



# 2018 Traffic Growth Report

Omaha-Council Bluffs Metropolitan Area



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## INTRODUCTION AND METHODOLOGY

The Traffic Growth report is a biennial publication produced by the Metropolitan Area Planning Agency (MAPA) as part of its ongoing transportation planning process. The report is produced in conjunction with the *Traffic Flow Map*, the *Top Intersections Report* and the *Top Traffic Interchanges Report*. This report provides a unique analysis of the change in vehicular traffic from a regional and sub-regional perspective. Traffic is listed in terms of total VMT (vehicle miles traveled), which is calculated by multiplying the length of a road segment by the average annual daily traffic (AADT). (Previous reports expressed traffic in AAWT; for the 2018 report onward AADT, will be used instead). Statistics in the *Traffic Growth Report* are primarily derived from volumes shown on the *2018 Traffic Flow Map*. For more specific information regarding traffic along or through particular streets or intersections, please consult the *2018 Traffic Flow Map*.

The *2018 Traffic Growth Report* utilizes the methodology from the *2016 Traffic Growth Report* to measure the changes in VMT at regional and sub-regional levels. Traffic count data for this report is aggregated to Traffic Analysis Districts (TADs)— small areas in each county that are bound by major roadways. These TADs are shown in the Corridor Map (Figure 1), which also depicts the major highways and arterials. Total VMT is derived from the traffic count estimates that include new counts and older data that is factored in relation to the new counts. The average daily vehicle miles traveled within each TAD is illustrated in Figure 2. Growth rates are derived from locations where new data was available for this report (i.e. a location with a 2018 traffic count would be compared back to the AADT adjusted from the AAWT value in 2016). This growth is depicted by TAD in Figure 3 for the period 2016-2018.

Figure 4 shows an estimated vintage for the traffic count database. This information should be used to provide context to the growth trends in Figures 2 and 3. In areas of older count data growth estimates are less reliable.

The Regional Traffic Patterns figure was created using data compiled from the *Top Intersection Report*. Traffic flow recorded at each intersection was processed using ArcGIS Spatial Analyst and turned into an interpolated flow surface that demonstrates intersection connectivity. This output provide insight into transportation network performance and traffic flow trends in the region. Figure 5 utilizes a heat map to portray intersection volumes to describe regional traffic patterns.

VMT is estimated to have grown by 1.6% in Douglas County, 2.3% in Sarpy County and by 1.5% in Pottawattamie and Mills Counties since 2016. These estimates are affected by the number and location of count locations within each county. For the period 2016-2018, Sarpy County has the fewest counts, with a distribution that underweights the southerwestern TADs. To aid in evaluating the information provided in the Traffic Flow Map, the age of the most recent count information by location is shown in Figure 5. Pottawattamie County comparable traffic counts are predominantly on high-volume roads, which likely overweights the growth represented in Figures 2 and 3. The overall regional growth of 1.6%, which is lower than in previous reporting periods, but is consistent with the national trends and regional reporting. The Federal Highway Administration reported nationally VMT on all systems only growing 0.4% from 2017; down from 1.2% in 2017.<sup>1</sup>

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<sup>1</sup> Federal Highway Administration. (2019) December 2018 Traffic Volume Trends Volume Trends - Urban. [https://www.fhwa.dot.gov/policyinformation/travel\\_monitoring/18dectvt/page8.cfm](https://www.fhwa.dot.gov/policyinformation/travel_monitoring/18dectvt/page8.cfm)

FIGURE 1 - CORRIDOR MAP

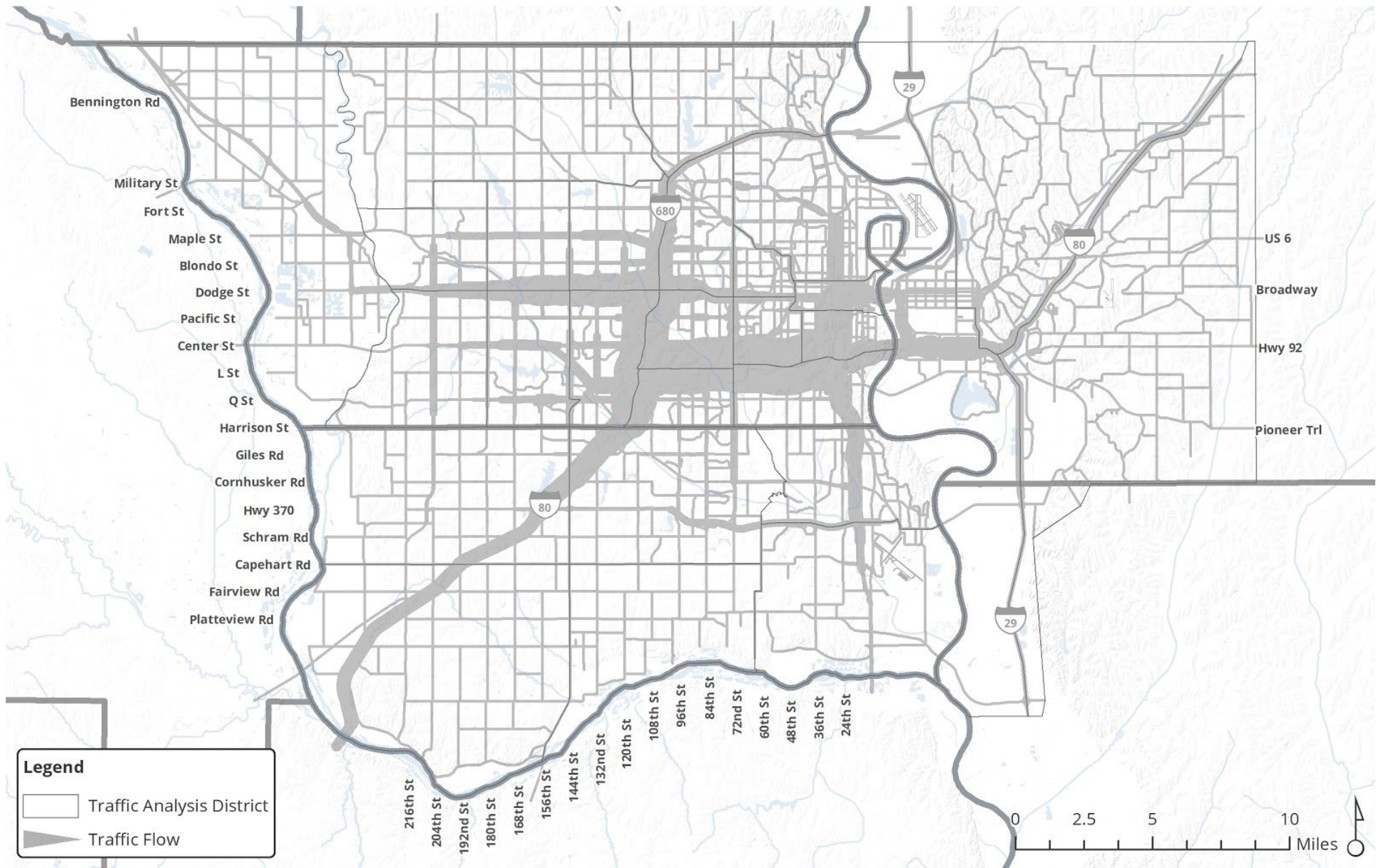




FIGURE 2 - 2018 AVERAGE DAILY VEHICLE MILES TRAVELED (IN THOUSANDS)

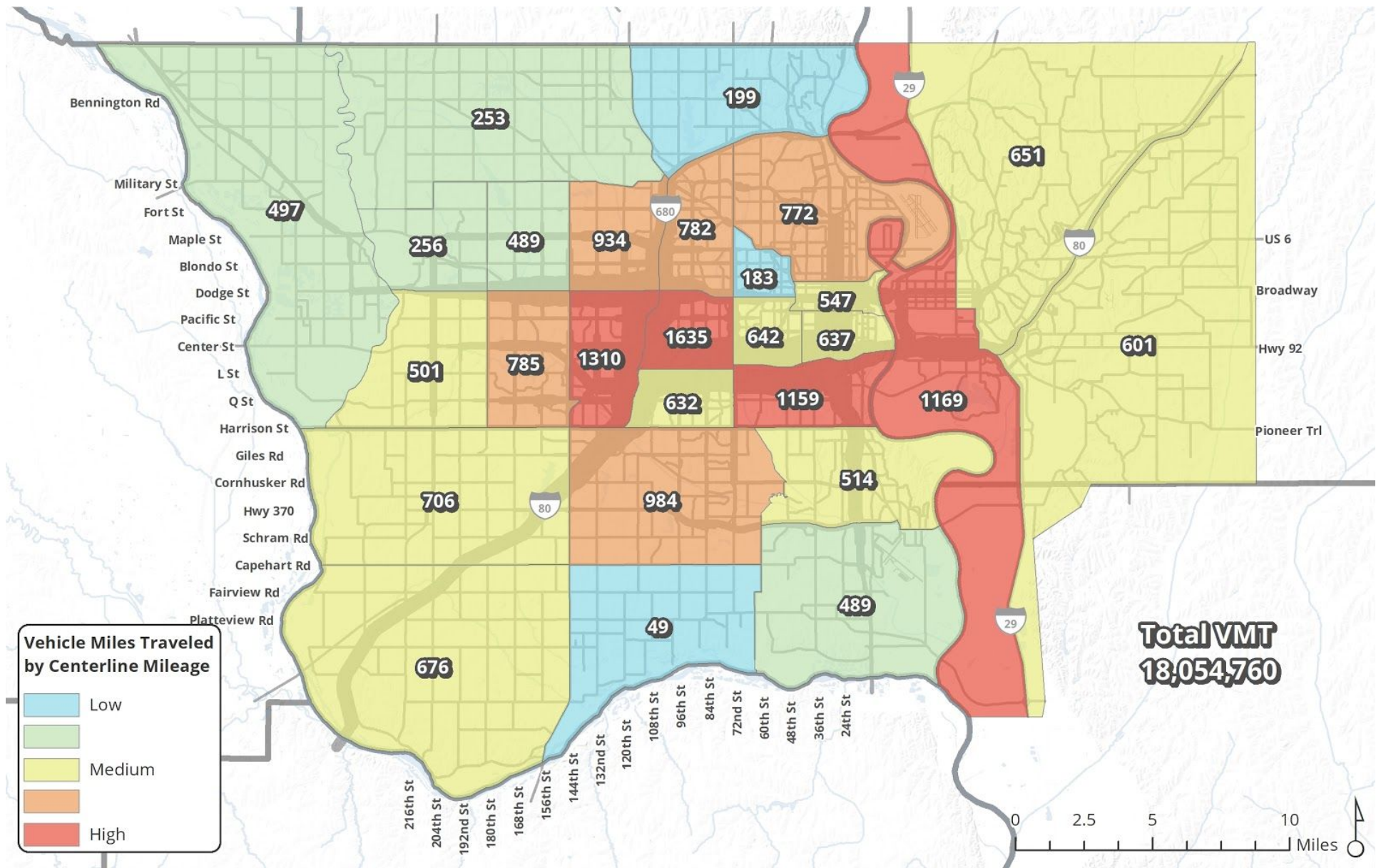


FIGURE 3 - ESTIMATED PERCENT CHANGE IN VOLUME 2016 - 2018

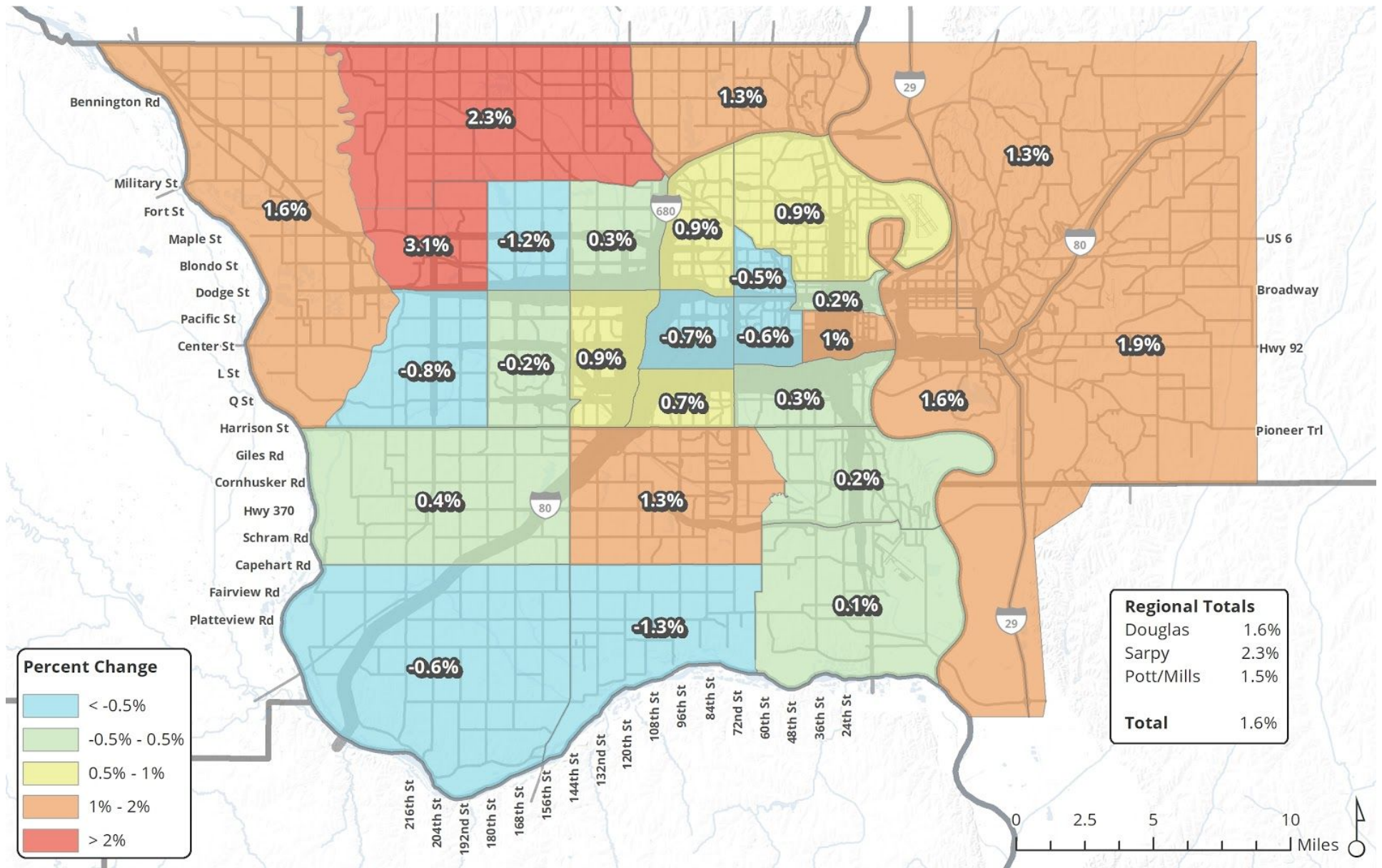




FIGURE 4 - AGE OF COUNT DATA

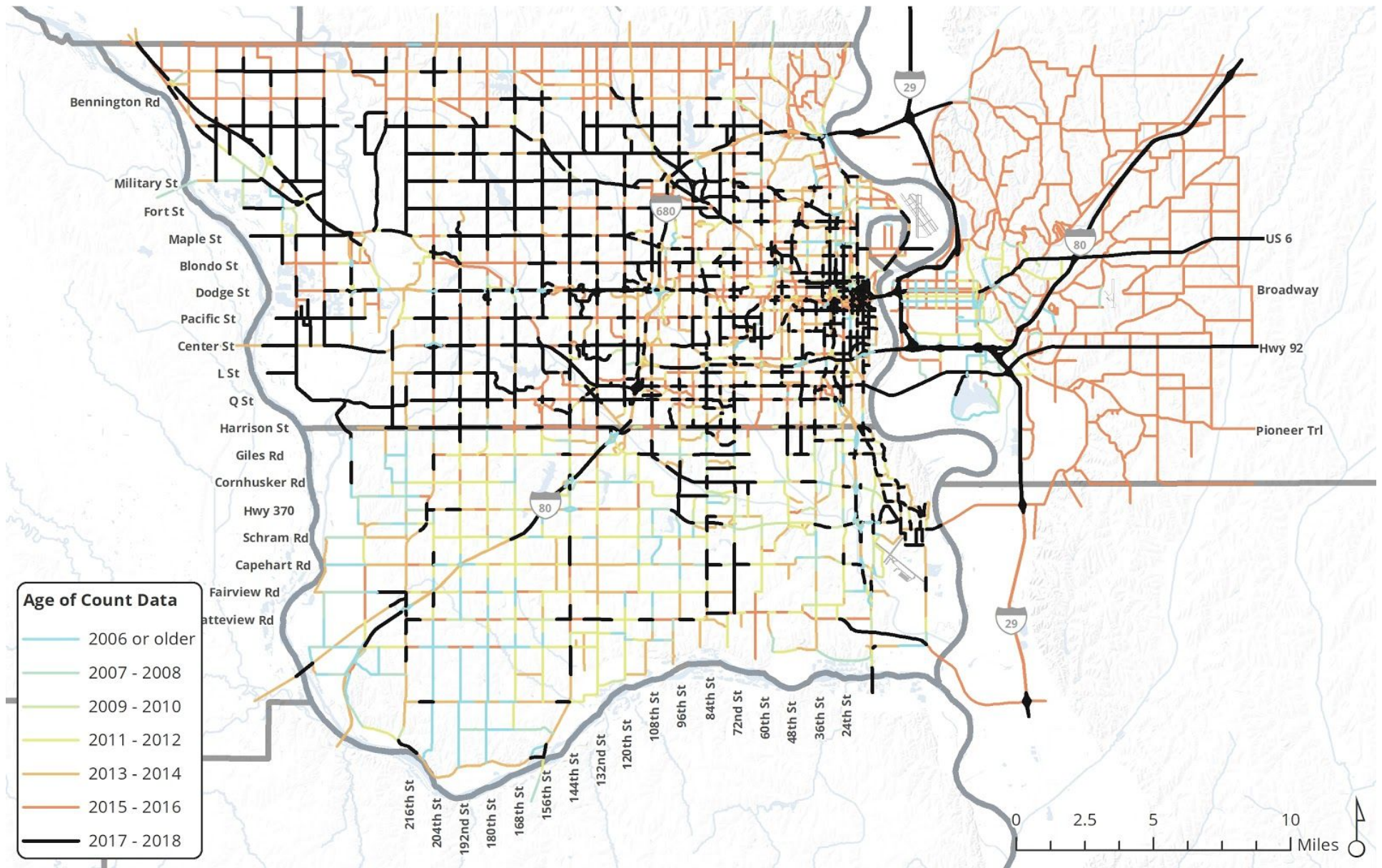
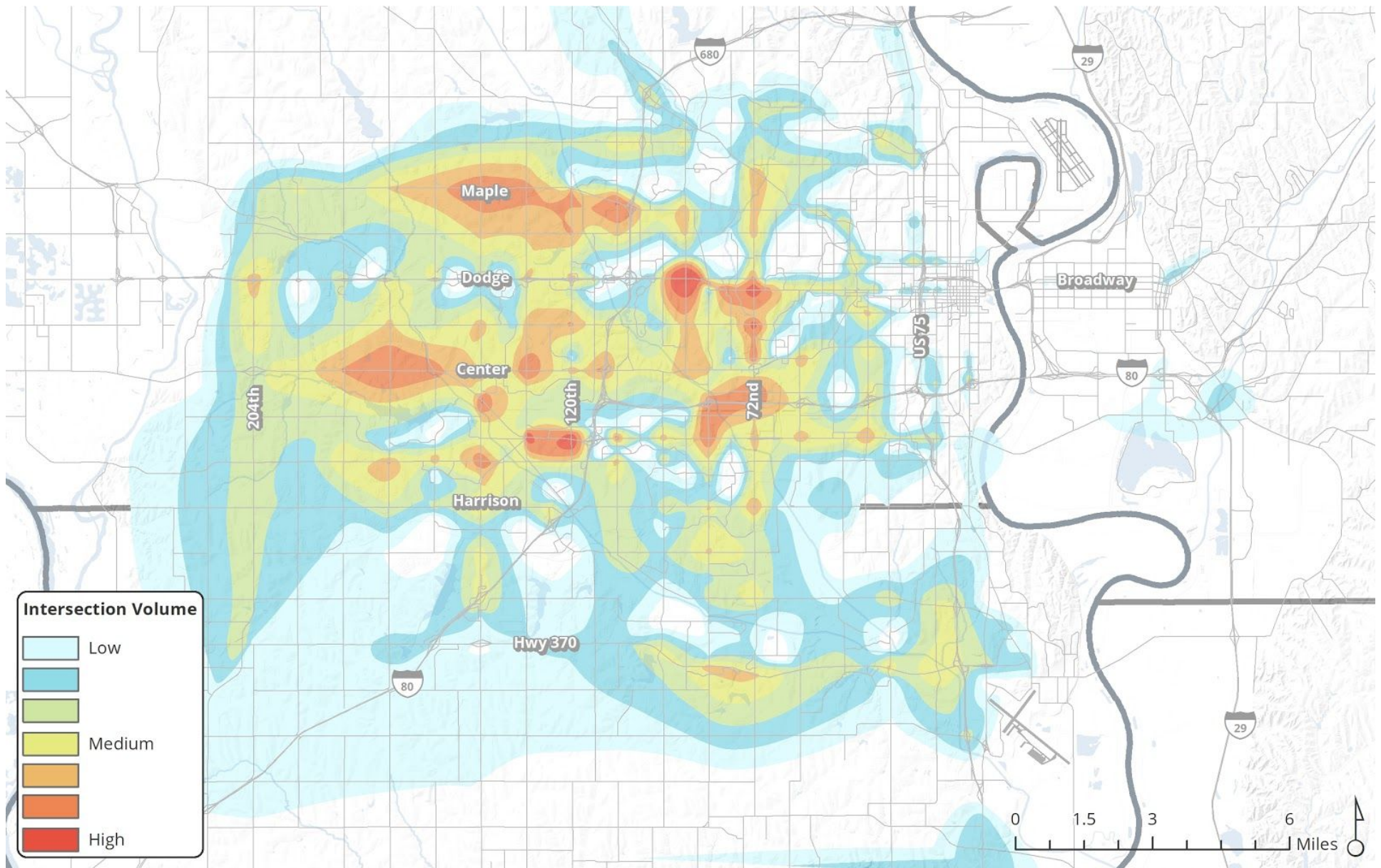




FIGURE 5 - REGIONAL TRAFFIC PATTERNS





## MAPA AREA CONTINUOUS TRAFFIC COUNTS

Nebraska and Iowa both have traffic counting sites that count vehicles on a continuous basis, 365 days a year, in the Omaha-Council Bluffs metro area. These counters, called Automatic Traffic Recorders (ATRs) or Continuous Count Sites (CCS), provide an excellent source of traffic data for analysis. There are currently 15 active ATRs in the region, with 9 located in Nebraska and 6 located in Iowa. Since the 2016 Traffic Growth Report, Iowa ATR 704 (Map ID 6) was officially discontinued, and ATR 124 (Map ID 1) was removed for construction with an anticipated return to service in the summer of 2019.

Statewide, ATRs are located on all classes of roadways, from interstate and state highways to local primary and secondary roads. Located in both urban and rural areas, these counters are useful in understanding trends in growth or decline of traffic volumes. Figure 6 below shows the location of ATRs which are either within the MAPA Metropolitan Planning Organization (MPO) Traffic Maintenance Area (TMA), or are in close enough proximity to add value in assessing traffic growth.

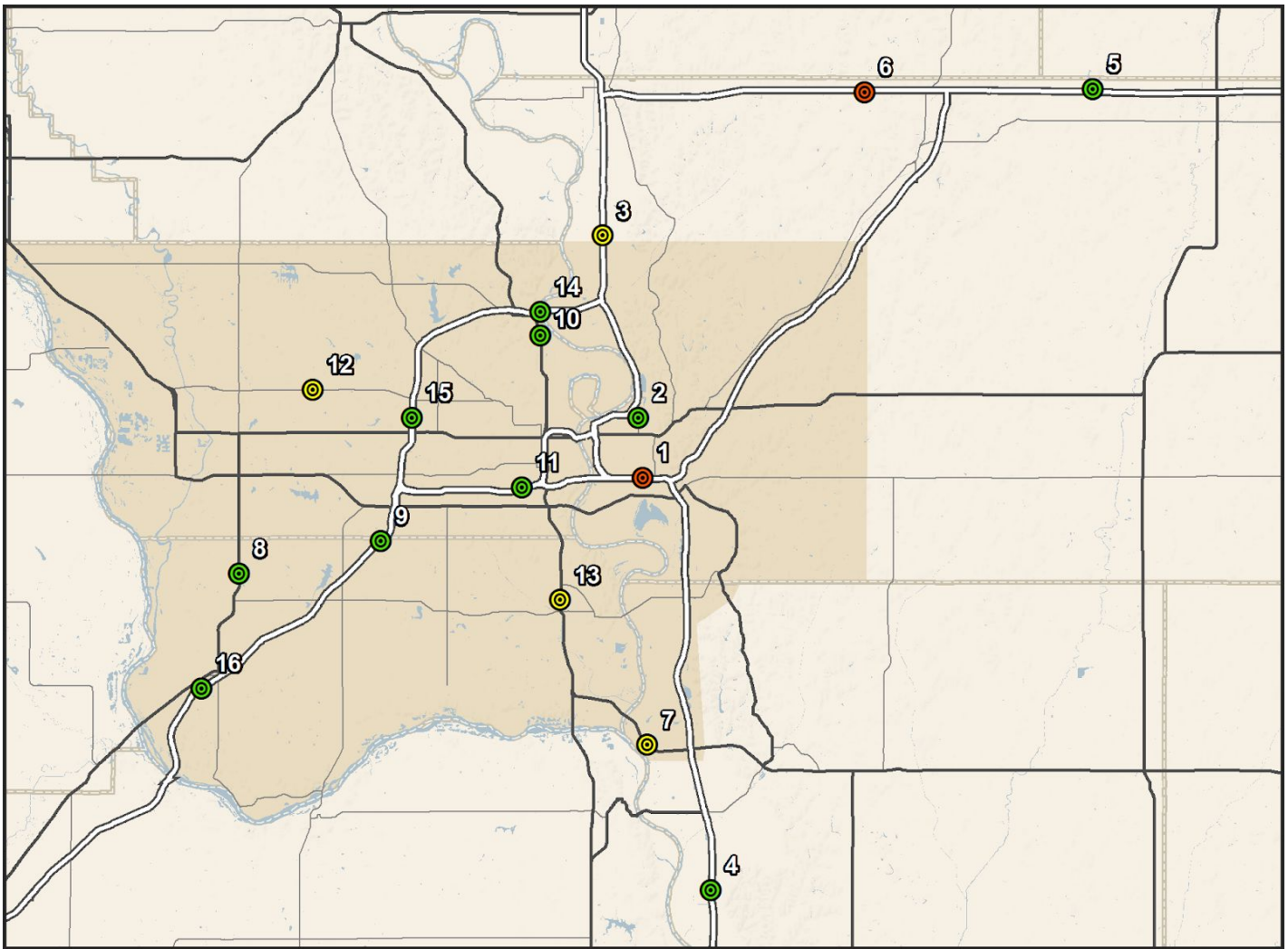


Figure 6. Automatic Traffic Recorders within or Influencing Traffic in the MAPA Region

## Historic Traffic Counts

The charts on the following pages track the growth of traffic on roadways monitored by ATRs in the MAPA region. Figures 7 through 9 include only data from ATRs for which a continuous set of data for the period reflected on each graphic. As such the long-term trend charts reflect a subset of the available ATR data but allow us to make comparisons and generalizations for these periods. Since the 2016 report, Iowa ATR 100 experienced a year without AADT, and this ATR has been removed from the dataset analyzed in Figures 7-9. Figures 10 and 11 illustrate the average annual rates of change for the entire region over the 24 year period and since the last MAPA Traffic Growth Report, respectively. Figures 10 and 11 similarly provide the annual rates of change for the entire period and since the last MAPA Traffic Growth Report for each individual ATR. The ATR location and data is summarized in Table 1 below.

Iowa ATR Locations									
Map	State ID	Route	Location	2010	2012	2014	2016	2017	2018
1	704	I-29/80	South of Ave N	75,989	75,521	N/A	N/A	N/A	N/A
2	914	16th St	.6 Mi West of IA-192	8,718	6,004	6,208	10,236	10,880	10,876
3	100	I-29	2 Mi North of South I-680 Jct	20,593	19,730	20,696	22,259	N/A	22,409
4	102	I-29	7 Mi South of US-34 Jct (Pacific)	11,868	12,008	13,563	13,780	14,226	14,056
5	110	I-80	1.5 Mi West of Co M-16 (Shelby)	22,950	N/A	23,517	25,519	25,906	24,920
6	124	I-680	6.4 Mi West of I-80 (Beebeetown)	6,196	5,947	6,039	N/A	N/A	N/A
7	286	US-34	US 34 2 Mi West of I-29 (Glenwood)	N/A	N/A	N/A	6,554	6,675	7,187
Nebraska ATR Locations									
Map	State ID	Route	Location	2010	2012	2014	2016	2017	2018
8	A-5	US 6	North of Gretna	15,048	16,162	19,023	21,110	22,121	22,520
9	A-17	I-80	Just South of Douglas-Sarpy Line	60,148	60,537	64,971	71,452	76,982	77,982
10	A-23	US 75	30th Street South of I-680 in Omaha	14,218	13,544	13,757	14,931	14,972	14,792
11	A-24	I-80	I-80 at 36th Street in Omaha	166,955	169,359	171,875	171,272	179,553	176,746
12	A-25	N-64	At 160th Street	22,584	23,678	24,415	26,905	27,396	30,935
13	A-26	US 75	Just North of Jct. N-370 in Bellevue	43,712	44,744	45,667	49,718	48,289	49,221
14	A-32	I-680	Mormon Bridge in Omaha	16,000	14,004	15,019	16,498	17,218	17,162
15	A-40	I-680	I-680 North of Dodge Street	84,107	83,817	83,154	90,120	94,212	94,778
16	A-56	I-80	West of Gretna Interchange	40,830	41,242	43,642	49,292	51,300	51,221

Table 1. Automatic Traffic Recorder Description and Traffic Count History

Historically, these numbers have been reasonably consistent with data from MAPA's Traffic Growth Report. Between 2016 and 2018, the ATR data increased 4.1%— a rate higher than MAPA's estimates for the entirety of the region's roadways. While MAPA's estimates for total VMT growth are closer to 1.6%, the ATR locations included in this analysis are reflective of the trend for the region's busiest roadways which show higher levels of growth in both analyses.

Nebraska and Iowa use slightly different classifications for the roadways being counted by ATRs. This classification has been added to the summary of ATR counters (Table 2) below. Additionally, the State ID has also been added to the table for ease of reference to NDOT and Iowa DOT documents. Finally, Iowa ATR 914 was previously labeled as being on IA-192, which is now 16th Street after being transferred to the City of Council Bluffs in 2016.

Iowa ATR Locations					
MAP	State ID	Route	Location	State Classification	
1	704	I-29/80	South of Ave N	Municipal Interstate	
2	914	16th St	.6 Mi West of IA-192	Municipal Streets	
3	100	I-29	2 Mi North of South I-680 Jct	Rural Interstate	
4	102	I-29	7 Mi South of US-34 Jct (Pacific)	Rural Interstate	
5	110	I-80	1.5 Mi West of Co M-16 (Shelby)	Rural Interstate	
6	124	I-680	6.4 Mi West of I-80 (Beebeetown)	Rural Interstate	
7	286	US-34	US 34 2 Mi West of I-29 (Glenwood)	Rural Primary	
Nebraska ATR Locations					
MAP	State ID	Route	Location	State Classification	
8	A-5	US 6	North of Gretna	Principal Arterial	
9	A-17	I-80	Just South of Douglas-Sarpy Line	Urban Interstate	
10	A-23	US 75	30th Street South of I-680 in Omaha	Principal Arterial	
11	A-24	I-80	I-80 at 36th Street in Omaha	Urban Interstate	
12	A-25	N-64	At 160th Street	Principal Arterial	
13	A-26	US 75	Just North of Jct. N-370 in Bellevue	Principal Arterial	
14	A-32	I-680	Mormon Bridge in Omaha	Urban Interstate	
15	A-40	I-680	I-680 North of Dodge Street	Urban Interstate	
16	A-56	I-80	West of Gretna Interchange	Rural Interstate	

Table 2. Roadway Classification at Automatic Traffic Recorder Count Locations

Within the monthly ATR reports additional information is provided which help to understand unexpected peaks or troughs in the data. For example, Nebraska ATR A-25 (Map ID 12) on N-64 (Maple Street) was a detour route from March to November of 2018. The resulting AADT of 30,935 is likely higher than the trending volume in 2019. Data for this report was taken from the Annual and Monthly ATR Reports available online at:

Nebraska Reports: <https://dot.nebraska.gov/projects/publications/>

Iowa Reports: <https://iowadot.gov/maps/data/automatic-traffic-recorder-reports>

Nebraska GIS Data: <https://gis.ne.gov/portal/apps/webappviewer/index.html?id=8ed4b009b0d546f19f0284e5bba0f972>

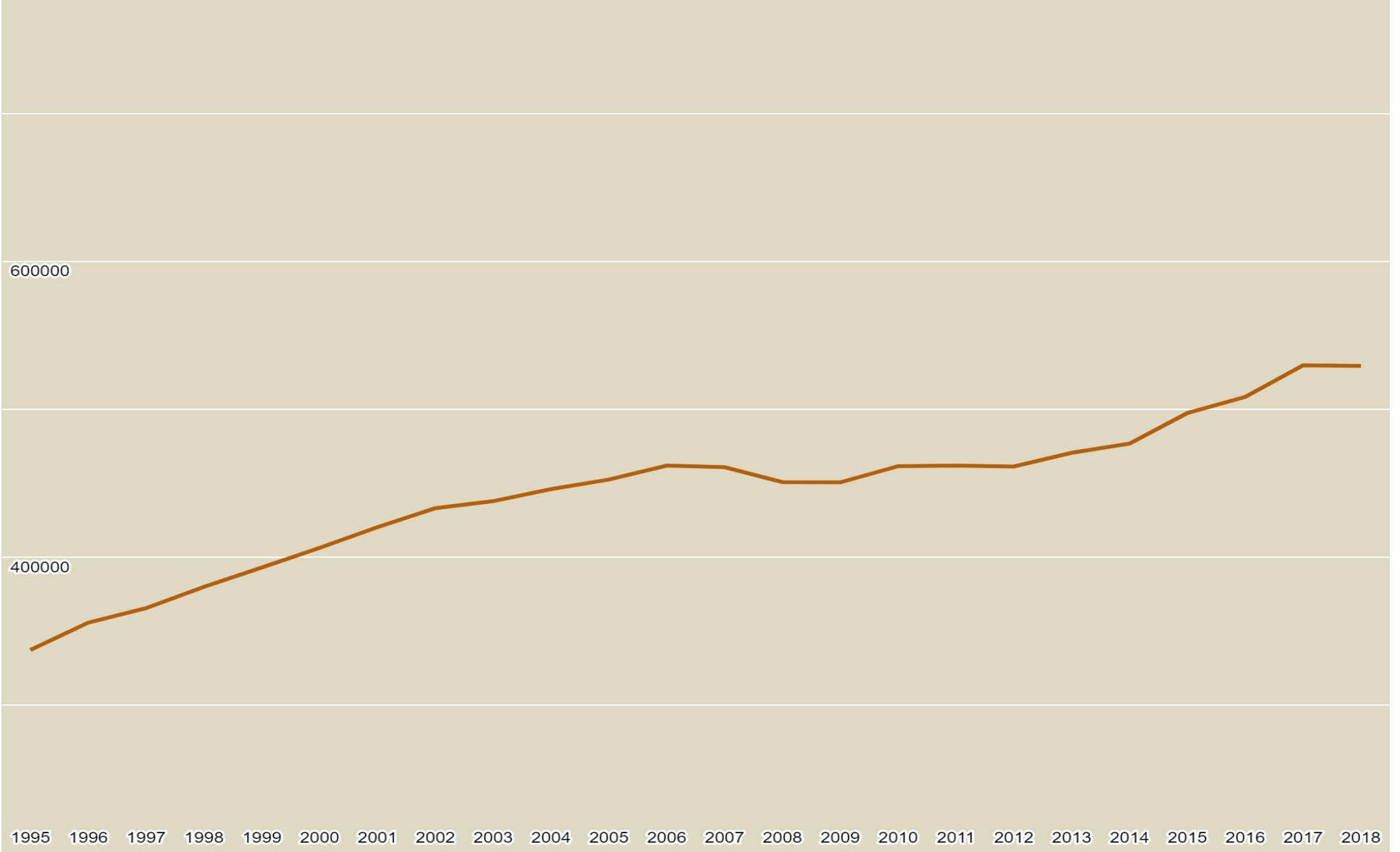
Iowa GIS Data: <https://iowadot.maps.arcgis.com/apps/MapSeries/index.html?appid=0cce99afb78e4d3b9b24f8263717f91>



# MAPA REGIONAL AUTOMATIC TRAFFIC RECORDER COUNTS, 1995 - 2018

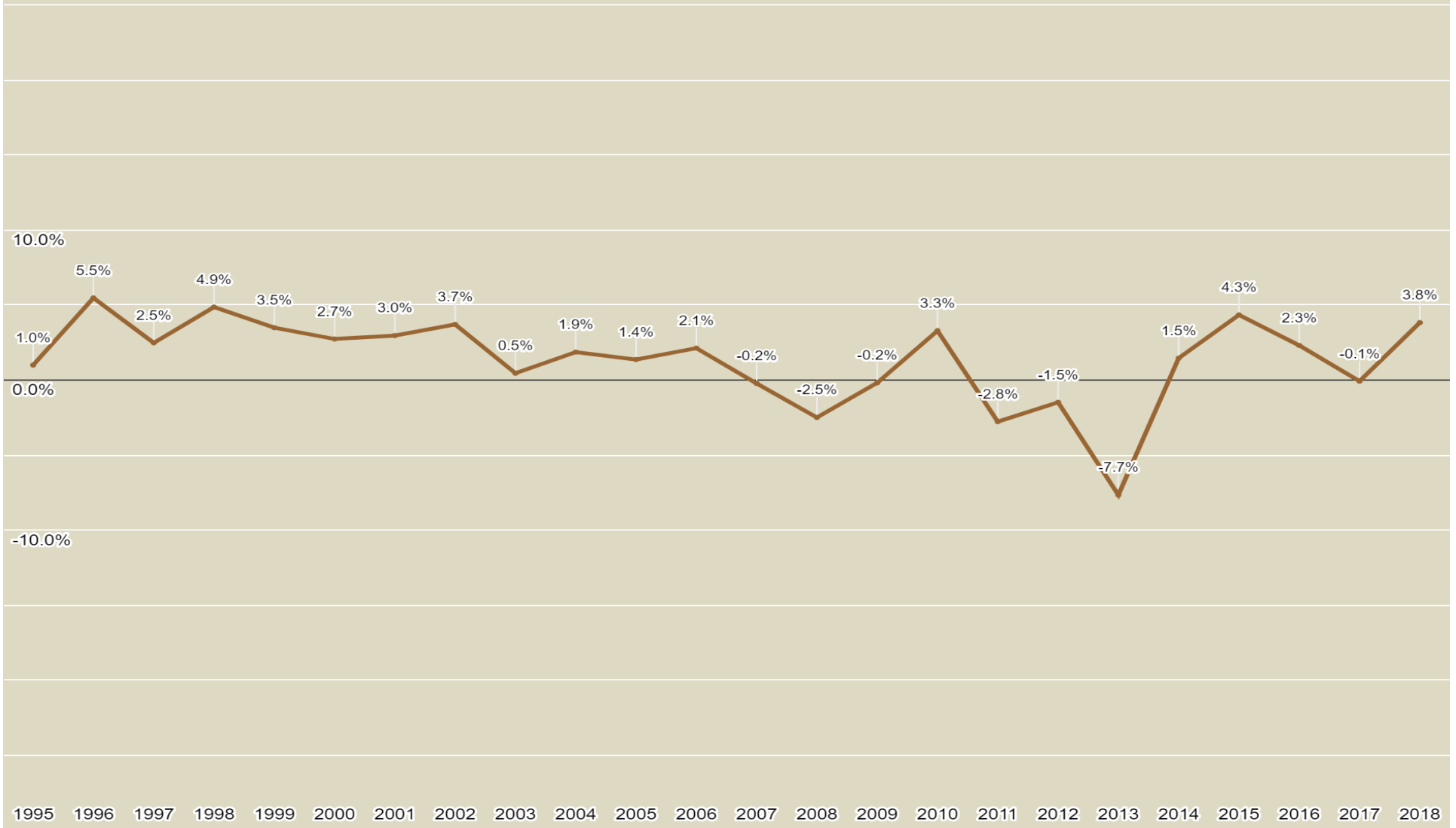
Figure 6. MAPA Regional Automatic Traffic Recorder Counts, 1995-2018

Annual Average Daily Traffic (AADT)

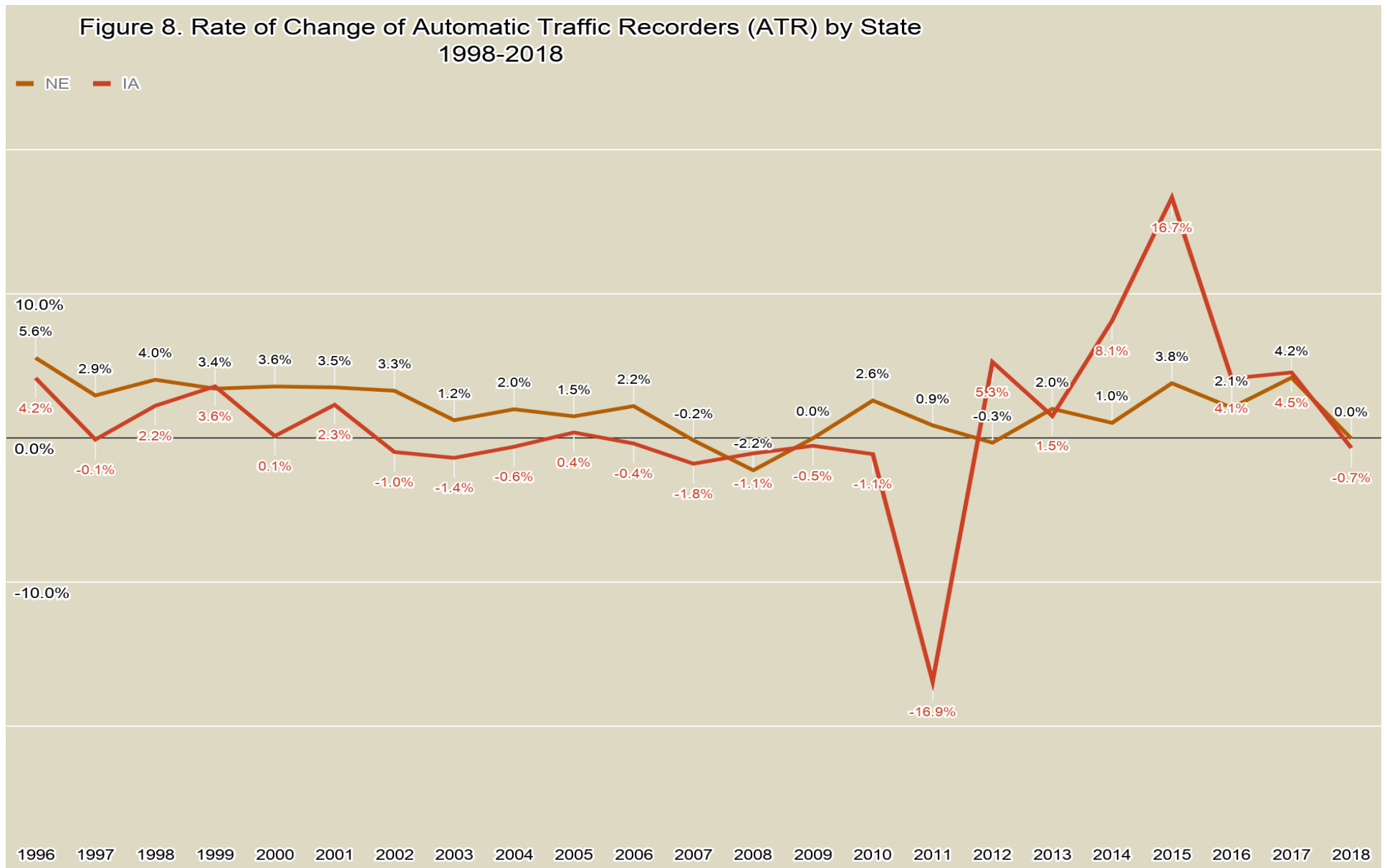


# ANNUAL RATE OF CHANGE OF AUTOMATIC TRAFFIC RECORDERS, 1995 - 2018

Figure 7. Annual Rate of Change of Automatic Traffic Recorders (ATR)  
1995-2018



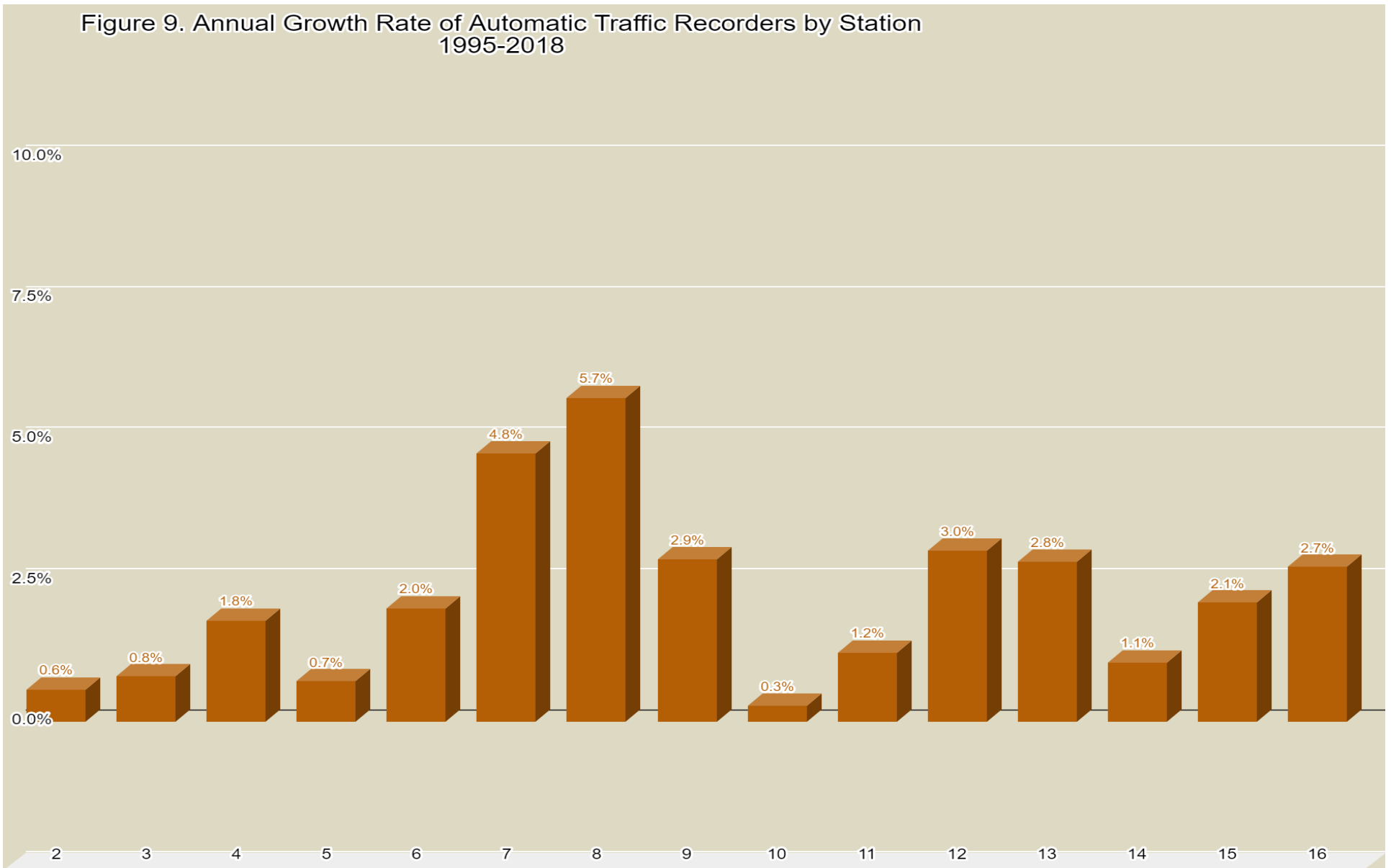
# ANNUAL GROWTH RATE OF AUTOMATIC TRAFFIC RECORDERS BY STATE, 1995 - 2018





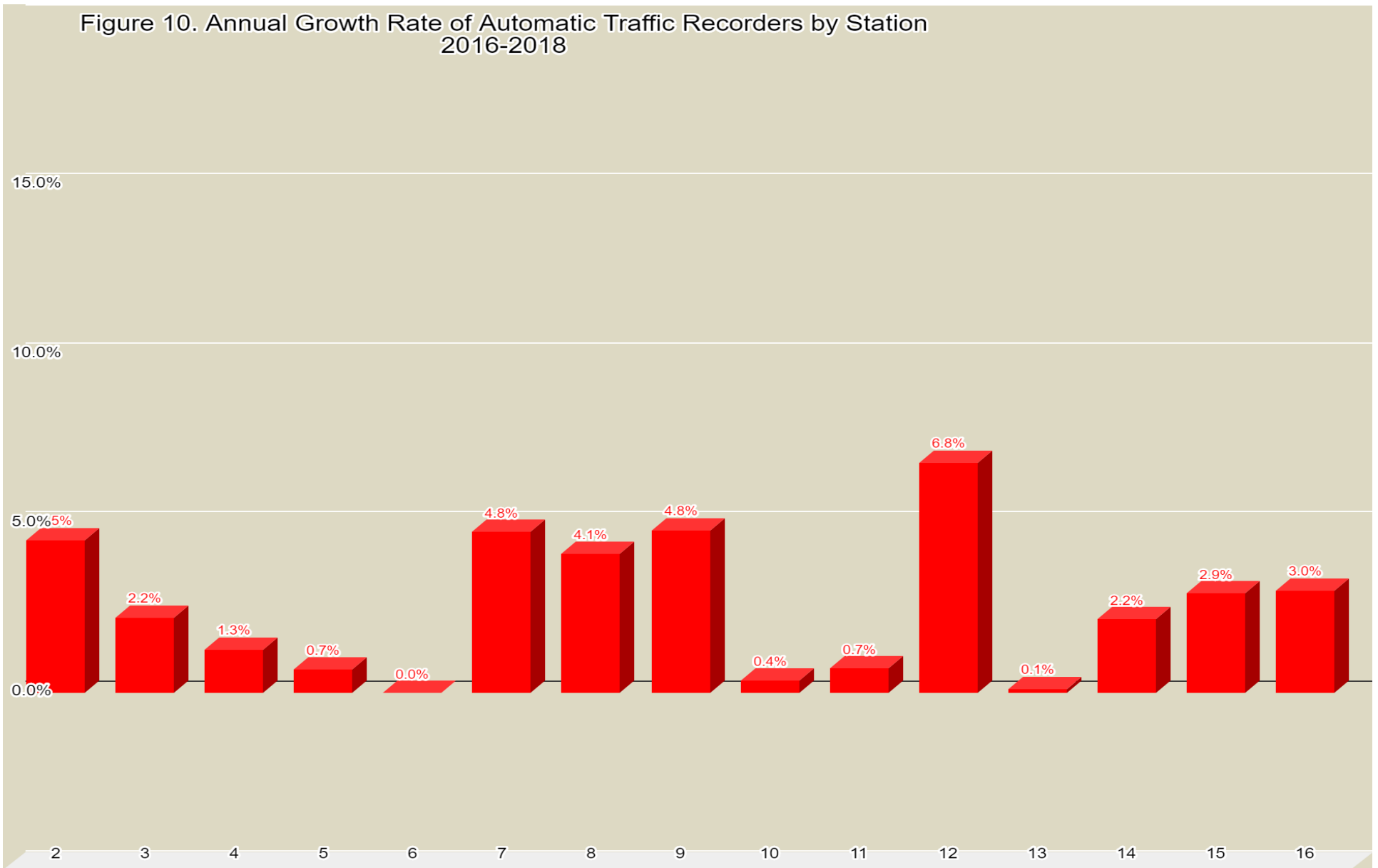
# ANNUAL GROWTH RATE OF AUTOMATIC TRAFFIC RECORDERS BY STATION, 1995 - 2018

Figure 9. Annual Growth Rate of Automatic Traffic Recorders by Station  
1995-2018



## ANNUAL GROWTH RATE OF AUTOMATIC TRAFFIC RECORDERS BY STATION, 2016 - 2018

Figure 10. Annual Growth Rate of Automatic Traffic Recorders by Station  
2016-2018



# ANNUAL GROWTH RATE OF AUTOMATIC TRAFFIC RECORDERS BY ROAD CLASSIFICATION, 1995 - 2018

