

t5

Existing Traffic Volume Data Summary

APPENDIX T5 – EXISTING TRAFFIC VOLUME DATA SUMMARY

Introduction

Since 2016, MnDOT has been working with neighborhoods, community groups, district councils, local governments and others interested in the future of I-94 between St. Paul and Minneapolis in an effort to plan for transportation changes on and along the freeway. This effort is known as Rethinking I-94. The work described in this technical memorandum was conducted as part of the initial phase of Rethinking I-94 conducted between 2016 and 2018.

This memorandum documents the data sources and characteristics of traffic that currently use the I-94 corridor between Broadway Avenue and TH 61. This traffic data was used in identifying traffic congestion issues, developing new design concepts and evaluating MnPASS concepts and Spot Mobility improvements, which are discussed elsewhere in the Rethinking I-94 report. This data was also used to develop a freeway origin-destination table that is also documented in the report.

Data Sources

Daily AM and PM peak hour traffic volumes were obtained from MnDOT's database using the DataExtract tool. Traffic volumes for mainline and interchange ramps were obtained for October 2015. This data is consistent with the published Annual Average Daily Traffic (AADT) along the corridor. Due to the length of the corridor and amount of infrastructure (bridges, retaining walls and pavement), finding a dataset that was not impacted by construction was challenging. Based on a review of recently constructed projects, it was determined that data from October 2015 was the least impacted by construction. However, this data was slightly impacted by the construction of the I-35E MnPASS project.

As this study proceeds into the environmental phase, new data from 2017 should be utilized for traffic analysis. Year 2018 data should be avoided due to the construction impacts of the I-35W Downtown to Crosstown Project.

Daily AM and PM peak hour traffic volumes are included in Table 1 (eastbound I-94) and Table 2 (westbound I-94) of Attachment 1 and contain volumes for all mainline segments and interchange ramps that access I-94. The volumes displayed are a balanced traffic set that identifies the traffic demand of the corridor. In congested locations, the measured traffic volume during the peak hours will likely be less than the demand volumes shown in tables 1 and 2.

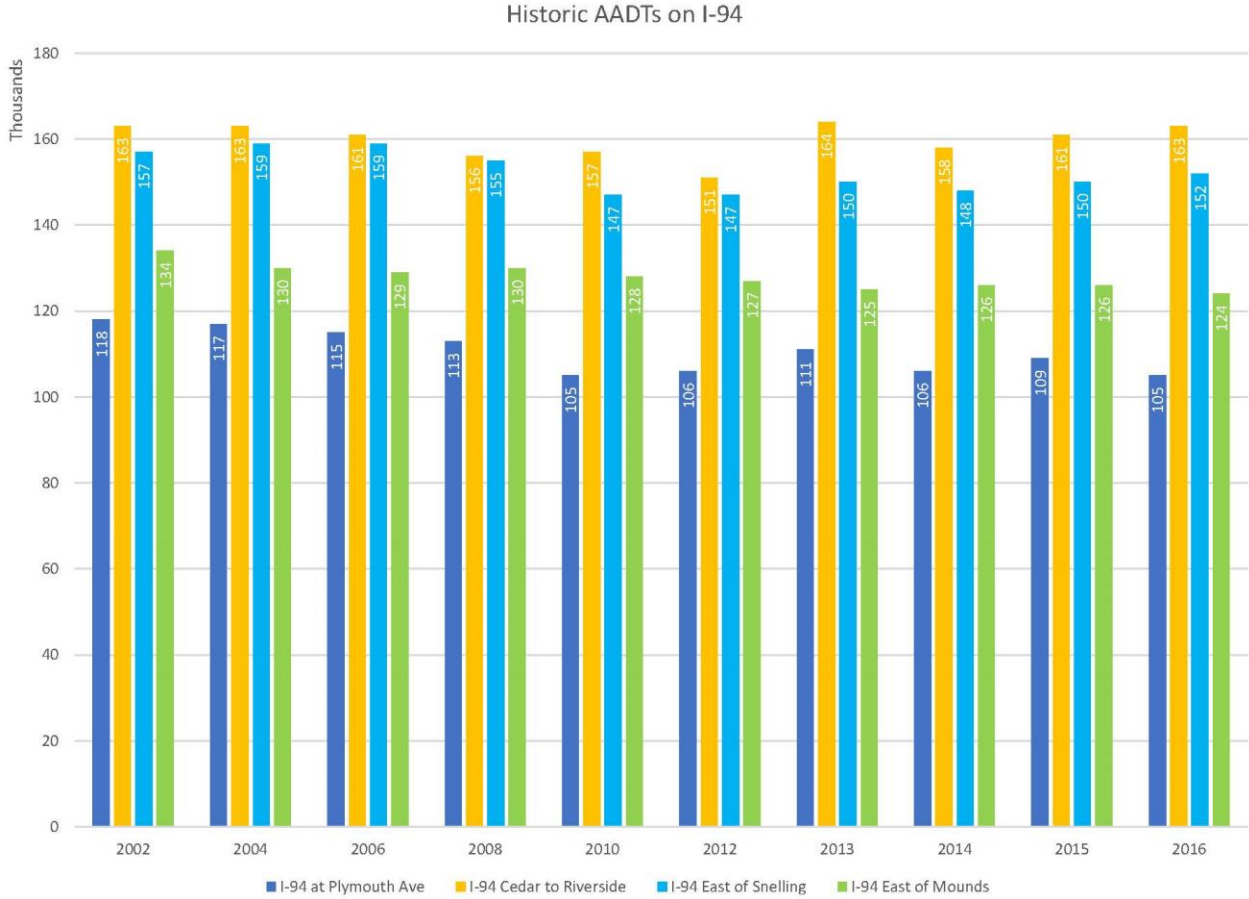
Historical Trends

Historical daily traffic volumes were obtained from MnDOT’s database using available data from 2002 to 2016 at four locations in the corridor:

- I-94 at Plymouth Avenue
- I-94 between Cedar Avenue and Riverside Avenue
- I-94 east of Snelling Avenue
- I-94 east of Mounds Boulevard

For all four of the locations, traffic volumes have remained constant or have decreased slightly over the 14-year period.

FIGURE 1 – I-94 HISTORICAL AADTS



Findings of Existing Data Review

- In general, weekday daily traffic volumes between downtown Minneapolis and downtown Saint Paul are between 150,000 and 170,000 (two-way volume) vehicles per day. These volumes are consistent with published AADTs.
 - Of these daily volumes, approximately 7,000 (4.6 percent) to 8,000 (4.7 percent) are trucks.
- The largest volumes in the study area occur between Hennepin Avenue/Lyndale Avenue and I-35W S (approximately 222,000 vehicles per day) and in the commons section of I-35E (approximately 198,000 vehicles per day). The largest peak hour volumes also occur at these locations.
- The daily traffic volume in the Lowry Hill Tunnel is approximately 175,000 vehicles per day.
- Traffic volumes along the corridor are not always symmetrical (eastbound does not equal westbound) due to:
 - Inconsistent access (not all movements are provided)
 - Eastbound I-94 has 23 on ramps and 18 off ramps
 - Westbound I-94 has 18 on ramps and 22 off ramps
 - Congestion develops along most of the corridor for at least one hour per day. In the I-94/I-35W commons, congestion exceeds seven hours per day
 - Vehicles are making the return trip using a different route
- In general, the AM peak hour for the corridor occurs between 7:00 and 8:00 a.m. and the PM peak hour occurs between 4:00 and 5:00 p.m. However, localized peaking occurs at several locations along the corridor outside these windows.
- As this study proceeds into the environmental phase, new data from 2017 should be utilized for traffic analysis. Year 2018 data should be avoided due to the construction impacts of the I-35W Downtown to Crosstown Project.

ATTACHMENT 1

Table 1
Rethinking I-94 Balanced Traffic Volumes (Year 2015)

Eastbound I-94 from Broadway Avenue to TH 61

Segment	Type	Weekday Daily Traffic	AM Peak Hour (7:00 to 8:00)	PM Peak Hour (4:00 to 5:00)
EB I-94 at Broadway Avenue	Mainline	45,600	4,750	2,900
Broadway	Entrance	15,250	800	1,150
EB I-94	Mainline	60,850	5,550	4,050
I-394/Hennepin Avenue/Lyndale Avenue	Exit	23,850	2,950	1,750
EB I-94	Mainline	37,000	2,600	2,300
TH 55/Lyndale Avenue	Entrance	18,050	1,650	1,300
EB I-94	Mainline	55,050	4,250	3,600
I-394	Entrance	30,350	2,150	1,900
EB I-94	Mainline	85,400	6,400	5,500
Hennepin Avenue/Lyndale Avenue	Entrance	27,050	2,200	1,550
EB I-94	Mainline	112,450	8,600	7,050
I-35W South	Exit	34,350	2,600	2,100
EB I-94	Mainline	78,100	6,000	4,950
I-35W North	Exit	18,250	1,250	1,050
EB I-94	Mainline	59,850	4,750	3,900
5th Avenue	Entrance	7,100	500	650
EB I-94	Mainline	66,950	5,250	4,550
TH 55	Exit	13,900	800	900
EB I-94	Mainline	53,050	4,450	3,650
I-35W South	Entrance	14,750	1,100	650
EB I-94	Mainline	67,800	5,550	4,300
6th Street	Entrance	11,500	450	1,300
EB I-94	Mainline	79,300	6,000	5,600
Cedar Ave	Entrance	7,950	500	650
EB I-94	Mainline	87,250	6,500	6,250
25th Avenue	Exit	8,700	650	450
EB I-94	Mainline	78,550	5,850	5,800
Riverside Avenue	Entrance	7,200	300	600
EB I-94	Mainline	85,750	6,150	6,400
Huron Boulevard	Exit	7,500	600	350
EB I-94	Mainline	78,250	5,550	6,050
Huron Boulevard	Entrance	6,950	250	750
EB I-94	Mainline	85,200	5,800	6,800
TH 280	Exit	15,000	1,000	1,200
EB I-94	Mainline	70,200	4,800	5,600
Cretin Avenue	Exit	9,500	500	850
EB I-94	Mainline	60,700	4,300	4,750
TH 280	Entrance	22,000	1,600	1,800
EB I-94	Mainline	82,700	5,900	6,550
Cretin Ave	Entrance	8,150	750	500
EB I-94	Mainline	90,850	6,650	7,050
Snelling Avenue	Exit	15,800	1,000	1,450
EB I-94	Mainline	75,050	5,650	5,600
Snelling Avenue	Entrance	10,700	650	700
EB I-94	Mainline	85,750	6,300	6,300
Lexington Parkway	Exit	10,100	500	900
EB I-94	Mainline	75,650	5,800	5,400
Lexington Pkwy	Entrance	10,400	750	450
EB I-94	Mainline	86,050	6,550	5,850
Dale Street	Exit	8,650	400	650
EB I-94	Mainline	77,400	6,150	5,200
Dale Street	Entrance	8,250	600	400
EB I-94	Mainline	85,650	6,750	5,600
Marion Street/Kellogg Boulevard	Exit	10,800	900	650
EB I-94	Mainline	74,850	5,850	4,950
5th Street/10th Street	Exit	14,800	1,700	1,050
EB I-94	Mainline	60,050	4,150	3,900
Marion Street/Kellogg Boulevard	Entrance	10,700	450	850
EB I-94	Mainline	70,750	4,600	4,750
I-35E Mainline	Entrance	25,000	1,500	2,000
EB I-94	Mainline	95,750	6,100	6,750
I-35E Ramp	Entrance	6,200	500	500
EB I-94	Mainline	101,950	6,600	7,250
I-35E North	Exit	36,000	2,200	2,800
EB I-94	Mainline	65,950	4,400	4,450
11th Street	Entrance	7,250	300	1,000
EB I-94	Mainline	73,200	4,700	5,450
7th Street	Exit	8,700	900	450
EB I-94	Mainline	64,500	3,800	5,000
I-35E North	Entrance	13,400	600	1,050
EB I-94	Mainline	77,900	4,400	6,050
TH 52	Exit	12,350	750	1,100
EB I-94	Mainline	65,550	3,650	4,950
6th Street	Entrance	2,900	100	600
EB I-94	Mainline	68,450	3,750	5,550
TH 52	Entrance	4,400	200	450
EB I-94	Mainline	72,850	3,950	6,000
Mounds Boulevard	Exit	10,100	450	750
EB I-94	Mainline	62,750	3,500	5,250
Mounds Boulevard	Entrance	10,450	400	1,500
EB I-94	Mainline	73,200	3,900	6,750
TH 61	EXIT	14,000	600	1,300
EB I-94	Mainline	59,200	3,300	5,450

Table 2
Rethinking I-94 Balanced Traffic Volumes (Year 2015)

Westbound I-94 from TH 61 to Broadway Avenue

Segment	Type	Weekday Daily Traffic	AM Peak Hour (7:00 to 8:00)	PM Peak Hour (4:00 to 5:00)
WB I-94	Mainline	54,000	4,900	3,500
TH 61	Entrance	16,800	2,150	800
WB I-94	Mainline	70,800	7,050	4,300
Mounds Boulevard	Exit	10,800	1,800	500
WB I-94	Mainline	60,000	5,250	3,800
TH 52/6th Street	Exit	6,800	700	450
WB I-94	Mainline	53,200	4,550	3,350
Mounds Boulevard	Entrance	11,700	600	700
WB I-94	Mainline	64,900	5,150	4,050
TH 52/6th Street	Entrance	16,700	1,350	1,200
WB I-94	Mainline	81,600	6,500	5,250
I-35E North	Exit	20,400	1,200	1,200
WB I-94	Mainline	61,200	5,300	4,050
12th Street	Exit	5,950	700	300
WB I-94	Mainline	55,250	4,600	3,750
I-35E North Mainline	Entrance	28,700	2,600	1,700
WB I-94	Mainline	83,950	7,200	5,450
I-35E North Ramp	Entrance	12,000	700	700
WB I-94	Mainline	95,950	7,900	6,150
I-35E South	Exit	29,000	2,400	1,750
WB I-94	Mainline	66,950	5,500	4,400
Marion Street/Kellogg Boulevard	Exit	9,150	550	550
WB I-94	Mainline	57,800	4,950	3,850
12th Street	Entrance	11,100	450	1,100
WB I-94	Mainline	68,900	5,400	4,950
6th Street	Entrance	9,200	800	1,100
WB I-94	Mainline	78,100	6,200	6,050
Marion Street/Kellogg Boulevard	Entrance	8,600	400	800
WB I-94	Mainline	86,700	6,600	6,850
Dale Street	Exit	9,500	450	850
WB I-94	Mainline	77,200	6,150	6,000
Dale Street	Entrance	9,200	600	550
WB I-94	Mainline	86,400	6,750	6,550
Lexington Parkway	Exit	8,800	550	650
WB I-94	Mainline	77,600	6,200	5,900
Lexington Parkway	Entrance	10,550	850	650
WB I-94	Mainline	88,150	7,050	6,550
Hamline Avenue	Exit	7,350	350	550
WB I-94	Mainline	80,800	6,700	6,000
Snelling Avenue	Exit	9,700	500	700
WB I-94	Mainline	71,100	6,200	5,300
Snelling Avenue	Entrance	18,700	1,600	1,100
WB I-94	Mainline	89,800	7,800	6,400
Cretin Avenue	Exit	8,200	400	750
WB I-94	Mainline	81,600	7,400	5,650
Cretin Avenue	Entrance	12,500	800	700
WB I-94	Mainline	94,100	8,200	6,350
TH 280	Exit	21,800	1,800	2,000
WB I-94	Mainline	72,300	6,400	4,350
TH 280	Entrance	13,400	1,050	850
WB I-94	Mainline	85,700	7,450	5,200
Huron Boulevard	Exit	7,400	800	450
WB I-94	Mainline	78,300	6,650	4,750
Huron Boulevard	Entrance	8,450	300	550
WB I-94	Mainline	86,750	6,950	5,300
Riverside Avenue	Exit	8,000	850	750
WB I-94	Mainline	78,750	6,100	4,550
25th Avenue	Entrance	7,700	400	500
WB I-94	Mainline	86,450	6,500	5,050
Cedar Avenue	Exit	8,300	500	400
WB I-94	Mainline	78,150	6,000	4,650
7th Street	Exit	7,200	850	400
WB I-94	Mainline	70,950	5,150	4,250
I-35W South	Exit	11,000	1,200	800
WB I-94	Mainline	59,950	3,950	3,450
I-35W North/TH 55	Entrance	30,000	1,900	1,900
WB I-94	Mainline	89,950	5,850	5,350
11th Street	Exit	13,000	1,400	800
WB I-94	Mainline	76,950	4,450	4,550
4th Avenue/I-35W South	Entrance	32,400	1,750	1,950
WB I-94	Mainline	109,350	6,200	6,500
Hennepin Avenue/Lyndale Avenue	Exit	20,200	850	950
WB I-94	Mainline	89,150	5,350	5,550
I-394	Exit	37,400	2,800	2,400
WB I-94	Mainline	51,750	2,550	3,150
TH 55	Exit	7,000	300	300
WB I-94	Mainline	44,750	2,250	2,850
I-394/Lyndale Avenue	Entrance	16,000	800	1,700
WB I-94	Mainline	60,750	3,050	4,550
Broadway Avenue	Exit	12,900	800	600
WB I-94	Mainline	47,850	2,250	3,950