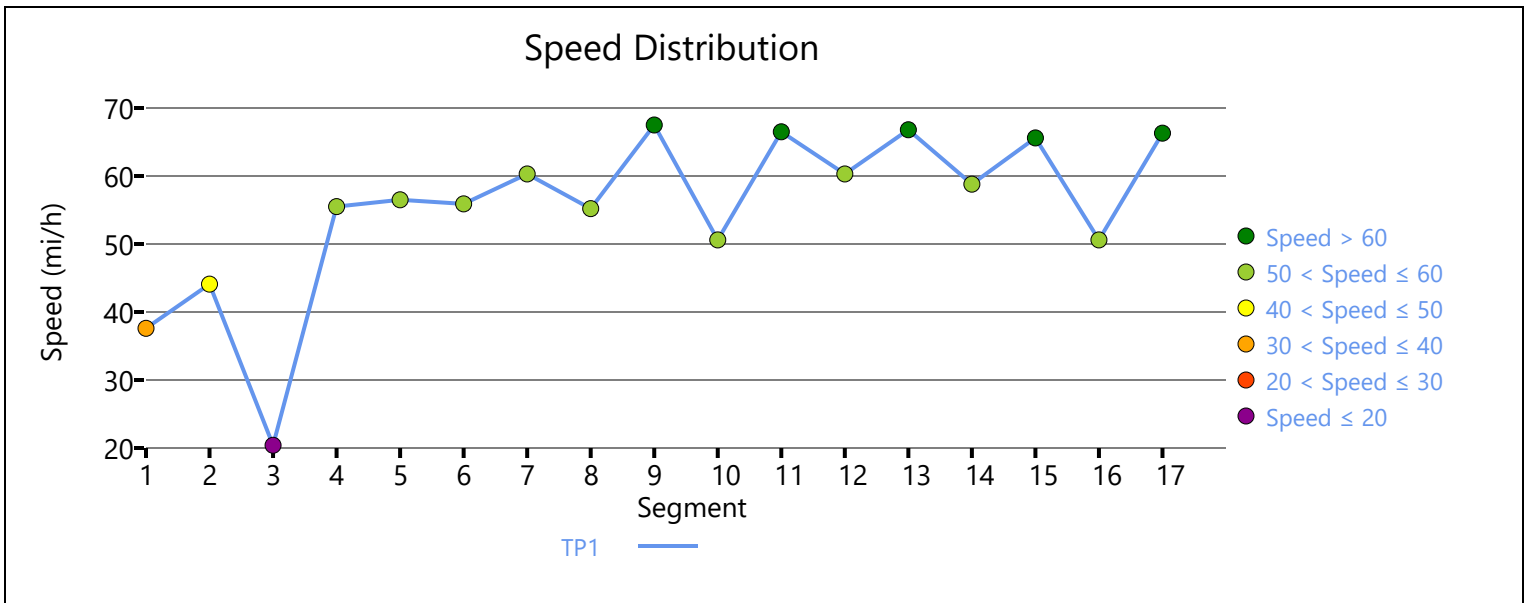
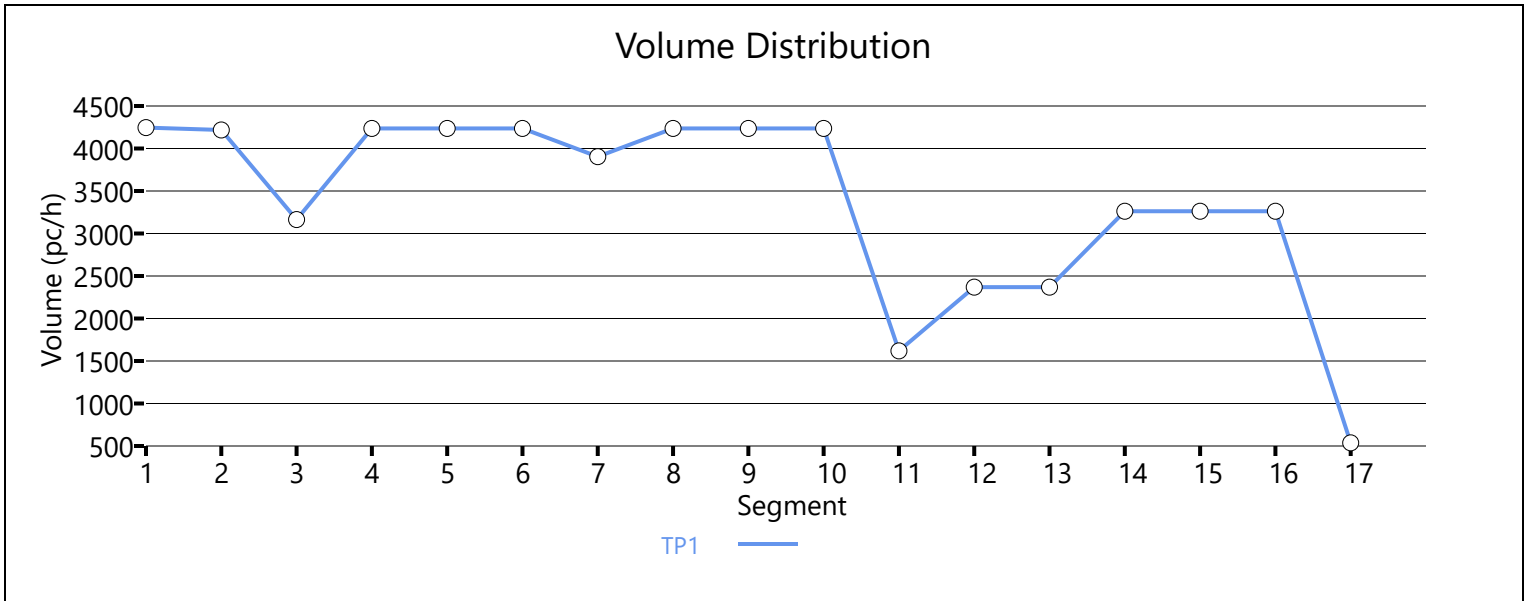
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		537		4612		0.65		66.3		3.9	

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	53.7		30.5		29.1		6.40		F						

Facility Overall Results															
Space Mean Speed, mi/h					53.7			Density, veh/mi/ln				29.1			
Average Travel Time, min					6.40			Density, pc/mi/ln				30.5			

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.										
WARNING 4					Merge capacity is less than merge demand for analysis period 1 on segment 4.										

WARNING 5	Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 6	Diverge capacity is less than diverge demand for analysis period 1 on segment 16. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
Comments	



2050 No Build PM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 8 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	3
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	3
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	3
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	3
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	4
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	4
7	Basic	Basic	EB - Truck Lane	1790	4
8	Merge	Merge	EB Merge - Truck Lane End	1500	4
9	Basic	Basic	EB - Truck Lane to Long Point	7727	4
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	3
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	3
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	3
13	Basic	Basic	EB - Btw Long Point On Ramps	625	3
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	3
15	Basic	Basic	EB - Btw Long Point and US 17	1816	3
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	3
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	5602	6917	0.81	62.0	30.1	D

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	5602	986	6824	1936	0.82	0.51	60.5	56.0	30.9	28.7	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4616		6917		0.66		66.6		23.1		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.962	0.980	6552	1936	6824	1936	0.96	1.06	53.4	50.4	40.9	33.3	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		6552		9223		0.73		65.5		25.0		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.513	6552	332	9099	1936	0.72	0.17	63.5	55.9	25.8	17.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		6220		9223		0.69		66.4		23.4		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.513	6552	332	9099	1936	0.72	0.17	62.1	60.6	26.4	18.6	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		6552		9223		0.75		65.5		25.0		C
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.976	6552	2617	6824	2033	0.96	1.29	50.6	53.8	45.0	41.0	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3935		6917		0.58		66.5		19.3		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4685	750	6824	1936	0.69	0.39	60.8	59.1	25.7	23.8	C

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		4685		6917		0.69		66.3		23.6		C

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	5578	893	6824	2130	0.82	0.42	59.3	57.5	31.4	30.0	D

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		5578		6917		0.83		62.1		29.9		D

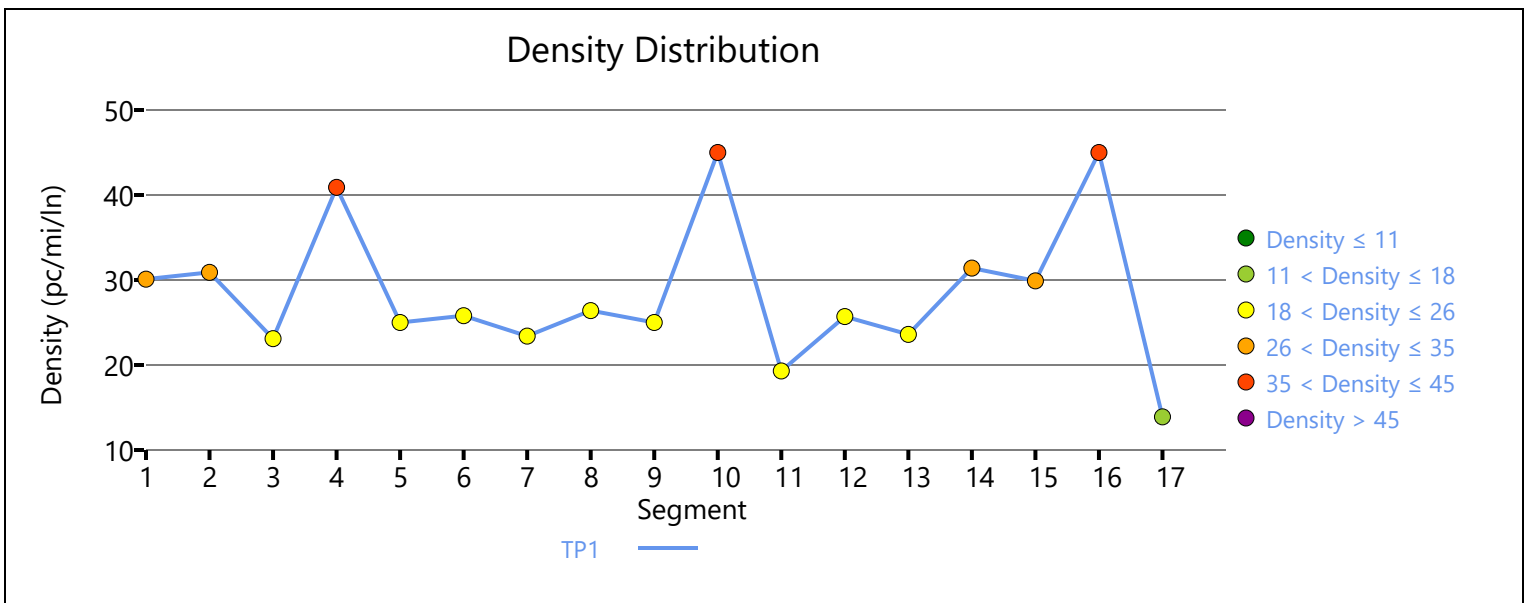
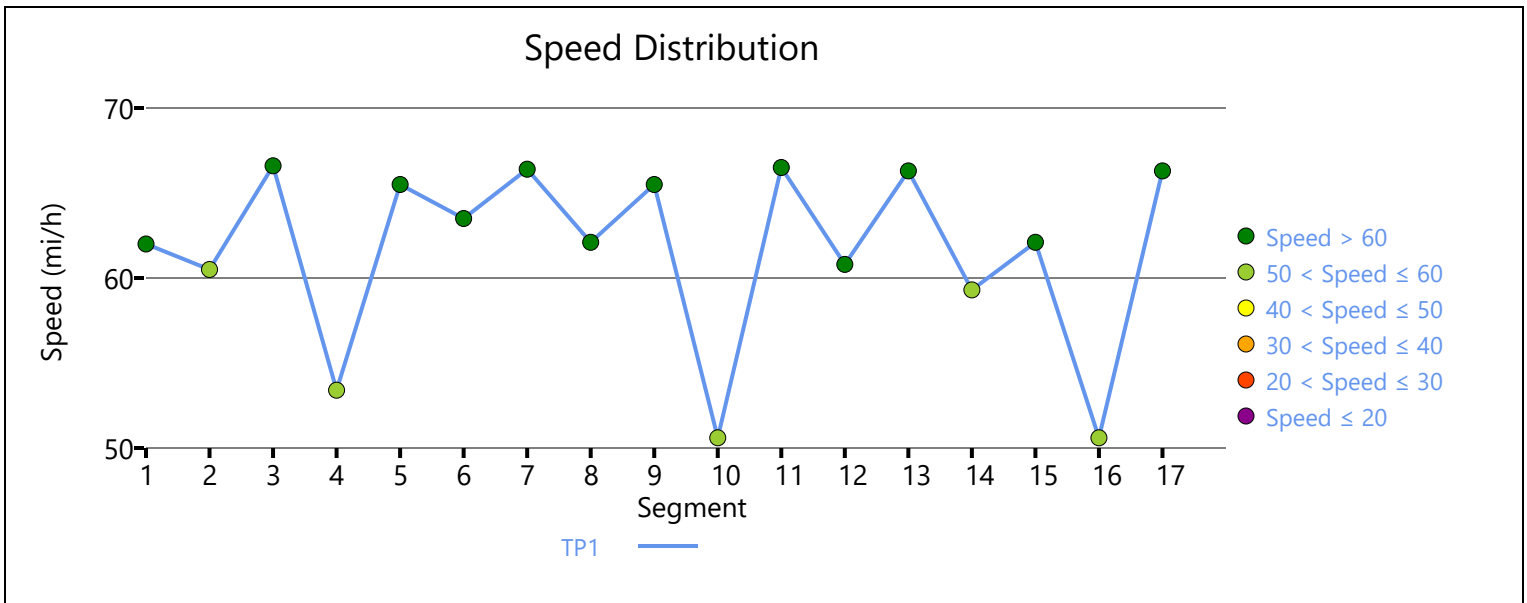
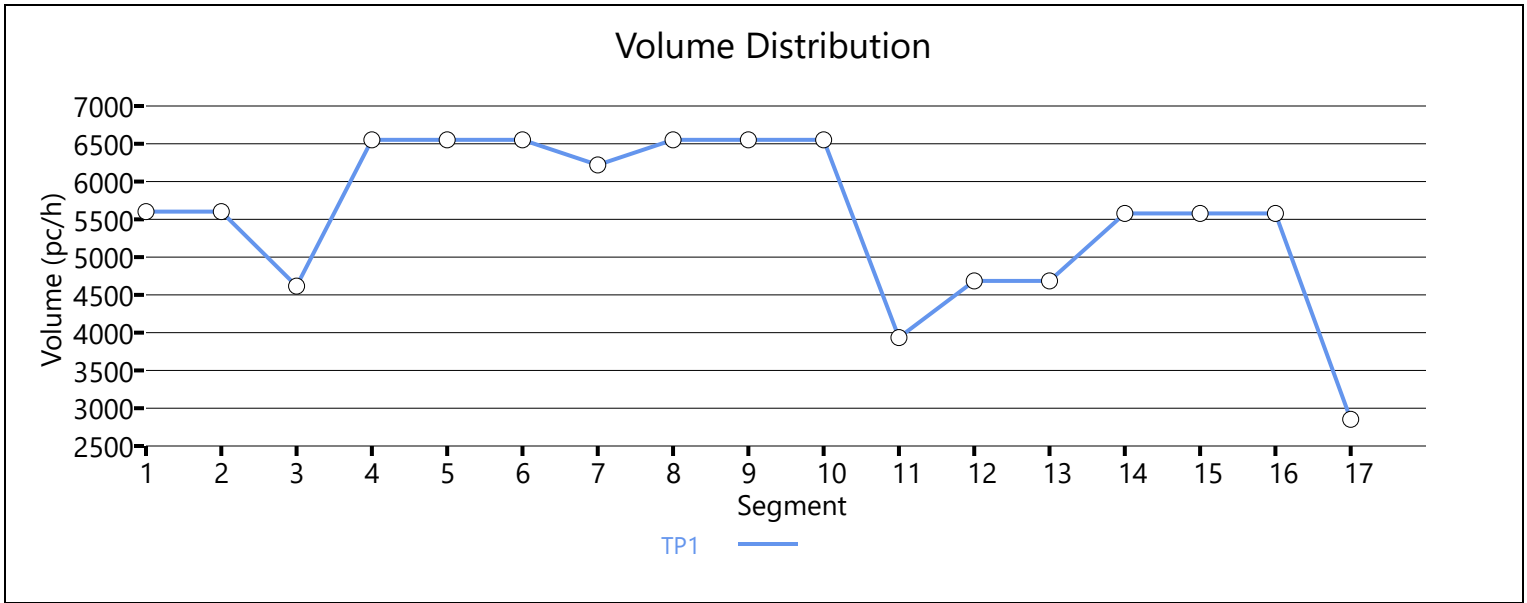
Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	5578	2725	6824	1936	0.82	1.41	50.6	51.9	45.0	37.9	F

Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		2853		6917		0.43		66.3		13.9		B

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	61.5		27.8		26.6		5.60		F						

Facility Overall Results															
Space Mean Speed, mi/h					61.5			Density, veh/mi/ln			26.6				
Average Travel Time, min					5.60			Density, pc/mi/ln			27.8				

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Merge capacity is less than merge demand for analysis period 1 on segment 4.										
WARNING 3					Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.										
WARNING 4					Diverge capacity is less than diverge demand for analysis period 1 on segment 16. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.										



2050 Alternative 1, 3 & 4 AM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 1 Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	13227	3
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	3
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
9	Basic	Basic	EB - Btw Long Point On Ramps	625	2
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point and US 17	1816	2
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

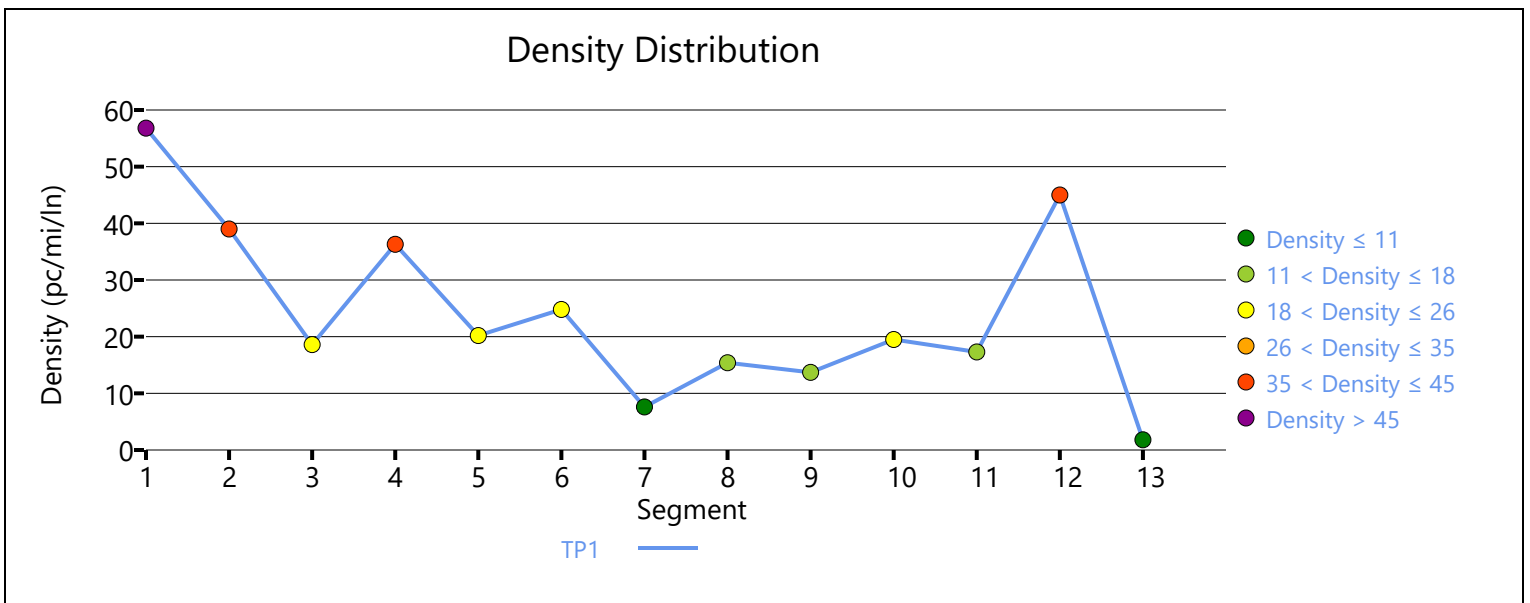
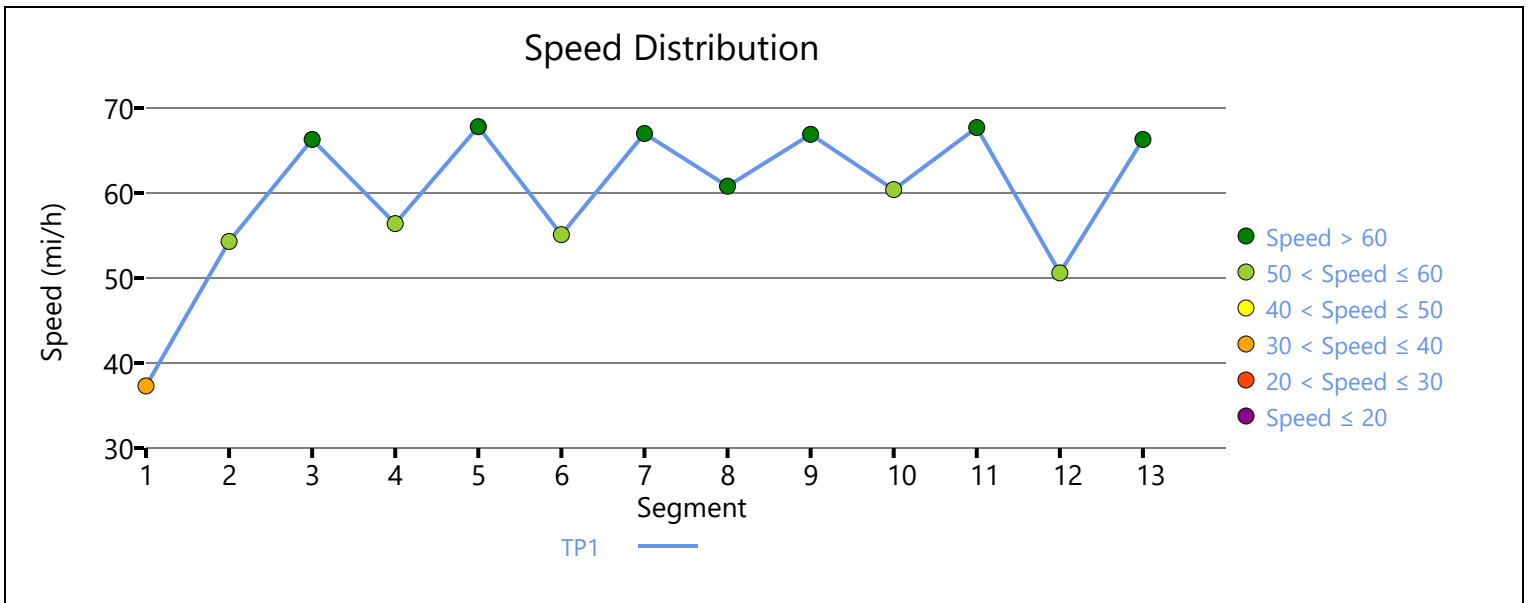
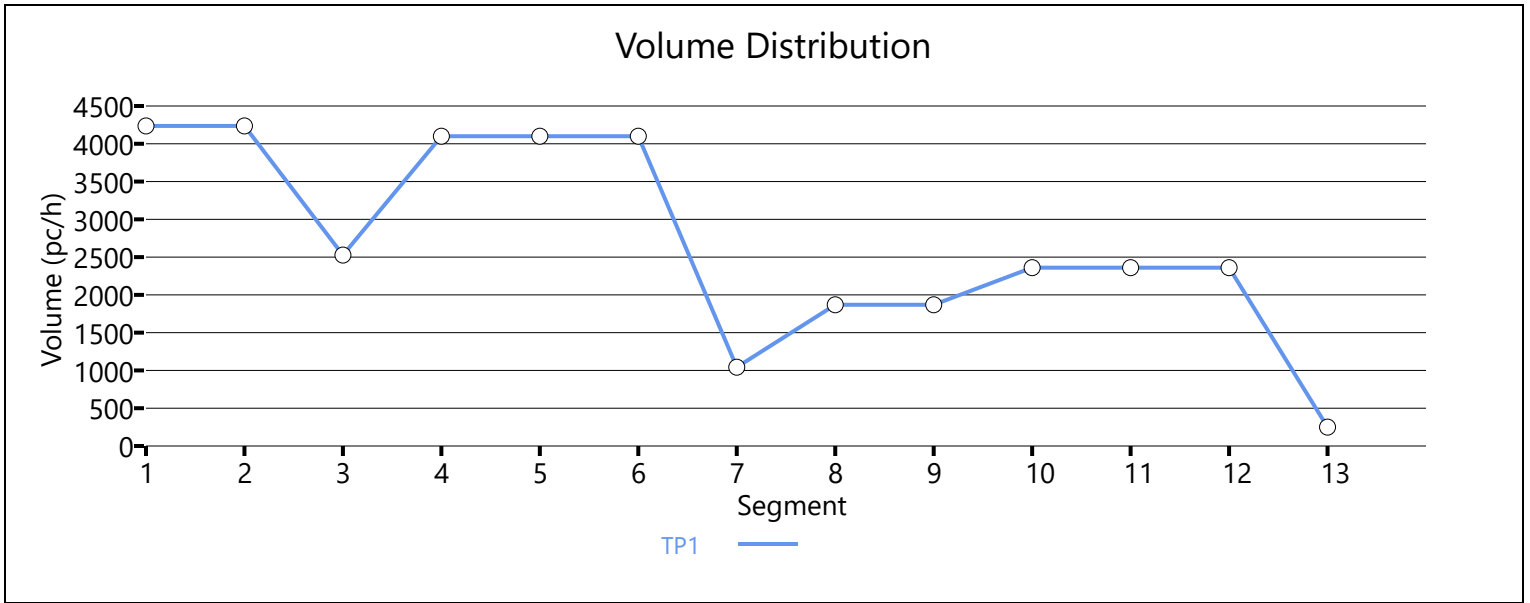
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4236		4612		1.41		37.3		56.8		F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	4236	1709	4550	1936	0.93	0.88	54.3	54.3	39.0	33.8	F

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2527		4612		0.99		66.3		18.6		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4100	1573	4550	1936	0.90	0.81	56.4	56.4	36.3	28.2	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4100		6917		1.02		67.8		20.2		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.820	4100	3057	6824	4066	0.60	0.75	55.1	52.8	24.8	21.1	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1043		4612		0.69		67.0		7.6		A
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	1869	826	4550	1936	0.41	0.43	60.8	60.8	15.4	14.0	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1869		4612		0.87		66.9		13.7		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	2360	491	4550	2130	0.52	0.23	60.4	60.4	19.5	19.9	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		2360		4612		0.98		67.7		17.3		B
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.962	0.962	2360	2110	4550	1936	0.52	1.09	50.6	53.4	45.0	22.6	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS		
1	0.94	0.962	250			4612		0.51	66.3		1.8		A		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	59.6		23.1			19.6		5.80			F				
Facility Overall Results															
Space Mean Speed, mi/h				59.6				Density, veh/mi/ln				19.6			
Average Travel Time, min				5.80				Density, pc/mi/ln				23.1			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 3				Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.											
WARNING 4				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



2050 Alternative 1, 3 & 4 AM Peak Hour
(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 1 8-Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
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2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	3
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	3
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	3
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	13227	4
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	4
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	3
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	3
9	Basic	Basic	EB - Btw Long Point On Ramps	625	3
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	3
11	Basic	Basic	EB - Btw Long Point and US 17	1816	3
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	3
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	3

Facility Segment Data

Segment 1: Basic

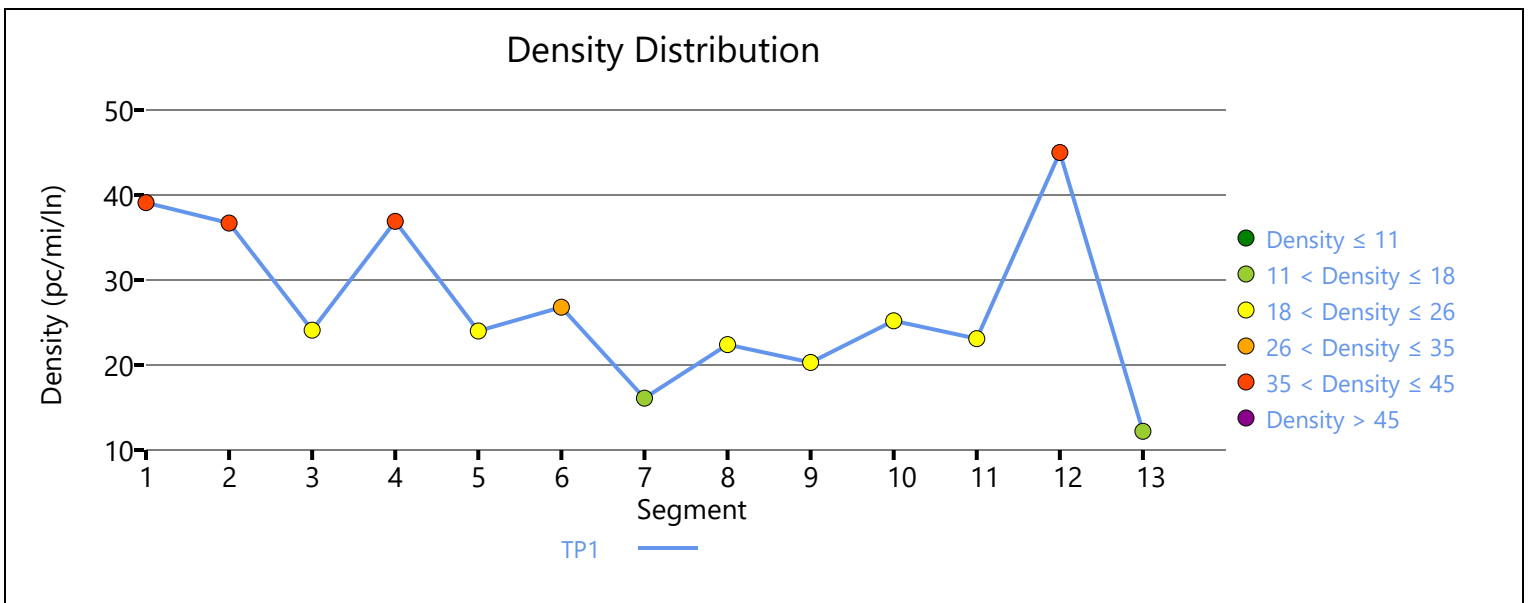
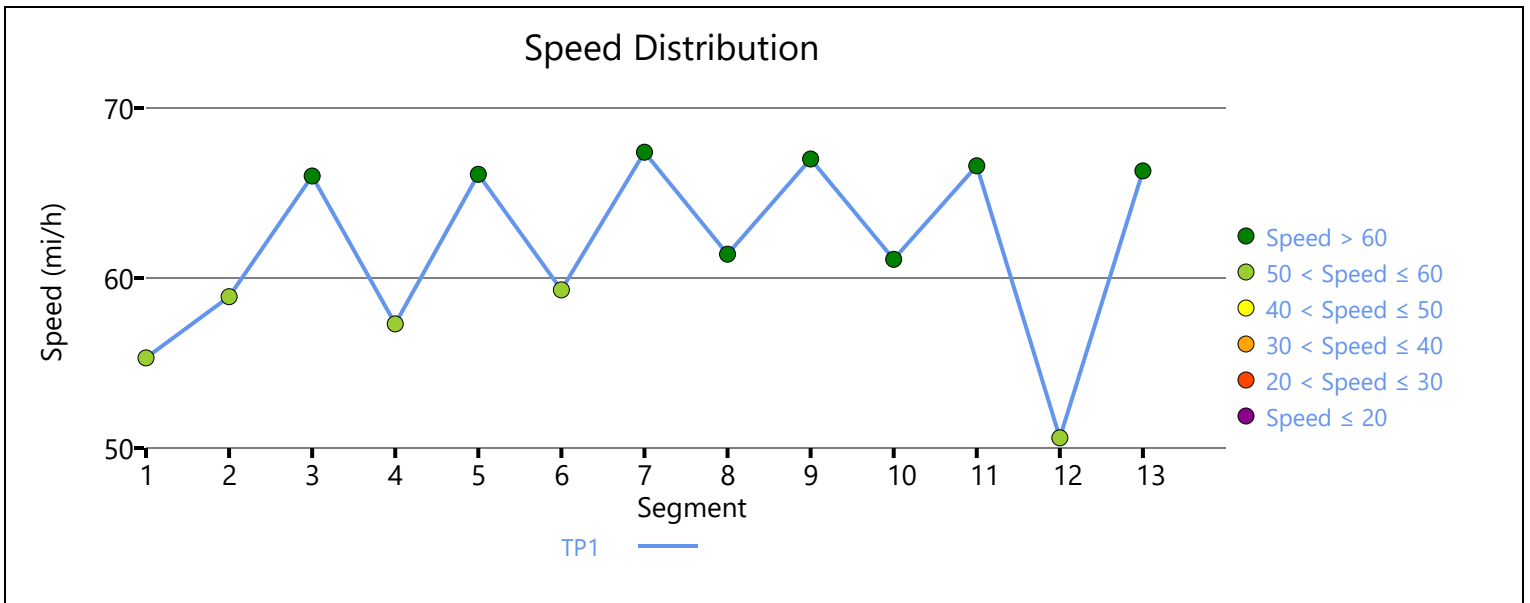
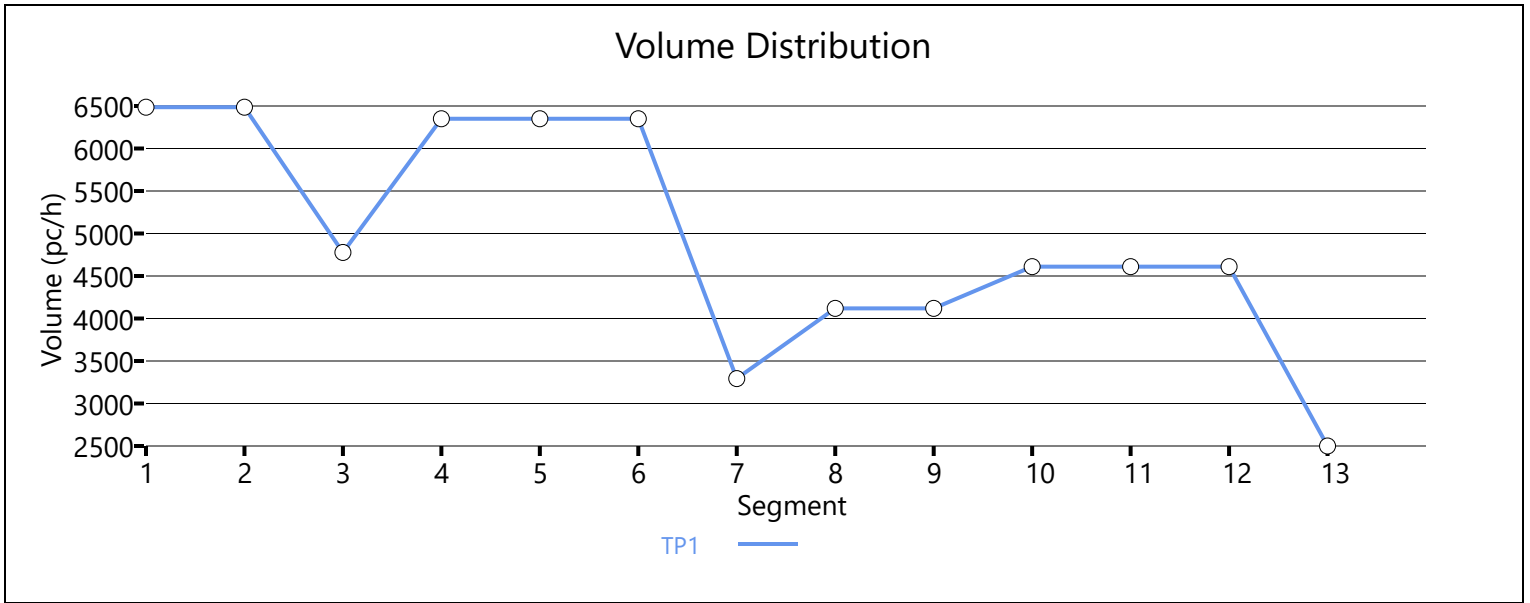
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		6486		6917		0.94		55.3		39.1		E

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6486	1709	6824	1936	0.95	0.88	58.9	54.3	36.7	33.4	D

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4777		6917		0.66		66.0		24.1		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	6350	1573	6824	1936	0.93	0.81	57.3	55.0	36.9	29.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		6350		9223		0.77		66.1		24.0		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.820	6350	3057	9099	4066	0.70	0.75	59.3	52.8	26.8	24.4	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		3293		6917		0.46		67.4		16.1		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	4119	826	6824	1936	0.60	0.43	61.4	59.7	22.4	21.4	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		4119		6917		0.58		67.0		20.3		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	4610	491	6824	2130	0.68	0.23	61.1	59.6	25.2	24.4	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		4610		6917		0.65		66.6		23.1		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.962	0.962	4610	2110	6824	1936	0.68	1.09	50.6	53.4	45.0	32.2	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS		
1	0.94	0.962	2500			6917		0.34	66.3		12.2		B		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	62.5		26.1			22.3		5.50			F				
Facility Overall Results															
Space Mean Speed, mi/h				62.5				Density, veh/mi/ln				22.3			
Average Travel Time, min				5.50				Density, pc/mi/ln				26.1			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



2050 Alternative 1, 3 & 4 PM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 6 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	3
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	4246	4612	1.21	37.6	56.5	F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4218	986	4550	1936	1.23	0.51	44.1	56.0	47.8	45.5	F
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3164		4612		1.00		20.4		77.4		F
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.962	0.980	4236	1936	4550	1936	0.93	1.06	55.5	55.5	38.2	29.1	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4236		4612		1.45		56.5		37.5		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.513	4236	332	4550	1936	0.93	0.17	55.9	55.9	37.9	28.1	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3904		4612		1.39		60.3		32.4		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.513	4236	332	4550	1936	0.93	0.17	55.2	55.2	38.4	29.7	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		4236		6917		1.01		67.5		20.9		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.976	4236	2617	4550	2033	0.93	1.29	50.6	53.8	45.0	38.8	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		1619		4612		0.88		66.5		11.9		B

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	2369	750	4550	1936	0.52	0.39	60.3	60.3	19.6	17.9	F

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		2369		4612		1.04		66.8		17.4	

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	3262	893	4550	2130	0.72	0.42	58.8	58.8	27.7	26.8	F

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		3262		4612		1.24		65.6		24.9	

Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3262	2725	4550	1936	0.72	1.41	50.6	51.9	45.0	30.3	F

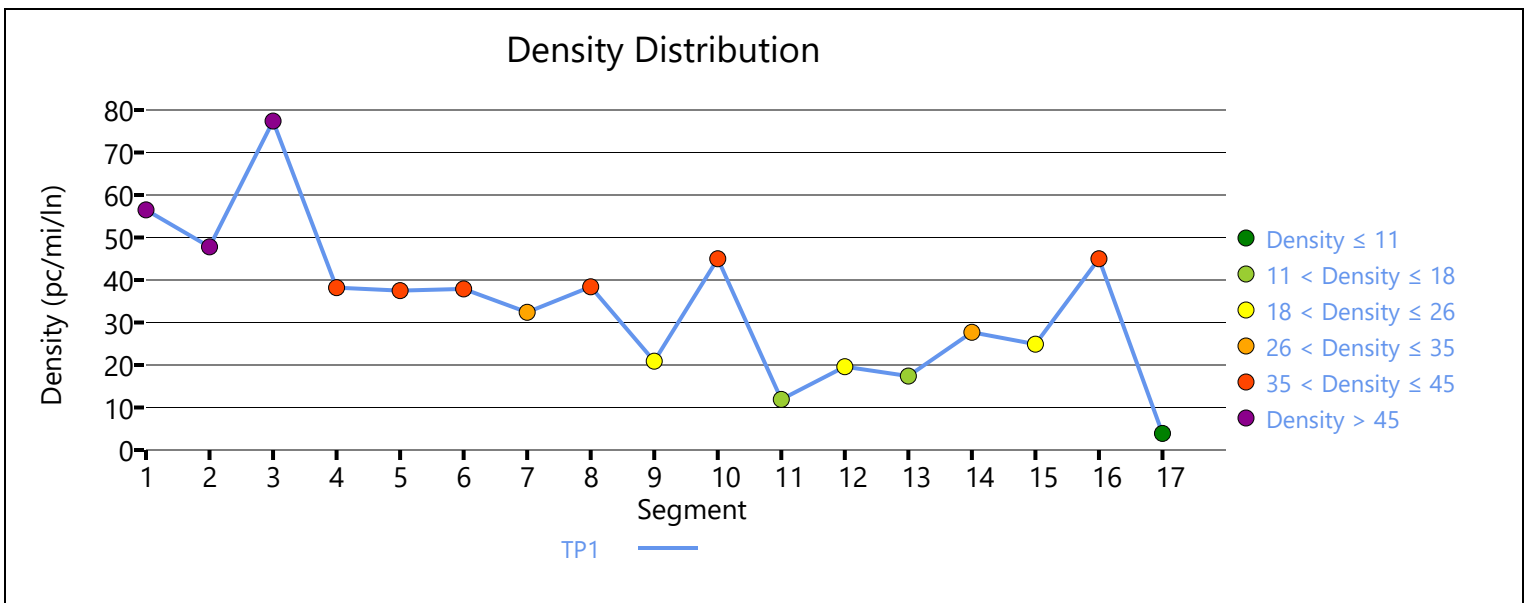
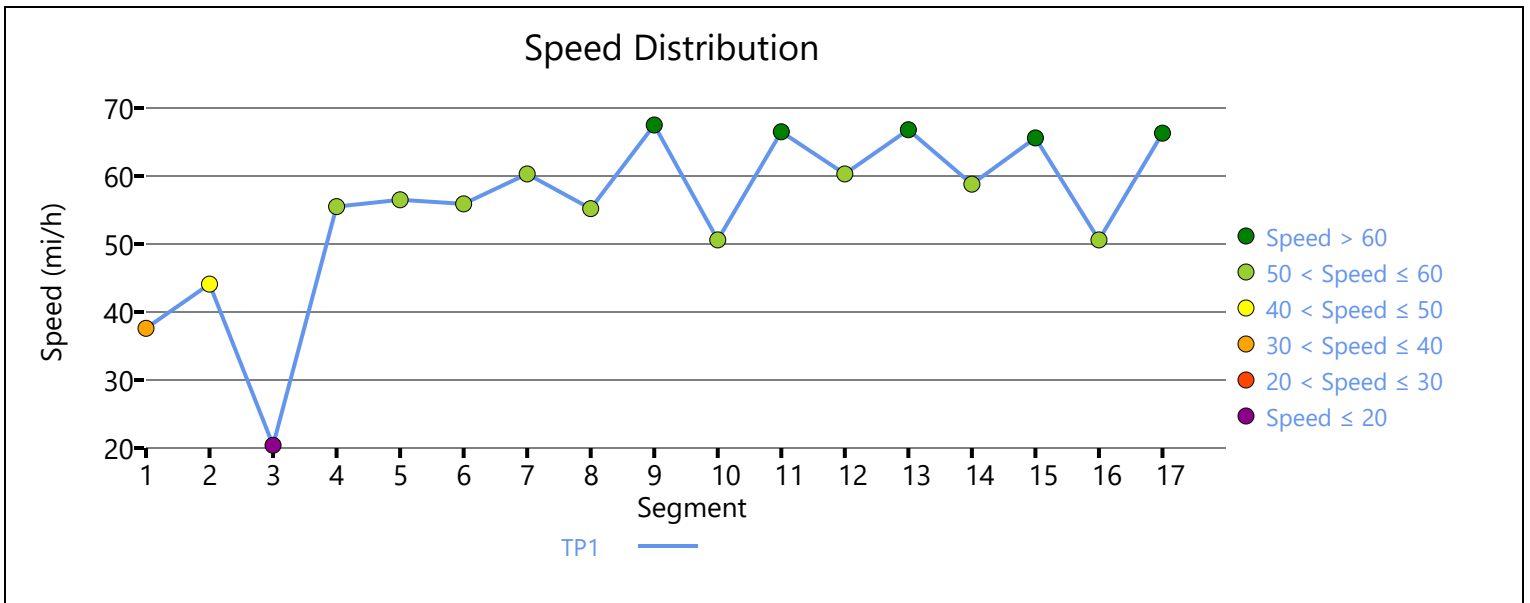
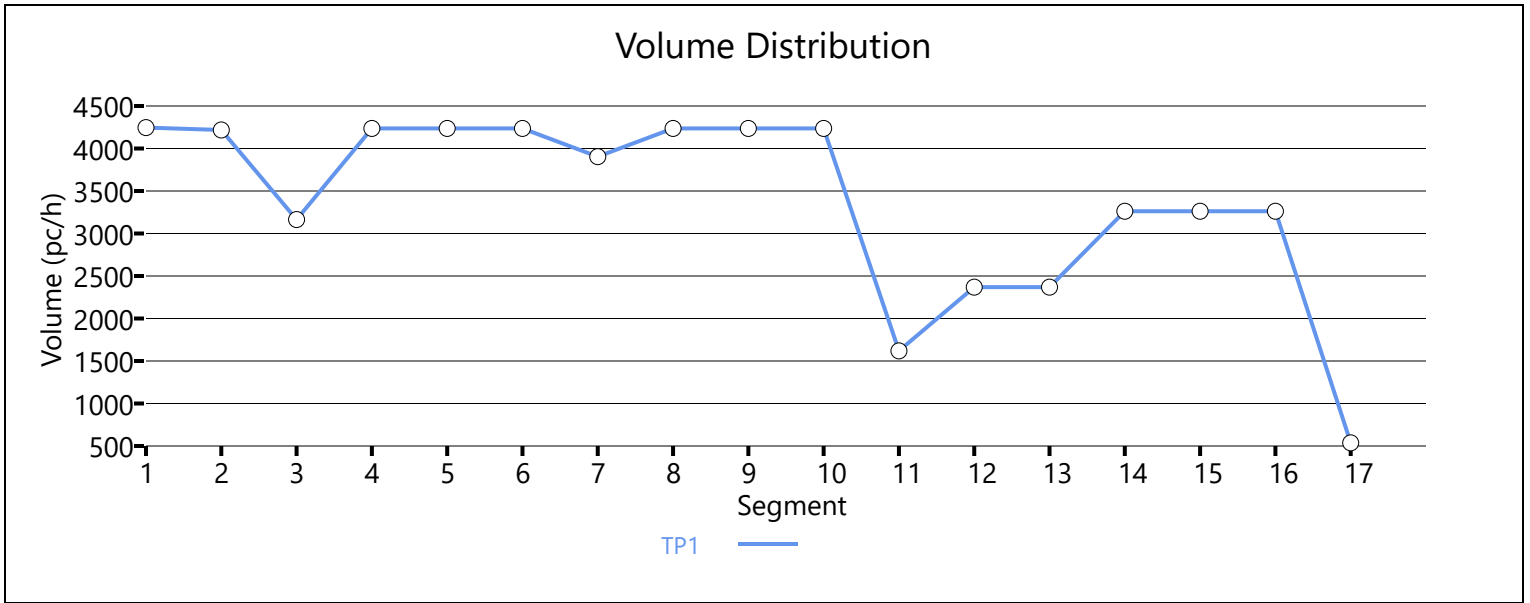
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		537		4612		0.65		66.3		3.9	

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	53.7		30.5		29.1		6.40		F						

Facility Overall Results															
Space Mean Speed, mi/h					53.7			Density, veh/mi/ln				29.1			
Average Travel Time, min					6.40			Density, pc/mi/ln				30.5			

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.										
WARNING 4					Merge capacity is less than merge demand for analysis period 1 on segment 4.										

WARNING 5	Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 6	Diverge capacity is less than diverge demand for analysis period 1 on segment 16. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
Comments	



2050 Alternative 1, 3 & 4 PM Peak Hour
(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 8 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	3
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	3
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	3
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	3
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	4
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	4
7	Basic	Basic	EB - Truck Lane	1790	4
8	Merge	Merge	EB Merge - Truck Lane End	1500	4
9	Basic	Basic	EB - Truck Lane to Long Point	7727	4
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	3
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	3
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	3
13	Basic	Basic	EB - Btw Long Point On Ramps	625	3
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	3
15	Basic	Basic	EB - Btw Long Point and US 17	1816	3
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	3
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	3

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	5602	6917	0.81	62.0	30.1	D

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	5602	986	6824	1936	0.82	0.51	60.5	56.0	30.9	28.7	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4616		6917		0.66		66.6		23.1		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.962	0.980	6552	1936	6824	1936	0.96	1.06	53.4	50.4	40.9	33.3	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		6552		9223		0.73		65.5		25.0		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.513	6552	332	9099	1936	0.72	0.17	63.5	55.9	25.8	17.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		6220		9223		0.69		66.4		23.4		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.513	6552	332	9099	1936	0.72	0.17	62.1	60.6	26.4	18.6	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		6552		9223		0.75		65.5		25.0		C
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.976	6552	2617	6824	2033	0.96	1.29	50.6	53.8	45.0	41.0	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3935		6917		0.58		66.5		19.3		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4685	750	6824	1936	0.69	0.39	60.8	59.1	25.7	23.8	C

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		4685		6917		0.69		66.3		23.6		C

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	5578	893	6824	2130	0.82	0.42	59.3	57.5	31.4	30.0	D

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		5578		6917		0.83		62.1		29.9		D

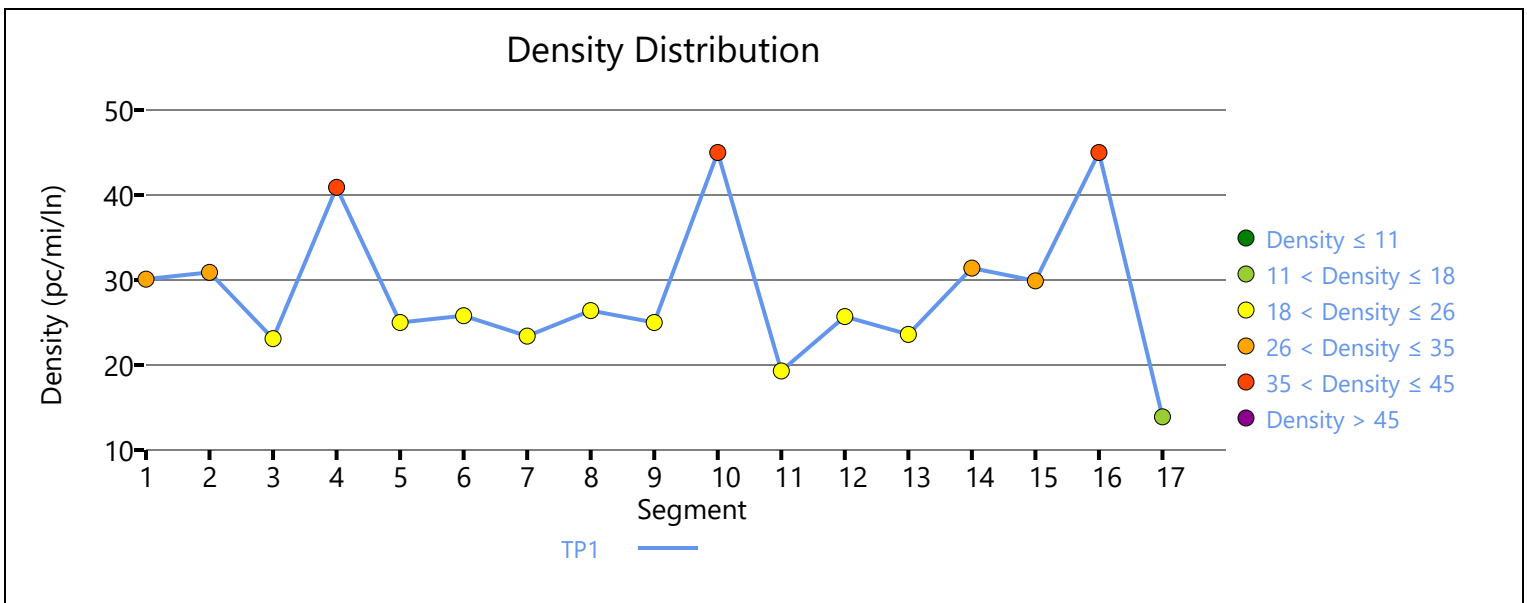
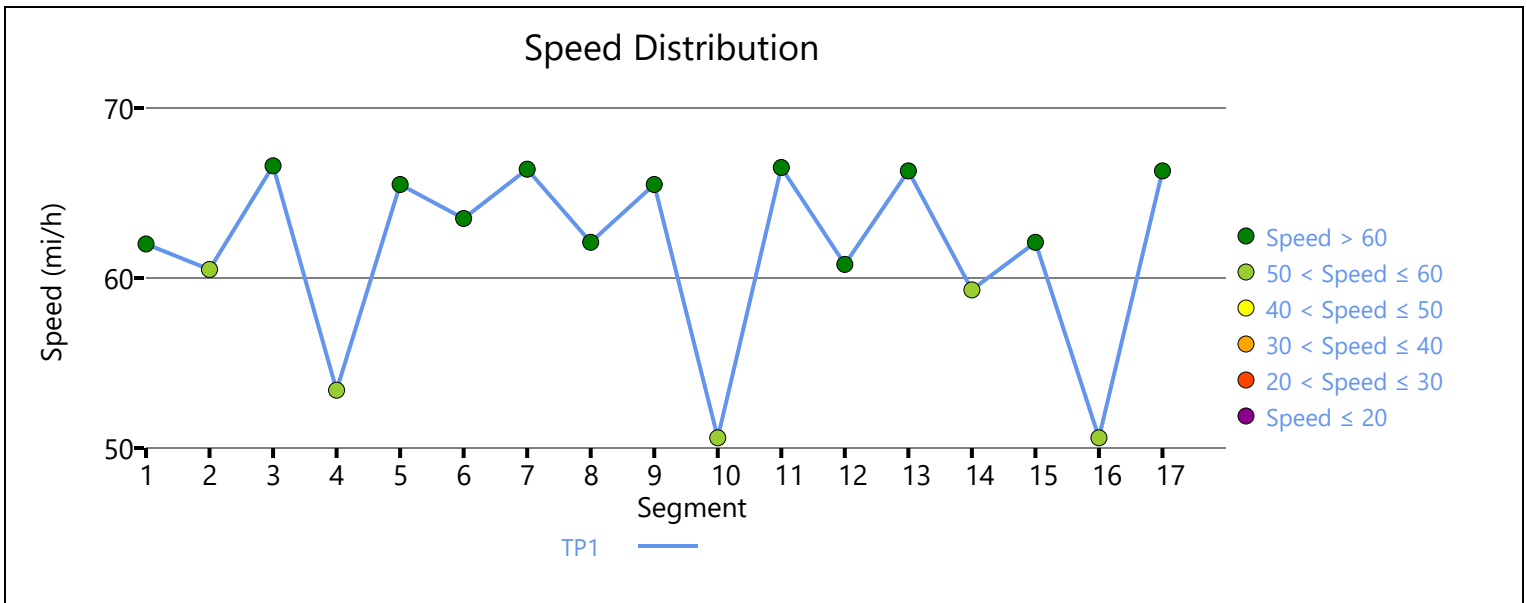
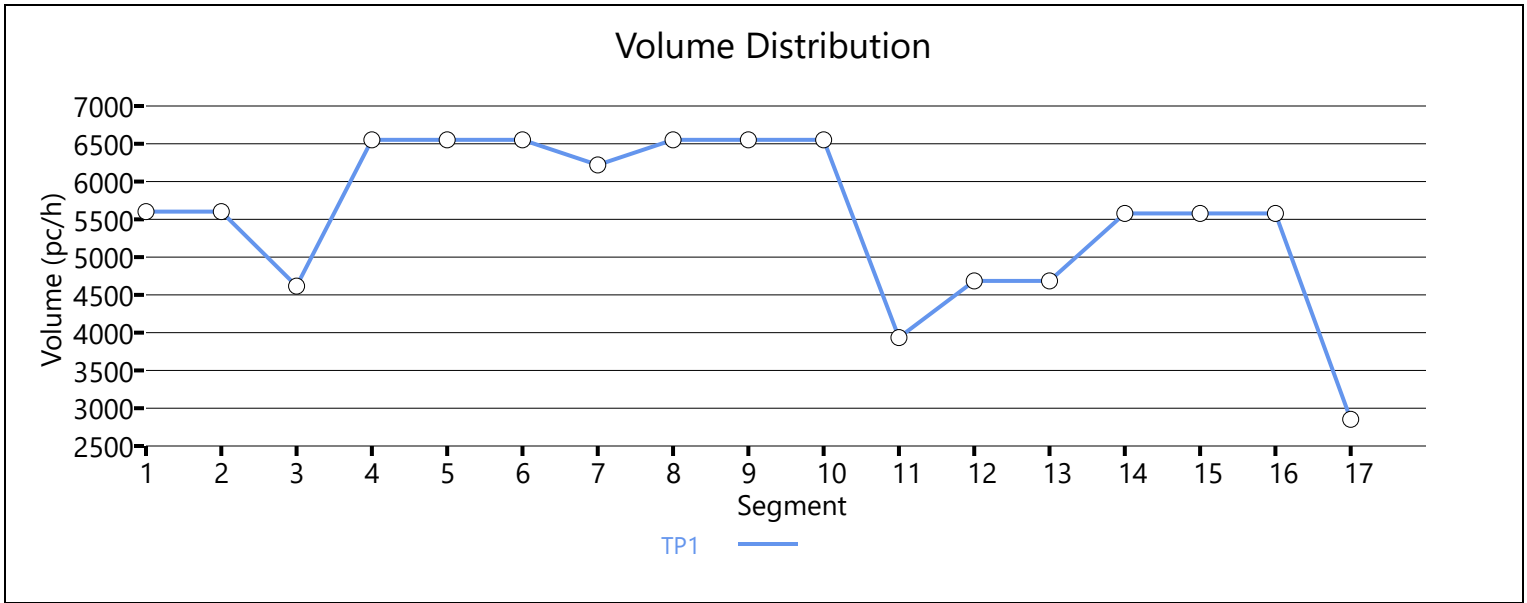
Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	5578	2725	6824	1936	0.82	1.41	50.6	51.9	45.0	37.9	F

Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		2853		6917		0.43		66.3		13.9		B

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	61.5		27.8		26.6		5.60		F						

Facility Overall Results															
Space Mean Speed, mi/h					61.5			Density, veh/mi/ln			26.6				
Average Travel Time, min					5.60			Density, pc/mi/ln			27.8				

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Merge capacity is less than merge demand for analysis period 1 on segment 4.										
WARNING 3					Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.										
WARNING 4					Diverge capacity is less than diverge demand for analysis period 1 on segment 16. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.										

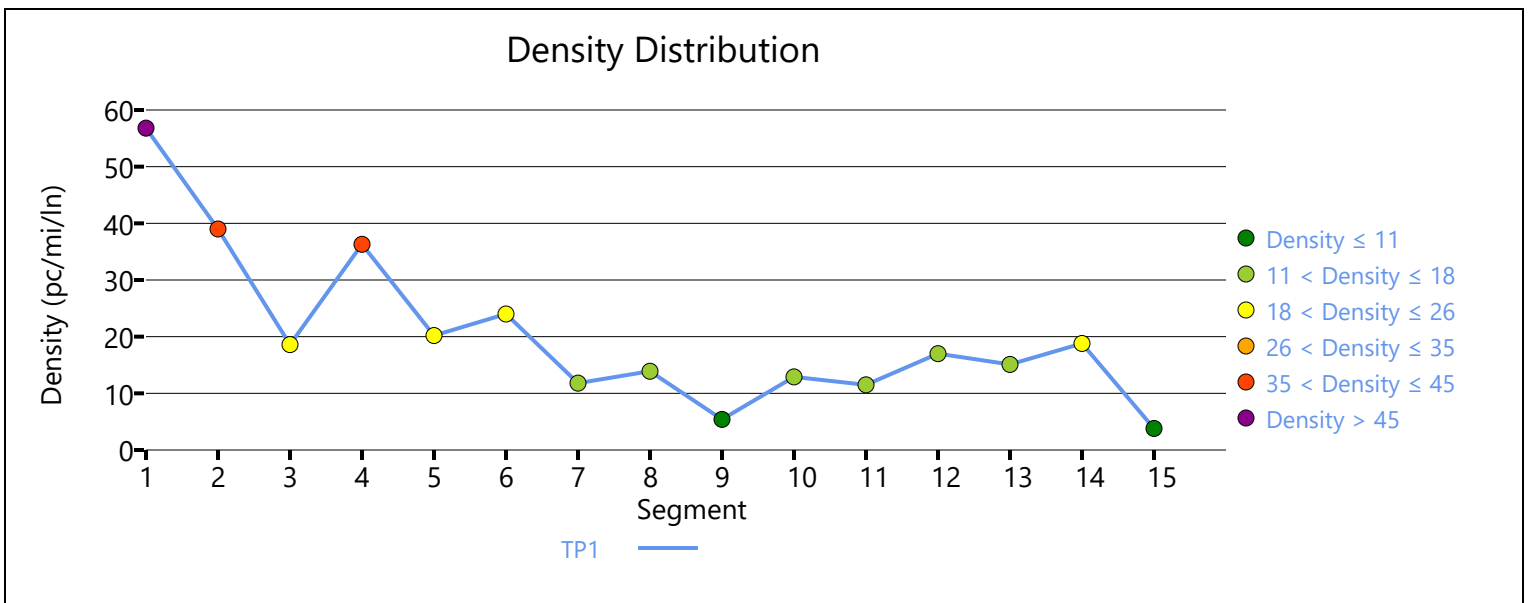
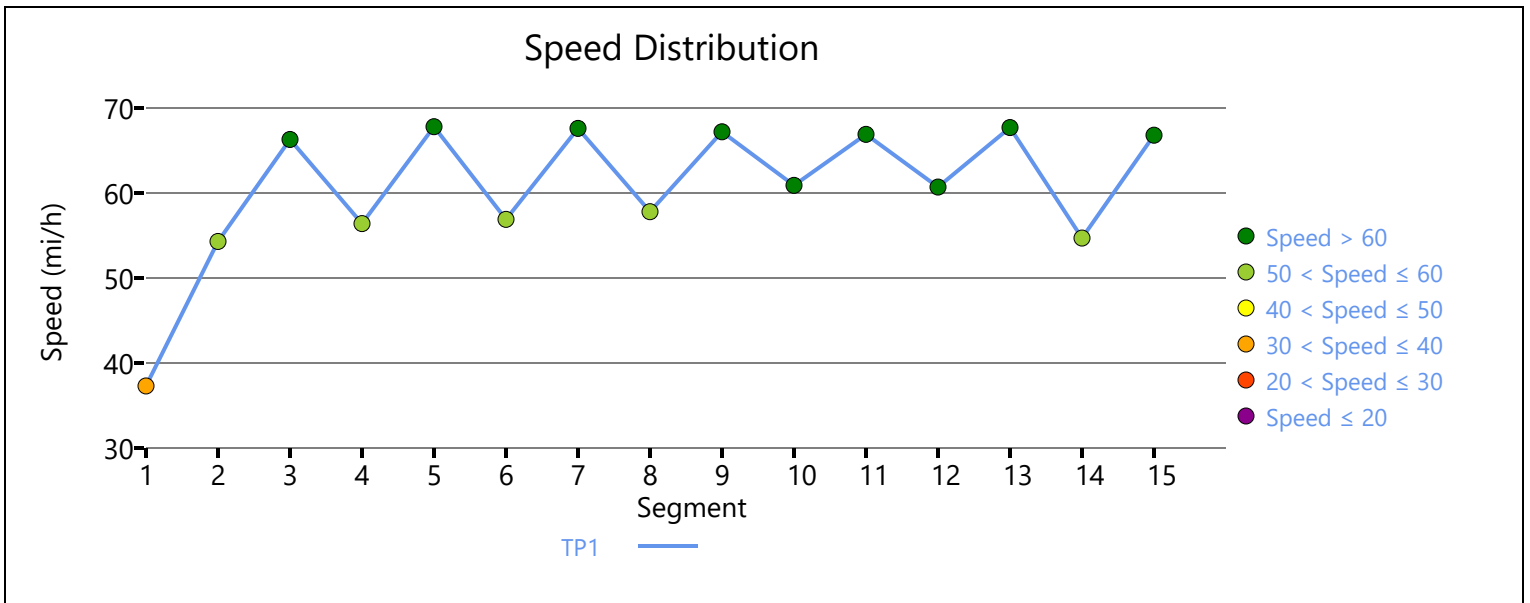
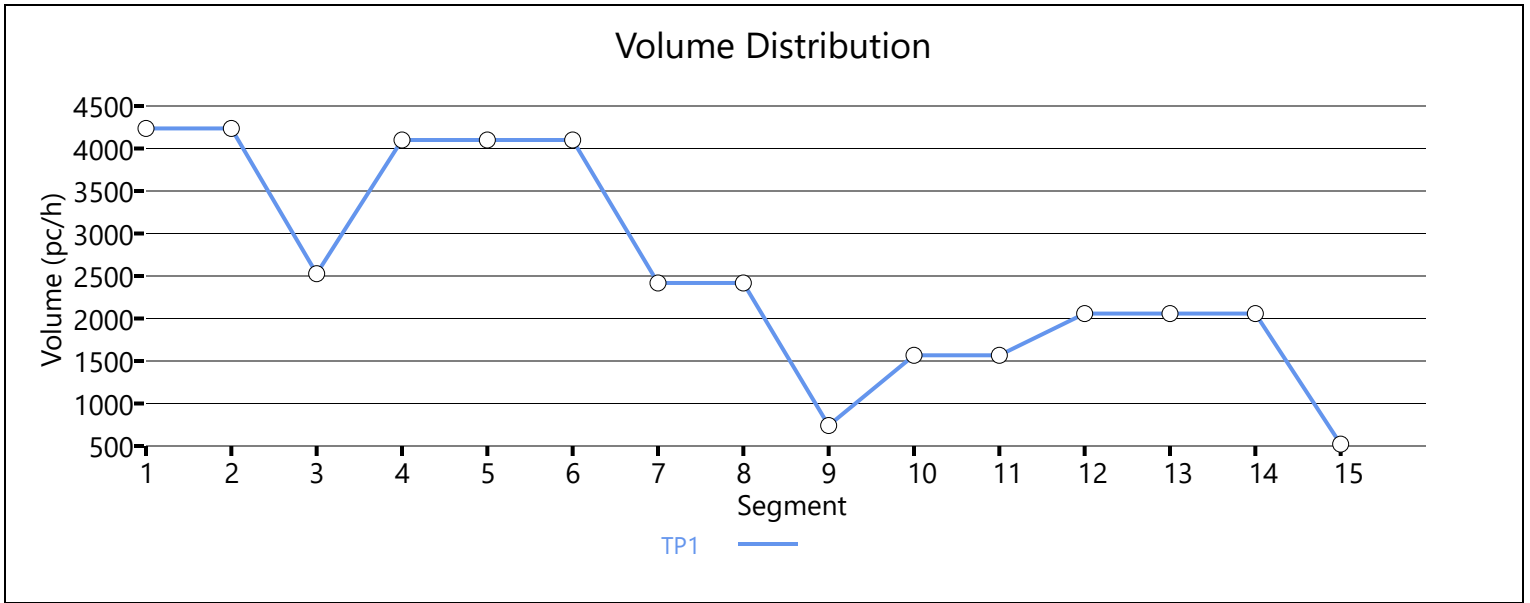


2050 Alternative 2 & 6 AM Peak Hour

(6-lane Freeway)

1	0.94	0.94	0.877	0.980	4236	1709	4550	1936	0.93	0.88	54.3	54.3	39.0	33.8	F
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2527		4612		0.99		66.3		18.6		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4100	1573	4550	1936	0.90	0.81	56.4	56.4	36.3	28.2	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4100		6917		1.02		67.8		20.2		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.513	4100	1682	6824	1936	0.60	0.87	56.9	52.7	24.0	18.2	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		2418		6917		0.71		67.6		11.8		B
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	2418	1677	6824	2033	0.35	0.83	57.8	57.8	13.9	13.9	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		741		4612		0.69		67.2		5.4		A
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	1567	826	4550	1936	0.34	0.43	60.9	60.9	12.9	11.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1567		4612		0.87		66.9		11.5		B
Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	2058	491	4550	2130	0.45	0.23	60.7	60.7	17.0	17.5	B
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		2058		4612		0.98		67.7		15.1		B
Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	2058	1536	4550	1936	0.45	0.79	54.7	54.7	18.8	20.0	B
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		522		4612		0.63		66.8		3.8		A
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	59.1				20.6				17.7				5.80		F
Facility Overall Results															
Space Mean Speed, mi/h					59.1					Density, veh/mi/ln					17.7
Average Travel Time, min					5.80					Density, pc/mi/ln					20.6
Messages															
ERROR 1					The number of trucks for segment 6 in analysis period 1 smaller than the number of trucks on off-ramp. Please verify truck percentages.										
WARNING 1					Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.										
Comments															



2050 Alternative 2 & 6 AM Peak Hour

(8-lane Freeway)

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6486	1709	6824	1936	0.95	0.88	58.9	54.3	36.7	33.4	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4577		6917		0.66		66.7		22.9		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	6150	1573	6824	1936	0.90	0.81	56.7	54.3	36.2	30.5	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		7076		9223		0.77		63.6		27.8		D
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.513	6302	1682	9223	1936	0.68	0.87	66.2	66.2	23.8	23.8	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		4899		6917		0.71		65.5		24.9		C
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	4899	1677	6824	2033	0.72	0.83	60.2	56.1	27.1	21.6	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		3172		6917		0.46		67.4		15.5		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	3998	826	6824	1936	0.59	0.43	61.5	59.8	21.7	20.8	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		4023		6917		0.58		67.0		19.7		C
Segment 12: Merge															

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	4514	491	6824	2130	0.66	0.23	61.2	59.7	24.6	24.0	C

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.952	4509	6917	0.65	66.9	22.5	C

Segment 14: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	4462	1536	6824	1936	0.65	0.79	58.9	54.7	25.3	30.0	D

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	2926	6917	0.42	67.2	14.3	B

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	62.3	26.6	23.1	5.50	D

Facility Overall Results

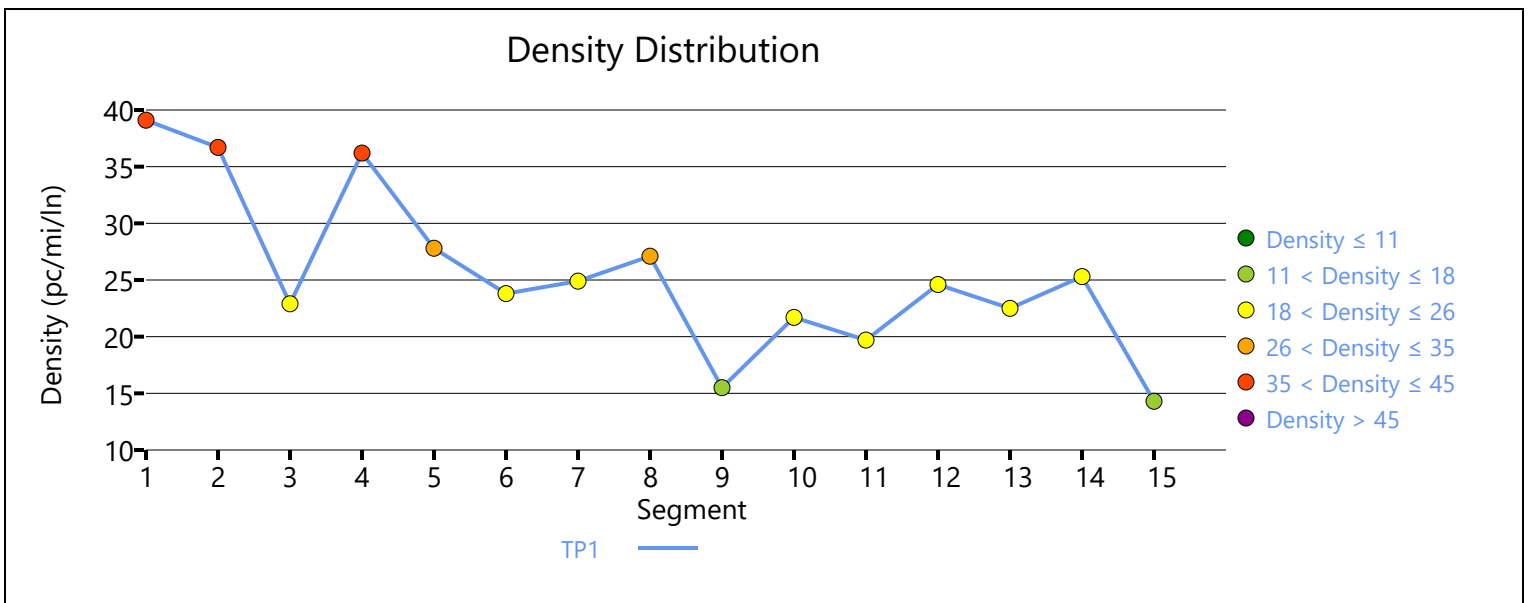
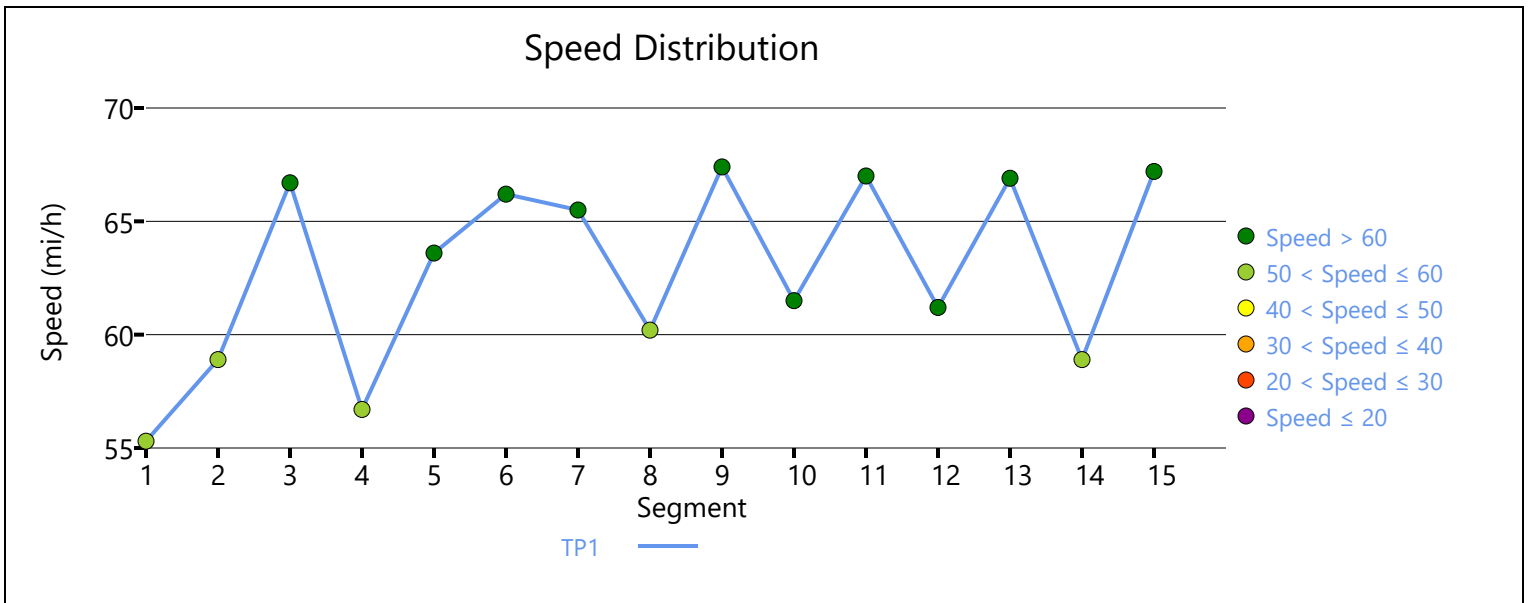
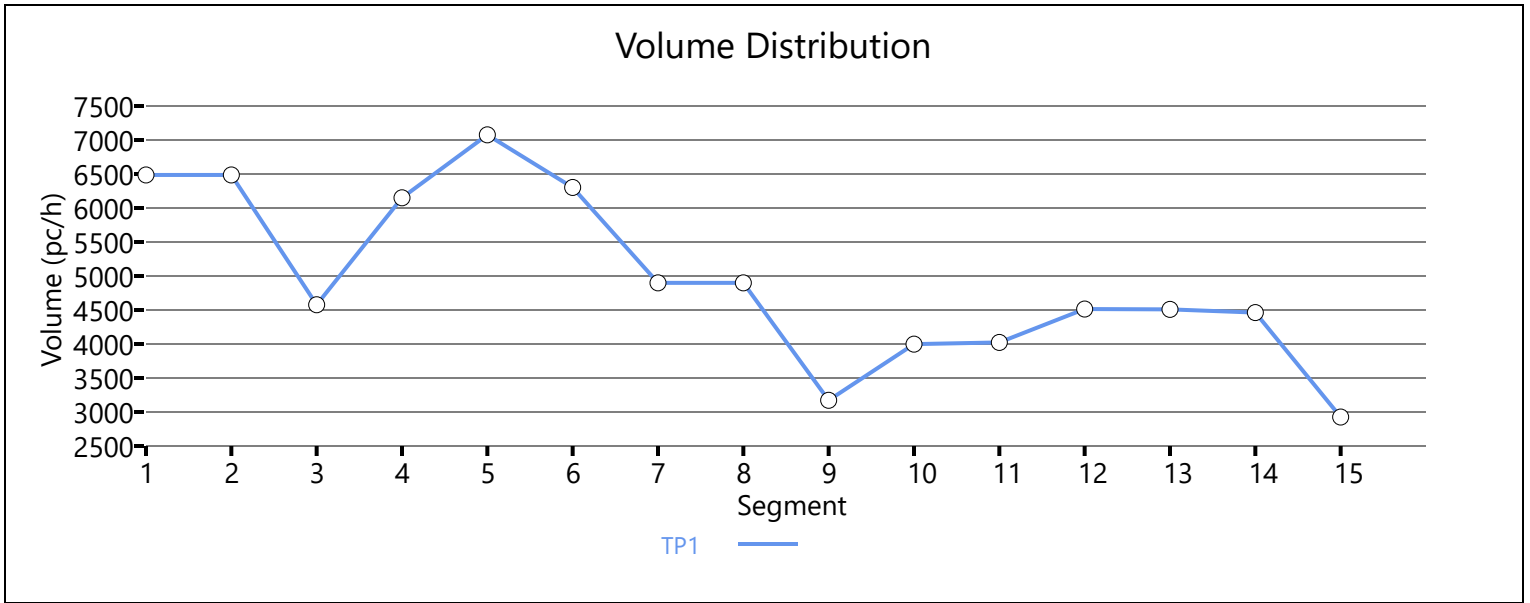
Space Mean Speed, mi/h	62.3	Density, veh/mi/ln	23.1
Average Travel Time, min	5.50	Density, pc/mi/ln	26.6

Messages

ERROR 1	The number of trucks for segment 6 in analysis period 1 smaller than the number of trucks on off-ramp. Please verify truck percentages.
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Comments

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2050 Alternative 2 & 6 PM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 6 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	710	2
6	Diverge	Diverge	EB Diverge - Truck Lane Begin	1500	2
7	Basic	Basic	EB - Truck Lane	1790	2
8	Merge	Merge	EB Merge - Truck Lane End	1500	2
9	Basic	Basic	EB - Truck Lane to Long Point	7727	3
10	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
12	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
13	Basic	Basic	EB - Btw Long Point On Ramps	625	2
14	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
15	Basic	Basic	EB - Btw Long Point and US 17	1816	2
16	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
17	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	4246	4612	1.21	37.6	56.5	F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4218	986	4550	1936	1.23	0.51	44.1	56.0	47.8	45.5	F
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3164		4612		1.00		20.4		77.4		F
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.962	0.980	4236	1936	4550	1936	0.93	1.06	55.5	55.5	38.2	29.1	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4236		4612		1.45		56.5		37.5		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.513	4236	332	4550	1936	0.93	0.17	55.9	55.9	37.9	28.1	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3904		4612		1.39		60.3		32.4		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.513	4236	332	4550	1936	0.93	0.17	55.2	55.2	38.4	29.7	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		4236		6917		1.01		67.5		20.9		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.976	4236	2617	4550	2033	0.93	1.29	50.6	53.8	45.0	38.8	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		1619		4612		0.88		66.5		11.9		B

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	2369	750	4550	1936	0.52	0.39	60.3	60.3	19.6	17.9	F

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		2369		4612		1.04		66.8		17.4	

Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	3262	893	4550	2130	0.72	0.42	58.8	58.8	27.7	26.8	F

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		3262		4612		1.24		65.6		24.9	

Segment 16: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3262	2725	4550	1936	0.72	1.41	50.6	51.9	45.0	30.3	F

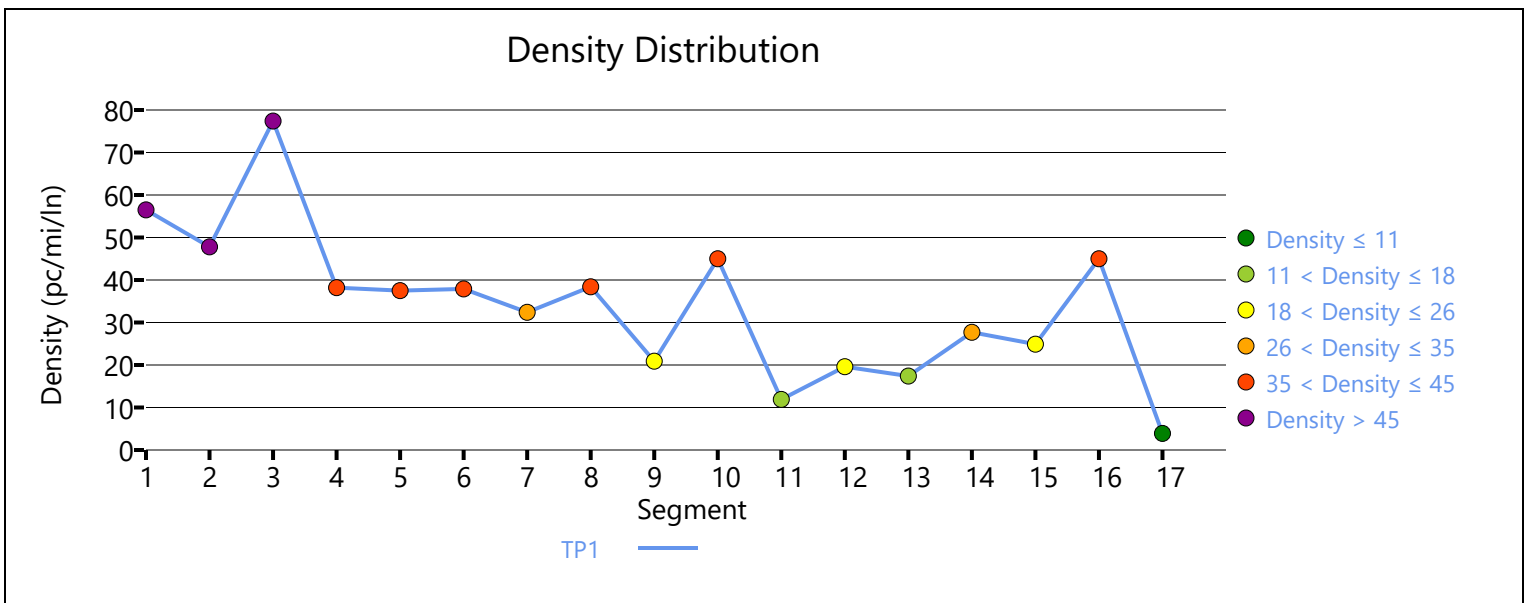
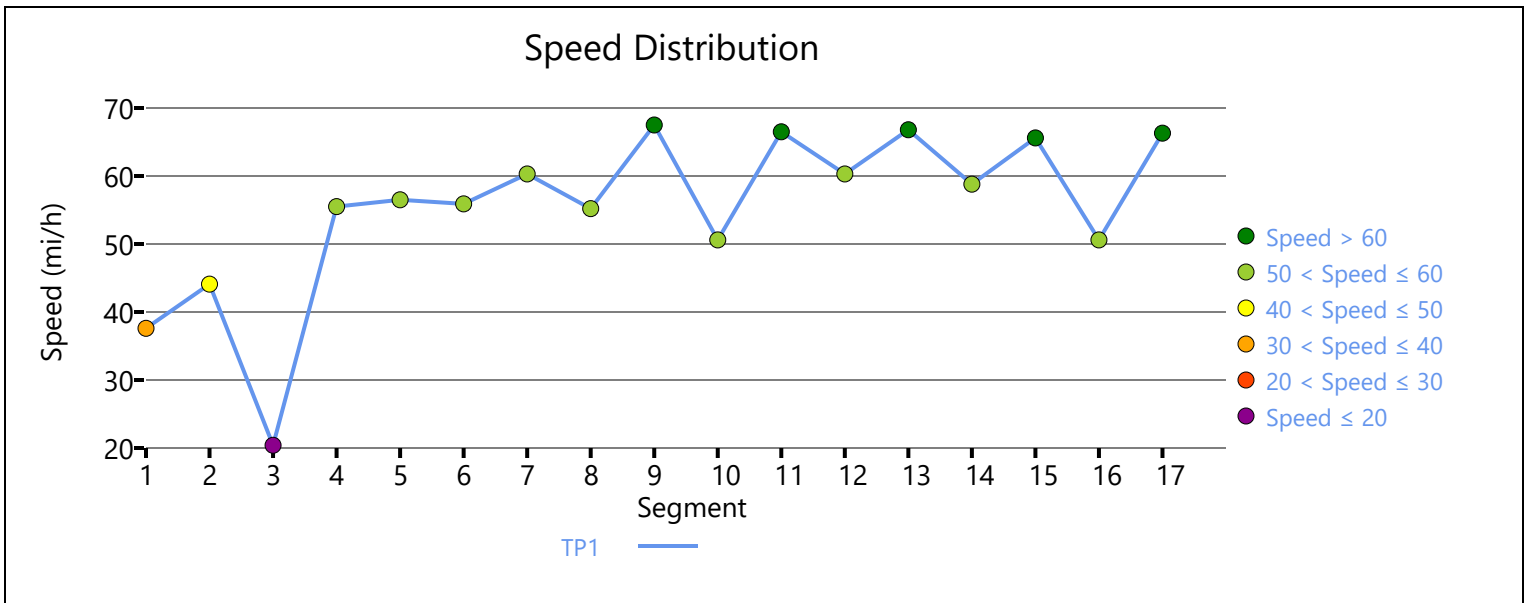
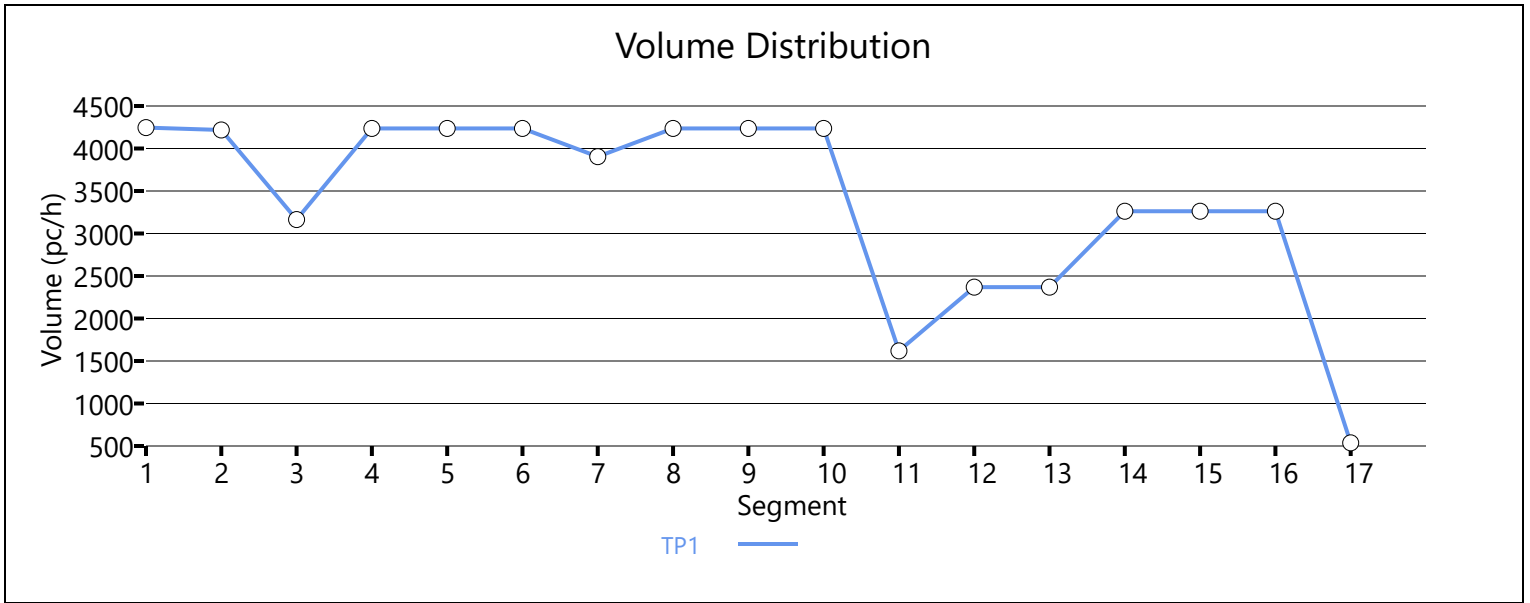
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.962		537		4612		0.65		66.3		3.9	

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	53.7		30.5		29.1		6.40		F						

Facility Overall Results															
Space Mean Speed, mi/h					53.7			Density, veh/mi/ln				29.1			
Average Travel Time, min					6.40			Density, pc/mi/ln				30.5			

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.										
WARNING 4					Merge capacity is less than merge demand for analysis period 1 on segment 4.										

WARNING 5	Diverge capacity is less than diverge demand for analysis period 1 on segment 10. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
WARNING 6	Diverge capacity is less than diverge demand for analysis period 1 on segment 16. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.
Comments	



2050 Alternative 2 & 6 PM Peak Hour
(8-lane Freeway)

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	5602	986	9099	1936	0.62	0.51	63.0	56.0	22.2	23.2	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4598		9223		0.50		67.5		16.9		B
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.962	6258	1936	9099	1936	0.69	1.08	61.2	58.6	25.6	24.6	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		6916		9223		0.75		64.3		26.9		D
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	6657	369	9099	1936	0.73	0.19	63.3	55.8	26.3	18.4	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		6342		9223		0.69		66.1		24.0		C
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	6342	2413	9099	4066	0.70	0.59	61.5	54.3	25.8	20.3	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3929		9223		0.43		67.6		14.4		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4679	750	9099	1936	0.51	0.39	63.0	60.4	18.6	17.6	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4679		9223		0.51		67.3		17.2		B
Segment 12: Merge															

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.943	5607	928	9099	2130	0.62	0.44	62.2	59.8	22.5	23.1	C

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	5572	9223	0.60	67.6	20.6	C

Segment 14: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	5572	1508	9099	1936	0.61	0.78	61.4	54.8	22.7	30.5	D

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	4064	9223	0.44	67.5	14.9	B

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.4	23.0	22.0	5.30	C

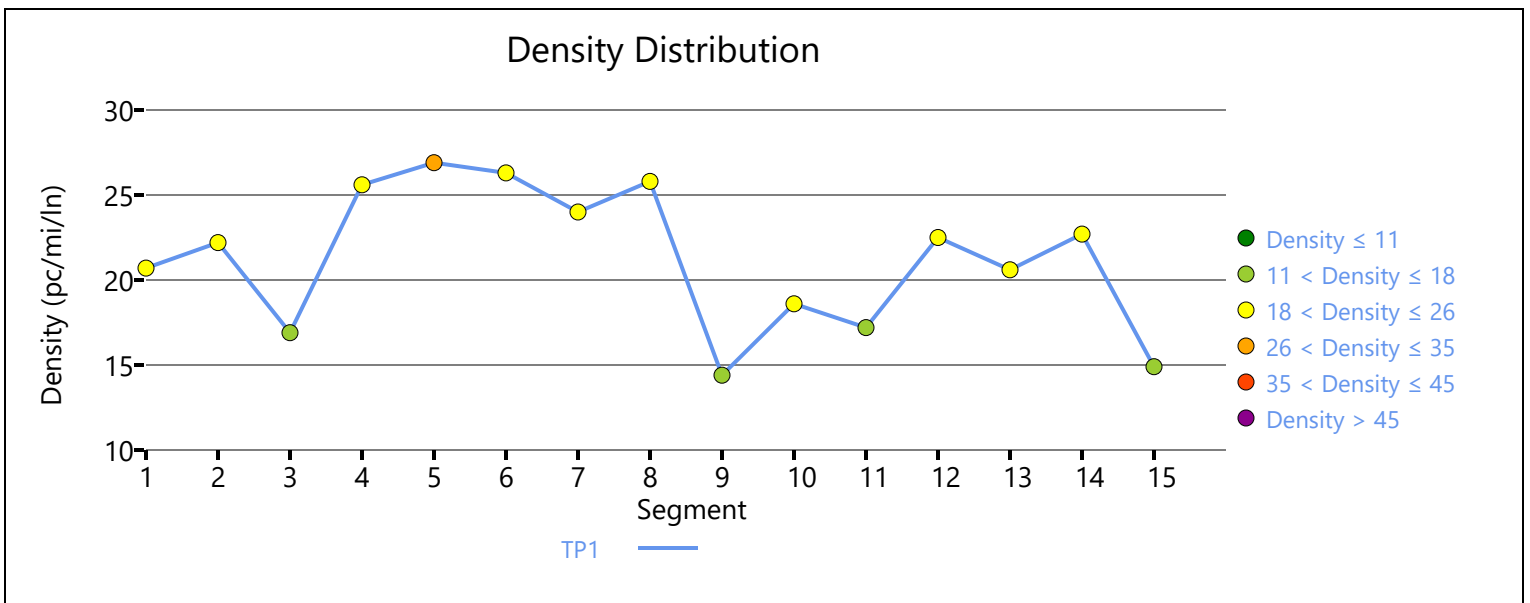
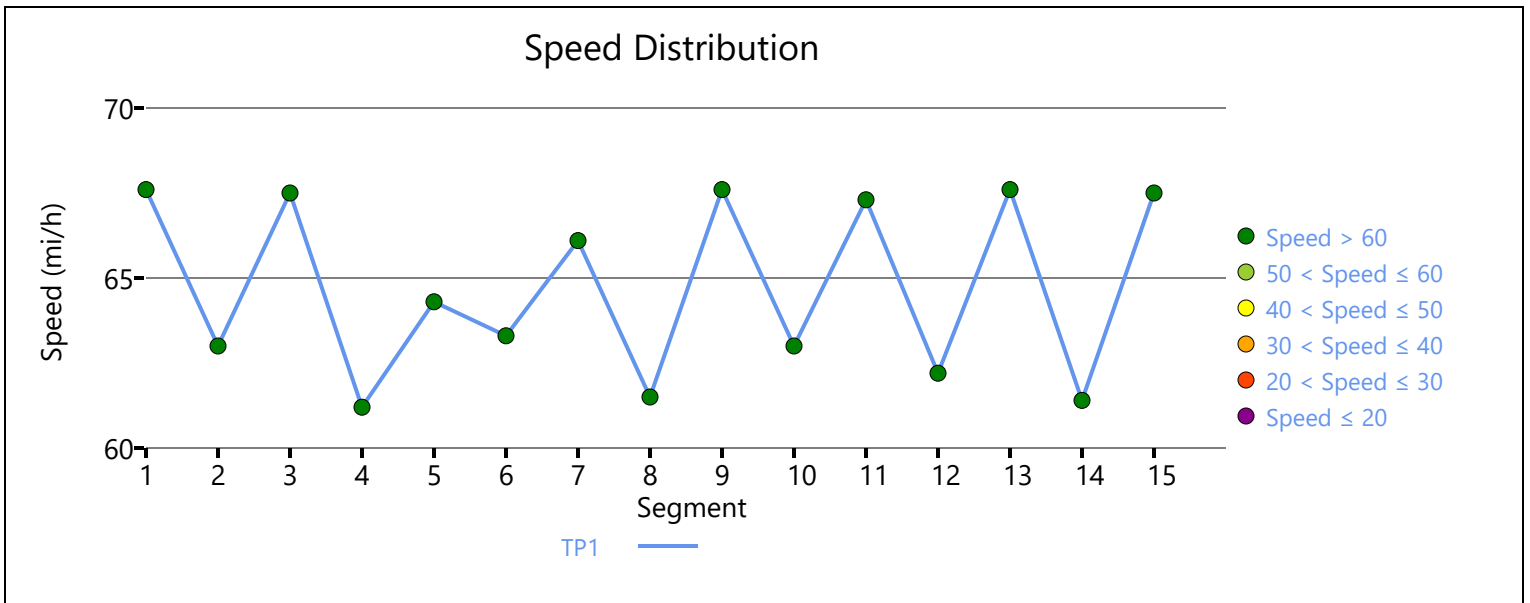
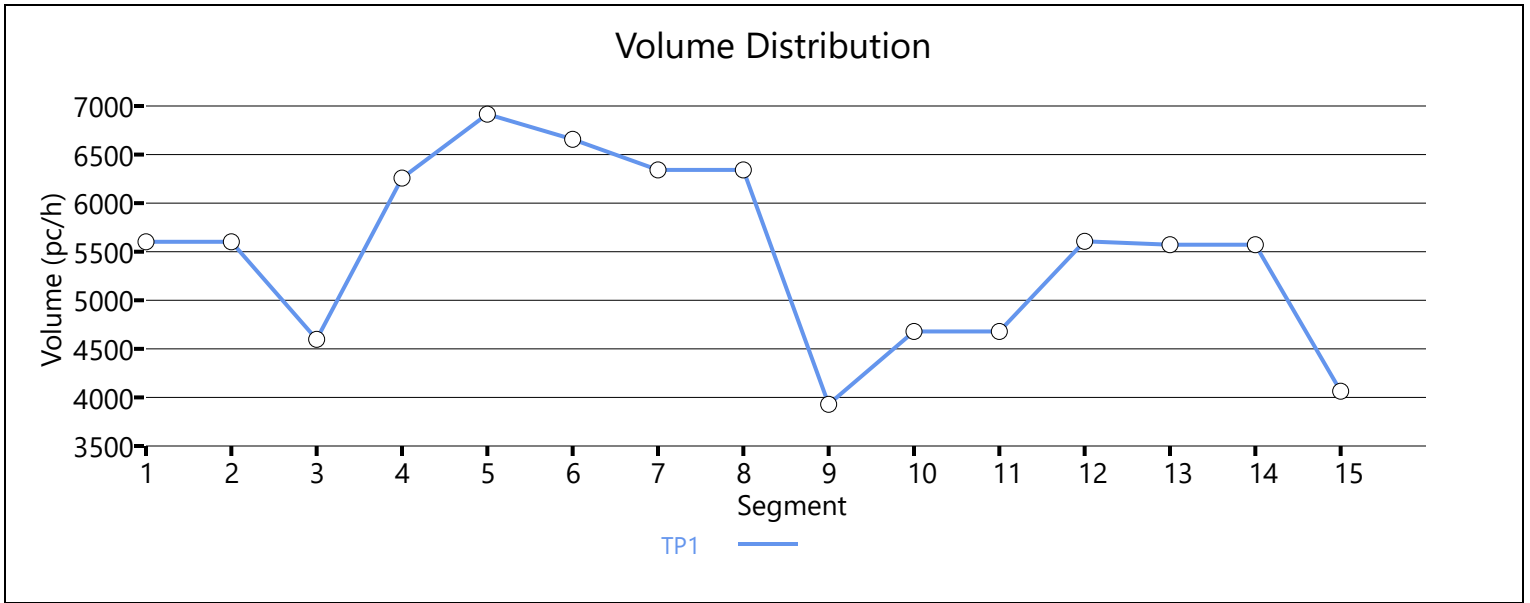
Facility Overall Results

Space Mean Speed, mi/h	64.4	Density, veh/mi/ln	22.0
Average Travel Time, min	5.30	Density, pc/mi/ln	23.0

Messages

WARNING 1 Merge capacity is less than merge demand for analysis period 1 on segment 4.

Comments



2050 Alternative 1 & 2 with CD Roadway AM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 1 & 2 Geometry w/ CD Road
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	9647	3
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	3
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	5000	2
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
9	Basic	Basic	EB - Btw Long Point On Ramps	625	2
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point and US 17	1816	2
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

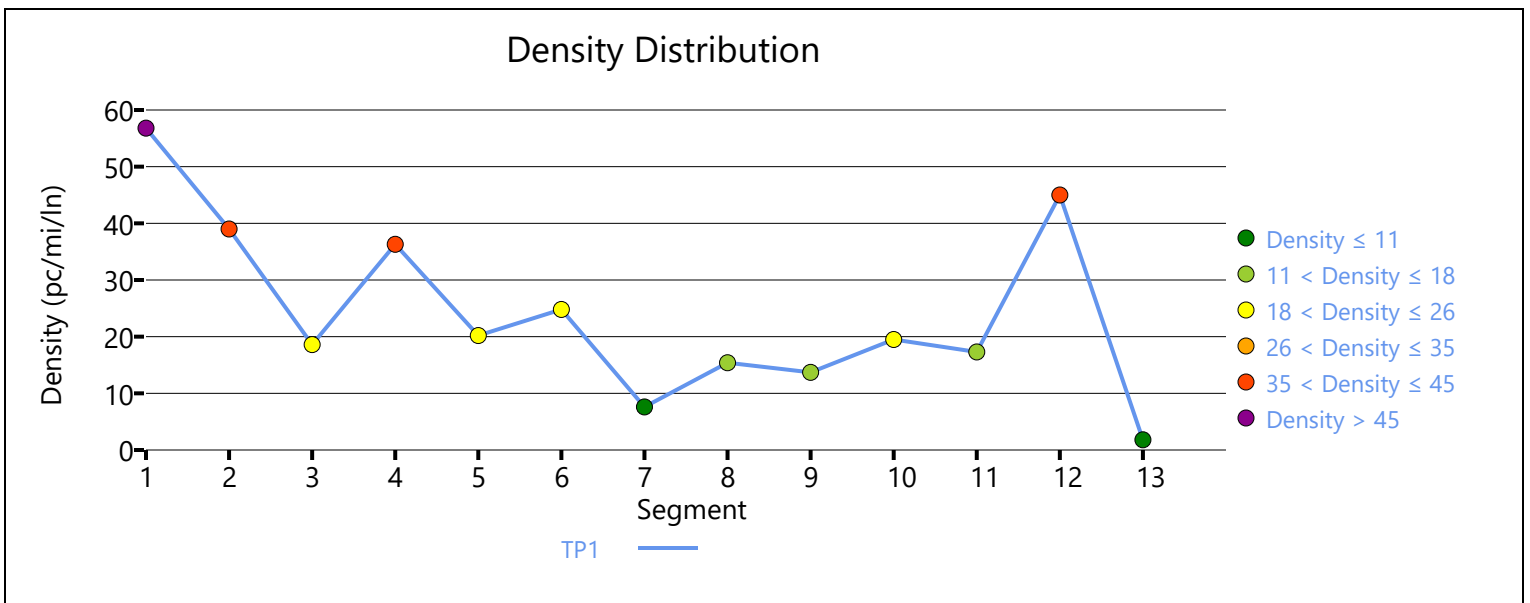
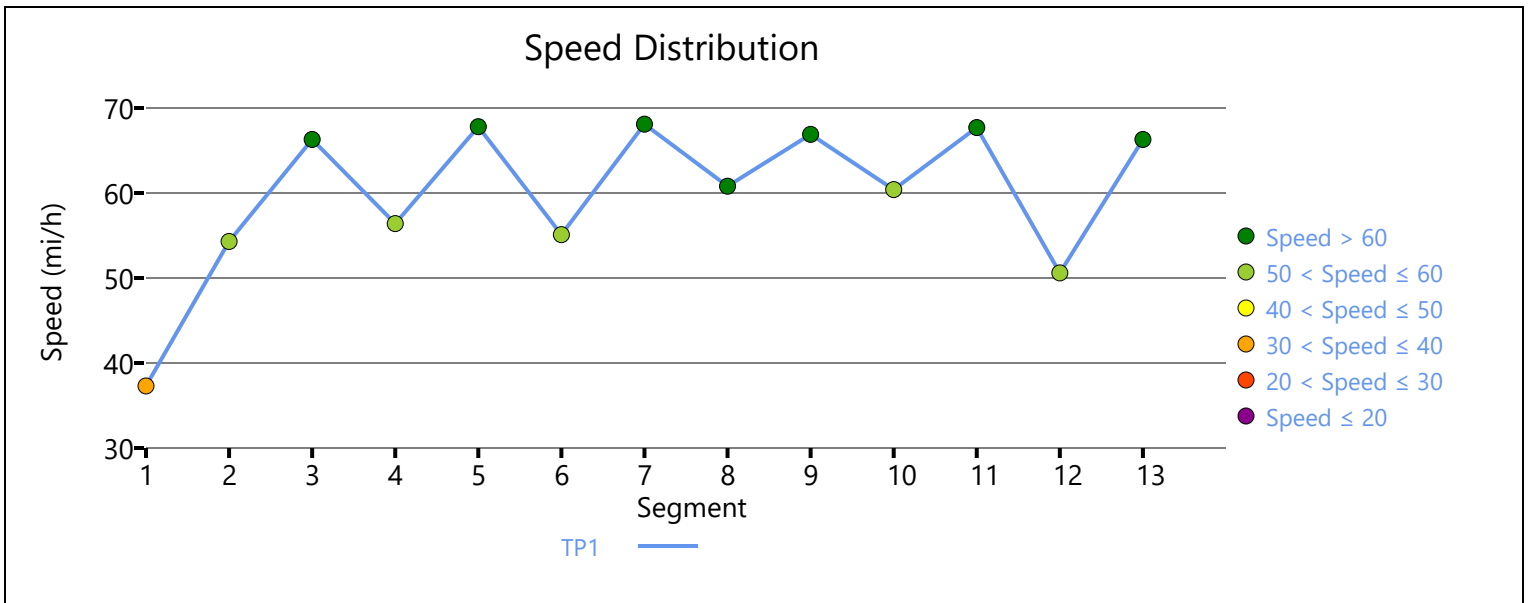
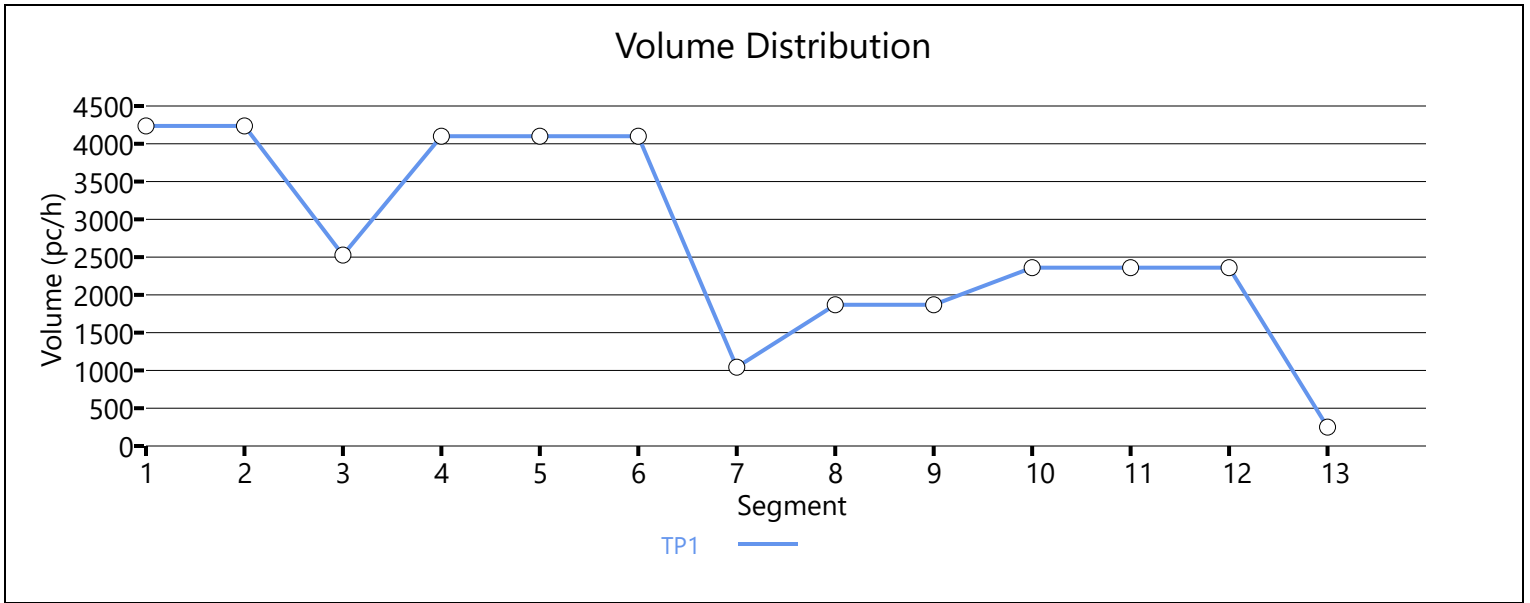
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4236		4612		1.41		37.3		56.8		F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	4236	1709	4550	1936	0.93	0.88	54.3	54.3	39.0	33.8	F

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2527		4612		0.99		66.3		18.6		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4100	1573	4550	1936	0.90	0.81	56.4	56.4	36.3	28.2	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4100		6917		1.02		67.8		20.2		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.820	4100	3057	6389	4066	0.64	0.75	55.1	52.8	24.8	21.1	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1043		4612		0.69		68.1		7.6		A
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	1869	826	4550	1936	0.41	0.43	60.8	60.8	15.4	14.0	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1869		4612		0.87		66.9		13.7		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	2360	491	4550	2130	0.52	0.23	60.4	60.4	19.5	19.9	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		2360		4612		0.98		67.7		17.3		B
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.962	0.962	2360	2110	4550	1936	0.52	1.09	50.6	53.4	45.0	22.6	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS		
1	0.94	0.962	250			4612		0.51	66.3		1.8		A		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	58.9		22.0			19.0		5.90			F				
Facility Overall Results															
Space Mean Speed, mi/h				58.9				Density, veh/mi/ln				19.0			
Average Travel Time, min				5.90				Density, pc/mi/ln				22.0			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 3				Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.											
WARNING 4				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



2050 Alternative 1 &2 with CD Roadway PM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 1 & 2 Geometry w/ CD Road
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	9647	3
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	3
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	5000	2
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
9	Basic	Basic	EB - Btw Long Point On Ramps	625	2
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point and US 17	1816	2
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

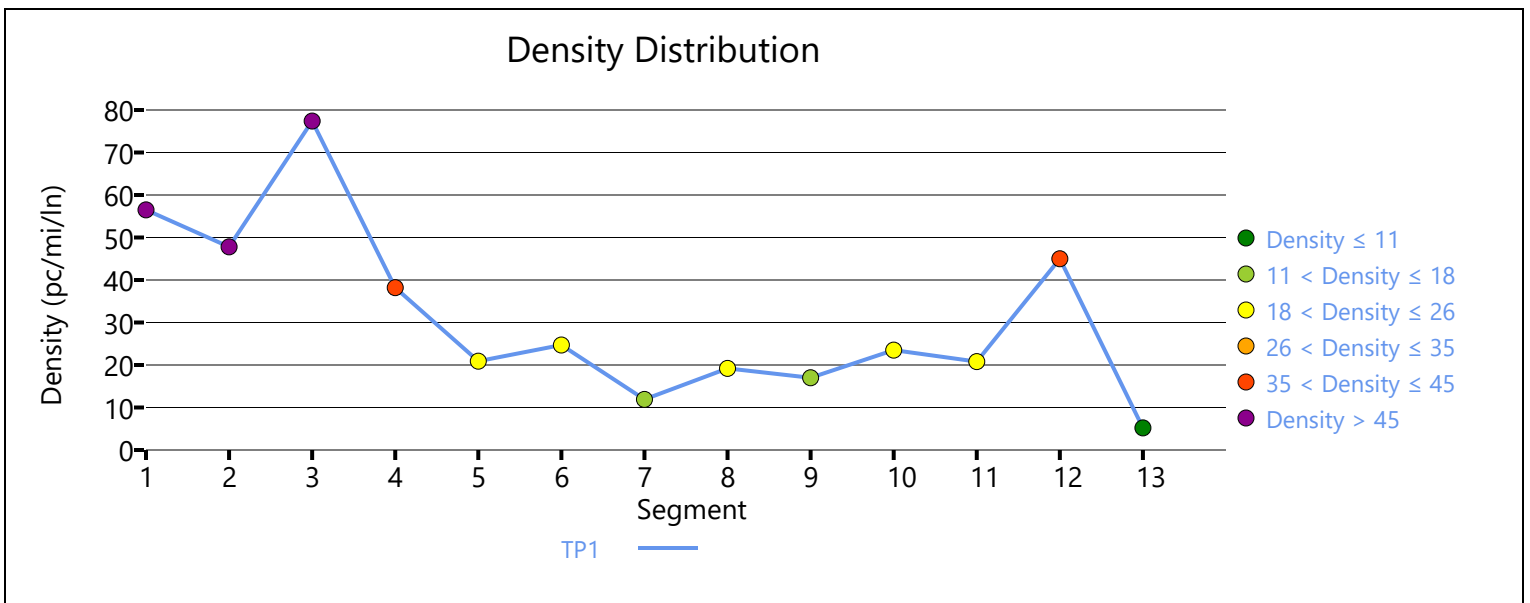
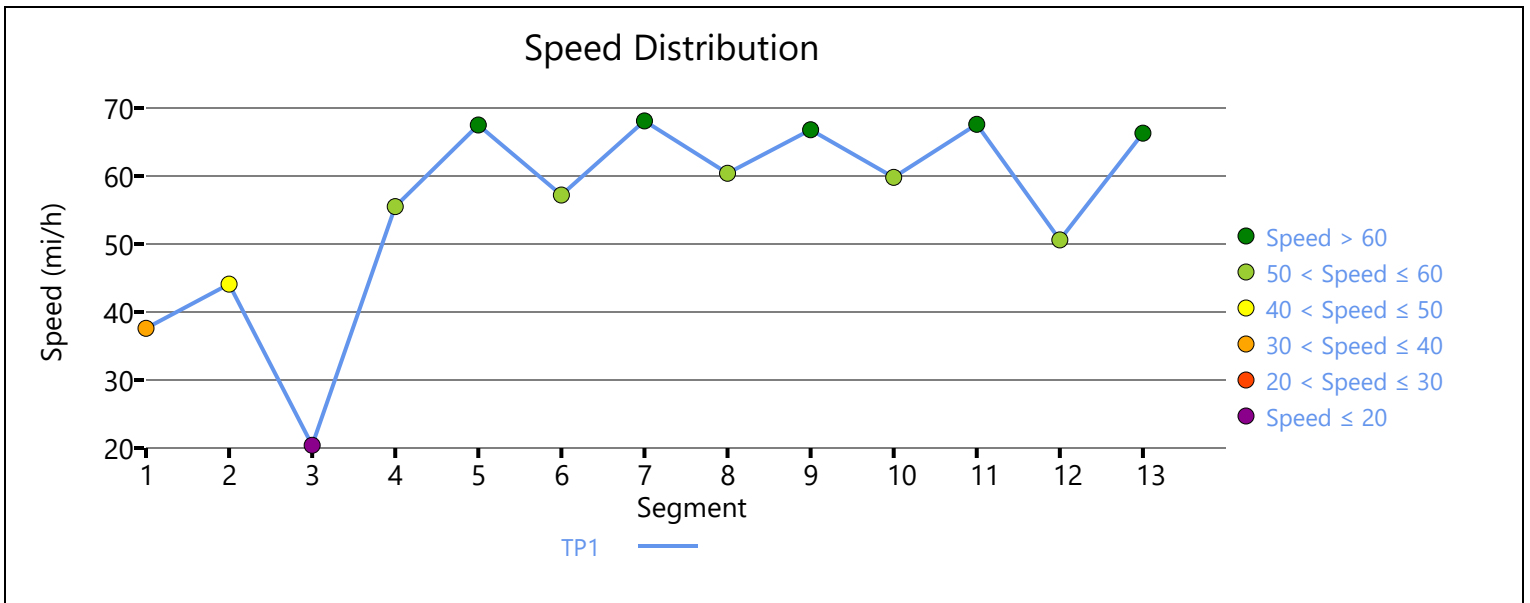
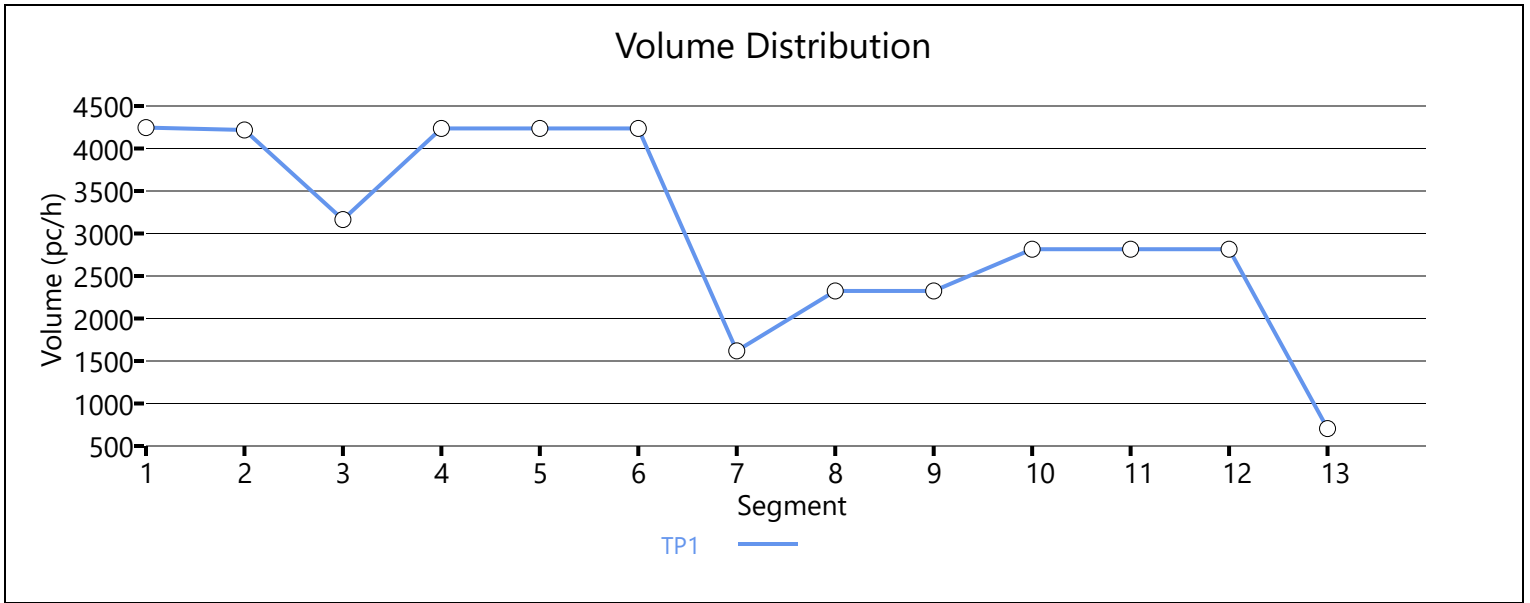
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4246		4612		1.21		37.6		56.5		F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4218	986	4550	1936	1.23	0.51	44.1	56.0	47.8	45.5	F

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3164		4612		1.00		20.4		77.4		F
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.962	4236	1936	4550	1936	0.93	1.08	55.5	55.5	38.2	29.1	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4236		6917		0.96		67.5		20.9		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.976	4236	2617	6824	4066	0.62	0.64	57.2	53.8	24.7	19.5	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		1619		4612		0.85		68.1		11.9		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.980	2324	705	4550	1936	0.51	0.36	60.4	60.4	19.2	17.6	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2324		4612		1.01		66.8		17.0		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.943	2815	491	4550	2130	0.62	0.23	59.8	59.8	23.5	23.5	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2815		4612		1.12		67.6		20.8		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.980	0.962	2815	2110	4550	1936	0.62	1.09	50.6	53.4	45.0	26.5	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)			d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS	
1	0.94	0.980	705			4612			0.67	66.3		5.2		A	
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln			Travel Time, min			LOS			
1	55.3		25.7			24.8			6.20			F			
Facility Overall Results															
Space Mean Speed, mi/h				55.3				Density, veh/mi/ln				24.8			
Average Travel Time, min				6.20				Density, pc/mi/ln				25.7			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 3				Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.											
WARNING 4				Merge capacity is less than merge demand for analysis period 1 on segment 4.											
WARNING 5				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



2050 Alternative 5 AM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 5 Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	13227	3
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	3
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
9	Basic	Basic	EB - Btw Long Point On Ramps	625	2
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point and US 17	1816	2
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

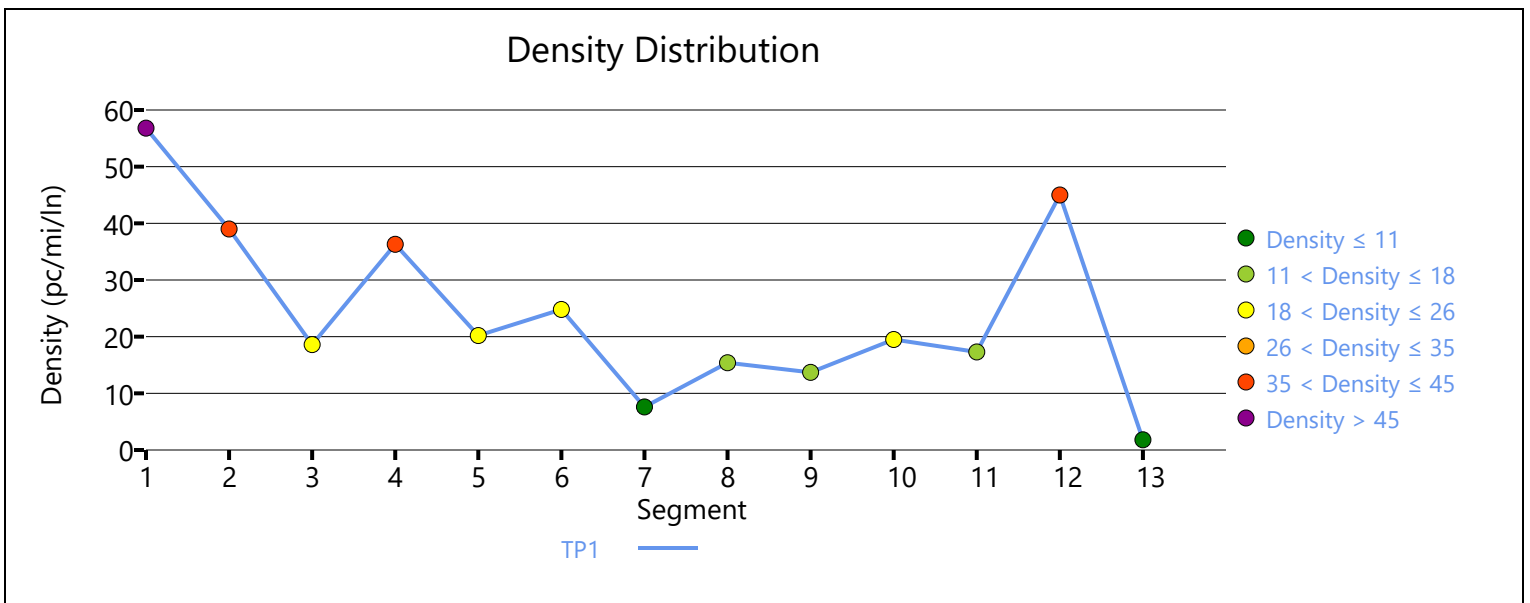
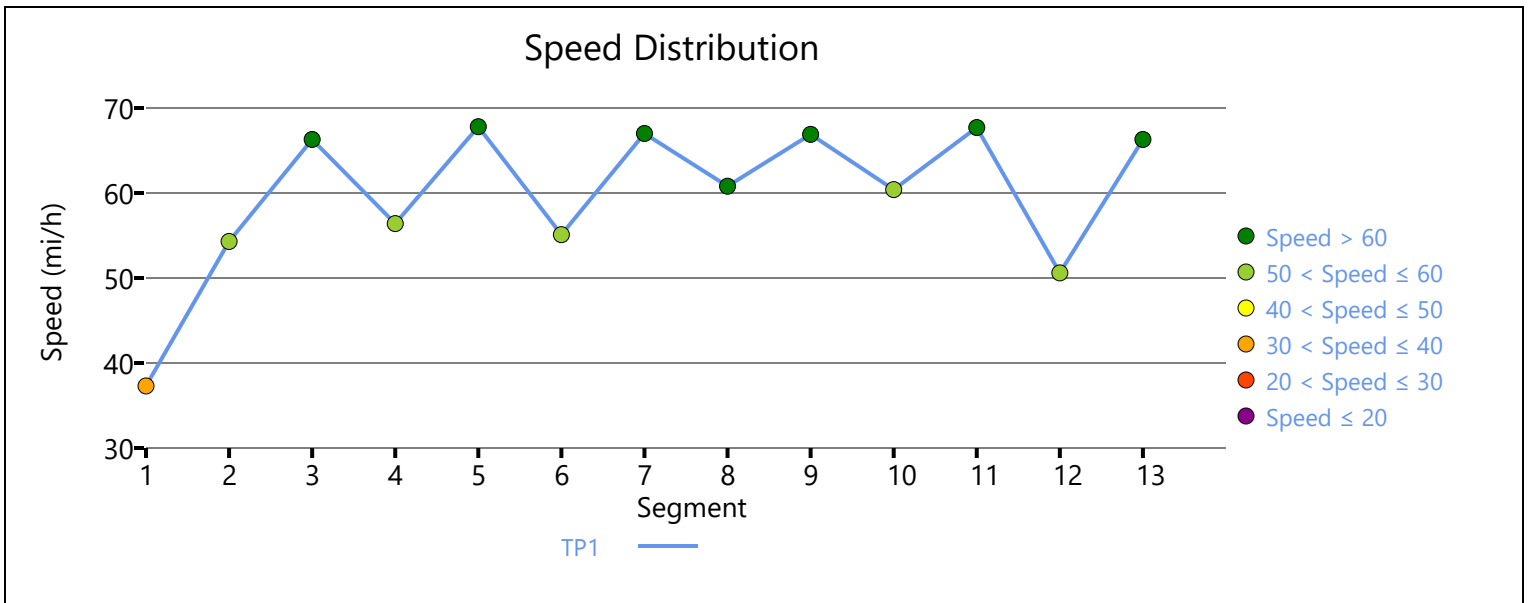
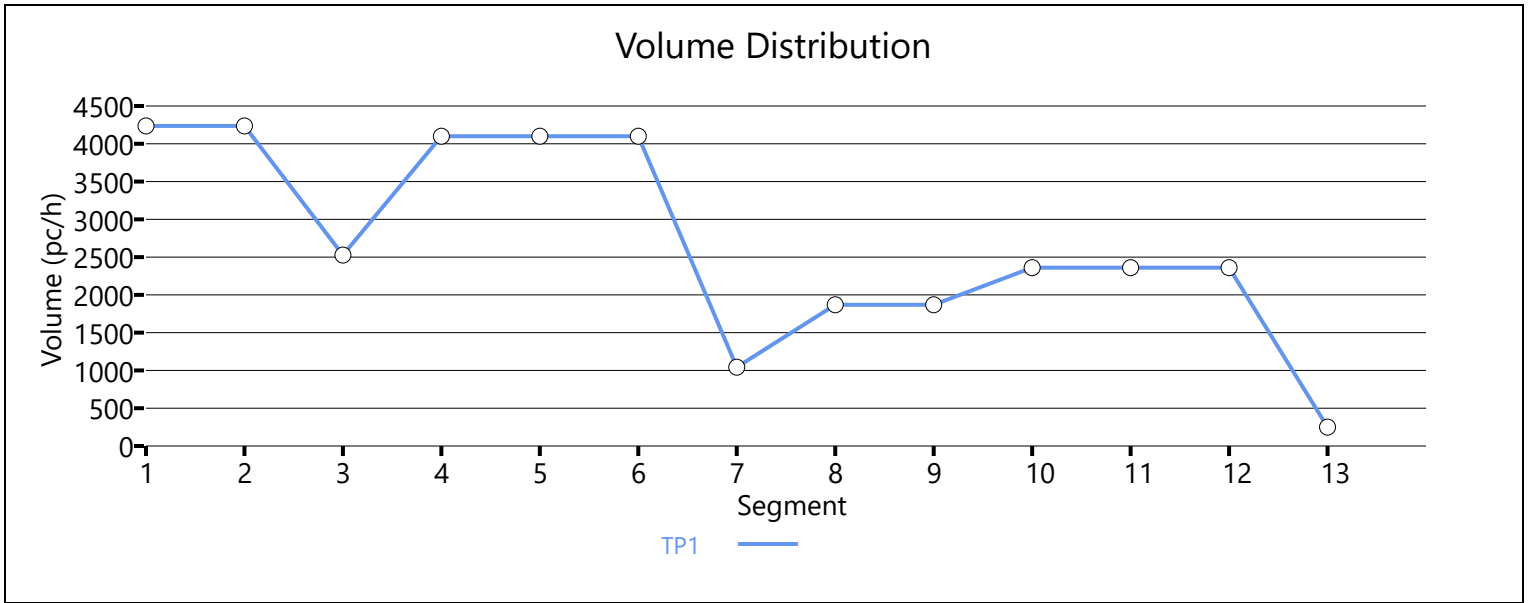
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4236		4612		1.41		37.3		56.8		F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	4236	1709	4550	1936	0.93	0.88	54.3	54.3	39.0	33.8	F

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2527		4612		0.99		66.3		18.6		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4100	1573	4550	1936	0.90	0.81	56.4	56.4	36.3	28.2	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4100		6917		1.02		67.8		20.2		F
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.820	4100	3057	6824	4066	0.60	0.75	55.1	52.8	24.8	21.1	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1043		4612		0.69		67.0		7.6		A
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	1869	826	4550	1936	0.41	0.43	60.8	60.8	15.4	14.0	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		1869		4612		0.87		66.9		13.7		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	2360	491	4550	2130	0.52	0.23	60.4	60.4	19.5	19.9	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		2360		4612		0.98		67.7		17.3		B
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.962	0.962	2360	2110	4550	1936	0.52	1.09	50.6	53.4	45.0	22.6	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS		
1	0.94	0.962	250			4612		0.51	66.3		1.8		A		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	59.6		23.1			19.6		5.80			F				
Facility Overall Results															
Space Mean Speed, mi/h				59.6				Density, veh/mi/ln				19.6			
Average Travel Time, min				5.80				Density, pc/mi/ln				23.1			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 3				Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.											
WARNING 4				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



2050 Alternative 5 AM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 5 8-Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	3
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	3
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	3
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	3
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	13227	4
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	4
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	3
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	3
9	Basic	Basic	EB - Btw Long Point On Ramps	625	3
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	3
11	Basic	Basic	EB - Btw Long Point and US 17	1816	3
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	3
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	3

Facility Segment Data

Segment 1: Basic

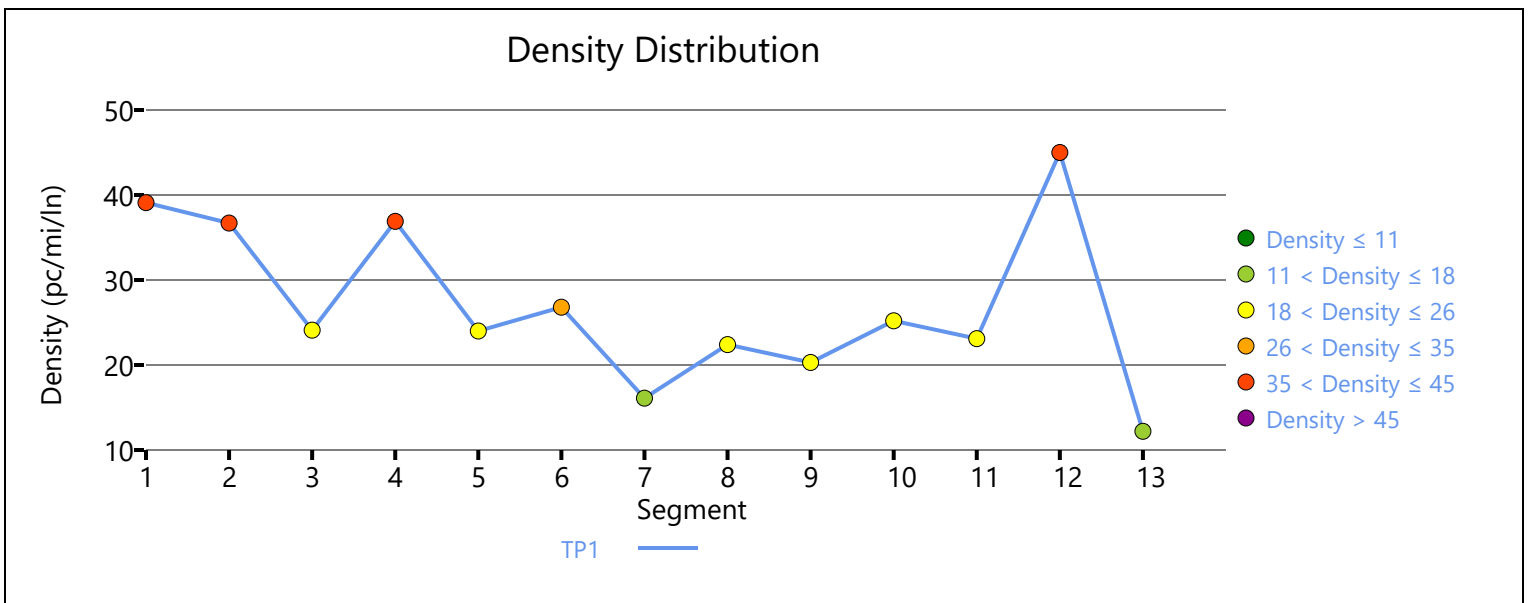
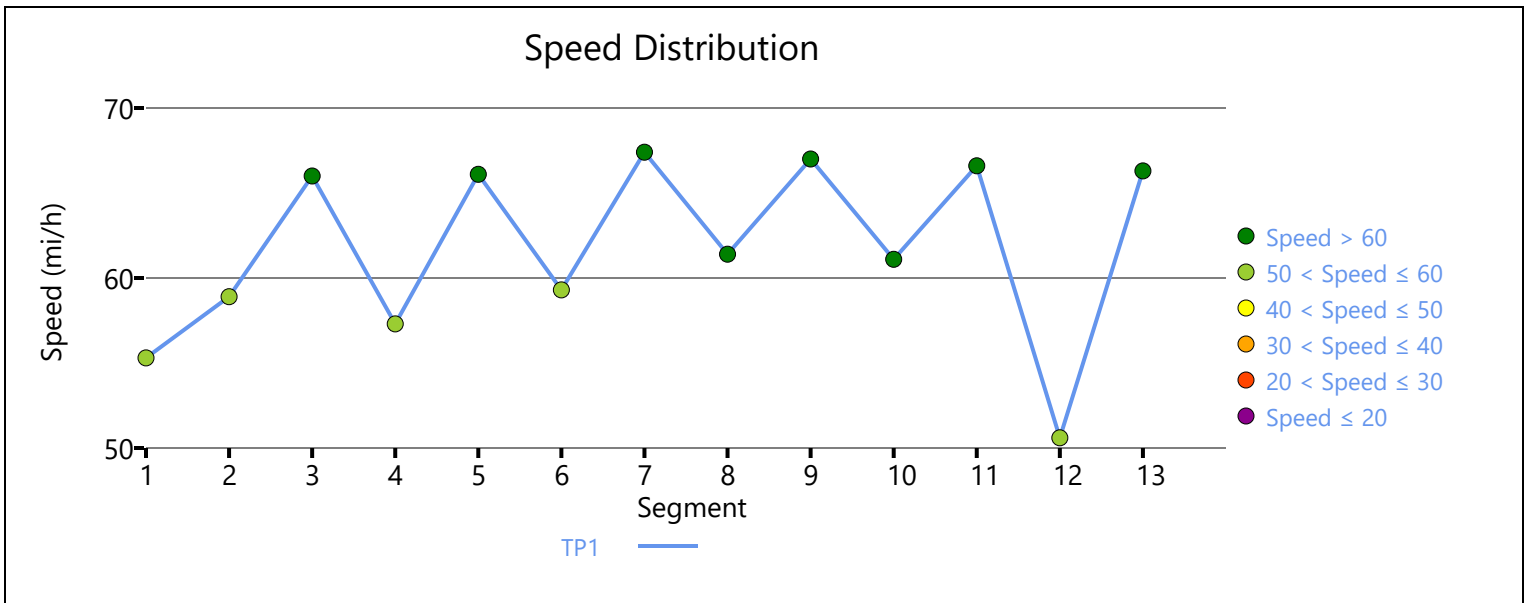
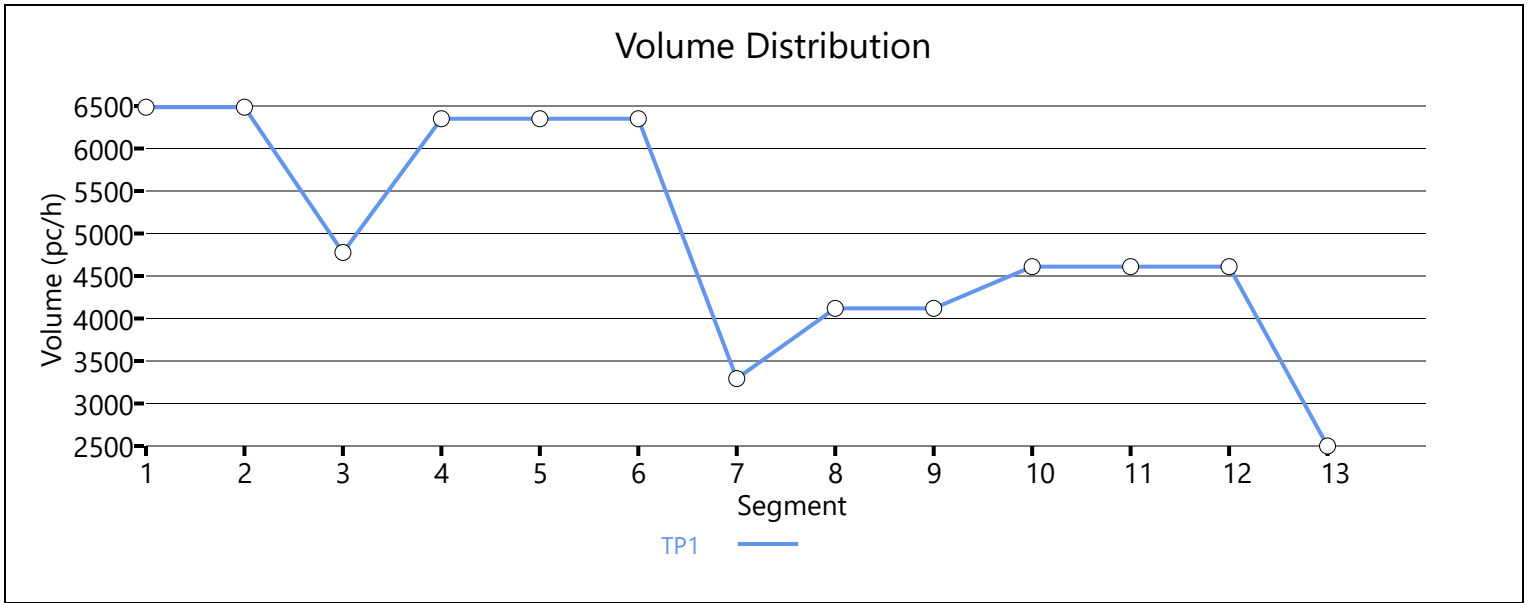
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		6486		6917		0.94		55.3		39.1		E

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6486	1709	6824	1936	0.95	0.88	58.9	54.3	36.7	33.4	D

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4777		6917		0.66		66.0		24.1		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	6350	1573	6824	1936	0.93	0.81	57.3	55.0	36.9	29.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		6350		9223		0.77		66.1		24.0		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.820	6350	3057	9099	4066	0.70	0.75	59.3	52.8	26.8	24.4	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		3293		6917		0.46		67.4		16.1		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.980	4119	826	6824	1936	0.60	0.43	61.4	59.7	22.4	21.4	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		4119		6917		0.58		67.0		20.3		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.943	4610	491	6824	2130	0.68	0.23	61.1	59.6	25.2	24.4	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.952		4610		6917		0.65		66.6		23.1		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.962	0.962	4610	2110	6824	1936	0.68	1.09	50.6	53.4	45.0	32.2	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS		
1	0.94	0.962	2500			6917		0.34	66.3		12.2		B		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	62.5		26.1			22.3		5.50			F				
Facility Overall Results															
Space Mean Speed, mi/h				62.5				Density, veh/mi/ln				22.3			
Average Travel Time, min				5.50				Density, pc/mi/ln				26.1			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



2050 Alternative 5 PM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 5 Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	2
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	2
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	2
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	2
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	13227	3
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	3
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	2
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	2
9	Basic	Basic	EB - Btw Long Point On Ramps	625	2
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	2
11	Basic	Basic	EB - Btw Long Point and US 17	1816	2
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	2
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	2

Facility Segment Data

Segment 1: Basic

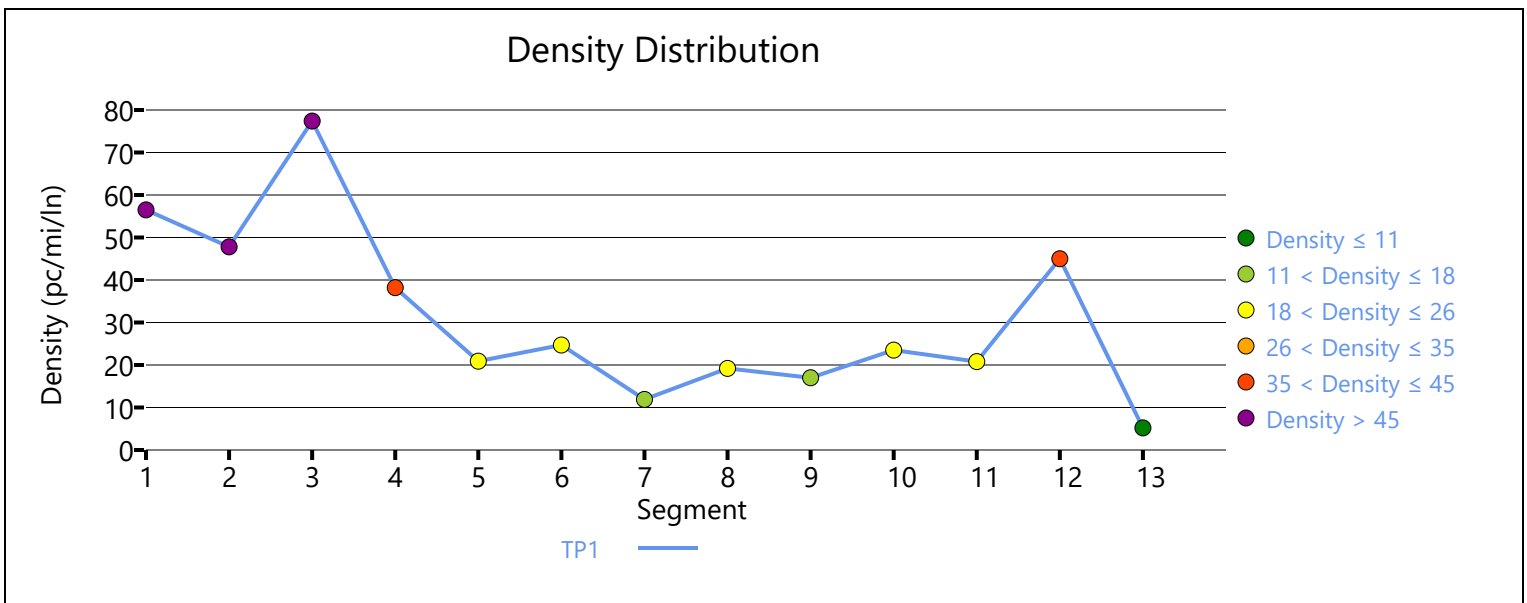
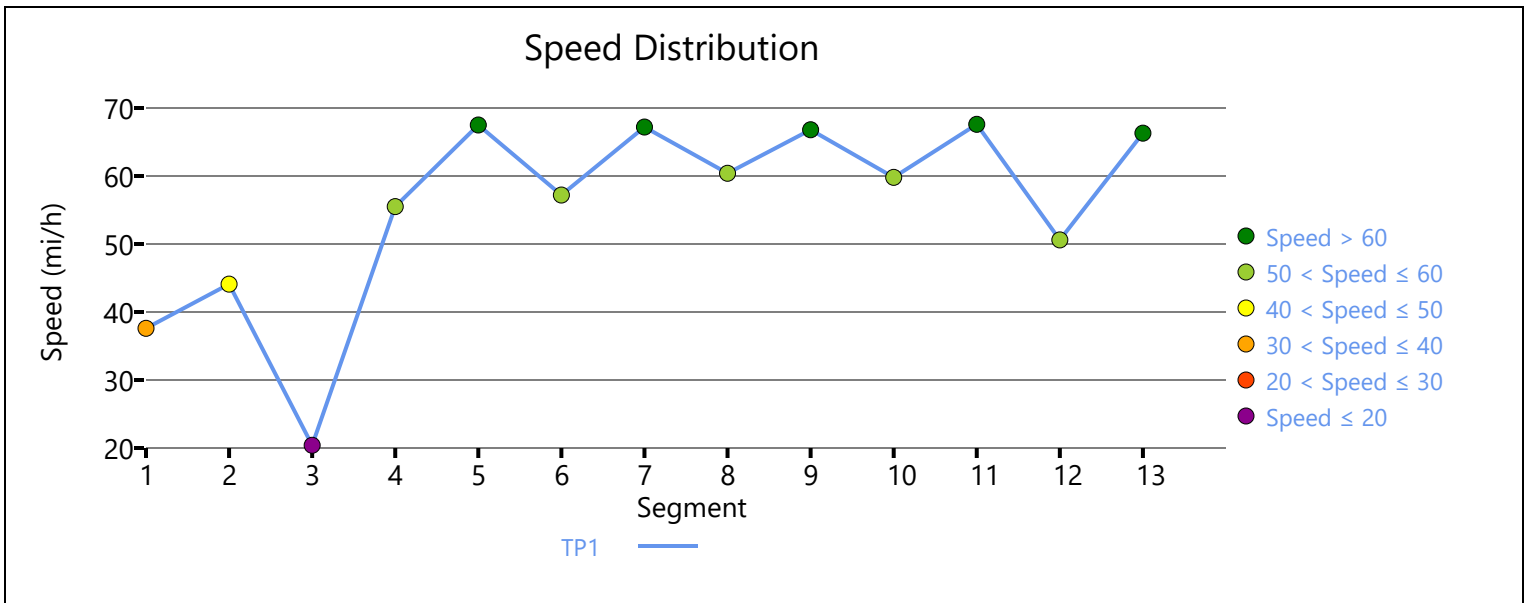
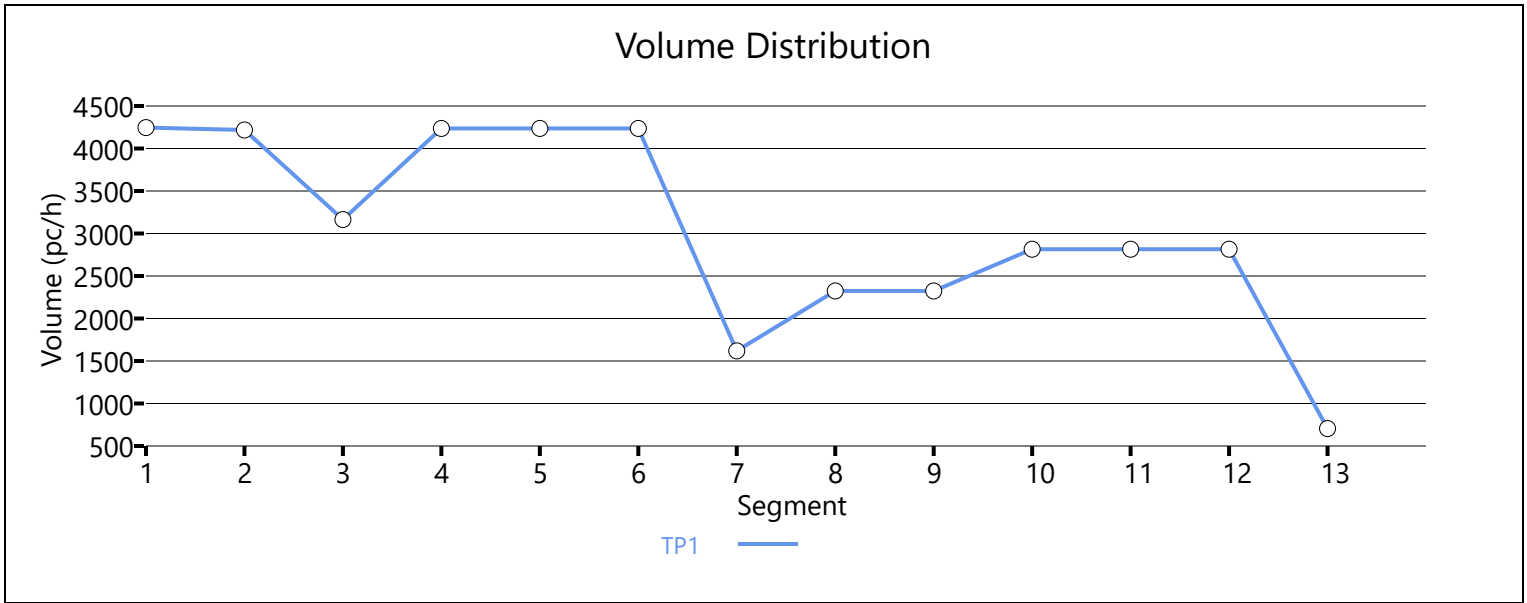
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4246		4612		1.21		37.6		56.5		F

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	4218	986	4550	1936	1.23	0.51	44.1	56.0	47.8	45.5	F

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3164		4612		1.00		20.4		77.4		F
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.962	4236	1936	4550	1936	0.93	1.08	55.5	55.5	38.2	29.1	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4236		6917		0.96		67.5		20.9		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.976	4236	2617	6824	4066	0.62	0.64	57.2	53.8	24.7	19.5	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		1619		4612		0.85		67.2		11.9		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.980	2324	705	4550	1936	0.51	0.36	60.4	60.4	19.2	17.6	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2324		4612		1.01		66.8		17.0		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.943	2815	491	4550	2130	0.62	0.23	59.8	59.8	23.5	23.5	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2815		4612		1.12		67.6		20.8		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.980	0.962	2815	2110	4550	1936	0.62	1.09	50.6	53.4	45.0	26.5	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)			LOS		
1	0.94	0.980	705			4612		0.67	66.3	5.2			A		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	56.1		26.3			25.4		6.10			F				
Facility Overall Results															
Space Mean Speed, mi/h				56.1				Density, veh/mi/ln				25.4			
Average Travel Time, min				6.10				Density, pc/mi/ln				26.3			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary segment 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 3				Queue extends past the beginning of the facility on analysis period 1. Consider expanding the length of the facility to account for these vehicles performance and affect on upstream segments.											
WARNING 4				Merge capacity is less than merge demand for analysis period 1 on segment 4.											
WARNING 5				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



2050 Alternative 5 PM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 Alternative 5 8-Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	5.74		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	EB - Btw Clements Ferry and Seven Farms	1973	3
2	Diverge	Diverge	EB Diverge - Seven Farms Off Ramp	1500	3
3	Basic	Basic	EB - Btw Seven Farms Off and On Ramps	980	3
4	Merge	Merge	EB Merge - Seven Farms On Ramp	1500	3
5	Basic	Basic	EB - Between Seven Farms and Truck Lane	13227	4
6	Diverge	Diverge	EB Diverge - Long Point Off Ramp	1500	4
7	Basic	Basic	EB - Btw Long Point Off and On Ramp	1420	3
8	Merge	Merge	EB Merge - Long Point on Ramp (Cloverleaf)	1500	3
9	Basic	Basic	EB - Btw Long Point On Ramps	625	3
10	Merge	Merge	EB Merge - Long Point On Ramp	1500	3
11	Basic	Basic	EB - Btw Long Point and US 17	1816	3
12	Diverge	Diverge	EB Diverge - US 17 Off Ramp	1500	3
13	Basic	Basic	EB - Btw US 17 Off Ramps	1273	3

Facility Segment Data

Segment 1: Basic

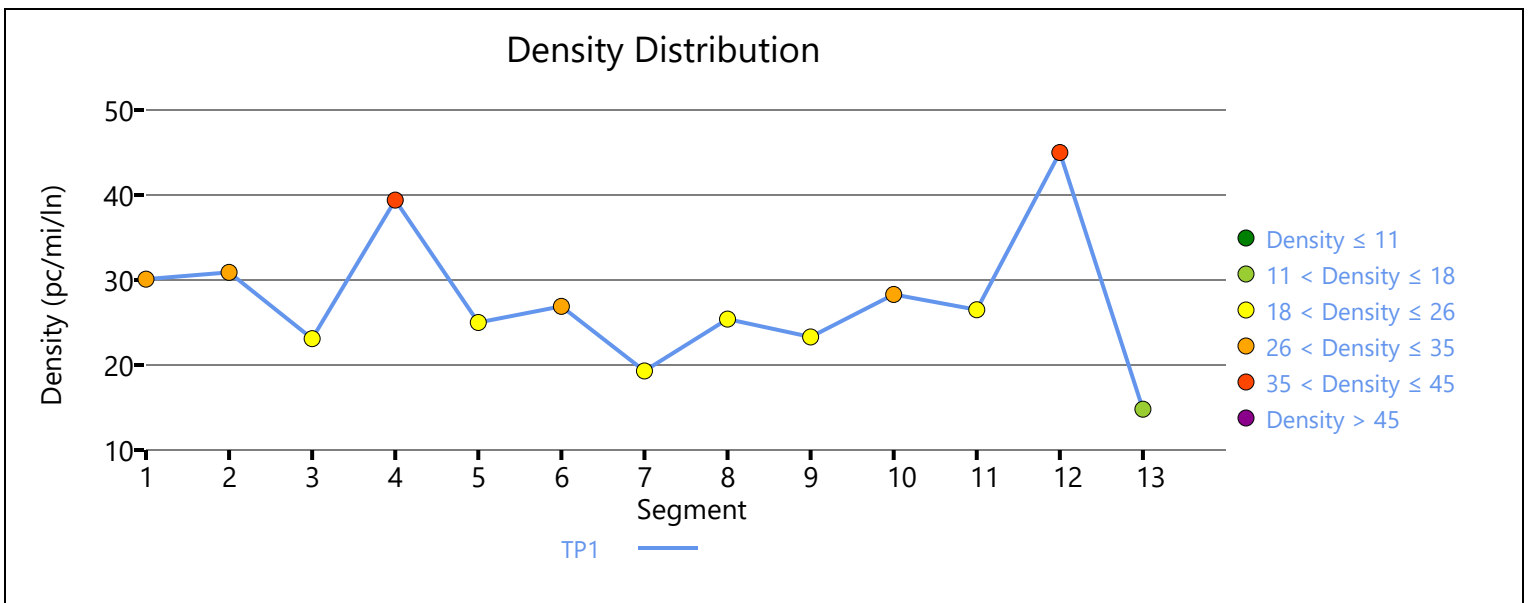
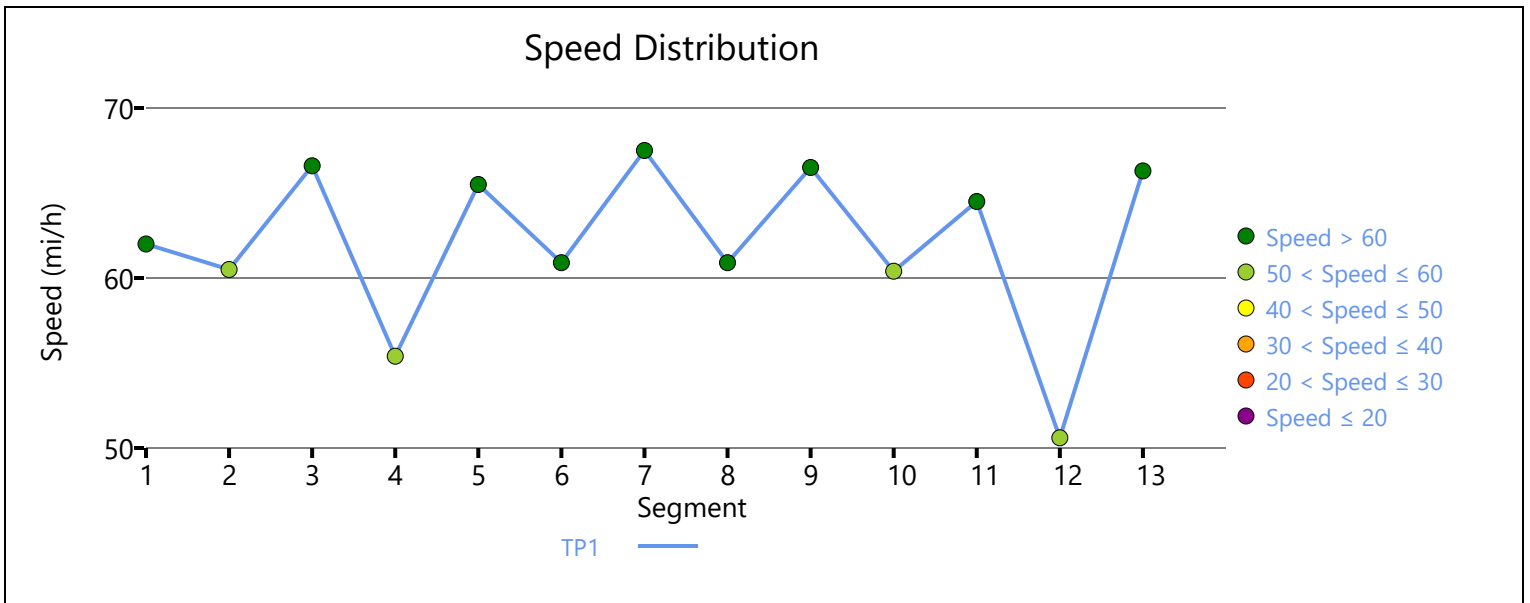
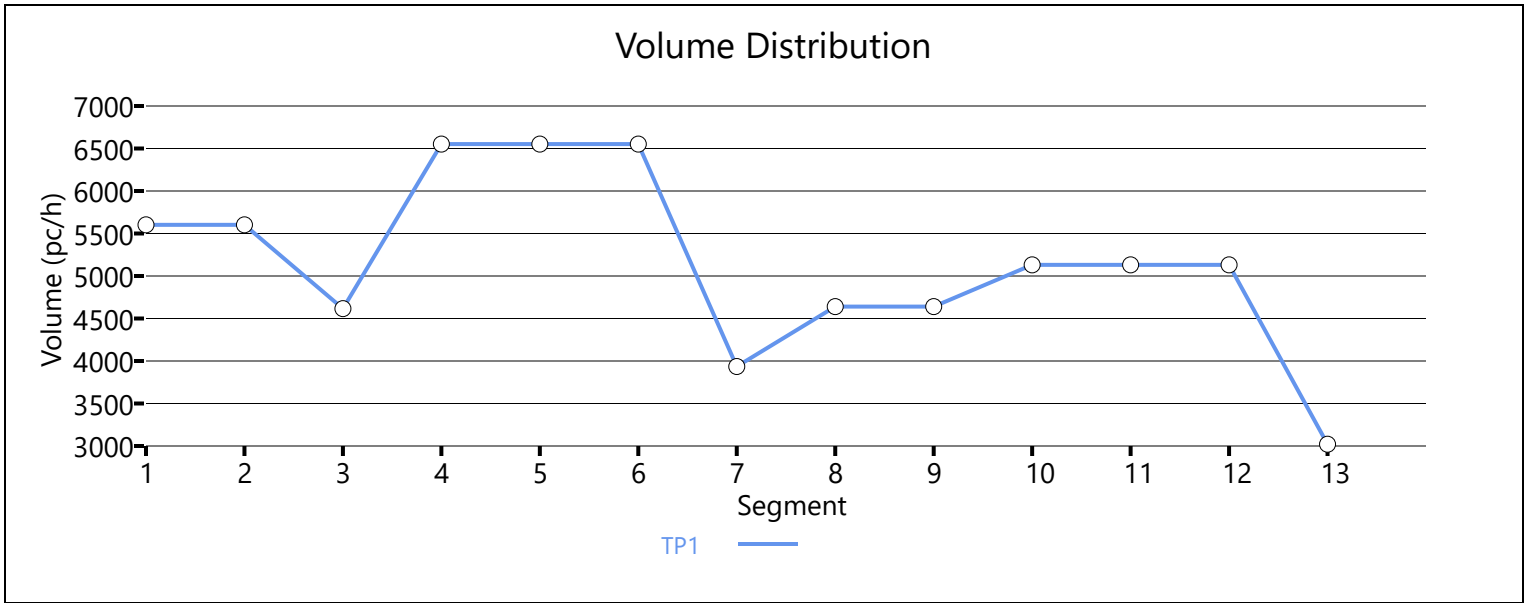
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		5602		6917		0.81		62.0		30.1		D

Segment 2: Diverge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.980	5602	986	6824	1936	0.82	0.51	60.5	56.0	30.9	28.7	D

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4616		6917		0.66		66.6		23.1		C
Segment 4: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.962	6552	1936	6824	1936	0.96	1.08	55.4	52.7	39.4	31.7	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		6552		9223		0.72		65.5		25.0		C
Segment 6: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.976	6552	2617	9099	4066	0.72	0.64	60.9	53.8	26.9	22.1	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3935		6917		0.57		67.5		19.3		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.980	4640	705	6824	1936	0.68	0.36	60.9	59.2	25.4	23.5	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4640		6917		0.68		66.5		23.3		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.943	5131	491	6824	2130	0.75	0.23	60.4	58.9	28.3	26.9	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		5131		6917		0.74		64.5		26.5		D
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.980	0.962	5131	2110	6824	1936	0.75	1.09	50.6	53.4	45.0	34.3	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)			LOS		
1	0.94	0.980	3021			6917		0.45	66.3	14.8			B		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	62.9		26.7		25.8		5.50		F						
Facility Overall Results															
Space Mean Speed, mi/h				62.9				Density, veh/mi/ln				25.8			
Average Travel Time, min				5.50				Density, pc/mi/ln				26.7			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Merge capacity is less than merge demand for analysis period 1 on segment 4.											
WARNING 3				Diverge capacity is less than diverge demand for analysis period 1 on segment 12. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results.											
Comments															



I-526

Westbound

2022 Existing AM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2022 WB Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	2
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	2
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	2
12	Merge	Merge	WB Merge - Truck Lane End	1500	2
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	2
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
15	Basic	Basic	WB Btw Off and On Ramps	920	2
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

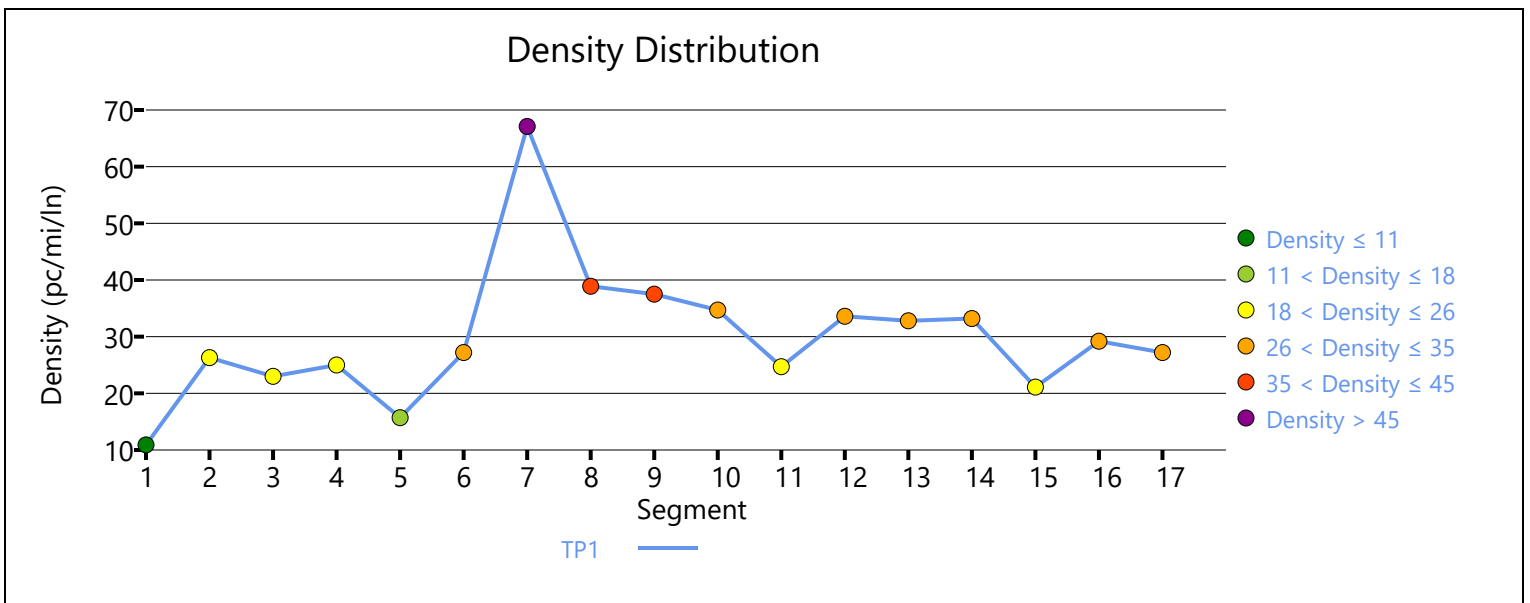
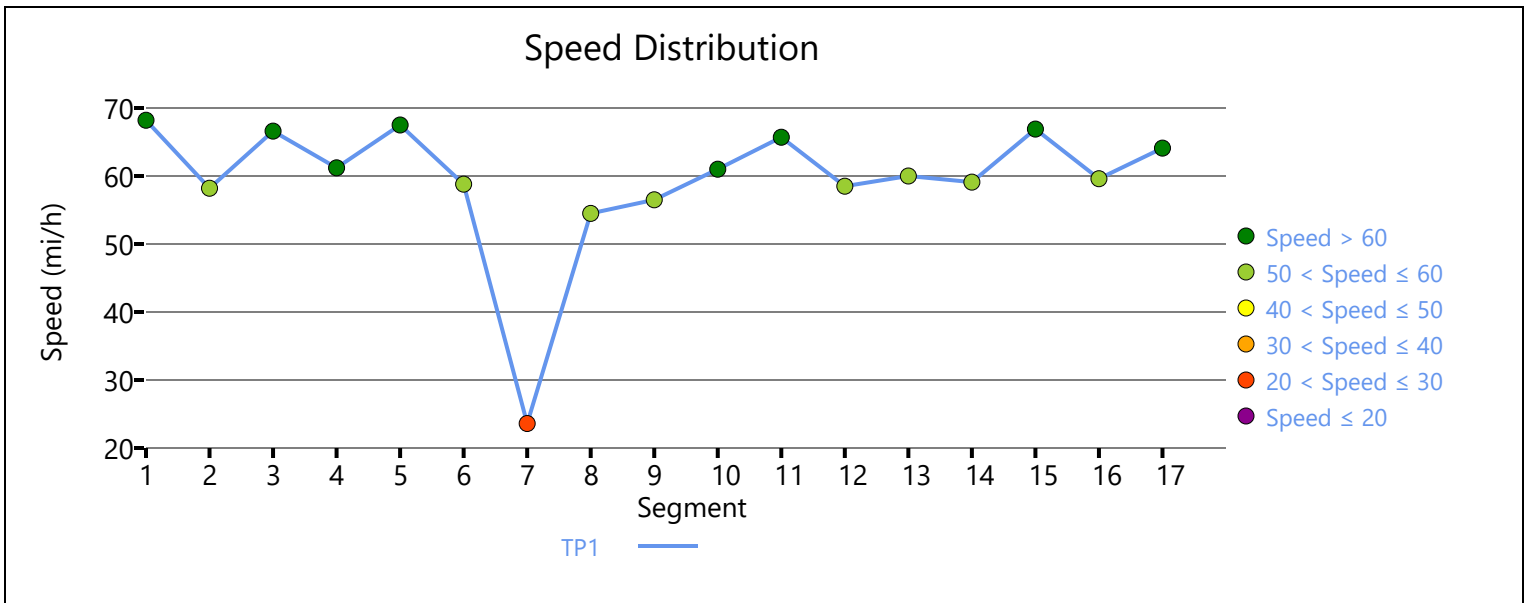
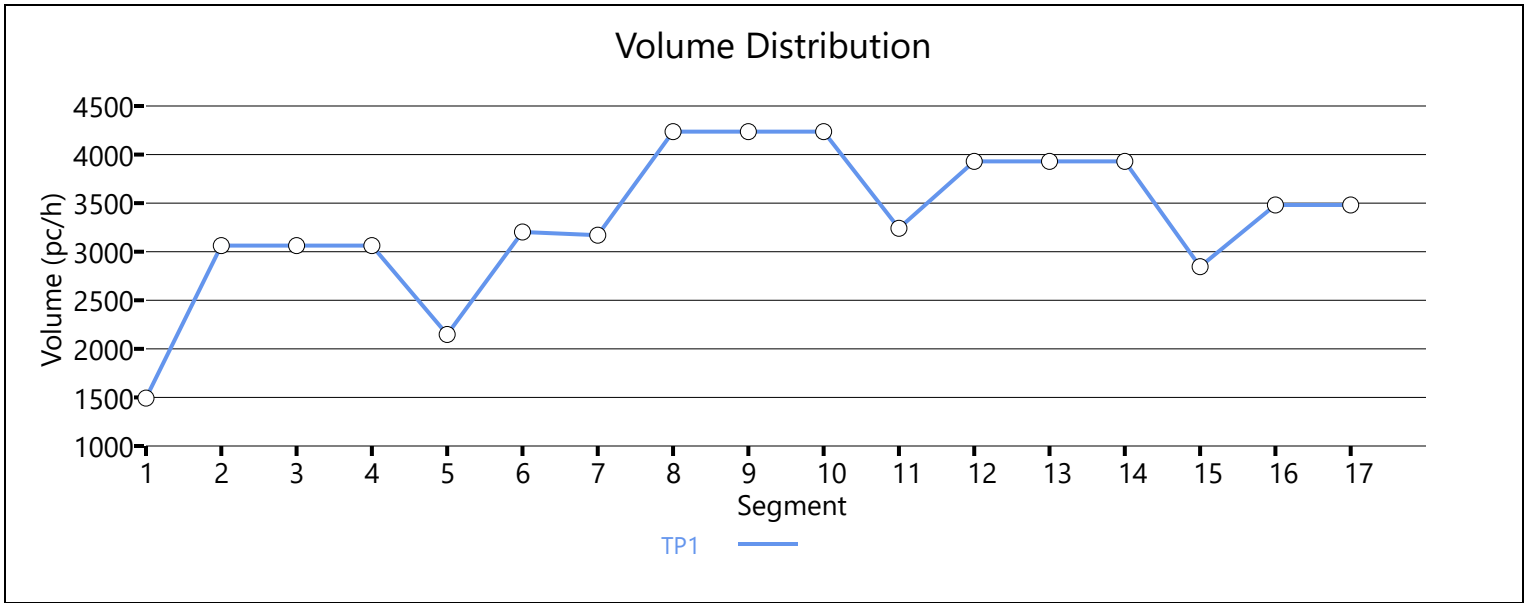
Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	1493	4612	0.32	68.2	10.9	A

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.971	3063	1570	4550	1839	0.67	0.85	58.2	58.2	26.3	26.2	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3063		4612		0.67		66.6		23.0		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.952	3063	915	4550	2130	0.67	0.43	61.2	61.2	25.0	28.3	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2148		4612		0.47		67.5		15.7		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.495	3203	1064	4550	1839	0.70	0.58	58.8	58.8	27.2	23.8	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3170		4612		0.65		23.6		67.1		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.877	0.980	4236	1565	4550	1936	0.93	0.81	54.5	54.5	38.9	31.5	D
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4236		4612		1.03		56.5		37.5		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.781	0.385	4236	995	4550	2130	0.93	0.47	61.0	61.0	34.7	28.1	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.909		3241		4612		0.90		65.7		24.7		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.556	3930	689	4550	2130	0.86	0.32	58.5	58.5	33.6	27.1	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		3930		4612		1.03		60.0		32.8		F
Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	3930	1084	4550	2033	0.86	0.53	59.1	59.1	33.2	30.9	F
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		2846		4612		0.77		66.9		21.1		C
Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3481	635	4550	2033	0.77	0.31	59.6	59.6	29.2	23.8	C
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		3481		4612		0.92		64.1		27.2		D
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	59.5		28.8		25.8		6.20		F						
Facility Overall Results															
Space Mean Speed, mi/h					59.5			Density, veh/mi/ln			25.8				
Average Travel Time, min					6.20			Density, pc/mi/ln			28.8				
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
Comments															



2022 Existing PM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2022 WB Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	2
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	2
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	2
12	Merge	Merge	WB Merge - Truck Lane End	1500	2
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	2
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
15	Basic	Basic	WB Btw Off and On Ramps	920	2
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

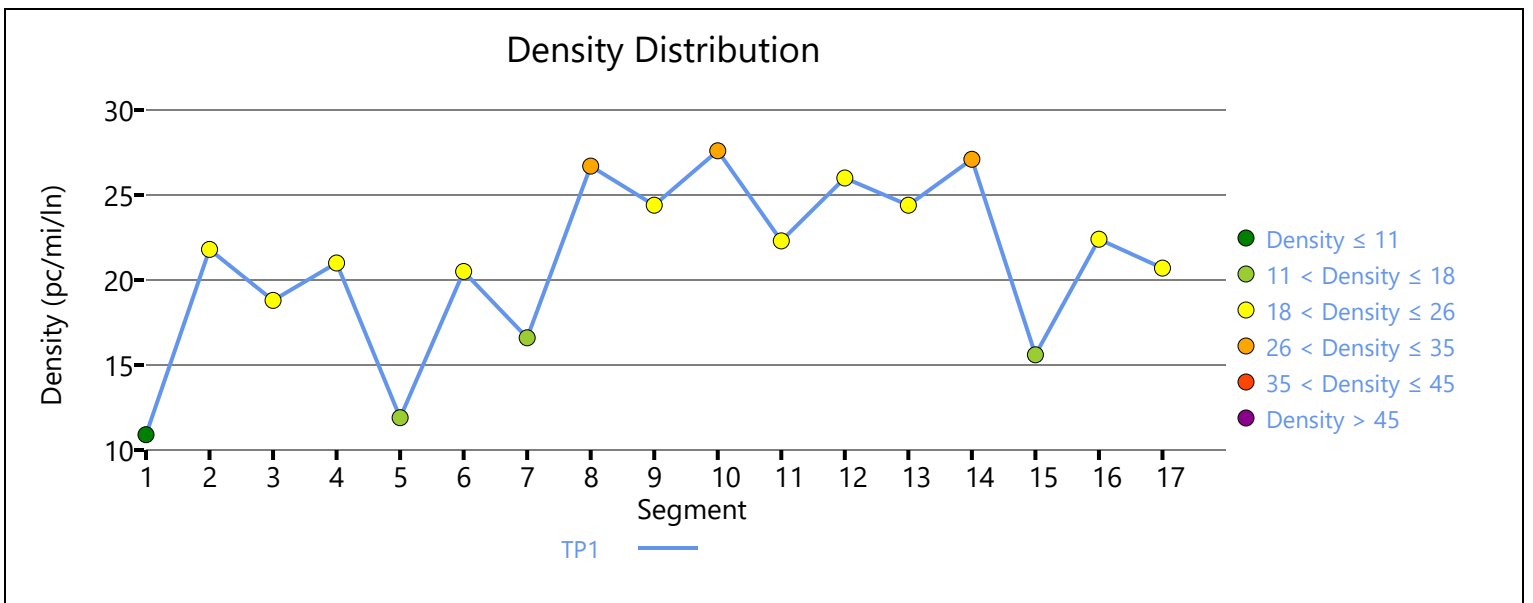
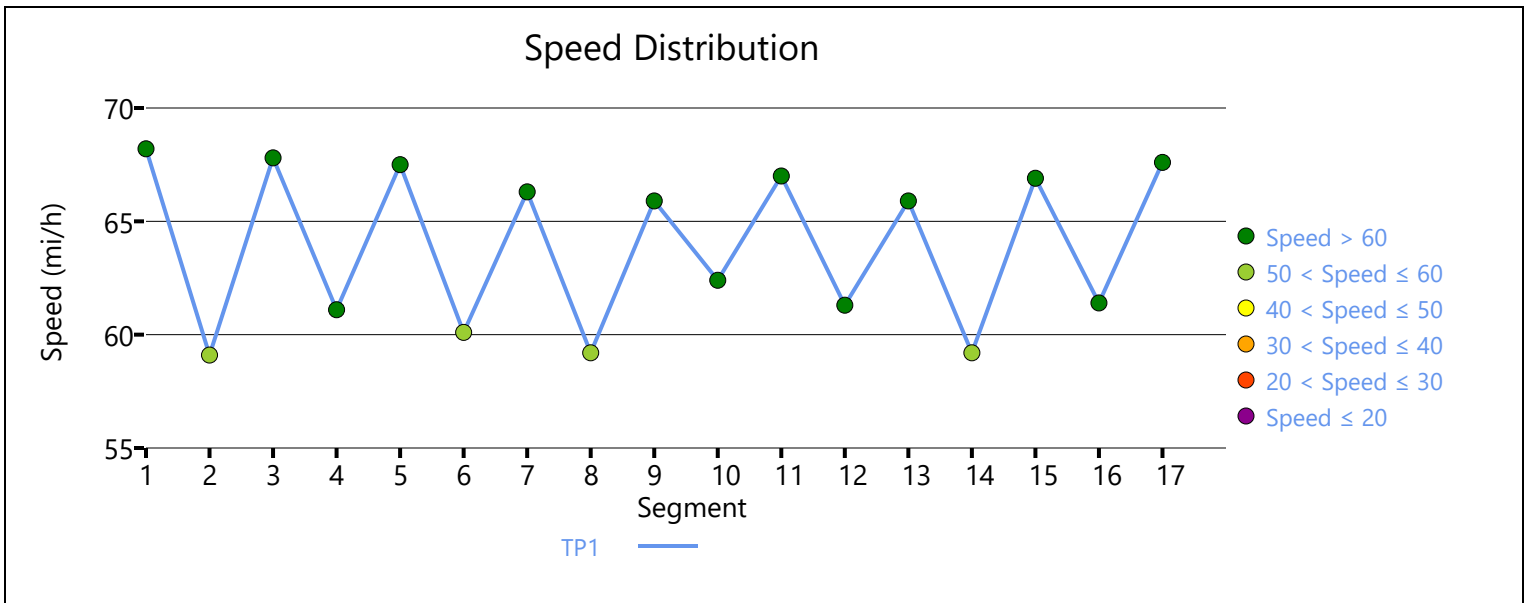
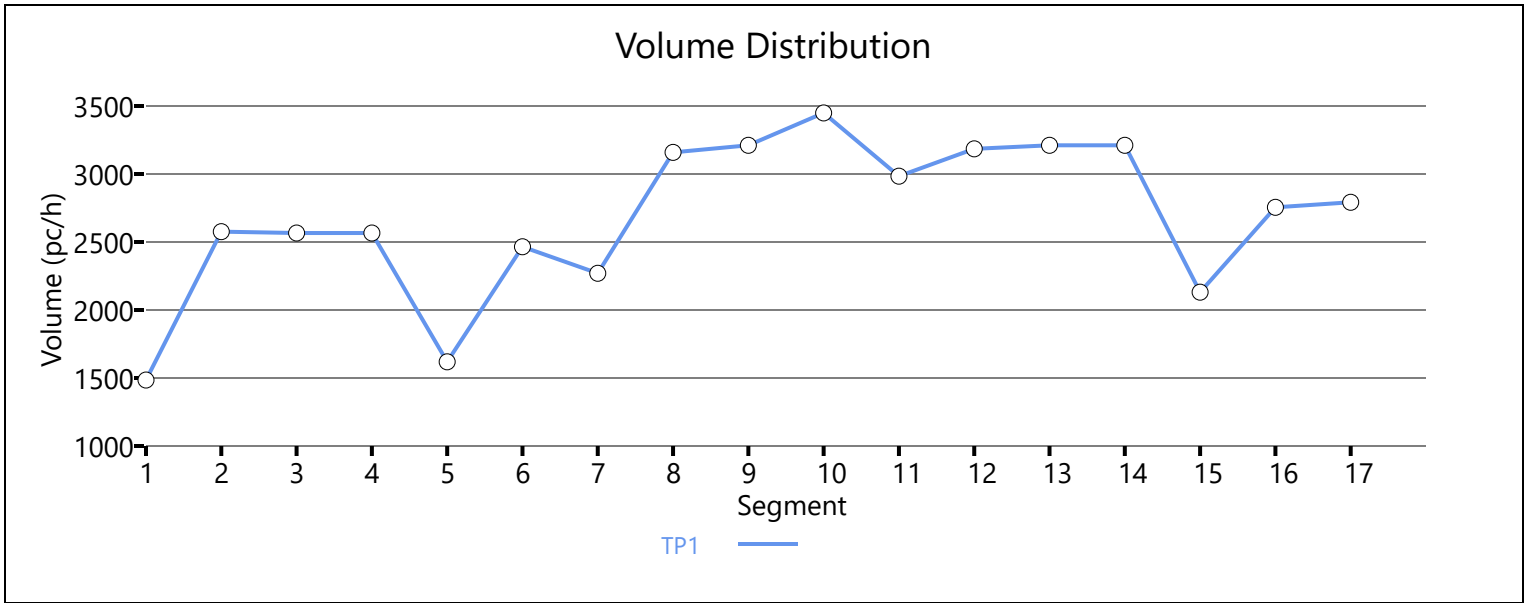
Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	1485	4612	0.32	68.2	10.9	A

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.971	2576	1091	4550	1839	0.57	0.59	59.1	59.1	21.8	22.6	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2566		4612		0.56		67.8		18.8		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.980	2566	948	4550	2130	0.56	0.45	61.1	61.1	21.0	24.0	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		1619		4612		0.35		67.5		11.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.610	2465	846	4550	1839	0.54	0.46	60.1	60.1	20.5	18.1	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		2270		4612		0.49		66.3		16.6		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.926	0.980	3159	889	4550	1936	0.69	0.46	59.2	59.2	26.7	23.4	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3211		4612		0.70		65.9		24.4		C
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.862	0.385	3449	414	4550	2130	0.76	0.19	62.4	62.4	27.6	21.3	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.943		2984		4612		0.65		67.0		22.3		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.971	0.556	3185	287	4550	2130	0.70	0.13	61.3	61.3	26.0	21.5	C
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		3211		4612		0.70		65.9		24.4		C
Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	3211	1040	4550	2033	0.71	0.51	59.2	59.2	27.1	24.7	C
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		2131		4612		0.46		66.9		15.6		B
Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	2755	624	4550	2033	0.61	0.31	61.4	61.4	22.4	18.1	B
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		2792		4612		0.61		67.6		20.7		C
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	64.2		21.5		20.2		5.80		C						
Facility Overall Results															
Space Mean Speed, mi/h					64.2			Density, veh/mi/ln			20.2				
Average Travel Time, min					5.80			Density, pc/mi/ln			21.5				
Messages															
Comments															



2050 No Build AM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	2
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	2
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	2
12	Merge	Merge	WB Merge - Truck Lane End	1500	2
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	2
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
15	Basic	Basic	WB Btw Off and On Ramps	920	2
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	2310	4612	0.50	68.2	16.9	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4058	1839	4550	1839	0.89	1.25	54.5	54.5	37.2	33.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3910		4612		0.93		38.5		50.8		F
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.952	3816	1428	4550	2130	0.95	0.67	33.9	59.9	56.3	39.0	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2172		4612		0.63		11.1		98.3		F
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.495	3190	1839	4550	1839	1.04	1.28	18.5	49.8	86.1	35.3	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3164		4612		0.91		17.6		89.9		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.877	0.980	4236	1936	4550	1936	0.93	1.19	54.5	54.5	38.9	31.3	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		4612		1.58		56.5		37.5		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.781	0.385	4236	1630	4550	2130	0.93	0.77	59.5	59.5	35.6	28.1	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.909		2606		4612		1.21		67.6		19.2		F

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.556	3735	1129	4550	2130	0.82	0.53	59.4	59.4	31.4	25.4	F

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		3735		4612		1.41		62.0		30.1		F

Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	3735	1691	4550	2033	0.82	0.83	57.7	57.7	32.4	29.2	F

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		2044		4612		1.01		66.7		15.0		F

Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3034	990	4550	2033	0.67	0.49	60.8	60.8	25.0	20.1	F

Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		3034		4612		1.25		66.8		22.7		F

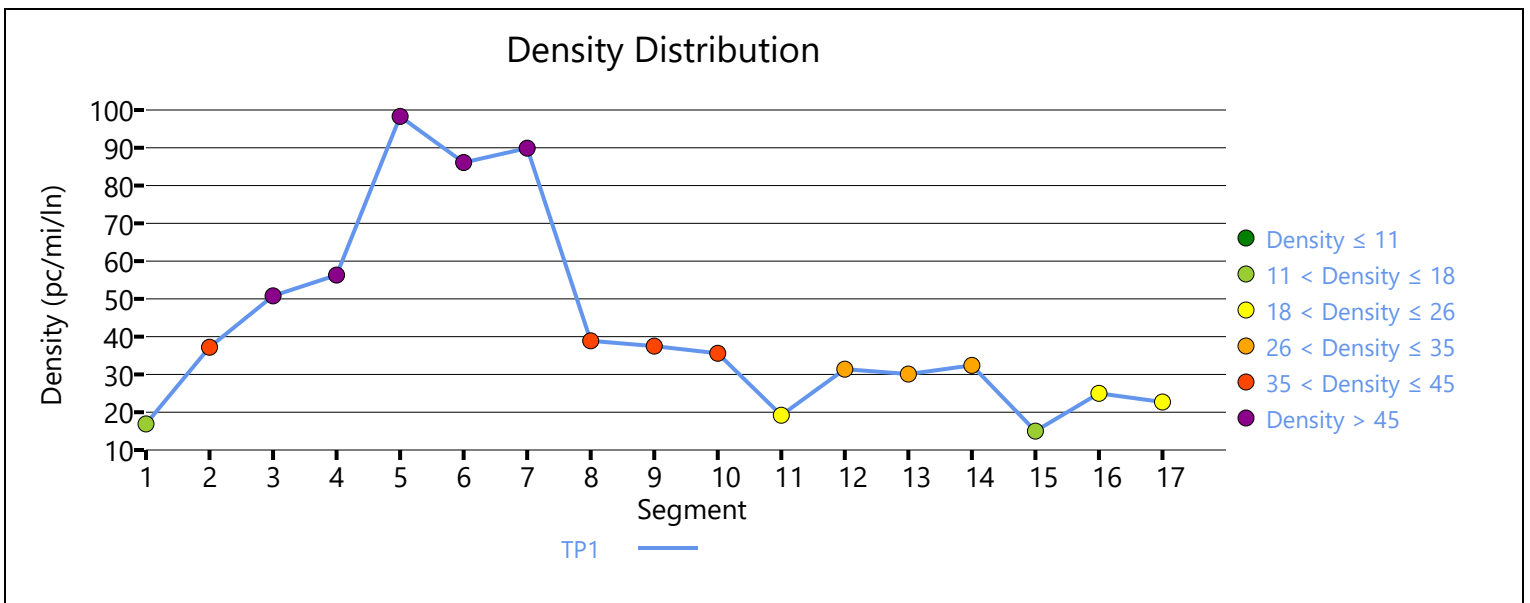
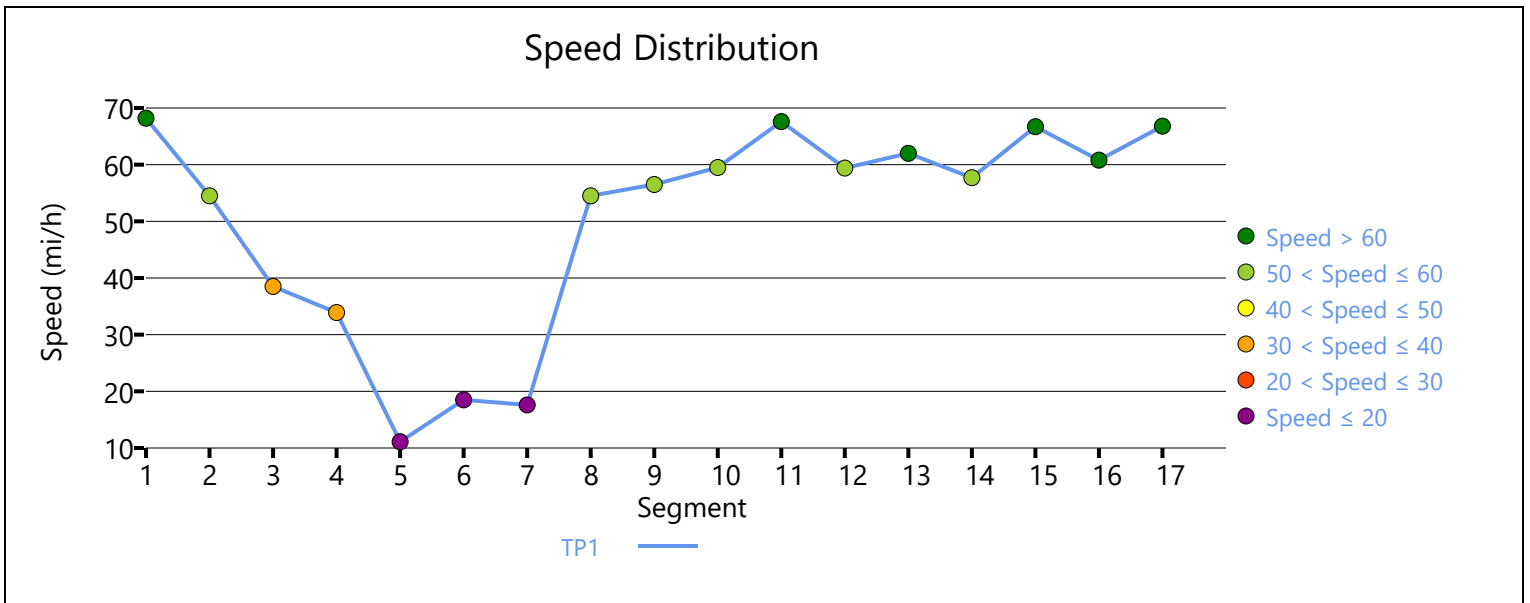
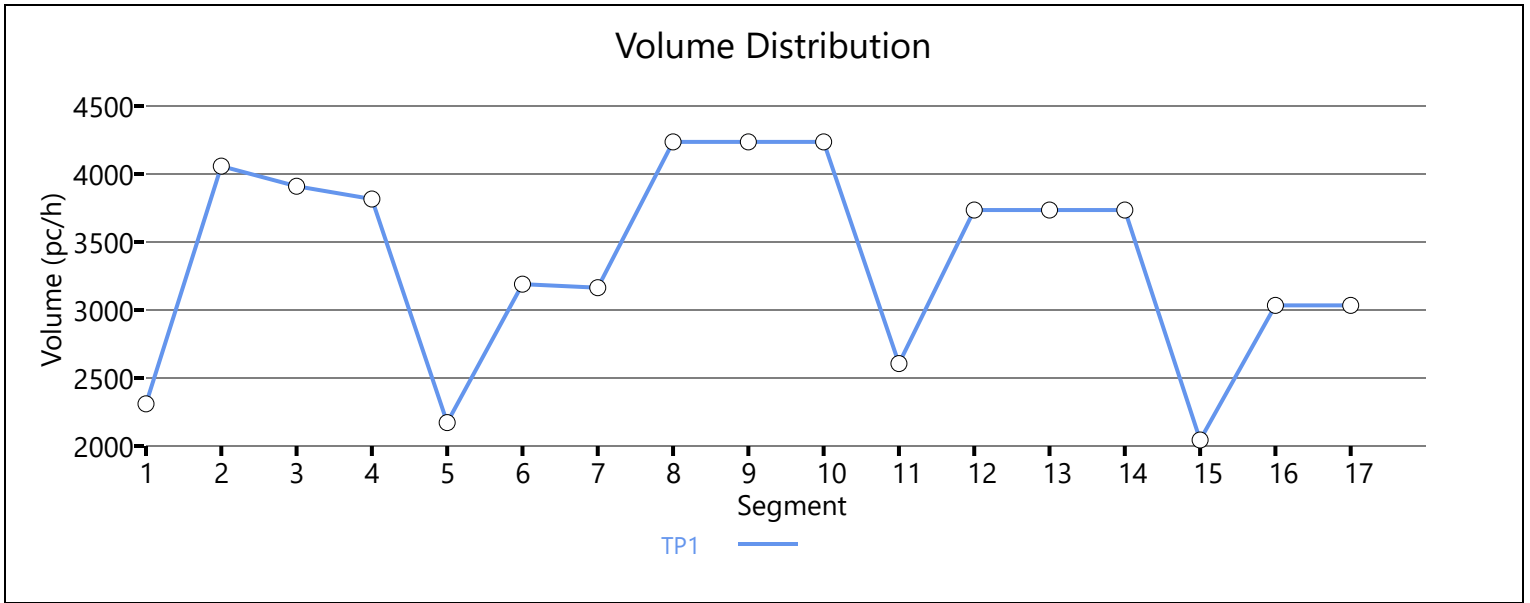
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	44.5		38.4		34.5		8.30		F						

Facility Overall Results															
Space Mean Speed, mi/h					44.5			Density, veh/mi/ln			34.5				
Average Travel Time, min					8.30			Density, pc/mi/ln			38.4				

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 17. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
WARNING 4					Merge capacity is less than merge demand for analysis period 1 on segment 6.										
WARNING 5					Merge capacity is less than merge demand for analysis period 1 on segment 8.										

Comments															
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2050 No Build AM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB 6 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	3
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	2
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	2
12	Merge	Merge	WB Merge - Truck Lane End	1500	2
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	2
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
15	Basic	Basic	WB Btw Off and On Ramps	920	2
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	2310	4612	0.50	68.2	16.9	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4058	1839	4550	1839	0.89	1.25	54.5	54.5	37.2	33.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3910		4612		0.93		38.5		50.8		F
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.952	3816	1428	4550	2130	0.95	0.67	33.9	59.9	56.3	39.0	F
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2172		4612		0.63		11.1		98.3		F
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.495	3190	1839	4550	1839	1.04	1.28	18.5	49.8	86.1	35.3	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3164		4612		0.91		17.6		89.9		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.877	0.980	4236	1936	4550	1936	0.93	1.19	54.5	54.5	38.9	31.3	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.06		67.5		20.9		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.781	0.385	4236	1630	4550	2130	0.93	0.77	59.5	59.5	35.6	28.1	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.909		2606		4612		1.21		67.6		19.2		F

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.556	3735	1129	4550	2130	0.82	0.53	59.4	59.4	31.4	25.4	F

Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.877		3735		4612		1.41		62.0		30.1	

Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	3735	1691	4550	2033	0.82	0.83	57.7	57.7	32.4	29.2	F

Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.877		2044		4612		1.01		66.7		15.0	

Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3034	990	4550	2033	0.67	0.49	60.8	60.8	25.0	20.1	F

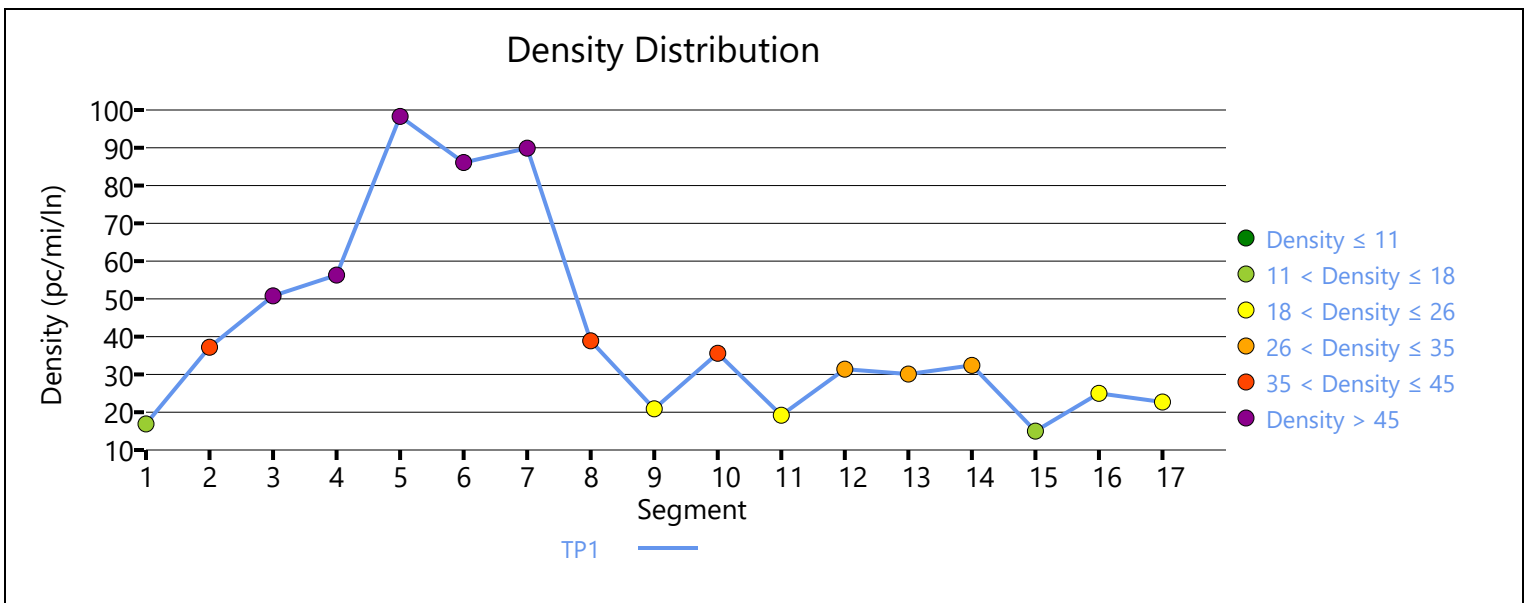
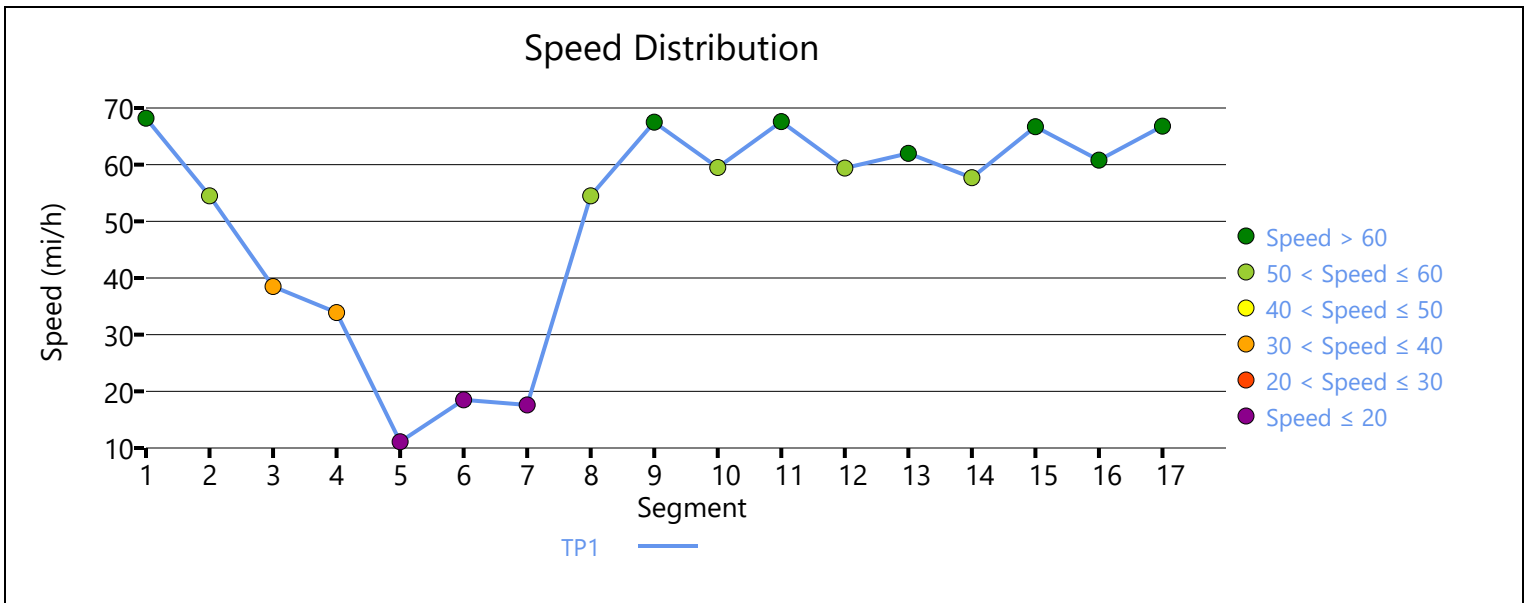
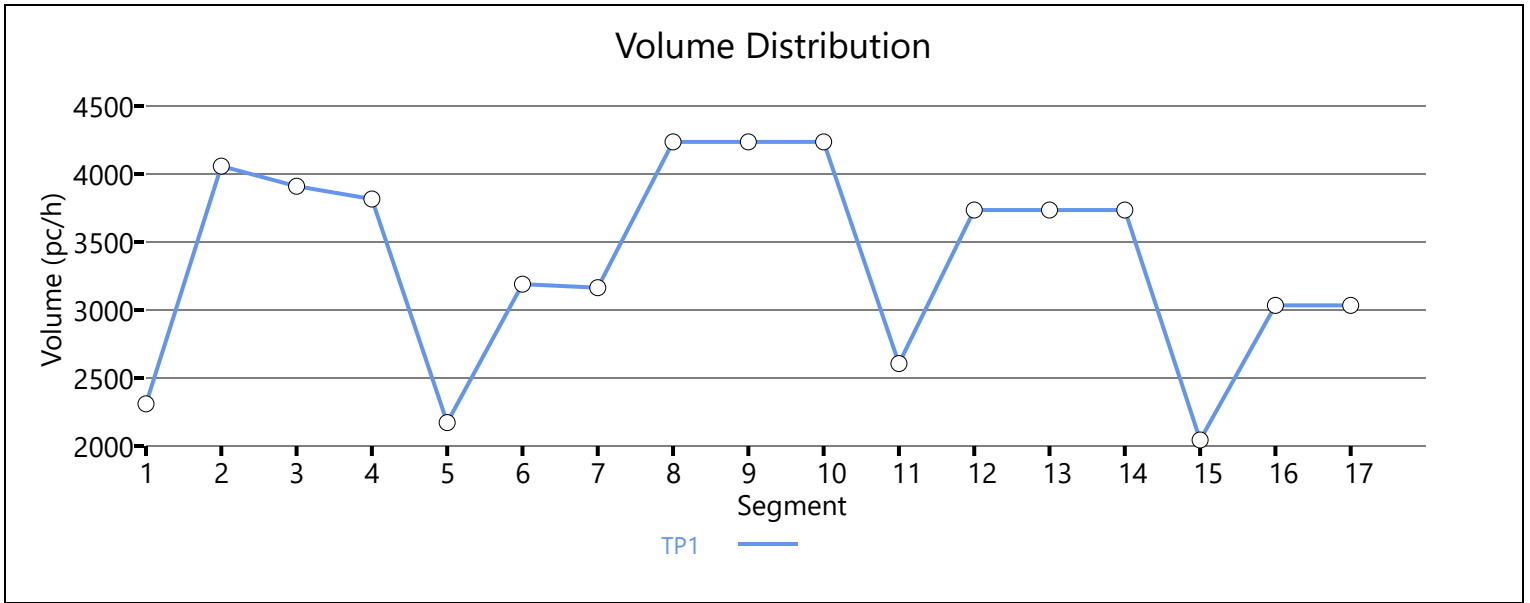
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	1	0.94		0.877		3034		4612		1.25		66.8		22.7	

Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	45.6		34.1		30.8		8.10		F						

Facility Overall Results															
Space Mean Speed, mi/h					45.6			Density, veh/mi/ln			30.8				
Average Travel Time, min					8.10			Density, pc/mi/ln			34.1				

Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 17. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
WARNING 4					Merge capacity is less than merge demand for analysis period 1 on segment 6.										
WARNING 5					Merge capacity is less than merge demand for analysis period 1 on segment 8.										

Comments															



2050 No Build AM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB 8 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	3
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	3
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	3
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	3
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	3
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	3
7	Basic	Basic	WB Btw Long Point On Ramps	320	3
8	Merge	Basic	WB Merge - Long Point On Ramp	1500	4
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	4
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	4
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	4
12	Merge	Merge	WB Merge - Truck Lane End	1500	4
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	4
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	4
15	Basic	Basic	WB Btw Off and On Ramps	920	4
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	4
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	4

Facility Segment Data

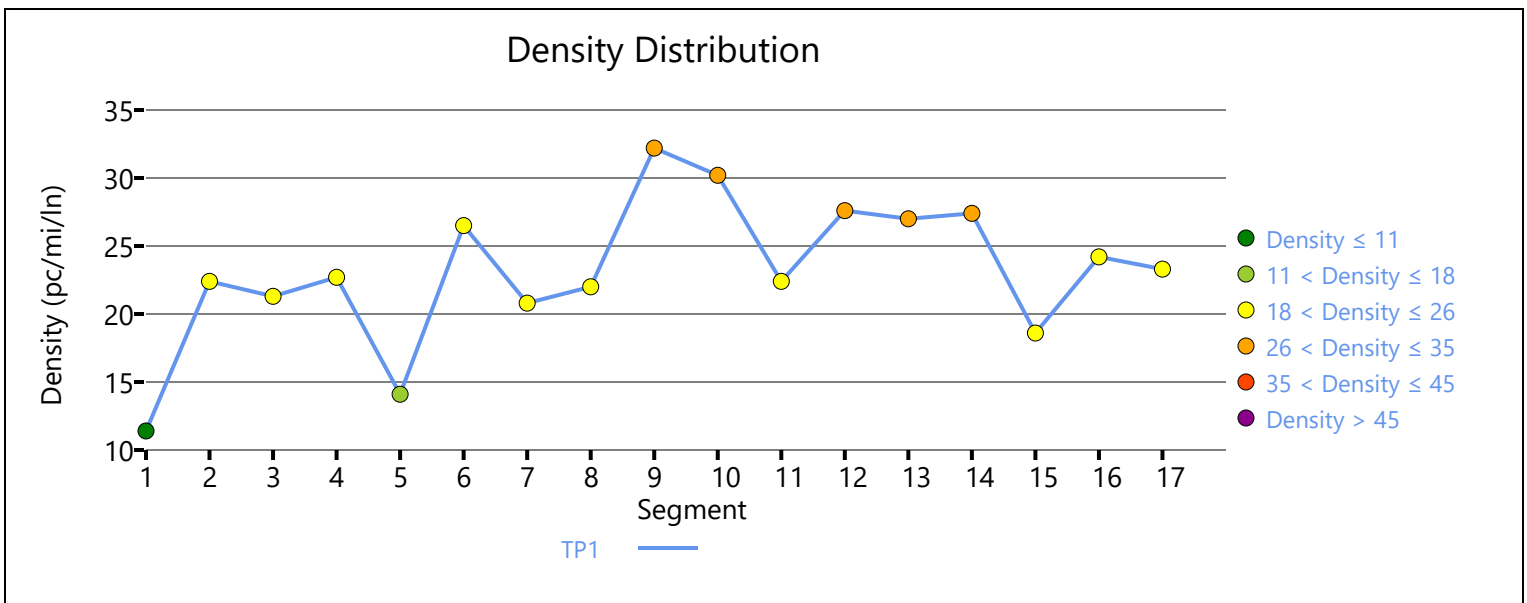
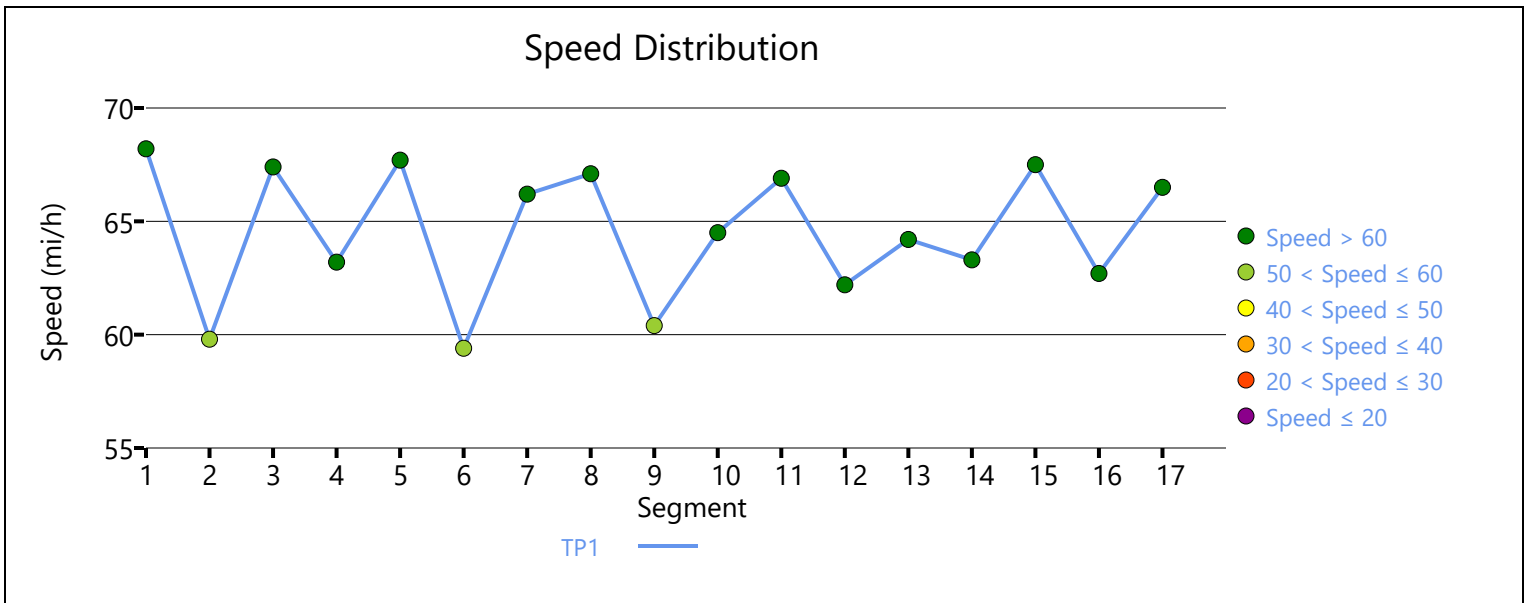
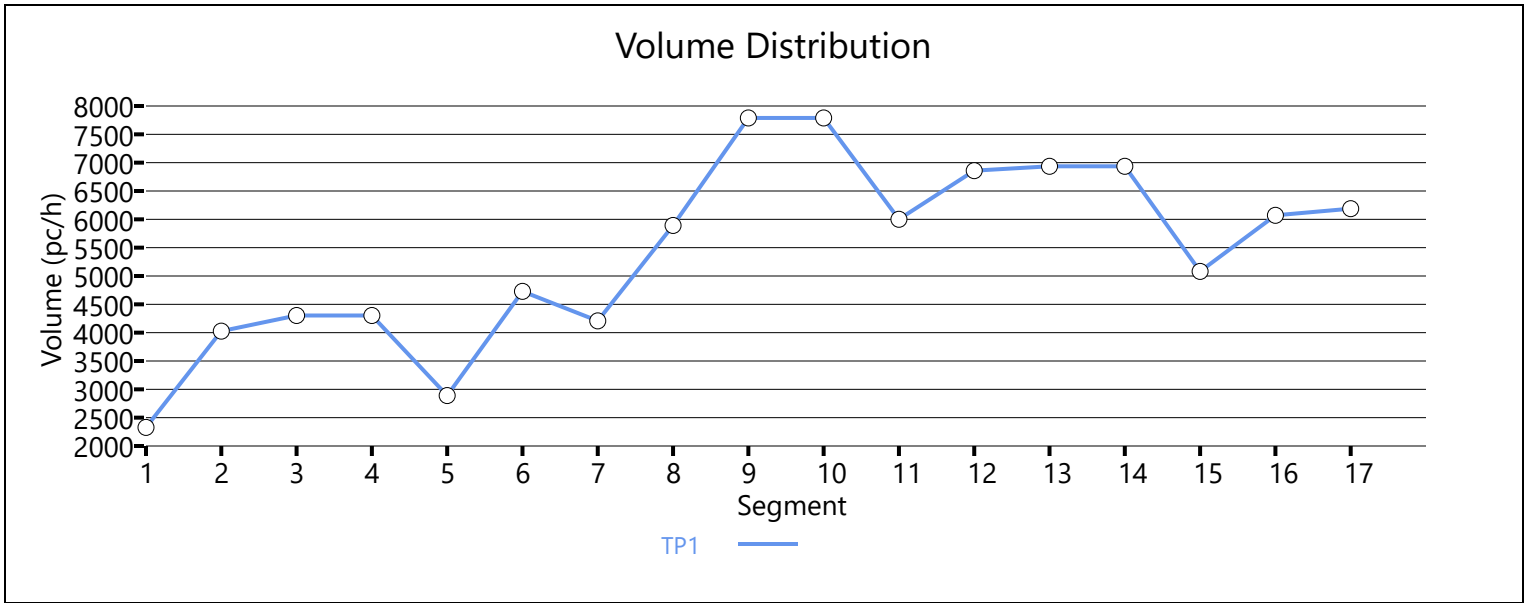
Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	2328	6917	0.34	68.2	11.4	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		67.7		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.962	0.495	4729	1839	6824	1839	0.69	1.28	59.4	57.6	26.5	26.4	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4208		6917		0.61		66.2		20.8		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.877	0.980	5892	1936	9223	1936	0.64	1.00	67.1	67.1	22.0	22.0	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		7789		9223		0.84		60.4		32.2		D
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.781	0.385	7789	1630	9099	2130	0.86	0.77	64.5	59.5	30.2	28.8	D
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.909		6001		9223		0.65		66.9		22.4		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.952	0.556	6859	1129	9099	2130	0.75	0.53	62.2	60.6	27.6	22.9	C
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		6936		9223		0.75		64.2		27.0		D
Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	6936	1691	9099	2033	0.76	0.83	63.3	57.7	27.4	31.3	D
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		5081		9223		0.55		67.5		18.6		C
Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6071	990	9099	2033	0.67	0.49	62.7	60.9	24.2	20.0	B
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		6188		9223		0.67		66.5		23.3		C
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	63.7		24.7		21.5		5.80		C						
Facility Overall Results															
Space Mean Speed, mi/h					63.7			Density, veh/mi/ln			21.5				
Average Travel Time, min					5.80			Density, pc/mi/ln			24.7				
Messages															
WARNING 1					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
WARNING 2					Merge capacity is less than merge demand for analysis period 1 on segment 6.										
Comments															



2050 No Build PM Peak Hour

(4-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Existing Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	2
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	2
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	2
12	Merge	Merge	WB Merge - Truck Lane End	1500	2
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	2
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
15	Basic	Basic	WB Btw Off and On Ramps	920	2
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

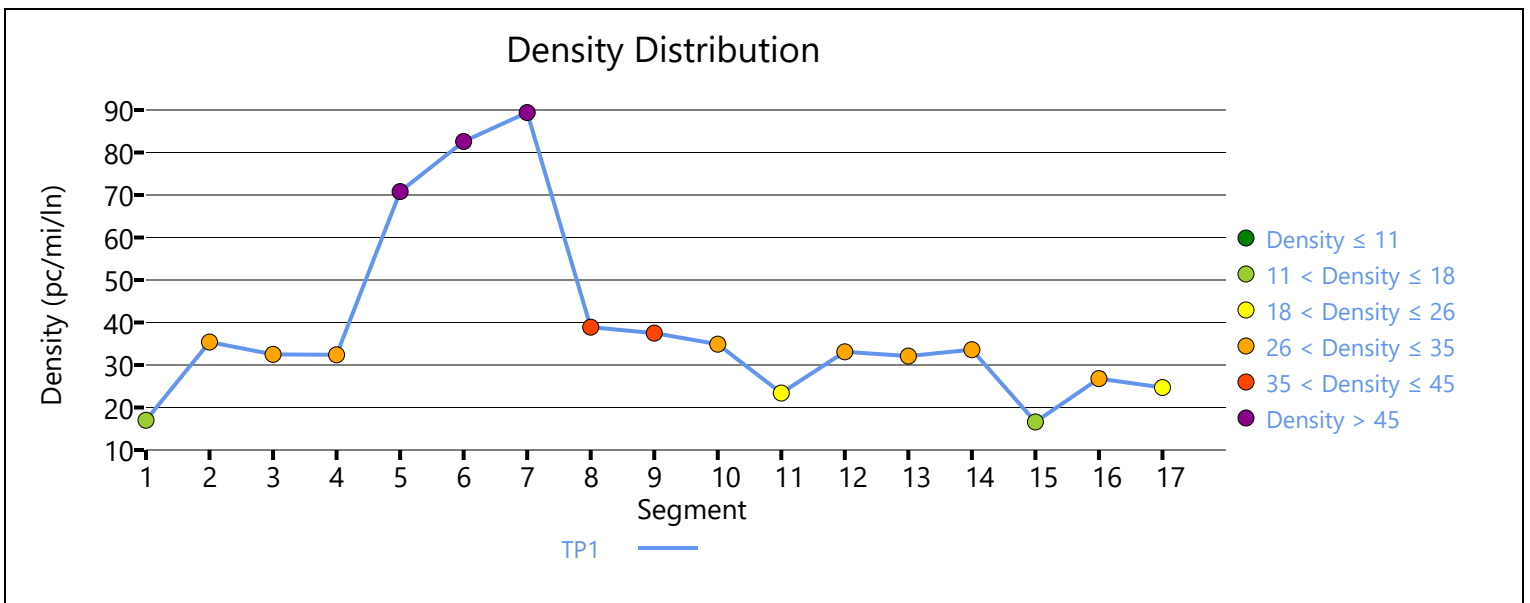
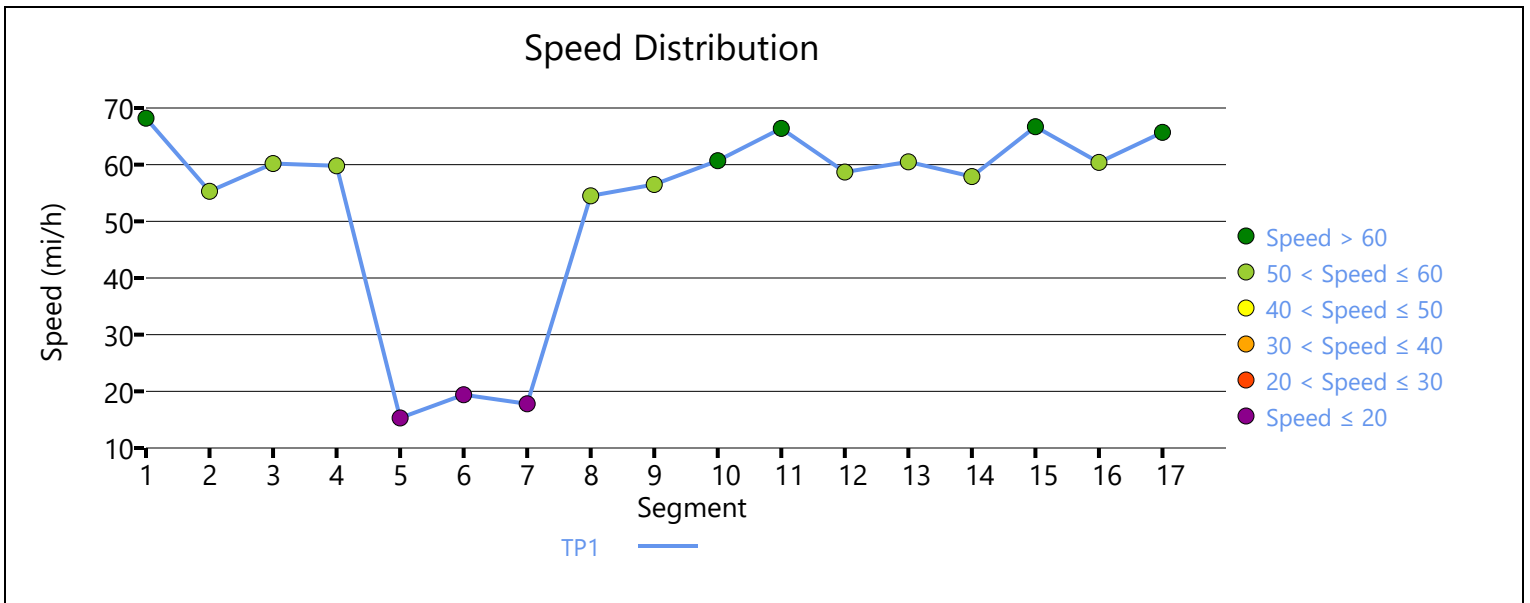
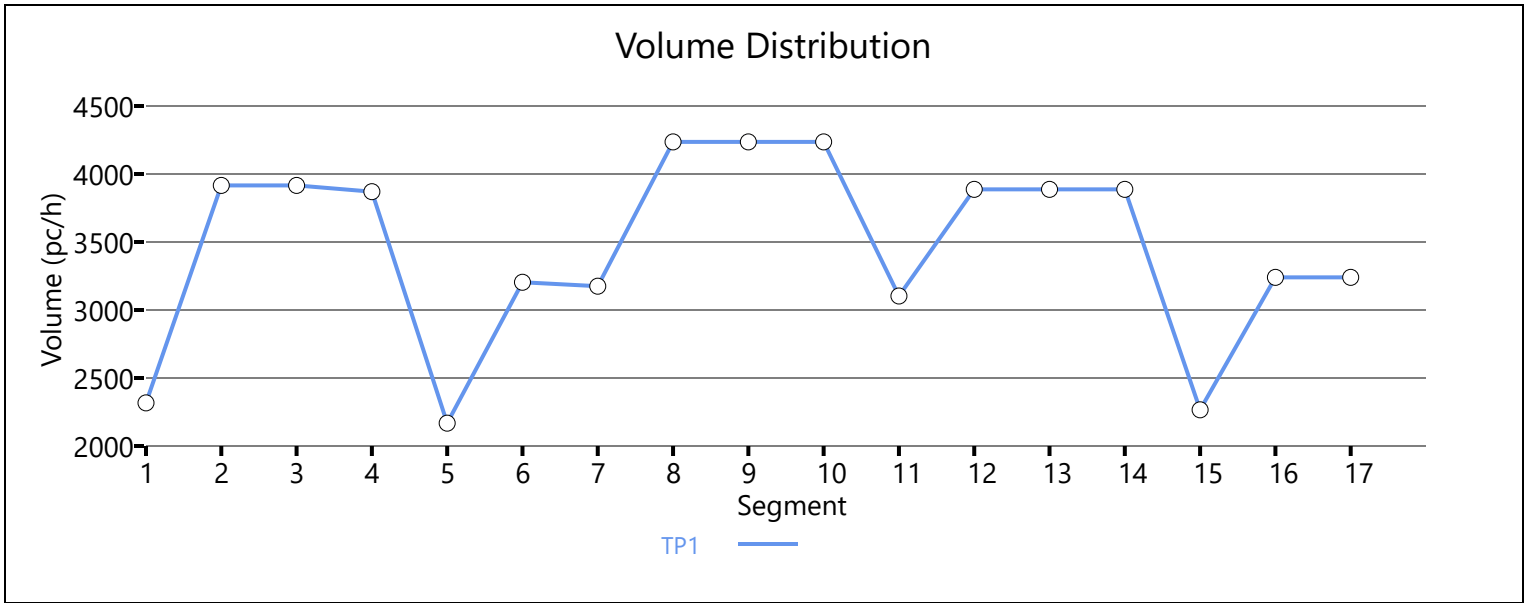
Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	2317	4612	0.50	68.2	17.0	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.980	3870	1479	4550	2130	0.85	0.69	59.8	59.8	32.4	35.2	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2168		4612		0.55		15.3		70.8		F
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.610	3204	1475	4550	1839	0.88	0.80	19.4	55.8	82.6	29.8	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3175		4612		0.79		17.8		89.4		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.926	0.980	4236	1303	4550	1936	0.93	0.67	54.5	54.5	38.9	31.6	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		4612		1.19		56.5		37.5		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.862	0.385	4236	1133	4550	2130	0.93	0.53	60.7	60.7	34.9	28.1	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.943		3103		4612		0.99		66.4		23.4		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.971	0.556	3887	784	4550	2130	0.85	0.37	58.7	58.7	33.1	26.7	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		3887		4612		1.11		60.5		32.1		F
Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	3887	1621	4550	2033	0.85	0.80	57.9	57.9	33.6	30.5	F
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		2266		4612		0.74		66.7		16.6		B
Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3240	974	4550	2033	0.71	0.48	60.4	60.4	26.8	21.7	C
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		3240		4612		0.97		65.7		24.7		C
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	50.2		35.3		33.0		7.40		F						
Facility Overall Results															
Space Mean Speed, mi/h					50.2			Density, veh/mi/ln			33.0				
Average Travel Time, min					7.40			Density, pc/mi/ln			35.3				
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
Comments															



2050 No Build PM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB 6 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	3
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	2
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	2
12	Merge	Merge	WB Merge - Truck Lane End	1500	2
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	2
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
15	Basic	Basic	WB Btw Off and On Ramps	920	2
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

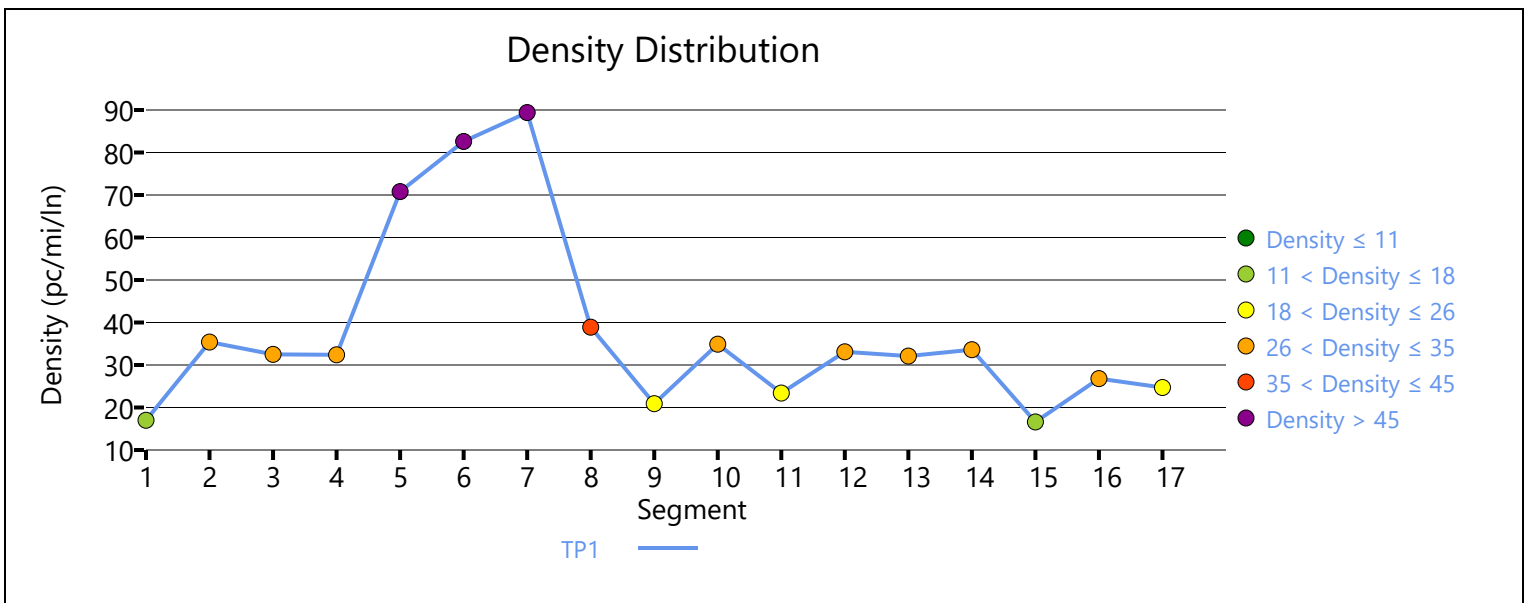
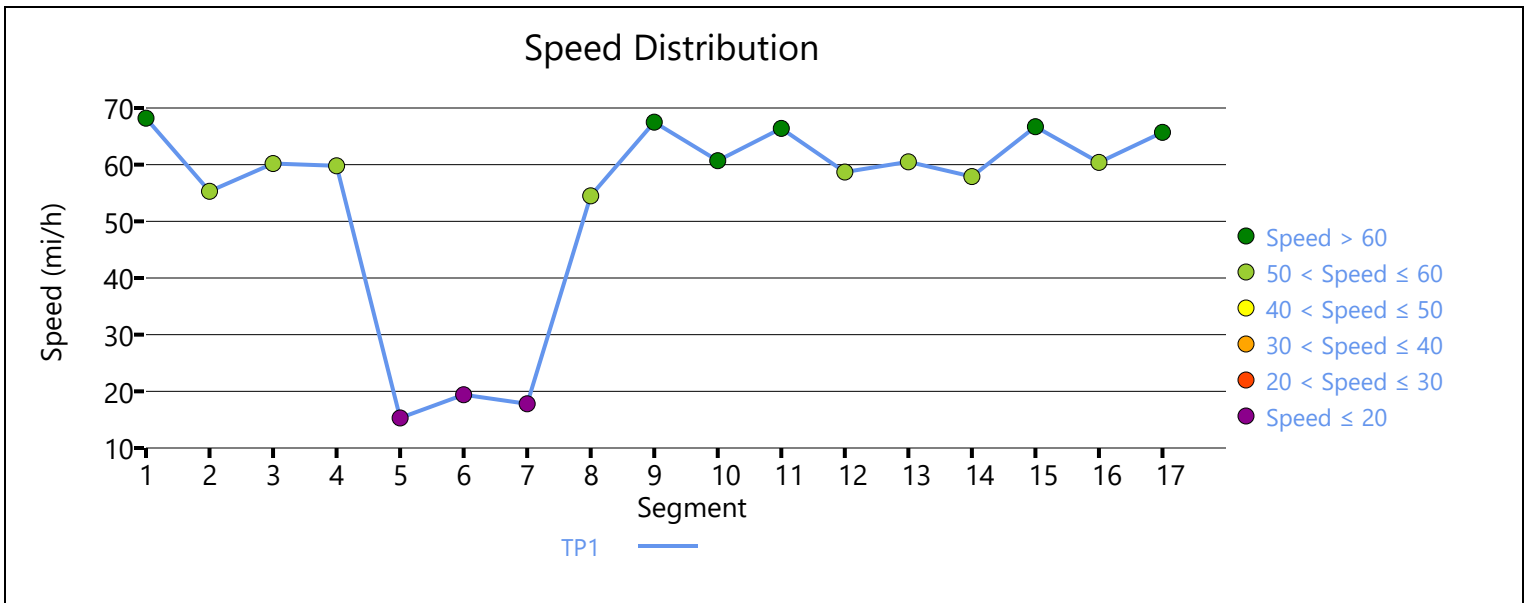
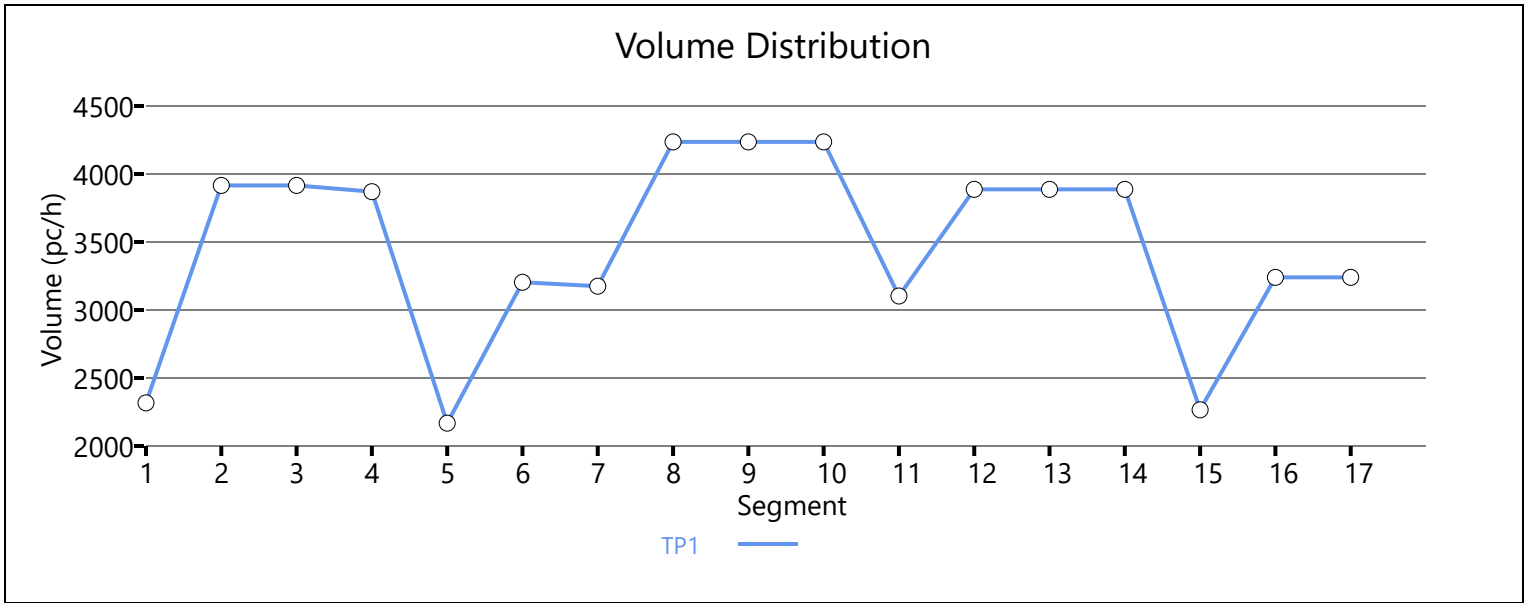
Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	2317	4612	0.50	68.2	17.0	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.980	3870	1479	4550	2130	0.85	0.69	59.8	59.8	32.4	35.2	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2168		4612		0.55		15.3		70.8		F
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.610	3204	1475	4550	1839	0.88	0.80	19.4	55.8	82.6	29.8	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3175		4612		0.79		17.8		89.4		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.926	0.980	4236	1303	4550	1936	0.93	0.67	54.5	54.5	38.9	31.6	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		67.5		20.9		C
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.862	0.385	4236	1133	4550	2130	0.93	0.53	60.7	60.7	34.9	28.1	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.943		3103		4612		0.99		66.4		23.4		C

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.971	0.556	3887	784	4550	2130	0.85	0.37	58.7	58.7	33.1	26.7	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		3887		4612		1.11		60.5		32.1		F
Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	3887	1621	4550	2033	0.85	0.80	57.9	57.9	33.6	30.5	F
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		2266		4612		0.74		66.7		16.6		B
Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3240	974	4550	2033	0.71	0.48	60.4	60.4	26.8	21.7	C
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		3240		4612		0.97		65.7		24.7		C
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	51.7		31.3		29.3		7.20		F						
Facility Overall Results															
Space Mean Speed, mi/h					51.7			Density, veh/mi/ln			29.3				
Average Travel Time, min					7.20			Density, pc/mi/ln			31.3				
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
Comments															



2050 No Build PM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB 8 Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	17
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.19		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	3
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	3
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	3
4	Diverge	Basic	WB Diverge - Long Point Off Ramp	1500	3
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Basic	WB Merge - Long Point On Ramp (Cloverleaf)	1500	3
7	Basic	Basic	WB Btw Long Point On Ramps	320	3
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	3
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	6038	4
10	Diverge	Diverge	WB Diverge - Truck Lane Begin	1500	4
11	Basic	Basic	WB - Wando Bridge Truck Climbing Lane	1900	4
12	Merge	Merge	WB Merge - Truck Lane End	1500	4
13	Basic	Basic	WB - Truck Climbing Lane to Seven Farms	1817	4
14	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	4
15	Basic	Basic	WB Btw Off and On Ramps	920	4
16	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	4
17	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	4

Facility Segment Data

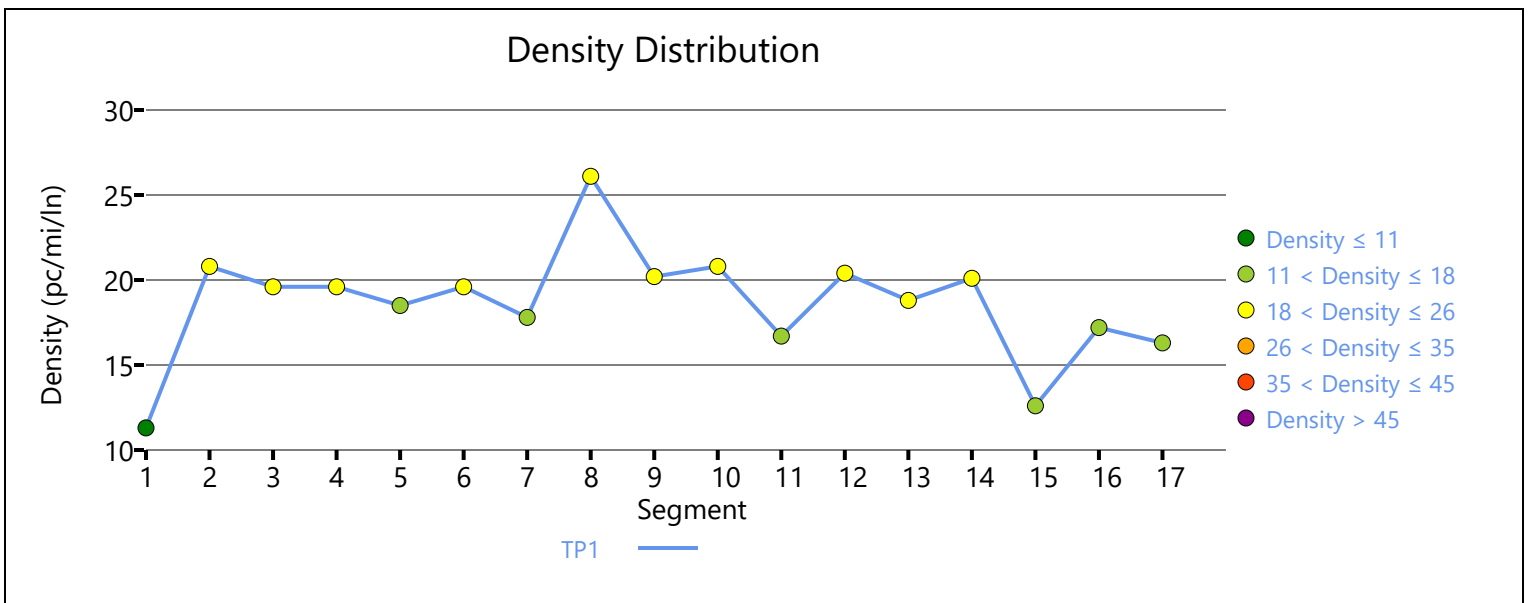
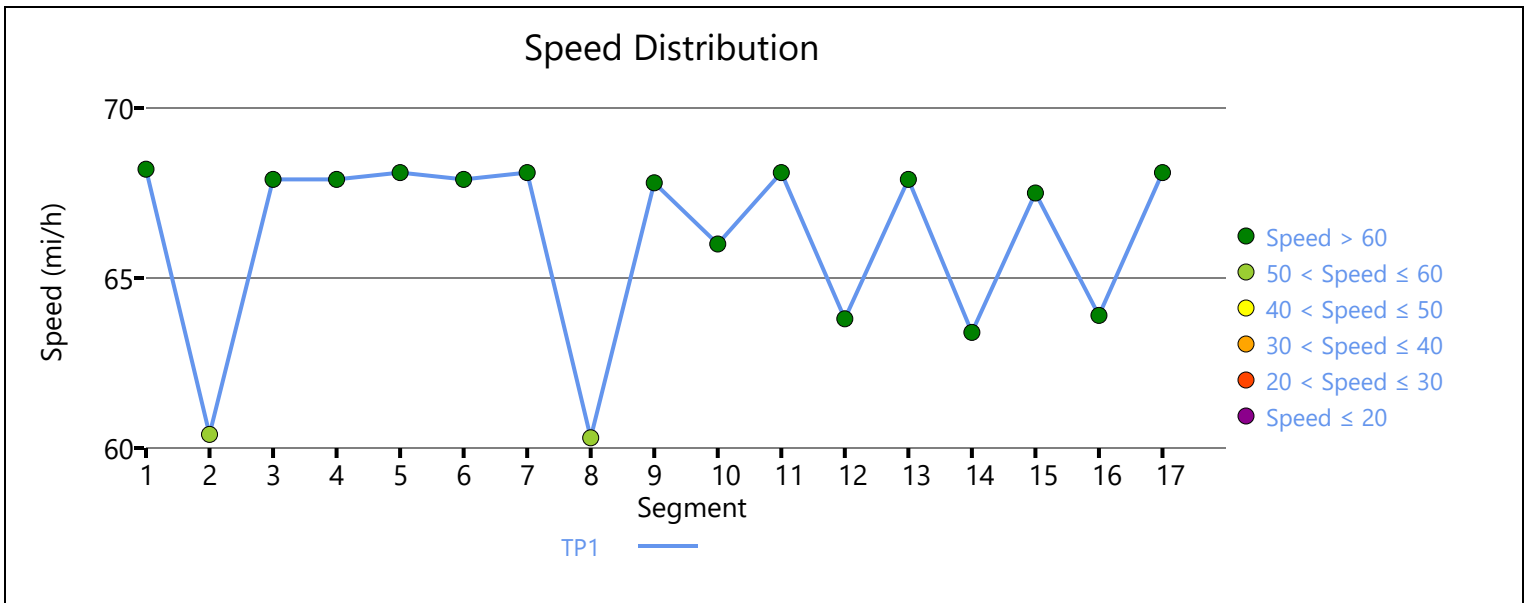
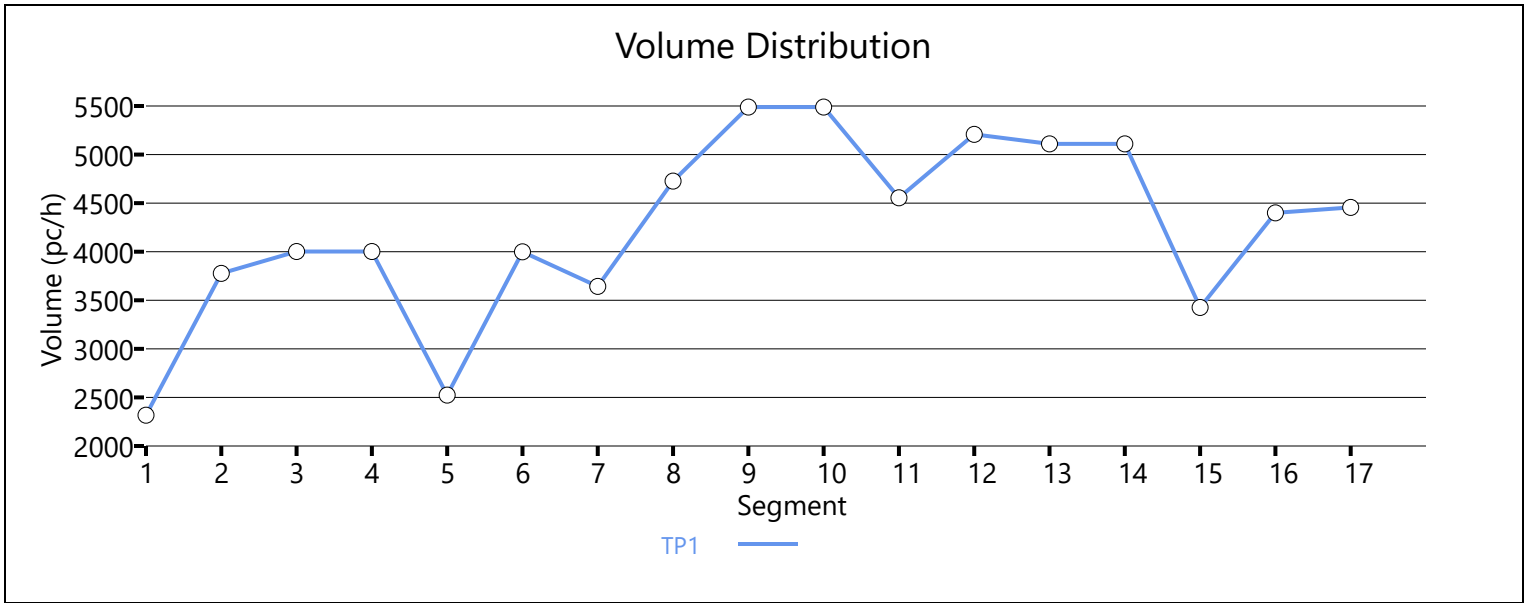
Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	2317	6917	0.33	68.2	11.3	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.980	4002	1479	6917	2130	0.58	0.69	67.9	67.9	19.6	19.6	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		4612		0.55		68.1		18.5		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.980	0.610	3999	1475	6917	1839	0.58	0.80	67.9	67.9	19.6	19.6	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3643		6917		0.53		68.1		17.8		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00	1.00	0.926	0.980	4727	1303	6824	1936	0.69	0.67	60.3	58.6	26.1	24.9	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94	0.94	0.862	0.385	5489	1133	9099	2130	0.60	0.53	66.0	60.7	20.8	17.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.943		4555		9223		0.49		68.1		16.7		B

Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.971	0.556	5208	784	9099	2130	0.57	0.37	63.8	62.4	20.4	16.3	B
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		5110		9223		0.55		67.9		18.8		C
Segment 14: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		3426		9223		0.37		67.5		12.6		B
Segment 16: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B
Segment 17: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		4456		9223		0.48		68.1		16.3		B
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	66.4		18.6		17.2		5.60		C						
Facility Overall Results															
Space Mean Speed, mi/h					66.4			Density, veh/mi/ln			17.2				
Average Travel Time, min					5.60			Density, pc/mi/ln			18.6				
Messages															
Comments															



2050 Alternative 1 & 3 AM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 1 Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	3
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	12665	3
10	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
11	Basic	Basic	WB Btw Off and On Ramps	920	2
12	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
13	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

Segment 1: Basic

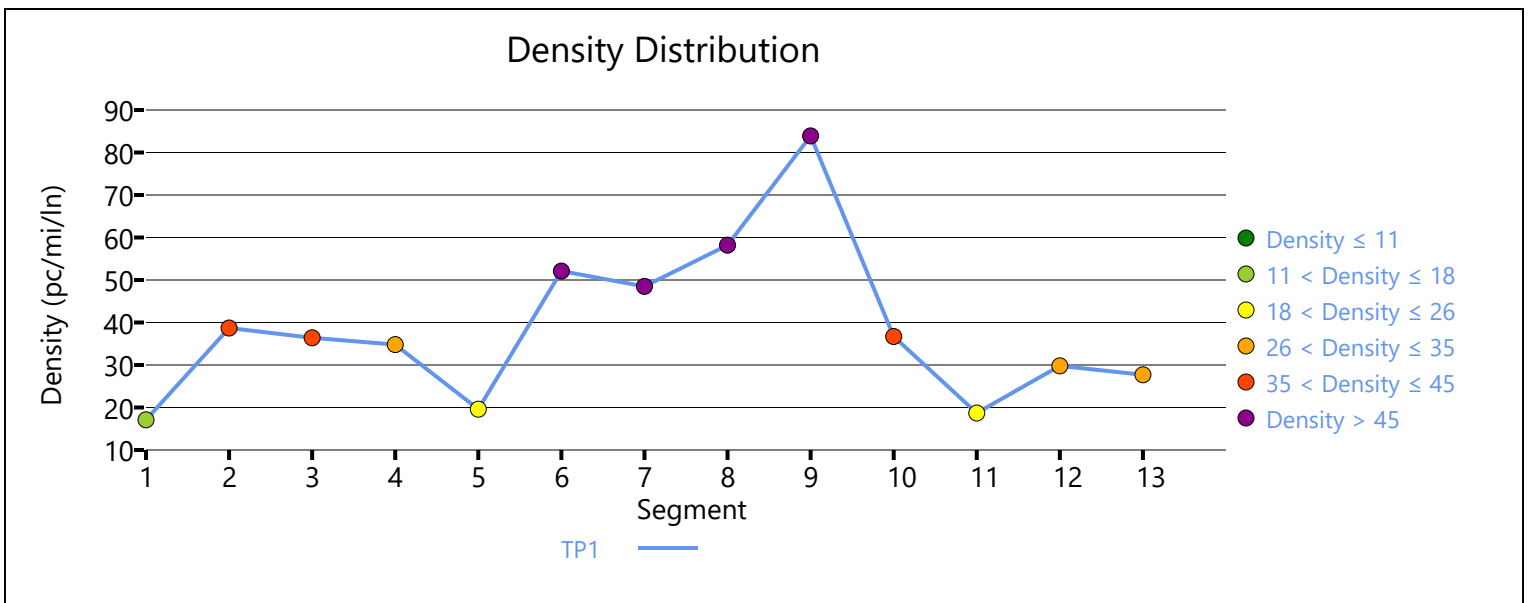
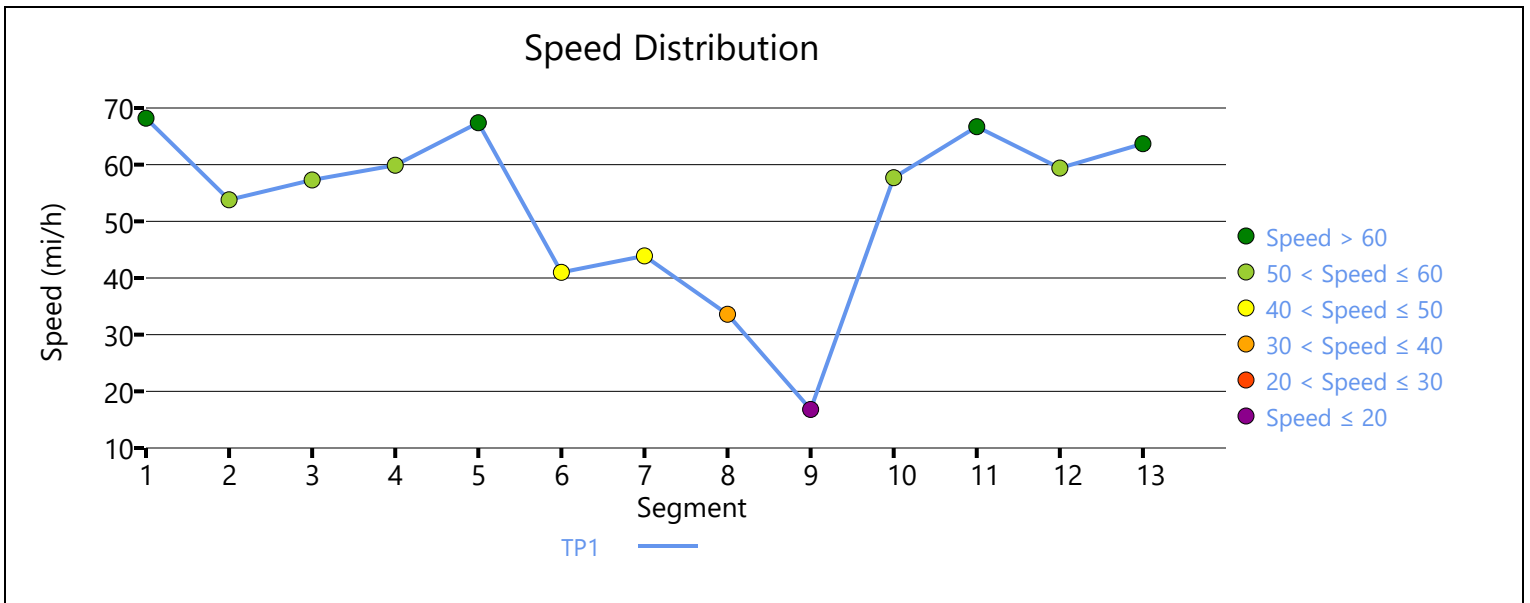
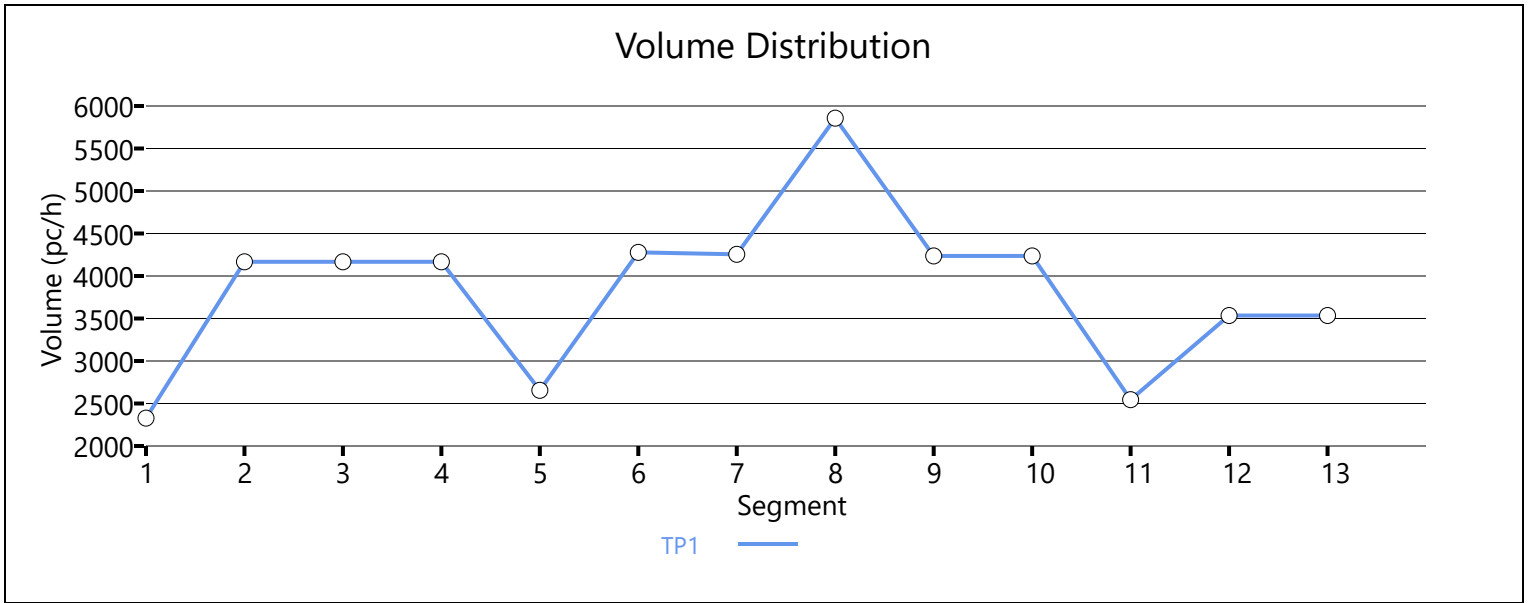
AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	2328	4612	0.50	68.2	17.1	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4167	1839	4550	1839	0.92	1.25	53.8	53.8	38.7	34.7	D

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4167		4612		0.93		57.3		36.4		E
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2655		4612		0.63		67.4		19.6		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.495	4278	1839	4550	1839	1.04	1.28	41.0	50.5	52.1	32.2	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4255		4612		0.91		43.9		48.5		F
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5857	2295	6824	3872	0.92	0.59	33.6	52.7	58.2	30.6	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.13		16.8		83.9		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2545		4612		1.10		66.7		18.7		F
Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS		
1	0.94	0.877	3535			4612		1.34	63.7		27.7		F		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	29.2		57.9			47.7		12.70			F				
Facility Overall Results															
Space Mean Speed, mi/h				29.2				Density, veh/mi/ln				47.7			
Average Travel Time, min				12.70				Density, pc/mi/ln				57.9			
Messages															
WARNING 1				Oversaturated conditions currently exist in boundary segment 13. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 2				Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.											
WARNING 3				Merge capacity is less than merge demand for analysis period 1 on segment 2.											
WARNING 4				Merge capacity is less than merge demand for analysis period 1 on segment 6.											
Comments															



2050 Alternative 1 & 3 AM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 1 8-Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	3
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	3
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	3
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	3
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	3
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	3
7	Basic	Basic	WB Btw Long Point On Ramps	320	3
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	4
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	12665	4
10	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	4
11	Basic	Basic	WB Btw Off and On Ramps	920	4
12	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	4
13	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	4

Facility Segment Data

Segment 1: Basic

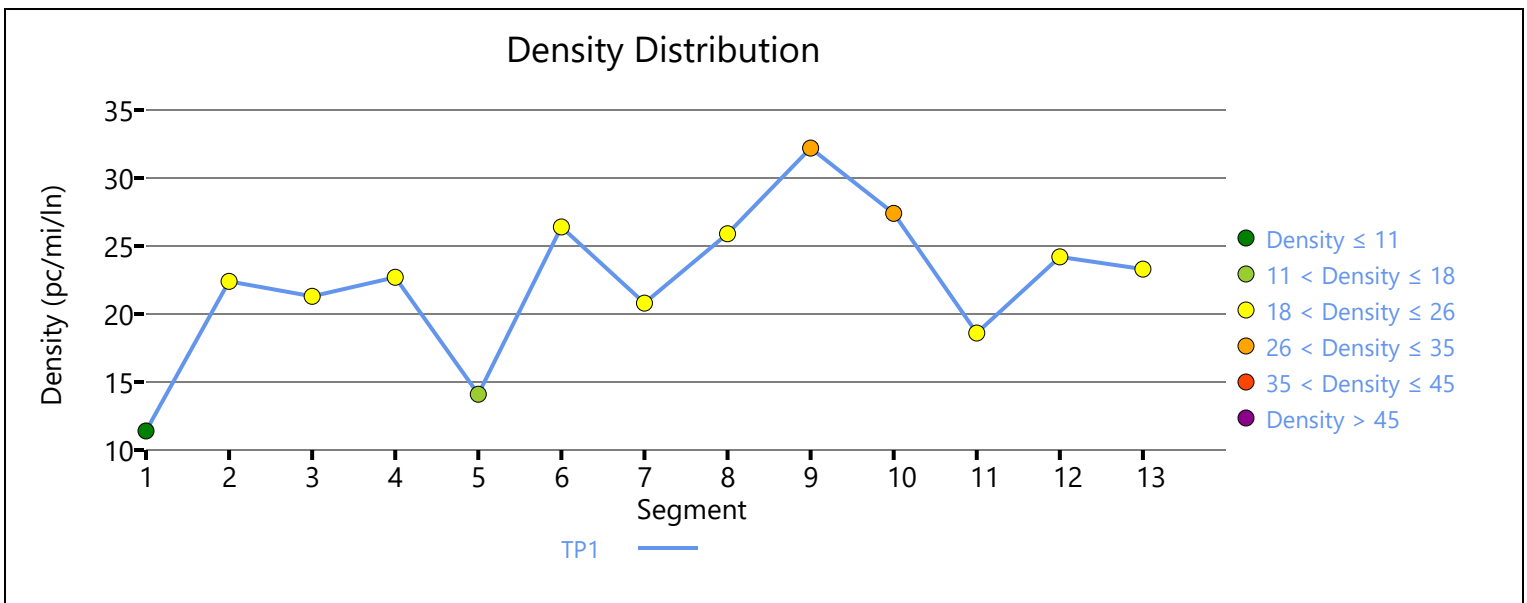
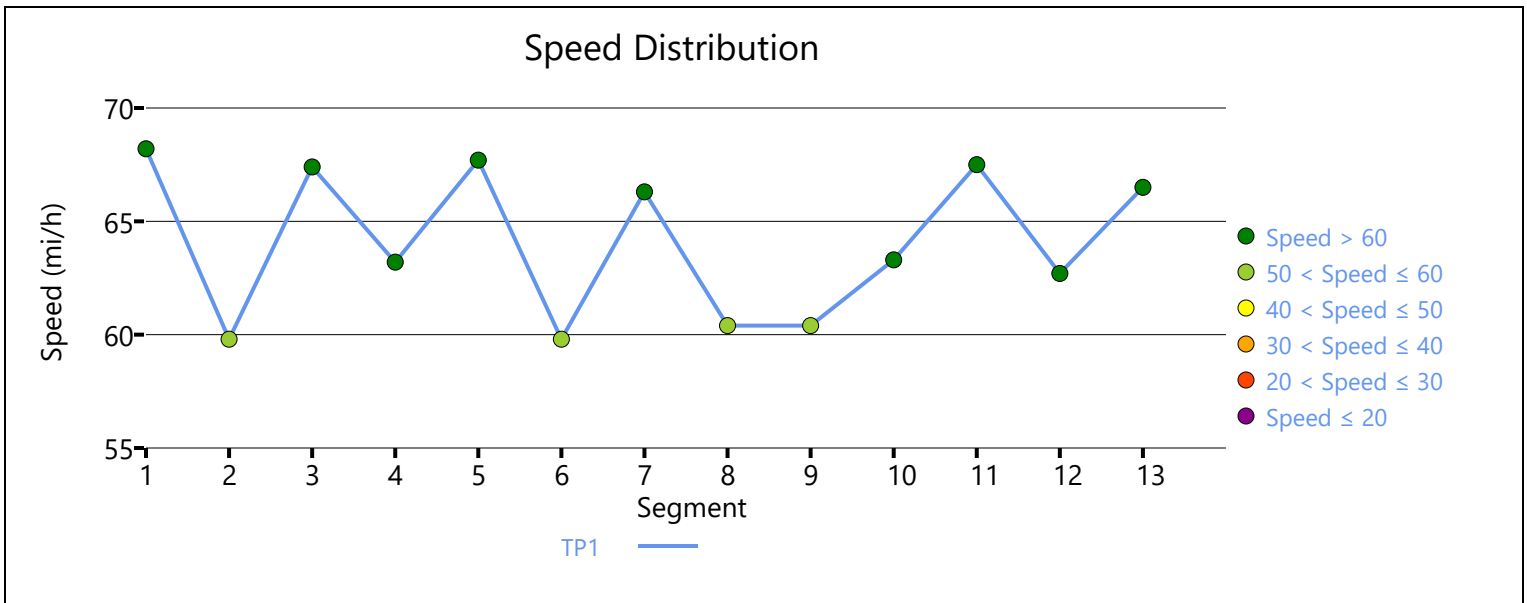
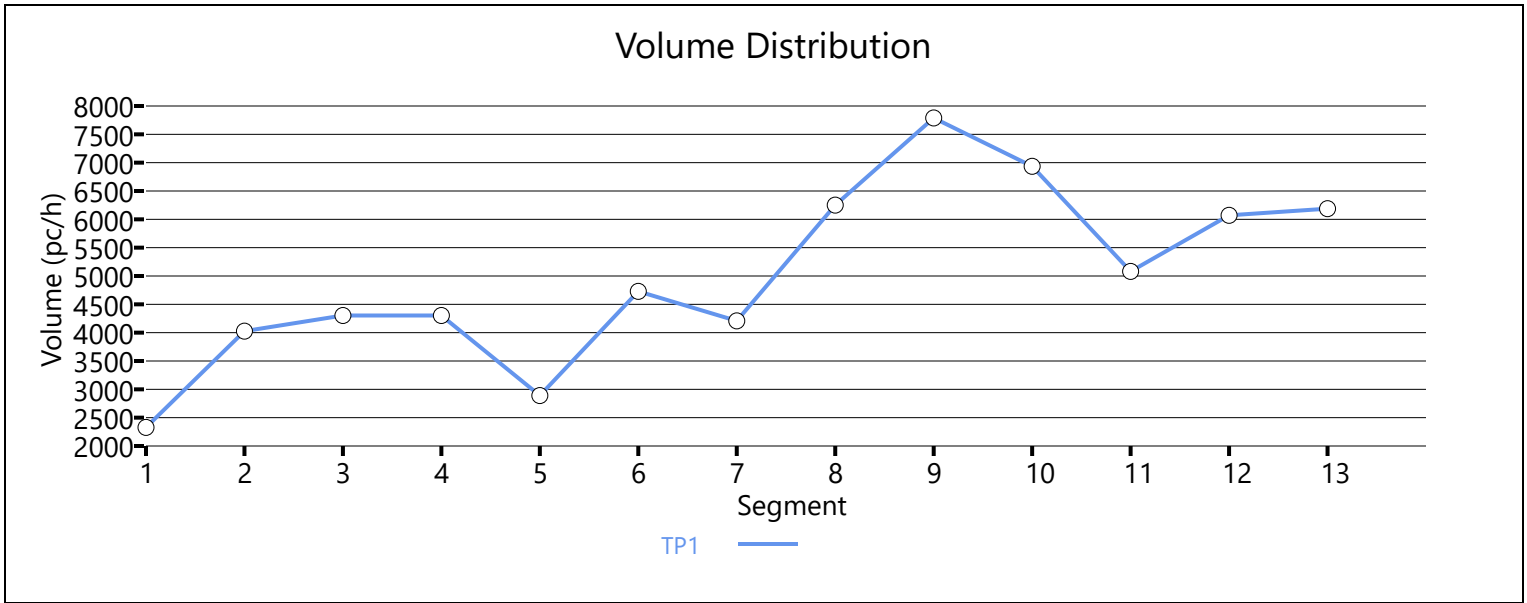
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2328		6917		0.34		68.2		11.4		B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		67.7		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.495	4729	1839	6824	1839	0.69	1.28	59.8	58.2	26.4	23.6	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4208		6917		0.61		66.3		20.8		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	6251	2295	9099	3872	0.69	0.59	60.4	57.5	25.9	25.3	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		7789		9223		0.84		60.4		32.2		D
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	6936	1691	9099	2033	0.76	0.83	63.3	57.7	27.4	31.3	D
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		5081		9223		0.55		67.5		18.6		C
Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.877	0.980	6071	990	9099	2033	0.67	0.49	62.7	60.9	24.2	20.0	B
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)			d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)			LOS	
1	0.94	0.877	6188			9223			0.67	66.5	23.3			C	
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln			Travel Time, min			LOS			
1	62.4		26.1			22.0			5.90			D			
Facility Overall Results															
Space Mean Speed, mi/h				62.4				Density, veh/mi/ln				22.0			
Average Travel Time, min				5.90				Density, pc/mi/ln				26.1			
Messages															
WARNING 1				Merge capacity is less than merge demand for analysis period 1 on segment 2.											
WARNING 2				Merge capacity is less than merge demand for analysis period 1 on segment 6.											
Comments															



2050 Alternative 1 & 3 PM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 1 Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	3
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	12665	3
10	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
11	Basic	Basic	WB Btw Off and On Ramps	920	2
12	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
13	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

Segment 1: Basic

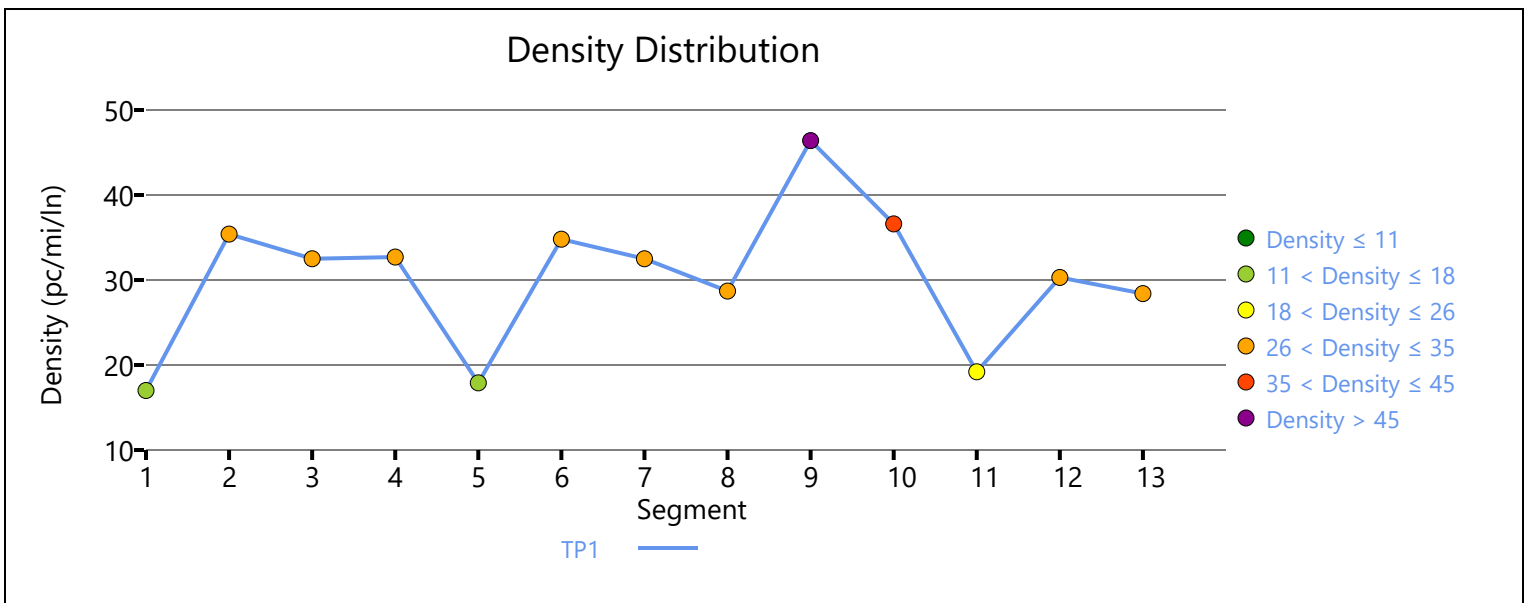
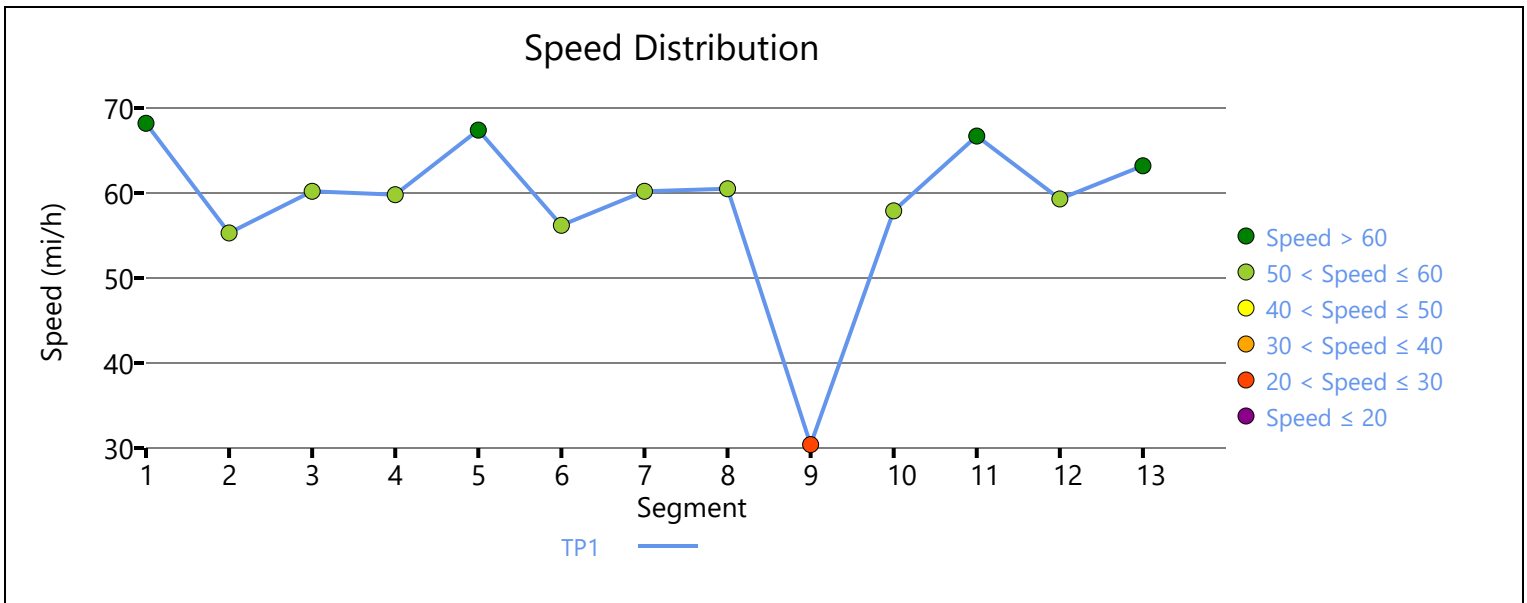
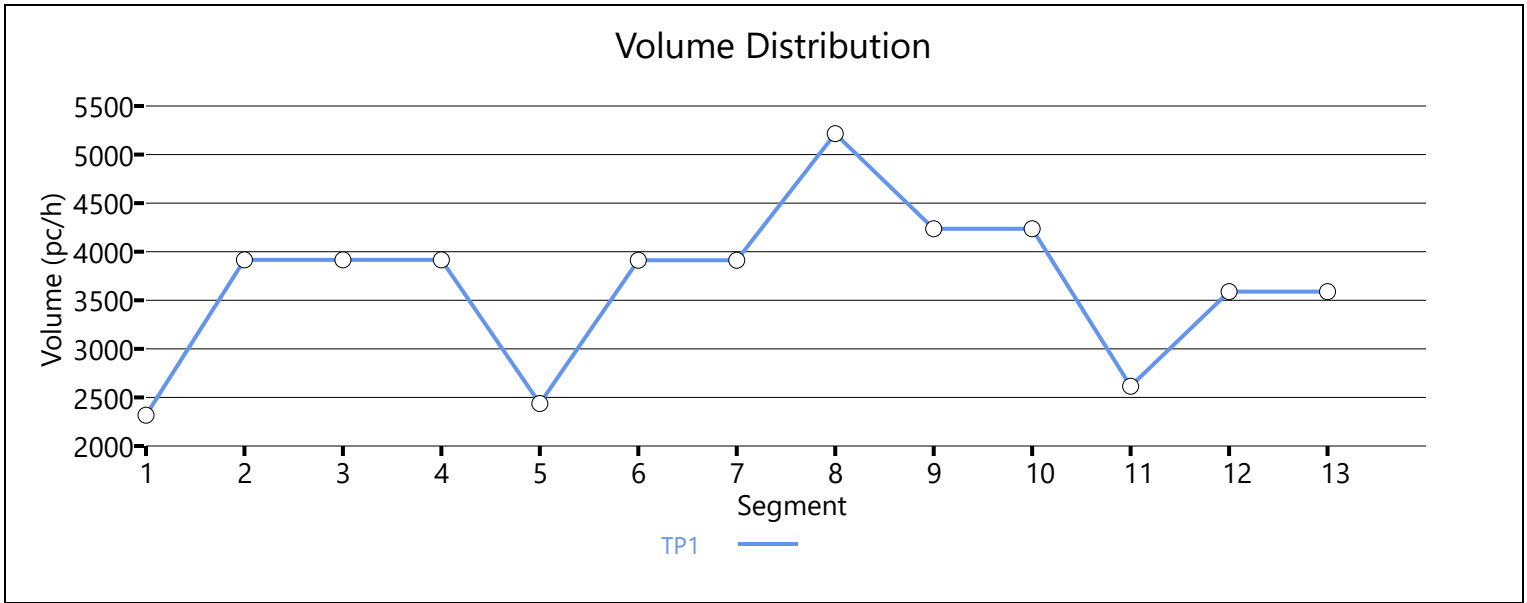
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2317		4612		0.50		68.2		17.0		B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		67.4		17.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.610	3912	1475	4550	1839	0.86	0.80	56.2	56.2	34.8	29.1	D
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3912		4612		0.79		60.2		32.5		D
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.926	0.980	5215	1303	6824	3872	0.76	0.34	60.5	59.0	28.7	23.1	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		30.4		46.4		F
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		2615		4612		0.74		66.7		19.2		C
Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)		Density (pc/mi/ln)		LOS		
1	0.94	0.926	3589			4612		0.97	63.2		28.4		D		
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln			Density, veh/mi/ln		Travel Time, min			LOS				
1	43.3		37.0			33.3		8.60			F				
Facility Overall Results															
Space Mean Speed, mi/h				43.3				Density, veh/mi/ln				33.3			
Average Travel Time, min				8.60				Density, pc/mi/ln				37.0			
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
Comments															



2050 Alternative 1 & 3 PM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 1 8-Lane Geometry
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	13
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	3
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	3
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	3
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	3
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	3
6	Merge	Merge	WB Merge - Long Point On Ramp (Cloverleaf)	1500	3
7	Basic	Basic	WB Btw Long Point On Ramps	320	3
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	4
9	Basic	Basic	WB - Long Point to Truck Climbing Lane	12665	4
10	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	4
11	Basic	Basic	WB Btw Off and On Ramps	920	4
12	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	4
13	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	4

Facility Segment Data

Segment 1: Basic

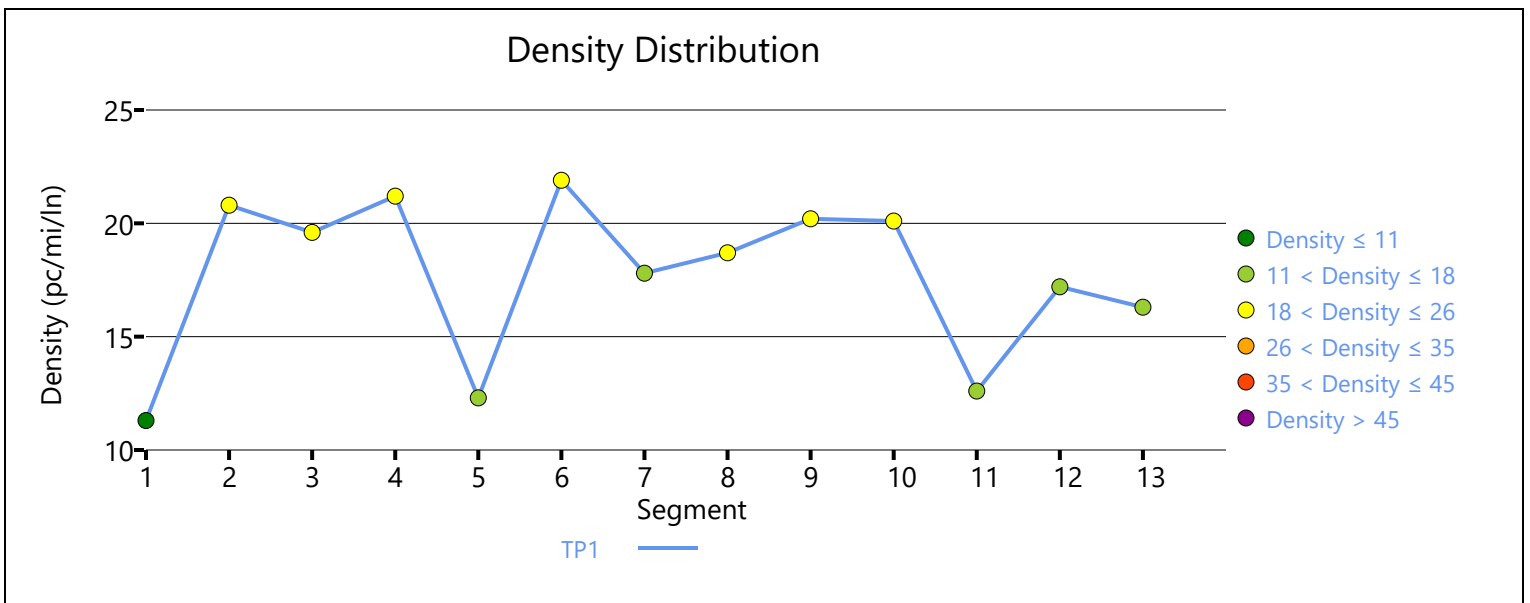
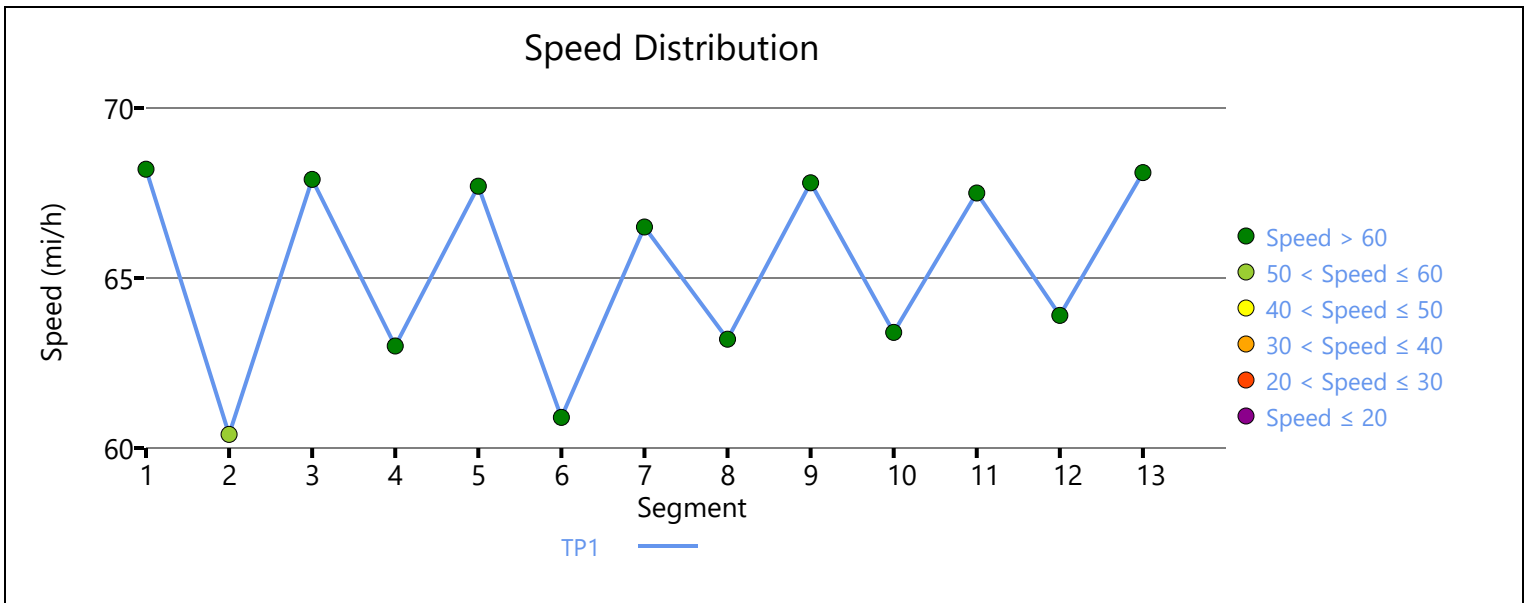
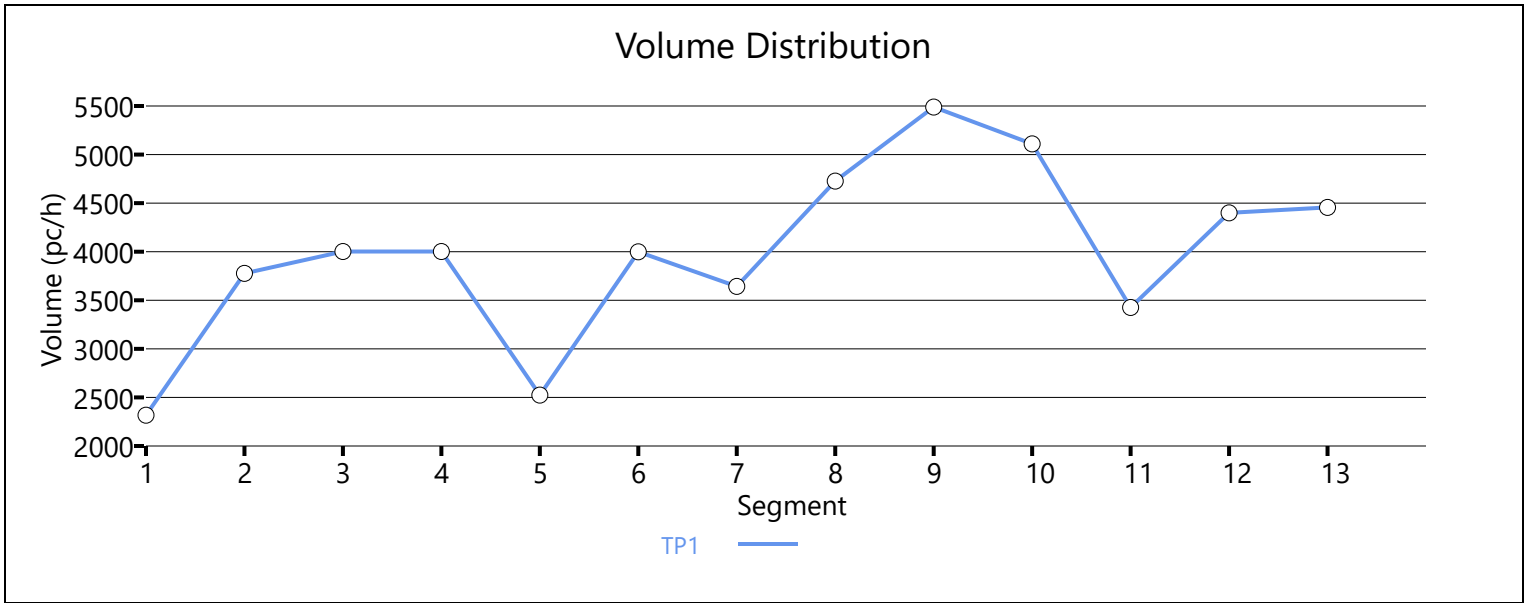
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2317		6917		0.33		68.2		11.3		B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		67.7		12.3		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.610	3999	1475	6824	1839	0.59	0.80	60.9	59.3	21.9	22.0	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3643		6917		0.53		66.5		17.8		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.926	0.980	4727	1303	9099	3872	0.52	0.34	63.2	61.0	18.7	16.4	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 10: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3426		9223		0.37		67.5		12.6		B
Segment 12: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B
Segment 13: Basic															
AP	PHF	fHV	Flow Rate (pc/h)			Capacity (pc/h)		d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)		LOS			
1	0.94	0.926	4456			9223		0.48	68.1	16.3		B			
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	66.3		18.5		16.9		5.60		C						
Facility Overall Results															
Space Mean Speed, mi/h			66.3			Density, veh/mi/ln			16.9						
Average Travel Time, min			5.60			Density, pc/mi/ln			18.5						
Messages															
Comments															



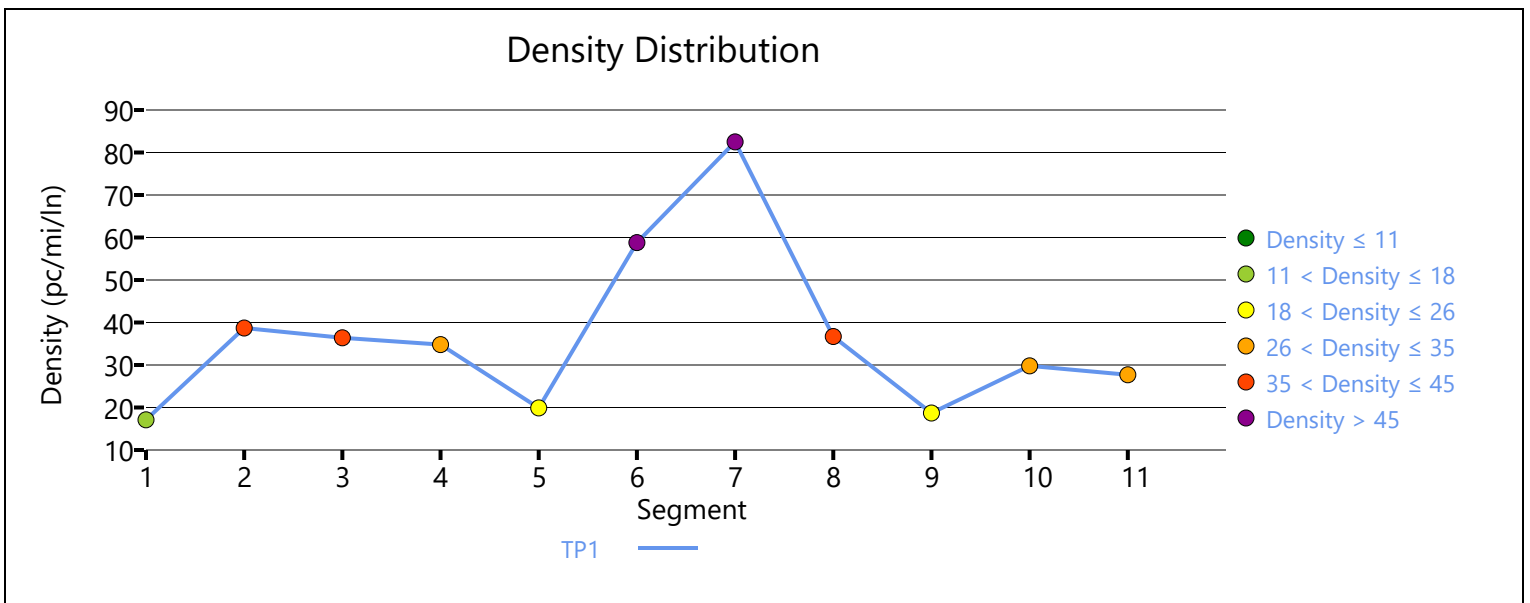
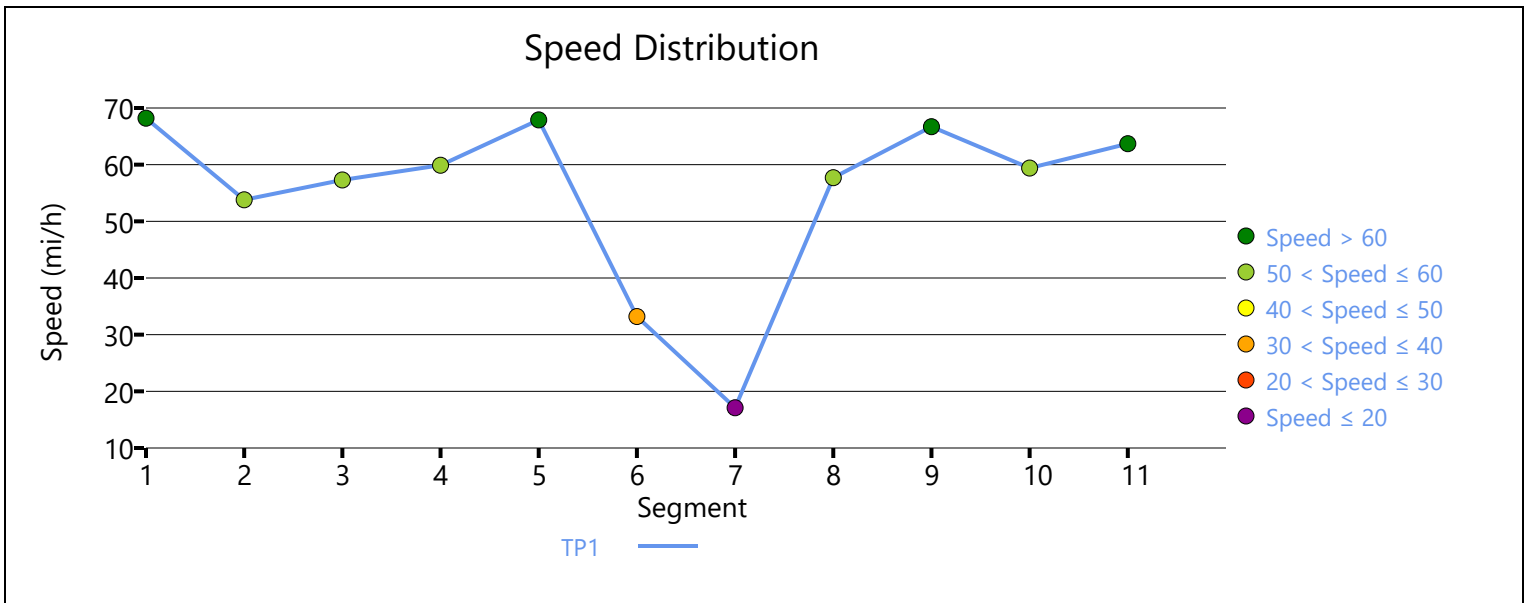
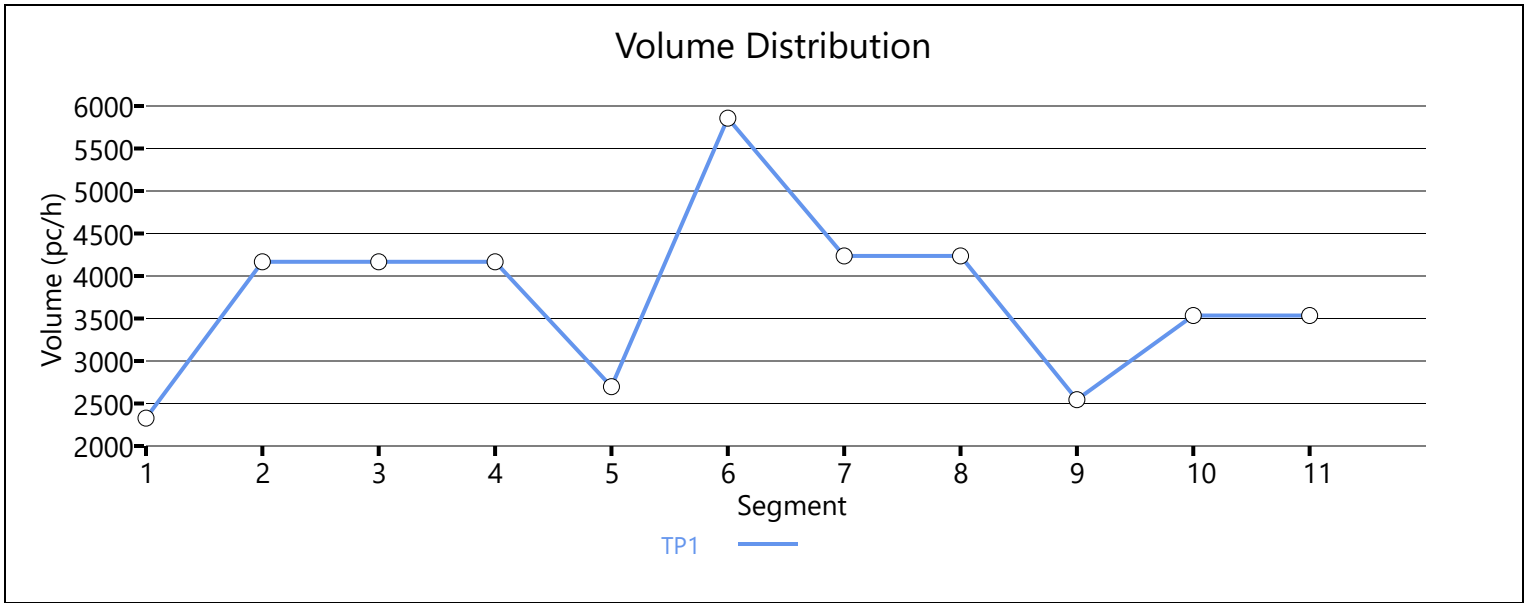
2050 Alternative 1

with CD Roadway AM Peak Hour

(6-lane Freeway)

1	0.94	0.962	4167	4612	0.93	57.3	36.4	E							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		2698		4612		0.63		67.9		19.9		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.847	5857	3872	6824	3872	0.97	1.02	33.2	39.3	58.8	36.7	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.781		4236		6917		1.16		17.1		82.5		F
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		2545		4612		1.15		66.7		18.7		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		3535		4612		1.39		63.7		27.7		F
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	29.7				55.8				46.1				12.50		F
Facility Overall Results															
Space Mean Speed, mi/h				29.7				Density, veh/mi/ln				46.1			

Average Travel Time, min	12.50	Density, pc/mi/ln	55.8
Messages			
WARNING 1	Oversaturated conditions currently exist in boundary segment 11. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.		
WARNING 2	Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.		
WARNING 3	Merge capacity is less than merge demand for analysis period 1 on segment 2.		
WARNING 4	Merge capacity is less than merge demand for analysis period 1 on segment 6.		
Comments			



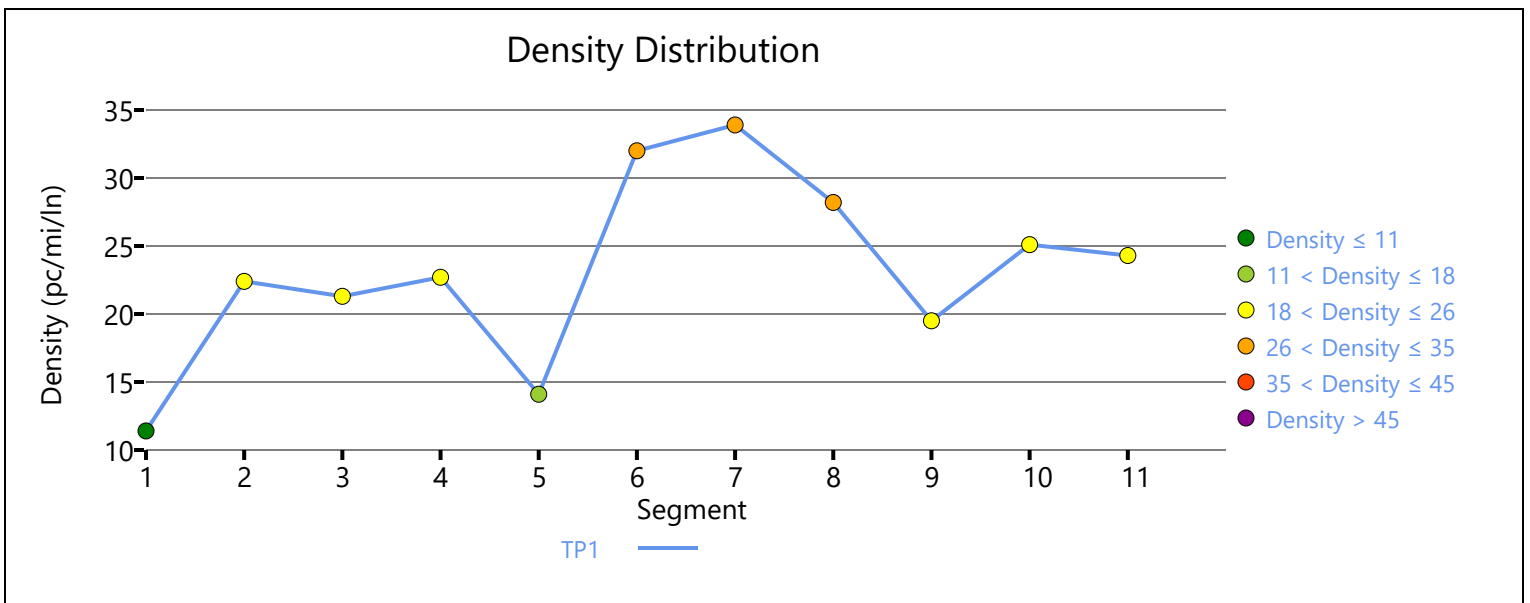
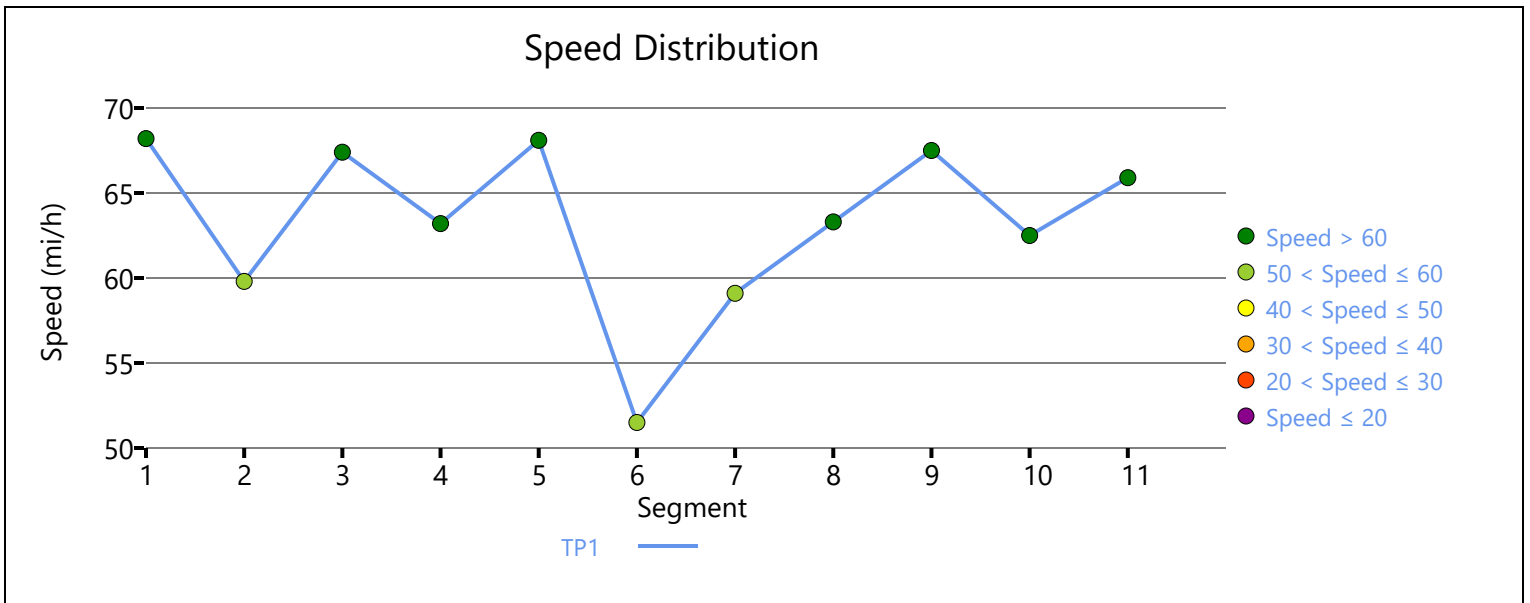
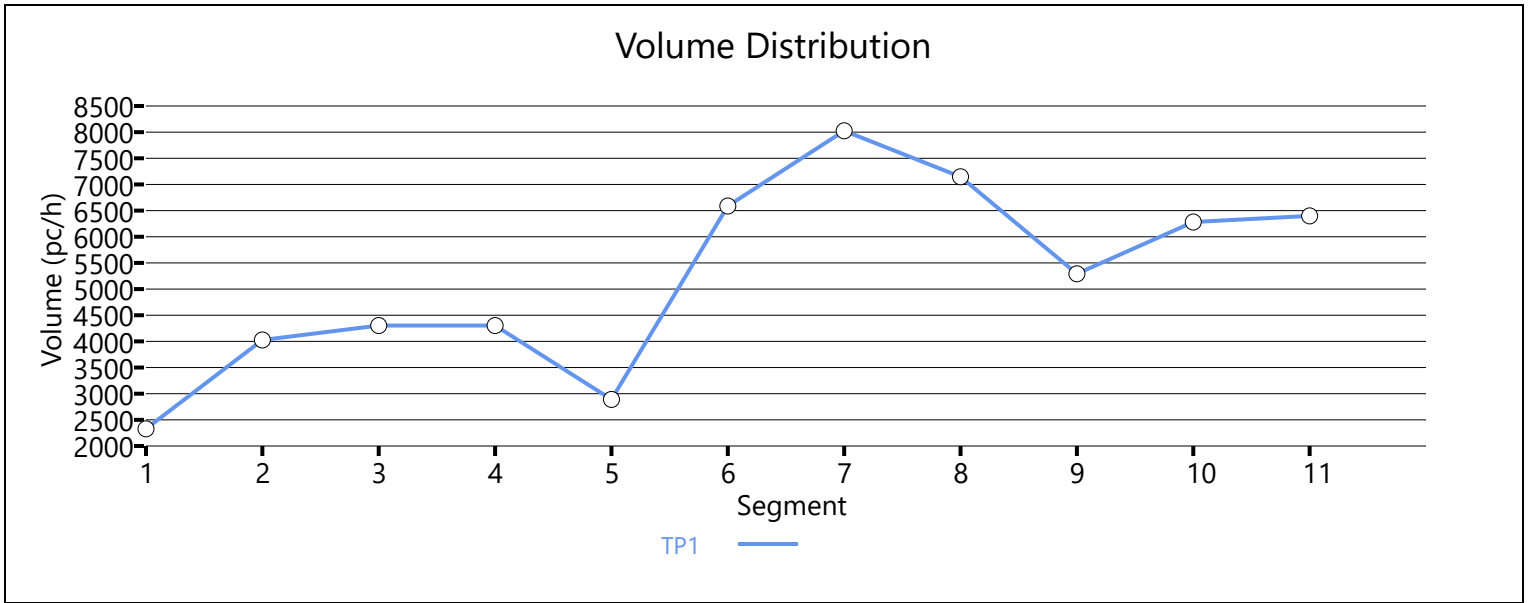
2050 Alternative 1

with CD Roadway AM Peak Hour

(8-lane Freeway)

1	0.94	0.962	4303	6917	0.62	67.4	21.3	C							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		68.1		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.847	6588	3872	9099	3872	0.72	1.02	51.5	47.9	32.0	33.0	D
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		8026		9223		0.87		59.1		33.9		D
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	7147	1691	9099	2033	0.79	0.83	63.3	57.7	28.2	32.1	D
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		5292		9223		0.57		67.5		19.5		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6282	990	9099	2033	0.69	0.49	62.5	60.7	25.1	20.7	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		6399		9223		0.69		65.9		24.3		C
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	61.2				26.9				22.8				6.00		D
Facility Overall Results															
Space Mean Speed, mi/h					61.2				Density, veh/mi/ln				22.8		

Average Travel Time, min	6.00	Density, pc/mi/ln	26.9
Messages			
WARNING 1	Merge capacity is less than merge demand for analysis period 1 on segment 2.		
WARNING 2	Merge capacity is less than merge demand for analysis period 1 on segment 6.		
Comments			



2050 Alternative 1

with CD Roadway PM Peak Hour

(6-lane Freeway)

1	0.94	0.980	3916	4612	0.87	60.2	32.5	D							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		68.0		17.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.926	0.877	4858	2421	6824	3872	0.71	0.63	59.5	57.9	27.2	24.8	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		67.5		20.9		C
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		2615		4612		0.74		66.7		19.2		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3589		4612		0.97		63.2		28.4		D
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	63.9				24.0				22.0				5.80		F
Facility Overall Results															
Space Mean Speed, mi/h				63.9				Density, veh/mi/ln				22.0			

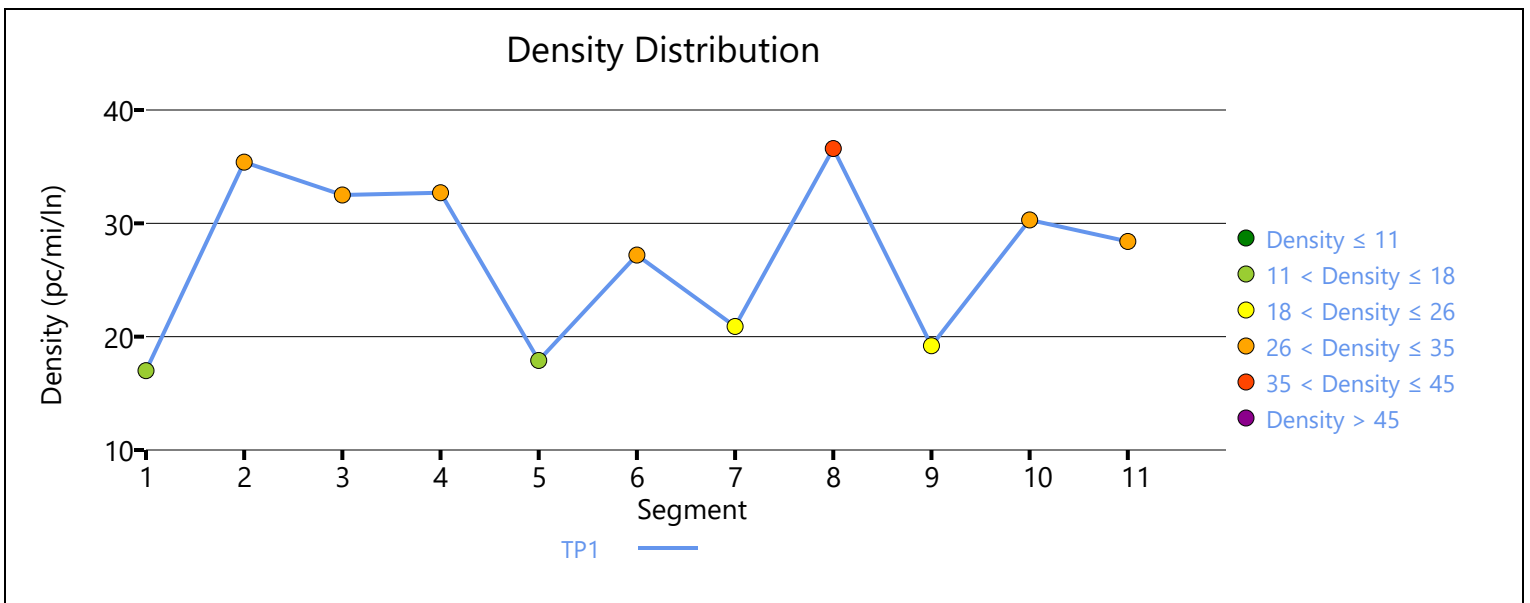
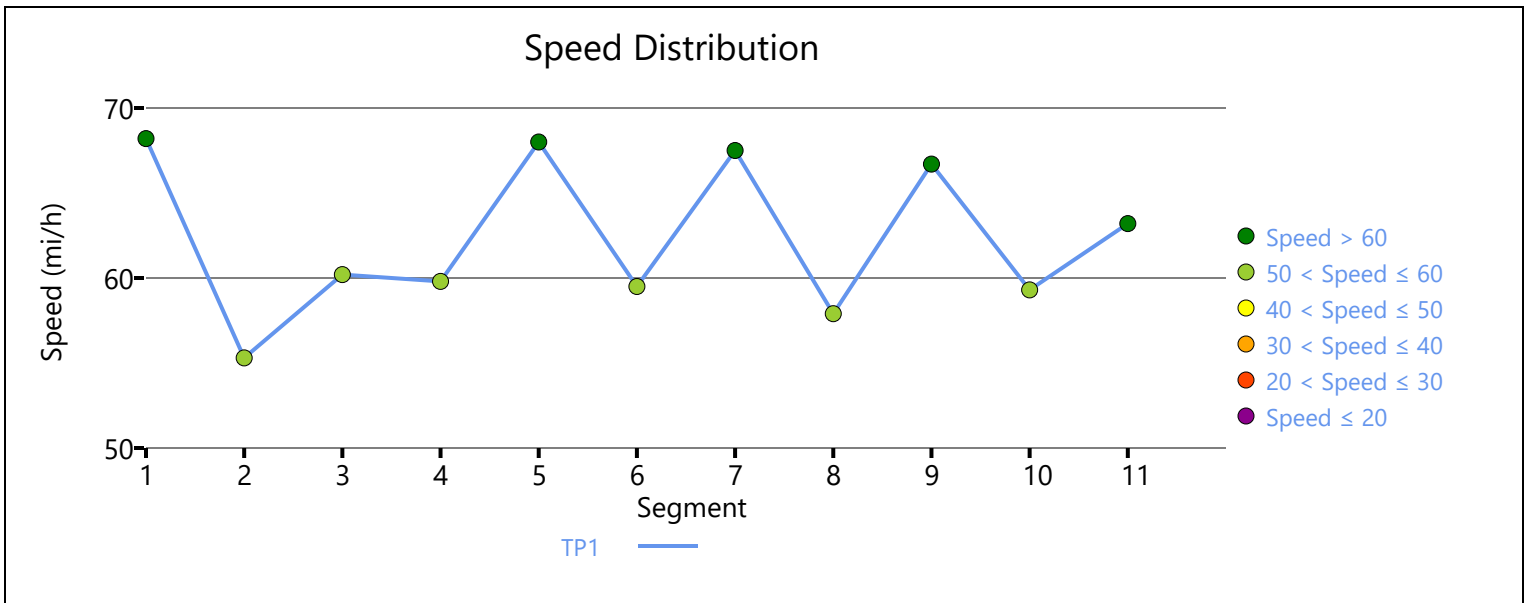
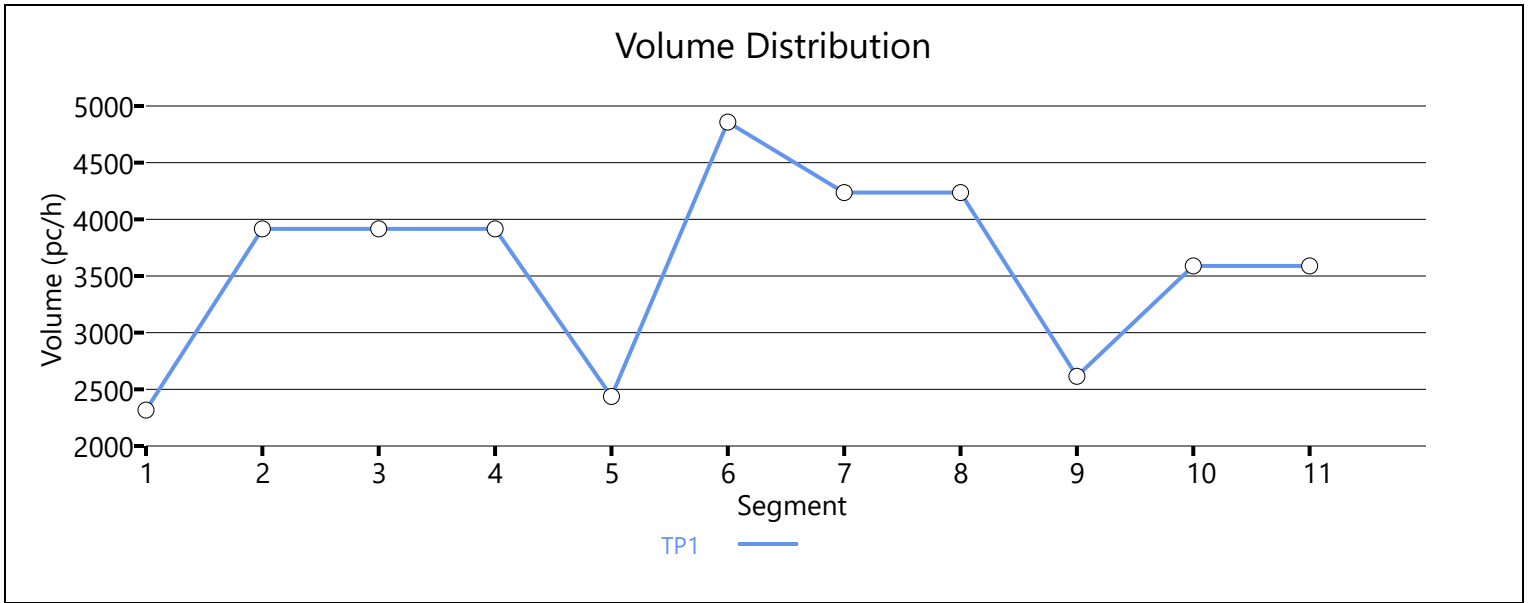
Average Travel Time, min	5.80	Density, pc/mi/ln	24.0
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Messages

WARNING 1	Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
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Comments

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2050 Alternative 1

with CD Roadway PM Peak Hour

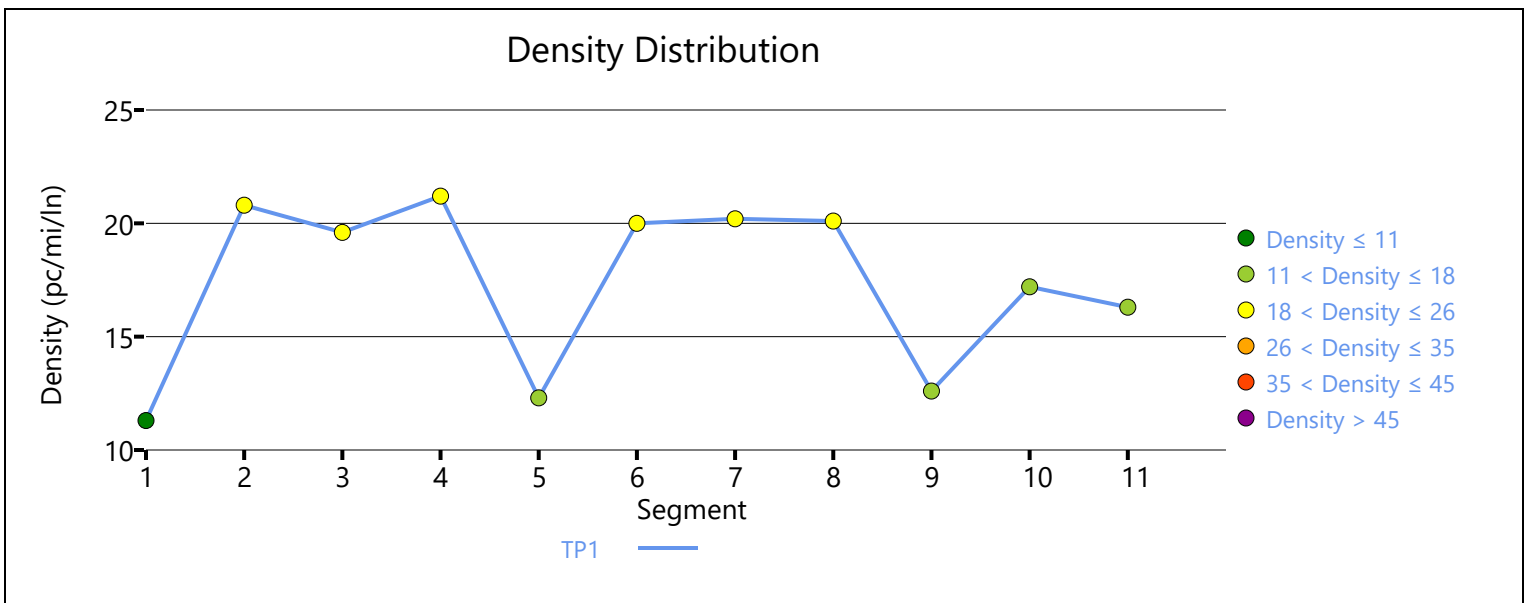
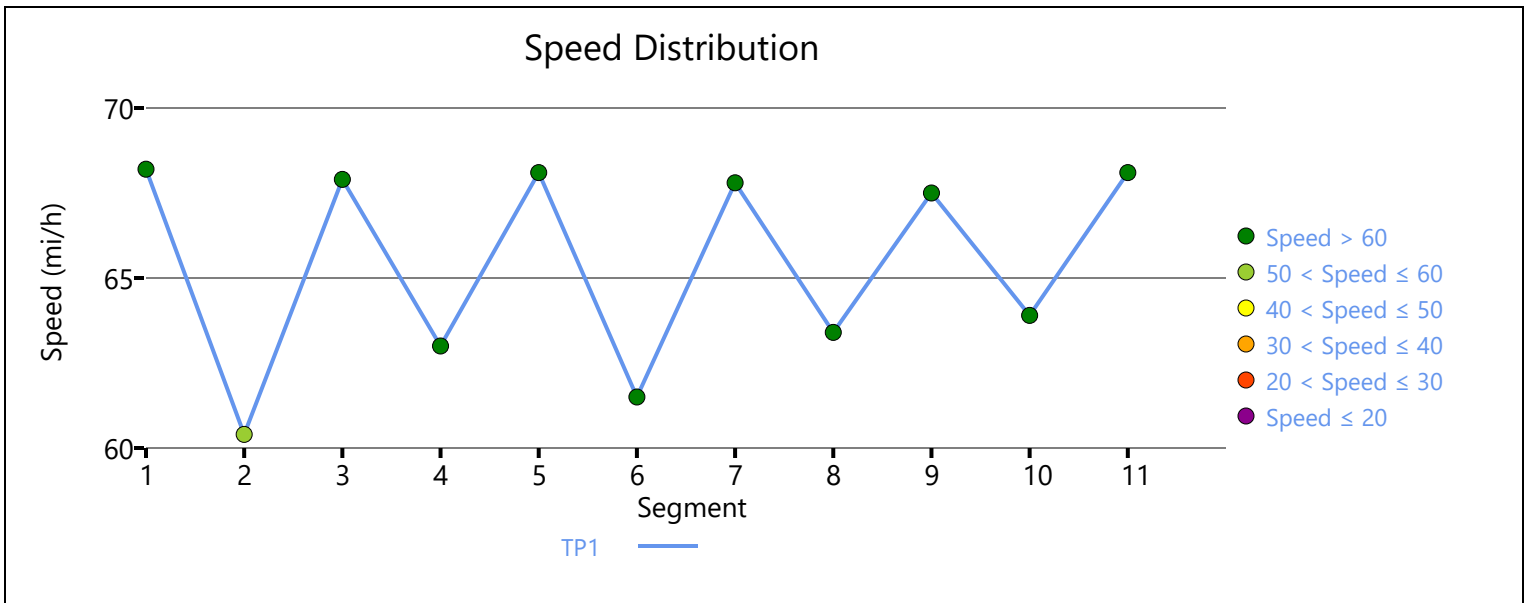
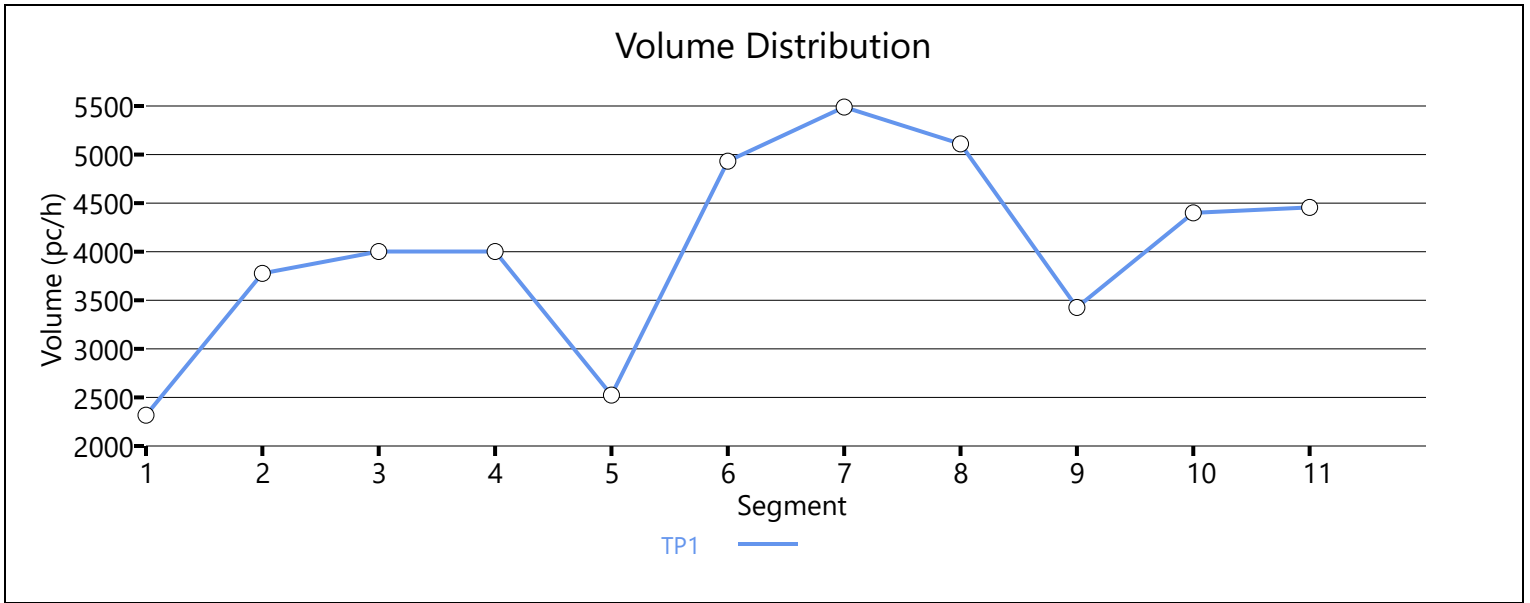
(8-lane Freeway)

1	0.94	0.980	4002	6917	0.58	67.9	19.6	C							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		68.1		12.3		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.926	0.877	4932	2421	9099	3872	0.54	0.63	61.5	59.3	20.0	21.7	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3426		9223		0.37		67.5		12.6		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		4456		9223		0.48		68.1		16.3		B
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	66.5				18.2				16.5				5.60		C
Facility Overall Results															
Space Mean Speed, mi/h					66.5					Density, veh/mi/ln					16.5

Average Travel Time, min	5.60	Density, pc/mi/ln	18.2
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Messages

Comments



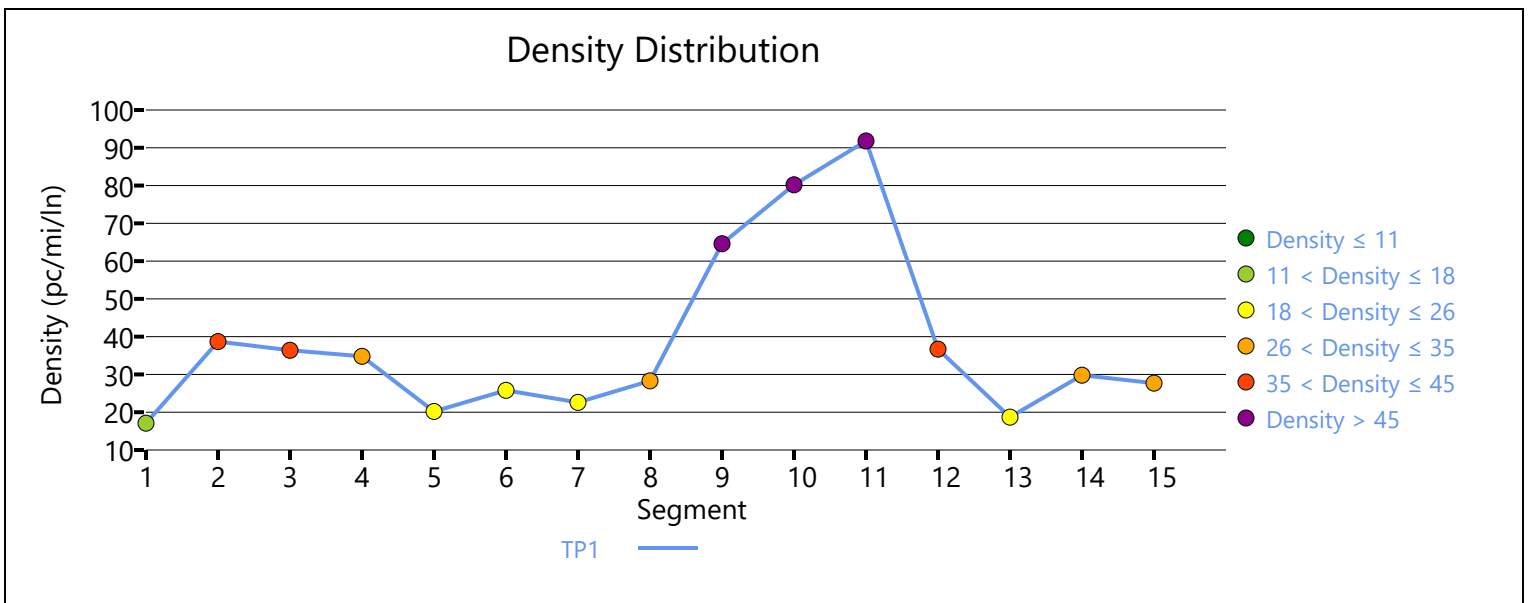
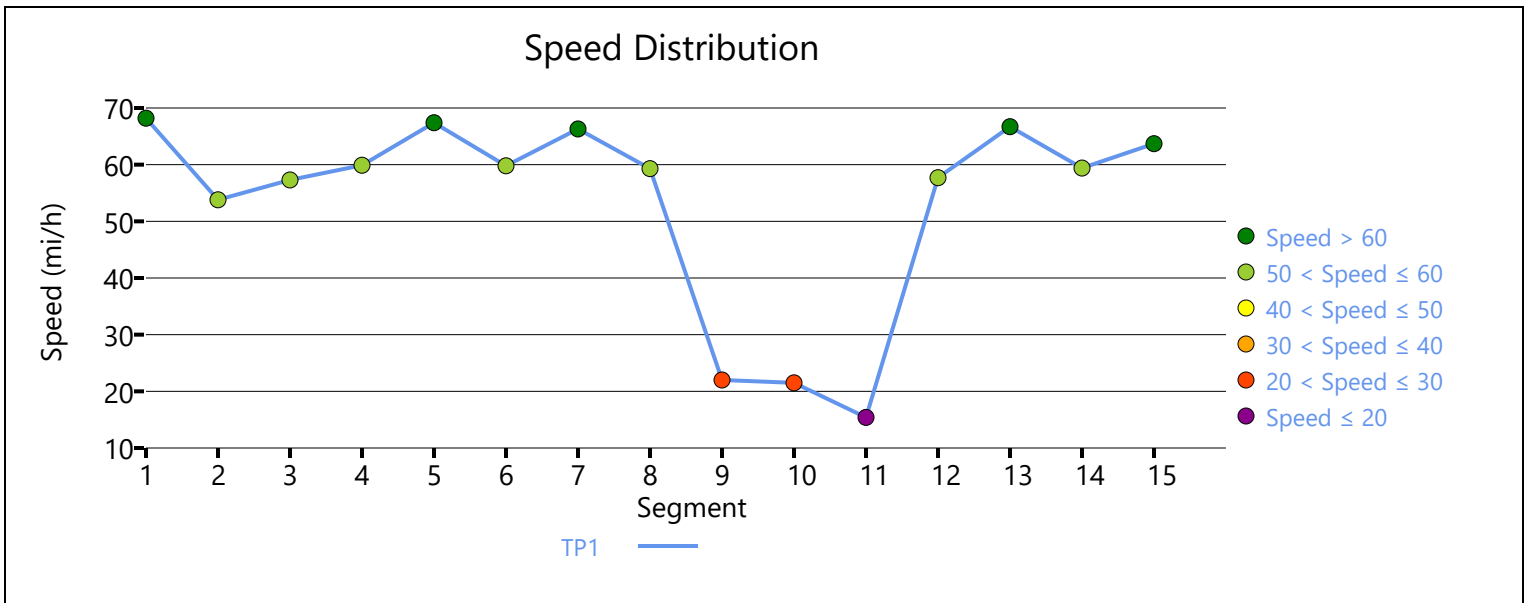
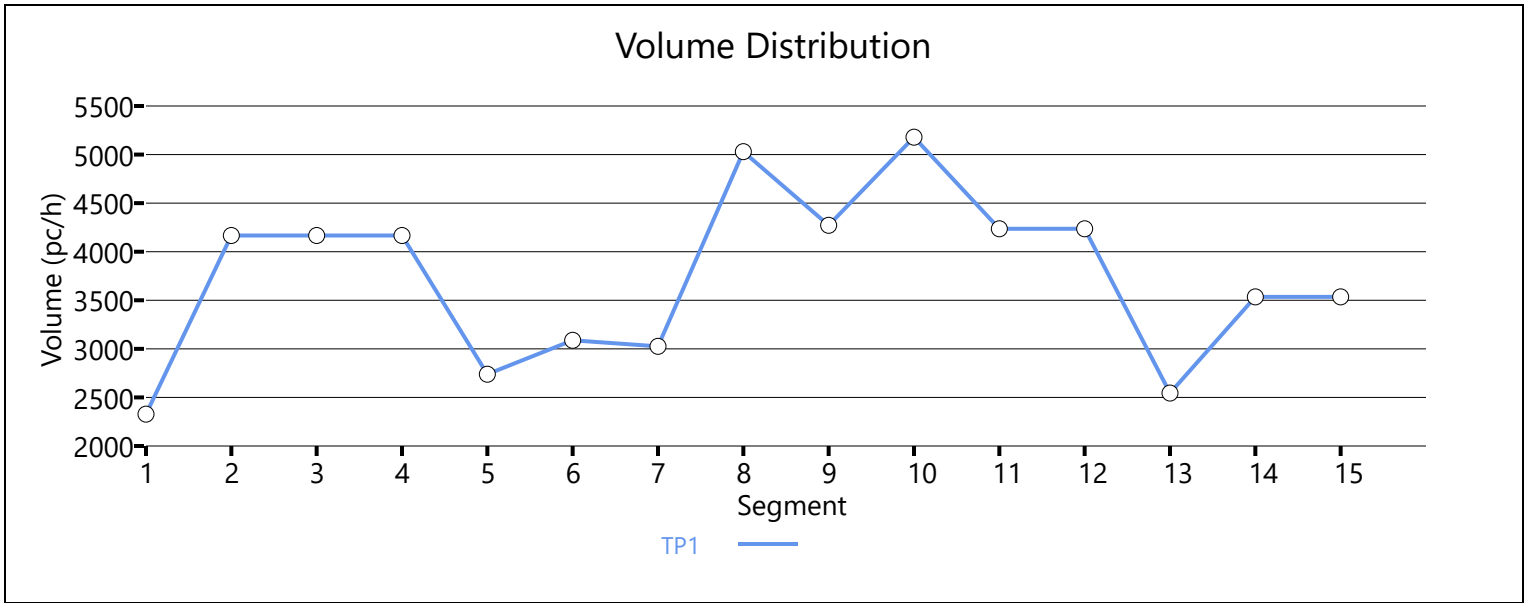
2050 Alternative 2 & 6

AM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.962	0.971	4167	1839	4550	1839	0.92	1.25	53.8	53.8	38.7	34.7	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4167		4612		0.93		57.3		36.4		E
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2739		4612		0.63		67.4		20.2		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3088	362	4550	1839	0.68	0.20	59.8	59.8	25.8	20.1	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3026		4612		0.77		66.3		22.6		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5030	2295	6824	3872	0.74	0.59	59.3	57.6	28.3	25.2	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4272		6917		0.83		22.0		64.6		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5179	1586	6970	1936	1.05	0.82	21.5	45.7	80.2	36.0	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.17		15.4		91.8		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2545		4612		1.16		66.7		18.7		F
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3535		4612		1.40		63.7		27.7		F
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	30.3				54.2				47.0				12.20		F
Facility Overall Results															
Space Mean Speed, mi/h					30.3					Density, veh/mi/ln					47.0
Average Travel Time, min					12.20					Density, pc/mi/ln					54.2
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 15. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
Comments															



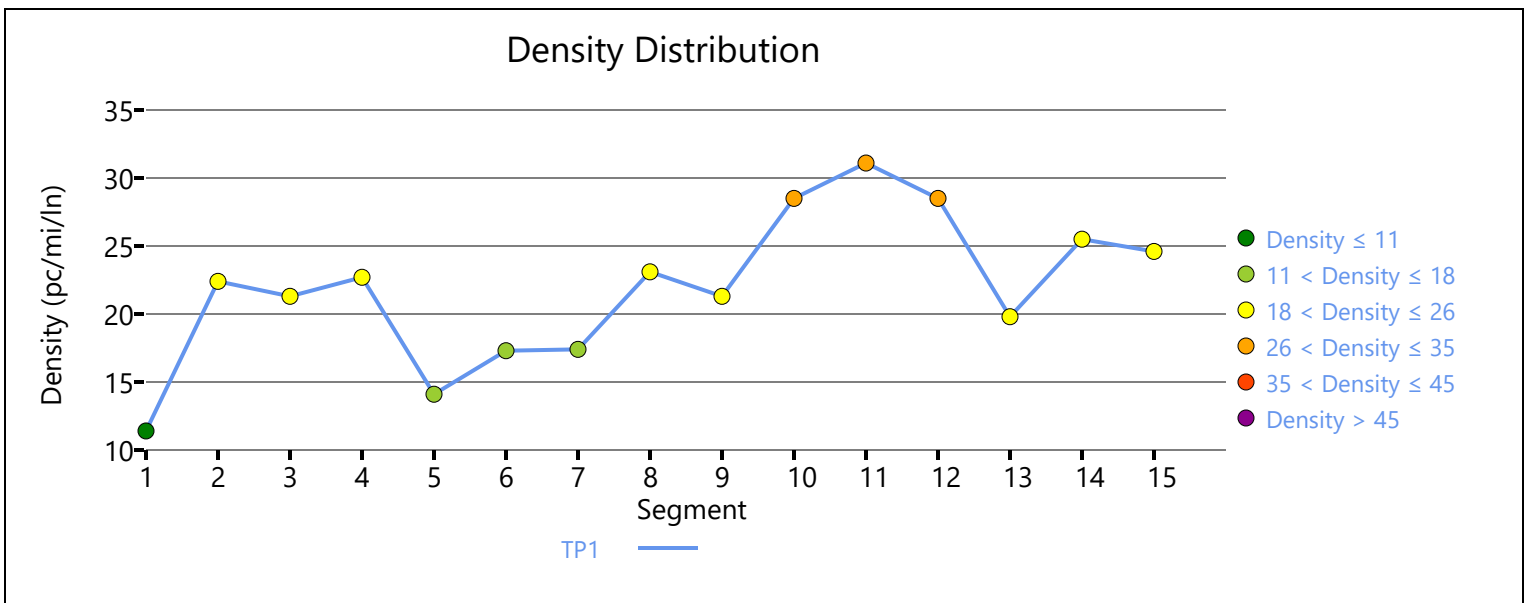
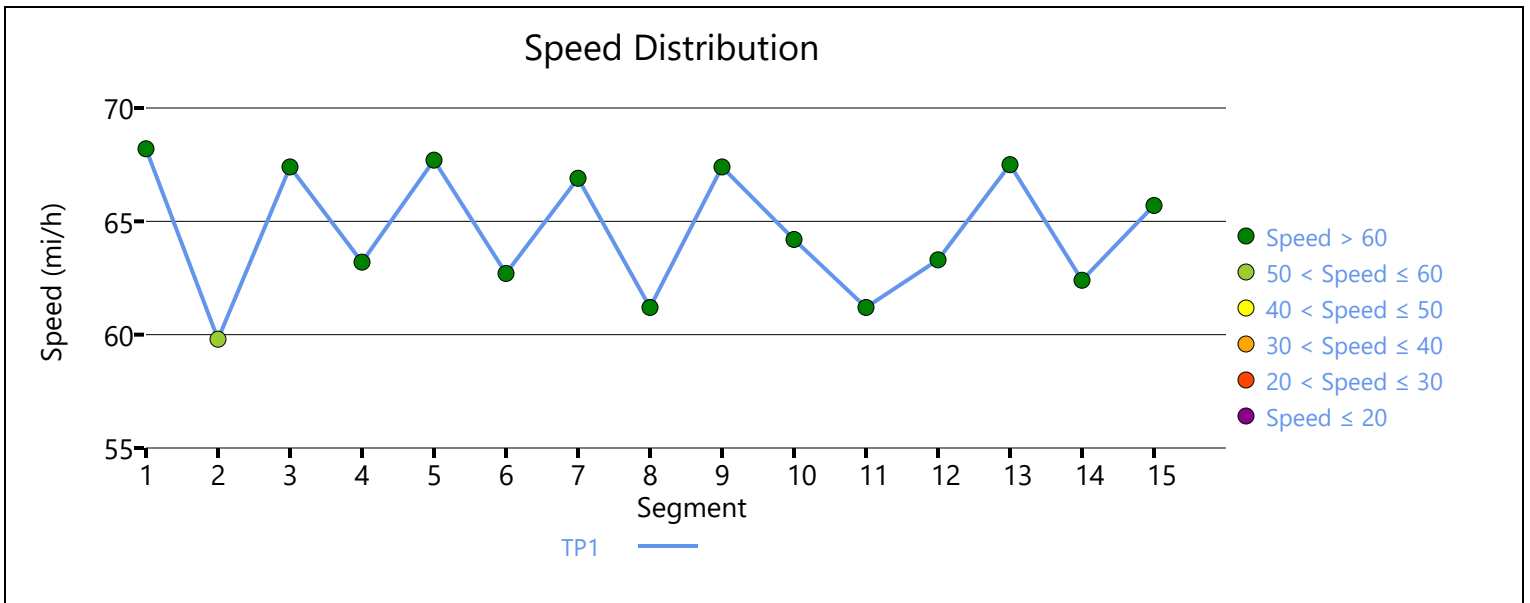
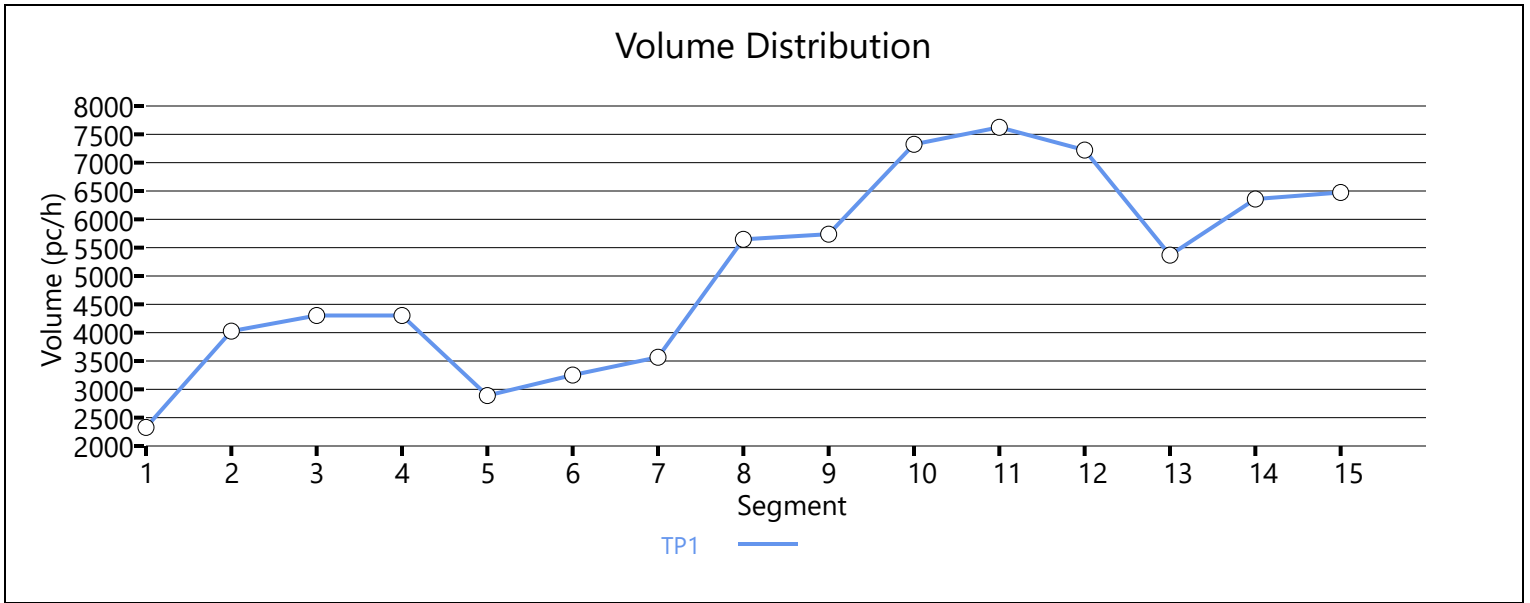
2050 Alternative 2 & 6

AM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		67.7		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3252	362	6824	1839	0.48	0.20	62.7	61.2	17.3	12.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3566		6917		0.52		66.9		17.4		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5647	2295	9099	3872	0.62	0.59	61.2	58.6	23.1	23.4	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		5738		9223		0.62		67.4		21.3		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	7324	1586	9293	1936	0.79	0.82	64.2	60.4	28.5	26.3	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00		0.781		7624		9223		0.83		61.2		31.1		D
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	7222	1691	9099	2033	0.79	0.83	63.3	57.7	28.5	32.3	D
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		5368		9223		0.58		67.5		19.8		C
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6358	990	9099	2033	0.70	0.49	62.4	60.6	25.5	20.9	C
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		6474		9223		0.70		65.7		24.6		C
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	63.9		24.1		21.2		5.80		C						
Facility Overall Results															
Space Mean Speed, mi/h					63.9			Density, veh/mi/ln			21.2				
Average Travel Time, min					5.80			Density, pc/mi/ln			24.1				
Messages															
WARNING 1					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
Comments															



2050 Alternative 2 & 6

PM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		67.4		17.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	2939	502	4550	1839	0.65	0.27	60.2	60.2	24.4	18.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2939		4612		0.67		66.4		21.9		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4242	1303	6824	3872	0.62	0.34	61.8	60.4	22.9	18.8	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4242		6917		0.65		67.5		20.9		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5055	813	6970	1936	0.73	0.42	64.6	62.6	26.1	23.1	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		26.2		53.9		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	2615	4612	0.74	66.7	19.2	C

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS						
1	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3589	4612	0.97	63.2	28.4	D

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	47.2	33.5	30.7	7.80	F

Facility Overall Results

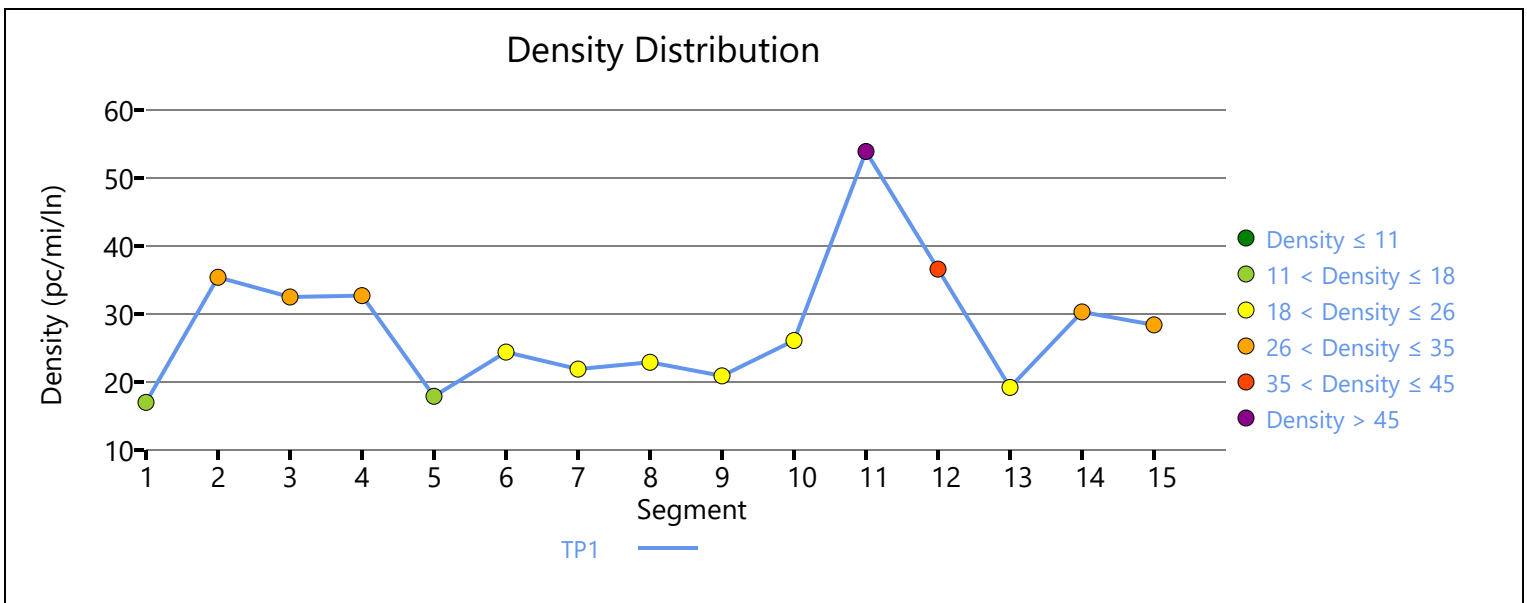
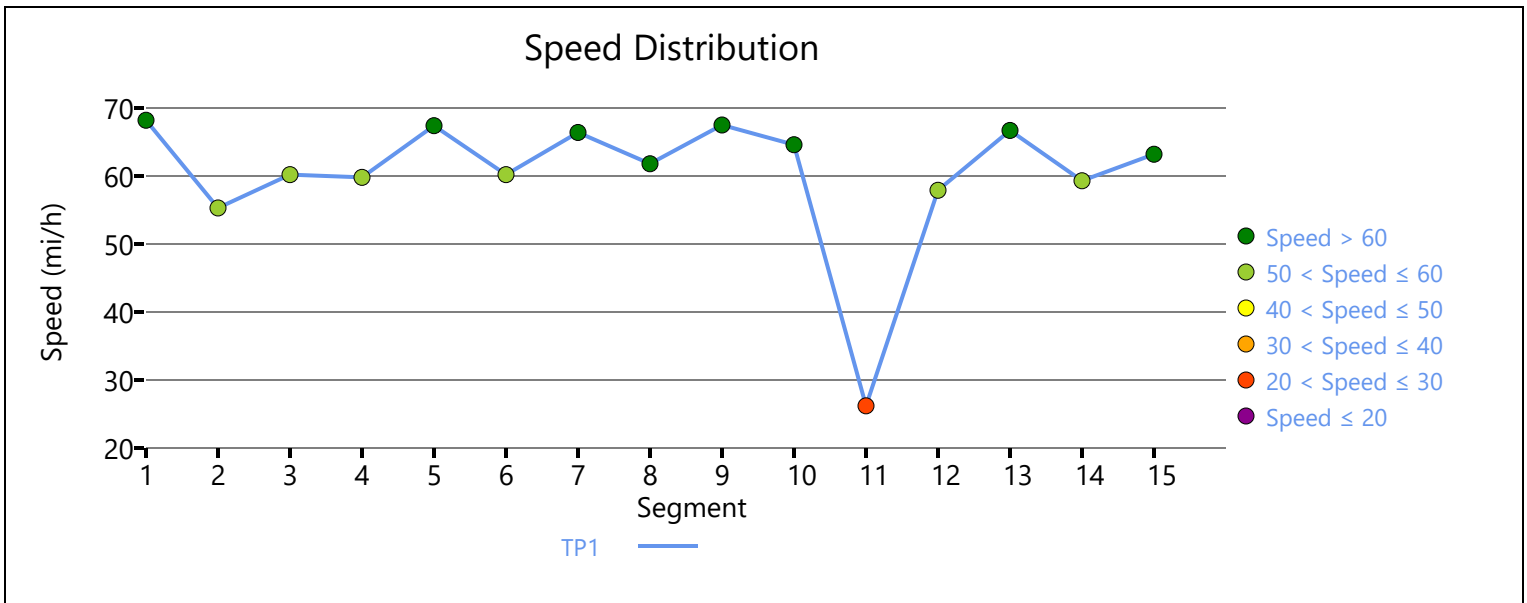
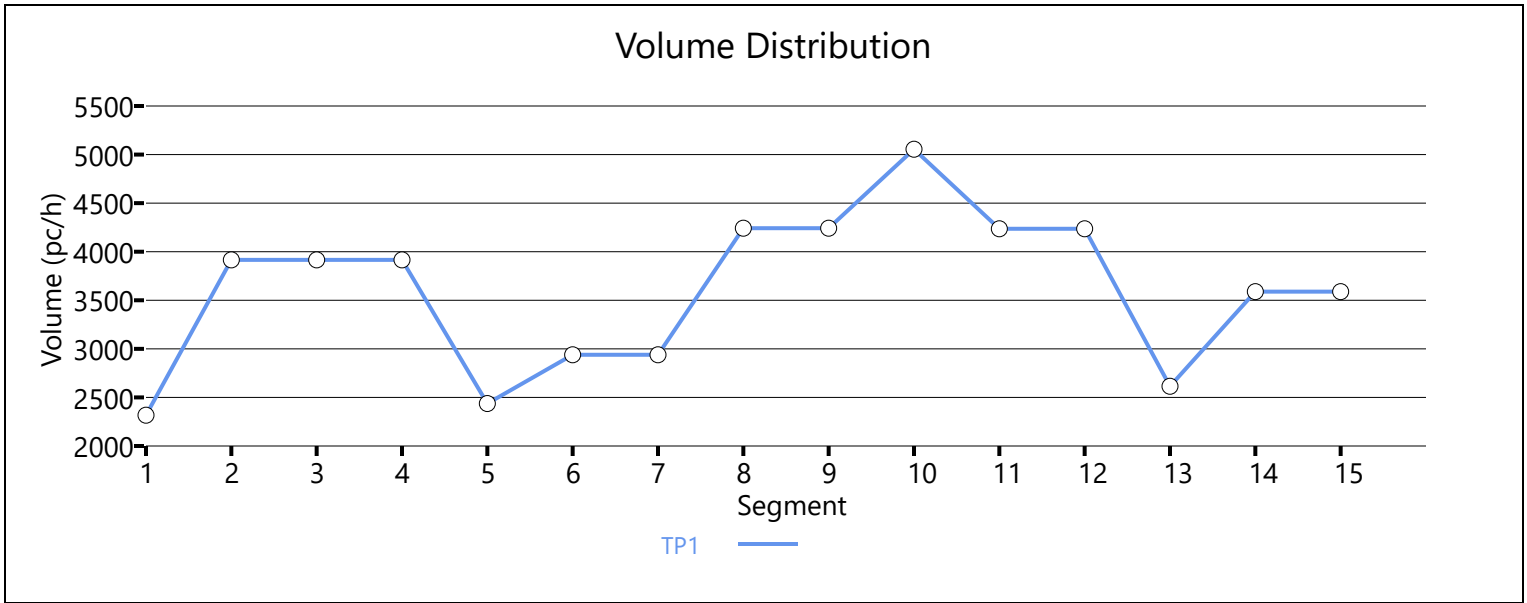
Space Mean Speed, mi/h	47.2	Density, veh/mi/ln	30.7
Average Travel Time, min	7.80	Density, pc/mi/ln	33.5

Messages

WARNING 1 Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.

Comments

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2050 Alternative 2 & 6

PM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		67.7		12.3		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	3026	502	6824	1839	0.44	0.27	62.9	61.3	16.0	12.0	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3073		6917		0.44		67.0		15.0		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4192	1303	9099	3872	0.46	0.34	63.5	61.3	16.5	14.7	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4485		9223		0.49		68.1		16.4		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5298	813	9293	1936	0.57	0.42	67.5	64.7	19.6	16.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3426	9223	0.37	67.5	12.6	B

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS							
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	4456	9223	0.48	68.1	16.3	B

Facility Analysis Results

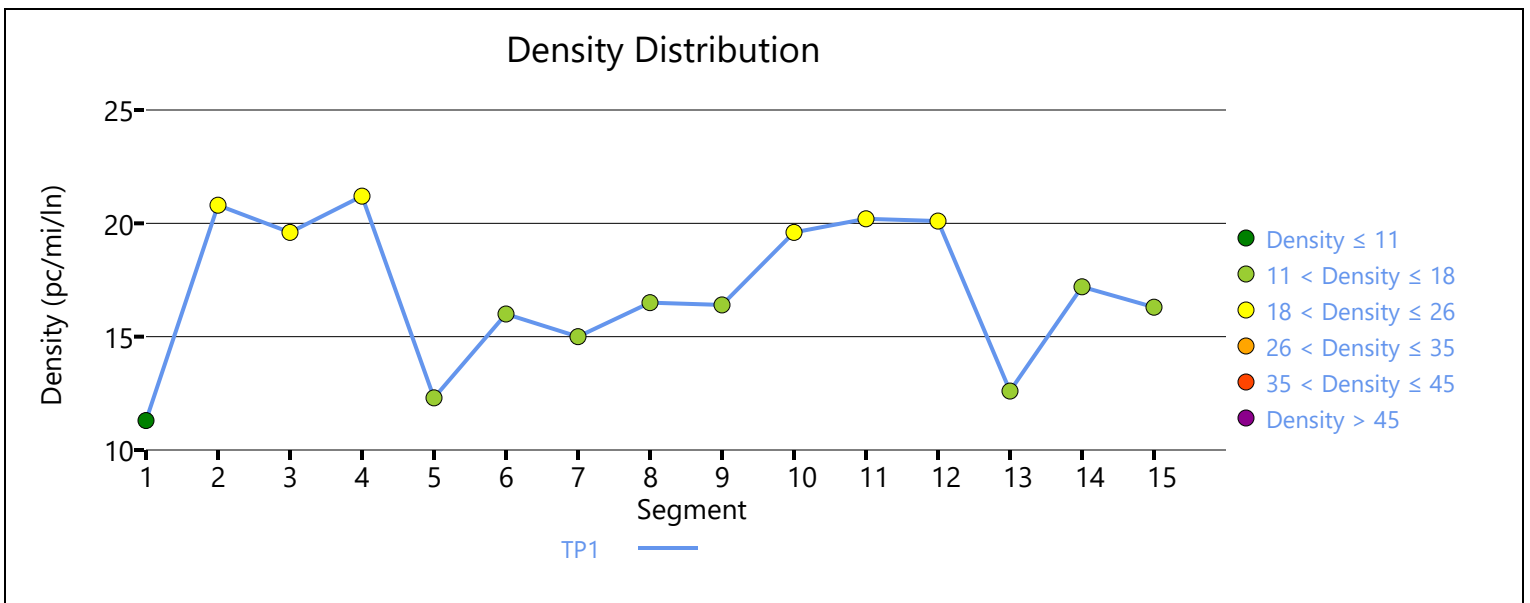
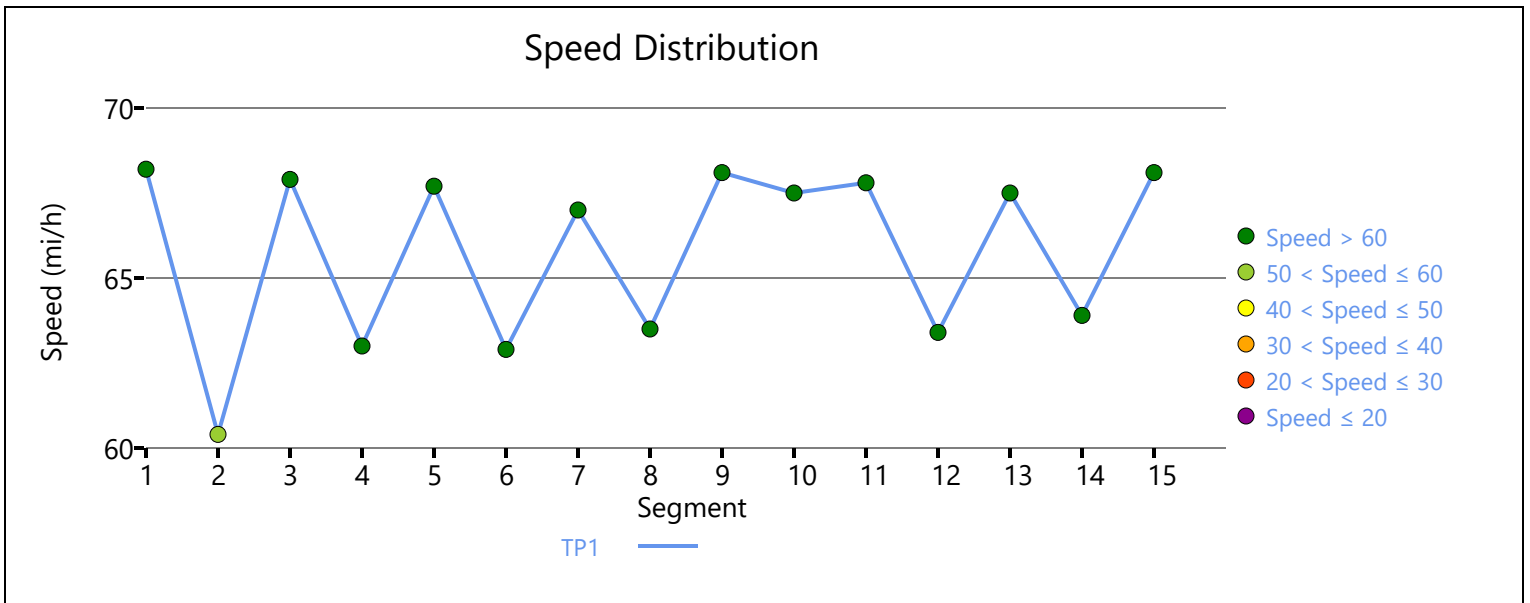
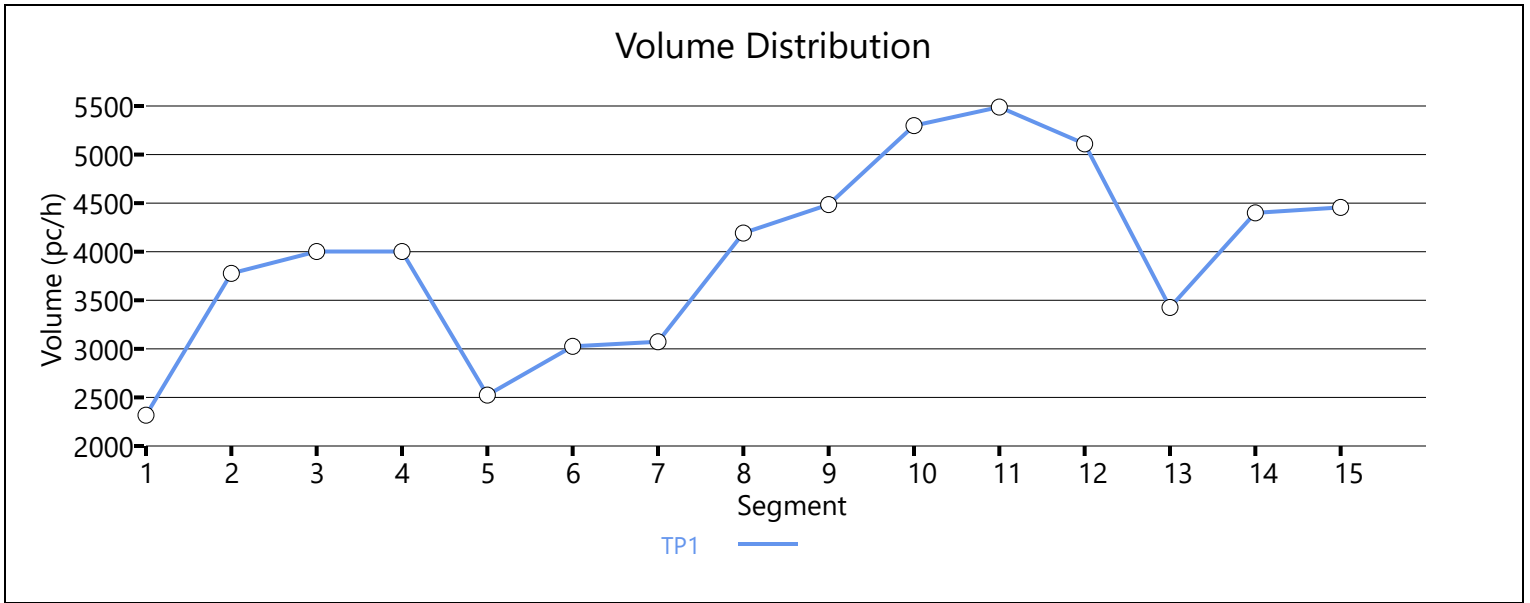
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.5	17.7	16.4	5.60	B

Facility Overall Results

Space Mean Speed, mi/h	66.5	Density, veh/mi/ln	16.4
Average Travel Time, min	5.60	Density, pc/mi/ln	17.7

Messages

Comments



2050 Alternative 2

LPR CD as Add and WWT as Merge AM Peak Hour

(6-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 2 Geometry w/ CD Road
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	14
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	2900	2
6	Basic	Basic	WB Btw Long Point On Ramps	320	2
7	Merge	Merge	WB Merge - Long Point On Ramp	1500	3
8	Basic	Basic	WB btw LPR and WWT ramp	3800	3
9	Merge	Merge	WB new WWT ramp	1500	3
10	Basic	Basic	WB - Long Point to Truck Climbing Lane	7365	3
11	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
12	Basic	Basic	WB Btw Off and On Ramps	920	2
13	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
14	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

Segment 1: Basic

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2328		4612		0.50		68.2		17.1		B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4167	1839	4550	1839	0.92	1.25	53.8	53.8	38.7	34.7	D

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4167		4612		0.93		57.3		36.4		E
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2739		4612		0.63		67.8		20.2		C
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2680		4612		0.69		67.9		19.7		C
Segment 7: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5018	2629	6824	3872	0.74	0.68	58.6	56.9	28.5	26.1	C
Segment 8: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4261		6917		0.83		22.1		64.3		F
Segment 9: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5179	1586	6970	1936	1.05	0.82	21.5	45.7	80.2	36.0	F
Segment 10: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.17		15.4		91.8		F
Segment 11: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 12: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2545		4612		1.16		66.7		18.7		F

Segment 13: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F

Segment 14: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	3535	4612	1.40	63.7	27.7	F

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	30.3	54.0	46.7	12.20	F

Facility Overall Results

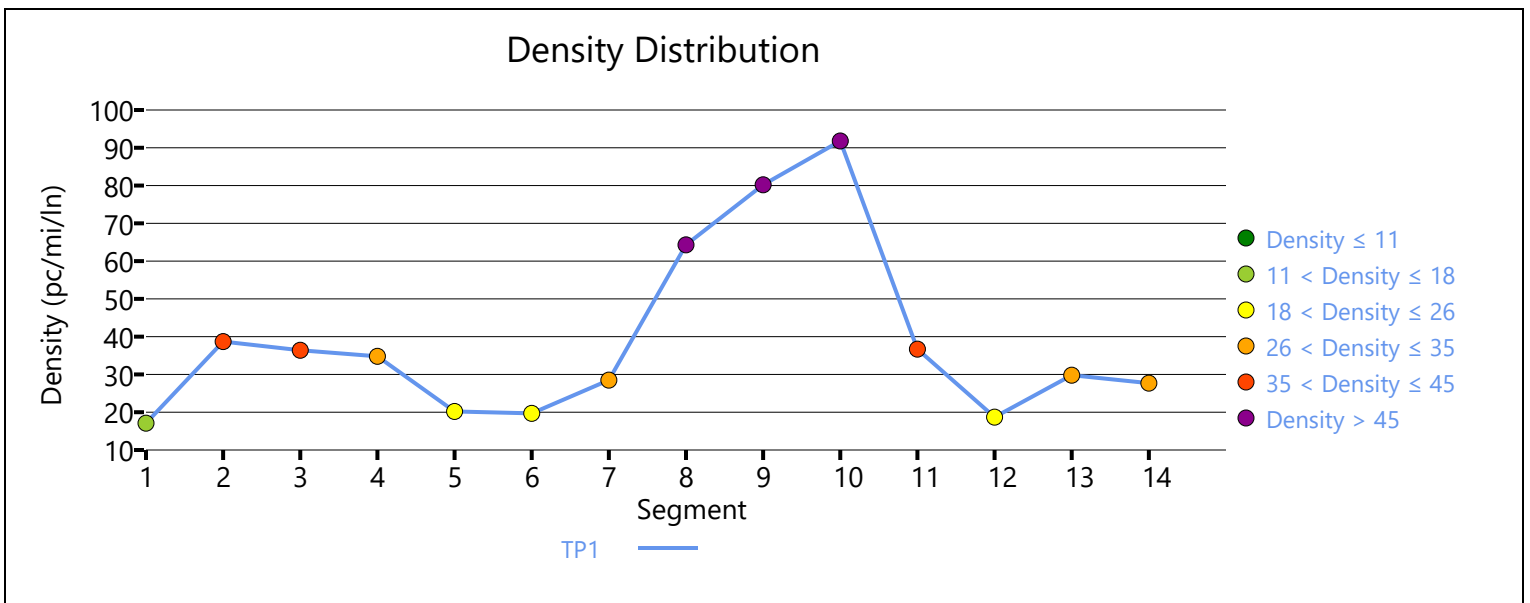
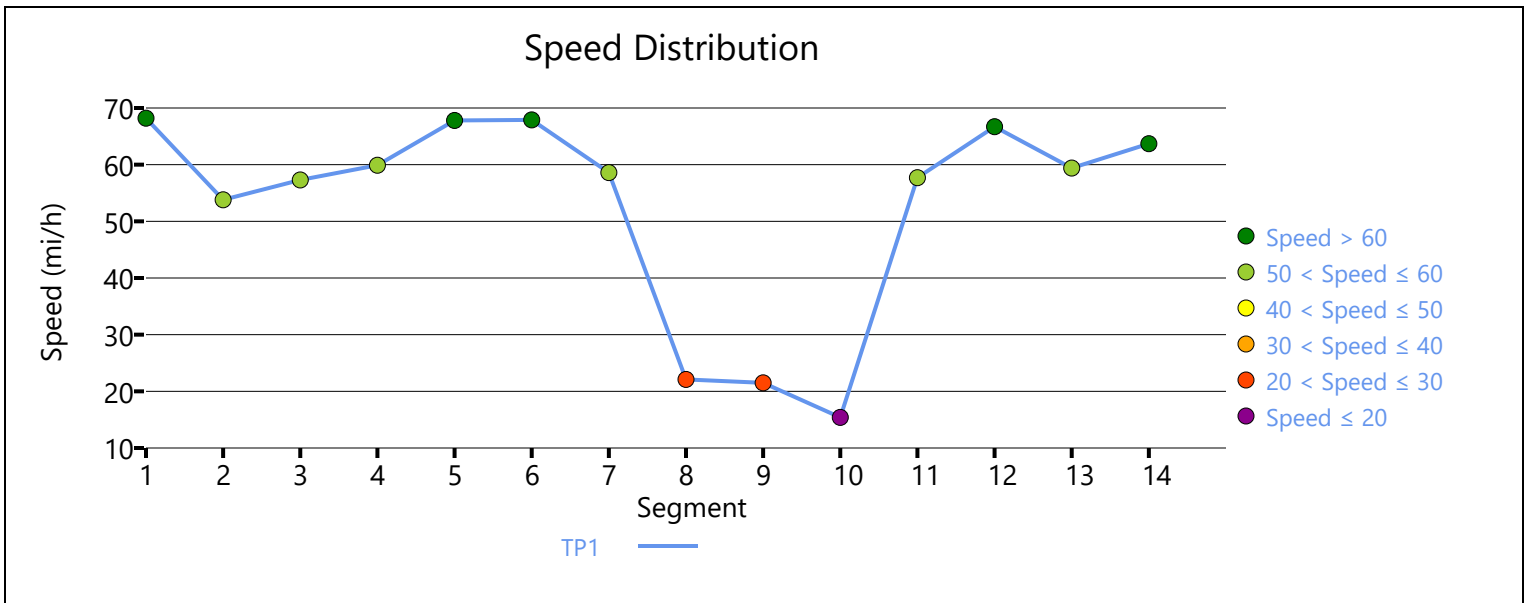
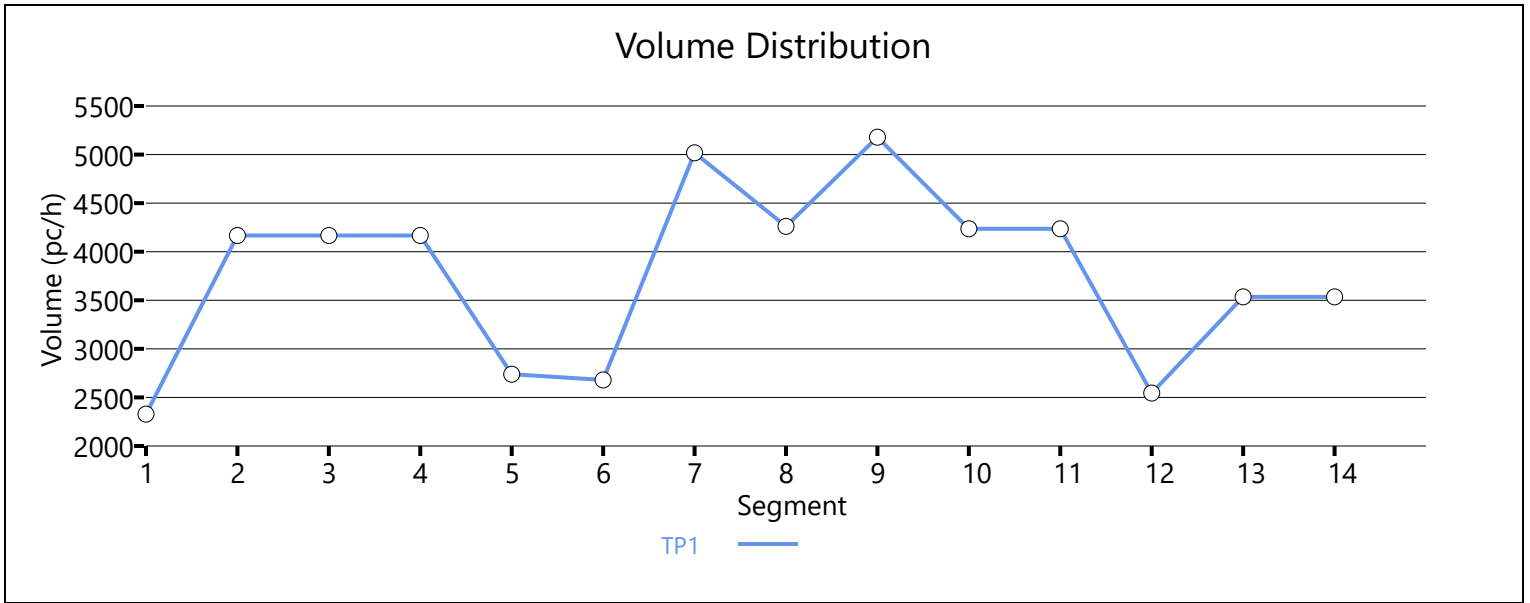
Space Mean Speed, mi/h	30.3	Density, veh/mi/ln	46.7
Average Travel Time, min	12.20	Density, pc/mi/ln	54.0

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 14. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Merge capacity is less than merge demand for analysis period 1 on segment 2.

Comments

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2050 Alternative 2

LPR CD as Add and WWT as Merge AM Peak Hour

(8-lane Freeway)

HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 2 Geometry w/ CD Road 8-Lane
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	14
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	3
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	3
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	3
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	3
5	Basic	Basic	WB - Long Point btw Off and On Ramp	2900	3
6	Basic	Basic	WB Btw Long Point On Ramps	320	3
7	Merge	Merge	WB Merge - Long Point On Ramp	1500	4
8	Basic	Basic	WB btw LPR and WWT ramp	3800	4
9	Merge	Merge	WB new WWT ramp	1500	4
10	Basic	Basic	WB - Long Point to Truck Climbing Lane	7365	4
11	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	4
12	Basic	Basic	WB Btw Off and On Ramps	920	4
13	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	4
14	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	4

Facility Segment Data

Segment 1: Basic

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2328		6917		0.34		68.2		11.4		B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		68.1		14.1		B
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3170		6917		0.46		68.2		15.5		B
Segment 7: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5608	2629	9099	3872	0.62	0.68	60.4	57.8	23.2	24.7	C
Segment 8: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		5738		9223		0.62		67.4		21.3		C
Segment 9: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	7324	1586	9293	1936	0.79	0.82	64.2	60.4	28.5	26.3	C
Segment 10: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00		0.781		7624		9223		0.83		61.2		31.1		D
Segment 11: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	7222	1691	9099	2033	0.79	0.83	63.3	57.7	28.5	32.3	D
Segment 12: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		5368		9223		0.58		67.5		19.8		C

Segment 13: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6358	990	9099	2033	0.70	0.49	62.4	60.6	25.5	20.9	C

Segment 14: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	6474	9223	0.70	65.7	24.6	C

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	64.0	23.9	21.0	5.80	C

Facility Overall Results

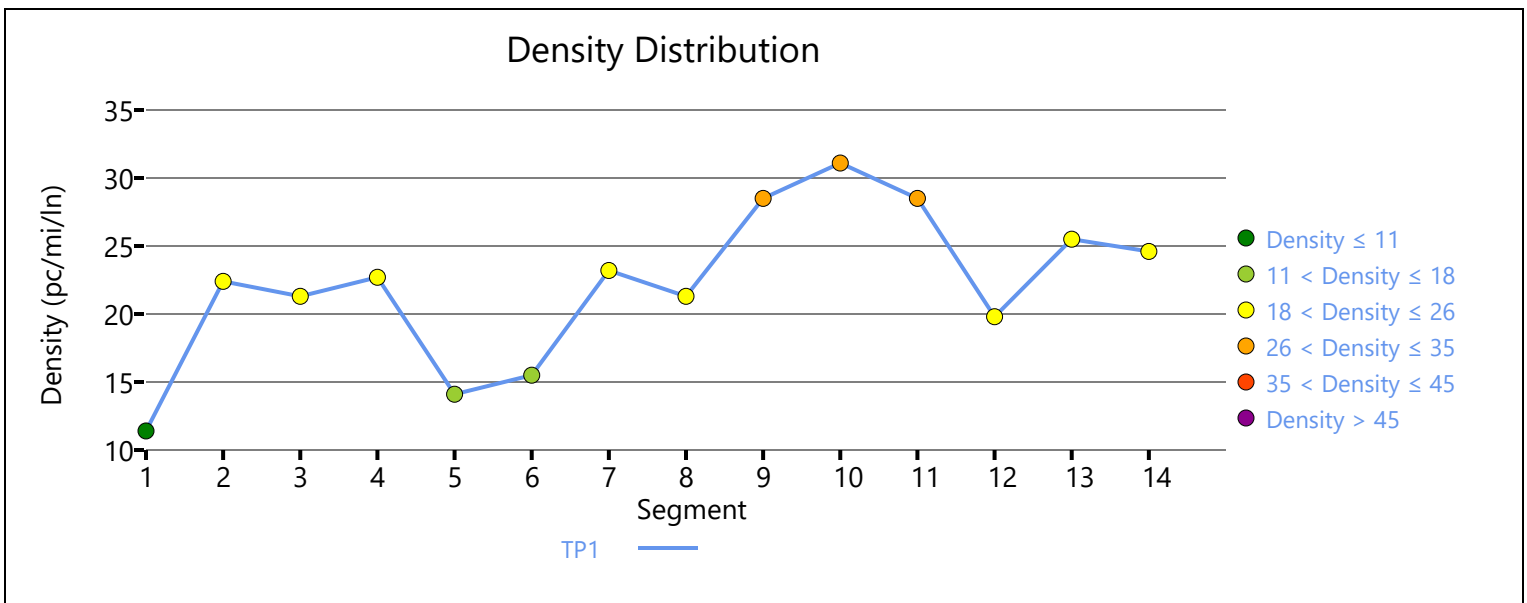
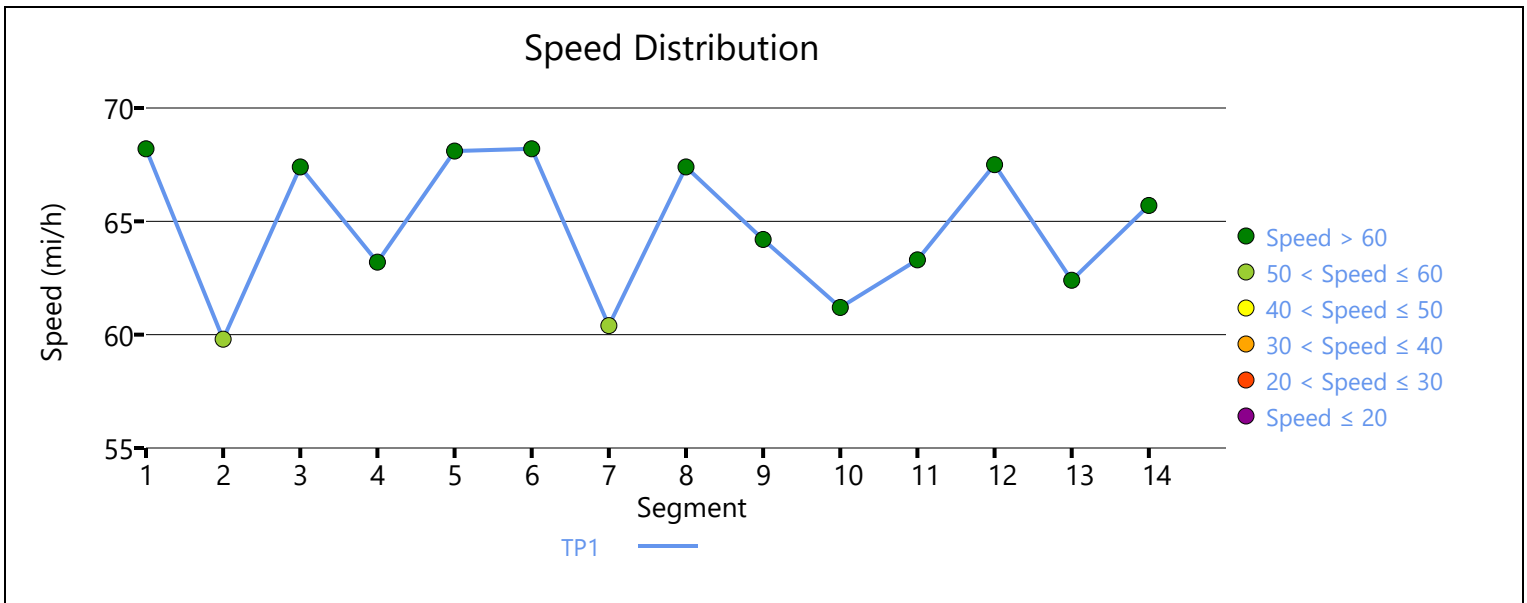
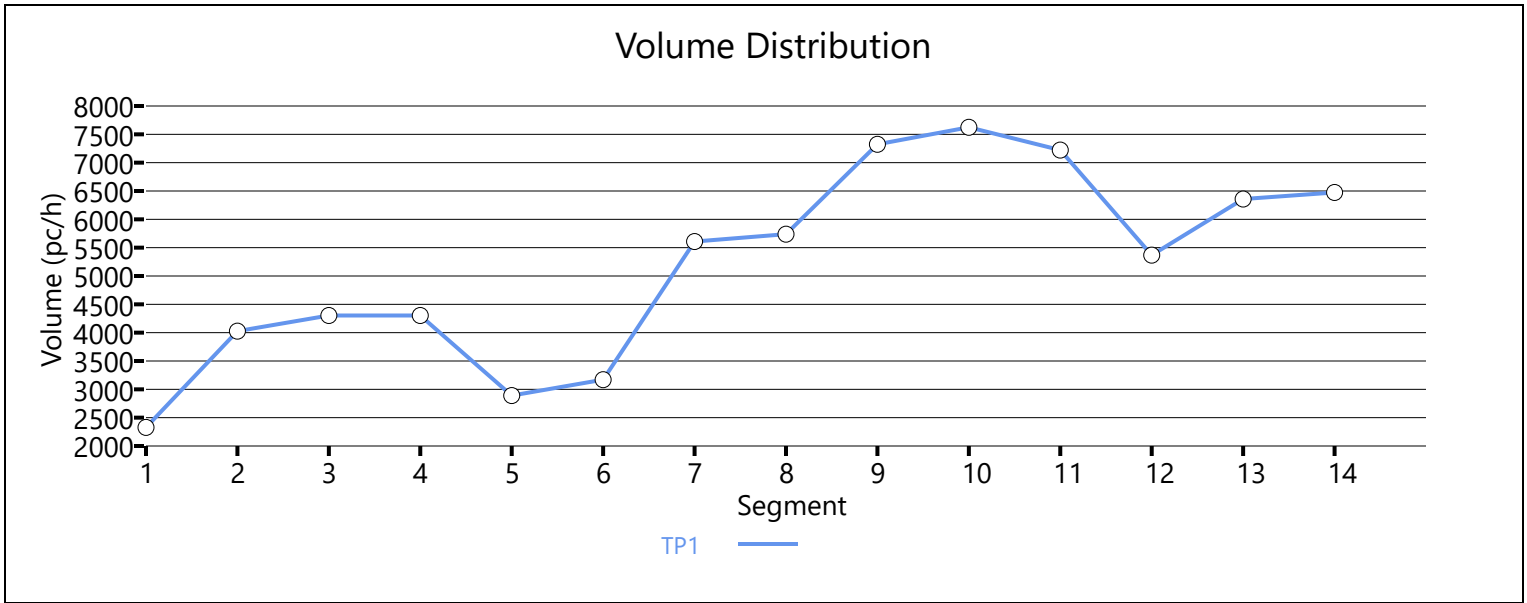
Space Mean Speed, mi/h	64.0	Density, veh/mi/ln	21.0
Average Travel Time, min	5.80	Density, pc/mi/ln	23.9

Messages

WARNING 1	Merge capacity is less than merge demand for analysis period 1 on segment 2.
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Comments

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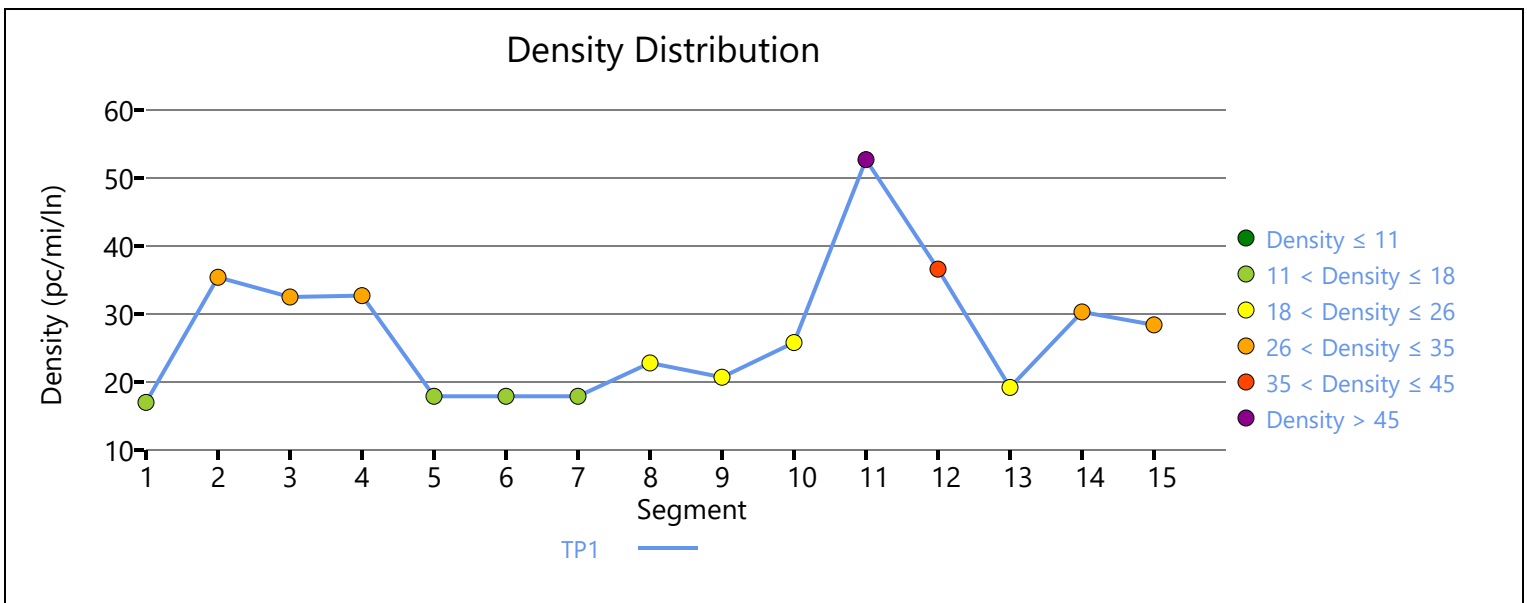
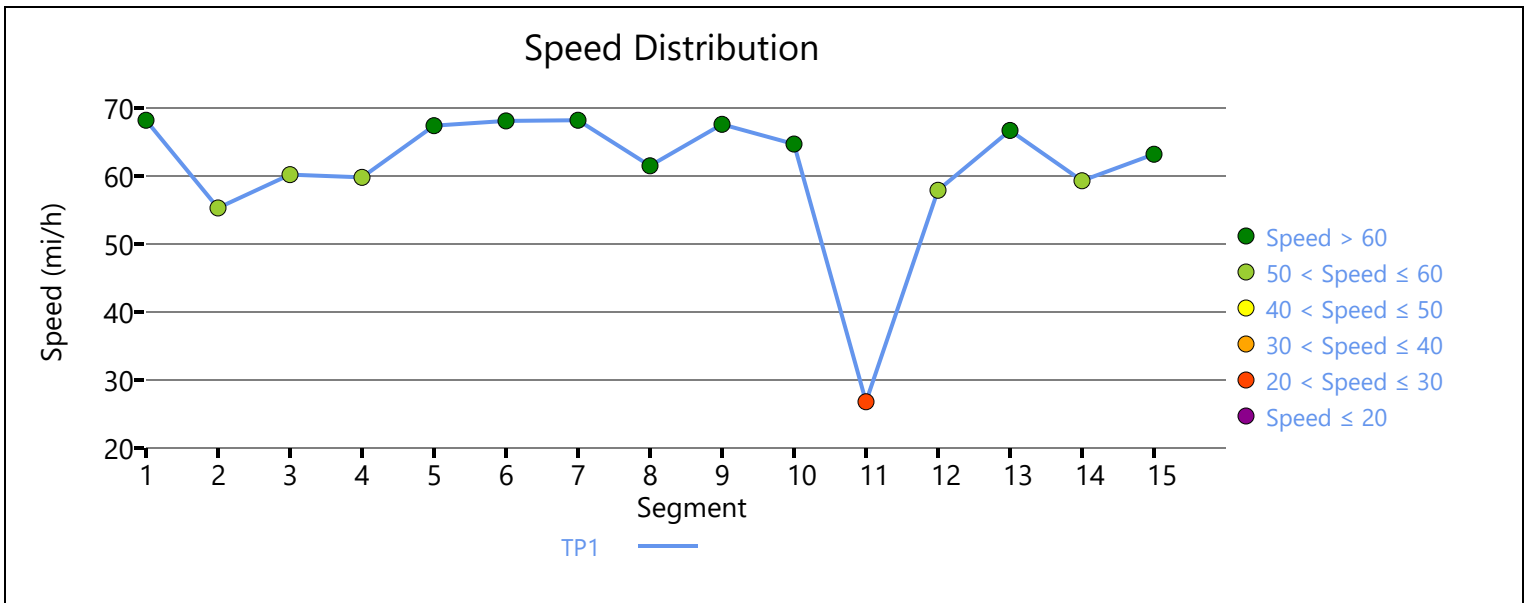
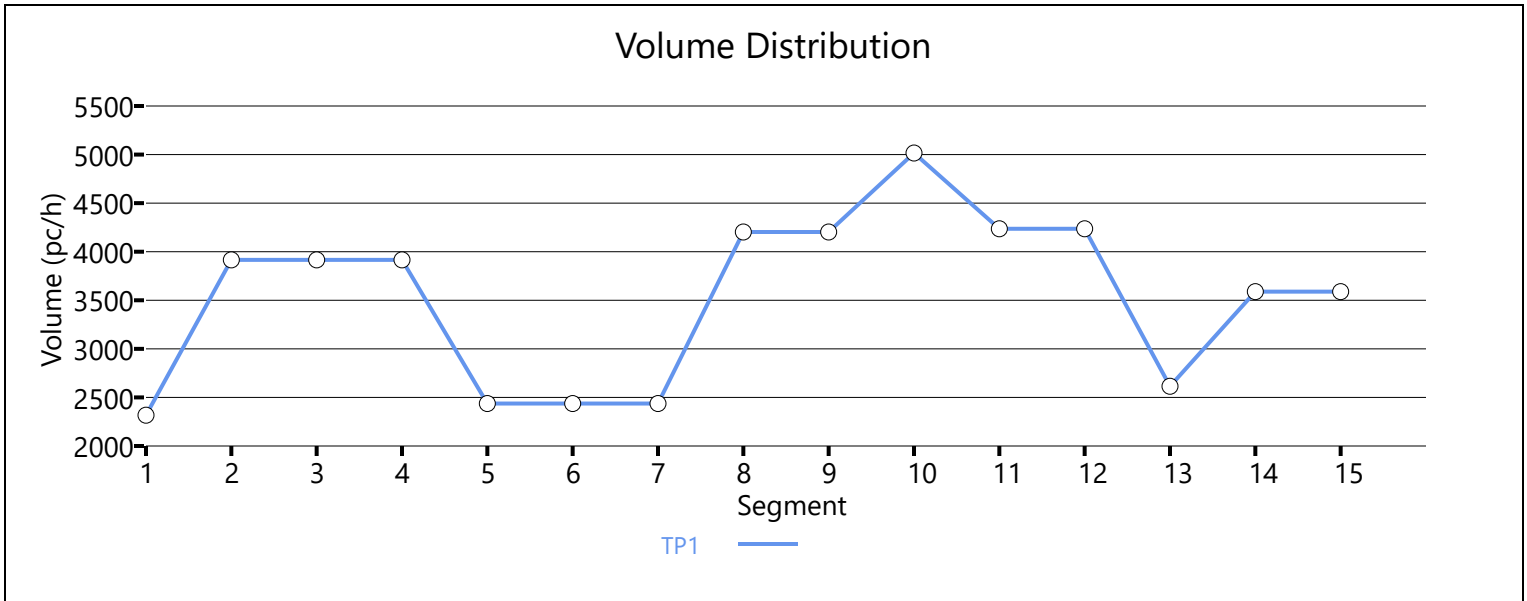
2050 Alternative 2

LPR CD as Add and WWT as Merge PM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		67.4		17.9		B
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		68.1		17.9		B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2437		4612		0.56		68.2		17.9		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4203	1766	6824	3872	0.62	0.46	61.5	60.1	22.8	20.0	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4203		6917		0.65		67.6		20.7		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5016	813	6970	1936	0.72	0.42	64.7	62.7	25.8	23.0	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		26.8		52.7		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		2615		4612		0.74		66.7		19.2		C
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3589		4612		0.97		63.2		28.4		D
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	47.7		32.9		30.1		7.80		F						
Facility Overall Results															
Space Mean Speed, mi/h					47.7			Density, veh/mi/ln				30.1			
Average Travel Time, min					7.80			Density, pc/mi/ln				32.9			
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
Comments															



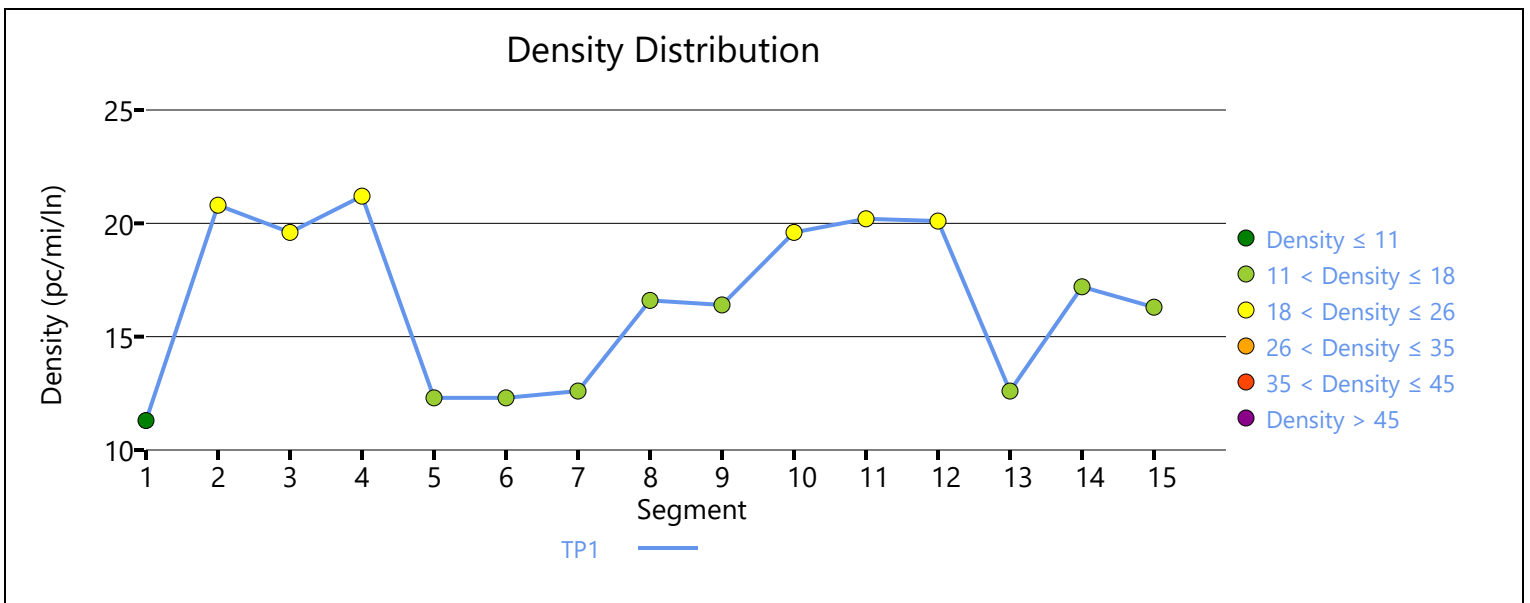
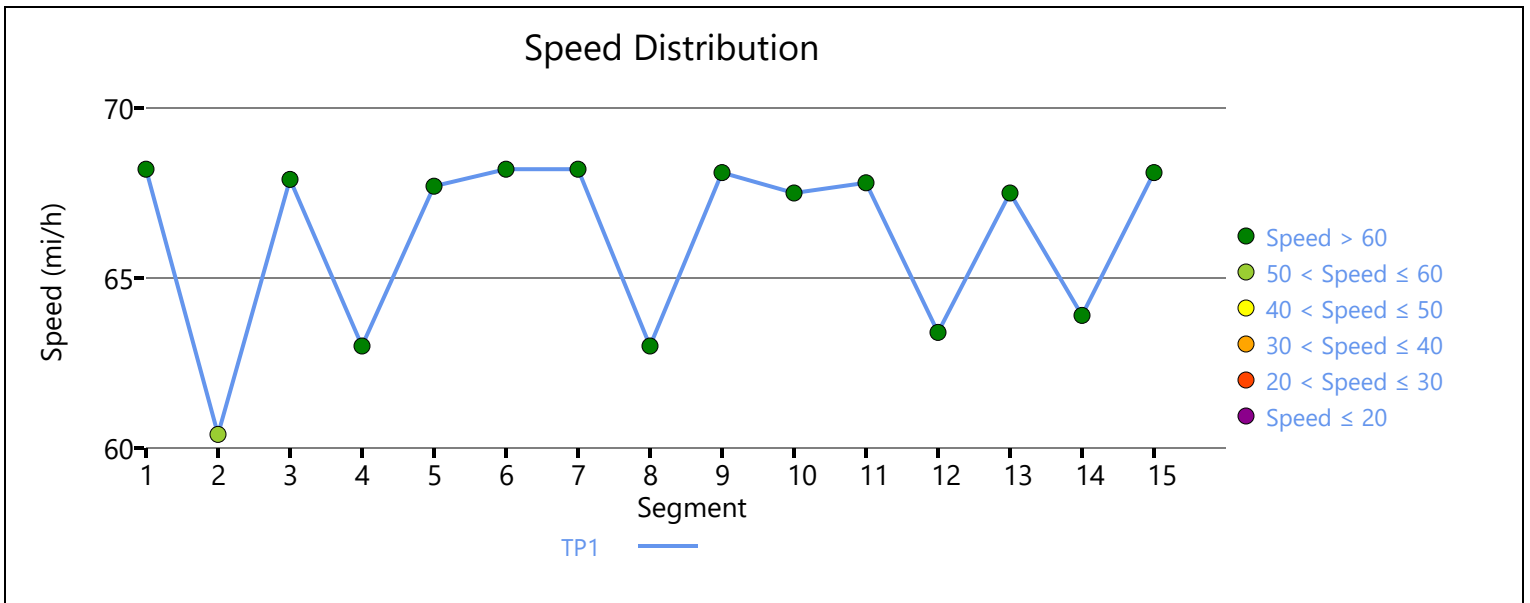
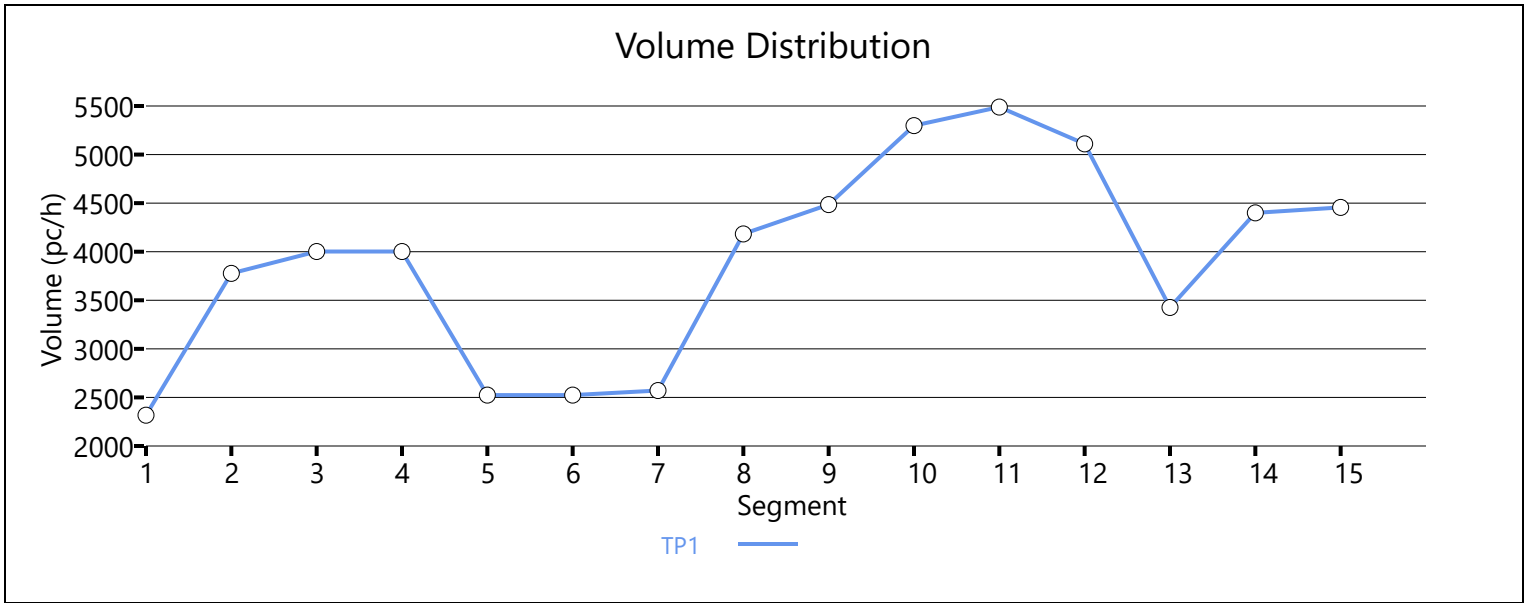
2050 Alternative 2

LPR CD as Add and WWT as Merge PM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		67.7		12.3		B
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		68.2		12.3		B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2571		6917		0.37		68.2		12.6		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4183	1766	9099	3872	0.46	0.46	63.0	60.9	16.6	16.6	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4485		9223		0.49		68.1		16.4		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5298	813	9293	1936	0.57	0.42	67.5	64.7	19.6	16.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	

1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3426		9223		0.37		67.5		12.6		B
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		4456		9223		0.48		68.1		16.3		B
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	66.6		17.5		16.3		5.60		B						
Facility Overall Results															
Space Mean Speed, mi/h					66.6			Density, veh/mi/ln				16.3			
Average Travel Time, min					5.60			Density, pc/mi/ln				17.5			
Messages															
Comments															



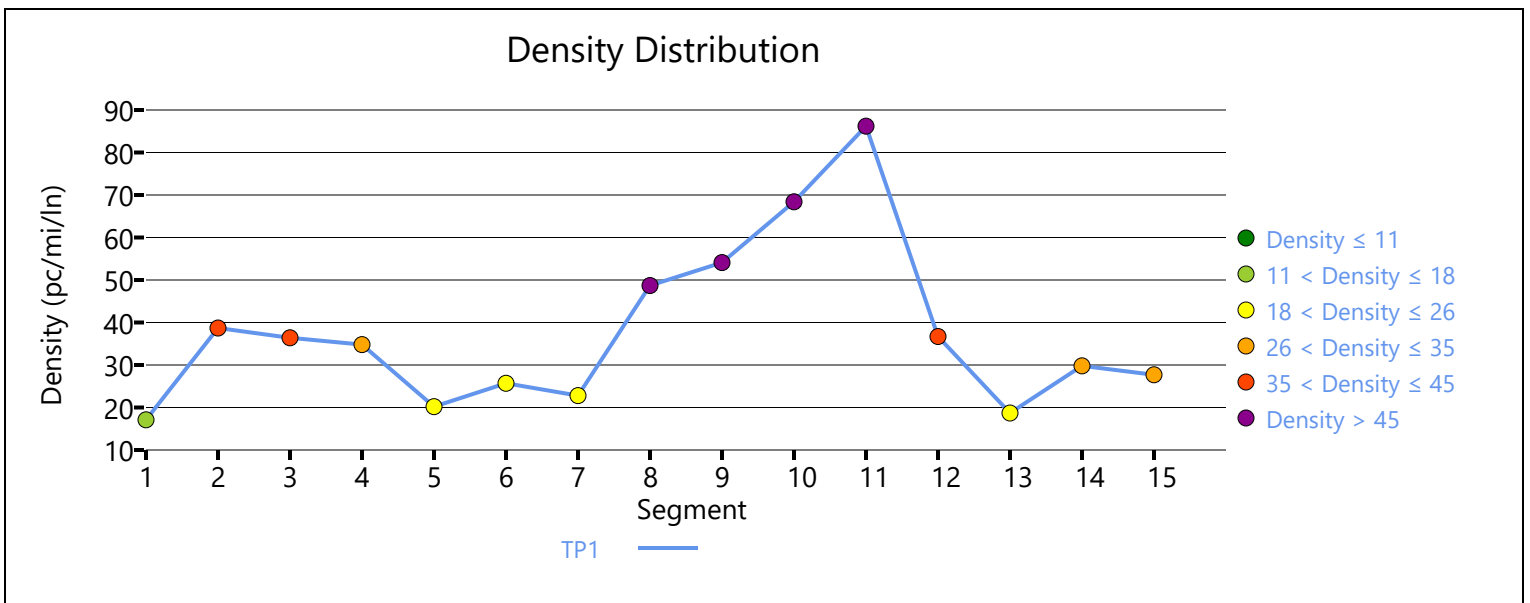
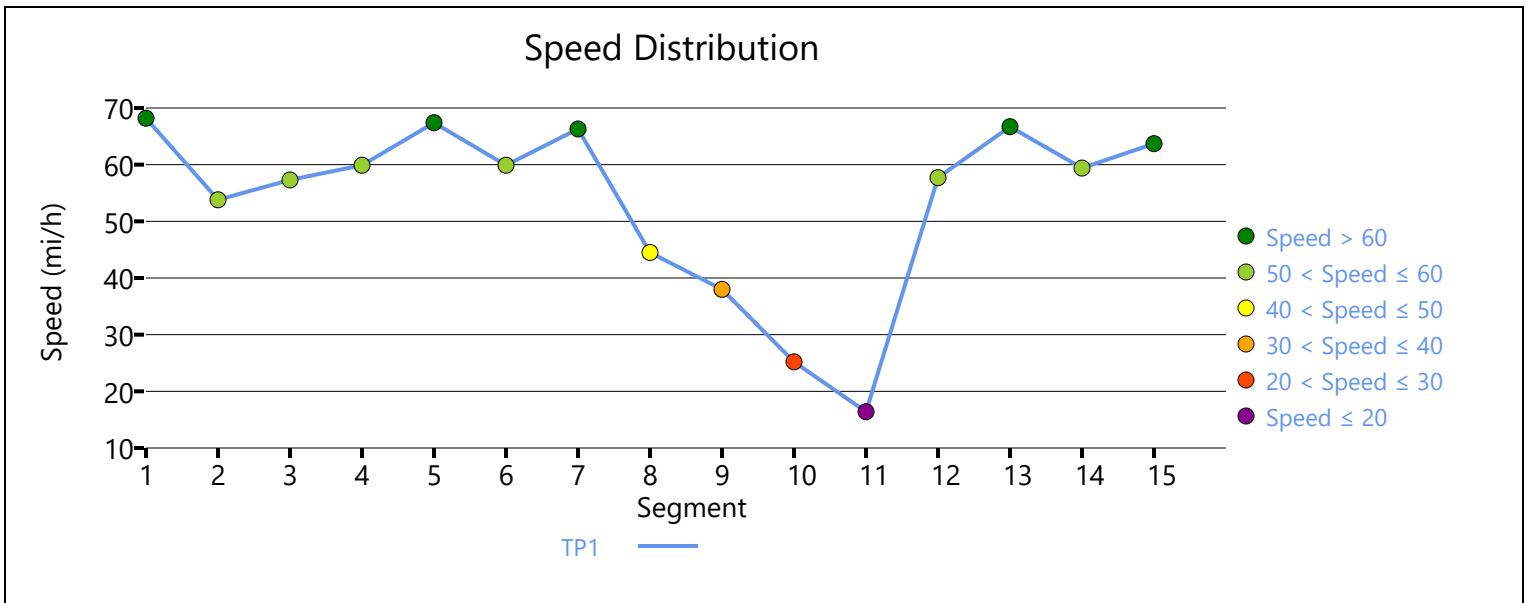
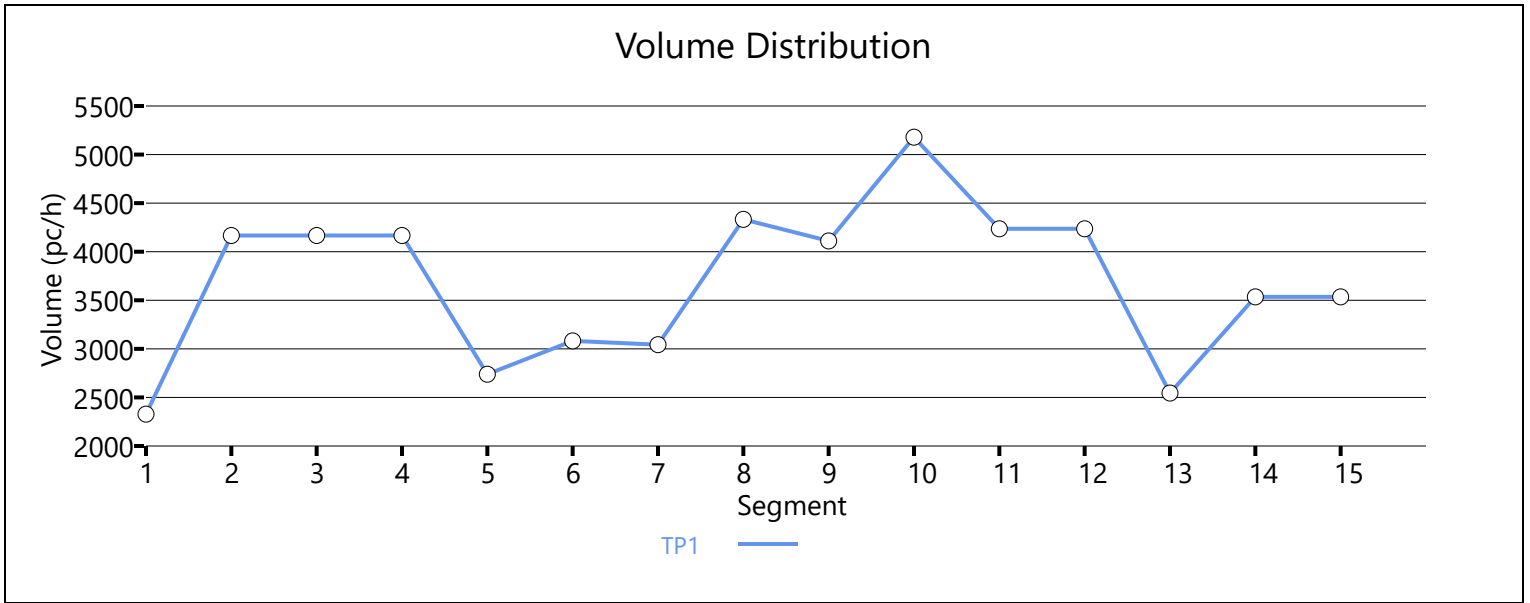
2050 Alternative 2

LPR CD as Merge and WWT as Add AM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.962	0.971	4167	1839	4550	1839	0.92	1.25	53.8	53.8	38.7	34.7	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4167		4612		0.93		57.3		36.4		E
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2739		4612		0.63		67.4		20.2		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3082	362	4550	1839	0.68	0.20	59.9	59.9	25.7	20.0	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3043		4612		0.77		66.3		22.8		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	4333	2295	4550	3872	1.24	0.59	44.5	33.5	48.7	39.1	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4111		4612		1.24		38.0		54.1		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5179	1586	6970	1936	1.05	0.82	25.2	25.2	68.4	68.4	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.17		16.4		86.2		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2545		4612		1.16		66.7		18.7		F
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3535		4612		1.40		63.7		27.7		F
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	34.0		51.6		44.3		10.90		F						
Facility Overall Results															
Space Mean Speed, mi/h					34.0			Density, veh/mi/ln			44.3				
Average Travel Time, min					10.90			Density, pc/mi/ln			51.6				
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 15. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
Comments															



HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 2 Geometry w/ CD Road WWT add lane
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	14
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	2900	2
6	Basic	Basic	WB Btw Long Point On Ramps	320	2
7	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
8	Basic	Basic	WB btw LPR and WWT ramp	3800	2
9	Merge	Basic	WB new WWT ramp	1500	3
10	Basic	Basic	WB - Long Point to Truck Climbing Lane	7365	3
11	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
12	Basic	Basic	WB Btw Off and On Ramps	920	2
13	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
14	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	2328	4612	0.50	68.2	17.1	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4167	1839	4550	1839	0.92	1.25	53.8	53.8	38.7	34.7	D

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4167		4612		0.93		57.3		36.4		E
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2716		4612		0.63		67.8		20.0		C
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2687		4612		0.69		67.9		19.8		C
Segment 7: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	4345	2629	4550	3872	1.23	0.68	43.6	34.6	49.8	38.7	F
Segment 8: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4123		4612		1.24		37.2		55.4		F
Segment 9: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5179	1586	6970	1936	1.05	0.82	24.6	24.6	70.2	70.2	F
Segment 10: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.17		16.2		87.4		F
Segment 11: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 12: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2545		4612		1.16		66.7		18.7		F

Segment 13: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F

Segment 14: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	3535	4612	1.40	63.7	27.7	F

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	33.6	52.0	44.6	11.00	F

Facility Overall Results

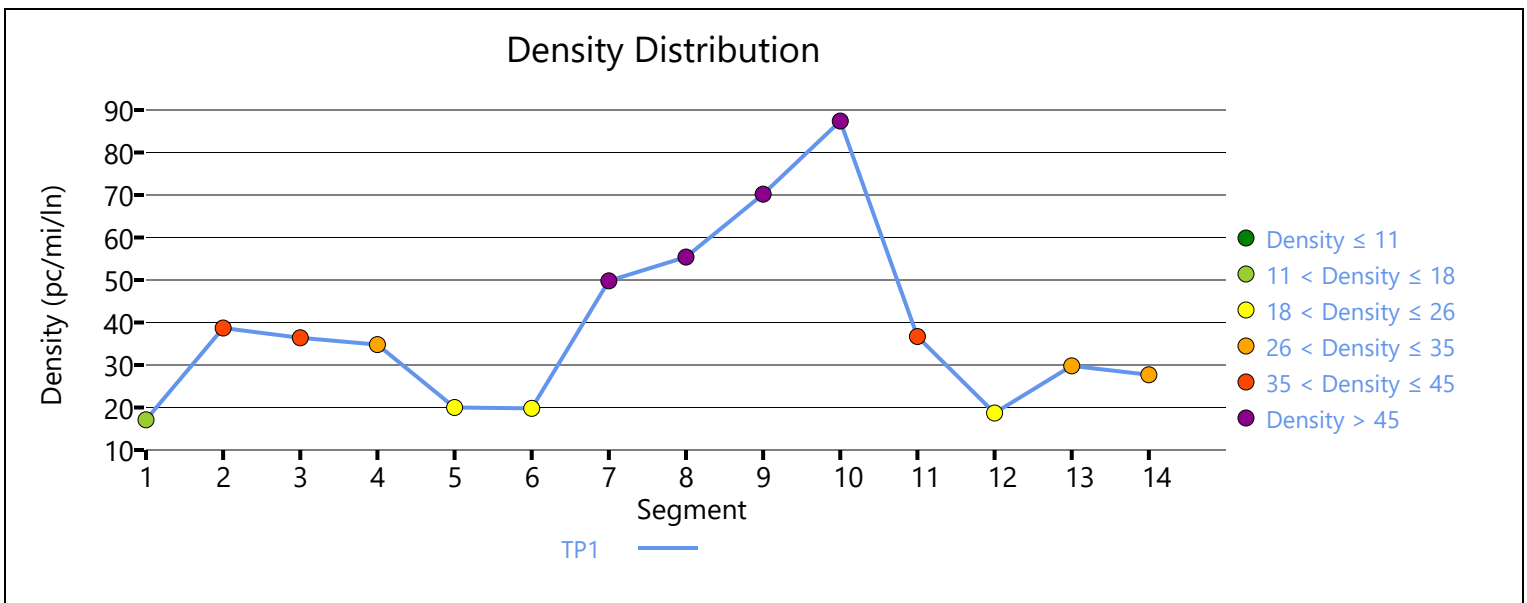
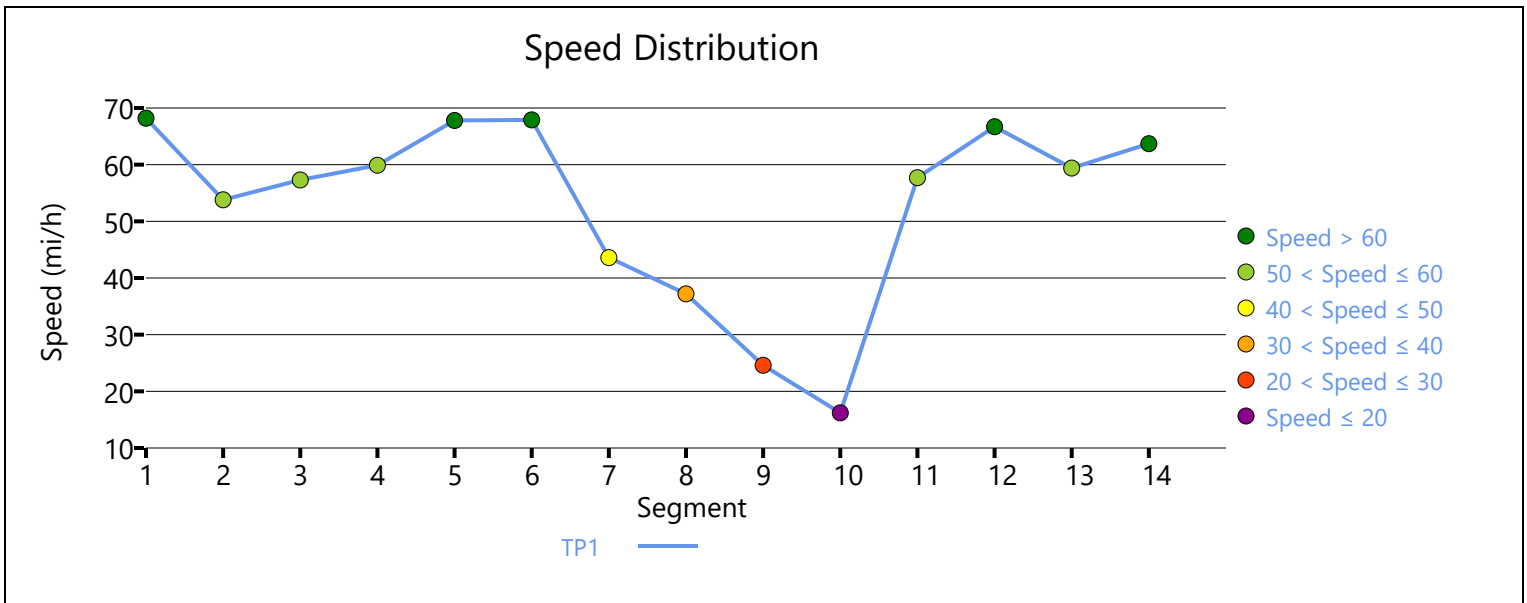
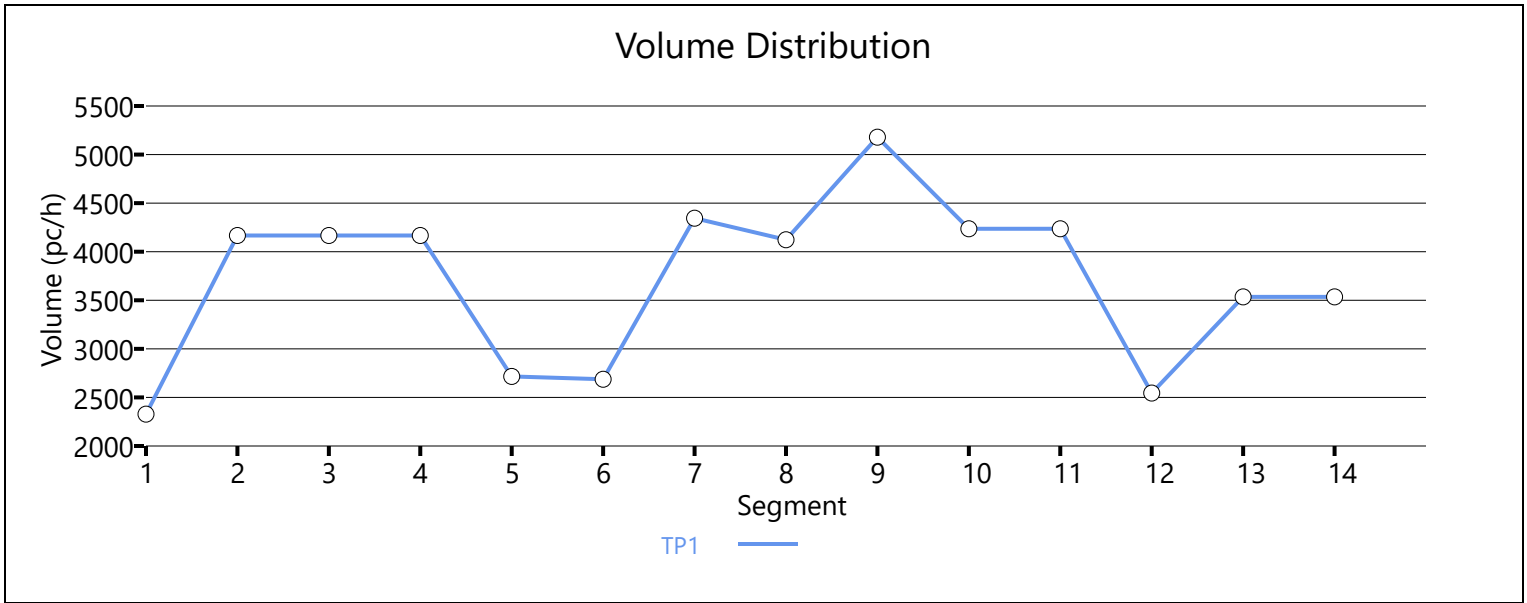
Space Mean Speed, mi/h	33.6	Density, veh/mi/ln	44.6
Average Travel Time, min	11.00	Density, pc/mi/ln	52.0

Messages

WARNING 1	Oversaturated conditions currently exist in boundary segment 14. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 2	Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
WARNING 3	Merge capacity is less than merge demand for analysis period 1 on segment 2.

Comments

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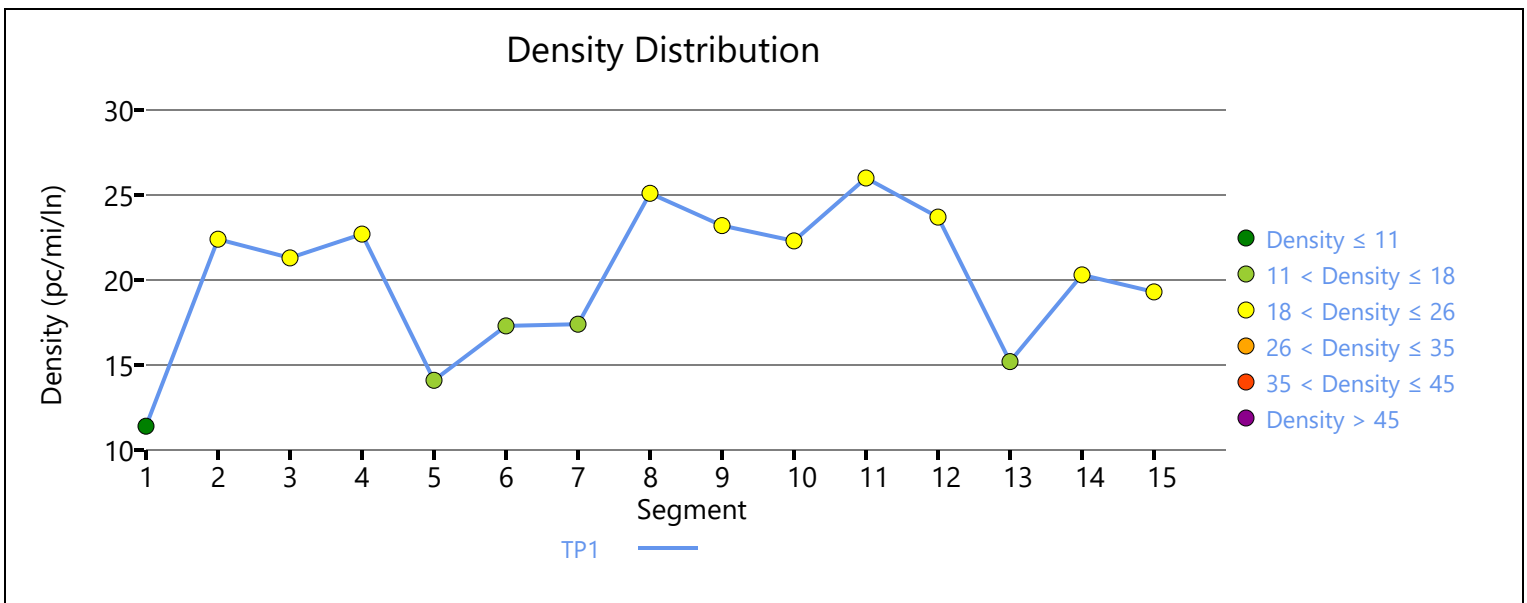
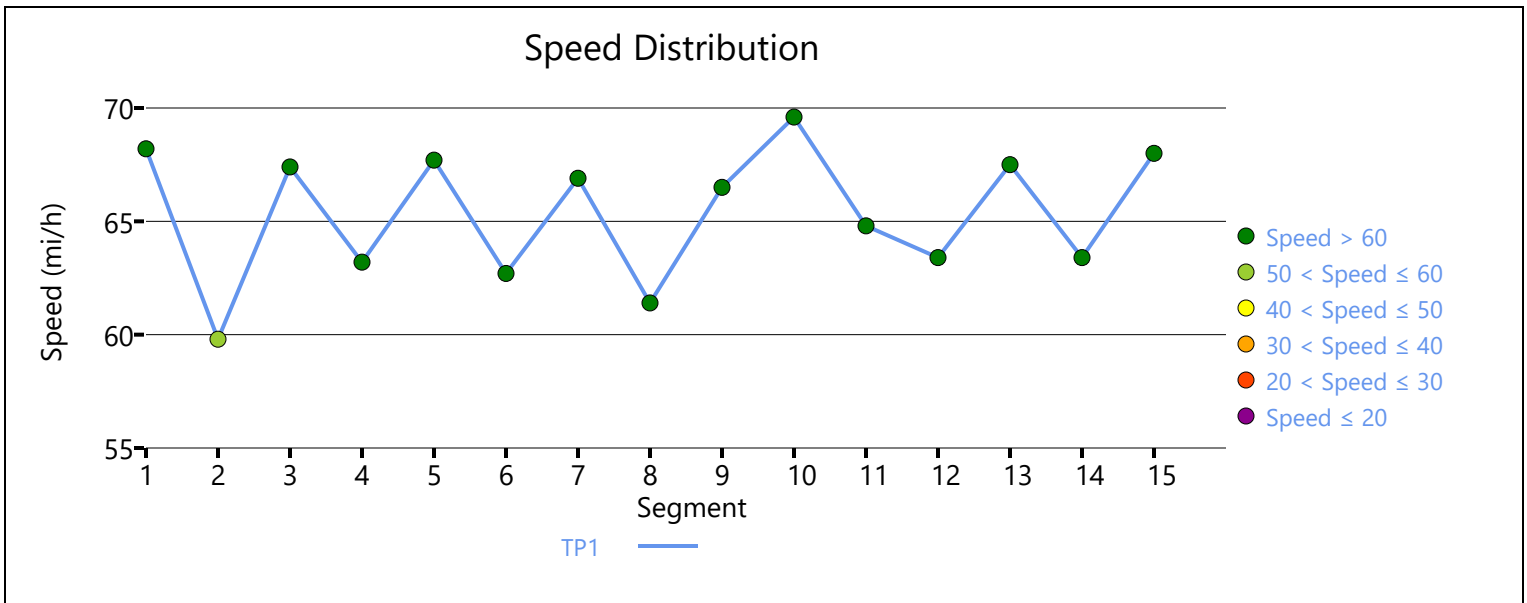
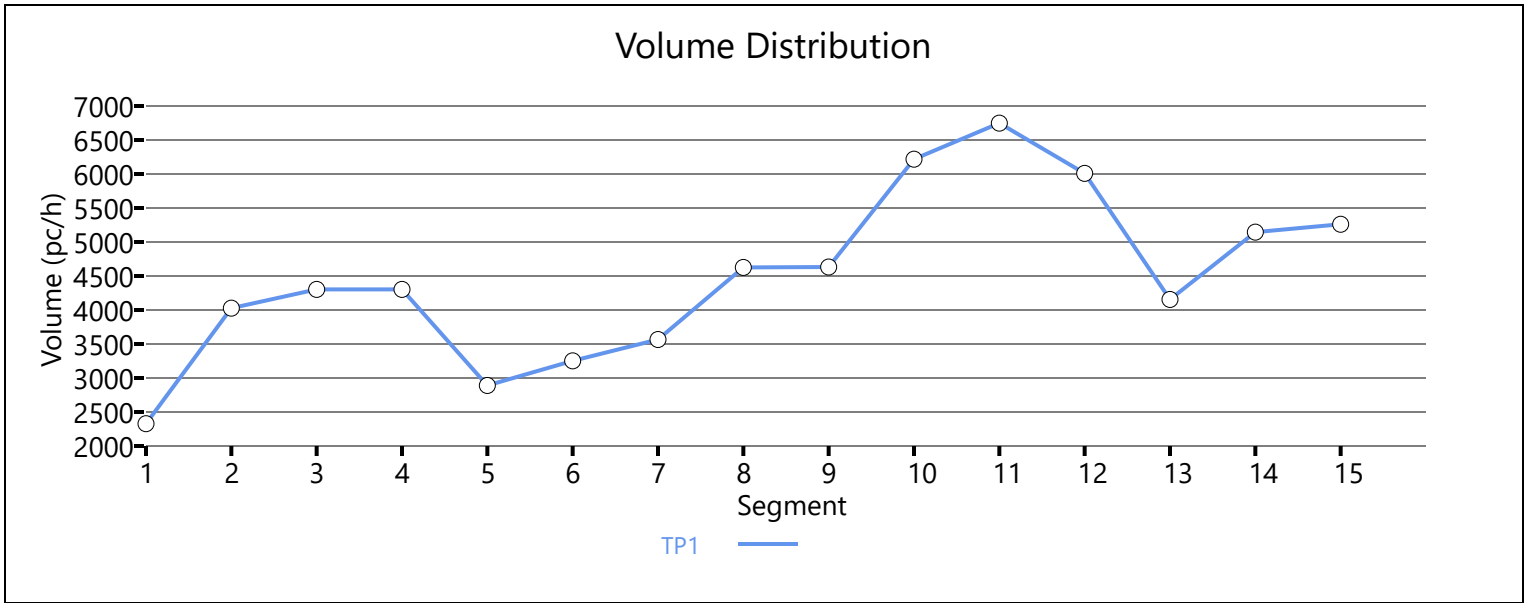
2050 Alternative 2

LPR CD as Merge and WWT as Add AM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		67.7		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3252	362	6824	1839	0.48	0.20	62.7	61.2	17.3	12.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3566		6917		0.52		66.9		17.4		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	4626	1274	6824	3872	0.68	0.33	61.4	60.0	25.1	20.4	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4632		6917		0.67		66.5		23.2		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	6218	1586	9293	1936	0.67	0.82	69.6	69.6	22.3	22.3	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		6748		9223		0.73		64.8		26.0		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	6009	1691	9099	2033	0.66	0.83	63.4	57.7	23.7	27.8	C
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4155		9223		0.45		67.5		15.2		B
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	5145	990	9099	2033	0.57	0.49	63.4	61.5	20.3	17.1	B
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		5261		9223		0.57		68.0		19.3		C
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	65.4		21.5		19.0		5.70		C						
Facility Overall Results															
Space Mean Speed, mi/h					65.4					Density, veh/mi/ln					19.0
Average Travel Time, min					5.70					Density, pc/mi/ln					21.5
Messages															
WARNING 1						Merge capacity is less than merge demand for analysis period 1 on segment 2.									
Comments															



HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 2 Geometry w/ CD Road 8-Lane WWT add lane
Jurisdiction	SCDOT	Time Analyzed	AM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	14
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	3
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	3
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	3
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	3
5	Basic	Basic	WB - Long Point btw Off and On Ramp	2900	3
6	Basic	Basic	WB Btw Long Point On Ramps	320	3
7	Merge	Merge	WB Merge - Long Point On Ramp	1500	3
8	Basic	Basic	WB btw LPR and WWT ramp	3800	4
9	Merge	Merge	WB new WWT ramp	1500	4
10	Basic	Basic	WB - Long Point to Truck Climbing Lane	7365	4
11	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	4
12	Basic	Basic	WB Btw Off and On Ramps	920	4
13	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	4
14	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.962	2328	6917	0.34	68.2	11.4	B

Segment 2: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C

Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		68.1		14.1		B
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3170		6917		0.46		68.2		15.5		B
Segment 7: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5608	2629	6824	3872	0.82	0.68	56.8	54.7	32.9	28.7	D
Segment 8: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		5738		9223		0.62		67.4		21.3		C
Segment 9: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	7324	1586	9293	1936	0.79	0.82	64.2	60.4	28.5	26.3	C
Segment 10: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	1.00		0.781		7624		9223		0.83		61.2		31.1		D
Segment 11: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	7222	1691	9099	2033	0.79	0.83	63.3	57.7	28.5	32.3	D
Segment 12: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		5368		9223		0.58		67.5		19.8		C

Segment 13: Merge

AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6358	990	9099	2033	0.70	0.49	62.4	60.6	25.5	20.9	C

Segment 14: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	6474	9223	0.70	65.7	24.6	C

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.8	24.3	21.4	5.80	C

Facility Overall Results

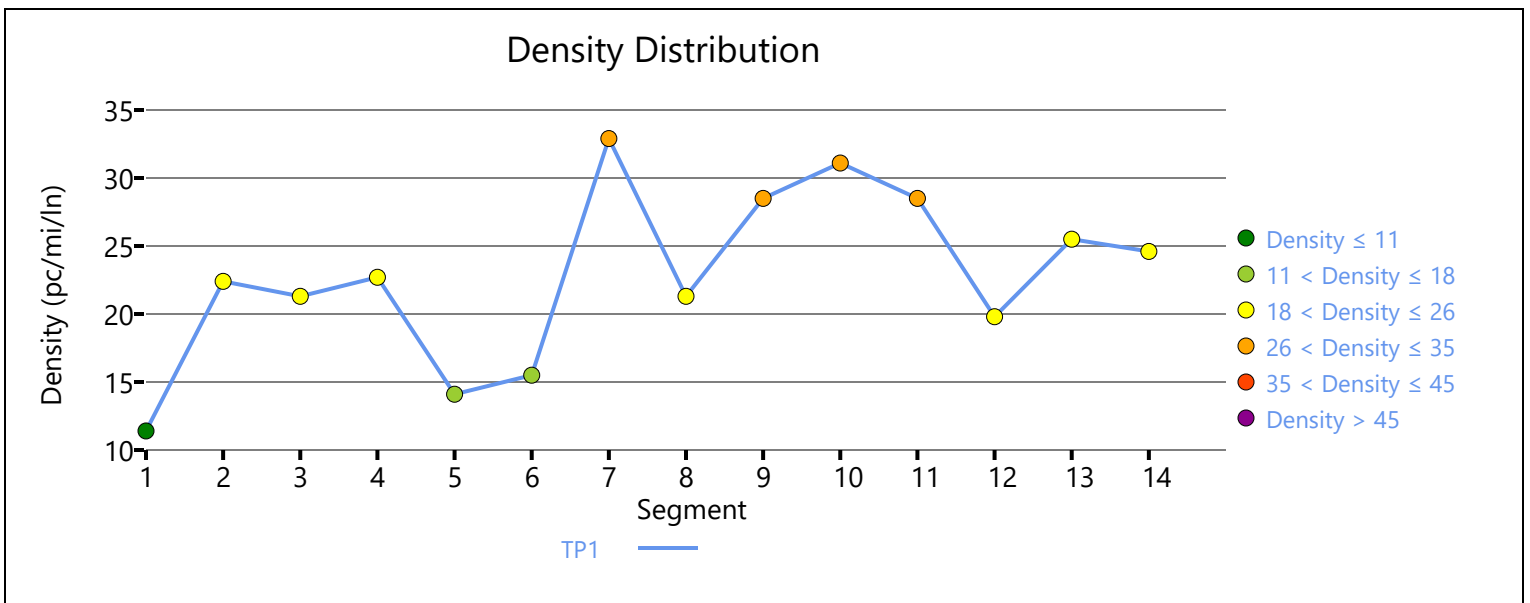
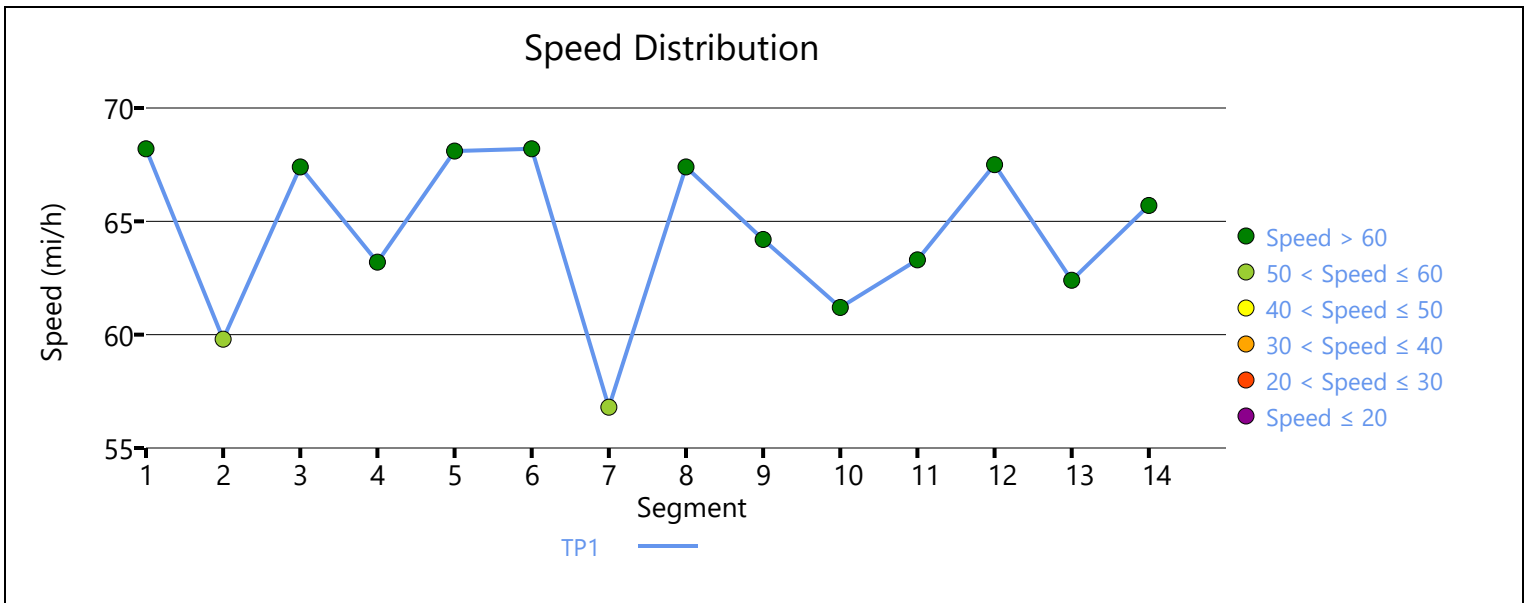
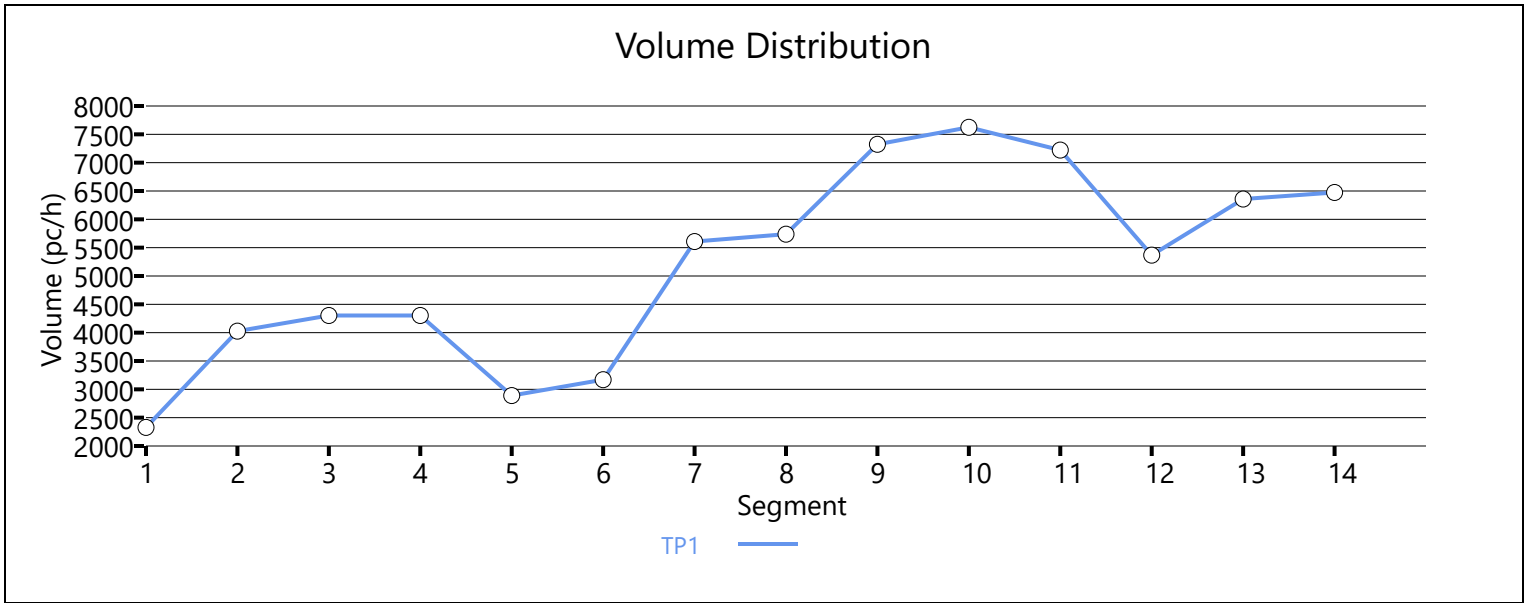
Space Mean Speed, mi/h	63.8	Density, veh/mi/ln	21.4
Average Travel Time, min	5.80	Density, pc/mi/ln	24.3

Messages

WARNING 1	Merge capacity is less than merge demand for analysis period 1 on segment 2.
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Comments

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2050 Alternative 2

LPR CD as Merge and WWT as Add PM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		67.4		17.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	2939	502	4550	1839	0.65	0.27	60.2	60.2	24.4	18.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2939		4612		0.67		66.4		21.9		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4242	1303	4550	3872	0.93	0.34	55.4	55.4	38.3	28.6	D
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4242		4612		0.97		56.4		37.6		E
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5055	813	6970	1936	0.73	0.42	64.6	64.6	26.1	26.1	D
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		26.2		53.9		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	2615	4612	0.74	66.7	19.2	C

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS							
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3589	4612	0.97	63.2	28.4	D

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	46.2	36.7	33.7	8.00	F

Facility Overall Results

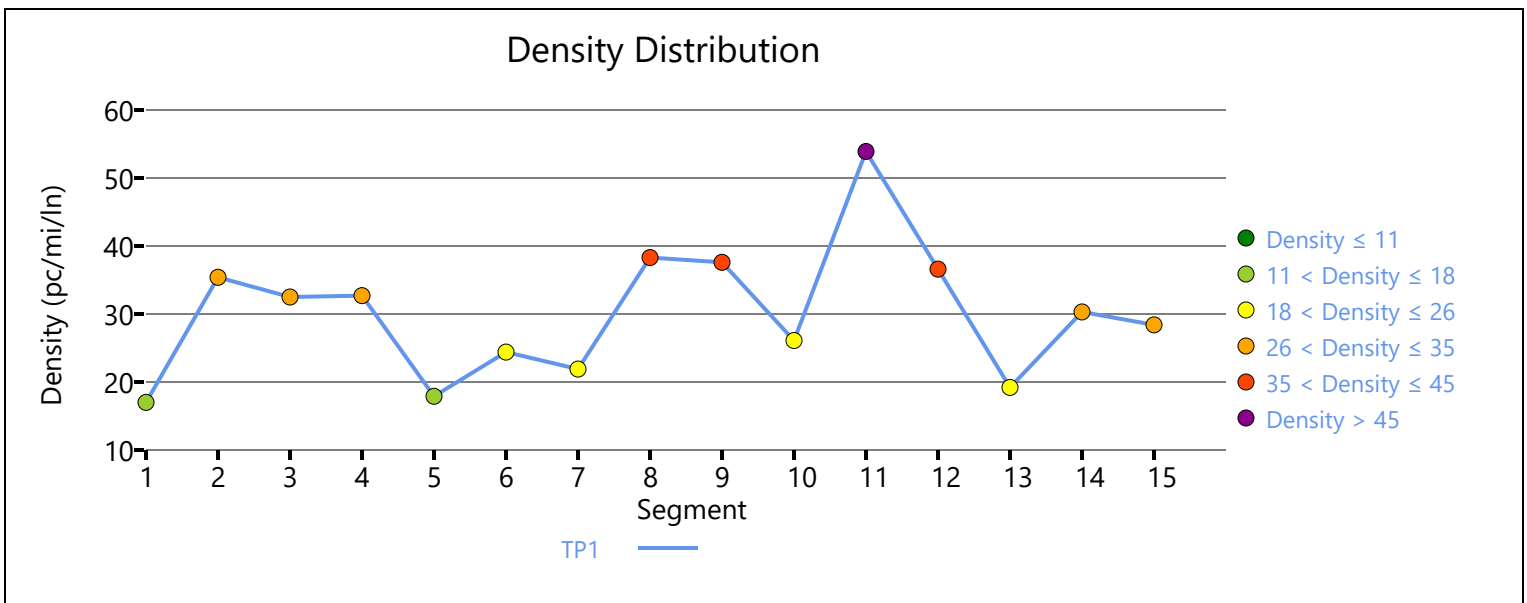
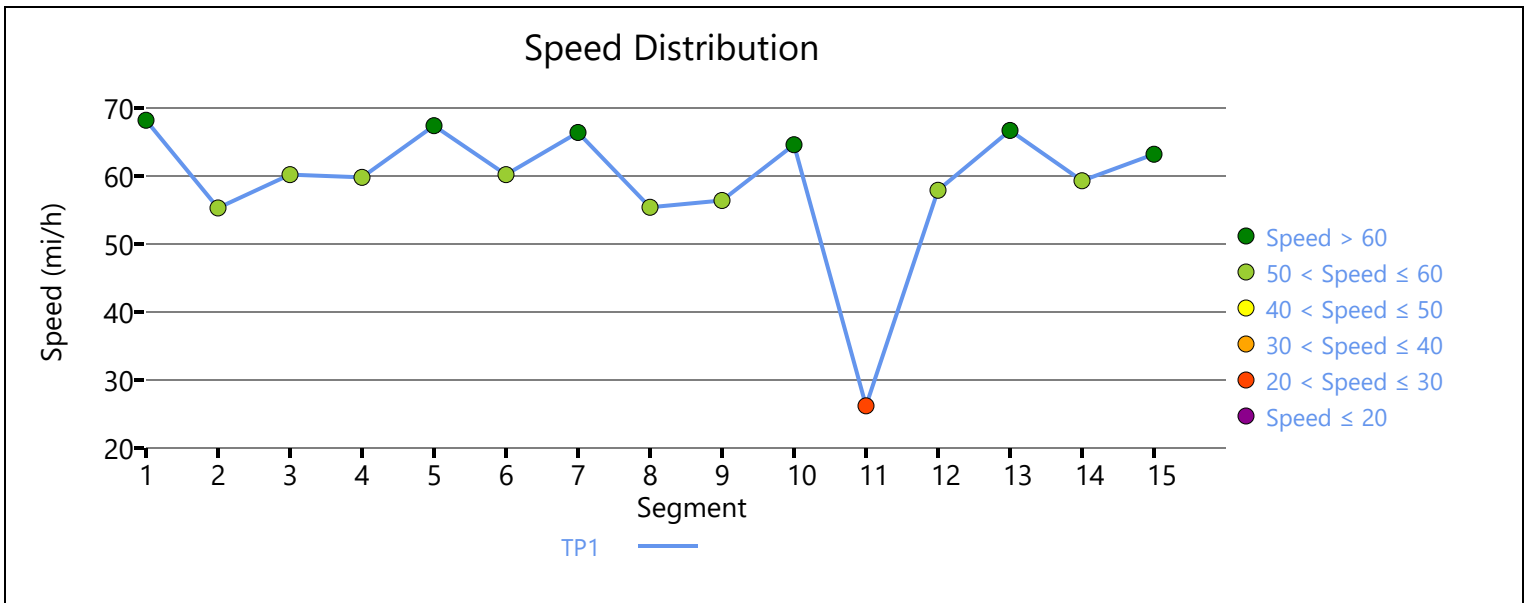
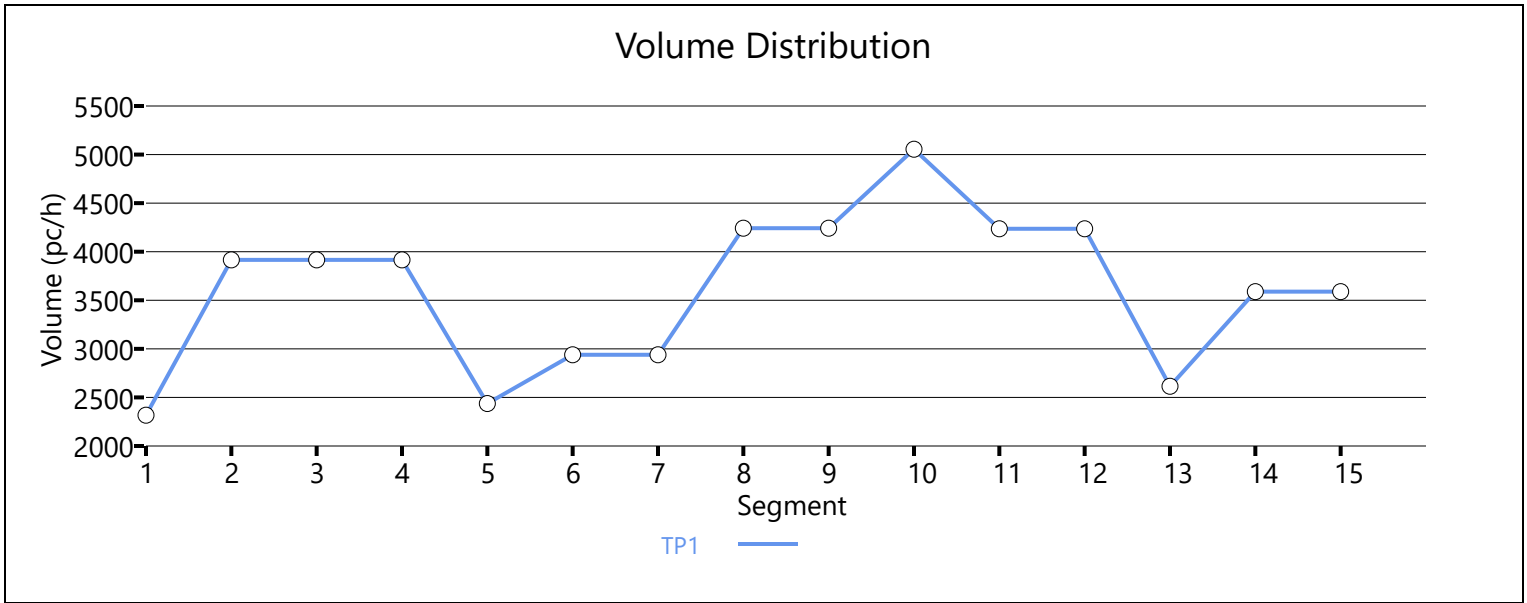
Space Mean Speed, mi/h	46.2	Density, veh/mi/ln	33.7
Average Travel Time, min	8.00	Density, pc/mi/ln	36.7

Messages

WARNING 1 Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.

Comments

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HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 2 Geometry w/ CD Road WWT add lane
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	2
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	2
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	2
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	2
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	2
6	Basic	Basic	WB Merge - Long Point On Ramp (Cloverleaf)	1500	2
7	Basic	Basic	WB Btw Long Point On Ramps	320	2
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	2
9	Basic	Basic	WB btw LPR and WWT ramp	3800	2
10	Merge	Basic	WB new WWT ramp	1500	3
11	Basic	Basic	WB - Long Point to Truck Climbing Lane	7365	3
12	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	2
13	Basic	Basic	WB Btw Off and On Ramps	920	2
14	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	2
15	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	2

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	2317	4612	0.50	68.2	17.0	B

Segment 2: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
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	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		67.4		17.9		B
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		68.1		17.9		B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2437		4612		0.56		68.2		17.9		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4203	1766	4550	3872	0.92	0.46	55.6	55.6	37.8	28.1	D
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4203		4612		0.97		56.9		36.9		E
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5016	813	6970	1936	0.72	0.42	64.7	64.7	25.8	25.8	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		26.8		52.7		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	2615	4612	0.74	66.7	19.2	C

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS							
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3589	4612	0.97	63.2	28.4	D

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	46.7	36.0	32.9	7.90	F

Facility Overall Results

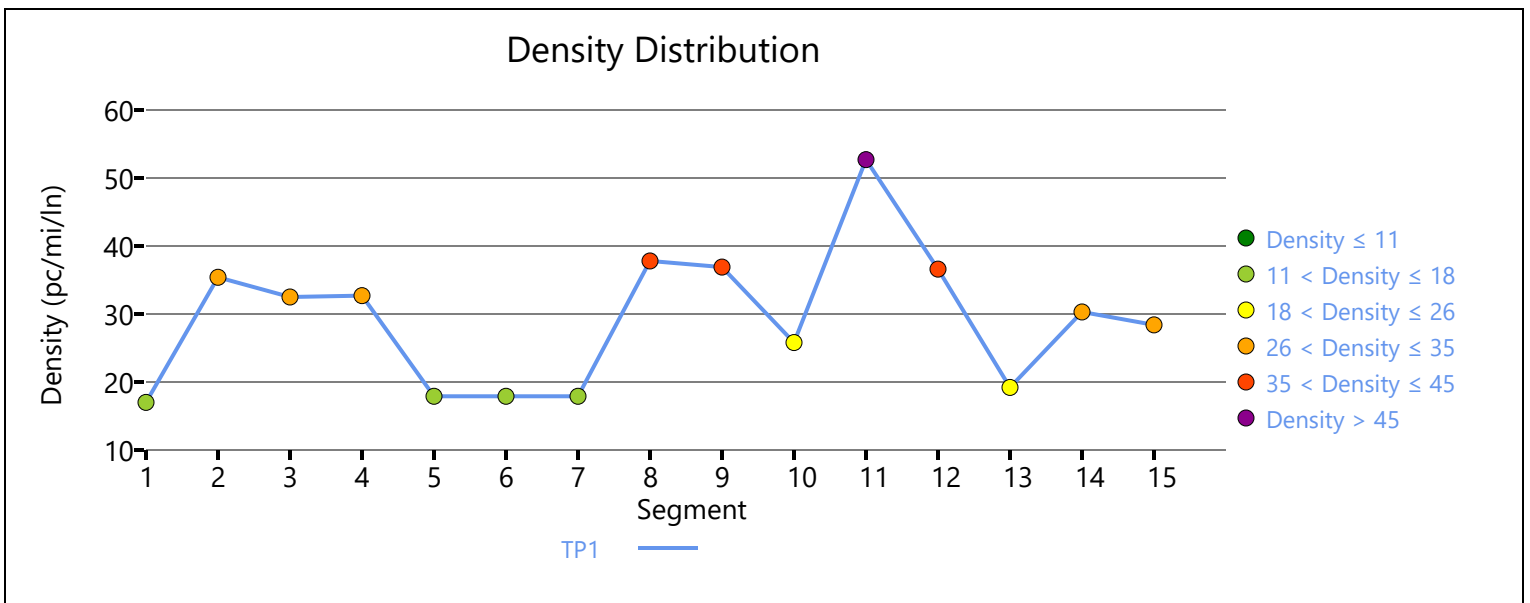
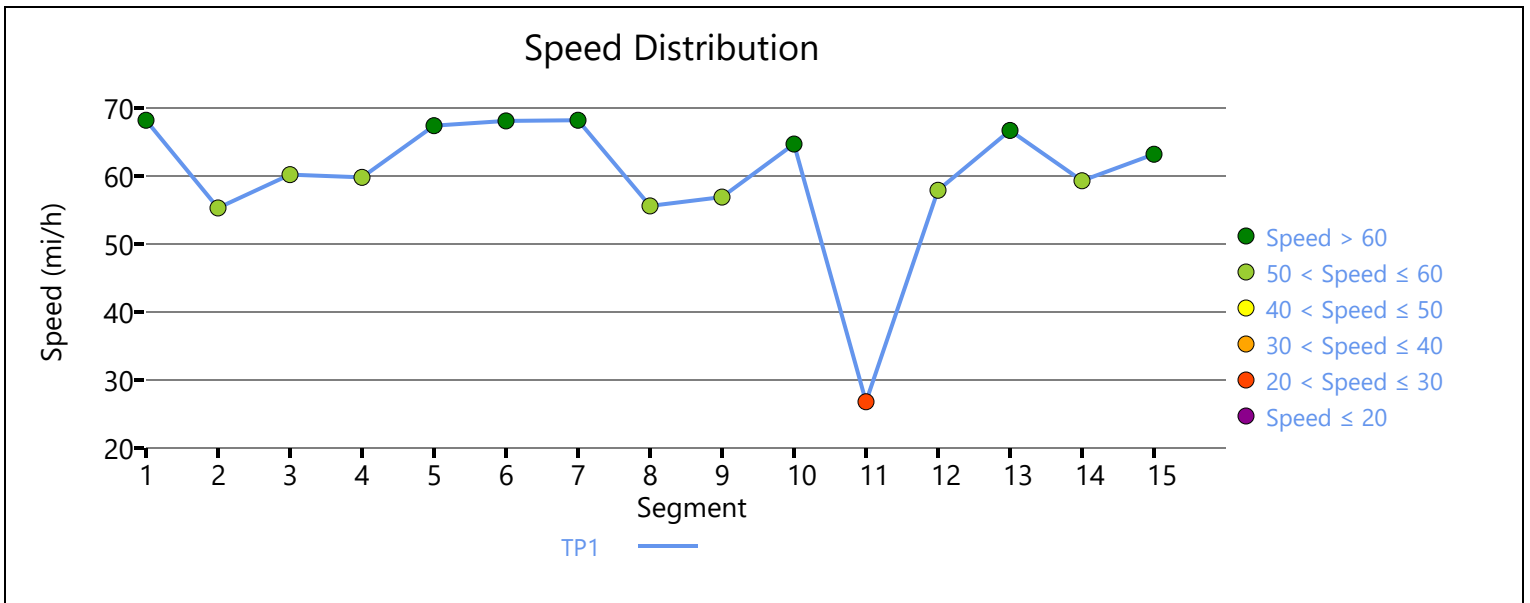
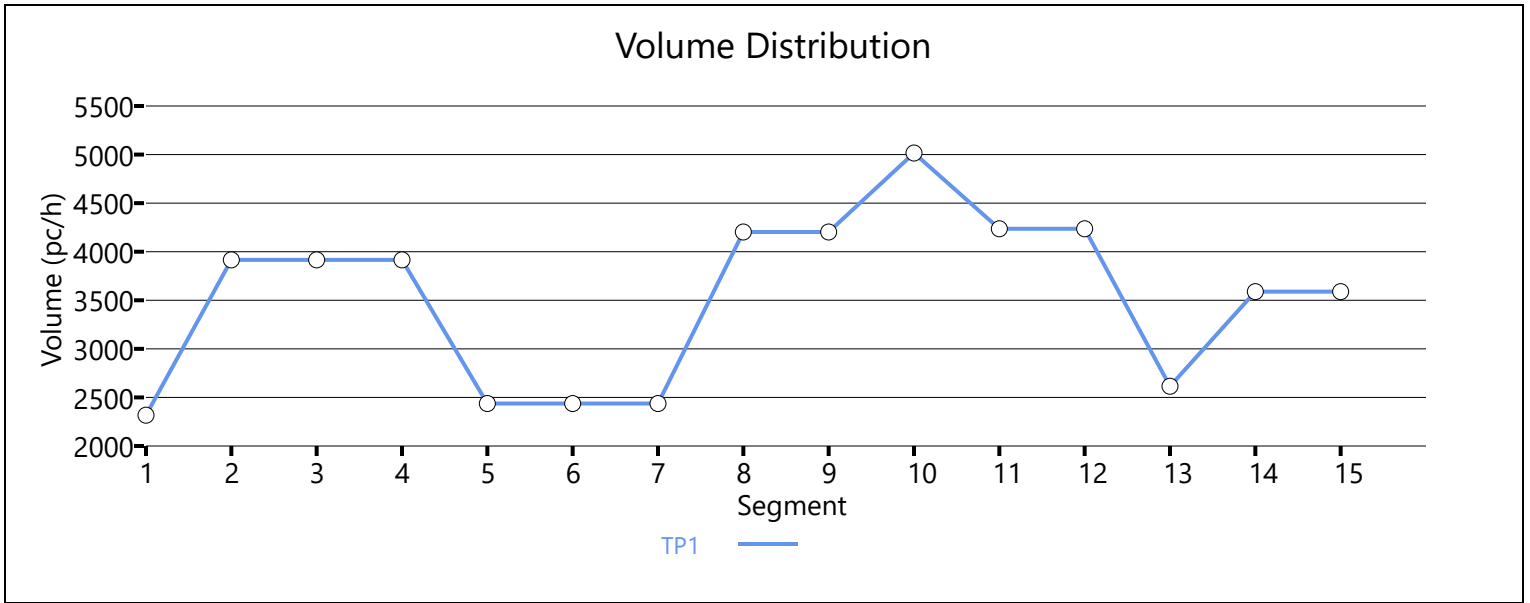
Space Mean Speed, mi/h	46.7	Density, veh/mi/ln	32.9
Average Travel Time, min	7.90	Density, pc/mi/ln	36.0

Messages

WARNING 1 Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.

Comments

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2050 Alternative 2

LPR CD as Merge and WWT as Add PM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		67.7		12.3		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	3026	502	6824	1839	0.44	0.27	62.9	61.3	16.0	12.0	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3073		6917		0.44		67.0		15.0		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4192	1303	6824	3872	0.61	0.34	61.9	60.5	22.6	18.6	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4485		6917		0.65		66.9		22.3		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5298	813	9293	1936	0.57	0.42	72.1	72.1	18.4	18.4	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3426	9223	0.37	67.5	12.6	B

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS							
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	4456	9223	0.48	68.1	16.3	B

Facility Analysis Results

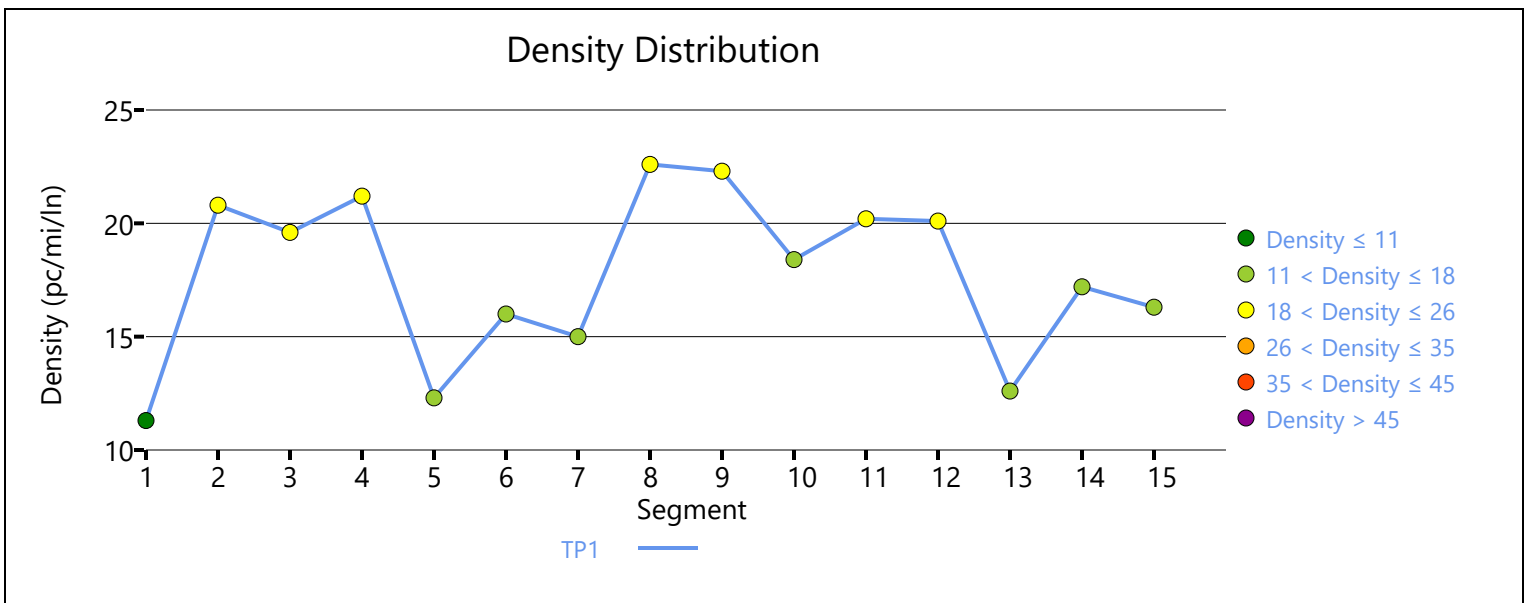
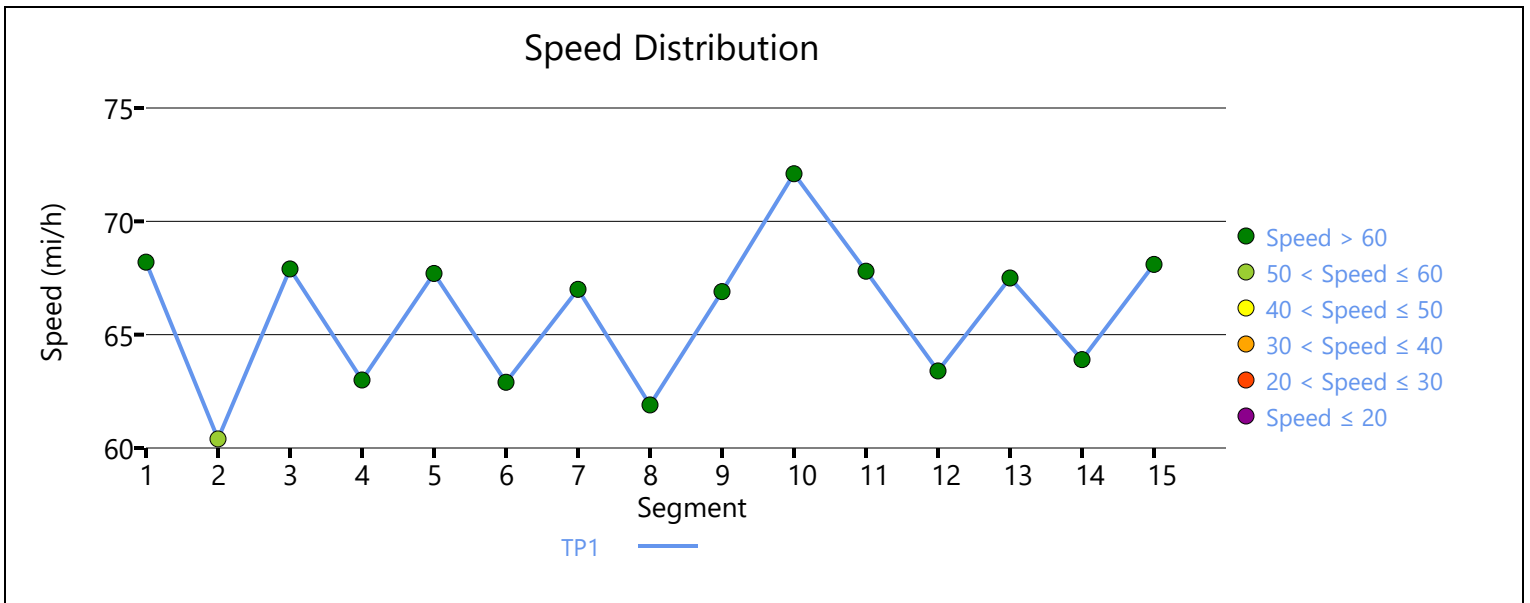
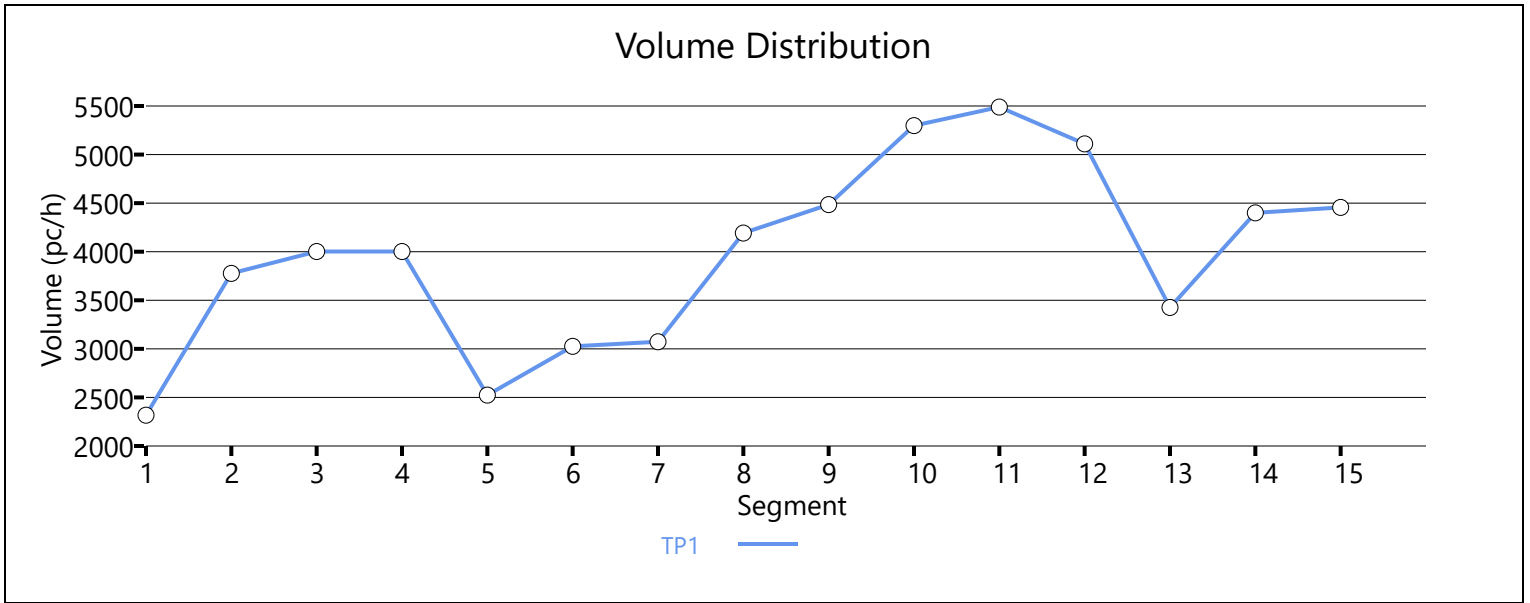
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.5	18.5	17.2	5.60	C

Facility Overall Results

Space Mean Speed, mi/h	66.5	Density, veh/mi/ln	17.2
Average Travel Time, min	5.60	Density, pc/mi/ln	18.5

Messages

Comments



HCS7 Freeway Facilities Report

Project Information

Analyst	KCole	Date	06/01/2022
Agency	CDM Smith	Analysis Year	2050 WB Alternative 2 Geometry w/ CD Road 8-Lane WWT add lane
Jurisdiction	SCDOT	Time Analyzed	PM DHV
Project Description	I-526 Long Point Road Interchange IMR/IJR	Units	U.S. Customary

Facility Global Input

Jam Density, pc/mi/ln	190.0	Density at Capacity, pc/mi/ln	45.0
Queue Discharge Capacity Drop, %	7	Total Segments	15
Total Analysis Periods	1	Analysis Period Duration, min	15
Facility Length, mi	6.17		

Facility Segment Data

No.	Coded	Analyzed	Name	Length, ft	Lanes
1	Basic	Basic	WB - US 17	2600	3
2	Merge	Merge	WB Merge - US 17 On Ramp	1500	3
3	Basic	Basic	WB Btw Mathis Ferry and Long Point	2455	3
4	Diverge	Diverge	WB Diverge - Long Point Off Ramp	1500	3
5	Basic	Basic	WB - Long Point btw Off and On Ramp	1400	3
6	Basic	Basic	WB Merge - Long Point On Ramp (Cloverleaf)	1500	3
7	Basic	Basic	WB Btw Long Point On Ramps	320	3
8	Merge	Merge	WB Merge - Long Point On Ramp	1500	3
9	Basic	Basic	WB btw LPR and WWT ramp	3800	3
10	Merge	Basic	WB new WWT ramp	1500	4
11	Basic	Basic	WB - Long Point to Truck Climbing Lane	7365	4
12	Diverge	Diverge	WB Diverge - Seven Farms Off Ramp	1500	4
13	Basic	Basic	WB Btw Off and On Ramps	920	4
14	Merge	Merge	WB Merge - Seven Farms On Ramp	1500	4
15	Basic	Basic	WB Btw Seven Farms and Clements Ferry	3215	4

Facility Segment Data

Segment 1: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.980	2317	6917	0.33	68.2	11.3	B

Segment 2: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
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	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		67.7		12.3		B
Segment 6: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		68.2		12.3		B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2571		6917		0.37		68.2		12.6		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4183	1766	6824	3678	0.61	0.48	61.2	59.7	22.8	19.9	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4485		6917		0.65		66.9		22.3		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5298	813	9293	1936	0.57	0.42	72.1	72.1	18.4	18.4	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3426	9223	0.37	67.5	12.6	B

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS							
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	4456	9223	0.48	68.1	16.3	B

Facility Analysis Results

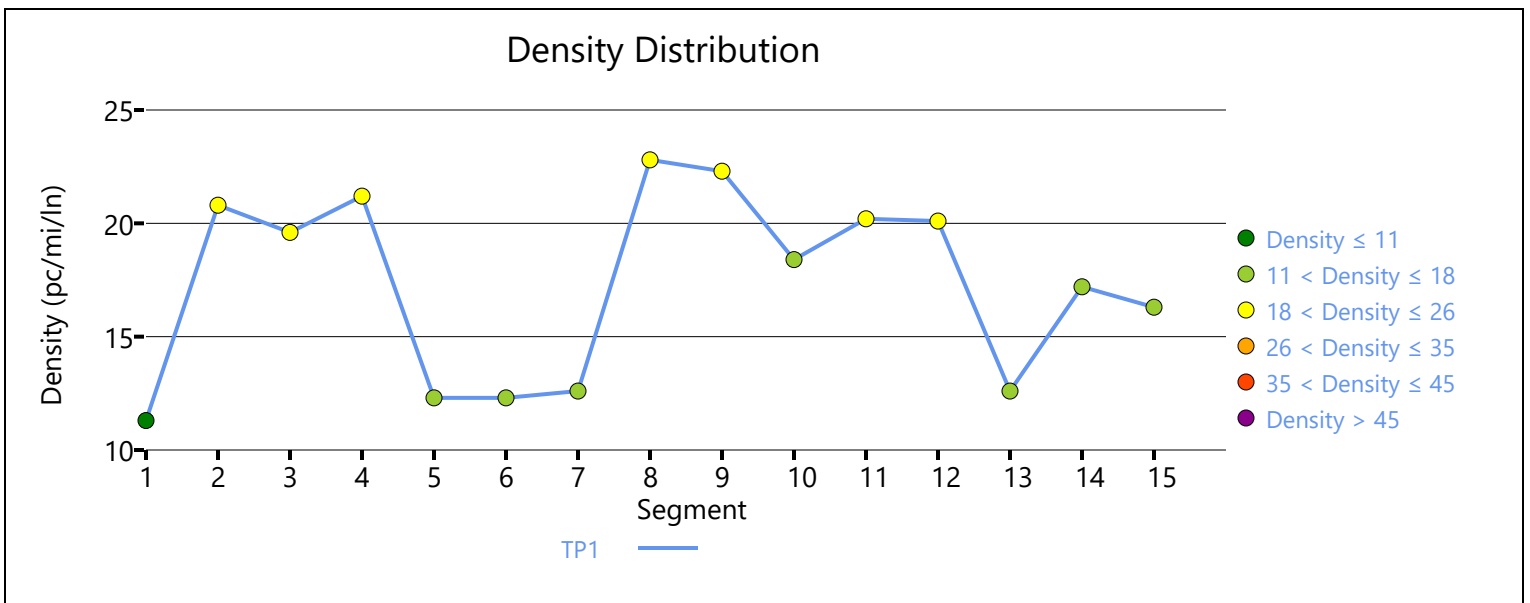
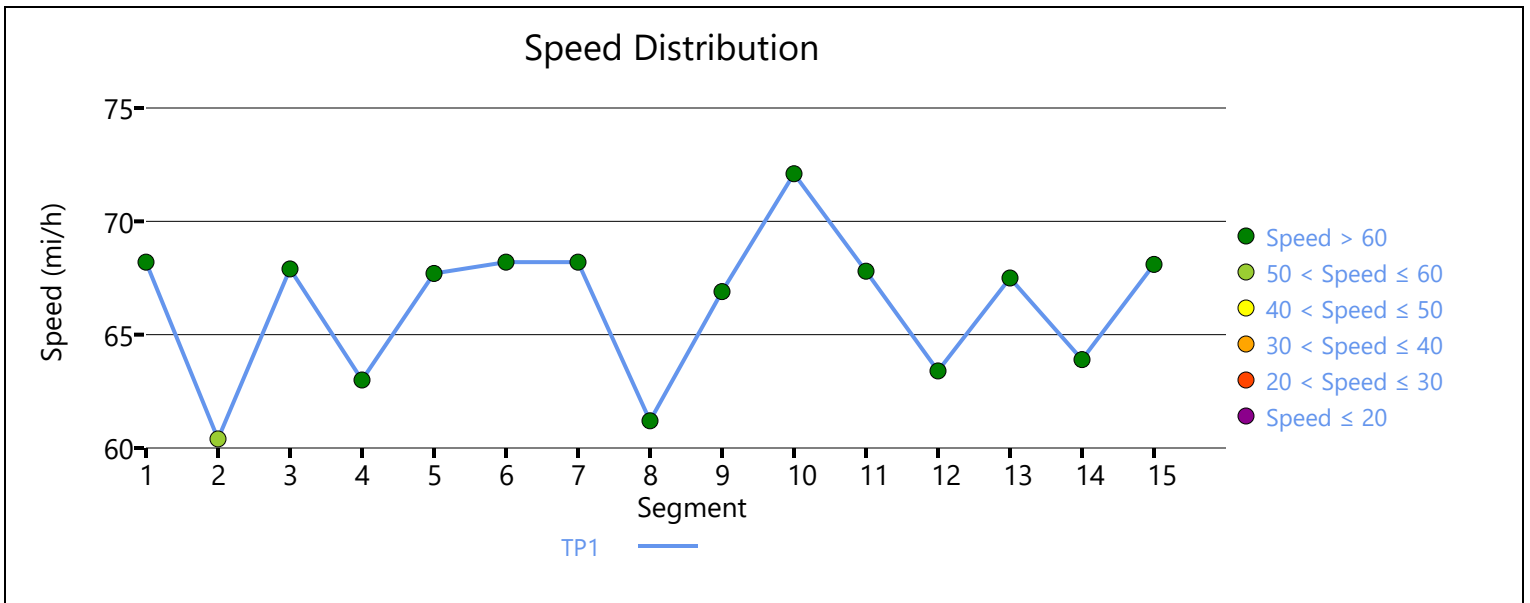
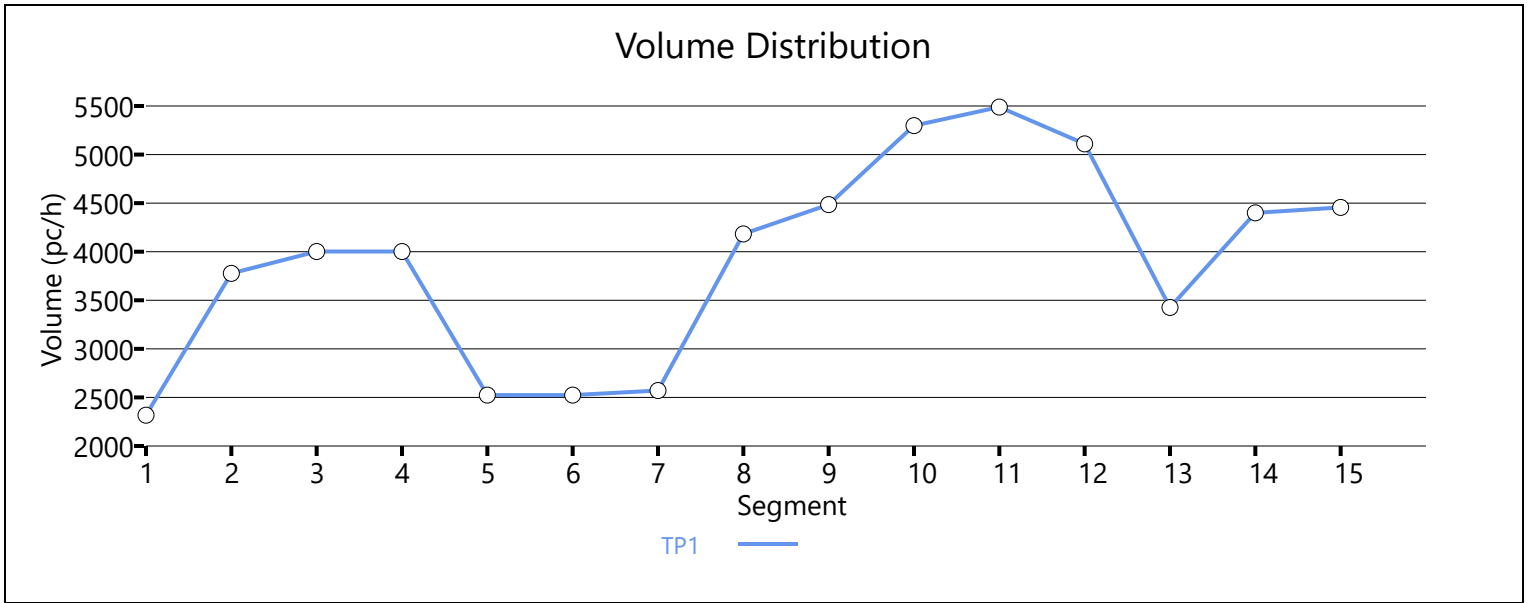
AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.6	18.3	17.0	5.60	C

Facility Overall Results

Space Mean Speed, mi/h	66.6	Density, veh/mi/ln	17.0
Average Travel Time, min	5.60	Density, pc/mi/ln	18.3

Messages

Comments



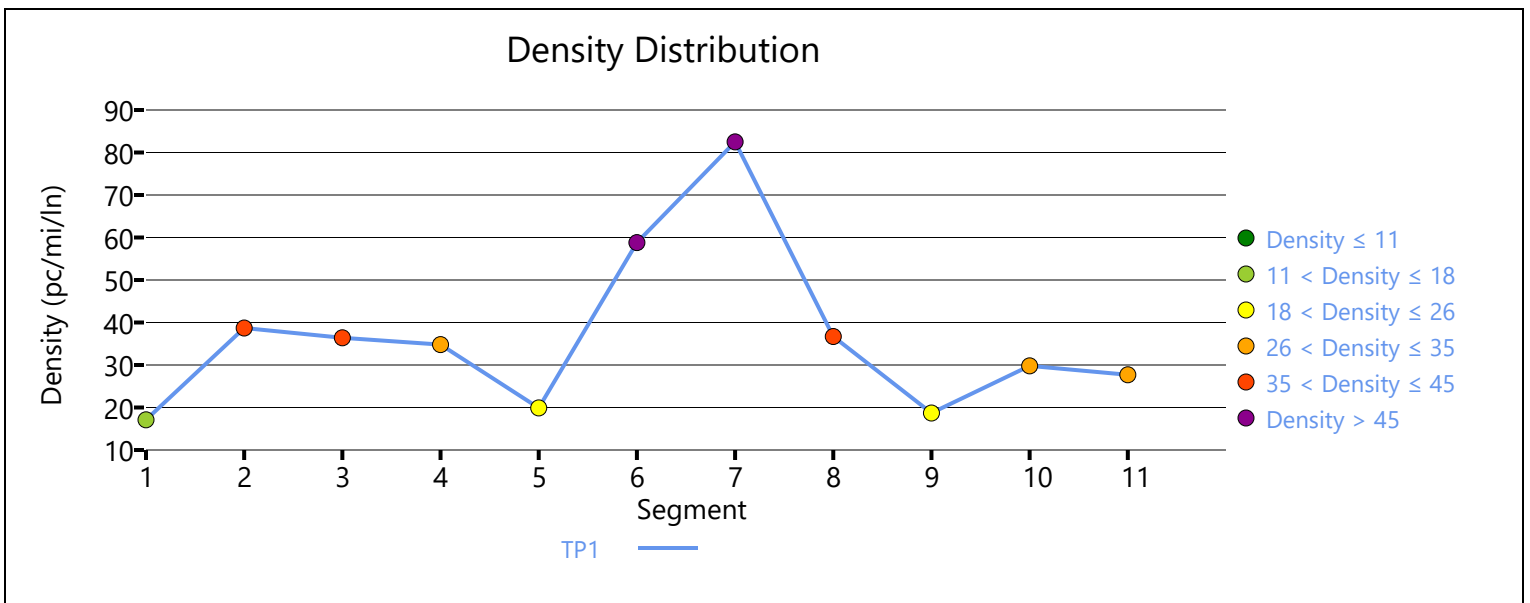
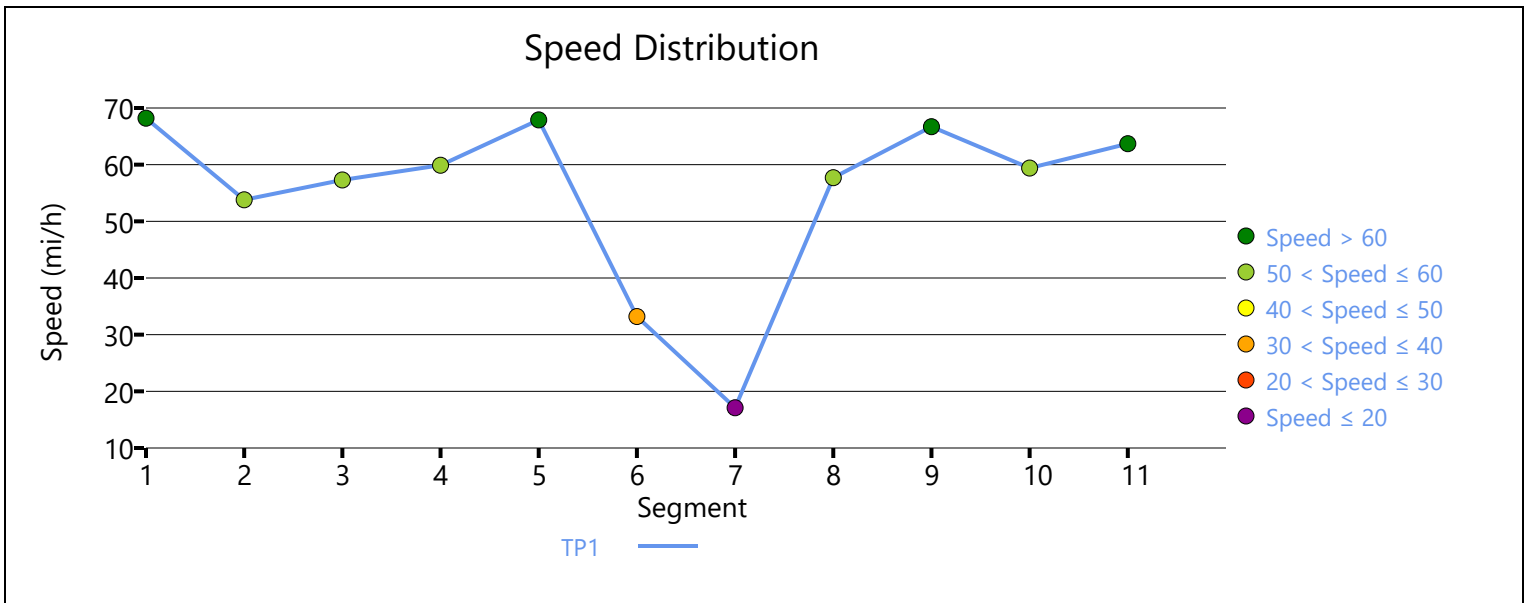
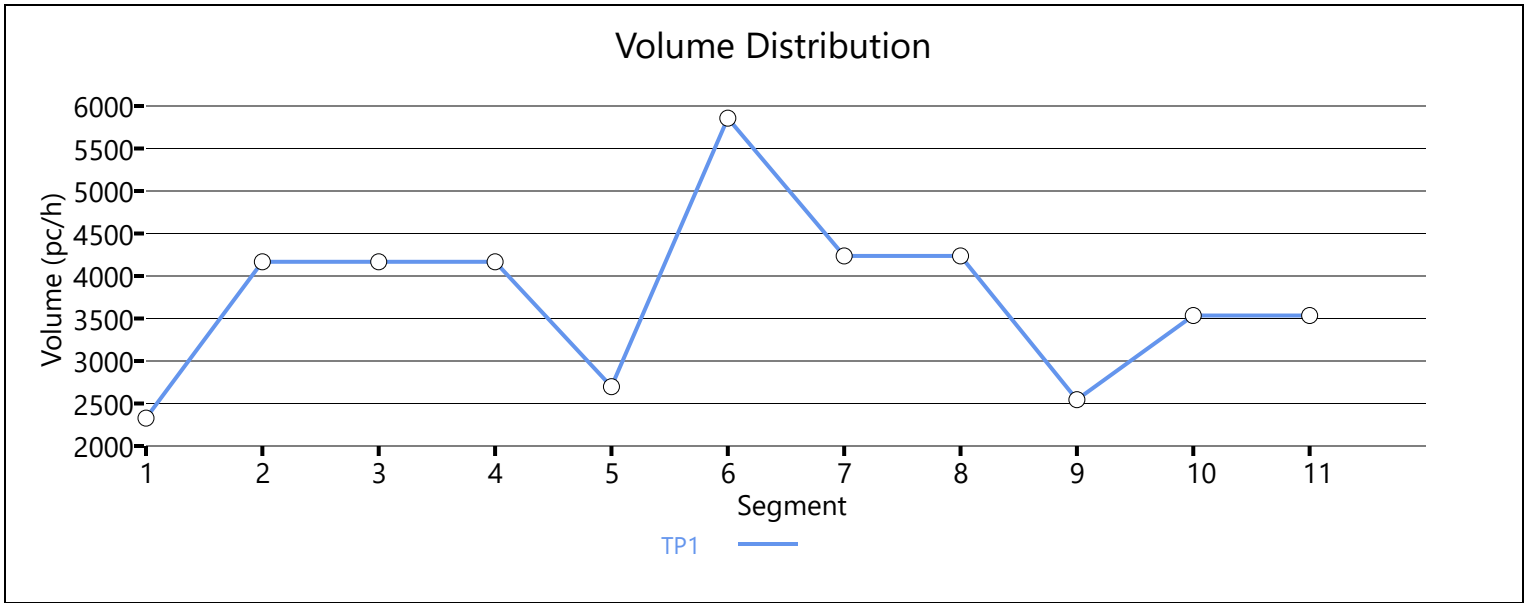
2050 Alternative 5

AM Peak Hour

(6-lane Freeway)

1	0.94	0.962	4167	4612	0.93	57.3	36.4	E							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		2698		4612		0.63		67.9		19.9		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.847	5857	3872	6824	3872	0.97	1.02	33.2	39.3	58.8	36.7	F
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.781		4236		6917		1.16		17.1		82.5		F
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		2545		4612		1.15		66.7		18.7		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		3535		4612		1.39		63.7		27.7		F
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	29.7				55.8				46.1				12.50		F
Facility Overall Results															
Space Mean Speed, mi/h				29.7				Density, veh/mi/ln				46.1			

Average Travel Time, min	12.50	Density, pc/mi/ln	55.8
Messages			
WARNING 1	Oversaturated conditions currently exist in boundary segment 11. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.		
WARNING 2	Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.		
WARNING 3	Merge capacity is less than merge demand for analysis period 1 on segment 2.		
WARNING 4	Merge capacity is less than merge demand for analysis period 1 on segment 6.		
Comments			



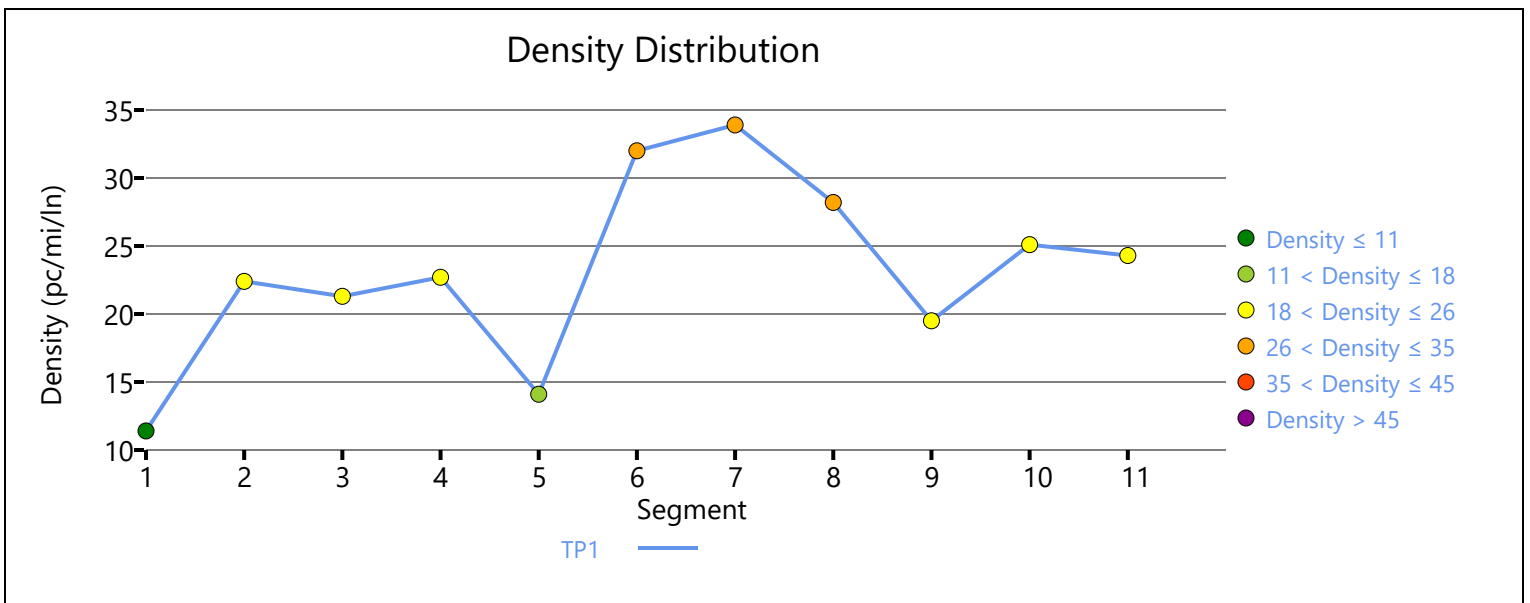
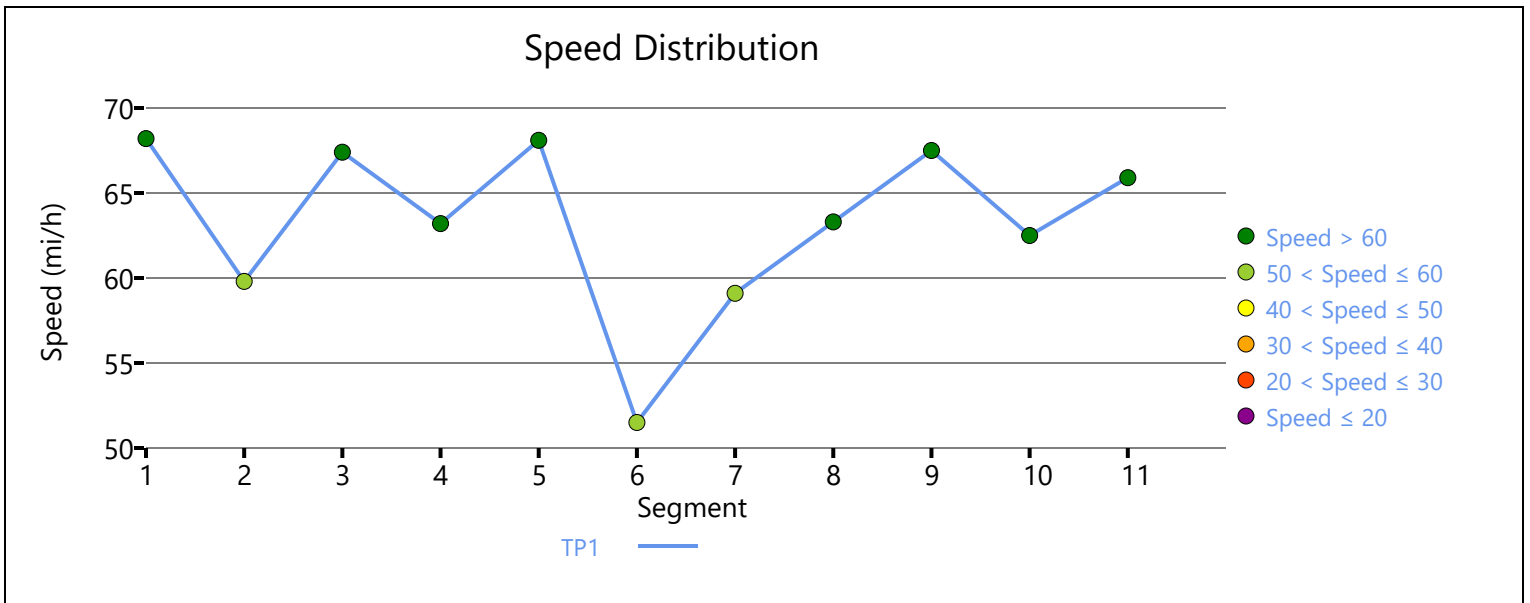
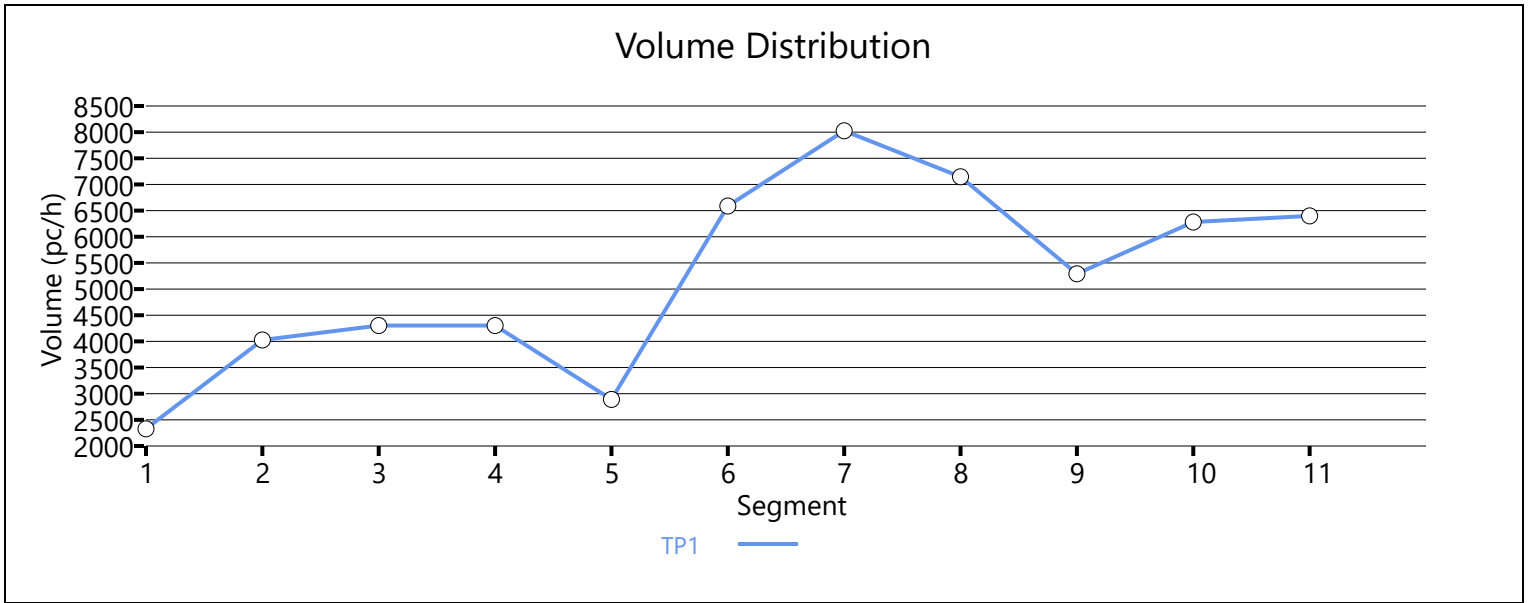
2050 Alternative 5

AM Peak Hour

(8-lane Freeway)

1	0.94	0.962	4303	6917	0.62	67.4	21.3	C							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.962		2890		6917		0.42		68.1		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.847	6588	3872	9099	3872	0.72	1.02	51.5	47.9	32.0	33.0	D
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.781		8026		9223		0.87		59.1		33.9		D
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	7147	1691	9099	2033	0.79	0.83	63.3	57.7	28.2	32.1	D
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		5292		9223		0.57		67.5		19.5		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	6282	990	9099	2033	0.69	0.49	62.5	60.7	25.1	20.7	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.877		6399		9223		0.69		65.9		24.3		C
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	61.2				26.9				22.8				6.00		D
Facility Overall Results															
Space Mean Speed, mi/h					61.2					Density, veh/mi/ln					22.8

Average Travel Time, min	6.00	Density, pc/mi/ln	26.9
Messages			
WARNING 1	Merge capacity is less than merge demand for analysis period 1 on segment 2.		
WARNING 2	Merge capacity is less than merge demand for analysis period 1 on segment 6.		
Comments			



2050 Alternative 5

PM Peak Hour

(6-lane Freeway)

1	0.94	0.980	3916	4612	0.87	60.2	32.5	D							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.980		2437		4612		0.55		68.0		17.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.926	0.877	4858	2421	6824	3872	0.71	0.63	59.5	57.9	27.2	24.8	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.862		4236		6917		0.79		67.5		20.9		C
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		2615		4612		0.74		66.7		19.2		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94		0.926		3589		4612		0.97		63.2		28.4		D
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	63.9				24.0				22.0				5.80		F
Facility Overall Results															
Space Mean Speed, mi/h				63.9				Density, veh/mi/ln				22.0			

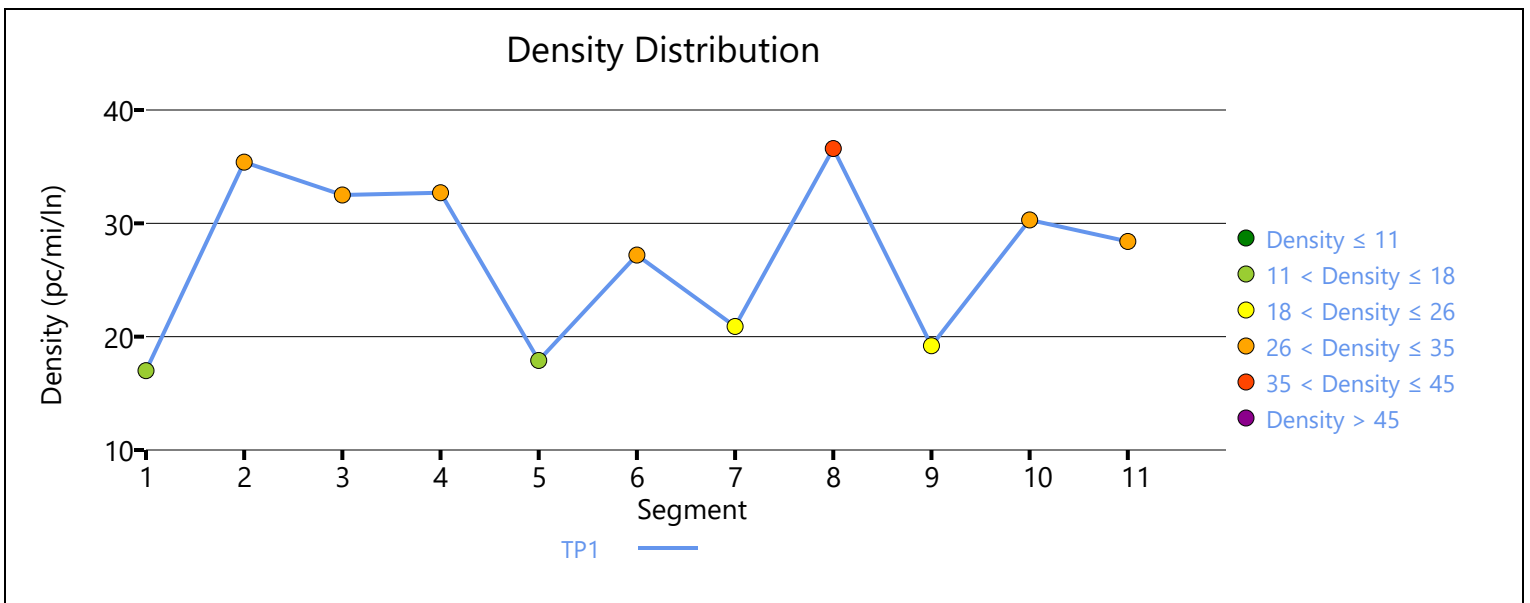
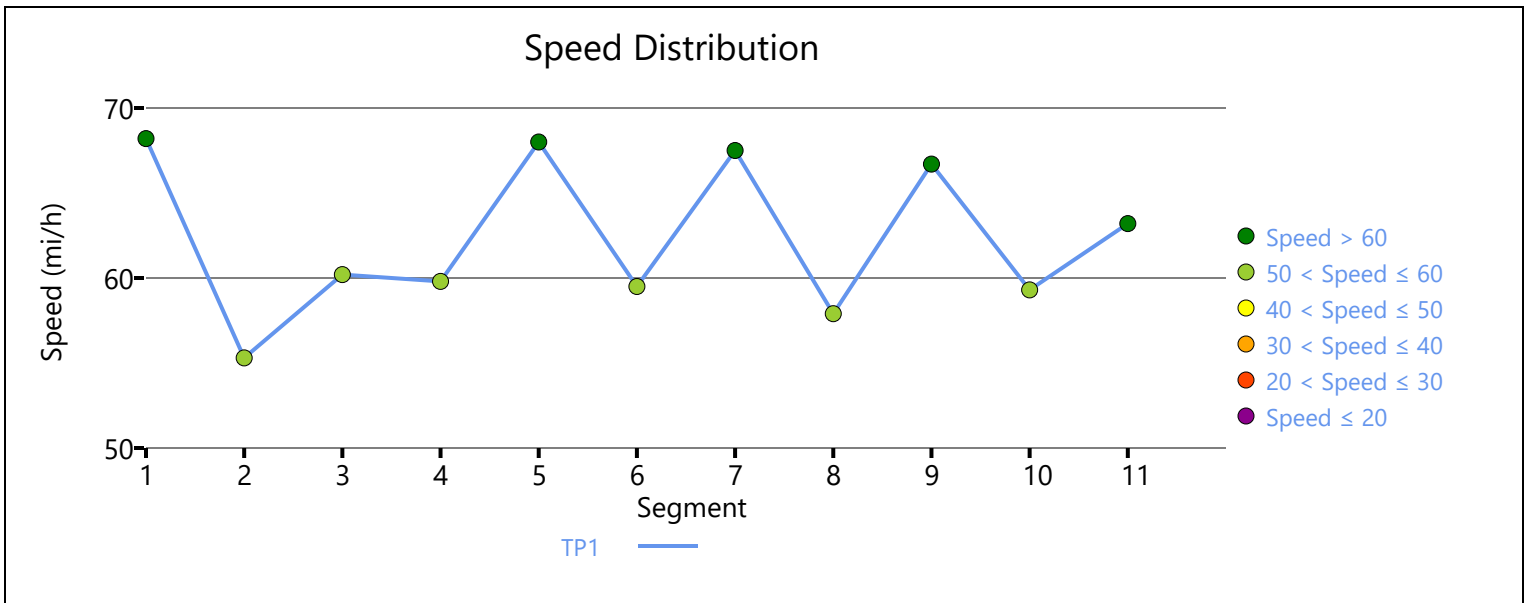
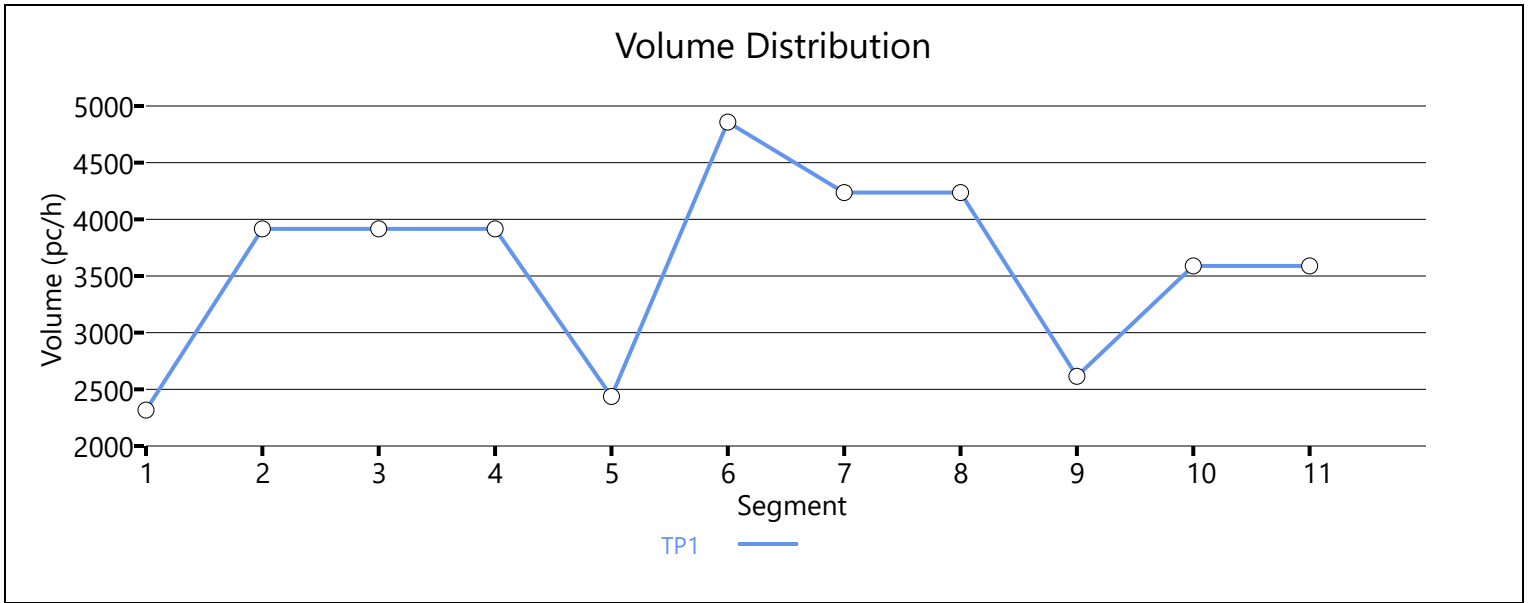
Average Travel Time, min	5.80	Density, pc/mi/ln	24.0
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Messages

WARNING 1	Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
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Comments

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2050 Alternative 5

PM Peak Hour

(8-lane Freeway)

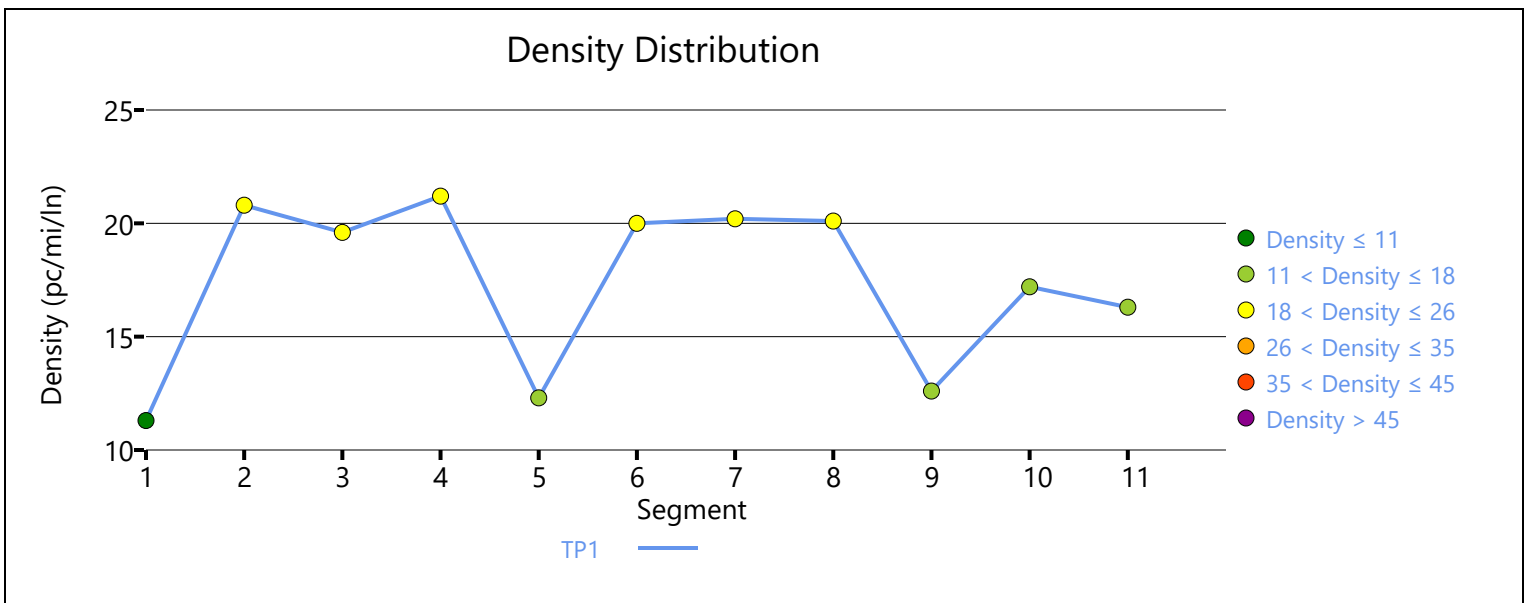
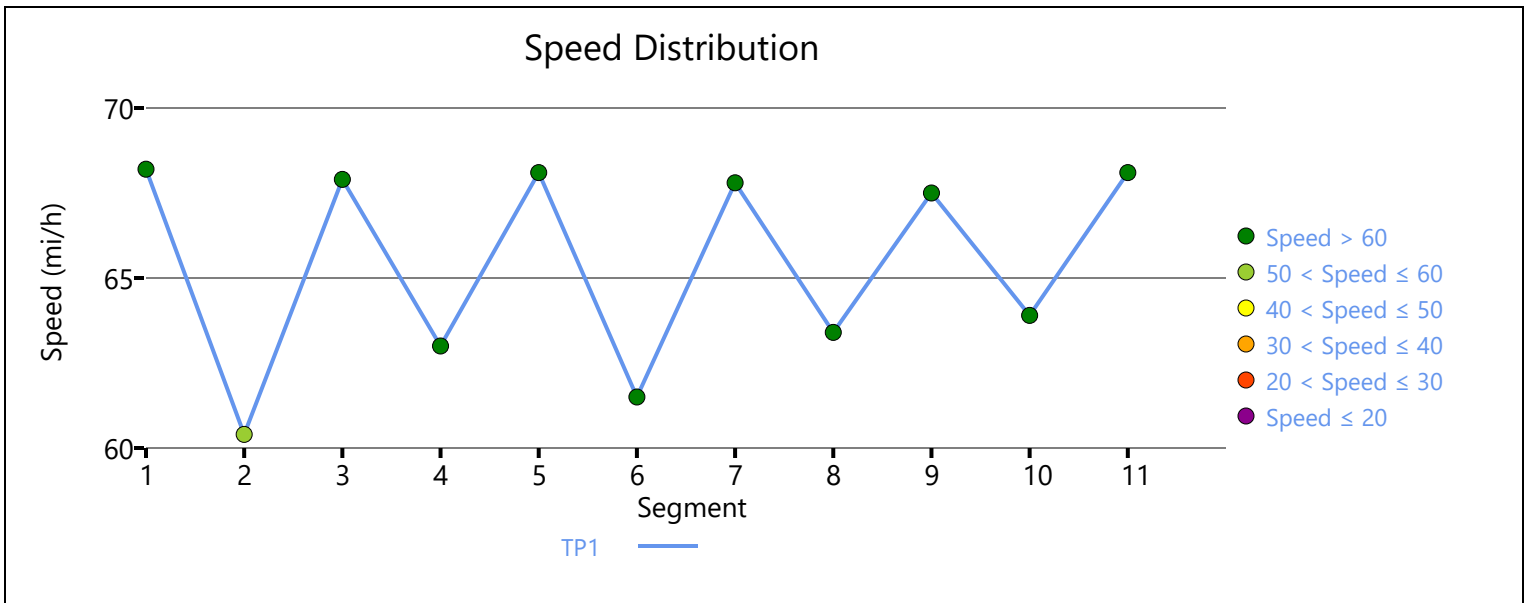
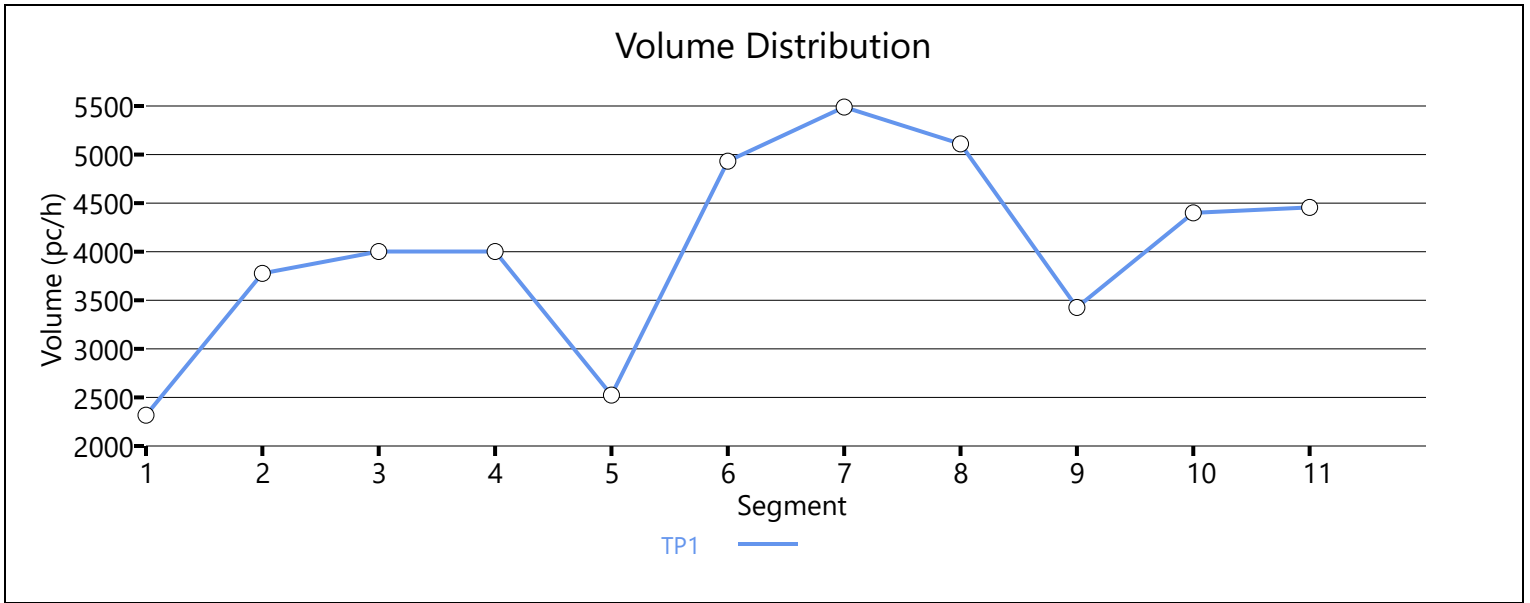
1	0.94	0.980	4002	6917	0.58	67.9	19.6	C							
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		68.1		12.3		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.926	0.877	4932	2421	9099	3872	0.54	0.63	61.5	59.3	20.0	21.7	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 8: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3426		9223		0.37		67.5		12.6		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		4456		9223		0.48		68.1		16.3		B
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	66.5				18.2				16.5				5.60		C
Facility Overall Results															
Space Mean Speed, mi/h					66.5					Density, veh/mi/ln					16.5

Average Travel Time, min	5.60	Density, pc/mi/ln	18.2
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Messages

Comments

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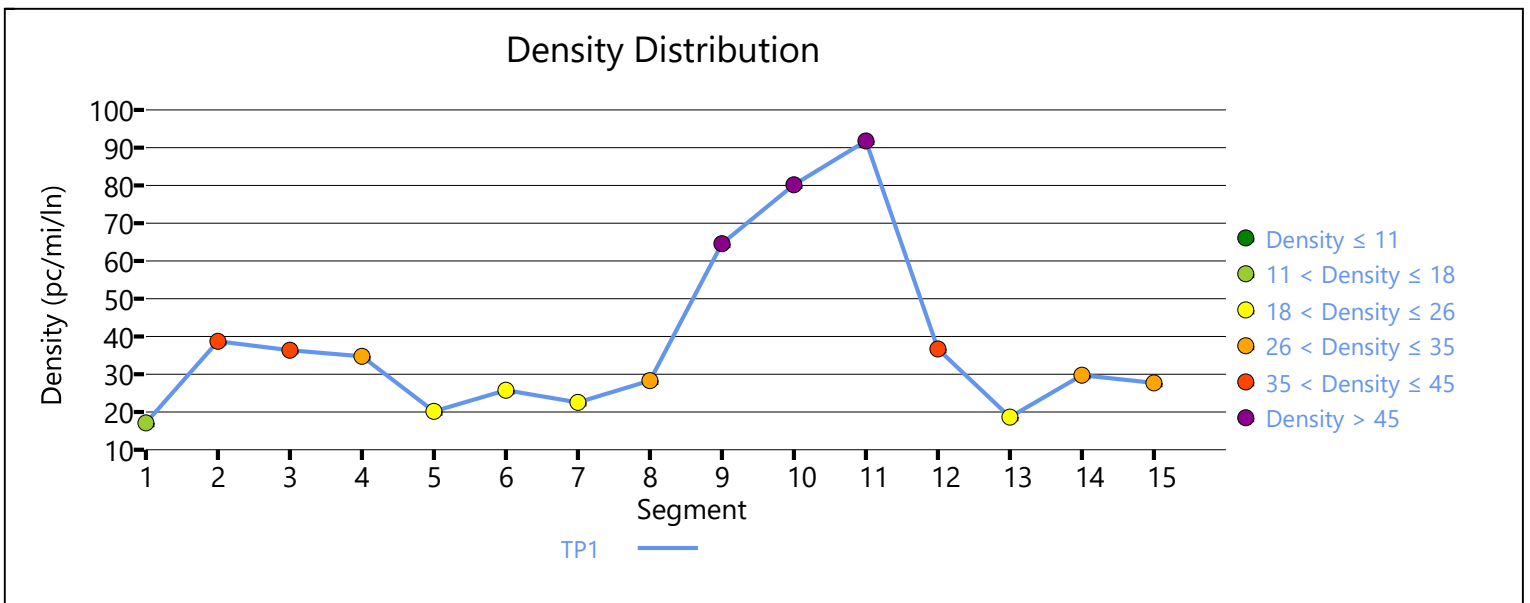
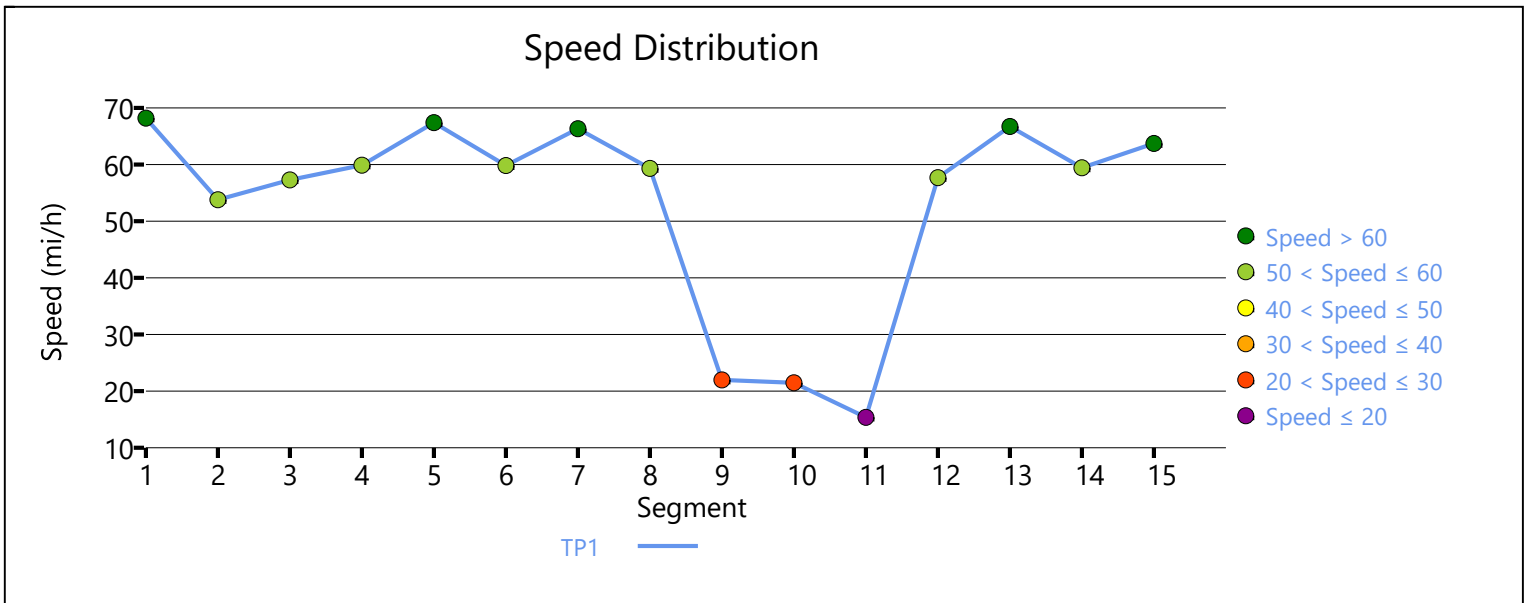
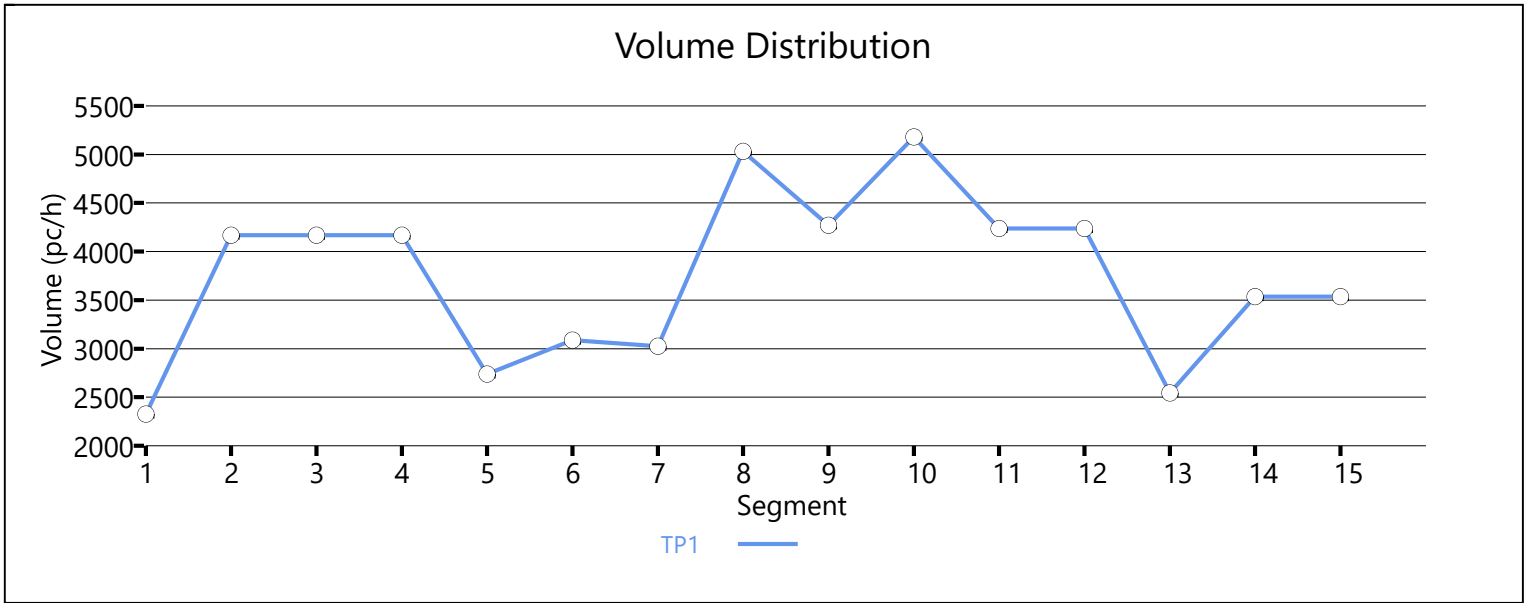
2050 Alternative 6

LPR CD as Add and WWT as Merge AM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.962	0.971	4167	1839	4550	1839	0.92	1.25	53.8	53.8	38.7	34.7	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4167		4612		0.93		57.3		36.4		E
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2739		4612		0.63		67.4		20.2		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3088	362	4550	1839	0.68	0.20	59.8	59.8	25.8	20.1	C
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3026		4612		0.77		66.3		22.6		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5030	2295	6824	3872	0.74	0.59	59.3	57.6	28.3	25.2	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4272		6917		0.83		22.0		64.6		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5179	1586	6970	1936	1.05	0.82	21.5	45.7	80.2	36.0	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.17		15.4		91.8		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2545		4612		1.16		66.7		18.7		F
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3535		4612		1.40		63.7		27.7		F
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	30.3				54.2				47.0				12.20		F
Facility Overall Results															
Space Mean Speed, mi/h					30.3					Density, veh/mi/ln					47.0
Average Travel Time, min					12.20					Density, pc/mi/ln					54.2
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 15. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
Comments															



2050 Alternative 6

LPR CD as Add and WWT as Merge AM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		67.7		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3252	362	6824	1839	0.48	0.20	62.7	61.2	17.3	12.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3566		6917		0.52		66.9		17.4		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	5647	2295	9099	3872	0.62	0.59	61.2	58.6	23.1	23.4	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		5738		9223		0.62		67.4		21.3		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	7324	1586	9293	1936	0.79	0.82	64.2	60.4	28.5	26.3	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		8110		9223		0.88		58.6		34.6		D
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	7222	1691	9099	2033	0.79	0.83	63.3	57.7	28.5	32.3	D

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	5368	9223	0.58	67.5	19.8	C

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS						
1	0.94	0.877	0.980	6358	990	9099	2033	0.70	0.49	62.4	60.6	25.5	20.9	C

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.877	6474	9223	0.70	65.7	24.6	C

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	63.0	24.9	21.8	5.90	C

Facility Overall Results

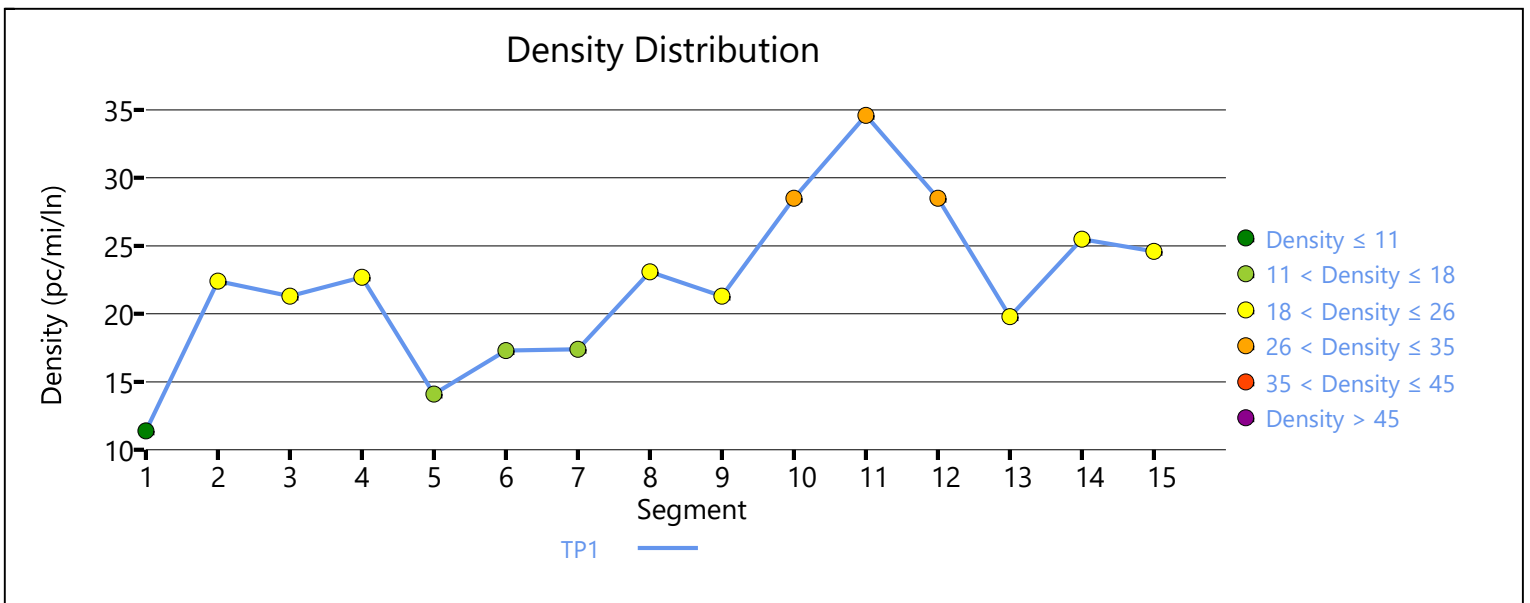
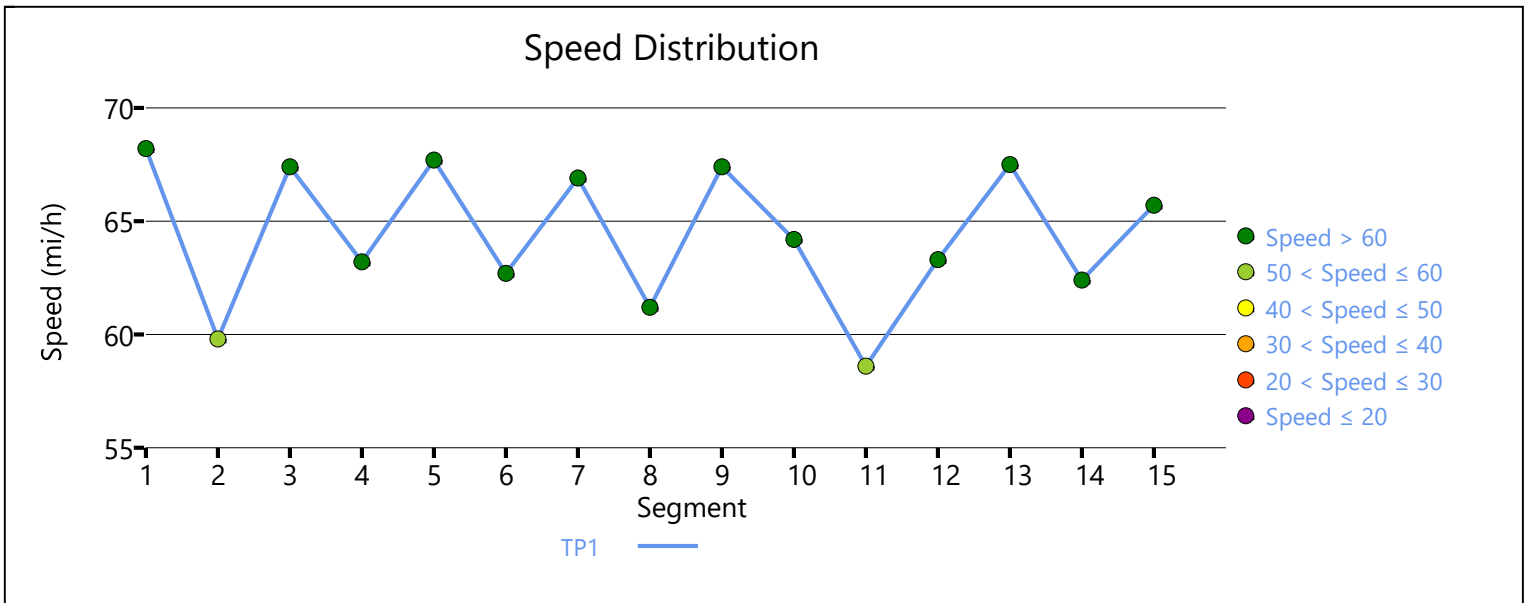
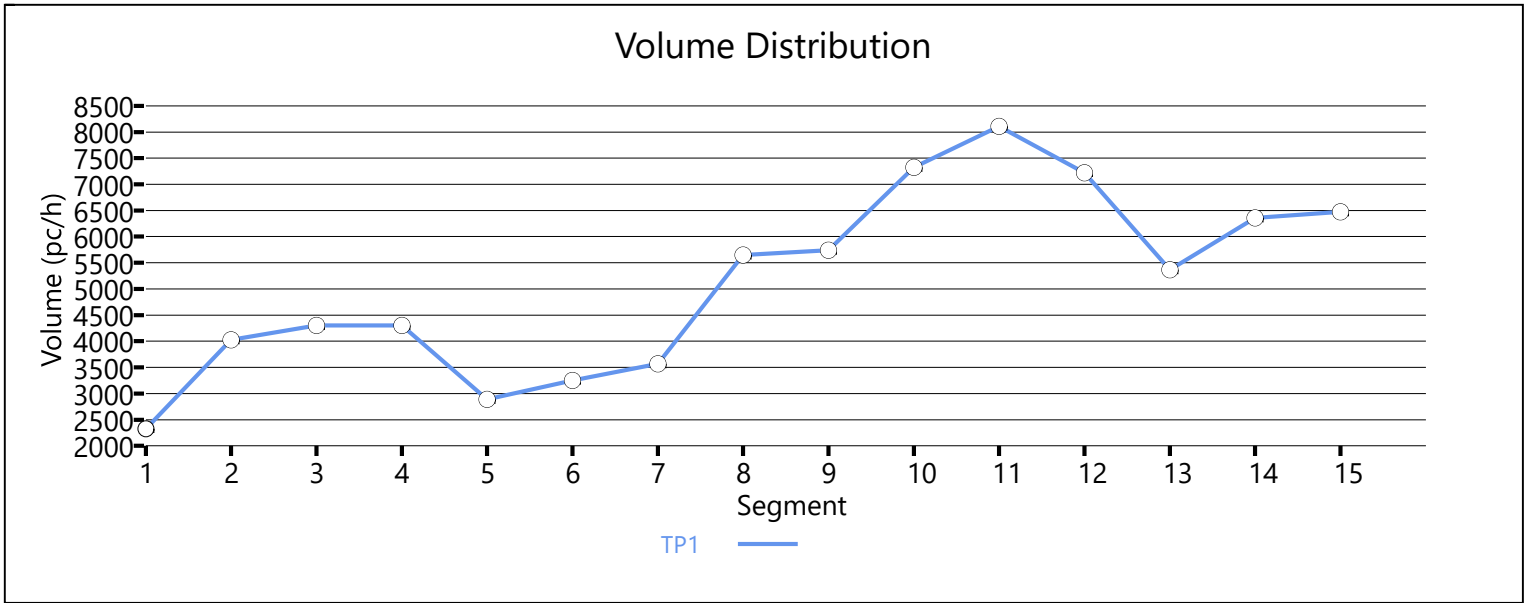
Space Mean Speed, mi/h	63.0	Density, veh/mi/ln	21.8
Average Travel Time, min	5.90	Density, pc/mi/ln	24.9

Messages

WARNING 1	Merge capacity is less than merge demand for analysis period 1 on segment 2.
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Comments

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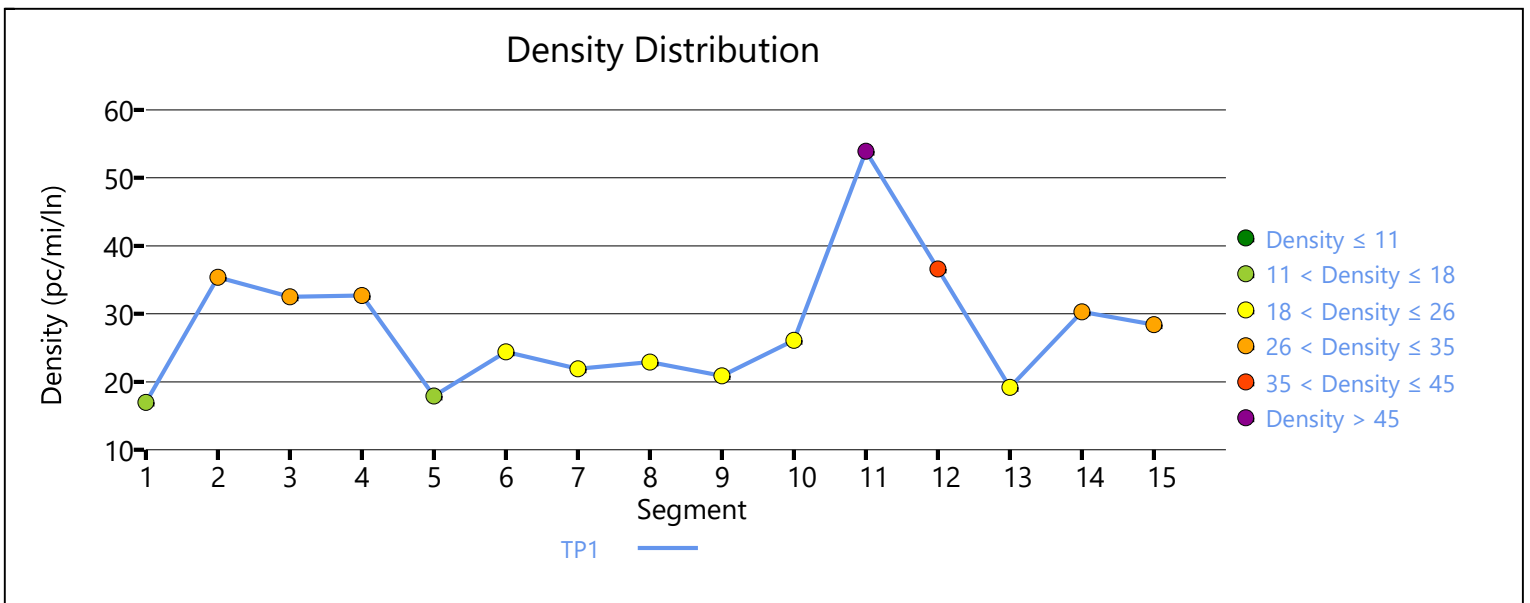
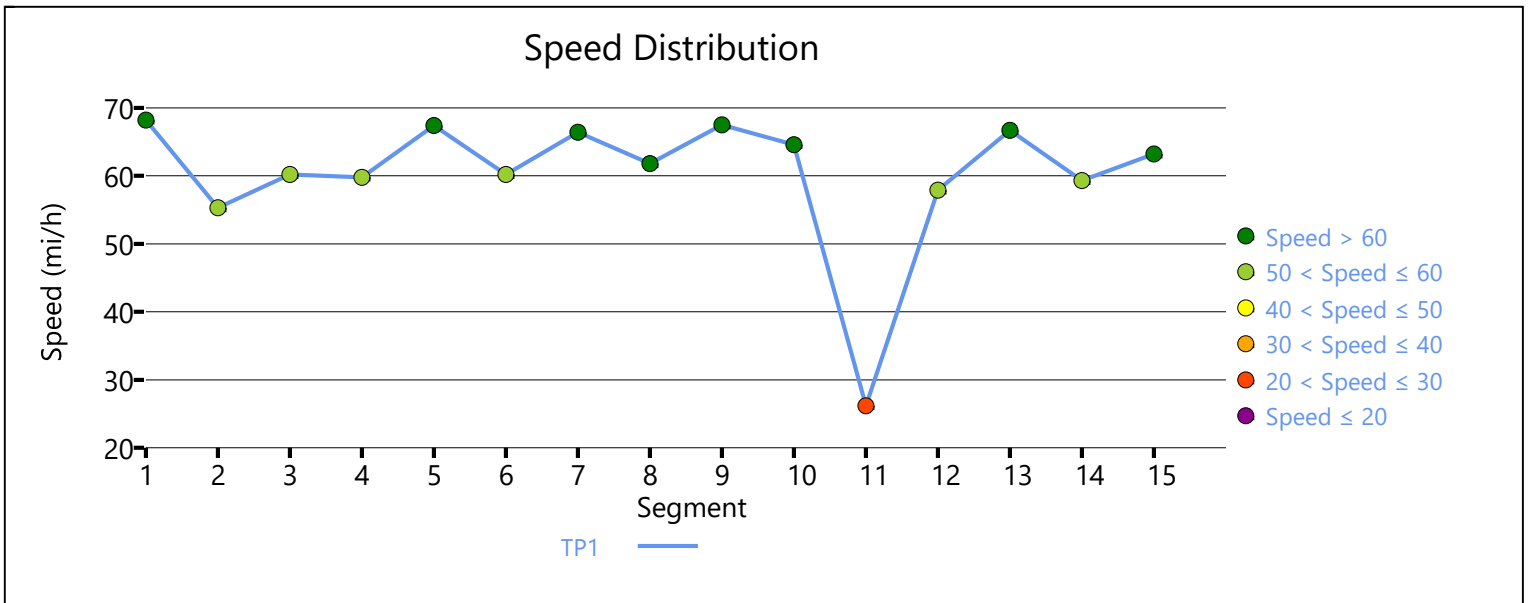
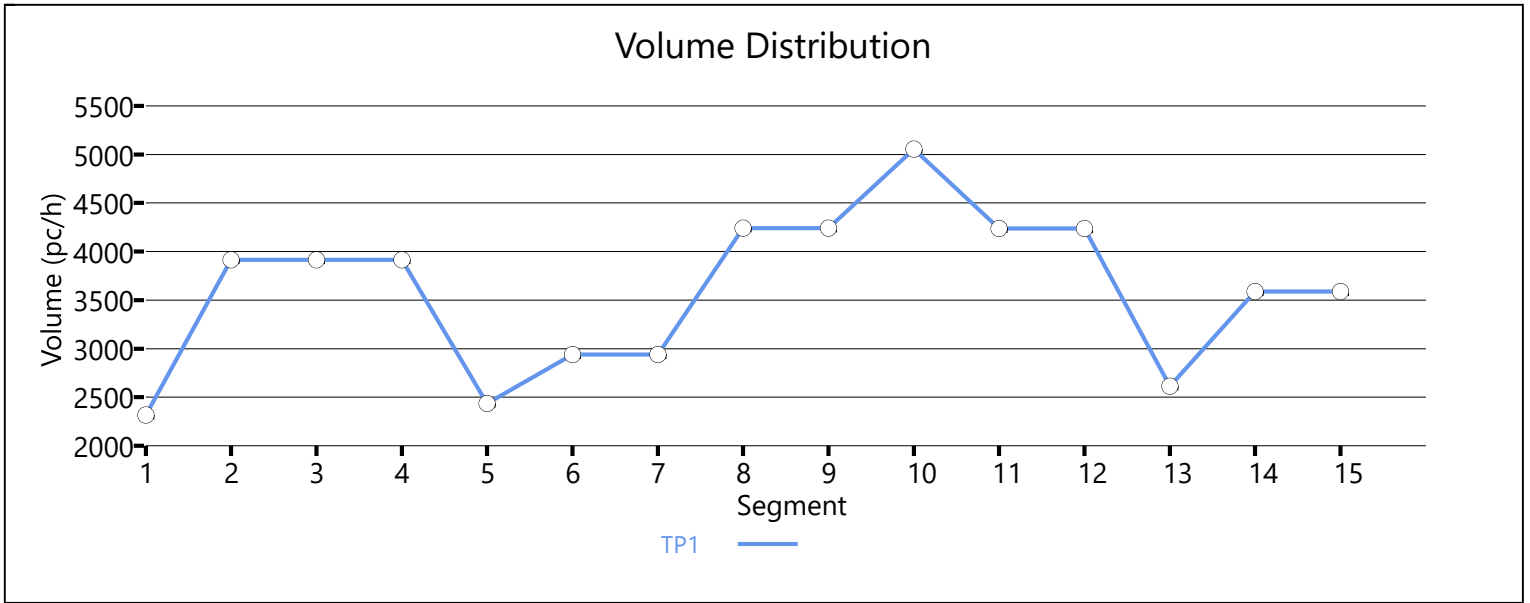
2050 Alternative 6

LPR CD as Add and WWT as Merge PM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		67.4		17.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	2939	502	4550	1839	0.65	0.27	60.2	60.2	24.4	18.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2939		4612		0.67		66.4		21.9		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4242	1303	6824	3872	0.62	0.34	61.8	60.4	22.9	18.8	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4242		6917		0.65		67.5		20.9		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5055	813	6970	1936	0.73	0.42	64.6	62.6	26.1	23.1	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		26.2		53.9		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		2615		4612		0.74		66.7		19.2		C
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.926		3589		4612		0.97		63.2		28.4		D
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	47.2				33.5				30.7				7.80		F
Facility Overall Results															
Space Mean Speed, mi/h					47.2					Density, veh/mi/ln					30.7
Average Travel Time, min					7.80					Density, pc/mi/ln					33.5
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
Comments															



2050 Alternative 6

LPR CD as Add and WWT as Merge PM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		67.7		12.3		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	3026	502	6824	1839	0.44	0.27	62.9	61.3	16.0	12.0	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3073		6917		0.44		67.0		15.0		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4192	1303	9099	3872	0.46	0.34	63.5	61.3	16.5	14.7	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4485		9223		0.49		68.1		16.4		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5298	813	9293	1936	0.57	0.42	67.5	64.7	19.6	16.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3426	9223	0.37	67.5	12.6	B

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS						
1	0.94	0.926	0.980	4400	974	9099	2033	0.48	0.48	63.9	61.9	17.2	14.7	B

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	4456	9223	0.48	68.1	16.3	B

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.5	17.7	16.4	5.60	B

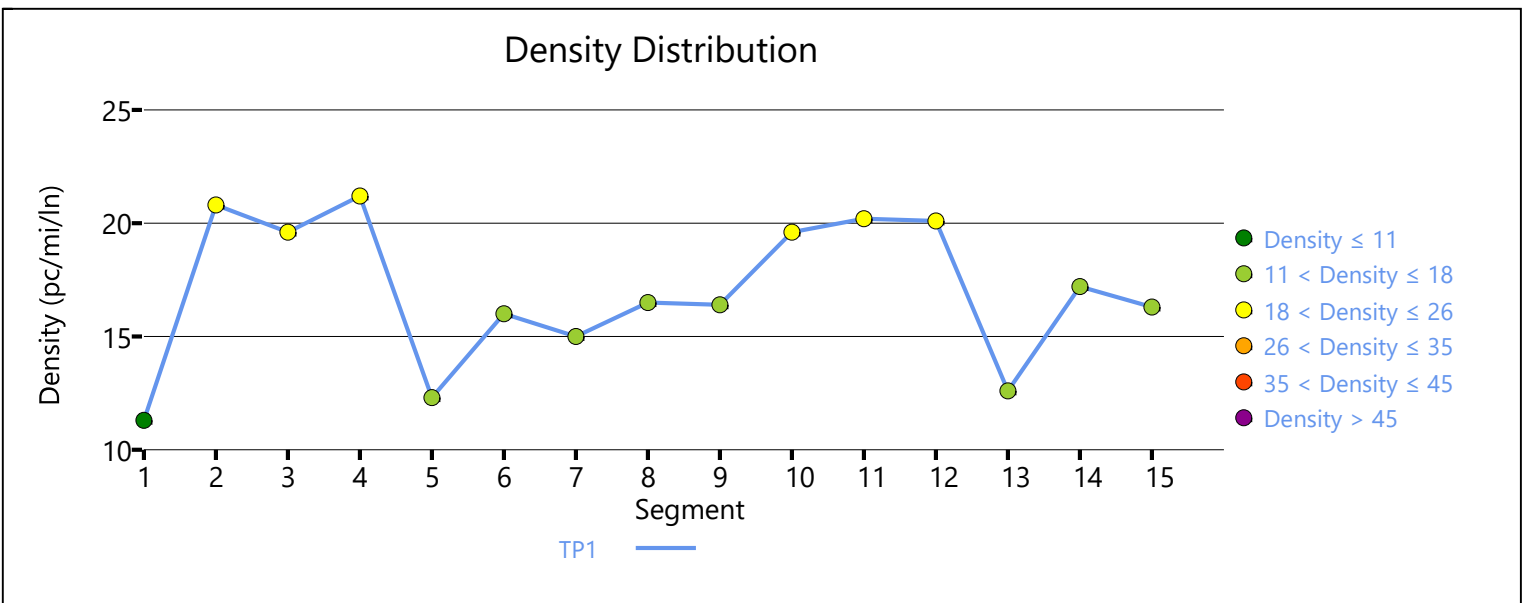
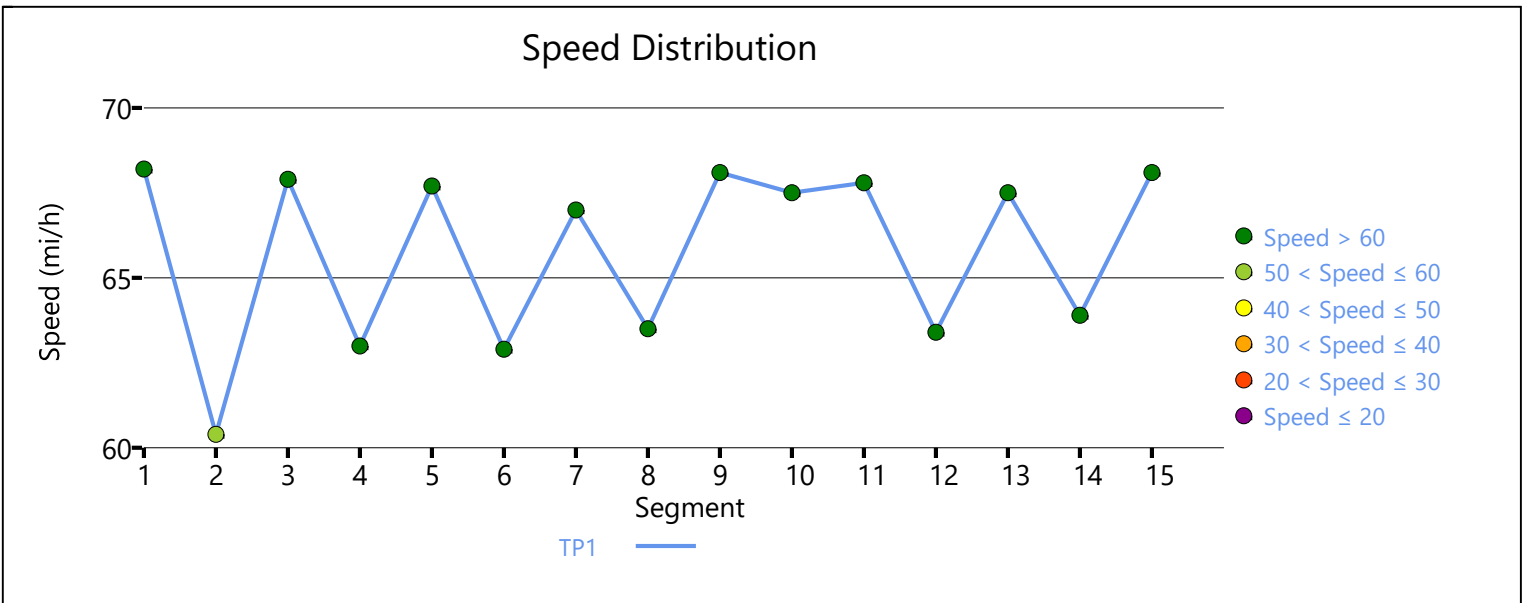
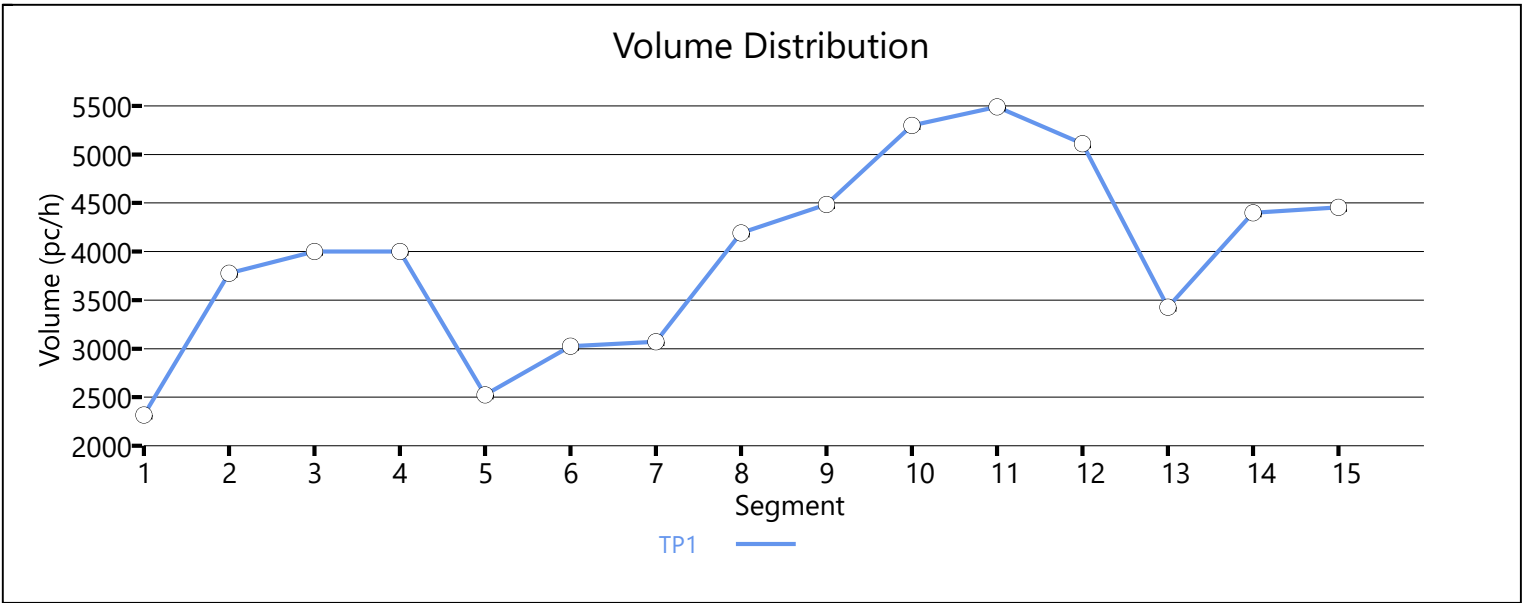
Facility Overall Results

Space Mean Speed, mi/h	66.5	Density, veh/mi/ln	16.4
Average Travel Time, min	5.60	Density, pc/mi/ln	17.7

Messages

Comments

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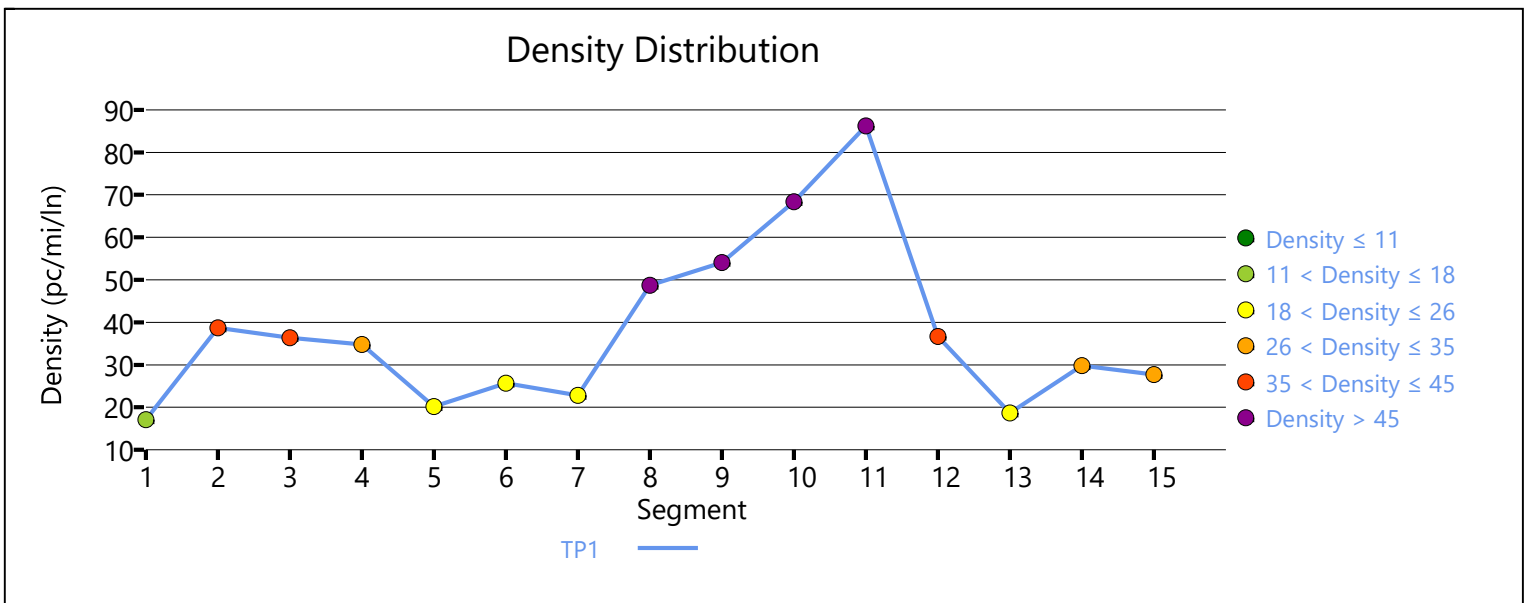
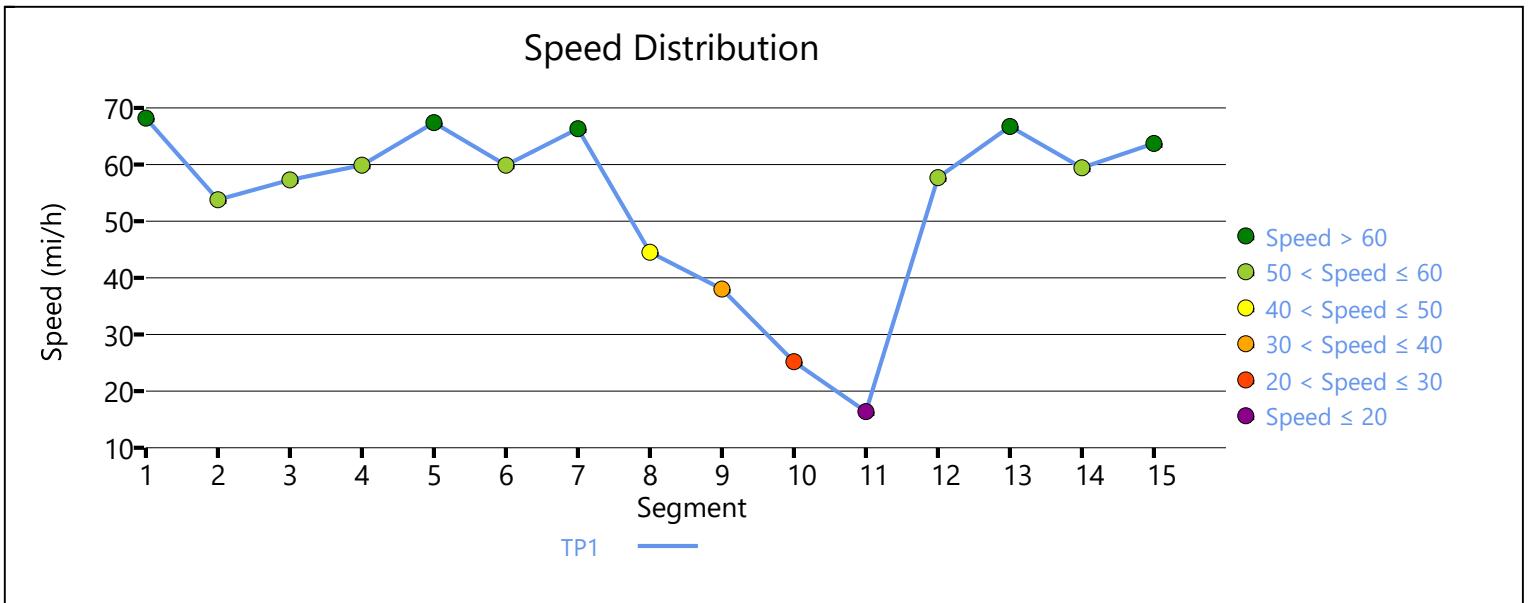
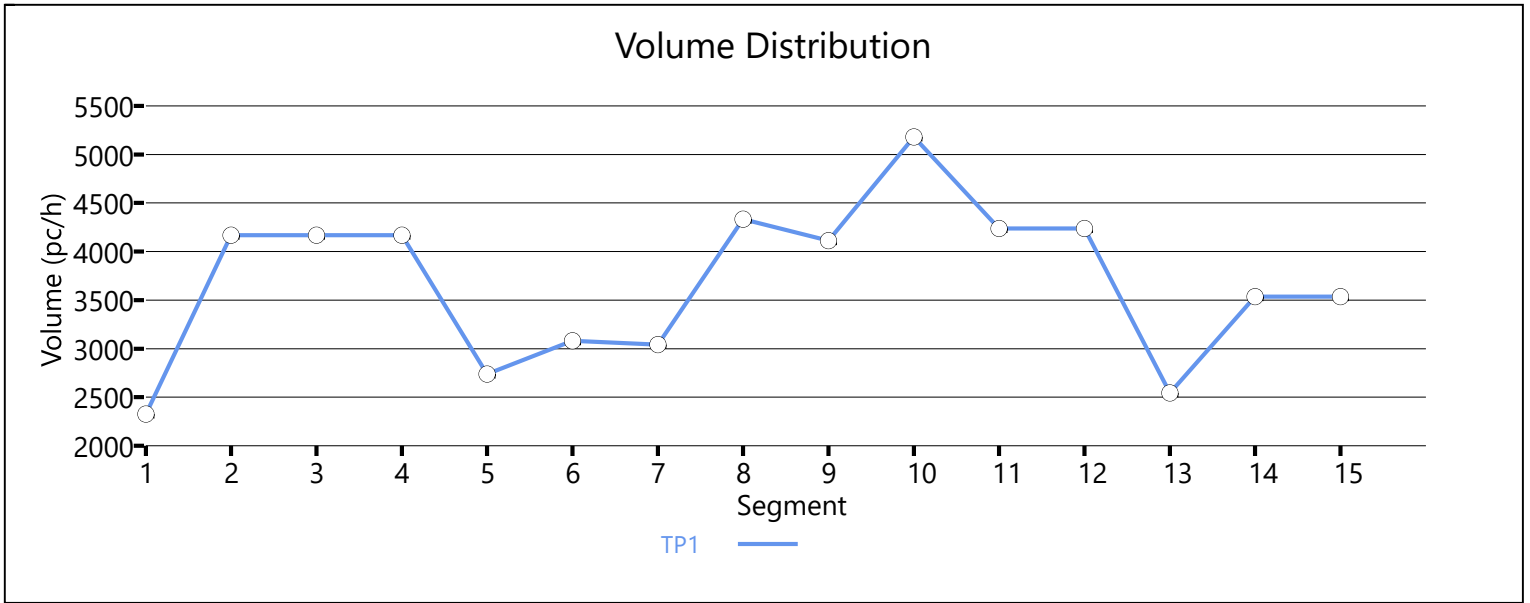
2050 Alternative 6

LPR CD as Merge and WWT as Add AM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.962	0.971	4167	1839	4550	1839	0.92	1.25	53.8	53.8	38.7	34.7	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4167		4612		0.93		57.3		36.4		E
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4167	1428	4550	2130	0.92	0.67	59.9	59.9	34.8	37.8	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2739		4612		0.63		67.4		20.2		C
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3082	362	4550	1839	0.68	0.20	59.9	59.9	25.7	20.0	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3043		4612		0.77		66.3		22.8		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	4333	2295	4550	3872	1.24	0.59	44.5	33.5	48.7	39.1	F
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4111		4612		1.24		38.0		54.1		F
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5179	1586	6970	1936	1.05	0.82	25.2	25.2	68.4	68.4	F
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		4236		6917		1.17		16.4		86.2		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	4236	1691	4550	2033	0.93	0.83	57.7	57.7	36.7	33.5	F
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		2545		4612		1.16		66.7		18.7		F
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	3535	990	4550	2033	0.78	0.49	59.4	59.4	29.8	24.0	F
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3535		4612		1.40		63.7		27.7		F
Facility Analysis Results															
AP	Speed, mi/h				Density, pc/mi/ln				Density, veh/mi/ln				Travel Time, min		LOS
1	34.0				51.6				44.3				10.90		F
Facility Overall Results															
Space Mean Speed, mi/h					34.0					Density, veh/mi/ln					44.3
Average Travel Time, min					10.90					Density, pc/mi/ln					51.6
Messages															
WARNING 1					Oversaturated conditions currently exist in boundary segment 15. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 2					Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.										
WARNING 3					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
Comments															



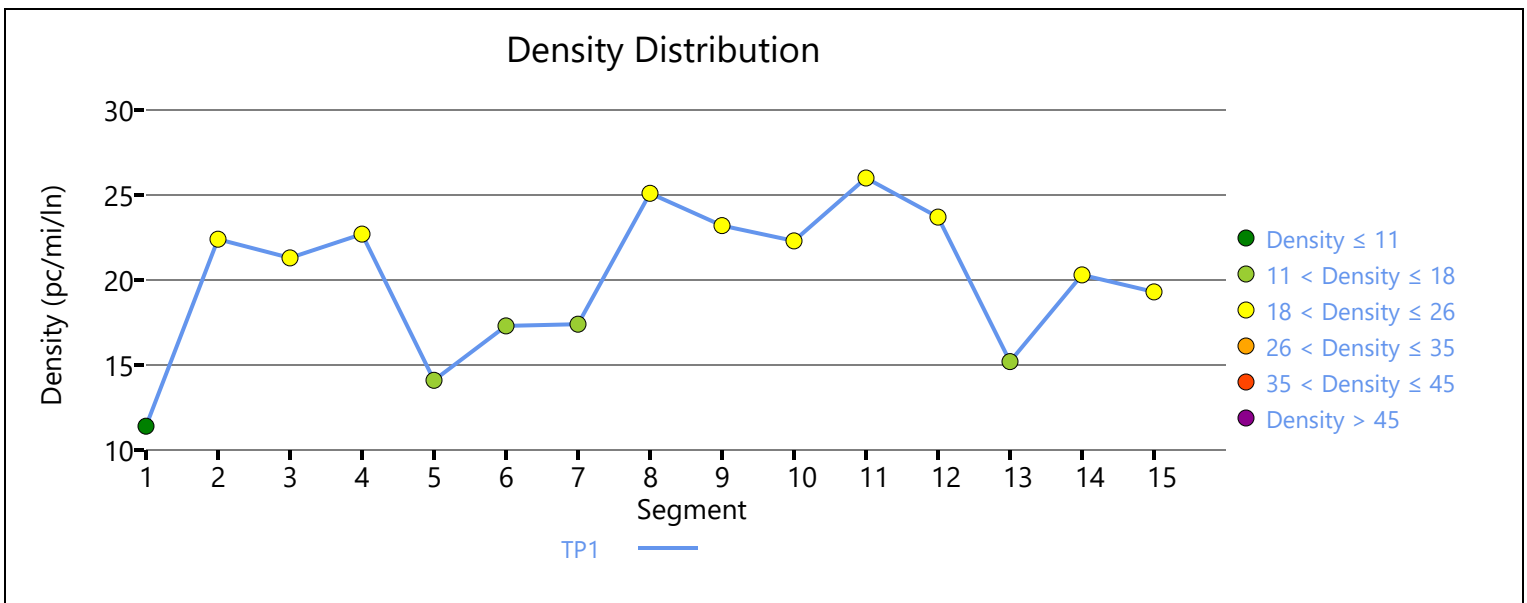
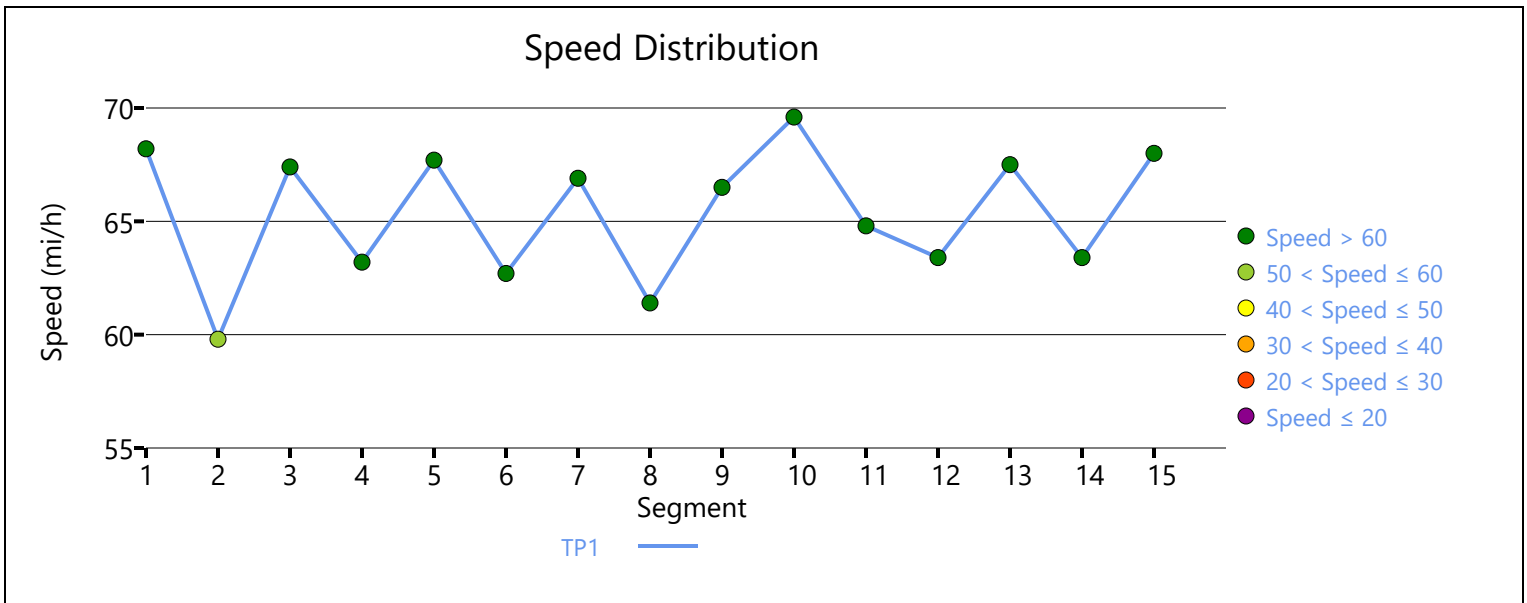
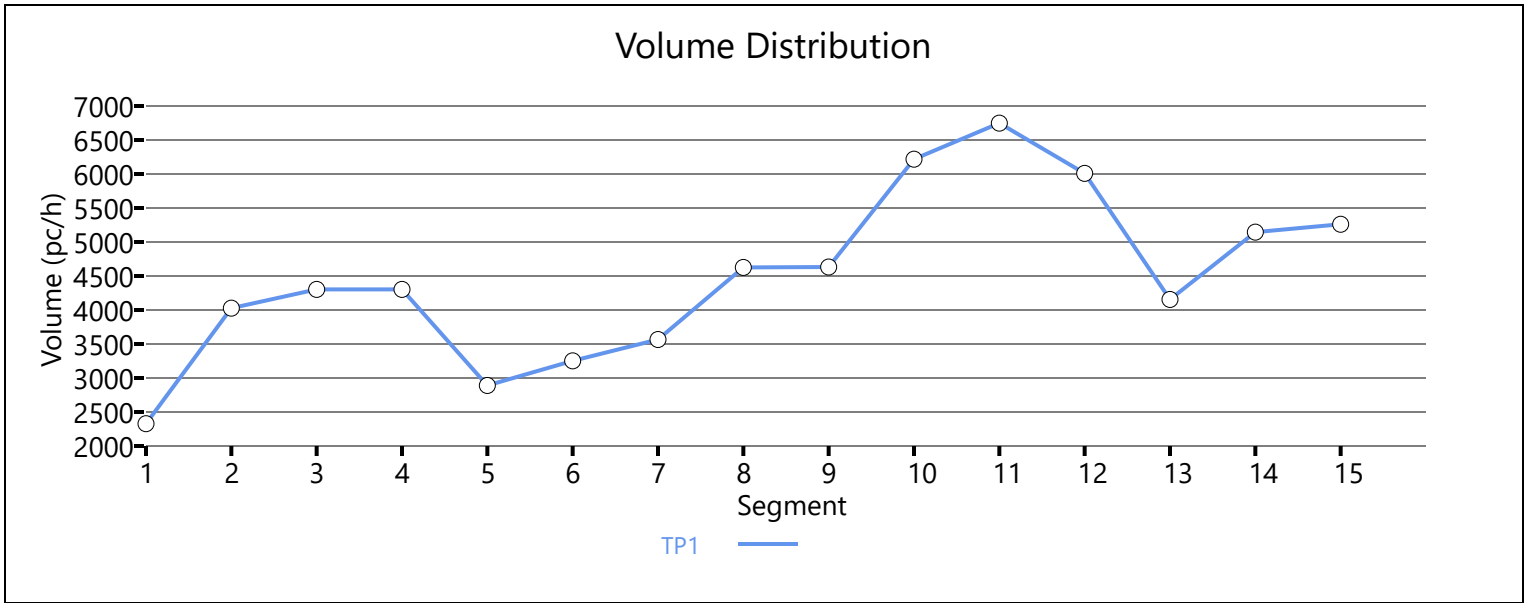
2050 Alternative 6

LPR CD as Merge and WWT as Add AM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.962	0.971	4027	1839	6824	1839	0.59	1.25	59.8	58.1	22.4	26.6	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4303		6917		0.62		67.4		21.3		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.952	4303	1428	6824	2130	0.63	0.67	63.2	59.9	22.7	28.8	D
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2890		6917		0.42		67.7		14.1		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.962	3252	362	6824	1839	0.48	0.20	62.7	61.2	17.3	12.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		3566		6917		0.52		66.9		17.4		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.877	0.980	4626	1274	6824	3872	0.68	0.33	61.4	60.0	25.1	20.4	C
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4632		6917		0.67		66.5		23.2		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	6218	1586	9293	1936	0.67	0.82	69.6	69.6	22.3	22.3	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.781		6748		9223		0.73		64.8		26.0		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.962	6009	1691	9099	2033	0.66	0.83	63.4	57.7	23.7	27.8	C
Segment 13: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		4155		9223		0.45		67.5		15.2		B
Segment 14: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.877	0.980	5145	990	9099	2033	0.57	0.49	63.4	61.5	20.3	17.1	B
Segment 15: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.877		5261		9223		0.57		68.0		19.3		C
Facility Analysis Results															
AP	Speed, mi/h		Density, pc/mi/ln		Density, veh/mi/ln		Travel Time, min		LOS						
1	65.4		21.5		19.0		5.70		C						
Facility Overall Results															
Space Mean Speed, mi/h					65.4					Density, veh/mi/ln					19.0
Average Travel Time, min					5.70					Density, pc/mi/ln					21.5
Messages															
WARNING 1					Merge capacity is less than merge demand for analysis period 1 on segment 2.										
Comments															



2050 Alternative 6

LPR CD as Merge and WWT as Add PM Peak Hour

(6-lane Freeway)

1	1.00	1.00	0.980	0.971	3916	1599	4550	1839	0.86	0.87	55.3	55.3	35.4	32.8	D
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		3916		4612		0.87		60.2		32.5		D
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	3916	1479	4550	2130	0.86	0.69	59.8	59.8	32.7	35.6	E
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2437		4612		0.55		67.4		17.9		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	2939	502	4550	1839	0.65	0.27	60.2	60.2	24.4	18.8	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		2939		4612		0.67		66.4		21.9		C
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4242	1303	4550	3872	0.93	0.34	55.4	55.4	38.3	28.6	D
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4242		6917		0.65		67.5		20.9		C
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5055	813	6970	1936	0.73	0.42	64.6	62.6	26.1	23.1	C
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		4236		6917		0.79		26.2		53.9		F
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	4236	1621	4550	2033	0.93	0.80	57.9	57.9	36.6	33.5	F

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	2615	4612	0.74	66.7	19.2	C

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS							
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.980	3589	974	4550	2033	0.79	0.48	59.3	59.3	30.3	24.4	C

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3589	4612	0.97	63.2	28.4	D

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	47.0	34.3	31.4	7.90	F

Facility Overall Results

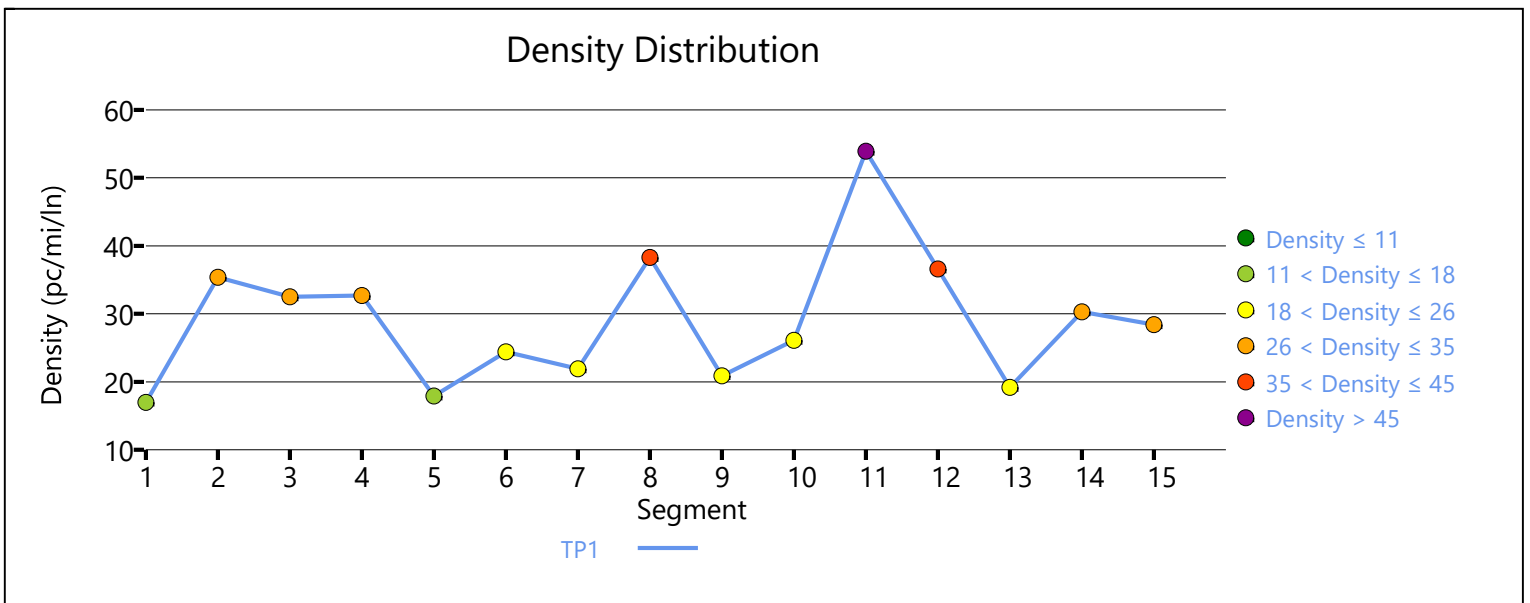
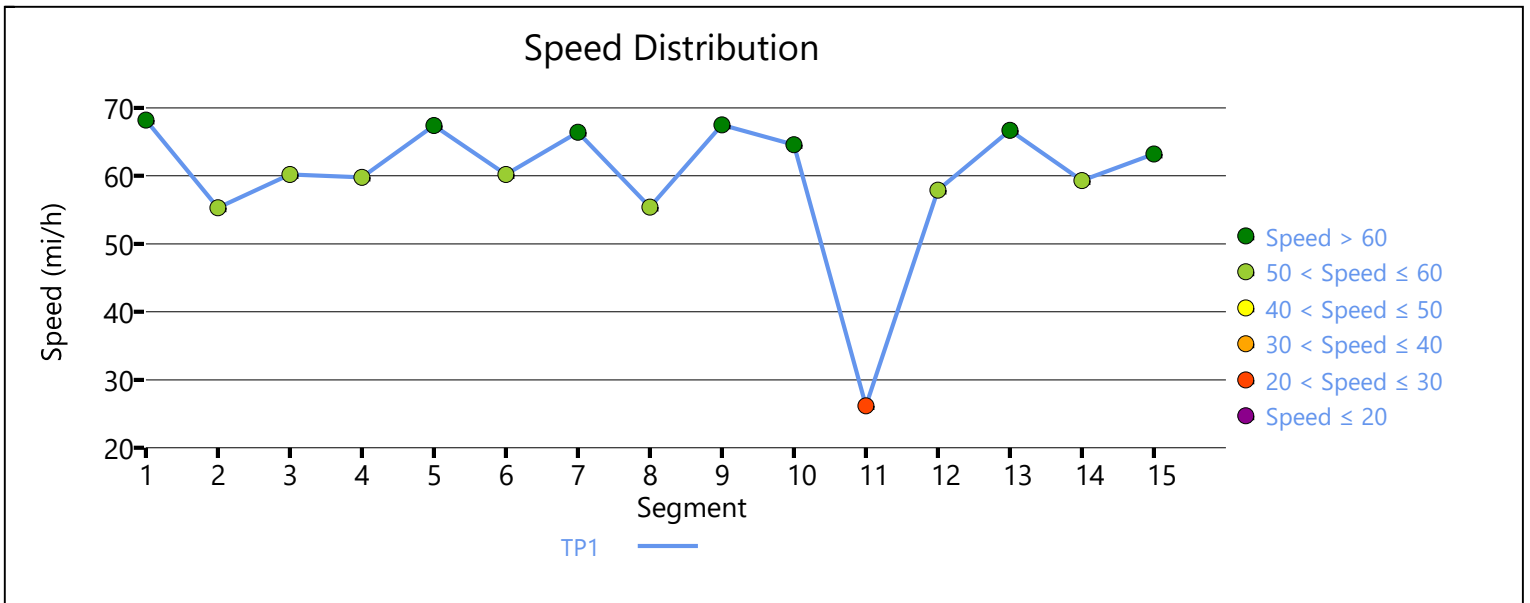
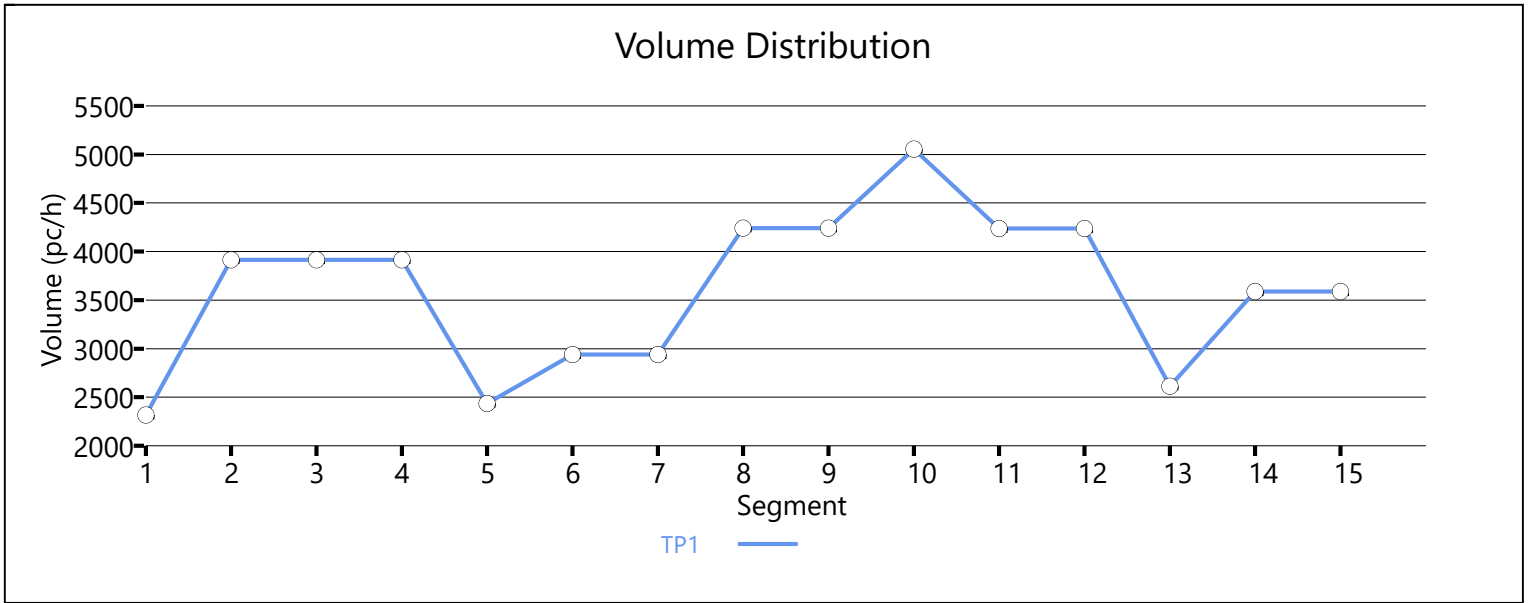
Space Mean Speed, mi/h	47.0	Density, veh/mi/ln	31.4
Average Travel Time, min	7.90	Density, pc/mi/ln	34.3

Messages

WARNING 1	Oversaturated conditions currently exist in boundary analysis period 1. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.
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Comments

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2050 Alternative 6

LPR CD as Merge and WWT as Add PM Peak Hour

(8-lane Freeway)

1	1.00	1.00	0.980	0.971	3777	1599	6824	1839	0.55	0.87	60.4	58.6	20.8	24.8	C
Segment 3: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		4002		6917		0.58		67.9		19.6		C
Segment 4: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.980	4002	1479	6824	2130	0.59	0.69	63.0	59.8	21.2	27.5	C
Segment 5: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.980		2524		6917		0.36		67.7		12.3		B
Segment 6: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.980	0.962	3026	502	6824	1839	0.44	0.27	62.9	61.3	16.0	12.0	B
Segment 7: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		3073		6917		0.44		67.0		15.0		B
Segment 8: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	1.00	1.00	0.962	0.980	4192	1303	6824	3872	0.61	0.34	61.9	60.5	22.6	18.6	B
Segment 9: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.962		4485		9223		0.49		68.1		16.4		B
Segment 10: Merge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.962	0.513	5298	813	9293	1936	0.57	0.42	67.5	64.7	19.6	16.7	B
Segment 11: Basic															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS
1	0.94		0.862		5489		9223		0.60		67.8		20.2		C
Segment 12: Diverge															
AP	PHF		fHV		Flow Rate (pc/h)		Capacity (pc/h)		d/c Ratio		Speed (mi/h)		Density (pc/mi/ln)		LOS

	F	R	F	R	Freeway	Ramp	Freeway	Ramp	F	R	F	R	Freeway	Ramp	
1	0.94	0.94	0.926	0.962	5110	1621	9099	2033	0.56	0.80	63.4	57.9	20.1	24.1	C

Segment 13: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	3426	9223	0.37	67.5	12.6	B

Segment 14: Merge

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS			
1	0.94	0.926	4400	974	0.48	0.48	63.9	61.9	17.2	14.7	B

Segment 15: Basic

AP	PHF	fHV	Flow Rate (pc/h)	Capacity (pc/h)	d/c Ratio	Speed (mi/h)	Density (pc/mi/ln)	LOS
1	0.94	0.926	4456	9223	0.48	68.1	16.3	B

Facility Analysis Results

AP	Speed, mi/h	Density, pc/mi/ln	Density, veh/mi/ln	Travel Time, min	LOS
1	66.4	17.9	16.7	5.60	B

Facility Overall Results

Space Mean Speed, mi/h	66.4	Density, veh/mi/ln	16.7
Average Travel Time, min	5.60	Density, pc/mi/ln	17.9

Messages

Comments

