LOI Submittal Management System (LOISS) Opportunity Number: 116

Transportation Systems Management & Operations (TSMO) Unit - Traffic Systems Operations

REQUEST for LETTERS of INTEREST (RFLOI)

2020 Traffic Operations Management LSC (Limited Services Contract)

TITLE: 2020 Traffic Operations Management LSC

USING AGENCY: North Carolina Department of Transportation
TSMO Unit - Traffic Systems Operations

ISSUE DATE: MARCH 15, 2020

SUBMITTAL DEADLINE: 12:00 PM (NOON) EASTERN, APRIL 08, 2020

ISSUING AGENCY: North Carolina Department of Transportation
Technical Services Division
Professional Services Management Unit

LETTER of INTEREST (LOI) Submittal Link (Ctrl + Click to open link):

NEW ONLINE SUBMITTAL PROCESS AND REQUIREMENTS – SEE PAGES 3 & ff.

SYNOPSIS

SUBCONSULTANTS ARE PERMITTED UNDER THIS CONTRACT.

The primary and/or subconsultant firm(s) (if Subconsultants are allowed under this RFLOI) shall be pre-qualified to perform PRIMARY - All; SUBCONSULTANTS - Only 462 is required) of the Discipline Codes listed below for the TSMO Unit - Traffic Systems Operations. Discipline Codes required are:

- 00462 - Traffic Operations
• 00495 - Transportation Operations Center / Traffic Management Center Management

DISCIPLINE CODES for each primary and/or subconsultant firm(s) (if Subconsultants are allowed under this RFLOI) SHALL be listed on the respective RS-2 FORMS (see section ‘SUBMISSION ORGANIZATION AND INFORMATION REQUIREMENTS’).

This RFLOI is to solicit responses (LETTERS of INTEREST, or LOIs) from qualified firms to provide professional consulting services to:

The purpose of this project is to effectively staff, operate, and manage the Statewide Traffic Operations Center (STOC) and the regional Transportation Management Centers (TMCs): Triangle (co-located in Raleigh), Triad (located in Greensboro), Metrolina (located in Charlotte), Mountains (located in Asheville), as well as NC Turnpike Authority (co-located in Raleigh and Charlotte). This includes a strong and proactive project management approach as well as an effective management of the day-to-day operations within the defined facilities. In addition, this contract includes providing Project Technical Support staff that enable a variety of management, administration, and traffic engineering functions in support of the project. The selected Firm/Team will develop and maintain a system for contracting TMC operators and staff to achieve the contract requirements stated in Attachment A.

A Project Coordinator from NCDOT will work alongside the selected Firm/Team to align the project with the goals and standards of NCDOT. The selected Firm/Team is encouraged to provide leadership and innovation throughout the life of the project with limited direction and only high level oversight by the NCDOT.

For details on the full breadth of the project background and requirements, see Attachment A.

Except as provided below any firm wishing to be considered must be properly registered with the Office of the Secretary of State and with the North Carolina Board of Examiners for Engineers and Surveyors. Any firm proposing to use corporate subsidiaries or subcontractors must include a statement that these companies are properly registered with the North Carolina Board of Examiners for Engineers and Surveyors and/or the NC Board for Licensing of Geologists. The Engineers performing the work and in responsible charge of the work must be registered Professional Engineers in the State of North Carolina and must have a good ethical and professional standing. It will be the responsibility of the selected private firm to verify the registration of any corporate subsidiary or subcontractor prior to submitting a Letter of Interest. Firms which are not providing engineering services need not be registered with the North Carolina Board of Examiners for Engineers and Surveyors. Some of the services being solicited may not require a license. It is the responsibility of each firm to adhere to all laws of the State of North Carolina.
The firm must have the financial ability to undertake the work and assume the liability. The selected firm(s) will be required to furnish proof of Professional Liability insurance coverage in the minimum amount of $1,000,000.00. The firm(s) must have an adequate accounting system to identify costs chargeable to the project.

SCOPE OF WORK

The North Carolina Department of Transportation (NCDOT) is soliciting proposals for the services of a firm/team for the following contract scope of work:

See "Attachment A: STOC and TMC Operations RFLOI Scope of Work".

PROPOSED CONTRACT TIME: The initial contract will be for a THREE (3) year period with the option of TWO (2) @ ONE (1) year extensions.

PROPOSED CONTRACT PAYMENT TYPE: LUMP SUM, COST-PLUS (Cost+Overhead+Profit), and/or UNIT PRICE Task Orders issued under a Contract Maximum Value.

SUBMITTAL REQUIREMENTS

All LOIs are limited to TWENTY (EXCLUSIVE of Resumes and Organizational / Staffing Charts) (20) pages (RS-2 forms are not included in the page count) inclusive of the cover sheet, and shall be typed on 8-1/2” x 11” sheets, single-spaced, one-sided.

LOIs containing more than TWENTY (EXCLUSIVE of Resumes and Organizational / Staffing Charts) (20) pages will not be considered.

DISCIPLINE CODES for each primary and/or subconsultant firm(s) (if Subconsultants are allowed under this RFLOI) SHALL be listed on the respective RS-2 FORMS (see section ‘SUBMISSION ORGANIZATION AND INFORMATION REQUIREMENTS’).

ONLY ELECTRONIC LOIs WILL BE ACCEPTED.

LOIs should be submitted in .pdf format using software such as Adobe, CutePDF PDF Writer, Docudesk deskPDF, etc.

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NCDOT now utilizes its online LOI Submittal Management System (LOISS) located at: https://connect.ncdot.gov/site/psmu/default.aspx. To submit an LOI utilizing this system, the “submitting employee” at each “submitting Firm” must have their own, individual NCID (as a note, each prequalified Firm should already have an individual in the company with an NCID – as
required by the online Prequalification System). NCIDs may be obtained at this website: https://ncid.nc.gov/ (locked NCIDs may also be unlocked via the self-service portion of the NCID website). Once the “submitting employee” has their completed NCID, they may proceed to upload their firm’s LOI to NCDOT’s LOISS. This site is very similar to other web-based upload and form-fill sites.

**NCID sync issues – Help contact:** Once a user has an NCID (whether prior to this advertisement, or pursuant to this advertisement) and said user receives an error message, or has issues, when attempting to login to LOISS, please contact NCDOT - CM Support at dot.cmsupport@ncdot.gov to have your NCID synchronized. Please explain that you are trying to access the LOISS application on the PSMU site and include your NCID (do not include your password) and the error message you are receiving. This syncing of your NCID to LOISS should be a one-time occurrence. Firms’ users are urged to **early** create an NCID (if needed) and have it synced with LOISS (if necessary) to avoid any potential delays or missed deadlines when submitting your firm’s LOI.

**NCDOT strongly urges Firms to use Google Chrome browser to access LOISS in order to ensure the best experience possible.**

Once logged into LOISS, the Firm should locate and click the ‘LOI Submission’ button in the left menu bar. After clicking the ‘LOI Submission’ button, the Firm should identify the specific Opportunity for which they wish to submit an LOI. The Firm will click the link for their desired Opportunity, and **UPLOAD** one copy of their LOI, as a .pdf file, to NCDOT’s LOISS at the Advertisement/Opportunity-Specific ‘LOI Submittal’ LINK shown below.

Your Firm’s Letter of Interest (LOI) may be uploaded at the Advertisement/Opportunity-Specific ‘LOI Submittal’ LINK for this specific Advertisement/Opportunity located here (Ctrl + Click to open link):


LOISS will **close** the Advertisement / Opportunity at the appropriate time and **will not** allow Firms to submit LOIs **after** the deadline.

Upon successful **UPLOAD** of your Firm’s LOI to LOISS, the system will notify you with the following screen. You will also receive an e-mail stating that you have successfully submitted your Letter of Interest (LOI).
Paper copies are not required. The subject line should contain the Firm’s Name, and “LOI for 2020 Traffic Operations Management LSC”.

LOI's SHALL be received electronically no later than 12:00 P.M. (NOON) Eastern, APRIL 08, 2020.

LOISS will not allow LOIs to be UPLOADED nor be received after the above deadline and such LOIs will not be considered.

Firms are encouraged to begin this submittal process early as there are now several more steps involved with LOI-submission than were involved with the previous FTS methodology of LOI-submission.

Firms submitting LOIs are encouraged to carefully check them for conformance to the requirements stated above (and any other requirements in this Advertisement). If LOIs are submitted late, exceed the maximum number of pages, are sent by any means other than NCDOT’s LOI Submittal Management System (LOISS), or are UPLOADED to any Advertisement/Opportunity-Specific 'LOI Submittal' LINK other than that given in this Advertisement they will be disqualified.

The Department reserves the right to reject all LOIs and not proceed with procurement.

The Department reserves the right to waive any technicality in LOIs, or notify the Firm(s) of such technicality and allow the Firm(s) up to two (2) business days to rectify the technicality.

**SELECTION PROCESS**

Following is a general description of the selection process:
• The NCDOT Selection Committee will review all qualifying LOI submittals.

• For Limited Services Contracts (On-Call type contracts), the NCDOT Selection Committee MAY, at the Department’s discretion, choose any number of firms to provide the services being solicited.

• For Project-Specific Contracts (non On-Call type contracts), the Selection Committee MAY, at the Department’s discretion, shortlist a minimum of three (3) firms to be interviewed. IF APPLICABLE, dates of shortlisting and dates for interviews are shown in the section SUBMISSION SCHEDULE AND KEY DATES at the end of this RFLOI.

• In order to be considered for selection, consultants must submit a complete response to this RFLOI prior to the specified deadlines. Failure to submit all information in a timely manner will result in disqualification.

TITLE VI NONDISCRIMINATION NOTIFICATION

The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all RESPONDENTS that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit LETTERS of INTEREST (LOIs) in response to this ADVERTISEMENT and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

SMALL PROFESSIONAL SERVICE FIRM (SPSF) PARTICIPATION

The Department encourages the use of Small Professional Services Firms (SPSF). Small businesses determined to be eligible for participation in the SPSF program are those meeting size standards defined by Small Business Administration (SBA) regulations, 13 CFR Part 121 in Sector 54 under the North American Industrial Classification System (NAICS). The SPSF program is a race, ethnicity, and gender neutral program designed to increase the availability of contracting opportunities for small businesses on federal, state or locally funded contracts. SPSF participation is not contingent upon the funding source.

The Firm, at the time the Letter of Interest is submitted, shall submit a listing of all known SPSF firms that will participate in the performance of the identified work. The participation shall be submitted on the Department’s Subconsultant Form RS-2. RS-2 forms may be accessed on the Department’s website at NCDOT Connect Guidelines & Forms.

The SPSF must be qualified with the Department to perform the work for which they are listed.

PREQUALIFICATION

The Department maintains on file the qualifications and key personnel for each approved discipline, as well as any required samples of work. Each year on the anniversary date of the
company, the firm shall renew their prequalified disciplines. If your firm has not renewed its application as required by your anniversary date or if your firm is not currently prequalified, please submit an application to the Department prior to submittal of your LOI. An application may be accessed on the Department’s website at Prequalifying Private Consulting Firms -- Learn how to become Prequalified as a Private Consulting Firm with NCDOT. Having this data on file with the Department eliminates the need to resubmit this data with each letter of interest.

Professional Services Contracts are race and gender neutral and do not contain goals. However, the Respondent is encouraged to give every opportunity to allow Disadvantaged, Minority-Owned and Women-Owned Business Enterprises (DBE/MBE/WBE) subconsultant utilization on all LOIs, contracts and supplemental agreements. The Firm, subconsultant and subfirm shall not discriminate on the basis of race, religion, color, national origin, age, disability or sex in the performance of this contract.

DIRECTORY OF FIRMS AND DEPARTMENT ENDORSEMENT

Real-time information about firms doing business with the Department, and information regarding their prequalifications and certifications, is available in the Directory of Transportation Firms. The Directory can be accessed on the Department’s website at Directory of Firms -- Complete listing of certified and prequalified firms.

The listing of an individual firm in the Department’s directory shall not be construed as an endorsement of the firm.

SELECTION CRITERIA

All prequalified firms who submit responsive letters of interest will be considered.

In selecting a firm/team, the selection committee will take into consideration qualification information including such factors as:

1. 10% = Business Reputation (See Attachment A).
2. 35% = Project Management Approach (See Attachment A).
3. 45% = TMC Control Room Approach (See Attachment A).
4. 10% = Transition Plan (See Attachment A).
5. N/A% = N/A.

After reviewing qualifications, if firms are equal on the evaluation review, then those qualified firms with proposed SPSF participation will be given priority consideration.

SUBMISSION ORGANIZATION AND INFORMATION REQUIREMENTS
The LOI should be addressed to Mr. Robert J. Stroup, PE -- State Professional Services Engineer and must include the name, address, telephone number, and e-mail address of the prime consultant’s contact person for this RFLOI.

**Note:** If a project team or subconsultant encounters personnel changes, or any other changes of significance dealing with the company, NCDOT should be notified immediately.

See "Attachment A: STOC and TMC Operations RFLOI Scope of Work" for additional submission requirements and organization of submission.

APPENDICES-
CONSULTANT CERTIFICATION Form RS-2

Completed Form RS-2 forms SHALL be submitted with the firm’s letter of interest. This section is limited to the number of pages required to provide the requested information.

Submit Form RS-2 forms for the following:

- **Prime Consultant firm**
  - Prime Consultant Form RS-2 Rev 1/14/08; and

- **ANY/ALL Subconsultant firms** *(If Subconsultants are allowed under this RFLOI)* to be, or anticipated to be, utilized by your firm.
  - Subconsultant Form RS-2 Rev 1/15/08.
  - In the event the firm has no subconsultant, it is required that this be indicated on the Subconsultant Form RS-2 by entering the word “None” or the number “ZERO” and signing the form.

Complete and sign each Form RS-2 (instructions are listed on the form).

The required forms are available on the Department's website at: https://connect.ncdot.gov/business/consultants/Pages/Guidelines-Forms.aspx

Prime Consultant Form RS-2
Subconsultant Form RS-2
All submissions, correspondence, and questions concerning this RFLOI should be directed to Robert J. Stroup, PE at rjstroup@ncdot.gov. However, the LOI itself must be UPLOADED via the ‘LOI Submittal Link’ shown in this Advertisement to NCDOT’s LOI Submittal Management System (LOISS).

NOTE: To adhere to the Timeframe, a Notice to Proceed is expected to be issued shortly after (a) firm(s)/team(s) is/are selected. All firm(s)/team(s) submitting a LETTER OF INTEREST should make sure that their rates and overheads are current and have been audited by NCDOT.

SUBMISSION SCHEDULE AND KEY DATES

RFLOI Release – MARCH 15, 2020
Deadline for Questions -
Issue Final Addendum -
Deadline for LOI Submission – 12:00 PM (NOON) EASTERN, APRIL 08, 2020
Shortlist Announced * - TBD--IF THE DEPARTMENT ELECTS THIS OPTION.
Interviews - the week of TBD--IF THE DEPARTMENT ELECTS THIS OPTION.
Firm Selection and Notification ** - TBD.
Anticipated Notice to Proceed – TBD.

* Notification will ONLY be sent to shortlisted firms.
** Notification will ONLY be sent to selected firms.
STATE OF NORTH CAROLINA
Transportation Mobility & Safety Division
TSMO Unit - Traffic Systems Operations

Attachment A:
STOC and TMC Operations
RFLOI Scope of Work

March 15, 2020
1 PURPOSE AND BACKGROUND

1.1 PROJECT INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is one of the largest government agencies in the state. NCDOT manages and supports multi-modal transportation infrastructure and roadway traffic operations across the state. NCDOT receives both state and federal funding for its wide variety of projects and services. The agency is led by several governing entities: the Secretary of Transportation, the NCDOT Board of Transportation, and NCDOT Executive Leadership, which includes 14 x Divisions who manage various major areas of NCDOT’s traffic operations.

The Transportation Systems Management and Operations (TSMO) Unit - Traffic Systems Operations (TSO) and the North Carolina Turnpike Authority (NCTA) both operate within the organization of the NCDOT and will play an active role in the facilitation of the NCDOT Statewide Transportation Operations Center (STOC) and Regional Traffic Management Centers (TMC) Operations Management contract. The TSO is responsible for the operations and management of the STOC and regional TMCs, and using incident management, intelligent transportation systems (ITS), traveler information strategies, and signal system timing to support mobility and safety on the statewide roadway network. The NCTA uses similar incident management, ITS, and traveler information strategies as well as toll system and facility monitoring and maintenance coordination to maintain safe and efficient traffic operations on toll facilities in North Carolina. The Triangle Regional TMC has been strategically co-located within the STOC to operate cooperatively to gain fiscal and operational efficiency. The Metrolina Regional TMC (MRTMC) in Charlotte, Triad Regional TMC in Greensboro, and Mountain Regional TMC (MTMC) in Asheville will continue to operate from their existing locations while also serving as back-up and redundant operations to the STOC.

The language within this scope of work utilizes ‘NCDOT’ to collectively represent relevant project stakeholders. It is expected that the Consultant will understand and work to address the specific needs of the identified key project stakeholders. Specifically, state level, regional level, and toll facility traffic operations include unique characteristics and perspectives that will need to be solicited, considered, and addressed.

A critical component of NCDOT’s transportation management is providing for large planned and unplanned events, such as major construction projects or state mandated evacuations. NCDOT accomplishes this with a keen focus on continuously evolving and looking for opportunities to enhance statewide traffic operations. NCDOT is currently managing major planned highway projects with significant involvement with traffic operations spanning multiple Divisions (e.g. I-26 Widening in Buncombe and Henderson Counties, I-95 Widening in Cumberland and Johnston Counties, I-40 Widening in Wake and Johnston Counties, etc.) Proactive traffic operations coordination and collaboration with the Divisions and Project Teams are vital to the successful implementation of traffic operations and management within the vicinity of the projects during construction. Similarly, during major natural disasters and events with significant regional impacts, appropriate evacuation and response plans are necessary for safe and efficient transportation management.

1.2 TRANSPORTATION / TRAFFIC MANAGEMENT CENTER OVERVIEW

Transportation / Traffic Management Centers are the hub of all major NCDOT roadway traffic operations. For NCDOT to meet its goal of providing high-quality, efficient transportation facilities to the people of North Carolina, it is essential that traffic be
effectively monitored and managed throughout the state. A critical component of the day-to-day traffic monitoring and management throughout the state is a strong incident management program. North Carolina’s traffic operations are currently coordinated through a series of systems operated from four physical locations, the STOC and Triangle TMC located at the NC National Guard’s Joint Force Headquarters in Raleigh and the TMCs located in Asheville, Charlotte, and Greensboro. The NCTA operates from both the STOC and MRTMC.

1.2.1 STATEWIDE OPERATIONS MANAGEMENT

The NCDOT’s Statewide Transportation Operations Center (STOC) is a traffic and incident management facility that operates 24 hours a day, 7 days a week, and 365 days a year (24/7/365) (366 in leap years). The STOC’s primary statewide function is to serve as a coordination hub for transportation officials and emergency responders when major incidents and/or events impact travel in multiple regions or across state lines. When these incidents occur, personnel in each affected region initiate response measures focused primarily on local impacts. The STOC engages personnel from each region and facilitates the exchange of information between all involved so that their responses are consistent and fully address the incident’s multi-regional impact.

The STOC plays a critical role in the continuity of the Department’s operations by serving as one of the major region’s (Triangle) primary TMC; by augmenting the response capabilities of regions without a Regional Transportation Management Center (TMC); and by supporting those that do by serving as the command center when the other TMCs are offline, not staffed, or unexpected events exceed their current manpower.

The STOC enhances the Department’s traveler information services by providing 24/7/365 quality assurance and user support for the Traveler Information Management System (TIMS), DriveNC.gov and NC 511 system. The STOC provides support to the Department of Commerce and the NC Correctional Institution for Women for the NCDOT Customer Service Center (CSC) and NC 511.

The STOC also provides staff to support construction projects through regular coordination with the Divisions and Project Teams. They provide a wide range of functions that include response plan development and implementation, assisting with the development and implementation of Integrated Corridor Management plans, tracking metrics and supporting NCDOT administered tow contracts, and collaborating with the Incident Management Project staff under a separate contract.

In the STOC facility, NCDOT’s traffic management staff are co-located with the operations/communications centers of other partners including NC State Highway Patrol, NC Emergency Management, the NCTA, and NC National Guard Joint Operations Center.

1.2.2 REGIONAL TRAFFIC OPERATIONS MANAGEMENT

The Regional TMCs are linked to various transportation and incident management partners including local municipal Transportation Operations Centers (TOC), emergency responders, and media partners for more efficient incident management and communication of real-time information to motorists via ITS infrastructure, Incident Management Assistance Patrol (IMAP), and advanced traveler information system (ATIS). TMCs could be the staging area for the response and mobilization of various stakeholders during a large special event or major emergency. Consistency in deployment, operational, and management methodologies are critical to successful and seamless traffic operations during an emergency, staff shortage, or system outages.
The Triangle TMC is operated and managed from within the same control room as the STOC at the Joint Force Headquarters, 1636 Gold Star Drive in Raleigh. The Triangle TMC manages traffic operations for the greater Raleigh area, mainly for Wake, Durham, Franklin, and Chatham counties. NCTA is co-located in the TMC/STOC to manage traffic for the Triangle Expressway in Wake County.

The Metrolina TMC is located at 2327 Tipton Drive in Charlotte. The Metrolina TMC manages traffic operations for the greater Charlotte area, including Mecklenburg, Cabarrus, Stanly, Union, Anson, Alexander, Iredell, Catawba, Lincoln, Cleveland, and Gaston Counties. NCTA is co-located in the TMC to manage traffic for the Monroe Expressway in Union County. The Metrolina TMC is the primary back-up support for the STOC or may be the center for major special events such as the Republican National Convention; therefore, consistency in deployment, operational, and management methodologies are critical to successful and seamless traffic operations during an emergency, staff shortage, or system outages. MRTMC and the STOC also coordinate with the I-77 Mobility Partners on managing traffic along the 26 miles of I-77 Express Lanes, as well as manage the I-85 ICM response plans which synchronize DMS signing plans, dynamic trailblazers, and coordinated signal system timing.

The Triad TMC is located at 201 S. Chimney Rock Road in Greensboro. The Triad TMC manages traffic for the Greensboro / Winston-Salem area including Orange, Alamance, Guilford, Forsyth, Davidson, Rowan, and Davie Counties. The Triad TMC may provide back-up support for the STOC or a Regional TMC.

The Mountains TMC is the newest Regional TMC and is in a temporary location at Division 13’s Traffic Services at 11 Old Charlotte Highway in Asheville. Originally setup to manage traffic for the I-26 Widening Project in Buncombe and Henderson counties, the Mountain TMC also manages traffic for Yancey, Madison, Buncombe, Polk, Henderson, Transylvania, Haywood, Jackson, Swain, Macon, Graham, Clay, and Cherokee Counties. With its location in the most mountainous areas of NC, it plays an important role in managing “hot spots” along the interstates where winter weather can cause the most significant effects.

### 1.2.3 Toll Facility Traffic Operations Management

The NCTA traffic is managed from within the same control room as the STOC as well as at the Metrolina Regional TMC. NCTA is responsible for the development, planning, construction, traffic operations, maintenance, and management of tollway projects statewide, including the prominent Triangle Expressway in Wake and Durham counties and the Monroe Expressway in Union County. The NCTA’s management responsibilities related to operating a toll facility include specific reporting, toll system monitoring, toll facility monitoring, ITS device auditing, toll system and facility maintenance coordination activities that are unique from other NC statewide or regional TMC’s responsibilities. In addition, because NCTA operates toll facilities, there are documentation and data storage responsibilities to which NCTA must adhere.

The NCTA’s Customer Service Centers (CSC), located in Morrisville, Monroe and Charlotte provide back-up support for the NCTA traffic operations. The requirements of this scope of work do not include operations of the CSC but requires close coordination and consistency of operations strategies. Therefore, continuous coordination with the NCTA Customer Service Center is critical to successful and seamless traffic operations during an emergency or outage.

The STOC manages after-hours traffic operations support for the NCTA tollways.
2 PROPOSAL CONTENT & EVALUATION PROCESS

2.1 PROPOSAL CONTENTS

Consultants shall populate all attachments as described herein that require the Consultant to provide information and include an authorized signature where requested. Consultant responses shall include the following items and attachments should be arranged in the following order:

a) Cover Sheet
b) Title Page: Include the company name, address, phone number, e-mail address, and authorized representative along with the Proposal Number.
c) Requirements 1-13 in 4 x areas (no more than 20 pages)

Business Reputation
Requirement 1: Industry Experience and References

Project Management Approach
Requirement 2: Project Management Approach and Philosophy
Requirement 3: Communications Approach
Requirement 4: Project Technical Support Approach
Requirement 5: Staffing Approach for Project Management and Project Technical Support

TMC Control Room Approach
Requirement 6: Primary TMC Function Examples
Requirement 7: Toll Facility Traffic Operations Example
Requirement 8: Control Room Coverage Approach
Requirement 9: Interoperability, Redundancy, and Continuity of Operations Approach
Requirement 10: Traffic Operations Training Approach
Requirement 11: Performance Requirements Approach
Requirement 12: Quality Control Approach

Transition Plan
Requirement 13: Transition Plan
d) Appendices:
   APPENDIX A: PROPOSED STAFFING ESTIMATE FORM
   APPENDIX B: REFERENCE REQUEST FORM

2.2 PROPOSAL EVALUATION PROCESS

NCDOT will form a Selection Committee with the necessary business and technical expertise to assess the Consultants abilities, strengths, and weaknesses based on the individual responses. NCDOT shall review all Consultant responses to confirm that they meet the specifications and requirements of the Scope of Work. NCDOT reserves the right to waive any minor informality or technicality in proposals received.

Proposals will generally be evaluated according to completeness, content, and experience with similar projects and the ability of the Consultant and its staff. Specific evaluation criteria are listed in Table 1: Technical Evaluation, below. Consultants are required to demonstrate
an understanding of tasks and responsibilities defined within each requirement identified throughout this scope of work and each requirement shall be addressed as requested.

After evaluating the proposals, the Selection Committee may setup an interview / proposal meeting for the short listed Consultant candidates to further discuss the scope of work and provide any clarifications.

If conducted, after completing the interview / proposal meeting, the evaluation team will consider both the technical evaluation and interview / proposal meeting in selecting a candidate that is deemed to be the best qualified. The Selection Committee will review the scope of work responses and responses during the interview / proposal meeting; failure to address any of the requirements can be deemed non-compliant and may be cause for proposal exclusion.

The Selection Committee will evaluate and score each response objectively with the use of an evaluation matrix to guide the weight of each identified service area. The service areas and associated weighted value is presented below in Table 1 such that the Consultants have a clear understanding of NCDOT’s priorities and method of evaluation.

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<th>Requirement</th>
<th>Focus Area</th>
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3 SCOPE OF WORK

The following section describes the scope of work for the STOC and TMC Operations contract being solicited. The scope is segmented into four distinct areas: Business Reputation, Project Management Approach, TMC Control Room Approach, and the Transition Plan. The scope of work and the associated requirements are defined within each subsection.

Direct Costs and Rates. In-state travel will be required in order to meet the defined requirements. Out-of-state travel may be required and will be approved on a case-by-case basis. All travel requires NCDOT's prior approval and will be reimbursed to the Consultant at the in-state and out-of-state rates found using the web address below:


The NCDOT will furnish all equipment, uniforms, office space and supplies, etc. required for the position. Direct costs will only apply towards expenses incurred during required travel. Full time embedded staff are subject to field rates.

Emergency Events. Due to the unpredictable nature of emergency events with respect to frequency and the area that they will affect, it will be difficult to assess the breadth and depth of the requirement for the Consultant. It will be expected that the consultant shall require their personnel assigned to the project to be available when appropriate by the Program Director from the NCDOT.

3.1 Business Reputation

In its Proposal, the Consultant shall demonstrate experience with public and/or private sector clients with similar or greater size and complexity to the State of North Carolina. Consultant shall provide information as to the qualifications and experience of all personnel to be assigned to this project, including resumes citing experience with similar projects and the responsibilities to be assigned to each person.

Requirement 1 – Industry Experience and References: This requirement consists of two parts. Part A should consist of an introduction that should demonstrate the consultant's overall qualifications to fulfill the requirements of the scope of work and should contain the following elements of information:

- Expression of firm’s interest in the work
- Statement of whether firm is on register
- Date of most recent private engineering firm qualification
- Statement regarding firm’s(’s) possible conflict of interest for the work
- Summation of information contained in the letter of interest.

For Part B of this requirement, the Consultant shall provide a brief statement describing their experience within the industry specific to traffic operations and toll facility operations. This statement shall include the length of time that the company has been established within the industry; their experience within the industry; and their relationship and project experience with NCDOT. Consultants shall provide the total number of active projects within the industry currently and how many State agencies the Consultant has worked for in the past. Consultants shall provide what resources (DOT and non-DOT); local, regional, and national,
that they will have available to them to help leverage their performance in this contract. In addition, the Consultant shall provide an example of how they have successfully accomplished a transition of a large project like this.

3.2 **Project Management Approach**

**Requirement 2 - Project Management Approach and Philosophy.** In the Consultant’s proposal, they shall address the following topics:

**Project Administration**

NCDOT intends to select a partner who will be independent and provide leadership, innovation, and quality. The project largely shall be managed by the Awarded Consultant with only high-level guidance and direction from NCDOT. The Awarded Consultant shall provide personnel to efficiently and effectively administer and manage all requirements as defined within the presented scope. Administration responsibilities are to be accomplished as the Awarded Consultant deems appropriate and as approved by NCDOT. It is understood that staff may be able to accomplish their administrative responsibilities without being fully dedicated to working on-site.

**Project Direction**

Project direction shall require the involvement and dedication of staff that can make informed decisions and has the authority to act on the behalf of the Consultant. Project direction will require regular communication and coordination with NCDOT and the project team. It is expected that the project will be directed with senior knowledge and experience. The Project Director will hold the ultimate responsibility for the successful implementation of the project. It is expected that this person(s) will be available when necessary and maintain a full understanding of project status, outstanding issues, policies and procedures.

**Project Management**

Project management shall include the day-to-day administration of the project and management of project staff. The Project Manager shall champion the project with limited direction from NCDOT, and must therefore take ownership of the project, actively anticipating and responding to problems and formulating innovative solutions. The Project Manager shall provide strong leadership, agility, flexibility, and initiative, partnering with NCDOT and stakeholders to implement these solutions for efficient and effective traffic operations.

The Project Manager will ensure that the Consultant has reliability and redundancy inside the Traffic Operations program – the intent being that regardless of what happens, the Consultant always has the means to provide project management as well as operate traffic throughout the regions and state.

The Project Manager is also responsible for providing a systematic approach that ties together actions and tasks accomplished within the project to an auditable monthly update. The Project Manager shall conduct periodic meetings, or as needed, with the NCDOT to review how the project accomplishments are being invoiced.
Requirement 3 - Communications Approach.
The Consultant shall include a Communications Strategy that is specific to internal project team communications and external to the NCDOT. The Communications Strategy shall clearly define the appropriate methods of correspondence and communication for the key NCDOT and awarded Consultant project team members. The communications approach shall describe how communications will be accomplished specific to contractual items versus daily duties. Key internal project team stakeholders shall be clearly identified.

The Consultant should provide a statement that outlines how the Consultant plans to escalate issues or concerns; how they will communicate to the NCDOT if seats are not being filled; and how any other changes will be managed.

Coordination and collaboration are crucial to the success of traffic operations. The Awarded Consultant shall work with various agencies, departments, and stakeholders (internal and external) throughout the state and nation. The Awarded Consultant must have a thorough understanding of the key partners that are required to deliver effective traffic operations. The awarded consultant must also work in concert with other firms working on similar contracts for the NCDOT, specifically within the TSO. Close coordination and collaboration between the STOC, TMCs, Traffic Specialists, the Incident Management Project, NCTA, Divisional and Regional staff is imperative to the success of the program. The Consultant shall provide a statement indicating how they coordinate and collaborate among the various stakeholders.

Requirement 4 – Project Technical Support Approach
TMC support personnel shall accomplish specialized traffic operations responsibilities such as TMC management, training, traffic engineering, data analysis, and technical advisement. The Awarded Consultant shall provide qualified personnel to accomplish the requirements and responsibilities defined herein. NCDOT anticipates that at a minimum, the following responsibilities will be required:

Operations Managers - TMC operations management shall include the day-to-day administration of TMC control room activities. The TMC Operations Manager shall be responsible for control room personnel staffing, providing technical guidance, and resolving personnel conflicts. In addition, the TMC Operations Manager shall be responsible for hiring and developing TMC operators. The TMC Operations Manager shall be engaged in supporting project development and maturation and the TMC Operations Manager’s experiences and knowledge shall be solicited to recommend operational improvements to enhance system and/or project performance. The TMC Operations Manager shall coordinate with the Project Manager regularly to communicate operations project status and recommendations. The TMC Operations Manager shall liaison with NCDOT management as necessary during critical events and/or incidents. The Operations Manager role must always be available for escalation of issues from the TMC floor – the role can be filled by other NCDOT approved personnel if the individual is not available.

Traffic Engineering – TMC Operations depend on the application of traffic engineering expertise to develop strategies for traffic operations throughout the state. Traffic engineering responsibilities include:
- Minimum of B.S. in Civil Engineering;
- Understanding the fundamentals of traffic engineering and how that relates to traffic operations;
- Providing guidance and coordination during severe/major events, construction, and
maintenance operations;
• Applying traffic engineering experience to recommend operational improvements using existing or recommended ITS deployments;
• Understanding the principles behind advanced traffic management strategies like managed freeways and how they are implemented.

Traffic Operations Specialists – Effective communication of control room operations policies and procedures are critical to the successful operations of a TMC. Traffic operations specialist responsibilities include:
• Communicating control room operations and strategies during various meetings and collaboration efforts;
• Being a resource for control room operations questions and activities;
• Planning, coordinating and implementing detour and alternate routes;
• Coordinating with Traffic Engineers and Operations Managers to develop and maintain response plans;
• Applying traffic operations experience to recommend improvements to existing or development of new policies and procedures;
• Creating presentations, developing training materials, or any special assignment related to incident management or traffic operations;
• Coordinate and collaborate with staff from the Incident Management Project concerning traffic operations;
• Supporting construction projects with traffic operations recommendations.

Data Analysis – NCDOT utilizes key pieces of data to regularly monitor and analyze system performance. Data analysis responsibilities include:
• Compiling and organizing data as necessary to analyze, develop reports, or assess system gaps for more effective and efficient traffic operations;
• Providing data for performance measure reporting;
• Interpreting data, analyzing results using statistical techniques and provide ongoing reports;
• Developing and implementing data collection systems and other strategies that optimize statistical efficiency and data quality;
• Acquiring data from primary or secondary data sources and maintain databases/data systems;
• Identifying, analyzing, and interpreting trends or patterns in complex data sets;
• Filtering and “cleaning” data, and review of computer reports, printouts, and performance indicators to locate and correct code problems;
• Working closely with management to prioritize business and information needs;
• Locating and defining new process improvement opportunities.

Project Planning – NCDOT is involved with the scoping and development of operational strategies in construction projects through the implementation and execution of those strategies during and after the project construction. The Consultant is expected to be able to assist the NCDOT in project development by:
• Bachelor’s degree required;
• Working closely with key stakeholders involved in the development of the State Transportation Improvement Program (STIP) and incorporating Traffic Operations strategies;
• Providing recommendations for Traffic Operations Strategies and estimates for feasibility
studies;
- Assisting with Project Delivery by providing Traffic Operations and Management input during key stakeholder meetings;
- Adjusting strategies as conditions change;
- Coordinate and collaborate with Traffic Operations Specialists and NCDOT staff on projects.

Responsibilities are to be accomplished as the Awarded Consultant deems appropriate and as approved by NCDOT. It is anticipated that one staff member may be capable of managing more than one set of defined responsibilities. In addition, the Awarded Consultant is encouraged to propose additional positions as necessary.

In the event of a statewide event affecting several counties, the NCDOT may stand up a "routing room" to support routing emergency vehicles and supplies in coordination with NC Emergency Management. The Consultant should be prepared to support manning the "routing room" or other requirements to support stakeholders as needed and requested by the NCDOT.

Consultants shall review all contract responsibilities and provide a project technical support approach. The project technical support approach shall clearly describe the method that the Consultant intends to implement to achieve all the project technical support responsibilities as described above.

**Requirement 5 – Staffing Approach for Project Management and Project Technical Support.** Consultants shall review all contract administrative and project support responsibilities and provide a staffing approach to fulfill the requirements. The staffing approach shall describe the method that the Consultant intends to staff the administrative and project support responsibilities within the contract. Consultants shall provide an organizational chart to visually represent the intended methodology of accomplishing the following contract responsibilities: Project Administration, Project Direction, Project Management, and Project Technical Support. Additional positions shall be included as the Consultant deems necessary. Resumes shall be provided for technical resources that are identified on the organizational chart. Consultants are not required to submit resumes for operations level staff. The Consultant shall provide the names of the Project Director and Project Manager.

**3.3 TMC Control Room Approach**

**TMC Control Room Responsibilities**

This section briefly describes the current functions in place to manage, operate, and maintain TMC control room operations. The Awarded Consultant shall maintain current NCDOT procedures and policies to facilitate traffic operations from statewide and regional TMCs.

The STOC and TMC Operator and Supervisor positions must be filled at 100% whenever the NCDOT requires a “seat”. The Awarded Consultant shall provide 24/7/365 coverage within the STOC Control Room and generally, the first and second shifts or as required by the NCDOT for the regional TMCs. During emergency operations or equivalent special events, the Consultant may be required to provide additional staff above the normal staffing levels at the NCDOT’s discretion and at no additional cost for the NCDOT.
The Awarded Consultant will be provided with the STOC Standing Operations Procedures (SOP) Manual upon contract award and shall implement SOPs as described. It is expected that the Awarded Consultant will provide recommendations for SOP improvements through the term of the contract and develop an approval process for recommended changes that shall involve the NCDOT. The Awarded Consultant shall continue the operations and management of the current primary TMC functions and services. As previously mentioned, the Awarded Consultant shall act on behalf of NCDOT to manage the statewide and regional TMC functions. The Awarded Consultant shall provide the following TMC primary functions and services on behalf of NCDOT (See Table 2):

### Table 2: TMC Primary Functions and Services

<table>
<thead>
<tr>
<th>Primary Function</th>
<th>Operational Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coordination for Major Incidents:</strong></td>
<td>Statewide</td>
</tr>
<tr>
<td>Serve as a communication and coordination hub for interregional and multi-state</td>
<td>X</td>
</tr>
<tr>
<td>incidents by interfacing with neighboring states, federal agencies, NCDOT field</td>
<td></td>
</tr>
<tr>
<td>forces, and local responders to establish and initiate a consistent and</td>
<td></td>
</tr>
<tr>
<td>coordinated response across the affected areas.</td>
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</tr>
<tr>
<td>Manage and coordinate the Special Alert response process which focuses on</td>
<td>X</td>
</tr>
<tr>
<td>rapid and frequent communication with response partners and the creation of</td>
<td></td>
</tr>
<tr>
<td>highly visible and easily accessible traveler information.</td>
<td></td>
</tr>
<tr>
<td>Manage regional and statewide response to Amber and Silver Alerts (and/or</td>
<td>X</td>
</tr>
<tr>
<td>other alerts administered by the Department of Public Safety) by serving as</td>
<td></td>
</tr>
<tr>
<td>the Department’s primary point of contact with the North Carolina Center for</td>
<td></td>
</tr>
<tr>
<td>Missing Persons (NCCMP). Generate high-visibility messages on Dynamic Message</td>
<td></td>
</tr>
<tr>
<td>Signs (DMS) and easily accessible messages on Traveler Information Management</td>
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</tr>
<tr>
<td>System (TIMS) and communicate alert activation status to Divisions and Regional</td>
<td></td>
</tr>
<tr>
<td>TMCs.</td>
<td></td>
</tr>
<tr>
<td>Notify the NC Trucking Association of major incidents and unplanned road</td>
<td>X</td>
</tr>
<tr>
<td>closures in order to establish and communicate viable detours/alternate routes</td>
<td></td>
</tr>
<tr>
<td>for commercial motor vehicles.</td>
<td></td>
</tr>
<tr>
<td>Communicate with transportation management agencies in other states in order</td>
<td>X</td>
</tr>
<tr>
<td>to coordinate response efforts for incidents affecting travel in North</td>
<td></td>
</tr>
<tr>
<td>Carolina and its neighbors, including Southern Traffic Incident eXchange (STIX)</td>
<td></td>
</tr>
<tr>
<td>Notify NCDOT personnel and partners quickly and frequently as road conditions</td>
<td>X</td>
</tr>
<tr>
<td>change.</td>
<td></td>
</tr>
<tr>
<td>Notify the Federal Highway Administration (FHWA) of incidents meeting special</td>
<td>X</td>
</tr>
<tr>
<td>criteria for federal involvement such as crashes involving school buses,</td>
<td></td>
</tr>
<tr>
<td>resulting in the injury or death of public officials, or where travel on a</td>
<td></td>
</tr>
<tr>
<td>route or area will be affected for 8 or more hours.</td>
<td></td>
</tr>
<tr>
<td><strong>Coordination during Emergency Operations &amp; Adverse Weather:</strong></td>
<td>Statewide</td>
</tr>
<tr>
<td>Serve as the primary source of road condition information for NCEM, NCSHP,</td>
<td>X</td>
</tr>
<tr>
<td>NC National Guard, and other state and federal agencies during state</td>
<td></td>
</tr>
<tr>
<td>Emergency Operation Center (EOC) activations for major events such as</td>
<td></td>
</tr>
<tr>
<td>hurricanes, snowstorms, or other declared disasters.</td>
<td></td>
</tr>
</tbody>
</table>
Produce and distribute the STOC Road Closure Report to NCEM, NC National Guard, and NCDOT Disaster Recovery during major adverse weather events in order to provide a regularly updated list of roadways affected by the adverse weather and to help responders prioritize their recovery efforts. | X |  

Record and document road closure information within TIMS during major emergency events and major adverse weather events. | X | X | X |  

Continuously monitor the National Weather Service’s (NWS) website and alert notifications to identify Watches or Warnings for adverse weather and, based on the alert type, coordinate regional or statewide response efforts including activation of DMS messages for adverse weather. | X | X | X |  

Support DOT field personnel during adverse weather operations by entering road closure information into TIMS and regularly updating County Adverse Weather Road Statuses. | X | X | X |  

<table>
<thead>
<tr>
<th>Regional TMC and Rural Division Support:</th>
<th>Statewide</th>
<th>Regional</th>
<th>NCTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactively detect and verify unplanned traffic incidents by using traffic cameras, traffic congestion sensors, law enforcement dispatch feeds and radio traffic, and news media reports.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Provide dispatch and radio monitoring services for Incident Management Assistance Patrol (IMAP) Units. | X | X | X |  

Support rural Divisions without Regional TMC coverage by monitoring travel conditions in their areas, detecting and verifying traffic incidents, dispatch IMAP, and notifying local personnel to initiate a response. | X |  

Assist ITS maintenance personnel by regularly testing all devices such as traffic cameras and DMS, reporting device malfunctions, and by producing and delivering daily/weekly/monthly device performance reports. | X | X | X |  

Provide assistance to Regional TMCs by monitoring travel conditions in and around their coverage area and by notifying Regional TMC personnel of recently detected traffic incidents in order to reduce or eliminate overlooked incidents. | X | X |  

Thoroughly document incident details and response activities and compile the resulting data to evaluate performance, build and refine emergency response plans, and support After Action Reviews (AARs). | X | X | X |  

Support local news media broadcasts of regular traffic reports by verifying reported traffic incidents and by providing visuals of travel conditions through CCTV cameras. | X | X | X |  

Assist traffic control efforts by coordinating with event planners and through management of the Reversible Lane Systems (RLS). | X |  

Utilize DMS to display traveler information and to support traffic control and congestion management by warning motorists of closures and hazardous conditions, displaying travel times, and providing detour/alternate route instructions. | X | X | X |  

Consistently track ongoing and upcoming planned events including roadwork and special events and work with DOT communications, maintenance, and incident management as well as with external partners and planners to coordinate event response. | X | X | X |  

<table>
<thead>
<tr>
<th>After-Hours Support:</th>
<th>Statewide</th>
<th>Regional</th>
<th>NCTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform all functions &amp; services described in the above section for Regional TMC &amp; Rural Division Support as well as the items described below:</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support rural Divisions and Regional TMCs by augmenting local response efforts by providing continuity of operations for their regions when they are offline or not staffed.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Provide reliable, 24/7 access to the Department for all internal/external partners including law enforcement, emergency response agencies, and media outlets in order to receive incident reports or requests for DOT assistance.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilize traffic cameras, traffic congestion sensors, dispatch feeds and radio traffic from law enforcement, news media reports, as well as STOC-specific resource and reports from partnering agencies, other states and to monitor travel conditions and detect traffic incidents across the state.</td>
<td>X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proactively verify detected and reported incidents by gathering critical incident information from local emergency responders and by seeking out further confirming evidence of an incident.</td>
<td>X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accurately receive and expeditiously relay verified incident reports to appropriate after-hours response personnel in order to support proper decision making and rapid response.</td>
<td>X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage DMS when rural Divisions are offline or not staffed by activating DMS to display traveler information and travel times, warn motorists of closures and hazardous conditions, and to provide detour/alternate route instructions.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TIMS Support:**

<table>
<thead>
<tr>
<th>Statewide</th>
<th>Regional</th>
<th>NCTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produce enhanced traveler information for incidents of regional or statewide significance which is accessible to the public online via the NCDOT’s DriveNC website.</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Provide real-time quality control for all traveler information in TIMS to assure that the systems are functioning properly, and that the information is accurate, up to date, and appropriate.</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Provide 24/7 assistance to all TIMS users across the state, most notably by entering incidents into the system for users responding in the field but also by performing STOC-specific functions such as adding new users, maintaining and repairing regional traffic cameras images, and modifying TIMS incidents appropriately.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Notify TIMS users across the state of planned and unplanned system outages and offer to manage incident data entry while the system is offline and once service returns.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Work with DOT Web Services and Communications personnel to plan, develop, test, and implement new TIMS features and functionality.</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**NCTA Traffic Operations Support:**

<table>
<thead>
<tr>
<th>Statewide</th>
<th>Regional</th>
<th>NCTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilize traffic cameras, traffic congestion sensors, dispatch feeds and radio traffic from law enforcement, news media reports, as well as STOC-specific resources including reports from partnering agencies and other states to detect traffic incidents along toll facility.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Assist ITS maintenance personnel by regularly testing toll facility ITS devices such as traffic cameras and DMS, reporting device malfunctions, and by producing and delivering daily/monthly device performance reports specific to toll facility system and hardware devices. Utilize Maintenance Online Management System (MOMS), NCTA’s computerized maintenance management system, to notify ITS maintenance personnel of needed repairs.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Perform periodic QA tasks associated with Microwave Vehicle Detectors (MVDs). This includes running reports to verify accuracy of MVD data vs. historical norms and manual traffic counts to verify MVD’s are performing as expected following maintenance work.</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Mandatory CCTV camera tours of NCTA facilities every 30 minutes. This includes identifying congestion or incidents associated with congestion but also checking for damaged assets (downed signs, damaged guardrail, or other damaged assets). Depending on the issue, the Operator will update TIMS or MOMS.

Coordinate with ITS maintenance personnel to request scheduled and unscheduled toll facility system and ITS hardware maintenance. Monitor the work zone in question and support the maintenance personnel with appropriate DMS messaging.

<table>
<thead>
<tr>
<th>NCTA Toll System Support:</th>
<th>Statewide</th>
<th>Regional</th>
<th>NCTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum of once-per-shift check of the Critical Monitoring System (CMS) for each NCTA toll facility. The CMS provides a host of real-time information on every toll gantry facility, including temperature, humidity, UPS status, carbon monoxide levels, propane tank fuel levels, etc. Any anomalies shall be reported immediately to the responsible toll Consultant to be addressed.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proactively monitor activity at toll system structures on NCTA toll facilities via security camera system. Access points to vaults and cabinets shall be checked and any suspicious activity shall be reported immediately to law enforcement.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor software application dedicated to dynamic toll pricing on NCTA managed lane facilities, verifying toll rates are displayed correctly every 15 minutes. Review failures in pricing system and follow failure procedures which could include manually displaying toll rates. Check status of detectors on managed lane facilities and immediately report any issues to the designated maintenance resource. (Future)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform daily QA tasks associated with Electronic Toll Collection System (ETCS) verification. These include checking lane identification accuracy (Locate and report vehicles only once and in only one lane 99.95%), read/write/identification for vehicle speeds and read/write/identification for all weather conditions. This data is compiled and then included in NCTA's Key Performance Indicators report that is distributed to key stakeholders every month.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform daily QA tasks associated with Automatic Vehicle Detection (AVC), Vehicle presence detection, properly separated vehicles and AVC accuracy (regarding proper vehicle classification). This data is compiled and then included in NCTA's Key Performance Indicators report that is distributed to key stakeholders every month.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform daily QA tasks associated with video processing for the purpose of verifying Optical Character Recognition (OCR) rates. This entails taking a random selection of transactions to verify that license plate number, license plate type (registration) and/or stacked characters were processed correctly by the system. This data is compiled and then included in NCTA's Key Performance Indicators report that is distributed to key stakeholders every month.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor non-routine maintenance activity for the purpose of verifying toll Consultant's response and repair requirements are being met for both toll and ITS infrastructure.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serve as initial point of contact for toll Consultant's facility maintenance technician. Start process of getting appropriate response to any asset issues the technician encounters.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor asset management maintenance activity for the purpose of verifying which assets need repair and when those repairs occur. This involves tracking the repair of assets on toll facilities such as roadway lighting and guardrail</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Requirement 6 – Primary TMC Function Examples (3):**

Consultants shall provide two examples from their experience that demonstrate the primary TMC functions and services defined above in Table 2. Consultants shall present examples that provide a comprehensive view of the breadth of their experience. In addition, Consultants shall provide one additional example of their choosing (may or may not be identified above) that illustrates how they have provided exceptional service, whether it was provided through effort, innovation, or value-added engineering. Three examples shall be provided in total; each describing how the function was accomplished, the Client associated with the example provided, and any relevant additional details that connects the provided example to supporting NCDOT’s operational goals.

**Requirement 7 – Toll Facility Traffic Operations Example:**

Consultants shall provide a traffic operations approach specific to toll facility needs and requirements. Consultants shall provide examples of toll facility traffic operations and management if available.

**Requirement 8 – Control Room Coverage Approach**

The Awarded Consultant shall provide personnel to efficiently and effectively manage all coverage requirements as defined within this section.

The Operators shall be responsible for the day- to-day functions and services as previously described. It is expected that Operators will be professional and provided with the appropriate training, encouragement, and support to be successful and satisfied with their working environment. The Operators are required to successfully complete the initial training to be considered eligible to fill a “seat”. Operators typically perform the duties by either dispatching IMAP or as a Traffic Management Specialist (TMS) as described in Table 2.
The Control Room Supervisors shall be responsible for managing the control room floor and the personnel. They will escalate issues within the STOC and Regions to the Operations Manager and/or NCDOT; identify personnel accomplishments and provide encouragement; provide recommendations for advancement; provide day-to-day technical guidance; and be the first point of contact during emergency operations when the Operations Manager is not available. The Control Room Supervisors shall liaison with the Operations Manager and/or NCDOT management as necessary during critical events and/or incidents.

The Consultant’s Coverage Approach shall include staffing for three shifts. The STOC shall be open 24 hours / day and 7 days / week throughout the entire year with 3 shifts per day. Generally, the Regional TMCs shall operate 2 shifts per day. Figures 1 and 2 indicate the typical staffing for 1st & 2nd shift and 3rd shift across the TMCs.

**Figure 1: Typical 1st and 2nd Shift Staffing**

**Figure 2: Typical 3rd and Weekend Shift Staffing**

**General Guidelines:**

1. **Staffing Increases** - NCDOT reserves the right to increase and decrease staffing as conditions demand (i.e. special events and emergencies), whereas the Consultant shall provide the coverage required.

2. **Peak Hours** - The heaviest traffic congestion and incident activity typically is expected during the peak period from Monday through Friday. This is largely due to the high volume of commuters travelling to and from work during two distinct travel times in the morning and evening peaks (generally Morning Peak – 6:00 am EST to 9:00 am EST, Evening Peak – 4:00 pm EST to 7:30 pm EST).

3. **Operator Coverage** – All Operators shall be in-place, focused on the performance of their operational duties and shall refrain from taking breaks until the morning/evening peak hour period concludes. During emergencies, all Operators shall be in-place, focused on the performance of their operational duties and shall coordinate taking breaks (including longer breaks for sleep) until the emergency event has concluded.
4. Supervisor Coverage – Supervisors shall be in the control room, monitoring and assisting the Operators throughout the morning/evening peak hour periods. Supervisors shall be in the control room during any times outside of these periods once congestion begins to build and/or as major events occur. Supervisors shall refrain from taking breaks, working on projects, or attending meetings until morning/evening congestion recedes or until the last significant incident has concluded. Supervisors shall not leave the control room during the peak hours unless it is in order to perform traffic operations related tasks and only at the direction of the Operations Manager or Project Manager. Supervisors shall return to the control room floor whenever visitors or otherwise non-traffic operations personnel are present in the control room.

During emergencies, supervisors must be in the control room, monitoring and assisting the Operators throughout the emergency event. Supervisors shall refrain from working on projects or attending non-critical meetings until the emergency event has concluded. Supervisors shall anticipate their needs and plan in advance for their own necessary breaks for sleep; this may include calling in additional supervisory coverage. Supervisors shall remain in coordination with the appropriate NCDOT staff during the entire duration of the event. In addition, the Supervisor shall provide a brief emergency event summary to NCDOT staff upon the conclusion of the emergency event.

5. IMAP Dispatching - IMAP is normally dispatched by the STOC / Regions indicated in Figure 3. If the Regional TMCs are not operating or are unable to dispatch and their associated IMAP are working, the STOC will dispatch the IMAP units accordingly.

Figure 3: IMAP Routes (as of February 2020)*

6. Emergency Coverage - Consultants shall consider staffing resource requirements to support additional emergency coverage throughout the life of the contract. NCDOT expects to pay a consistent rate for operations with the understanding that the Consultant will absorb the costs for staffing needs in emergency conditions within their proposed rates.

Although weather related emergency events cannot be predicted with complete accuracy, the Awarded Consultant shall monitor and anticipate the need for greater Control Room Coverage based on critical weather-related events. The Awarded Consultant shall coordinate with the appropriate NCDOT staff prior to the anticipated weather event to communicate emergency coverage approach and schedule.
In the event of a large-scale unforeseen emergency event, the Awarded Consultant shall coordinate with the appropriate NCDOT staff immediately upon verifying the emergency event to communicate emergency coverage approach and schedule.

Consultants shall provide a TMC control room coverage and staffing approach which will include how scheduling will be accomplished (i.e. merit, seniority, etc. based), how absences and heightened needs will be accommodated, and how schedule issues will be handled. Staff retention and career growth shall be briefly addressed. In addition, Consultants shall briefly describe the health, safety and security mechanisms that will be in place to ensure a healthy, safe, secure working environment.

**Requirement 9 – Interoperability, Redundancy, and Continuity of Operations Approach.**
The NCDOT has been working on the network infrastructure of the STOC and Regional TMCs for them to be interoperable and redundant. The network’s capability currently allows each TMC to be able to access all the ITS devices across the state. The consultant shall provide their approach about how they plan to maximize the current infrastructure and with their proposed staffing recommendations in order to provide 24/7/365 coverage of the state’s traffic operations, and in the event of failure, staffing issues, etc., how they plan to ensure the continuity of operations at the statewide and regional levels.

**Requirement 10 – Traffic Operations Training Approach**
NCDOT currently utilizes a traffic operations training program to educate and train individuals responsible for the operations and management of traffic through systems housed at NCDOT TMCs. Responsibilities include:

- Administering the statewide standardized traffic operations training program
- Performing training at the on-set of employment (travel to the STOC is required)
- Performing continuing education on a regularly scheduled basis or as a method of ensuring quality control
- Performing training when major systems change, or procedures are altered
- Modifying training materials and procedures as technology evolves or requirements shift
- Maintain and update SOPs through NCDOT approval
- Provide a tracking and reporting process

An Operator is not considered ready to fill a “seat” until they complete the initial training outlined in the NCDOT training curriculum. Currently, the initial training is conducted at the STOC.

The awarded Consultant shall provide their methodology and approach for the different positions in the awarded project. It is expected that the Consultant develops a training team that has both expert level traffic management experience as well as professional training skills. The training approach should focus on the Operator and Supervisor levels in the TMCs, as well as, provide insight on training the Operations Managers, Support, and Project Management staff.

**Requirement 11 – Performance Requirements Approach**
NCDOT is committed to monitoring system and project performance. Significant attention has been given to the available measures of performance as they relate to traffic operations and responsibilities within the influence of the operations center control room. In addition, with the implementation of a new statewide Advanced Traffic Management System (ATMS) software, it is expected that more data will become available to support the implementation of these and other performance measures.
The Awarded Consultant shall lead the operations center control room performance measures process with input and support from NCDOT. The Awarded Consultant shall be responsible for the measures of performance specific to control room activities and shall support measures of performance not fully within their control. The Awarded Consultant shall work with NCTA to understand the reporting requirements specific to tollway operations and shall incorporate those reporting requirements in with the other TMC reports deemed necessary. In addition, the Awarded Consultant should offer recommendations for data sets, reporting functions, and other requirements to support the performance measurement program. It is important to note that NCDOT will make the final decision on what final focus areas the Awarded Consultant shall be responsible for monitoring, measuring, and reporting on throughout the project. The following methods of measuring performance are provided as an example of the level of requirement that NCDOT requires:

- Minimum number of camera tours per hour
- Incident notification within a maximum time of verification
- Minimum percentage of proactive incident detection in the control room
- Maximum time for deployment of automated response plans
- Maximum time for deployment of manual response plans
- Maximum time of notification to stakeholders
- Measurement of customer satisfaction
- Maximum time between first awareness of an incident and restoration of the roadway to “normal” conditions per level of severity of the incident
- Verification of adherence to training schedule
- Verification of adherence to staffing plan

The Awarded Consultant shall create performance reports based on the agreed upon metrics. NCDOT will review the auditable performance reports with regularity. If it is determined that a measure of performance is unacceptable, the Awarded Consultant shall submit a Recovery Plan identifying the reason for unacceptable performance and detailing the solution and timeframe to resolve the issue within one week of identifying the problem. If the Awarded Consultant fails to adhere to the Recovery Plan, NCDOT will consider this a violation of the contract and will respond in the best interest of NCDOT.

Consultants shall provide a performance measurement recommended approach that generally describes how operations center control room performance will be measured. This also may include an example of how the Consultant has accomplished performance measurement on similar projects.

**Requirement 12 – Quality Control Approach**

Quality contract delivery is paramount to NCDOT and is vital to the successful accomplishment of the NCDOT mission and goals. The Quality Control Approach shall describe the anticipated policies and procedures that will be followed throughout the project to ensure precise, accurate, and complete work. The Awarded Consultant will be empowered to proactively recommend and implement quality control improvements throughout the life of the contract. The Awarded Consultant shall be held accountable for adherence to the plan.

Consultants shall provide a Quality Control Approach that describes how quality will be maintained throughout the life of the project. This statement shall address all aspects of the
project and provide specific examples of procedures or policies that may be recommended for use.

3.4 Transition Plan

Requirement 13 – Transition Plan

It is critical that the Awarded Consultant shall transition responsibility of the current Traffic Management program from the existing contract holder such that there is no interruption or loss in quality of service. The Awarded Consultant shall provide a transition plan that describes the recommended method of transition of responsibility from the current contract holder. This statement shall be specific with clearly defined expectations of time and effort to complete the transition. In addition, a schedule shall be provided detailing the full process of transition from Notice to Proceed (NTP) until project establishment. Direct and Indirect costs incurred by the Awarded Consultant while the previous contract is still in-place will not be reimbursed.
4 CONTRACT ADMINISTRATION

4.1 PROJECT MANAGER AND CUSTOMER SERVICE
The Consultant shall designate and make available to the State a Project Manager as described in Section 3.2. The Project Manager shall be the State’s point of contact for contract related issues and issues concerning performance, progress review, scheduling and service.

NCDOT shall designate a Contract Administrator, Project Manager or such other agent, who will be responsible for monitoring the Consultant’s performance. All official and binding communications by NCDOT shall only come through the Contract Administrator, and the Consultant shall direct all communications concerning the contract to the Contract Administrator.

4.2 POST AWARD MANAGEMENT REVIEW MEETINGS
The Consultant, at the request of the State, shall meet regularly with the NCDOT for Project Review Meetings. The purpose of these meetings will be to review project progress reports, discuss Consultant and State performance, address outstanding issues, review problem resolution, provide direction, evaluate continuous improvement and cost saving ideas, and discuss any other pertinent topics.

4.3 DISPUTE RESOLUTION
The parties agree that it is in their mutual interest to resolve disputes informally. A claim by the Consultant shall be submitted in writing to the State’s Project Manager for resolution. A claim by the State shall be submitted in writing to the Consultant’s Project Manager for resolution. The Parties shall 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. If a dispute cannot be resolved between the Parties within thirty (30) days after delivery of notice, either Party may elect to exercise any other remedies available under this Contract, or at law. This term shall not constitute an agreement by either party to mediate or arbitrate any dispute.

4.4 CONTRACT CLOSE-OUT PROCEDURES
The Consultant shall develop a transition plan that details the close-out or transition of ownership of all open action items, the transfer of assets to the agency or Consultant assuming responsibility upon the end of the contract, and all other logistical responsibilities managed by the Consultants. This transition plan shall be approved by the NCDOT Contract Administrator six months before the end of the contract term.
<table>
<thead>
<tr>
<th>Line Item</th>
<th>Units</th>
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<tr>
<td>Project Director</td>
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<tr>
<td>Project Manager</td>
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<tr>
<td>Operations Manager</td>
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<tr>
<td>Traffic Operations Trainer</td>
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<td>TMC Operator</td>
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<td>TMC Supervisor</td>
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- List other proposed positions and #s as needed
- Mark through any anticipated unneeded positions

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Consultants shall provide four (4) references for consideration. Three (3) of these references shall align with the project examples requested in Requirement 1. References shall be included for projects completed within the last five (5) years and similar in nature to this contract.

**Attachment B: Reference Request Form**

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Brief Description of Work</th>
<th>Completion Date (Month/Year)</th>
<th>Project Budget</th>
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Ver: 3/11/20