NCDOT 2024 AADT Station Shapefile

The AADT shapefile is a station point shapefile of Annual Average Daily Traffic (AADT) estimates. This 2024 AADT data was submitted to FHWA for Highway Performance Monitoring System (HPMS) AADT data reporting for 2024. We report AADT on all highways functionally classified (FC) above Local. Full coverage is provided for these routes where AADT segmentation is based on network configuration, travel patterns, and land use. An AADT is an Annual Average Daily Traffic volume for all lanes in both directions passing a point on the highway system. It represents the average of all days during the year. An AADT estimate is generated using procedures that comply with the standards specified in the Traffic Monitoring Guide published by the Federal Highway Administration.

There are 48,687 AADT stations that provide traffic data history from 2002 to 2024. Due to the large number of short-term count stations located throughout North Carolina, the NCDOT Traffic Survey Group has adopted the following data collection schedule:

> **Interstate route** volumes are collected on the ramps and mainline where possible on an annual basis.
>
> **US** and **NC route** volumes are also collected on an annual basis except for stations which fall within the off cycle urban areas. (See urban area cycle below.)
>
> **Secondary Road** (SR) volumes are collected on a biennial cycle with approximately half being counted each year.
>
> North Carolina's eighteen large **urban areas** are counted on a biennial cycle with 8 urban areas counted during the even years and 10 urban areas counted during the odd years.
>
> The following urban areas are collected during the **even-year cycle**: Asheville, Charlotte, Concord-Kannapolis, Fayetteville, Gastonia, Goldsboro, Greenville, and Jacksonville.
>
> The following urban areas are collected during the **odd-year cycle**: Burlington, Chapel Hill, Durham, Greensboro, Hickory, High Point, Raleigh, Rocky Mount, Wilmington, and Winston-Salem.

The points in this file were digitized referencing the NCDOT Linear Referencing System (LRS). They are based on GPS data collected on the side of the road when counters are installed but are digitized on road centerlines. The station locations are based on referencing the 2024 final end-of-year publication of the NCDOT LRS. Some differences will be found when using different quarterly publications with this data set.

The data provided is seasonally factored to an estimate of an annual average of daily traffic. AADT values are either derived from a count base collection or a grown estimation for those stations that could not be collected during the collection cycle. The attributions provided are:

LocationID: Traffic Survey's 10-character unique station identifier. Digits 1-3 is the county code beginning with 001 and ending with 100. Digits 4-10 is the station number for the indicated county
COUNTY: County Name
ROUTE: The 11-digit route number is a route naming convention used by NCDOT. It can be used to reference milepost locations along a route. Each digit has a different meaning. The last three digits of the route number are the SAP county code. The county code starts at 001 for Alamance County and ends with 100 for Yancey County. Guide to the NCDOT Eleven Digit Route Number can be viewed on the following webpage: https://xfer.services.ncdot.gov/gisdot/DistDOTData/Guide%20to%20the%20NCDOT%20Eleven-Digit%20Route%20Number%20-%20Rome%20Implementation.pdf
LOCATION: Provides an approximate location description of where the AADT was collected.
RTE_CLS: Route type for the route the station is located on (1 = I, 2 = US, 3 = NC, 4 = SR, 5 = non-system route (municipal, private or other) Local, 7= Federal route (National Parks, Military, Fish and Wildlife Service, Indian Reservations), 8 = Ramp) Refer to the NCDOT Eleven Digit Route Number Guide link provided above for more details.
RTE_CLS_TX: Provides the text description for the numerical RTE_CLS value.
FUNC_CLS: Provides the designated route Functional Classification numerical value. Functional Class is a classification system of roads based on the traffic service they are intended to provide. The numerical values and the route assignment is as follows;
1 Interstate 2 PA-FrwyExp Principal Arterial – Other Freeways and Expressways 3 PA-Other Principal Arterial - Other 4 Minor Arterial 5 Major Collector 6 Minor Collector 7 Local. For further details go to https://connect.ncdot.gov/resources/gis/pages/gis-data-layers.aspx
FUNC_CLS: Provides the text description for the numerical FUNC_CLS value.
Latitude/Longitude: Coordinates provided to the approximate traffic data collection location.
Coll_Cycle: Identifies the station collection cycle. O = Odd-Year Collection, E = Even-Year Collection, A = Annual Collection, S = Supplemental Collection (collected within a 6-year cycle or better)
Active: Confirms that this station is part of our active traffic monitoring collection inventory at the end of the collection cycle. 1 = Active collection inventory.
Category: Identifies the category of collection type. Volume is our standard short-term volume collection type not collected on Interstate Mainline. Ramp is our standard category for short-term volume collection associated with ramp type roadway characteristics. Freeway category is for those stations on the Interstate/Freeway of full control access routes that are collected through a non-intrusive device and/or are calculated through a volume balancing process in conjunction with ramp collections.

Categories FRWY VIRTUAL and RAMP VIRTUAL provide an opportunity to simulate volume counts at points along a corridor that are not currently monitored by a station device. The AADT provided is based on actual collections taken at monitored stations in the vicinity.

AADT_2002: Estimated Annual Average Daily Traffic in vehicles per day for 2002
AADT_2003: Estimated Annual Average Daily Traffic in vehicles per day for 2003
AADT_2004: Estimated Annual Average Daily Traffic in vehicles per day for 2004
AADT_2005: Estimated Annual Average Daily Traffic in vehicles per day for 2005
AADT_2006: Estimated Annual Average Daily Traffic in vehicles per day for 2006
AADT_2007: Estimated Annual Average Daily Traffic in vehicles per day for 2007
AADT_2008: Estimated Annual Average Daily Traffic in vehicles per day for 2008
AADT_2009: Estimated Annual Average Daily Traffic in vehicles per day for 2009
AADT_2010: Estimated Annual Average Daily Traffic in vehicles per day for 2010
AADT_2011: Estimated Annual Average Daily Traffic in vehicles per day for 2011
AADT_2012: Estimated Annual Average Daily Traffic in vehicles per day for 2012
AADT_2013: Estimated Annual Average Daily Traffic in vehicles per day for 2013
AADT_2014: Estimated Annual Average Daily Traffic in vehicles per day for 2014
AADT_2015: Estimated Annual Average Daily Traffic in vehicles per day for 2015
AADT_2016: Estimated Annual Average Daily Traffic in vehicles per day for 2016
AADT_2017: Estimated Annual Average Daily Traffic in vehicles per day for 2017
AADT_2018: Estimated Annual Average Daily Traffic in vehicles per day for 2018
AADT_2019: Estimated Annual Average Daily Traffic in vehicles per day for 2019
AADT_2020: Estimated Annual Average Daily Traffic in vehicles per day for 2020
AADT_2021: Estimated Annual Average Daily Traffic in vehicles per day for 2021
AADT_2022: Estimated Annual Average Daily Traffic in vehicles per day for 2022
AADT_2023: Estimated Annual Average Daily Traffic in vehicles per day for 2023
AADT_2024: Estimated Annual Average Daily Traffic in vehicles per day for 2024

Note: A value of zero in the AADT field prior to 2024 indicates there was no count-based AADT data available for that year. For the 2024-year publication we have included AADT estimates for traffic monitoring stations that are active in our collection inventory and that were unable to be collected during the collection cycle.

If additional information is needed, or an issue with the data is identified, please contact the Traffic Survey Group at (919) 814-4842.

DISCLAIMER: The North Carolina Department of Transportation shall not be held liable for any errors in this data. This includes errors of omission, commission, errors concerning the content of the data, and relative and positional accuracy of the data. This data cannot be construed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data.