



STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

Invitation for Bid #: 54-CA-12092025

Traffic Data Collection

Date of Issue: June 11, 2026

Bid Opening Date: June 25, 2026

At 2:00 PM ET

Direct all inquiries concerning this IFB to:

Christian Andresen

Procurement Specialist III

Email: ctandresen@ncdot.gov

Phone: (919)707-2627



STATE OF NORTH CAROLINA

Invitation for Bid

54-CA-12092025

For internal State agency processing, including tabulation of bids, provide your company's eVP (Electronic Vendor Portal) Number. Pursuant to G.S. 132-1.10(b) this identification number shall not be released to the public. **This page will be removed and shredded, or otherwise kept confidential**, before the procurement file is made available for public inspection.

**This page shall be filled out and returned with your bid.
Failure to do so may subject your bid to rejection.**

Vendor Name

Vendor eVP#

Note: For a contract to be awarded to you, your company (you) must be a North Carolina registered Vendor in good standing. You must enter the Vendor number assigned through eVP (Electronic Vendor Portal). If you do not have a Vendor number, register at <https://evp.nc.gov/SignIn>

STATE OF NORTH CAROLINA Department of Transportation	
Refer <u>ALL</u> Inquiries regarding this IFB to: Christian Andresen ctandresen@ncdot.gov (919)707-2627	Invitation for Bid No.: 54-CA-12092025
Using Agency: Department of Transportation	Bids will be publicly open: June 25, 2026, at 2:00 PM ET
Requisition No.: N/A	Commodity No. and Description: 811022 Transportation Engineering

EXECUTION

In compliance with this Invitation for Bid (IFB), and subject to all the conditions herein, the undersigned Vendor offers and agrees to furnish and deliver any or all items upon which prices are bid, at the prices set opposite each item within the time specified herein.

By executing this bid, the undersigned Vendor understands that false certification is a Class I felony and certifies that:

- this bid is submitted competitively and without collusion (G.S. 143-54),
- none of its officers, directors, or owners of an unincorporated business entity has been convicted of any violations of Chapter 78A of the General Statutes, the Securities Act of 1933, or the Securities Exchange Act of 1934 (G.S. 143-59.2), and
- it is not an ineligible Vendor as set forth in G.S. 143-59.1.

Furthermore, by executing this bid, the undersigned certifies to the best of Vendor’s knowledge and belief, that:

- it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any Federal or State department or agency.

As required by G.S. 143-48.5, the undersigned Vendor certifies that it, and each of its Sub-Contractors for any Contract awarded as a result of this IFB, complies with the requirements of Article 2 of Chapter 64 of the NC General Statutes, including the requirement for each employer with more than 25 employees in North Carolina to verify the work authorization of its employees through the federal E-Verify system.

As required by Executive Order 24 (2017), the undersigned Vendor certifies will comply with all Federal and State requirements concerning fair employment and that it does not and will not discriminate, harass, or retaliate against any employee in connection with performance of any Contract arising from this solicitation.

G.S. 133-32 and Executive Order 24 (2009) prohibit the offer to, or acceptance by, any State Employee associated with the preparing plans, specifications, estimates for public contracts; or awarding or administering public contracts; or inspecting or supervising delivery of the public contract of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of this response to the IFB, the undersigned certifies, for Vendor’s entire organization and its employees or agents, that Vendor is not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

By executing this bid, Vendor certifies that it has read and agreed to the **INSTRUCTION TO VENDORS** and the **NORTH CAROLINA GENERAL TERMS AND CONDITIONS** incorporated herein. These documents can be accessed from the Ariba Sourcing Tool.

Failure to execute/sign bid prior to submittal will render bid invalid and it WILL BE REJECTED. Late bids will not be accepted.

COMPLETE/FORMAL NAME OF VENDOR:		
STREET ADDRESS:	P.O. BOX:	ZIP:
CITY & STATE & ZIP:	TELEPHONE NUMBER:	TOLL FREE TEL. NO:
PRINCIPAL PLACE OF BUSINESS ADDRESS IF DIFFERENT FROM ABOVE (SEE INSTRUCTIONS TO VENDORS ITEM #21):		
PRINT NAME & TITLE OF PERSON SIGNING ON BEHALF OF VENDOR:		
VENDOR’S AUTHORIZED SIGNATURE*:	DATE:	EMAIL:

VALIDITY PERIOD

Offer shall be valid for at least one hundred twenty (120) days from date of bid opening, unless otherwise stated here: _____ days, or if extended by mutual agreement of the parties in writing. Any withdrawal of this offer shall be made in writing, effective upon receipt by the agency issuing this IFB.

ACCEPTANCE OF BIDS

If your bid is accepted, all provisions of this IFB, along with the written results of any negotiations, shall constitute the written agreement between the parties ("Contract"). The NORTH CAROLINA GENERAL TERMS AND CONDITIONS are incorporated herein and shall apply. Depending upon the Goods or Services being offered, other terms and conditions may apply, as mutually agreed.

<p><u>FOR STATE USE ONLY:</u> Offer accepted and Contract awarded this _____ day of _____, 20____, as indicated on</p> <p>The attached certification, by _____.</p> <p style="text-align: center;">(Authorized Representative of Department of Transportation)</p>
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1.0 PURPOSE AND BACKGROUND

The purpose of this Invitation for Bids (IFB) is to solicit bids from Vendors that have been pre-qualified in accordance with “Traffic Data Collection” (Discipline Code 309) for the collection of traffic data for the North Carolina Department of Transportation (NCDOT) Transportation Mobility and Safety Division. Vendors shall also be prequalified in Discipline Code 551 “Unmanned Aircraft System (UAS) Operator” prior to conducting any aerial video work. This data is used by a wide variety of business units in NCDOT for project development, safety and mobility initiatives, planning, and forecasting in connection with the planning, operations, design, maintenance, repair, and construction of transportation infrastructure.

The work in general will consist of collecting site information and traffic data for each location to include vehicle turning movement, volume/speed/class, and other data types as indicated in the Scope of Work. Most work will have a two (2) week deadline, but some deadlines may be longer or shorter depending on the type of traffic data collected, and/or the sensitivity of the specific request. Deliverables will generally consist of a summary of site information, a summary of weather conditions, maps, pictures, tabulated and summarized traffic data, and, in some cases, video.

Background for this IFB can be found at the following URLs:

Historical traffic data collection information:

<https://connect.ncdot.gov/resources/safety/TrafficDataResources/Historical%20Data.pdf>

NCDOT traffic data collection website and information:

<https://connect.ncdot.gov/resources/safety/Pages/Traffic-Data.aspx>

The intent of this solicitation is to award an Agency Specific Term Contract. Bids shall be submitted in accordance with the terms and conditions of this IFB and any addenda issued hereto.

1.1 CONTRACT TERM

The Contract shall have an initial term of three (3) years, beginning on July 11, 2026 (the “Effective Date”), as indicated in the Contract award. In addition, and with the Vendor’s concurrence, the State reserves the right to extend a contract term after the last active term.

[Bids shall be submitted in accordance with the terms and conditions of this IFB and any addenda issued hereto.](#)

2.0 GENERAL INFORMATION

2.1 INVITATION FOR BID DOCUMENT

This IFB is comprised of the base IFB document, any attachments, and any addenda released before Contract award, which are incorporated herein by reference.

2.2 E-PROCUREMENT FEE

ATTENTION: The E-Procurement fee may apply to this solicitation. See the paragraph entitled ELECTRONIC PROCUREMENT of the North Carolina General Terms and Conditions.

General information on the E-Procurement Services can be found at: <http://eprocurement.nc.gov/>.

2.3 NOTICE TO VENDORS REGARDING IFB TERMS AND CONDITIONS

It shall be the Vendor’s responsibility to read the Instructions to Vendors, the North Carolina General Terms and Conditions, all relevant exhibits and attachments, and any other components made a part of this IFB and comply with all requirements and specifications herein. Vendors are also responsible for obtaining and complying with all Addenda and other changes that may be issued in connection with this IFB.

If Vendors have questions or issues regarding any component of this IFB, those must be submitted as questions in accordance with the instructions in the BID QUESTIONS Section. If the State determines that any changes will be made as a result of the questions asked, then such decisions will be communicated in the form of an IFB addendum. The State may also elect to leave open the possibility for later negotiation of specific provisions of the Contract that have been addressed during the question-and-answer period, prior to contract award.

Other than through the process of negotiation under 01 NCAC 05B.0503, the State rejects and will not be required to evaluate or consider any additional or modified terms and conditions submitted with Vendor’s bid or otherwise. This applies to any language appearing in or attached to the document as part of the Vendor’s bid that purports to vary any terms and conditions or Vendors’ instructions herein or to render the bid non-binding or subject to further negotiation. Vendor’s bid shall constitute a firm offer that shall be held open for the period required herein (“Validity Period” above).

The State may exercise its discretion to consider Vendor proposed modifications. By execution and delivery of this IFB Response, the Vendor agrees that any additional or modified terms and conditions, whether submitted purposely or inadvertently, shall have no force or effect, and will be disregarded unless expressly agreed upon during negotiations and incorporated by way of a Best and Final Offer (BAFO). Noncompliance with, or any attempt to alter or delete, this paragraph shall constitute sufficient grounds to reject Vendor’s bid as non-responsive.

2.4 IFB SCHEDULE

The table below shows the *intended* schedule for this IFB. The State will make every effort to adhere to this schedule.

Event	Responsibility	Date and Time
Issue IFB	State	June 11, 2026
Submit Written Questions	Vendor	June 17, 2026, at 12:00 PM ET
Submit Bids	Vendor	<p>Public bid opening for this solicitation will be conducted via conference call. Vendors may use the links below or the call-in number to join the bid opening on June 25, 2026, at 2:00 PM ET.</p> <p>Microsoft Teams meeting Join: https://teams.microsoft.com/meet/253703867302649?p=r7KVUANq9DtBfV3m2b Meeting ID: 253 703 867 302 649 Passcode: Au9Zj2UM</p> <hr/> <p>Need help? System reference Dial in by phone +1 984-204-1487,,356958064# United States, Raleigh Find a local number Phone conference ID: 356 958 064# Join on a video conferencing device Tenant key: ncgov@m.webex.com Video ID: 117 328 086 6 More info</p>
Contract Award	State	TBD
Contract Effective Date	State	July 11, 2026

2.5 BID QUESTIONS

Upon review of the IFB documents, Vendors may have questions to clarify or interpret the IFB in order to submit the best bid possible. To accommodate the Bid Questions process, Vendors shall submit any such questions by the “Submit Written Questions” date and time provided in the IFB SCHEDULE Section above, unless modified by Addendum.

Written questions shall be e-mailed to ctandresen@ncdot.gov by the date and time specified in the IFB SCHEDULE Section of this IFB. Vendors will enter “IFB # 54-CA-12092025 – Questions” as the subject of the message. Question submittals should include a reference to the applicable IFB section. This is the only manner in which questions will be received.

Questions received prior to the submission deadline date, the State's response, and any additional terms deemed necessary by the State will be posted to the Electronic Vendor Portal (eVP), <https://evp.nc.gov>, in the form of an addendum and shall become an Addendum to this IFB. No information, instruction or advice provided orally or informally by any State personnel, whether made in response to a question or otherwise in connection with this IFB, shall be considered authoritative or binding. Vendors shall rely *only* on written material contained in the IFB and an addendum to this IFB.

2.6 BID SUBMITTAL

IMPORTANT NOTE: This is an absolute requirement. Late bids, regardless of cause, will not be opened or considered, and will be automatically disqualified from further consideration. Vendor shall bear the sole risk of late submission due to unintended or unanticipated delay. It is the Vendor's sole responsibility to ensure its bid has been received as described in this IFB by the specified time and date of opening. Failure to submit a bid in strict accordance with instructions provided shall constitute sufficient cause to reject a Vendor's bids(s). Solicitation responses are subject to Sealed Bidding requirements.

If applicable to this IFB and using eVP, all proposal responses shall be submitted electronically via the electronic Vendor Portal (eVP). Additional information can be found at the eVP updates for Vendors link: <https://eprocedurement.nc.gov/news-events/evp-updates-vendors>.

Failure to submit a bid in strict accordance with these instructions shall constitute sufficient cause to reject a Vendor's bid(s). Vendors are strongly encouraged to allow sufficient time to upload bids.

Critical updated information may be included in Addenda to this IFB. It is important that all Vendors responding on this IFB periodically check the State's eVP website for any Addenda that may be issued prior to the bid opening date. All Vendors shall be deemed to have read and understood all information in this IFB and all Addenda thereto.

If confidential and proprietary information is included in the bid, also submit one (1) signed, REDACTED copy of the bid. Such information may include trade secrets defined by N.C. Gen. Stat. § 66-152 and other information exempted from the Public Records Act pursuant to N.C. Gen. Stat. §132- 1.2. Vendor may designate information, Products, Services, or appropriate portions of its response as confidential, consistent with and to the extent permitted under the statutes and rules set forth above. By so redacting any page, or portion of a page, the Vendor warrants that it has formed a good faith opinion, having received such necessary or proper review by counsel and other knowledgeable advisors, that the portions determined to be confidential and proprietary and redacted as such, meet the requirements of the Rules and Statutes set forth above. However, under no circumstances shall price information be designated as confidential.

If the Vendor does not provide a redacted version of the bid with its bid submission, the Department may release an unredacted version if a record request is received.

2.7 BID CONTENTS

Vendors shall provide responses to all questions and complete all attachments for this IFB that require the Vendor to provide information and include an authorized signature where requested. Failure to provide all required items, or Vendor's submission of incomplete items, may result in the State rejecting Vendor's bid, in the State's sole discretion.

Vendor IFB responses shall include the following items and attachments, which shall be arranged in the following order:

- a) Completed and signed version of all EXECUTION PAGES.
- b) Signed receipt pages of any addenda released in conjunction with this IFB, if required to be returned.
- c) Vendor response: (please include here sections that require fill-in responses)
- d) Completed version of ATTACHMENT A: PRICING
- e) Completed and signed version of ATTACHMENT D: HUB SUPPLEMENTAL VENDOR INFORMATION
- f) Completed version of ATTACHMENT E: CUSTOMER REFERENCE FORM
- g) Completed and signed version of ATTACHMENT F: LOCATION OF WORKERS UTILIZED BY VENDOR
- h) Completed and signed ATTACHMENT H: EXPERIENCE RATE MODIFIER (ERM) as well as any additional documentation required by ATTACHMENT H (if applicable). Note that any Vendors not providing this information shall render the bid non-responsive and it shall be rejected. **Vendors having an ERM greater than 1.30 at the time of the bid opening shall be rejected.**

2.8 DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

Relevant definitions for this IFB are provided in 01 NCAC 05A .0112 and in the Instructions to Vendors found below which are incorporated herein by this reference.

The following definitions, acronyms, and abbreviations are also relevant to this IFB:

- a. **AADT:** Annual Average Daily Traffic
- b. **BICYCLE:** Human-powered vehicle with two wheels in tandem designed to transport, by the action of pedaling one or more persons seated on one or more saddle seats on its frame. (G.S. 20-171.8)
- c. **CFI:** Continuous flow intersection
- d. **ERM:** Experience rate modifier
- e. **FAA:** Federal Aviation Administration
- f. **FHWA:** Federal Highway Administration
- g. **FRA:** Federal Railroad Administration
- h. **FTS:** File Transfer System
- i. **HAZMAT:** Hazardous Materials
- j. **HOV:** High-occupancy vehicle
- k. **LIDAR:** Light detection and ranging
- l. **MPH:** Miles per hour
- m. **MUTCD:** The Manual on Uniform Traffic Control Devices
- n. **NCBELS:** North Carolina Board of Examiners for Engineers and Surveyors
- o. **NESC:** National Electric Safety Code
- p. **NOAA:** National Oceanic and Atmospheric Administration
- q. **NWS:** National Weather Service
- r. **OSHA:** Occupational Safety and Health Administration
- s. **PEDESTRIAN:** Any person not in or upon a motor vehicle or other road vehicle. Includes a person afoot, sitting, lying or working upon a land way or place (DMV Instruction Manual)
- t. **PHF:** Peak Hour Factor
- u. **PPD:** PostScript Printer Description
- v. **REGION A:** NCDOT Highway Divisions 1, 2, and 3
- w. **REGION B:** NCDOT Highway Divisions 4, 5, 6, 7, and 8
- x. **REGION C:** NCDOT Highway Divisions 9, 10, and 12
- y. **REGION D:** NCDOT Highway Division 11, 13, and 14
- z. **SOP:** Safe Operating Procedures
- aa. **TEAAS:** Traffic Engineering Accident Analysis System
- bb. **TEPPL:** Traffic Engineering Policies, Practices, and Legal Authority
- cc. **TMG:** Traffic Monitoring Guide (FHWA)
- dd. **TTDT:** Truck Tractor Dual Trailer (Trucks with twin trailers)
- ee. **TTST:** Truck Tractor Single Trailer
- ff. **UAS:** Unmanned Aircraft System (i.e. drone)
- gg. **VPD:** Vehicles per day

3.0 METHOD OF AWARD AND BID EVALUATION PROCESS

3.1 METHOD OF AWARD

North Carolina G.S. 143-52 provides a general list of criteria the State shall use to award contracts, as supplemented by the additional criteria herein. The Goods or Services being procured shall dictate the application and order of criteria; however, all award decisions shall be in the State’s best interest.

All responsive bids will be reviewed, and an award or awards will be based on the maximum number of responsive bid(s) offering the lowest price that meets the specifications as follows:

Data Type	Vendors
Turning Movement – Standard Junction	Six (6) Vendors per Region
Mixed Data – Standard Multi-Point Junction	Five (5) Vendors per Region
Volume/Speed/Class – Single Location	Six (6) Vendors per Region
Volume/Speed/Class – Rail Division Groups	Seven (7) Vendors per Region
Volume Only Data – Seasonal Study Group	Eight (8) Vendors per Region
School Operations Data	Four (4) Vendors per Region
Compliance	Four (4) Vendors per Region
Manual	Five (5) Vendors per Region
All other items	Four (4) Vendors per Region

While the intent of this IFB is to award a Contract(s) to multiple Vendors, the State reserves the right to make separate awards to different Vendors for one or more line items, to not award one or more line items, or to cancel this IFB in its entirety without awarding a Contract, if it is considered to be most advantageous to the State to do so.

The State reserves the right to waive any minor informality or technicality in bids received.

3.2 CONFIDENTIALITY AND PROHIBITED COMMUNICATIONS DURING EVALUATION

While this IFB is under evaluation, the responding Vendor, including any subcontractors and suppliers, is prohibited from engaging in conversations intended to influence the outcome of the evaluation. See Paragraph 29. of the Instructions to Vendors entitled COMMUNICATOINS BY VENDORS

Each Vendor submitting a bid to this IFB, including its employees, agents, subcontractors, suppliers, subsidiaries and affiliates, is prohibited from having any communications with any person inside or outside the using agency; issuing agency; other government agency office or body (including the procurement lead named above, any department secretary, agency head, members of the General Assembly and Governor’s office); or private entity, if the communication refers to the content of Vendor’s bid or qualifications, the content of another Vendor’s proposal, another Vendor’s qualifications or ability to perform a resulting contract, and/or the transmittal of any other communication of information that could be reasonably considered to have the effect of directly or indirectly influencing the evaluation of proposals, the award of a contract, or both.

Any Vendor not in compliance with this provision shall be disqualified from evaluation and award. A Vendor’s proposal may be disqualified if its subcontractor and/or supplier engage in any of the foregoing communications during the time that the procurement is active (*i.e.*, the issuance date of the procurement until the date of contract award or cancellation of the procurement). Only those discussions, communications or transmittals of information authorized or initiated by the issuing agency

for this IFB or inquiries directed to the procurement lead named in this IFB regarding requirements of the IFB (prior to proposal submission) or the status of the award (after submission) are excepted from this provision.

3.3 BID EVALUATION PROCESS

Only responsive submissions will be evaluated.

The State will conduct an evaluation of responsive Bids, as follows:

Bids will be received according to the method stated in the Bid Submittal section above.

All bids must be received by the issuing agency not later than the date and time specified in the IFB SCHEDULE Section above, unless modified by Addendum. Vendors are cautioned that this is a request for offers, not an offer or request to contract, and the State reserves the unqualified right to reject any and all offers at any time if such rejection is deemed to be in the best interest of the State.

At the date and time provided in the IFB SCHEDULE Section above, unless modified by Addendum, the bids from each responding Vendor will be opened publicly and all offers (except those that have been previously withdrawn, or voided bids) will be tabulated. The tabulation shall be made public at the time it is created. When negotiations after receipt of bids is authorized pursuant to G.S. 143-49 and 01 NCAC 05B.0503, only the names of offerors and the Goods and Services offered shall be tabulated at the time of opening. Cost and price shall become available for public inspection at the time of the award. Interested parties are cautioned that these costs and their components are subject to further evaluation for completeness and correctness and therefore may not be an exact indicator of a Vendor’s pricing position.

At their option, the evaluators may request oral presentations or discussions with any or all Vendors for clarification or to amplify the materials presented in any part of the bid. Vendors are cautioned, however, that the evaluators are not required to request presentations or other clarification—and often do not. Therefore, all bids should be complete and reflect the most favorable terms available from the Vendor. Prices bid cannot be altered or modified as part of a clarification.

Bids will generally be evaluated, based on completeness, content, cost and responsibility of the Vendor to supply the requested Goods and Services. Specific evaluation criteria are listed in Section 3.1 METHOD OF AWARD.

Upon completion of the evaluation process, the State will make Award(s) based on the evaluation and post the award(s) to the electronic Vendor Portal (eVP), <https://evp.nc.gov>, under the IFB number for this solicitation. Award of a Contract to one Vendor does not mean that the other bids lacked merit, but that, all factors considered, the selected bid was deemed most advantageous and represented the best value to the State.

The State reserves the right to negotiate with one or more Vendors, or to reject all original offers and negotiate with one or more sources of supply that may be capable of satisfying the requirement, and in either case to require Vendor to submit a Best and Final Offer (BAFO) based on discussions and negotiations with the State.

3.4 PERFORMANCE OUTSIDE THE UNITED STATES

Vendor shall complete ATTACHMENT F: LOCATION OF WORKERS UTILIZED BY VENDOR. In addition to any other evaluation criteria identified in this IFB, the State may also consider, for purposes of evaluating proposed or actual contract performance outside of the United States, how that performance may affect the following factors to ensure that any award will be in the best interest of the State:

- a) Total cost to the State
- b) Level of quality provided by the Vendor
- c) Process and performance capability across multiple jurisdictions
- d) Protection of the State’s information and intellectual property
- e) Availability of pertinent skills
- f) Ability to understand the State’s business requirements and internal operational culture
- g) Particular risk factors such as the security of the State’s information technology
- h) Relations with citizens and employees
- i) Contract enforcement jurisdictional issues

3.5 INTERPRETATION OF TERMS AND PHRASES

This IFB serves two functions: (1) to advise potential Vendors of the parameters of the solution being sought by the State; and (2) to provide (together with other specified documents) the terms of the Contract resulting from this procurement. The use of phrases such as “shall,” “must,” and “requirements” are intended to create enforceable contract conditions. In determining whether bids should be evaluated or rejected, the State will take into consideration the degree to which Vendors have proposed or failed to propose solutions that will satisfy the State’s needs as described in the IFB. Except as specifically stated in the IFB, no one requirement shall automatically disqualify a Vendor from consideration. However, failure to comply with any single requirement may result in the State exercising its discretion to reject a bid in its entirety.

4.0 REQUIREMENTS

This Section lists the requirements related to this IFB. By submitting a bid, the Vendor agrees to meet all stated requirements in this Section as well as any other specifications, requirements, and terms and conditions stated in this IFB. If a Vendor is unclear about a requirement or specification, or believes a change to a requirement would allow for the State to receive a better bid, the Vendor is urged to submit these items in the form of a question during the question and answer period in accordance with the Bid Questions Section above.

4.1 PRICING

Bid price shall constitute the total cost to the State for complete performance in accordance with the requirements and specifications herein, including all applicable charges for handling, transportation, administrative and other similar fees. Complete ATTACHMENT A: PRICING and include in Vendor’s response. The pricing provided in ATTACHMENT A: PRICING, or resulting from any negotiations, is incorporated herein and shall become part of any resulting Contract.

4.2 HUB PARTICIPATION

Pursuant to North Carolina General Statute G.S. 143-48, it is State policy to encourage and promote the use of small, minority, physically handicapped, and women contractors in purchasing Goods and Services. As such, this IFB will serve to identify those Vendors that are minority owned or have a strategic plan to support the State’s Historically Underutilized Business program by meeting or exceeding the goal of 10% utilization of diverse firms as 1st or 2nd tier subcontractors. Vendor shall complete ATTACHMENT D: HUB SUPPLEMENTAL VENDOR INFORMATION.

4.3 REFERENCES

Vendor shall provide at least three (3) references, using ATTACHMENT E: CUSTOMER REFERENCE FORM, for which it has provided services of a similar size and scope to those proposed herein. The State may contact these users to determine whether the services provided are substantially similar in scope to those proposed herein and whether Vendor’s performance has been satisfactory. The information obtained may be considered in the evaluation of the bid.

4.4 VENDOR PREQUALIFICATION

Any person or company doing work related to this IFB that was not awarded work under this IFB is considered a subcontractor when they are doing work for a Vendor that was awarded work under this IFB.

NCDOT does not differentiate between contract employees, subcontractors, and independent contractors and, therefore, considers all contract employees and independent contractors to be subcontractors under the various terms of this contract. As such, all contract employees, subcontractors, and independent contractors shall follow pre-established Departmental rules (such as being prequalified to do the work they are engaged in) and contractual requirements (such as meeting insurance coverage, being approved by the NCDOT prior to conducting any work, and adhering to all other contract provisions and conditions). In short, all contract employees, subcontractors, and independent contractors are required to meet all the same requirements as the prime contractor (Vendor).

All Vendors (including contract employees, subcontractors, and independent contractors) shall at all times:

1. Be prequalified for NCDOT Discipline Code 309 (“Traffic Data Collection”).

2. Have an Experience Rate Modifier (ERM) of 1.30 or less or be ineligible for an ERM. Note that this only applies to Vendors required to have worker’s compensation insurance (see below).
3. Have worker’s compensation insurance in the type and amount listed in ATTACHMENT C, Item 15, if performing any work in North Carolina.
4. Meet the insurance requirements as stated in ATTACHMENT C, Item 15-.
5. Provide updates to any of the above information within ten (10) business days following a written request (email, letter, etc.) to do so.

It shall be the responsibility of any Vendor (prime contractor) awarded work under this IFB to ensure that any contract employees, subcontractors and/or independent contractors that may be used by the prime contractor meet the above requirements.

Updated insurance and ERM information should be provided upon receipt following any renewals and/or coverage changes. No work shall be assigned without current insurance and ERM information being on file with NCDOT from all Vendors including contract employees, subcontractors, and independent contractors

Under no circumstances shall a Vendor awarded work under this IFB subcontract work to another Vendor awarded work under this IFB.

4.5 VENDOR RESPONSIBILITIES AND REQUIREMENTS

1. All original calculations, field notes, drawings, videos, data files, and any other necessary project information prepared by Vendors (electronic and hard copy) shall be the property of the NCDOT and shall be turned over to the NCDOT upon completion of the work or when requested. The retention of traffic data records by Vendors shall conform to the Functional Schedule for North Carolina State Agencies (currently record number 10311.10 “Traffic Recorder Counts”), on page 10-12, which may be reviewed at the following URL:

<https://archives.ncdcr.gov/functional-schedule/open>

2. Vendor shall be responsible for ensuring that submittals are accurate (by conducting internal data quality control checks) and in a format compatible with NCDOT analysis software and in a format compatible with NCDOT analysis and count type specifications.
3. Vendor shall obtain approval prior to collecting and/or processing data if the chosen method does not meet the specifications of the original request.
4. If requested to collect data when schools are in session, Vendor shall be responsible for contacting the appropriate schools (public, private, traditional, year-round, colleges, universities, day cares, etc.) to verify that the schools will actually be in regular session (not delayed openings, early release days, teacher workdays, track-out days, etc.). Vendor shall be responsible for requesting further instructions if school closure or other events affects requested deadlines. Vendor shall notify any affected schools of the date, time, and location of traffic data collection prior to conducting the actual work and explain what affects, if any, the data collection will have on traffic to and from the school. All correspondence shall be documented.
5. Vendor shall notify Division Traffic Engineer or designee along with appropriate law enforcement agencies (Highway Patrol, Police, Sheriff, University, etc.) of the date, time, duration, and location of traffic data collection prior to conducting the actual work, preferably at least twenty-four (24) hours in advance.
6. Vendor shall be responsible for obtaining and securing all necessary permissions for the use of utility poles, public vehicular areas, right-of-way, etc., prior to collecting data. Vendor shall make this information available when requested.
7. Vendor personnel shall be equipped with cellular telephones or other communication devices to facilitate resolution of potential problems regarding the work.
8. Vendor personnel shall have identification (personal and company) at all times.

9. Any vehicles used on this project shall be equipped with markings identifying and prominently displaying the name of the Vendor. Any equipment installed in the field should also be marked with the name of the Vendor, Vendor website, and their contact information.
10. Vendors shall be responsible for the completeness, accuracy, presentation, and review of any work sublet to others.
11. Vendor shall be responsible for the safety of its personnel (counters, count equipment installers, etc.), any sub-Vendors (contract employees, subcontractors and/or independent contractors utilized by the prime), and the traveling public and shall adhere to all applicable state and federal occupational safety and health laws and regulations. Vendor shall also conform to DOT Workplace Safety Manual SOP and MUTCD standards for mobile operations (if applicable).
12. Vendor shall be responsible for ensuring its personnel adhere to applicable state and federal labor laws and regulations regarding work hours, breaks, etc. Vendor staff shall not take breaks at the end of the count period.
13. The size of all non-video electronic submittals (PDF, PPD, spreadsheets, etc.) should be no greater than six (6) megabytes (MB).
14. Submittals shall be uploaded as a .ZIP file and match a naming convention provided by NCDOT Example (Count number.zip = 10234.zip).
15. If a video was requested, it will be uploaded to the link called "Vendor Video Upload" located on the NCDOT Traffic Data Collection Request System.
16. Vendors shall be responsible for the presentation and explanation of their work (methods, equipment, standard practices, etc.) at any meetings, hearings, consultations, discussions, and field conferences as requested by the NCDOT.
17. Vendors shall be required to cooperate and coordinate fully with other Vendors, municipalities, local officials, etc., as directed by the NCDOT.
18. Any revisions to the collected data shall be provided to the NCDOT. If failure to do so results in incorrect designs in plans prepared by others, the Vendor shall be fully liable for all claims against the NCDOT including redesign costs, delay costs, and the cost of other corrective measures as determined to be necessary by the NCDOT.
19. If Vendor receives instructions or directions that are considered beyond the scope of work as outlined in the specifications, then no work shall be performed until the matter is resolved.
20. Vendor shall notify the NCDOT of significant changes within the Vendor (e.g., change of address, telephone number, project-related personnel changes, hiring or separation of project-related subcontractors or independent contractors, etc.).
21. Each request received by the Vendor from the NCDOT shall be considered a notice to proceed for that specifically requested work and location, and Vendor personnel shall keep a copy of the request with them at all times while collecting data. Requests will be provided through the online traffic data collection system, and locations will have GPS coordinates with six (6) decimals.
22. The Vendor shall verify that all equipment is used in accordance with manufacturer's specifications and is calibrated and working properly when installed.
23. If Vendor utilizes video or other technology that requires attachment to any poles, utilities, or other structures, they shall have prior approval from the structure owner and they shall be bonded, a licensed electrician, and have general liability insurance, and all work shall be in compliance with the NESC.
24. All work performed shall comply with federal, state and local statutes, ordinances, and codes.
25. All work performed shall comply with federal, state and local safety regulations and procedures.

27. Vendors shall complete all assignments, regardless of due date or submittal date, if they are assigned prior to the end of the contract.
28. Vendor shall be available for work on this project on and after the effective date provided in the Notice of Award.
29. Some weather conditions require the Vendor to contact the requestor to indicate that the Vendor will not proceed with the data collection and postpone to another eligible date. All such notifications shall be emailed prior to sending any personnel to the target site.
30. Vendor personnel shall provide on request to law enforcement officers, school officials, citizens, etc., their names, the names and phone numbers of their supervisors, and the name and phone number of the NCDOT data collection program manager in order to facilitate independent verification of the validity of the work.
31. Vendor personnel shall not speculate, or provide opinions, on why the data is being collected, what it will be used for, or the potential results of any analysis.
32. Vendor shall ensure that any personnel (employee, contract employee, subcontractor, or independent contractor) working on this project is legally able to work on this project.
33. Vendor shall provide a current/updated list of employees, contract employees, subcontractors, and independent contractors within three (3) business days whenever requested by NCDOT.
34. Vendor shall verify the status (current or former) and standing (employee, contract employee, subcontractor, or independent contractor) of any names provided by NCDOT within two (2) business days whenever requested by NCDOT.
35. Vendor shall not extrapolate/interpolate or otherwise falsify data.
36. Vendor shall notify NCDOT within one (1) business day of any incident resulting in injuries or fatalities to any individual, or damage in any amount equal to or exceeding \$2,000 to any property, as a result of doing work on this project, shall submit a form approved by NCDOT specifying the details of the incident within five (5) business days of the incident, and shall fully cooperate with any subsequent questions or investigations related to the incident.
37. This project is for the collection of data. Unless otherwise specifically required or prohibited by NCDOT, the Vendor has wide latitude as to the number of personnel, methods, and/or number and types of equipment used to collect the data.
38. Vendor shall point out any discrepancies that may exist between route numbers, GPS coordinates, and/or street names in the field versus what NCDOT has provided for the request.
39. Vendor shall conform to specific measures for the quality control, validity, and acceptance of data as developed and distributed by NCDOT. However, data that appears to be suspect or has inconsistencies or imbalances that are unreasonable or cannot be explained may need to be re-tabulated or re-counted at no cost to NCDOT.
40. Vendor shall provide copies of equipment test and calibration logs upon request and within five (5) business days of the request.
41. Vendors are solely responsible for the damage to vehicles resulting from their equipment or the installation of the equipment, and any compensation thereof for repairs and/or replacement of said vehicles.
42. Vendors utilizing UAS (i.e. drones) shall follow appropriate FAA and State regulations.

4.6 NCDOT RESPONSIBILITIES AND REQUIREMENTS

1. NCDOT shall provide written requests, which shall describe the location, duration, collection times, estimated AADT, and type of each traffic data collection to be performed.
2. NCDOT shall provide a map of, or an internet link to, each location (and an approximate location for any equipment installation, if applicable).

3. NCDOT shall coordinate and submit all requests to the Vendor.
4. NCDOT shall periodically provide evaluations based on guidance from the Chief Engineers Office to each Vendor.
5. NCDOT, upon verification of completed work and processing of any Vendor invoice, shall make payment to the Vendor.
6. NCDOT shall extend due dates by a number of business days equal to the length of any postponements if a request is postponed due to predicted precipitation. All guidance on precipitation and postponements shall be by email.
7. NCDOT shall provide a naming convention for submittals.
8. NCDOT shall provide "Feature User" access to TEAAS and/or access to FTS to Vendors as requested.
9. NCDOT shall notify Vendors of any future changes in submittal formats and/or software needs as soon as practical along with detailed information of the changes and shall provide reasonable time frames for conformity.
10. NCDOT shall notify Vendors of any changes in specifications for quality control and acceptance of data as soon as practical and shall provide reasonable time frames for conformity.
11. NCDOT shall have the right to approve or reject any Vendor or subcontractor personnel for this project, with or without cause or reason.
12. NCDOT shall pay vendors a flat \$100 "recovery" fee for any requests that vendors have gone to a site but counts are unable to be completed due to an error by NCDOT (such as scheduled construction). Such fee shall only be considered following verification from the vendor that staff actually traveled to the site and that the vendor notified NCDOT of the issue prior to collecting data.

4.7 OTHER ITEMS AND REQUIREMENTS

1. Collection and processing of basic raw traffic data is technician level work and does not require certification under the purview of a licensed professional engineer nor requires the Vendor to be licensed or registered with the NCBELS.
2. Reasonable extensions to time frames or deadlines may be made by mutual consent by all involved parties for unforeseen or unavoidable delays, or interference with the usual or normal traffic pattern or flow of a location.
3. Traffic data collection generally requires a two-week turnaround. However, turnaround times for counts that are for a duration of forty-eight (48) hours or less at a single location may be reduced to as little as one week (expedited). Turnaround times for other counts such as for week-long (24/7) counts, mixed data counts, or batch/group counts (i.e. multiple count locations) may be extended to as much as one month or more. Deadlines shall be specified when a data collection request is made. Note that in some cases there may be an urgent need to collect data within a certain time period, but the submittal of the data may follow normal time frames. Specific days may also be requested.
4. All portions of a submittal (PDF, PPD, spreadsheets, video, etc.) must be received by close of business (5:00 p.m. eastern time) on the specified deadline date in order to get credit for an on-time submittal.
5. All submittal items (PDF, PPD, spreadsheets, etc.), and each page and/or file therein (if multiple pages and/or files) shall be labeled with the count number.
6. Requests may be on specific days, dates, and/or times (including weekends and holidays).
7. Request data should be verified and approved by the requestor within 30 calendar days after submittal. Any request not approved by the requestor within 30 days will automatically be approved by the NCDOT Traffic Data Collection Request System. Reasonable extensions past 30 days may be given to accommodate for requestor review.
8. Peak hours shall be defined as 7:00 a.m. to 9:00 a.m. (AM peak), 11:00 a.m. to 1:00 p.m. (lunch peak), and 4:00 p.m. to 6:00 p.m. (PM peak), unless otherwise specified. Data collectors should not take breaks during these hours.
9. Counts will normally be completed Tuesday, Wednesday and/or Thursday between 6:00 a.m. and 7:00 p.m., unless specifically stated in the count type or by the requestor.

10. Volume/speed/class data may be collected between 6:00 a.m. on Mondays and 6:00 p.m. on Fridays, unless otherwise specified. All other data shall be collected between 2:00 p.m. on Mondays and 2:00 p.m. on Fridays, unless otherwise specified.
11. Any award, if awarded, is not a guarantee of work. Assignment of any work is dependent on the needs of the agency. If and when work is assigned, it will be done based on the existing work load of the vendors and the amount of work to be assigned.
12. TEAAS features reports shall be considered the official record for the purposes of distances.
13. For non-motorist (bicycle and pedestrian) data collection, locations may be on road (i.e. streets and roads) or off road (i.e. sidewalks, greenways, etc.), and they may be paved or unpaved.
14. A junction with offset approaches shall be considered one location if the offset approaches are within one hundred fifty (150) feet of each other, at their nearest points, regardless of the type or amount of any traffic control devices.
15. Junctions are defined as those portions of a roadway that allow for more than one movement (through, left, right, and/or U-turn) regardless of mode type (motor vehicle, bicycle, pedestrian, etc.) or traffic control (sign, signal, roundabout, etc.).
16. Video submittals shall have a date and time stamp and shall be clear and useful (i.e. fully capture all vehicles entering, traveling through, turning, and/or stopping at a specific location, and shall not be blocked by truck tractors with trailers such as FHWA classes 8-13). Where necessary (such as collecting compliance data), video shall also capture traffic control devices (such as stop bars and signal indications) and shall have the capacity to capture the exact time (part of a second) when a signal indication changes or signals/flashers are activated/deactivated. At a minimum, video should be color at 24 frames per second, 352 x 240 pixels, 1.5 Mbps (VBR), and playable on Windows Media Player version 12.
17. No data shall be collected on holidays, during road/street closures, in work zones, etc., unless otherwise directed. Vendor shall verify with the requestor (and copy the NCDOT Contract Manager), or the NCDOT Contract Manager, whether or not to proceed with the work if any of these activities are present unless already indicated on the notice to proceed.
18. No data shall be collected during, or immediately following, extreme weather conditions that affect travel unless otherwise directed. Extreme weather conditions, for the purposes of this IFB, include any active or projected non-frozen precipitation of a long duration, active or projected frozen precipitation that is expected to affect travel (i.e. close schools, cover roads and sidewalks, etc.), temperatures below 30 Fahrenheit, temperatures above 100° Fahrenheit, or fog that is thick enough to hide approaches, traffic signal indications, or other items necessary for data collection. No data shall be collected during, or immediately following, states of emergencies and/or evacuations (in North Carolina or affecting North Carolina) that would reasonably disrupt normal traffic flow at the requested site unless otherwise directed. The Vendor shall email the requestor, and copy the NCDOT Contract Manager, to ask for guidance on whether or not to proceed with the data collection or to postpone (prior to sending personnel to the site). Due dates shall be extended by a number of business days equal to the length of any postponements.
19. No data shall be collected in the immediate aftermath of a natural or other disaster if the disaster affects ~~the~~^{the} traffic flows in the area.
20. Intrusive data collection sensors (tubes, plates, loops, etc.) shall not be installed in the travel lanes of roadway segments with posted speed limits greater than fifty-five (55) miles per hour (MPH). Intrusive data collection sensors (tubes, plates, loops, etc.) shall not be installed in the travel lanes of high-volume roads (AADT > 25,000 VPD) between 6:00 a.m. and 8:00 p.m.
21. Statutory definitions shall apply unless an item is specifically defined otherwise within this IFB.
22. Unless otherwise specified herein, data collection methods and submittals should conform to the most recent edition of the FHWA [Traffic Monitoring Guide](#).

4.8 PERSONNEL

Vendor warrants that qualified personnel shall provide Services under this Contract in a professional manner. "Professional manner" means that the personnel performing the Services will possess the skill and competence consistent with the prevailing business standards in the industry. Vendor will serve as the prime contractor under this Contract and shall be responsible for the performance and payment of all subcontractor(s) that may be approved by the State. Names of any third-party Vendors or subcontractors of Vendor may appear for purposes of convenience in Contract documents; and shall not limit Vendor's obligations hereunder. Vendor will retain executive representation for functional and technical expertise as needed in order to incorporate any work by third party subcontractor(s).

Should the Vendor's bid result in an award, the Vendor shall be required to agree that it will not substitute key personnel assigned to the performance of the Contract without prior written approval by the Contract Lead. Vendor shall further agree that it will notify the Contract Lead of any desired substitution, including the name(s) and references of Vendor's recommended substitute personnel. The State will approve or disapprove the requested substitution in a timely manner. The State may, in its sole discretion, terminate the Services of any person providing Services under this Contract. Upon such termination, the State may request acceptable substitute personnel or terminate the contract Services provided by such personnel.

4.9 VENDOR'S REPRESENTATIONS

If Vendor's bid results in an award, Vendor agrees that it will not enter any agreement with a third party that may abridge any rights of the State under the Contract. If any Services, deliverables, functions, or responsibilities not specifically described in this solicitation are required for Vendor's proper performance, provision and delivery of the Service and deliverables under a resulting Contract, or are an inherent part of or necessary sub-task included within such Service, they will be deemed to be implied by and included within the scope of the Contract to the same extent and in the same manner as if specifically described in the Contract. Unless otherwise expressly provided herein, Vendor will furnish all of its own necessary management, supervision, labor, facilities, furniture, computer and telecommunications equipment, software, supplies and materials necessary for the Vendor to provide and deliver the Services and/or other Deliverables.

4.10 AGENCY INSURANCE REQUIREMENTS MODIFICATION

A. Default Insurance Coverage from the General Terms and Conditions applicable to this Solicitation:

Contract value in excess of \$1,000,000.00

4.11 SUBCONTRACTORS

No portion of the work shall be subcontracted without prior written consent of the State. In the event that the Vendor desires to subcontract some part of the work specified herein, the Vendor shall furnish with their bid the names, qualifications, and experience of their proposed subcontractors. The Vendor shall, however, remain solely and fully liable and responsible for the work done by its subcontractor(s) and shall assure compliance with all the requirements and specifications of the contract.

4.12 SECRETARY OF STATE REGISTRATION

A contract award under the above-referenced solicitation, and the resulting purchase orders, will produce repeated orders and transactions in North Carolina and will constitute "transacting business" in the State, which requires a certificate of authority from the North Carolina Secretary of State as provided in G.S. §55-15-01 (corporations) or §57D-7-01 (LLCs). Please go to: <https://www.sosnc.gov/> to register.

Vendor has registered with the North Carolina Secretary of State: Yes No

Prior to entering into a contract with the State, the awarded Vendor(s) must complete registration with the NC Secretary of State. Upon notification of award, the selected Vendor(s) must furnish evidence of filing within 10 business days. Failure to provide this documentation may result in the disqualification of the Vendor(s) bid from further consideration for the award. No purchase orders shall be issued prior to confirmation of completed registration with the Secretary of State.

5.0 SPECIFICATIONS AND SCOPE OF WORK

5.1 GENERAL SPECIFICATIONS

This IFB is for the collection and processing of traffic data. This data is used by a wide variety of business units in the NCDOT for project development, safety and mobility initiatives, planning, and forecasting.

The work in general shall consist of collecting site information and traffic data for each requested location to include vehicle turning movement, volume/speed/class, and other data types as indicated below. Most work shall have a two (2) week deadline, but some deadlines may be longer or shorter depending on the type of traffic data collected or the sensitivity of the specific request. Deliverables will generally consist of a summary of site information, a summary of weather conditions, maps, pictures, tabulated and summarized traffic data, and, in some cases, video.

Vendors submitting bids for one (1) or more data types are expected to collect, process, and deliver the information as requested regardless of roadway geometrics or characteristics (horizontal or vertical curvature, skew, posted speed limit, number of lanes, etc.). Each Vendor, unless specifically stated otherwise, has a wide latitude to use any resources and techniques that are acceptable by industry standards to fulfill the requirements herein.

5.2 SITE DATA

Vendor shall compile site data of each requested location (regardless of data collection type) to include, but not limited to, the following:

1. Assignment number (count number, order number, station number, etc.), GPS coordinates (minimum of six decimals), count type, contractor's name and contact information (address, telephone numbers, etc.), subcontractor's name and role (data collection and/or data processing – only if a subcontractor was used), collection date(s), collection times, and break times (if appropriate).
2. Official weather conditions for the general area including maximum temperature (Fahrenheit), minimum temperature (Fahrenheit), precipitation (inches), snowfall (inches), average sky cover (0.0 – 1.0), and weather conditions (sunshine, rain, light rain, fog, haze, etc., or “no significant weather was observed”) for each day counted. Local climate information recorded at NOAA shall be considered the official record for this information (<https://www.weather.gov/wrh/climate>).
3. Observed weather conditions for the site for each day counted (same categories as above), if on site during data collection.
4. Method of collection (manual, video, automated, blended, etc.) and tabulation (PETRAPro® analysis software, automated length based algorithm software, NCDOT Axle Based Classification tree, etc.) of the data. Manufacturer, model, and type of equipment used to collect the data (Jamar® TDC-12 electronic count board, TRAX® automatic data recorder, Wavetronix® Smart Sensor V, etc.). Also include the configuration of the sensors, if applicable.
5. General location type (intersection, corridor, multi-use path, driveway, crosswalk, roundabout, superstreet, railroad crossing, bridge, etc.).
6. Site sketch or aerial photograph of the location including the name of each development (stores, banks, fast food, etc.) in each quadrant, or on either side, of the location (if present). This shall also include a description of any landmarks, intersections, generalized land use, interchanges, and driveways adjacent to, and in close proximity with, the location, and the location(s) of observers (counters) and/or data collection equipment.
7. When providing the count map, specify where freeway counts were taken in relation to the on and off ramps (Latitude and Longitude coordinates for the exact locations).
8. Statement of unique conditions (if applicable) of local land uses being served by particular classes of vehicles that may cause higher volumes for the classes (such as a quarry being served by dump trucks).
9. NCDOT division, county name, city name (if applicable), orientation of location, and directional north.
10. Identification of approaches by interstate (I), primary (US, NC), or secondary (SR) route number(s) and local street name(s).

11. For each approach, the number of lanes and lane movement designations (left, through, right, or combination).
12. For each approach, posted speed limits (if present), posted school zone speed limits and effective times (if present), and posted advisory speeds (if present).
13. For each approach, a statement as to whether or not the distance to the nearest roadway (non-driveway) stop sign is less than three hundred (300) feet.
14. For each approach, a statement as to whether or not the distance to the nearest traffic signal is less than three hundred (300) feet.
15. For each approach, a statement as to whether or not an at-grade railroad crossing is present within two hundred (200) feet (measured from the stop/yield line to the center of the track nearest to the intersection) and, if present, the measured distance.
16. Photographs of each approach of the location (facing the location AND facing upstream), any data collection equipment that has been installed (cameras, tubes, recorders, induction plates, radar, etc.), traffic control devices including signs, signals, and pavement markings (if not already pictured in the approach photographs), and all identification numbers that may be present (signal cabinets, railroad crossing numbers, etc.). Photographs should be current, on-site, and are to be taken under optimal ambient light conditions (generally during daylight). Pictures/photographs/images from third party entities (i.e. Google Maps, Google Earth, Bing, etc.) shall not be used. There should be no more than two (2) photographs per page when submitting deliverables, and time stamps should not interfere with viewing of the relevant items of the photographs (such as signal heads, signs, data collection equipment, etc.).
17. Presence of area lighting (if any).
18. Traffic control devices (such as traffic signals, pedestrian signals, flashers, stop signs, yield signs, railroad crossing gates, pavement markings, etc.), their locations, and their inventory numbers, if applicable (such as signal cabinets, railroad gate cabinets, etc.).
19. Presence of disabled pedestrians, including type of disability, and the approach they cross. If disabled pedestrians were not present, this should also be noted. This shall include disabled pedestrians within any crosswalks and/or crossing within approximately fifty (50) feet of the intersection proper.
20. Presence of highway construction activities that impact the normal flow or patterns of traffic.
21. Description and time of occurrence of any disruption of normal traffic patterns occurring during data collection (such as crashes, short traffic signal phases, lack of signal progression, signal malfunction, downpours, heavy snow, etc.) and duration of disruption.
22. Statement that the equipment used for data collection was calibrated per manufacturer instructions (if applicable) and operating properly when used or installed.
23. Additional site data as required for the specific traffic data being collected as indicated in the following sections.
24. Date(s) and time(s) of any railroad activations (if railroad gates and/or flashers are present).
25. FRA land use categories defined as the predominant type of development in the vicinity (up to 1,000 feet) as follows:
 - a. Open space – sparsely or undeveloped, lightly populated, or agricultural
 - b. Residential – built up residential area
 - c. Commercial – retail stores and businesses, office and personal services
 - d. Industrial – manufacturing, construction, heavy products, factories, and warehouses
 - e. Institutional – schools, churches, hospitals, parks, and other community facilities

5.3 TURNING MOVEMENT DATA – STANDARD SINGLE POINT JUNCTION

Standard single point junctions include, but are not limited to, single lane roundabouts, continuous flow intersections, and offset intersections (where the nearest points are <= 150 feet apart). Turning movement data is used to determine the number of motor vehicles, bicycles, making left, through, and right movements over a specified period of time and can be summarized as total volume by movement or separated out by type (classification). Pedestrians will also be counted when crossing at the intersection. Data collected shall encompass all possible movements (left, through, and/or right; and U-turns if requested) regardless of any traffic control devices (stop/yield signs, signals, directional crossovers, islands, etc.) that may be present.

The Vendor shall collect and compile turning movement data as follows:

1. Use software consistent with industry standards and request specifications (PETRAPro® but other common file types such as a spreadsheet may also be requested).
2. Data collection equipment shall not be installed in any work zones or on detour routes, unless specifically requested.
3. Collect in fifteen (15) minute increments. However, increments of one (1), five (5), thirty (30), and sixty (60) minutes may also be requested.
4. Collect for thirteen (13) hours (from 6:00 a.m. to 7:00 p.m., unless otherwise requested) – standard duration. However, sixteen (16) hour counts (6:00 a.m. to 10:00 p.m., unless otherwise requested), twenty-four (24) hour counts (6:00 am to 6:00 am the following day) may also be requested.
5. Collect from all approaches (including driveways or access connections that act as an approach).
6. Data shall be in southbound, westbound, northbound, and eastbound order.
7. U-turn movements on each approach may also be requested.
8. The presence of queuing on each approach may also be requested. If there is queuing on any movement at the end of a 15-minute count period, this queuing needs to be noted on the submittal form as a yes or no queue check box for each movement.
9. May include vehicle classifications (**OPTION ONLY – not collected unless requested**).

Option A – NCDOT 4 Class Scheme (default option)

- PV (FHWA classes 1, 2, 3)
- DUALS (FHWA classes 4, 5, 6, 7)
- TTST (FHWA classes 8, 9, 10)
- TWINS (FHWA classes 11, 12, 13)

Option B – Traditional Classes

- Long combination vehicles (five or more axles, including trailers)
- Dump trucks and 3-axle/4-axle trucks
- HAZMAT vehicles (tanker trucks, etc.)
- Trucks (generalized – vehicles with 3 or more axles)
- Emergency Vehicles (police, fire, EMS – shall have lights and/or sirens activated)
- Mopeds/Scooters
- School buses
- Motorcycles
- Transit buses
- Truck tractors with twin trailers
- Truck tractors with 53’ trailers

10. Supply collected data, as follows:

- a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hours. If classifications have been requested (option A or option B), then count data for each type of classification requested shall also be provided in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hours.
- b. Raw turning movement data in an electronic format (e.g. PPD file) with column headers (left to right) labeled as, and data ordered as, southbound, westbound, northbound, and eastbound. If class was requested, then two electronic downloads are required – one with the classes broken out and one with the classes combined.
- c. Raw turning movement data in a spreadsheet (e.g. Excel file) following the example electronic format provided on the [Traffic Data Connect site](#) under the “For Contractors” section.

5.4 NEAR MISS DATA – SINGLE LOCATION

A single location includes signalized or unsignalized standard single point junctions and midblock locations spanning up to 200 feet. Near miss data is used to determine the number of vehicle-to-vehicle, vehicle-to-bicycle, and vehicle-to-pedestrian conflict events over a specified period of time. Conflicting movements include any left turn, through movement, right turn, or crosswalk movement where a vehicle, bicycle, or pedestrian fails to correctly yield the right of way. A near miss event shall occur when a vehicle and another vehicle, bicycle, or pedestrian performing conflicting movements have a post encroachment time (PET) of under three (3) seconds.

The study is appropriate for the single intersection or midblock scale and along corridors. Near Miss reports may be useful for the following studies: bike/pedestrian studies, corridor studies, Roadway Safety Audits (RSA), for unique intersection geometries, and for community and stakeholder engagement.

The vendor shall collect, compile, and submit near miss data as follows:

- 1. Turning movement data (if needed) – see Section 5.3
- 2. Separately report vehicle-to-vehicle, vehicle-to-bicycle, and vehicle-to-pedestrian near miss event totals that occur with PET values under 1.5, 2, and 3 seconds, (or other increments as agreed upon by the requestor and the vendor).
- 3. Separately report each near miss event including the PET value for each event in seconds and milliseconds (ss:ms) format.
- 4. Report the classification of each vehicle involved in a near miss event using the NCDOT 4 Class Scheme or Traditional Class as requested.

Option A – NCDOT 4 Class Scheme (default option)

- PV (FHWA classes 1, 2, 3)
- DUALS (FHWA classes 4, 5, 6, 7)
- TTST (FHWA classes 8, 9, 10)
- TWINS (FHWA classes 11, 12, 13)

Option B – Traditional Classes

- Long combination vehicles (five or more axles, including trailers)
- Dump trucks and 3-axle/4-axle trucks
- HAZMAT vehicles (tanker trucks, etc.)
- Trucks (generalized – vehicles with 3 or more axles)
- Emergency Vehicles (police, fire, EMS – shall have lights and/or sirens activated)
- Mopeds/Scooters

- School buses
- Motorcycles
- Transit buses
- Truck tractors with twin trailers
- Truck tractors with 53' trailers

5. Supply collected data, as follows:

- a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hours. If classifications have been requested (option A or option B), then count data for each type of classification requested shall also be provided in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hour of near miss events.
- b. Raw near miss event data in electronic format (in Excel format or as needed by requestor) with column headers (left to right) labeled and data ordered as, southbound, westbound, northbound, and eastbound. If class was requested, then two electronic downloads are required – one with the classes broken out and one with the classes combined.

5.5 MIXED DATA – STANDARD MULTI-POINT JUNCTION

Standard multi-point junctions include, but are not limited to, traditional interchanges, diverging diamond interchanges, single point urban interchanges, and junctions where slip lanes are >150' from a junction but the movements are still considered part of the junction. Turning movement data, volume speed class data, and/or volume data is used to determine the number of motor vehicles, and bicycles making left, through and /or right movements over a specified period of time for each point within the junction influence area and can be summarized as total volume by movement or separated out by vehicle type (classification). Pedestrians will also be collected when crossing the road. Data collected shall encompass all possible movements (left, through and or right; and U-turns if requested) regardless of any traffic control devices (stop/yield signs, signals, directional cross overs, islands, etc.) that may be present. The Vendor shall collect, compile, and submit multi-point junction data as follows:

1. Turning movement data (if needed), standard duration – see Section 5.3
2. Volume/Speed/Class data (if needed), standard duration – see Section 5.7
3. Volume only data (if needed), standard duration – see Section 5.20

5.6 MIXED DATA – COMPLEX JUNCTION (ORIGINATION/DESTINATION)

Complex junctions are locations with designs in which some traffic streams must traverse more than one point to complete their desired movements, where those points are too far apart to both be seen from a single viewpoint, and where standard traffic data collection methods by themselves will not provide a full picture of all turning movements thereby necessitating some type of origin-destination study technique in addition to standard data collection techniques. Data for complex junctions is used to determine the number of motor vehicles, and bicycles making left, through and right movements over a specified period of time for each point within the junction influence area and can be summarized as total volume by movement or separated out by vehicle type (classification). Pedestrians will also be collected when crossing the road and on the sides of the street. Data collected shall encompass all possible movements (left, through and or right; and U-turns if requested) regardless of any traffic control devices (stop/yield signs, signals, directional cross overs, islands, etc.) that may be present.

Complex junctions include, but are not limited to: synchronized streets (superstreets), quadrant lefts, multiple lane roundabouts, and traffic circles, which usually include multiple standard single point junctions, cross-overs, mainline corridors, median U-turn intersections, quadrant roadway intersections, one-way pair intersections, split diamond interchanges, and interchanges in which the ramps intermingle with frontage roads. The Vendor shall collect and compile complex junction data for each part of a complex junction (individual intersections, U-turn locations, redirected movements, cross overs, mainline corridors, etc.), and the entire complex junction as a whole, as follows:

1. Turning movement data (if needed), standard duration – see Section 5.3
2. Volume/Speed/Class data (if needed), standard duration – see Section 5.7
3. Volume only data (if needed), standard duration – see Section 5.20

4. Supply collected data, as follows:
 - a) Data collection reports for each part of the complex junction in one PDF document consisting of a cover sheet with site data, photographs, count data in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hours. If classifications have been requested (option A or option B), then count data for each type of classification requested shall also be provided in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hours.
 - b) Data collection summary of the complex junction as a whole (overall origination/destination) in one PDF document consisting of a cover sheet with site data, photographs, count data in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hours. If classifications have been requested (option A or option B), then count data for each type of classification requested shall also be provided in requested increments, summaries and diagrams of total movements, AM peak hours, and PM peak hours.
 - c) Raw turning movement data in an electronic format (currently, PPD or spreadsheet depending on the type of data collected).
2. There are examples provided on the website which is open to all agencies for this type of data collection.

<https://connect.ncdot.gov/resources/safety/TrafficDataResources/Examples%20of%20Mixed%20Data%20Complex%20Junction.pdf>

5.7 VOLUME/SPEED/CLASS DATA – SINGLE LOCATION

Volume/speed/class data is generally collected to determine the number, direction, speed, and classification of motor vehicles at a given location. Vendor may submit bids for two (2) lane locations (defined as two through lanes that may or may not include a two-way center turn lane) and/or multi-lane locations (more than two through lanes, with or without median/barrier). The Vendor shall collect and compile volume/speed/class data as follows:

1. Collect for forty-eight (48) continuous hours (standard duration). However, one hundred sixty-eight (168) continuous hour counts (7 days) may also be requested. If multiple counters are used, they shall collect data concurrently with each other.
2. Data collection equipment shall not be installed in any work zones, unless specifically requested.
3. Data shall be collected where traffic flow is steady, preferably at least one thousand (1,000) feet from any road or ramp junction. On shorter length segments, counters should be installed mid-block away from higher volume driveways and, if necessary, counters may be staggered by direction to avoid queuing traffic from traffic signals.
4. Collect by lane and direction (or just by direction if a low volume road and no lane delineation) in one (1) hour increments. However, fifteen (15) minute increments may also be requested.
5. The default bins for speed data shall be 0-14.99, 15-19.99, 20-24.99, 25-29.99, 30-34.99, 35-39.99, 40-44.99, 45-49.99, 50-54.99, 55-59.99, 60-64.99, 65-69.99, 70-74.99, and 75+ (unless otherwise directed).
6. Raw speed data may be provided (if requested) in a three (3) column spreadsheet with the columns (from left to right) being as follows: "Vehicle Count", "Time Stamp", and "MPH". The "Vehicle Count" column shall be in whole numbers, the

“Time Stamp” column shall be in hours, minutes, and seconds using a 24-hour clock (i.e. “13:05:31”), and the “MPH” column shall be in whole numbers.

- 7. If vehicle classification is not specified and count equipment capable of detecting axles is used (two axle sensors per lane) then the default bins for class data shall be the FHWA Thirteen (13) Class Scheme, plus one bin for “Undefined”, and the FHWA classes shall be determined using the NCDOT Axle Based Classification Tree.
- 8. If vehicle classification is not specified and count equipment capable of detecting motor vehicle length is used (radar, etc.) then the bins for class data shall be the NCDOT 4 Class Scheme using the following process. When counting pedestrian and bicycle data specify the appropriate bin that will need to be used:
 - a. Specify the Length Bins (recommended initial bins are indicated below, but shall be adjusted based on the vehicle mix for the location and the data collection equipment calibrated accordingly – actual length bins used shall be indicated on data collection reports):

Rural Location

Passenger Vehicles: 0’ to <= 21.5’

Duals: > 21.5’ to <= 49.0’

TTST: > 49.0’ to <= 83.0’

Twins: > 83.0’

Urban Location

Passenger Vehicles: 0’ to <= 20.0’

Duals: > 20.0’ to <= 43.0’

TTST: > 43.0’ to <= 83.0’

Twins: > 83.0’

- b. Allow the sensor to auto-calibrate
 - c. Validate the sensor is classifying properly
 - d. Adjust the sensor settings and/or length bins if necessary and revalidate
- 9. The percent (%) “Undefined” should not exceed 15% for any hour for any individual lane, 10% for any hour of the total volume, or 5% for either twenty-four (24) hour period of the total volume for either axle-based or length-based methods. If there is a reading of zero (0) place the percentage at the beginning of the report.
- 10. If count equipment that directly classifies motor vehicles (by axle or length) cannot be used, then a mix of equipment and direct observation may be performed. In these cases, the following shall apply:
 - a. The number of vehicles shall be collected for the entire collection cycle in fifteen (15) minute increments.
 - b. Classification shall be collected by direct observation (manually) for Duals, TTST, and TTDT.
 - c. Classification shall be collected for fourteen (14) hours (6:00 a.m. through 8:00 p.m., unless otherwise specified).
 - d. Classification shall be collected in fifteen (15) minute increments.
 - e. Classification shall follow the NCDOT 4 Class Scheme.
https://www.fhwa.dot.gov/policyinformation/tmguides/tmg_fhwa_pl_13_015.pdf
- 11. If methods other than the above (axle based, length based, mixed, visual, etc.) are utilized, they must be clearly explained and detailed prior to collection.
- 12. Supply collected data, as defined above, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data (volume, speed, and class) by lane and direction in 1-hour increments (or 15-minute increments, if

specified or requested) with daily totals, summaries, percentages, and AM/PM peak hours, and peak directional (D) percentage. Speed data shall also include, by _____ direction, the median, mean, pace, high, low, 85th percentile, and percent of vehicles above the posted speed limit by vehicles. The count number shall be indicated on each page of the document. Also, clearly indicate what method(s) and equipment were utilized to collect and process the data (i.e. axle based, length based, mixed, other – detailed).

- b. Raw volume data in an electronic format using a spreadsheet provided by the NCDOT (this spreadsheet may be adjusted as needed for roads with more than two lanes).
- c. If non-intrusive equipment (electronic count boards, side fire radar, etc.) is used (i.e. mixed manual) then the export files from the equipment should also be included (PPD, etc.).

5.8 VIDEO AI VOLUME/SPEED/CLASSIFICATION DATA – SINGLE LOCATION

Volume/speed/class data is generally collected to determine the number, direction, speed, and classification of motor vehicles at a given location. This specification applies to counts collected using portable video AI classifiers.

Vendor may submit bids for two (2) lane locations (defined as two through lanes that may or may not include a two-way center turn lane) and/or multi-lane locations (more than two through lanes, with or without median/barrier). The Vendor shall collect and compile volume/speed/class data as follows:

- 1. The video AI classifiers employed shall collect vehicle classification using the FHWA 13 class scheme. The technology shall assign vehicles to classes consistent with axle-based detection methods. Vehicle length-based classification is not an acceptable method.
- 2. Counters shall have the latest video AI model and firmware available from the manufacturer installed at the time counts are collected.
- 3. Video AI classifiers shall be able to detect and classify vehicles under all typical conditions including daytime, nighttime with street lighting, nighttime without street lighting, rain, and fog. Data collection shall not be performed during extreme weather conditions.
- 4. Video AI classifiers shall be set up in compliance with the manufacturer’s specifications and be properly calibrated and configured to collect data at the specified location. This includes excluding vehicles not traveling on the roadway on service roads, parking lots, and parked vehicles.
- 5. If the distance to the farthest lane exceeds the manufacturer’s specification, more than one video AI classifier shall be used to collect counts at the location. If multiple video AI classifiers are used at a location, all counters shall be the same manufacturer and model and shall have the same video AI model and firmware. When multiple counters are used at a location, the data from all counters must be combined into a single report for the location.
- 6. Collect for forty-eight (48) continuous hours (standard duration). However, one hundred sixty-eight (168) continuous hour counts (7 days) may also be requested. If multiple counters are used, they shall collect data concurrently with each other.
- 7. Data collection equipment shall not be installed in any work zones, or on detour routes unless specifically requested.
- 8. Data shall be collected where traffic flow is steady, preferably at least one thousand (1,000) feet from any road or ramp junction. On shorter length segments, counters should be installed mid-block away from higher volume driveways and, if necessary, counters may be staggered by direction to avoid queuing traffic from traffic signals.
- 9. Collect by lane and direction (or just by direction if a low volume road and no lane delineation) in one (1) hour increments. However, fifteen (15) minute increments may also be requested.
- 10. The default bins for speed data shall be 0-14.99, 15-19.99, 20-24.99, 25-29.99, 30-34.99, 35-39.99, 40-44.99, 45-49.99, 50-54.99, 55-59.99, 60-64.99, 65-69.99, 70-74.99, and 75+ (unless otherwise directed).
- 11. Raw speed data may be provided (if requested) in a three (3) column spreadsheet with the columns (from left to right) being as follows: “Vehicle Count”, “Time Stamp”, and “MPH”. The “Vehicle Count” column shall be in whole numbers, the

“Time Stamp” column shall be in hours, minutes, and seconds using a 24-hour clock (i.e. “13:05:31”), and the “MPH” column shall be in whole numbers.

12. Supply collected data, as defined above, as follows:

- a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data (volume, speed, and class) by lane and direction in 1-hour increments (or 15-minute increments, if specified or requested) with daily totals, summaries, percentages, and AM/PM peak hours, and peak directional (D) percentage. Speed data shall also include, by direction, the median, mean, pace, high, low, 85th percentile, and percent of vehicles above the posted speed limit by vehicles. The count number shall be indicated on each page of the document. Also, clearly indicate what method(s) and equipment were utilized to collect and process the data (i.e. axle based, length based, mixed, other – detailed). The report shall include the manufacturer and model of the video AI counter used.
- b. Raw volume data in an electronic format using a spreadsheet provided by the NCDOT (this spreadsheet may be adjusted as needed for roads with more than two lanes).
- c. The export files from the video AI equipment should also be included.

5.9 VOLUME/CLASS DATA – RAIL DIVISION GROUPS

Volume/class data is generally collected to determine the number, direction, and classification of motor vehicles at a given location. Also, data for at-grade railroad crossing is required by the Rail Division as part of its Investigative Index (II) produced every April and for the FRA crossing inventory. The Vendor shall collect and compile volume/class data as follows:

1. Collect for forty-eight (48) continuous hours.
2. Data collection equipment shall not be installed in any work zones or on detour routes, unless specifically requested.
3. Data shall be collected where traffic flow is steady, preferably at least one thousand (1,000) feet from any road or ramp junction. On shorter length segments, counters should be installed mid-block away from higher volume driveways and, if necessary, counters may be staggered by direction to avoid queuing traffic from traffic signals. When tubes are put in place ensure that there is no other road intersection or major driveways in between the tube and the railroad crossing. If the placement of the tube is not safe or feasible, the vendor shall email the requestor, and copy the NCDOT Traffic Data Collection Program Manager, to ask for guidance on how to proceed with the data collection location. Note: If video is selected for certain locations, tubes will not be used.
4. Collect by direction in one (1) hour increments. However, fifteen (15) minute increments may also be requested.
5. Locations will be assigned individually for non-railroad crossing locations. Locations involving railroad crossings will be assigned in groups of no more than twenty-five (25) crossings, all within the same Highway Division and, where possible, within general proximity to each other.
6. For groups of counts being conducted for the Rail Division, if normal traffic flow is affected by construction at one or more locations, or the location is on a gravel road or within an intersection/junction, then the contractor shall contact the requestor. Submittal due dates shall be extended a minimum of two business days for each affected location.
7. Data shall be collected throughout the year. However, locations involving at-grade railroad crossings shall only have data collected during the months of January through May and September through November.
8. The default bins for classification data shall be the [NCDOT 4 Class Scheme](#).
9. If NCDOT 4 Class Scheme cannot be used and count equipment capable of detecting axles is used (two axle sensors per lane), then the default bins for class data shall be the [FHWA Thirteen \(13\) Class Scheme](#), plus one bin for "Undefined", and the FHWA classes shall be determined using the [NCDOT Axle Based Classification Tree](#).
10. The percent (%) "Undefined" should not exceed 10% for any hour of the total volume or 5% for either twenty-four (24) hour period of the total volume.
11. Data collected for groups of at-grade railroad crossings shall be due within thirty (30) calendar days of the assignment.
12. Supply collected data, as defined above, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, FRA land use categories (if the location is at a railroad crossing), count data (volume and class) by direction in 1-hour increments (or 15-minute increments, if requested) with daily totals, summaries, classification and other percentages, truck

percentages, and AM/PM peak hours. The count number and crossing number shall be indicated on each page of the document.

- b. Raw volume data in an electronic format using a spreadsheet provided by the NCDOT.
- c. For requests with groups of locations at railroad crossings, a summary spreadsheet (provided by the NCDOT) named "YY-MM-DIV-###" (where YY is the two-digit year, MM is the two-digit month, and ## is the two-digit division number, using leading zeros where appropriate).

5.10 VOLUME/CLASS DATA – SINGLE LOCATION

Volume/class data is generally collected to determine the number, direction, and classification of motor vehicles at a given location. Vendor may submit bids for two (2) lane locations (defined as two through lanes that may or may not include a two-way center turn lane) and/or multi-lane locations (more than two through lanes, with or without median/barrier). The Vendor shall collect, and compile volume/class data as follows:

1. Collect for forty-eight (48) continuous hours (standard duration). However, one hundred sixty-eight (168) continuous hour counts (7 days) may also be requested. If multiple counters are used, they shall collect data concurrently with each other.
2. Data collection equipment shall not be installed in any work zones or on detour routes, unless specifically requested.
3. Data shall be collected where traffic flow is steady, preferably at least one thousand (1,000) feet from any road or ramp junction. On shorter length segments, counters should be installed mid-block away from higher volume driveways and, if necessary, counters may be staggered by direction to avoid queuing traffic from traffic signals.
4. Collect by lane and direction (or just by direction if a low volume road and no lane delineation) in one (1) hour increments. However, fifteen (15) minute increments may also be requested.
5. Raw data may be provided (if requested) in a two (2) column spreadsheet with the columns (from left to right) being as follows: "Vehicle Count" and "Time Stamp". The "Vehicle Count" column shall be in whole numbers, and the "Time Stamp" column shall be in hours, minutes, and seconds using a 24-hour clock (i.e. "13:05:31").
6. If vehicle classification is not specified and count equipment capable of detecting axles is used (two axle sensors per lane) then the default bins for class data shall be the FHWA Thirteen (13) Class Scheme, plus one bin for "Undefined", and the FHWA classes shall be determined using the NCDOT Axle Based Classification Tree.
7. If vehicle classification is not specified and count equipment capable of detecting motor vehicle length is used (radar, etc.) then the bins for class data shall be the NCDOT 4 Class Scheme using the following process. When counting pedestrian and bicycle data specify the appropriate bin that will need to be used:
 - a. Specify the Length Bins (recommended initial bins are indicated below, but shall be adjusted based on the vehicle mix for the location and the data collection equipment calibrated accordingly – actual length bins used shall be indicated on data collection reports):

Rural Location

Passenger Vehicles: 0' to <= 21.5'
Duals: > 21.5' to <= 49.0'
TTST: > 49.0' to <= 83.0'
Twins: > 83.0'

Urban Location

Passenger Vehicles: 0' to <= 20.0'
Duals: > 20.0' to <= 43.0'
TTST: > 43.0' to <= 83.0'
Twins: > 83.0'

- b. Allow the sensor to auto-calibrate.
 - c. Validate the sensor is classifying properly.
 - d. Adjust the sensor settings and/or length bins if necessary and revalidate.
8. The percent (%) "Undefined" should not exceed 15% for any hour for any individual lane, 10% for any hour of the total volume, or 5% for either twenty-four (24) hour period of the total volume for either axle-based or length-based methods. If there is a reading of zero (0) place the percentage at the beginning of the report.
9. If count equipment that directly classifies motor vehicles (by axle or length) cannot be used, then a mix of equipment and direct observation may be performed. In these cases, the following shall apply:
- a. The number of vehicles shall be collected for the entire collection cycle in fifteen (15) minute increments.
 - b. Classification shall be collected by direct observation (manually) for Duals, TTST, and TTDT.
 - c. Classification shall be collected for fourteen (14) hours (6:00 AM ET through 8:00 PM ET) unless otherwise specified.
 - d. Classification shall be collected in fifteen (15) minute increments.
 - e. Classification shall follow the [NCDOT 4 Class Scheme](https://www.fhwa.dot.gov/policyinformation/tmguides/tmg_fhwa_pl_13_015.pdf).
https://www.fhwa.dot.gov/policyinformation/tmguides/tmg_fhwa_pl_13_015.pdf
10. If methods other than the above (axle based, length based, mixed, visual, etc.) are utilized, they must be clearly explained and detailed prior to collection.
11. Supply collected data, as defined above, as follows:
- a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data (volume and class) by lane and direction in 1-hour increments (or 15-minute increments, if specified or requested) with daily totals, summaries, percentages, and AM/PM peak hours, and peak directional (D) percentage. Data shall also include, by direction, the median, mean, high, low, and 85th percentile. The count number shall be indicated on each page of the document. Also, clearly indicate what method(s) and equipment were utilized to collect and process the data (i.e. axle based, length based, mixed, other – detailed).
 - b. Raw volume data in an electronic format using a spreadsheet provided by the NCDOT. This spreadsheet may be adjusted as needed for roads with more than two (2) lanes.
 - c. If non-intrusive equipment (electronic count boards, side fire radar, etc.) is used (i.e. mixed manual), then the export files from the equipment should also be included (PPD, etc.)

5.11 SPOT SPEED (FREE FLOW SPEED) DATA

Spot speed data is generally collected to determine the free flow speed of motor vehicles (usually single vehicles or platoon-leading vehicles) at a particular location. The Vendor shall collect and compile spot speed data as follows:

1. Collect free flow speeds from isolated vehicles or the lead vehicle of platoons.
2. No data shall be collected if any lane closures or active construction/maintenance work is located within two (2) miles of the target site, unless otherwise requested or the work zone is the target site.
3. Equipment, personnel, and/or vehicles shall be as inconspicuous as possible.
4. Collect for four (4) continuous hours (approximately 2 hours per direction), or a minimum specified number of cars and trucks per direction, whichever comes first (begin and end times to be provided by requestor). However, twenty-four (24) continuous hours may also be requested.
5. LIDAR shall be used to collect speeds for the four (4) continuous hours. However, other equipment and/or methods may be used to collect free flow speeds for the twenty-four (24) continuous hour option.
6. Collection by lane may also be requested (OPTION ONLY – not collected unless requested).
7. Vehicle speeds may be broken out for long combination vehicles (truck tractors with trailers, FHWA classifications 8-13) if requested (OPTION ONLY – not collected unless requested).
8. Supply collected data, as defined above, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, and the median, mean, pace, high, low, 50th percentile speed, 85th percentile speed, and percent of vehicles above the speed limit by vehicles in each direction (additional tabulations for long combination vehicles, if requested).
 - b. Raw speed data showing individual data points in an electronic format (Excel Spreadsheet).

5.12 DELAY DATA

Delay data is collected to determine the time, in seconds, that vehicles have to wait at a location, usually a stop controlled or signalized junction. This data is typically collected for the approach with the highest estimated volume during the critical peak hours to obtain delay characteristics while traffic is operating under the heaviest conditions. The Vendor shall collect and compile delay data as follows:

1. Collect in fifteen (15) second intervals.
2. Collect for two (2) continuous hours (Begin and end times and approach to be provided by requestor).
3. Additional approaches may be requested (OPTION ONLY – not collected unless requested and additional approach/approaches are specified by requestor).
4. If video is used to collect data, multiple cameras may need to be set up to collect the end of queue. The Vendor is responsible for accurately gauging the equipment needed for the count.
5. Supply collected data as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, and delay data in 15-second intervals.
 - b. For un-signalized locations, the data collection reports should also include a statistical summary for all the data (for each approach counted) to include total vehicle count, delayed vehicle count, average stopped time, maximum stopped time, minimum seconds for delay, average queue, queue density, and maximum queue.
 - c. For signalized locations, the data collection reports should also include a statistical summary for all the data (for each approach counted) to include total vehicle count (approach total), delayed vehicle count (stopped volume), total delay, average delay per stopped vehicle, average delay for all vehicles, and the percent of vehicles stopped.

- d. Raw delay data showing individual data points in an electronic format (PPD file if an electronic count board is used, or Excel Spreadsheet if another method is used).

5.13 GAP DATA

Gap data includes the time and/or distance between motor vehicles passing a particular point on a roadway. Gap data is usually collected for the critical peak period. The Vendor shall collect and compile gap data as follows:

1. No gap data shall be collected if any lane closures or active construction/maintenance work is located within two (2) miles of the target site, unless the work zone is the target site.
2. Collect for all lanes in each direction.
3. Collect in intervals of fifteen (15) minutes.
4. Summarize in bins of two (2) seconds to thirty-plus (30+) seconds (in 2 second increments).
5. Ensure that gap data is collected in both directions.
6. If there are heavy queues and vehicles are stopped in the roadway, this timeframe should be excluded from the gap data and unusual circumstances should be denoted in the count.
7. Collect for two (2) continuous hours (begin and end times to be provided by requestor). However, special event systems may need a sixteen (16) hour gap study, begin and end times to be provided by requestor (**OPTION ONLY – not collected unless requested**).
8. Supply collected data, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, gap data in 15-minute increments, volume, and a peak hour analysis to include the peak hour, the peak time, and the PHF.
 - b. Raw gap data showing individual data points in an electronic format (PPD file if an electronic count board is used, or Excel spreadsheet if another method is used).

5.14 SATURATION FLOW RATE DATA

Saturation flow rate data is collected at a signalized junction by phase showing the number of vehicles, with respect to time, allowed to travel through the location during one cycle. Saturation flow rate data is usually collected for the critical peak period on the approach with the highest estimated volume. The Vendor shall collect and compile saturation flow rate data as follows:

1. No saturation flow rate data shall be collected if any lane closures or active construction/maintenance work is located within two (2) miles of the target site, unless the work zone is the target site.
2. Collect for two (2) continuous hours (begin and end times to be provided by requestor).
3. Additional approaches may be requested (**OPTION ONLY – not collected unless requested and additional approach/approaches are specified by requestor**).
4. Collect for all through lanes on each approach counted, up to a maximum of five (5) total lanes. If there are less than five (5) through lanes, then saturation flow rate data may be collected for left turn lanes and/or right turn lanes (**OPTION ONLY – not collected unless requested and only if there are fewer than four through lanes**) for a maximum of five (5) total lanes per approach.
5. Include phase changes and/or approach volumes (queue totals during red phase).
6. Supply collected data, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, saturation flow data, phase, timing, and a summary (for each approach counted) to include the volume that arrived on red, the volume that arrived on green, the lost time, and the saturation flow rate. Also include a map that denotes the lanes numbers corresponding to the count.

- b. Raw saturation flow data showing individual data points in an electronic format (PPD file if an electronic count board is used, or Excel spreadsheet if another method is used).

5.15 TIME TRAVEL DATA

Travel time data is the amount of time required for motor vehicles to travel from one particular location (terminal) to another, and studies are typically performed during peak volume hours to obtain travel characteristics while traffic is operating under loaded conditions. Travel time data is usually collected at specific locations along the route. The Vendor shall collect and compile travel time data as follows:

1. No travel time data shall be collected if any lane closures or active construction/maintenance work is located within two (2) miles of the target site, unless the work zone is the target site.
2. Collected for two (2) continuous hours (begin and end times to be provided by requestor). However, durations of forty-eight (48) hours and one hundred sixty-eight (168) hours may also be requested.
3. Data and field notes shall include the description and locations of terminals and intermediary nodes.
4. Sources of delay shall be recorded and classified as follows: signal, congestion, stop sign, pedestrian, and up to four others (to be defined by the requestor).
5. Supply collected data, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data by run and direction, field notes (including terminal descriptions and intermediary nodes), and delay source summaries (if applicable). Also include a map that denotes the lanes numbers corresponding to the count.
 - b. Raw travel time data showing individual data points in an electronic format (PPD file if an electronic count board is used, or Excel spreadsheet if another method is used).

5.16 SCHOOL OPERATIONS DATA

School operations data is collected in order to understand how school related traffic affects the adjacent roadways. A site at or near the school campus property is the point of collection. (A site is not the entire school campus.) **The term “site” for this specific data includes, but is not limited to, driveways, a roadway intersection, or segments of roads between intersections and/or driveways.** Data is only collected on an average school day, which is usually only on a Tuesday, Wednesday, or Thursday, but does not include the first two weeks of school (all schools), the last two weeks of elementary and middle schools, the last four weeks of high schools, and the week before holidays. Vendors shall provide a per site bid amount. The Vendor shall collect and compile data as follows:

1. Collect for twelve (12) hours (6:00 AM ET through 6:00 PM ET, unless otherwise specified). Note that this may or may not include before school and/or after school programs or activities as instructed by the requestor. Vendor shall coordinate with the requestor on the actual dates of data collection.
2. Collect for the entrance(s) specified by the requestor.
3. Collect turning movement data (see Section 5.3) for motor vehicles in five (5) minute increments. All vehicles dropping off/picking up children in through lanes shall be noted with a time stamp and direction of travel as should have been turning left, or turning right, even though they may have been counted as through movements.
4. Collect turning movement data (see Section 5.3) for bicycles in five (5) minute increments regardless of what facility they are on (road, sidewalk, mixed use path, etc.).
5. Collect turning movement data (see Section 5.3) for pedestrians in five (5) minute increments regardless of what facility they are on (road, sidewalk, mixed use path, etc.).
6. Queue data is generally a measure of demand exceeding capacity, and is usually measured by the number of motor vehicles, or distance, from a specific point along an approach (provided by the requestor) typically performed during peak volume hours. School Ops queue length data shall have a beginning point (by Latitude and Longitude), noted in the comments for the queue measurement provided by the requester.

7. Collect the number of students using city/regional public transportation (not a school bus) to/from a bus stop located near or adjacent to the school (collect the time of each bus arrival and how many students ride each bus, etc.).
8. Collect the number of students being walked to school by a parent or guardian (collect the time of each arrival and how many students were escorted).
9. Contact MSTA Project Manager before collecting.
10. Supply collected data, for each requested entrance, as follows:
 - a. Turning movement data in five (5) minute increments (see Section 5.3 for details).
 - b. Queue data in both tabulated and graphical (length versus time) format (spreadsheet). Please refer to link located on website

<https://connect.ncdot.gov/resources/safety/pages/trafficdata.aspx> (under **For Contractors**).

- c. A visual (map, aerial photograph, etc.) indicating how far each queue extended.

5.17 PEDESTRIAN CORRIDOR DATA

Pedestrian corridor data is generally intended to capture any pedestrian activity in the analysis zone. This would include crossing movements, as well as movements parallel to the roadway facility. The Vendor shall collect and compile pedestrian corridor data as follows:

1. No data shall be collected if any lane closures or active construction/maintenance work is located at, or within two (2) miles of, the target site (unless the work zone is the target site).
2. No data shall be collected during rain or snow weather events, or immediately following rain/snow weather events where the aftermath of those weather events affects non-motorist travel (flooding, snow/ice on the roadways or sidewalks, etc.).
3. Collect for thirteen (13) hours (6:00 a.m. through 7:00 p.m., unless otherwise specified). However, twenty-four (24) or forty-eight (48) continuous hours may also be requested.
4. Collected in fifteen (15) minute increments. Increments of five (5) minutes may also be requested.
5. Collected in zones up to approximately three hundred fifty (350) feet in length along the corridor. Multiple zones may be necessary for each corridor. Only one request needs to be submitted if along the same corridor. For example, if the length is 5250 feet it will be divided by each 350 feet for payment purposes. This would equate to 15 counts.
6. Data and field notes shall include a map or maps of the pedestrian corridor sites and their volume and the times crossed as well as the movements parallel to the roadway.
7. Data Collected shall include the direction of pedestrian travel of each zone.
8. Supply collected data, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, map(s) indicating crossing sites, crossing data/volume as well as pedestrian movements parallel to the roadway.
 - b. Raw data in an electronic format (Excel spreadsheet).

5.18 COMPLIANCE DATA

Compliance data is the tabulation of unit (motor vehicle, bicycle, and pedestrian) actions grouped by compliance/non-compliance with statutes, ordinances, traffic control devices (signals, signs, and pavement markings), etc. This data is usually site specific, such as at an intersection/junction or crosswalk, and is usually specific to evaluating one statute, device, etc. However, in some cases this may cover a section of road such as merge and weaving areas. The Vendor shall collect and compile compliance data as follows:

1. No data shall be collected if traffic control devices (including push buttons or other activation devices) are hidden or not visible (such as due to fog, light conditions, etc.), inoperable, malfunctioning (such as a traffic signal in flash mode or is dark), or damaged to the point of being unreadable or unrecognizable (i.e. a stop sign has been knocked down, etc.). However, if the condition is temporary then indicate the start and end time of the condition but count for the rest of the time.
2. When the collection of compliance data involves pedestrians and bicyclists, it shall not be collected during rain or snow weather events or immediately following rain/snow weather events where the aftermath of those weather events affects non-motorist travel (flooding, snow/ice on the roadways or sidewalks, etc.).
3. Collect for thirteen (13) hours (6:00 a.m. through 7:00 p.m., unless otherwise specified). However, twenty-four (24), forty-eight (48), or one hundred sixty-eight (168) continuous hours may also be requested.
4. Collected in fifteen (15) minute increments.
5. Compliance/non-compliance data shall be collected by direction and lane for each of the following modes: motor vehicles, bicycles, and pedestrians.
6. If a pedestrian push button (or other activation device) is present, then collected data shall include whether or not the equipment was engaged/put into use prior to crossing AND whether or not the pedestrian waited for activation prior to crossing.
7. Additional detailed guidance for data (explanations, definitions, spreadsheet, flow chart, examples, etc.) shall be provided by the requestor.
8. Video should clearly show all compliance events and the operations of any traffic control devices.
9. Contact the requestor for clarification on any data items and/or their definitions for the specific compliance issue being counted.
10. Compliance data may be requested occasionally by the NCDOT Rail Division for grade crossings. Such data collected shall include the number of train activations by active warning devices, the number of train movements at the grade crossing, the number of vehicles advancing beyond stop bar while railroad signals are activated, the number of vehicles driving around activated gates/flashers, and the compliance of motorists at adjacent junctions where railroad preemption is installed.
11. Supply collected data, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, compliance/noncompliance data by unit (with time stamps that correspond to the video data), direction, and lane/approach.
 - b. Raw data in an electronic format (Excel spreadsheet).

5.19 VOLUME/CLASS DATA – NON-MOTORISTS

Volume/classification data is generally collected to determine the number, direction, and type (classification) of non-motorized transportation system users (pedestrians and bicyclists) at a given location. Locations may be on road (i.e. streets and roads) or off road (i.e. sidewalks, greenways, etc.), and they may be paved or unpaved. The Vendor shall collect and compile data as follows:

1. Collect for twenty-four (24) hours per day for seven (7) consecutive days (one week).
2. Collect by direction in fifteen (15) minute increments.
3. Data collection equipment shall not be installed in any work zones, unless specifically requested.
4. Data collection methods and/or equipment shall identify all bicycles regardless of material (carbon-fiber, aluminum, steel, titanium, etc.).
5. If data is to be collected near a road or ramp junction, it should be collected at least one thousand (1,000) feet from the road or ramp junction.
6. The default bins for classification data shall (1) bicyclists and (2) pedestrians.
7. Collect additional site information as follows:
 - a. Grades, median or buffer divisions, on-street parking, sidewalk buffer width (if applicable), presence of sidewalk or pathway, presence of bicycle marking or lane, approximate width of off-road path or multi-use trail, and other geometrics for each approach, if appropriate. This information may be separate or included within the cross section required below.
 - b. A cross-section sketch of the corridor or multi-use path including, but not limited to, the width of vehicular travel lanes, bicycle lanes, parking, shoulders, medians, buffers, sidewalks, greenways, and/or trails within the study area.
 - c. Presence, type (parallel, diagonal, etc.), and duration (two-hour limit, no time limit, etc.) of any on-street parking.
 - d. Presence, width, and type of any shoulder rumble strips/stripes. If present, include the length/width of a typical rumble, distance from edge line, and any gaps (and length of typical gap).
8. Data collected for individual location assignments shall be due within thirty (30) calendar days.
9. All raw data must be provided consistent with the most current edition of the FHWA TMG.
10. Supply collected data as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data (volume and classification) by direction in 15-minute increments) with daily totals, summaries, and percentages. The crossing number (if the location is at a railroad crossing) shall be indicated on each page of the document.
 - b. Raw volume data in an electronic format using an Excel spreadsheet formatted as requested by NCDOT (following TMG format conventions).

5.20 VEHICLE OCCUPANCY DATA

Vehicle occupancy data is generally collected to determine the number of operators and passengers using motor vehicles. The Vendor shall collect and compile data as follows:

1. No data shall be collected if any lane closures or active construction/maintenance work is located at, or within two (2) miles of, the target site (unless the work zone is the target site).
2. Collect for thirteen (13) hours (6:00 a.m. through 7:00 p.m., unless otherwise specified).
3. Collected in fifteen (15) minute increments.
4. The default bins for occupancy data shall be (1) vehicles with only the operator, (2) vehicles with an operator and one passenger (HOV2), and (3) vehicles with an operator and more than one passenger (HOV3).
5. Supply collected data, as follows:

- a. Data collection reports in one PDF document consisting of a cover sheet with site data, map(s), and data/volume.
- b. Raw data in an electronic format (Excel spreadsheet is preferred).

5.21 VIDEO (GROUND OR AERIAL)

Video does not have traffic data processing or tabulation associated with it but is rather the collection of movements and interactions at a fixed location. The Vendor shall collect video as follows:

- 1. Collect for twelve (12) hours, twenty-four (24) hours, forty-eight (48) hours, or one hundred sixty-eight (168) hours.
- 2. Supply collected data, as follows:
 - a) If a video was requested, it will be uploaded to the link called “Vendor Video Upload” located on the NCDOT Traffic Data Collection Request System.

5.22 QUEUE DATA

Queue data is generally a measure of demand exceeding capacity and is usually measured by the number of motor vehicles, or distance, from a specific point along an approach (provided by the requestor) typically performed during peak volume hours. The Vendor shall collect and compile queue data as follows:

- 1. Collect for two (2) continuous hours (specific location and begin/end times to be provided by requestor).
- 2. Collect in one (1) minute increments (at the beginning of each minute).
- 3. Collect distance in feet.
- 4. Additional approaches may be requested (**OPTION ONLY – not collected unless requested and additional approach/approaches are specified by requestor.**)
- 5. Additional detailed guidance for data (explanations, definitions, spreadsheet, flow chart, examples, etc.) shall be provided by the requestor as needed.
- 6. Supply collected data, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, and queue data by approach (if multiple approaches were requested).
 - b. Raw data in an electronic format (Excel spreadsheet).

5.23 VOLUME ONLY DATA (MOTOR VEHICLES) – SINGLE LOCATION

Volume data is generally collected to determine the number and direction of motor vehicles at a given location. The Vendor shall collect and compile volume data as follows:

- 1. Collect for forty-eight (48) continuous hours (standard duration). However, one hundred twenty (120) continuous hour counts (5 days) or one hundred sixty-eight (168) continuous hour counts (7 days) may also be requested. If multiple counters are used, they shall collect data concurrently with each other.
- 2. Data collection equipment shall not be installed in any work zones or on detour routes, unless specifically requested.
- 3. Data shall be collected where traffic flow is steady, preferably at least one thousand (1,000) feet from any road or ramp junction. On shorter length segments, counters should be installed mid-block away from higher volume driveways and, if necessary, counters may be staggered by direction to avoid queuing traffic from traffic signals.
- 4. Collect by direction in one (1) hour increments. However, fifteen (15) minute increments may also be requested.
- 5. Volume counts collected using equipment with axle-based sensing technology shall be reported in axle pairs (2 axle detections = 1 count). Counts collected with equipment using vehicle-based sensing technology shall be reported as collected. (Note: This needs to be indicated in the PDF of 6a.)
- 6. Supply collected data, as defined above, as follows:

- a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, count data (volume) by direction in 1-hour increments (or 15-minute increments, if requested) with daily totals and AM/PM peak hours. The count number shall be indicated on each page of the document.
- b. Raw volume data in an electronic format using a spreadsheet provided by the NCDOT.

5.24 VOLUME ONLY DATA (MOTOR VEHICLES) – SEASONAL STUDY GROUP

Volume data is generally collected to determine the number and direction of motor vehicles at a given location. Seasonal counts are a series of volume counts collected at a location used to identify the general level of variation in travel experienced during the year. This involves collecting a volume count at the same location on typical travel days during each of the four seasons defined by the NCDOT. The Seasonal Study Group is a set of count locations used to sample the seasonal travel patterns on corridors within a study area. Seasonal counts are collected at each study group location to identify the character of seasonal travel in an area. The requirements for the Seasonal Study Group are:

1. Studies will be assigned in groups of no more than fifty (50) locations, all within the same county and, where possible, within general proximity to each other. Studies will generally have a minimum of twenty-five (25) locations.
2. A study group may be assigned to a vendor at any time during the year and will require collection of counts in the next four (4) consecutive seasons from the date assigned (unless a location and/or study are discontinued – see specifications, below). For example, a group with fifty (50) locations may require two hundred (200) volume counts.
3. DOT seasons are defined as winter (December – February), spring (March – May), summer (June – August), and fall (September – November).
4. Vendor shall be responsible for scheduling data collection at each location of an assigned group as follows:
 - a. All locations within a study group shall be counted within a four (4) week time period within the season being counted.
 - b. There shall be a minimum of sixty (60) days between the end of counts collected in one season and the start of counts collected in the subsequent season, unless otherwise directed by the requestor (see Item 12a, below).
 - c. Counts shall be collected during typical conditions experienced during the season being counted. For example, summer counts shall be collected when school is not in session in an area with a traditional school calendar as schools are not in session most of the summer season. Counts collected while school is in session under these circumstances shall not be accepted. Vendors shall contact the requestor in advance of collection if they are unsure of which conditions are appropriate for an area.
 - d. Vendors shall schedule collection of counts outside of events that have a widespread impact in an area (e.g. State Fair, Azalea Festival, NASCAR races).
 - e. Counts shall not be collected on holidays or days associated with a holiday weekend (e.g. Friday, Saturday, and Sunday on Memorial Day weekend).
 - f. Counts shall not be collected the week of the 4th of July holiday, the week of Thanksgiving holiday, and the two weeks of the Christmas and New Year's Day holidays. This includes the weekend days on either end of these weeks (if applicable).
 - g. Due to the extended period of the seasonal study process, changes may occur in an area causing shifts in travel not related to seasonal variation (e.g. new long term construction detours, new routes opening). Vendors shall notify the requestor when this occurs in an area prior to data collection for the next season. The requestor may discontinue data collection on some or all locations within a study group depending on the nature of the changes.
5. Vendor shall supply the requestor with a schedule of the data collection for each season (i.e. study counts are planned to be collected between Date A and Date B) in advance of actual data collection for the requestor's review and approval (this can be done by email).

6. Collect for one hundred twenty (120) continuous hours to include twenty-four (24) hours of data for each of Wednesday, Thursday, Friday, Saturday, and Sunday.
7. Data collection equipment shall not be installed in any work zones, unless specifically requested.
8. Data shall be collected where traffic flow is steady, preferably at least one thousand (1,000) feet from any road or ramp junction. On shorter length segments, counters should be installed mid-block away from higher volume driveways and, if necessary, counters may be staggered by direction to avoid queuing traffic from traffic signals.
9. Collect by direction in 15-minute increments.
10. Volume counts collected using equipment with axle-based sensing technology shall be reported in axle pairs (2 axle detections = 1 count). Counts collected with equipment using vehicle-based sensing technology shall be reported as collected.
11. Site and equipment selection is performed by the vendor during the first season a location is counted. All counts collected in subsequent seasons shall be collected at the same site using the same type of equipment as used in the first season.
12. Data collection at locations may be discontinued due to changes in conditions at that location that cause changes in travel unrelated to seasonal variation. An entire study may be discontinued if an area experiences a major event that impacts travel for an extended period (e.g. flooding). Due to the extended period of the study and the potential for changes occurring, the vendor shall:
 - a. Submit a general schedule by email of the weeks planned for collection of a study group two weeks prior to the start of the season being counted; the requestor may direct the vendor to adjust the schedule due to specific conditions that occur in a study area. The schedule provided in this item shall supersede the general sixty (60) day requirement (see Item 4b, above).
 - b. Collect data at each site at the same location as collected in the first season for all subsequent seasons.
 - c. Contact the requestor by email if a minor shift in location is required for a location prior to data collection indicating the original and proposed locations and the reason for the shift; in general, minor shifts may be accepted if no major intersections/junctions or driveways are between the original and proposed locations; all shifts must be approved by the requestor prior to data collection at the shifted location.
 - d. Discontinue data collection at a location in all subsequent seasons if data could not be collected in a season; the Vendor will be notified through email by the requestor if a data collection at a location has been discontinued.
13. Requestor shall assign a location identifier specific to individual locations (recurring locations) that is different from the count number so locations may be grouped for all four seasons counted.
14. Additional notes, requirements, and specifications:
 - a. All scheduling and location shift emails shall be submitted to the requestor (i.e. Data Systems Engineer with the Traffic Survey Group, Project Manager with the Mobility and Safety Division, etc.). A response should be provided within one (1) week of the email submittal date. Vendors shall not proceed with data collection until receiving notification from the requestor for each email submitted.
 - b. A study group may have additional counts required in addition to the standard four (4) seasonal counts. For example, a county located in the mountain region may have two (2) sets of counts collected in the fall season. A set of counts may be collected during the peak fall colors when travel is highest and a second set of counts outside that time period within the same season. The requestor will discuss the logistics of conducting the additional counts with the Vendor prior to assignment of the study group.
 - c. Due to the variable amount of work associated with a Seasonal Study Group and the potential for discontinuing collection on some locations, vendors will provide a price per location for all seasons (example: Total Bid price of \$1100 equals \$275 per location x 4 seasons) Vendors shall be paid for counts as they are collected each

season. Vendors shall not be paid for counts collected at discontinued locations or that do not meet the requirements specified above.

- d. The requestor may cancel some or all data collection for a Seasonal Study Group at any point during the study period. The Vendor will be notified by the requestor through email if a study group has been cancelled. Vendors shall be paid for all counts collected meeting the requirements specified above through the cancellation date including those counts in progress at the time of the notification.

15. Supply collected data, for each location (station) within a study group, as follows:

- a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, and volume count data by direction in 1-hour increments with daily totals and daily AM/PM peak hours. The count number and location identifier shall be indicated on each page of the document.
- b. Raw volume data in an electronic format using a spreadsheet provided by the NCDOT.

16. Supply collected data for each study group, as defined above, in a spreadsheet providing raw daily volume summary data in tabular format with the following fields:

- a. StationID: Requestor assigned location (station) identifier for the count location
- b. Season: The NCDOT season for which the data was collected
- c. Start Date: The date for the Wednesday volume count
- d. Wednesday: Two-way total daily volume for the Wednesday 24-hour count
- e. Thursday: Two-way total daily volume for the Thursday 24-hour count
- f. Friday: Two-way total daily volume for the Friday 24-hour count
- g. Saturday: Two-way total daily volume for the Saturday 24-hour count
- h. Sunday: Two-way total daily volume for the Sunday 24-hour count
- i. Remarks: A brief summary of any unusual conditions observed at the count location (station) during the period of data collection

NOTE - locations that have seasonal counts collected in each season will have four (4) records in this table, one for each season counted, when the seasonal study is completed. Locations that are discontinued will have records for those seasonal counts that were collected. The Vendor shall submit this spreadsheet to the requestor each time a set of seasonal counts are completed. The spreadsheet shall be submitted to the requestor within two (2) weeks of completion of the last count collected for a season.

5.25 GENERAL TRAFFIC DATA

General traffic data is the collection of traffic data of a previously unforeseen type not otherwise included in these specifications. Vendors shall provide a person-hour quote if bidding on this item, and payment shall be made in a mutually agreed upon total of person-hours for a given request. The following items shall be mutually agreed upon between the requestor and the vendor prior to the collection of the traffic data for each request:

- 1. Definition of the traffic data needed and post collection deliverables.
- 2. Location(s), duration, increments, start time, and end time of the data collection. A specific day or days may also be agreed upon.
- 3. Total person-hours required to do the work for each request to include travel time, processing time, time on site, etc.
- 4. Additional detailed guidance for data (explanations, definitions, spreadsheet, flow chart, examples, etc.) shall be provided by the requestor as needed.
- 5. Supply collected data, as follows:

- a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, and traffic data in the agreed upon format.
- b. Raw data in an electronic format (Excel spreadsheet or other defined format).

5.26 MANUAL CLASSIFICATION DATA

Classification data is collected to determine the types (classes) of motor vehicles, bicyclists and/or pedestrians at a location. Manual classification data is usually collected when intrusive automated equipment cannot be installed in travel lanes (such as due to safety issues, will not count correctly due to poor traffic flow conditions, etc.). Manual classification data may be collected by direct observation (all manual) or a combination of direct observation and non-intrusive automated equipment (mixed manual – collected concurrently). The Vendor shall collect and compile classification data as follows:

- 1. Collect fourteen (14) hours (6:00 AM ET through 8:00 PM ET), twenty-four (24) hours (6:00 AM ET to 6:00 AM ET) or forty-eight (48) hours (6:00 AM ET through 6:00 AM ET) on a Tuesday, Wednesday or Thursday, unless otherwise specified).
- 2. Data collection equipment shall not be installed in any work zones or on detour routes, unless specifically requested.
- 3. Collect by direction in fifteen (15) minute increments.
- 4. Classification will follow one of the following two (2) options:

Option A – NCDOT 4 Class Scheme (default option)

- PV (FHWA classes 1, 2, 3)
- DUALS (FHWA classes 4, 5, 6, 7)
- TTST (FHWA classes 8, 9, 10)
- TWINS (FHWA classes 11, 12, 13)

Option B – Traditional Classes

- Pedestrians
- Long combination vehicles (five or more axles, including trailers)
- Dump trucks and 3-axle/4-axle trucks
- HAZMAT vehicles (tanker trucks, etc.)
- Trucks (generalized – vehicles with 3 or more axles)
- Emergency Vehicles (police, fire, EMS – shall have lights and/or sirens activated)
- Bicycles
- Mopeds/Scooters
- School buses
- Motorcycles
- Transit buses
- Truck tractors with twin trailers
- Truck tractors with 53’ trailers

- 5. Supply collected data, as follows:
 - a. Data collection reports in one PDF document consisting of a cover sheet with site data, photographs, classification data by direction in 15-minute increments, AM and PM peak hour summaries, peak directional (D) percentage, class summaries by direction, total volumes by direction, percent distribution by class by direction. The count number shall

be indicated on each page of the document. Also, clearly indicate what method(s) and equipment were utilized to collect and process the data (i.e. axle based, length based, mixed, other – detailed).

- b. Raw classification data showing individual data points in an electronic spreadsheet format. If non-intrusive equipment (electronic count boards, side fire radar, etc.) is used (i.e. mixed manual) then the export files from the equipment should also be included.

6.0 CONTRACT ADMINISTRATION

All Contract Administration requirements are conditioned on an award resulting from this solicitation. This information is provided for the Vendor’s planning purposes.

NCDOT Contract Manager: Chris Pendergrass, cvpendergrass@ncdot.gov, 919-814-5126

6.1 CONTRACT MANAGER AND CUSTOMER SERVICE

The Vendor shall be required to designate and make available to the State a contract manager. The contract manager shall be the State’s point of contact for Contract related issues and issues concerning performance, progress review, scheduling, and service.

Contract Manager Point of Contact	
Name:	
Office Phone #:	
Mobile Phone #:	
Email:	

The Vendor shall be required to designate and make available to the State for customer service. The customer service point of contact shall be the State’s point of contact for customer service-related issues (involving site planning, data collection, data quality, delivery of submittals) and any other questions or concerns as it pertains to the traffic data.

Customer Service Point of Contact	
Name:	
Office Phone #:	
Mobile Phone #:	
Email:	

6.2 INVOICES

Vendor shall invoice the Procurement Entity. The standard format for invoicing shall be Single Invoices meaning that the Vendor shall provide the Procurement Entity with an invoice for each order. Invoices shall include detailed information to allow Procurement Entity to verify pricing at point of receipt matches the correct price from the original date of order. Invoices should only include work that has been accepted and completed. The following fields shall be included on all invoices, as relevant:

Vendor’s Billing Address, Customer Account Number, NC Contract Number, Order Date, Buyer’s Order Number, Manufacturer Part Numbers, Vendor Part Numbers, Item Descriptions, Price, Quantity, and Unit of Measure.

6.3 CONTINUOUS IMPROVEMENT

The State encourages the Vendor to identify opportunities to reduce the total cost the State. A continuous improvement effort consists of various ways to enhance business efficiencies as performance progresses.

6.4 ACCEPTANCE OF WORK

Performance of the work and/or delivery of Goods shall be conducted and completed at least in accordance with the Contract requirements and recognized and customarily accepted industry practices. Performance shall be considered complete when the Services or Goods are approved as acceptable by the Contract Manager.

Acceptance of Vendor’s work product shall be based on the following criteria:

Verification that the data has met the requestor’s specifications and the data is within quality tolerances as described in each request type of Section 5.

The State shall have the obligation to notify Vendor, in writing ten (10) calendar days following completion of such work or delivery of a deliverable described in the Contract that it is not acceptable. The notice shall specify in reasonable detail the reason(s) it is unacceptable. Acceptance by the State shall not be unreasonably withheld; but may be conditioned or delayed as required for reasonable review, evaluation, installation, or testing, as applicable to the work or deliverable. Final acceptance is expressly conditioned upon completion of all applicable assessment procedures. Should the work or deliverables fail to meet any specifications, acceptance criteria or otherwise fail to conform to the Contract, the State may exercise any and all rights hereunder, including, for Goods deliverables, such rights provided by the Uniform Commercial Code, as adopted in North Carolina.

6.5 DISPUTE RESOLUTION

During the performance of the Contract, the parties agree that it is in their mutual interest to resolve disputes informally. Any claims by the Vendor shall be submitted in writing to the State’s Contract Manager for resolution. Any claims by the State shall be submitted in writing to the Vendor’s Project Manager for resolution. The Parties shall agree to negotiate in good faith and use all reasonable efforts to resolve such dispute(s).

During the time the Parties are attempting to resolve any dispute, each shall proceed diligently to perform their respective duties and responsibilities under this Contract. The Parties will agree on a reasonable amount of time to resolve a dispute. If a dispute cannot be resolved between the Parties within the agreed upon period, either Party may elect to exercise any other remedies available under the Contract, or at law. This provision, when agreed in the Contract, shall not constitute an agreement by either party to mediate or arbitrate any dispute.

6.6 CONTRACT CHANGES

Contract changes, if any, over the life of the Contract shall be implemented by contract amendments agreed to in writing by the State and Vendor. Amendments to the contract can only be done through the Contract Administrator.

7.0 ATTACHMENTS

****IMPORTANT NOTICE****

RETURN THE REQUIRED ATTACHMENTS WITH YOUR RESPONSE

FOLLOW THE LINKS TO ACCESS EACH ATTACHMENT

ATTACHMENT A: PRICING

Complete and return the Pricing associated with this IFB, which can be found in the table below:

Vendor shall enter price amounts only for items they are bidding. Vendors shall not be considered for any item left blank. **Amounts shall be in whole U.S. dollars. Items containing amounts other than whole U.S. dollars shall not be considered for award.**

Region:	A	B	C	D
DOH Divisions:	1, 2, 3	4, 5, 6, 7, 8	9, 10, 12	11, 13, 14
Turning Movement Data – Standard Single Point Junction for 13 hours				
Per Location				
Turning Movement Data – Standard Single Point Junction for 16 hours				
Per Location				
Turning Movement Data – Standard Single Point Junction for 24 hours				
Per Location				
Near Miss Data – Standard Single Point Junction for 13 hours including Near Miss Data				
Per Location				
Near Miss Data – Standard Single Point Junction for 24 hours including Near Miss Data				
Per Location				
Near Miss Data – Standard Single Point Junction for 48 hours including Near Miss Data				
Per Location				
Mixed Data – Standard Multi-Point Junction				
Per Location				
Mixed Data – Complex Junction (Origination/Destination)				
Per Location				
Volume/Speed/Class Data – Single Location, Two (2) Through Lanes				
48 Hours				
168 hours (7 days)				
Volume/Speed/Class Data – Single Location, Multi-Lane (>2 Through Lanes)				
48 Hours				
168 hours (7 days)				
Video AI Volume/Speed/Classification Data – Single Location, Two (2) Through Lanes				
48 Hours				
168 hours (7 days)				
Video AI Volume/Speed/Classification Data – Single Location, Multi-Lane (>2 Through Lanes)				
48 Hours				
168 hours (7 days)				
Volume/Speed/Class Data (groups of <= 25 at-grade railroad crossings) – one amount for entire group				
48 hours				
Volume/Class – Single Location, Two (2) Through Lanes				
48 Hours				
168 hours (7 days)				

Region:	A	B	C	D
DOH Divisions:	1, 2, 3	4, 5, 6, 7, 8	9, 10, 12	11, 13, 14
Volume/Class – Single Location, Multi-Lane (>2 Through Lanes)				
48 Hours				
168 hours (7 days)				
Spot Speed (Free Flow) Data				
4 hours				
24 hours				
Delay Data				
Per Approach				
Gap Data				
2 hours				
16 hours				
Saturation Flow Rate Data				
Per Approach				
Travel Time Data				
2 hours				
48 hours				
168 hours (7 days)				
School Operations Data				
Per Entrance				
Pedestrian Corridor Data (per zone)				
13 hours				
24 hours				
48 hours				
Compliance Data				
13 hours				
24 hours				
48 hours				
168 hours (7 days)				
Volume/Class Data (non-motorists)				
168 hours (7 days)				
Vehicle Occupancy Data				
13 hours				
Video (Ground)				
12 hours				
24 hours				
48 hours				
168 hours (7 days)				

Region:	A	B	C	D
DOH Divisions:	1, 2, 3	4, 5, 6, 7, 8	9, 10, 12	11, 13, 14
Video (Aerial)				
12 hours				
24 hours				
48 hours				
168 hours (7 days)				
Queue Data				
Per Approach				
Volume Only Data (Motor Vehicles) – Single Location				
48 hours				
120 hours (5 days)				
168 hours (7 days)				
Volume Only Data (Motor Vehicles) – Seasonal Study Group (groups of <= 50 locations, <u>bid amount is per location</u>)				
Per Location				
General Traffic Data				
Per Person Hour				
Manual Classification Data				
14 Hours				
24 Hours				
48 hours				

RETURN THE REQUIRED ATTACHMENTS WITH YOUR RESPONSE

FOLLOW THE LINKS TO ACCESS EACH ATTACHMENT

ATTACHMENT B: INSTRUCTIONS TO VENDORS

The Instructions to Vendors, which are incorporated herein by this reference, may be found here:

<https://www.doa.nc.gov/pandc/north-carolina-instructions-vendors-1-2025/open>

ATTACHMENT C: NORTH CAROLINA GENERAL TERMS & CONDITIONS

The North Carolina General Terms and Conditions, which are incorporated herein by this reference, may be found here:

<https://www.doa.nc.gov/north-carolina-general-terms-and-conditions-5-2025/open>

ATTACHMENT D: HUB SUPPLEMENTAL VENDOR INFORMATION

Complete and return the Historically Underutilized Businesses (HUB) Vendor Information form, which can be found at the following link: <https://www.doa.nc.gov/pandc/onlineforms/pc-hub-supplemental-vendor-information-92021-pdf/open>

MUST BE COMPLETED AND RETURNED WITH BID RESPONSE

ATTACHMENT E: CUSTOMER REFERENCE FORM

Complete and return the Customer Reference Form, which can be found at the following link:

<https://ncadmin.nc.gov/media/15503/open>

MUST BE COMPLETED AND RETURNED WITH BID RESPONSE

ATTACHMENT F: LOCATION OF WORKERS UTILIZED BY VENDOR

Complete and return the Location of Workers Utilized by Vendor, which can be found at the following link:

<https://www.doa.nc.gov/pandc/onlineforms/pc-worker-location-92021-pdf/open>

MUST BE COMPLETED AND RETURNED WITH BID RESPONSE

***** Failure to Return the Required Attachments May Eliminate**

Your Response from Further Consideration ***

ATTACHMENT H: EXPERIENCE RATE MODIFIER (ERM)

***** CONFIDENTIAL *****

Name of current or potential contractor/vendor: _____

For internal State agency processing, please indicate your company's current Experience Rate Modifier (ERM) as determined by the insurer providing your worker's compensation insurance, the North Carolina Rate Bureau (NCRB), or the National Council on Compensation Insurance (NCCI).

Experience Rate Modifier eligibility for contracts with the North Carolina Department of Transportation is based solely in accordance with the Experience Rating Eligibility criteria set forth by the North Carolina Rate Bureau. No other State or Territorial criteria shall apply.

Pursuant to N.C.G.S. §58-36-16 the experience rate modifier shall not be released to the public. This page shall be kept confidential and shall not be made available for public inspection.

**This form is required for any contractor/vendor desiring to perform work.
This includes primes and any subconsultants.**

Enter most current ERM here: - OR - Not eligible for an ERM*

Check one of the following: intrastate interstate

Rating effective date: _____

** Any contractor/vendor indicating they are not eligible for an Experience Rate Modifier in accordance with the criteria set forth by the North Carolina Rate Bureau (NCRB) shall submit written documentation from either the NCRB or their Worker's Compensation insurance carrier verifying that they are not eligible, and such documentation shall be provided on the letterhead of the NCRB or the insurance carrier, respectively.*



Signature Date

Printed Name Title

[This Form Must Be Signed]

***** CONFIDENTIAL *****