



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

DATE: February 18, 2022

TO: NCDOT staff and consultants who use traffic volume data

FROM: Joseph E. Hummer, PhD, PE, State Traffic Management Engineer
and
Brian Mayhew, PE, State Traffic Safety Engineer
Transportation Mobility & Safety Division

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SUBJECT: 2020 AADT and other traffic volume data

We are writing to warn the NCDOT staff and consultants who use traffic volume data in the course of making planning or engineering calculations to use 2020 average annual daily traffic (AADT) estimates and other statistics based on traffic volume data collected in 2020 very cautiously if at all. Due to the Covid-19 pandemic which began to have a widespread impact in March 2020, traffic data collected in North Carolina during 2020 were largely abnormal. As the attached data from the Mobility and Safety Division show, traffic volumes in much of North Carolina during 2020 were substantially lower than previous years, and even where volumes were not lower the temporal and spatial patterns were often different than in previous years. Using traffic volumes collected in 2020 either by themselves or as part of an average or trend could seriously distort a conclusion about what happened in previous years or what will happen in the years to come. Note that traffic volumes in 2021 generally seem to have recovered to levels that are much more in line with previous years, indicating that 2020 was an outlier rather than the start of a long-term trend. If a planner or engineer is making a calculation about what happened in 2020 any available 2020 volume data are likely relevant, but the relevance of 2020 traffic volume data should be questioned if the calculation has to do with any other years.

The staffs of the Traffic Management Unit and the Traffic Safety Unit are available to answer any questions along these lines or assist any staff or consultants in finding the most relevant data available to complete a calculation.

Traffic data from the Mobility and Safety Division:

COVID-19 Arterial Traffic Volume Tracking							
Month	Monthly Averages (as compared to February, 2020)						
	Average	Cary	Charlotte	Concord	Greensboro	Raleigh	Wilmington
Baseline	-	-	-	-	-	-	-
March, 2020	-21%	-34%	-20%	-20%	-17%	-25%	-11%
April, 2020	-37%	-51%	-30%	-40%	-31%	-44%	-30%
May, 2020	-29%	-41%	-26%	-27%	-21%	-37%	-20%
June, 2020	-18%	-35%	-16%	-13%	-12%	-30%	-3%
July, 2020	-12%	-25%	-9%	-11%	-6%	-23%	0%
August, 2020	-11%	-23%	-10%	-6%	-4%	-24%	1%
September, 2020	-10%	-24%	-12%	-5%	-1%	-20%	2%
October, 2020	-9%	-20%	-16%	0%	-1%	-19%	1%
November, 2020	-9%	-19%	-9%	0%	-2%	-21%	0%
December, 2020	-10%	-21%	-8%	-2%	-8%	-21%	1%
January, 2021	-9%	-20%	-7%	-2%	-4%	-19%	1%
February, 2021	-7%	-19%	-7%	-1%	-1%	-18%	2%
March, 2021	-6%	-19%	-7%	-1%	2%	-16%	3%
April, 2021	-5%	-16%	**	0%	4%	-14%	3%
May, 2021	-4%	-14%	**	1%	5%	-12%	3%
June, 2021	-2%	-12%	**	1%	7%	-10%	3%
July, 2021	-1%	-9%	**	2%	8%	-9%	3%
August, 2021	0%	-7%	**	2%	10%	-7%	3%
September, 2021	1%	-6%	**	4%	10%	-5%	3%
October, 2021	3%	-5%	**	5%	10%	**	3%
November, 2021	4%	-4%	**	7%	10%	**	3%
December, 2021	5%	-2%	**	10%	10%	**	3%

*data derived from traffic signal vehicle detection, typically 6'x6' in-pavement inductive loops

**traffic volume data not available due to technical issues

