

NCDOT – Traffic Survey

Frequently Asked Questions

[What does the Traffic Survey Group do?](#)

The Traffic Survey Group (TSG) is the primary traffic data provider for the North Carolina Department of Transportation. It is the Group's mission to provide statewide coverage of quality traffic count data using innovative analysis and traffic data collection methods to support the planning, design, construction, maintenance, operation, and research activities required to manage the transportation system in North Carolina.

[Why is traffic data collected?](#)

Traffic data is critical to all transportation decision making. It is an integral part of the planning, programming, design and construction of our road infrastructure. The table below illustrates the many uses for our traffic data:

Highway Activity	Traffic Counting	Vehicle Classification	Truck Weighing
Engineering	Highway Geometry	Pavement Design	Structural Design
Engineering Economy	Benefit of Highway Improvements	Cost of Vehicle Operation	Benefit of Truck Climbing Lane
Finance	Estimates of Road Revenue	Highway Cost Allocation	Weight Distance Taxes
Legislation	Selection of Highway Routes	Speed Limits and Oversize Vehicle Policy	Permit Policy for Overweight Vehicles
Maintenance	Selecting the Timing of Maintenance	Selection of Maintenance Activities	Design of Maintenance Actions
Operations	Signal Timing	Development of Control Strategies	Designation of Truck Routes
Planning	Location and Design of Highway Systems	Forecasts of Travel by Vehicle Type	Resurfacing Forecasts
Environmental Analysis	Air Quality Analysis	Forecasts of Emissions By Type of Vehicle	Noise Studies, NOX Emissions
Safety	Design of Traffic Control Systems and Accident Rates	Safety Conflicts Due to Vehicle Mix and Accident Rates	Posting of Bridges for Load Limits
Statistics	Average Daily Traffic	Travel by Vehicle Type	Weight Distance Traveled
Private Sector	Location of Service Areas	Marketing Keyed to Particular Vehicle Types	Trends in Freight Movement

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[Which road does NCDOT collect traffic data on for the purpose of traffic monitoring?](#)

The NCDOT collects traffic data on all of the Primary Routes in North Carolina; this includes Interstate and National Highway, State Highways (NC Routes). There is very good coverage of the state's secondary road system, however, not all secondary roads having low volume are counted. Some locally maintained city streets are collected, which provide continuity with the state maintained system but this is a partial coverage only.

[What is an AADT?](#)

AADT is an acronym for Annual Average Daily Traffic. An AADT is an estimated daily traffic volume along a specific segment of roadway that considers every lane and both directions of travel. It represents the average traffic volume throughout the year considering typical traffic conditions.

[When is the AADT data available?](#)

Please note that TSG is responsible for collecting over 25,000 counts each year, which then must be analyzed and processed prior to being published. The AADT data collected from the current year will be available during the summer of the following year. For example: Data collected during 2014 will be available during the summer of 2015.

[How is an AADT Calculated?](#)

- Collect two days' worth of raw daily traffic counts at each monitoring station
- Apply an axle factor to the raw daily count for conversion into a daily volume
- Apply a seasonal factor to the daily volume for conversion into an AADT
- Average both daily estimates of AADT
- Compare AADT to historical AADT's (at same location) providing for temporal quality assurance
- Compare AADT to AADT's within close proximity providing for spatial quality assurance

[How can I get a traffic count?](#)

The Traffic Survey Group (TSG) collects traffic volume data in support of NCDOT goals and objectives. TSG does not take ad hoc traffic count requests from the general public; however the counts taken each year are very comprehensive in their coverage of North Carolina and are available to the public. The traffic volume data is available at the following web page link: <http://www.ncdot.gov/projects/trafficsurvey/>

On the Traffic Survey web page you can access and download the available AADT map images in Adobe Acrobat PDF format or you may also download TSG ArcGIS shape file products that are available.

[Why are some AADT only available on certain years?](#)

The Coverage Count Program employed by TSG consists of approximately 40,000 Portable Traffic Count (PTC) monitoring stations located throughout the state. Data is collected on both state and locally maintained roadways over a 48-hour period. The Primary Routes (Interstate, US and NC) are collected each year while the secondary routes are collected on a two-year cycle with half being collected each year (adjustments in collection cycle can occur). Stations located within North Carolina's 18 major Urbanized Areas are collected on a two-year cycle. Stations designated either as small urban (areas under 50,000 in population) or rural are organized and collected by county each year.

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[How are the data collection locations determined?](#)

Data is collected along a roadway segment. The actual point at which the data is collected is determined by the data-collector in the field to account for local conditions in order to minimize hazards and optimize data quality. Coverage selection is based on fluctuation in traffic flow, Highway Performance Monitoring System (HPMS) reporting requirements as well as the judgment of planners and engineers who use the data for specific project and program requirements.

[When is the traffic data in NC collected and for what duration?](#)

The Coverage Count Program consists of a 48-hour (short-term) count period taken on weekdays and never on holidays. These counts are taken throughout the entire year based on that year's schedule. Approximately 10,000 stations are updated annually and about 15,000 stations are updated every two years for a total of approximately 25,000 counts taken annually.

The Continuous Count Program consists of continuous (long-term) data collection occurring 24 hours a day and 365 days a year.

The Projects Count Program consists of ad hoc traffic data requests. Electronic counting is done for a minimum of 48-hours and manual counting is done for a minimum of 16-hours.

[How is the traffic data collected?](#)

The electronic short-term counting is done using a pneumatic tube counter. Tube based counters count axle pairs, which then require an axle factor to be applied to the raw daily count in order to derive a daily volume. Daily volume counting is done at 24-hour intervals for 48-hour duration. Hourly Volume counting is done at 1-hour intervals for 48-hour duration. Hourly vehicle classification by lane is done using a two-tube configuration at 1-hour intervals for 48-hour duration.

The electronic long-term counting is done with inductance loop based systems that are permanently placed into the roadway. Loop based counters are used for collecting both hourly volume data and hourly classification data by lane for a continuous duration. Inductance loops used in combination with piezo arrays and piezo sensors are used for collecting hourly classification data and truck weight data. Weigh-in-Motion (WIM) data is currently collected for Federal Highway Administration (FHWA) and Long Term Pavement Performance (LTPP) reporting.

Manual vehicle classification counting is done when electronic counting is deemed impractical. Manual vehicle classification data provides truck volumes, AM and PM peak hour volumes and directional peak hour volumes.

Turning Movement counting is also done manually and is typically required where detailed data for intersection movements, peak hour and truck data is required.

[How can I contact the NCDOT Traffic Survey Group?](#)

Visit our contact information section at the bottom of our web page: <http://www.ncdot.gov/projects/trafficsurvey/>