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New Hampshire DOT
Department of Transportation

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

11

NOV 12 2025

William Cass, P.E.
Commissioner

David Rodrigue, P.E.
Assistant Commissioner

Her Excellency, Governor Kelly A. Ayotte
and the Honorable Council
State House
Concord, New Hampshire 03301

Bureau of Highway Design
July 1, 2025

REQUESTED ACTION

Authorize the Department of Transportation to enter into an Agreement with TEC Inc., Hampton, New Hampshire, Vendor #379815, for an amount not to exceed $611,102.91, for preliminary and final design services for intersection improvements in the Town of Moultonborough, effective upon Governor and Council approval through December 31, 2027. 100% Federal Funds.

Funds are available in the following account for Fiscal Year 2026:

	FY 2026
04-096-96-963515-3054	
Consolidated Federal Aid	
046-500464 Gen Consultants Non-Benefit	$611,102.91

EXPLANATION

The Department requires professional engineering and environmental consulting services to select an appropriate proposed action that is supported by the community, technically feasible, environmentally permittable, and economical; develop an approved Environmental Document; and bring the proposed action to a public hearing for layout approval for the intersection of NH Route 25 and Sheridan Road in the Town of Moultonborough. This agreement is included in the State's Ten-Year Transportation Improvement Plan (Moultonborough 41581).

The consultant selection process employed by the Department for this qualifications-based contract is in accordance with RSAs 21-I:22, 21-I:22-c, 21-I:22-d, 228:4 and 228:5-a, and all applicable Federal laws and the Department's "Policies and Procedures for Consultant Contract Procurement, Management, and Administration" dated August 25, 2017. The Department's Consultant Selection Committee is a standing committee that meets regularly to administer the process and make determinations. The Committee is comprised of the Assistant Director of Project Development (Chair), the Chief Project Manager, the Administrators of the Bureaus of Highway Design, Bridge Design, Environment, and Materials and Research, and the Municipal Highways Engineer.

The consultant selection process for this qualifications-based contract was initiated by a solicitation for consultant services for Moultonborough 41581 & Moultonborough 42602 Preliminary and Final Design – NH 25/Sheridan Road and NH 25/Redding Lane Intersection Improvements. The assignment was listed as a "Project Soliciting for Interest" on the Department's website on October 12, 2023, asking for letters of interest from qualified firms. From the list of firms that submitted letters of interest, the Committee

prepared a long and then short list of consultants on November 9, 2023. Three (3) shortlisted firms were notified on November 17, 2023, through a technical "Request for Proposal" (RFP). Committee members individually rated the firms on January 25, 2024 using a written ballot to score each firm on the basis of comprehension of the assignment, clarity of the proposal, capacity to perform in a timely manner, quality and experience of the project manager and the team, previous performance, and overall suitability for the assignment. (A compilation of the completed individual rating ballots and the ranking summary form is attached.) The individual rankings were then totaled to provide an overall ranking of the three firms, and the Assistant Commissioner was notified of the Committee's ranking. The shortlisted firms were notified of the results on January 25, 2025, and the highest-ranking firm was asked to submit a fee proposal for negotiations.

The long list of five (5) consultant firms that were considered for this assignment, with the three (3) short-listed firms shown in bold, is as follows:

Consultant Firm	***Office Location***
Green International Affiliates, Inc.	**Tewksbury, MA**
HEB Engineers, Inc.	North Conway, NH
Howard Stein Hudson	**Boston, MA**
TEC, Inc.	**Hampton, NH**
Tighe & Bond	Portsmouth, NH

The firm of TEC, Inc. was recommended for this contract. This firm has an excellent reputation and has demonstrated their capability to perform the required services. Background information on this firm is attached.

TEC, Inc. has agreed to furnish the professional engineering services for an amount not to exceed $611,102.91. This is a reasonable fee and is commensurate with the complexity of the project and the scope of the engineering and technical services to be furnished. This project funding is 80% Federal funds with 20% State match. Turnpike toll credit is being utilized for New Hampshire's match requirement, effectively using 100% federal funds.

This Agreement (Moultonborough 41581) has been approved by the Attorney General as to form and execution. The Department has verified that the necessary funds are available. Copies of the fully executed Agreement are on file at the Secretary of State's Office and the Department of Administrative Services, and subsequent to Governor and Council approval will be on file at the Department of Transportation.

The Department of Transportation has determined that the vendor is in good standing with the Secretary of State's Office, has secured the required levels of insurance, and has provided evidence of authority to execute and be bound by the contract. Documents supporting these assertions are available at the agency, for review upon request.

It is respectfully requested that authority be given to enter into an Agreement for consulting services as outlined above.

Sincerely,

William J. Cass, P.E.
Commissioner

Attachments

Moultonborough 41581 & 42602 January 25, 2024

DESCRIPTION:

The Projects include preliminary design, survey, public involvement, final design, and associated environmental & cultural services for two (2) intersections in the Town of Moultonborough. The planned improvements include the intersections of NH 25/Sheridan Lane and NH 25/Redding Lane to address safety and improve traffic operations.

SERVICES REQUIRED: RDWY, ENV, HYD, PINV, ROW, STRC, SURV, TRAF, GEOT

Rating Considerations	Scoring of Firms						
Moultonborough 41581 & 42602	WEIGHT	Green International Affiliates, Inc.	HEB Engineers, Inc.	Howard Stein Hudson	TEC, Inc.	Tighe & Bond, Inc.	
Comprehension of the Assignment	20%	16%		16%	17%		
Clarity of the Proposal	20%	14%		15%	17%		
Capacity to Perform in a Timely Manner	20%	15%		16%	16%		
Quality & Experience of Project Manager/Team	20%	15%		16%	15%		
Previous Performance	10%	7%		7%	7%		
Overall Suitability for the Assignment	10%	6%		7%	6%		
Total:	100%	73%	0%	77%	78%	0%	0%

Ranking of Firms: 1. TEC, Inc. 4.
2. Howard Stein Hudson 5.
3. Green International Affiliates, Inc. 6.

Rating Considerations	Scoring of Firms						
Moultonborough 41581 & 42602	WEIGHT	Green International Affiliates, Inc.	HEB Engineers, Inc.	Howard Stein Hudson	TEC, Inc.	Tighe & Bond, Inc.	
Comprehension of the Assignment	20%	18%		16%	18%		
Clarity of the Proposal	20%	18%		16%	19%		
Capacity to Perform in a Timely Manner	20%	17%		18%	19%		
Quality & Experience of Project Manager/Team	20%	19%		17%	18%		
Previous Performance	10%	9%		7%	8%		
Overall Suitability for the Assignment	10%	9%		6%	9%		
Total:	100%	90%	0%	80%	91%	0%	0%

Ranking of Firms: 1. TEC, Inc. 4.
2. Green International Affiliates, Inc. 5.
3. Howard Stein Hudson 6.

Rating Considerations	Scoring of Firms						
Moultonborough 41581 & 42602	WEIGHT	Green International Affiliates, Inc.		Howard Stein Hudson	TEC, Inc.		
Comprehension of the Assignment	20%	18%		16%	18%		
Clarity of the Proposal	20%	17%		17%	19%		
Capacity to Perform in a Timely Manner	20%	18%		18%	18%		
Quality & Experience of Project Manager/Team	20%	17%		17%	18%		
Previous Performance	10%	9%		7%	8%		
Overall Suitability for the Assignment	10%	9%		7%	9%		
Total:	100%	88%	0%	82%	90%	0%	0%

Ranking of Firms: 1. TEC, Inc. 4.
2. Green International Affiliates, Inc. 5.
3. Howard Stein Hudson 6.

Rating Considerations	Scoring of Firms						
Moultonborough 41581 & 42602	WEIGHT	Green International Affiliates, Inc.	HEB Engineers, Inc.	Howard Stein Hudson	TEC, Inc.	Tighe & Bond, Inc.	
Comprehension of the Assignment	20%	17%		16%	18%		
Clarity of the Proposal	20%	17%		18%	18%		
Capacity to Perform in a Timely Manner	20%	8%		8%	8%		
Quality & Experience of Project Manager/Team	20%	18%		17%	17%		
Previous Performance	10%	7%		7%	7%		
Overall Suitability for the Assignment	10%	8%		8%	9%		
Total:	100%	75%	0%	74%	77%	0%	0%

Ranking of Firms: 1. TEC, Inc. 4.
2. Green International Affiliates, Inc. 5.
3. Howard Stein Hudson 6.

Rating Considerations	Scoring of Firms						
Moultonborough 41581 & 42602	WEIGHT	Green International Affiliates, Inc.		Howard Stein Hudson	TEC, Inc.		
Comprehension of the Assignment	20%	16%		15%	18%		
Clarity of the Proposal	20%	18%		16%	18%		
Capacity to Perform in a Timely Manner	20%	16%		16%	16%		
Quality & Experience of Project Manager/Team	20%	17%		17%	17%		
Previous Performance	10%	7%		7%	8%		
Overall Suitability for the Assignment	10%	8%		7%	9%		
Total:	100%	82%	0%	78%	86%	0%	0%

Ranking of Firms: 1. TEC, Inc. 4.
2. Green International Affiliates, Inc. 5.
3. Howard Stein Hudson 6.

Rating Considerations	Scoring of Firms						
Moultonborough 41581 & 42602	WEIGHT	Green International Affiliates, Inc.		Howard Stein Hudson	TEC, Inc.		
Comprehension of the Assignment	20%	19%		18%	17%		
Clarity of the Proposal	20%	15%		16%	20%		
Capacity to Perform in a Timely Manner	20%	16%		15%	18%		
Quality & Experience of Project Manager/Team	20%	15%		16%	19%		
Previous Performance	10%	8%		7%	8%		
Overall Suitability for the Assignment	10%	7%		9%	10%		
Total:	100%	80%	0%	81%	92%	0%	0%

Ranking of Firms: 1. TEC, Inc. 4.
2. Howard Stein Hudson 5.
3. Green International Affiliates, Inc. 6.

Rating Considerations	Scoring of Firms						
Moultonborough 41581 & 42602	WEIGHT	Green International Affiliates, Inc.		Howard Stein Hudson	TEC, Inc.		
Comprehension of the Assignment	20%	17%		16%	18%		
Clarity of the Proposal	20%	17%		16%	17%		
Capacity to Perform in a Timely Manner	20%	19%		18%	19%		
Quality & Experience of Project Manager/Team	20%	18%		17%	18%		
Previous Performance	10%	8%		8%	8%		
Overall Suitability for the Assignment	10%	8%		7%	8%		
Total:	100%	87%	0%	82%	88%	0%	0%

Ranking of Firms: 1. TEC, Inc. 4.
2. Green International Affiliates, Inc. 5.
3. Howard Stein Hudson 6.

								TOTAL	RANK
Green International Affiliates, Inc.	3	2	2	2	3	2	2	16	2
0									
Howard Stein Hudson	2	3	3	3	2	3	3	19	3
TEC, Inc.	1	1	1	1	1	1	1	7	1
0									
0									

MOULTONBOROUGH
X-A004(678)
41581
PRELIMINARY DESIGN

TABLE OF CONTENTS

AGREEMENT EXECUTION ATACHMENTS **3**

PREAMBLE **1**

ARTICLE I - DESCRIPTION OF PROFESSIONAL SERVICES TO BE RENDERED **2**
- A. LOCATION AND DESCRIPTION OF PROJECT 2
- B. GENERAL SCOPE OF WORK 2
- C. SCOPE OF WORK (PRELIMINARY DESIGN) 3
- D. GEOTECHNICAL 22
- E. UTILITIES 22
- F. QUALITY CONTROL 22
- G. MATERIAL FURNISHED BY THE DEPARTMENT OF TRANSPORTATION 22
- H. WORK SCHEDULE AND PROGRESS REPORTS 23
- I. SUBMISSION OF REPORTS, PLANS AND DOCUMENTS 24
- J. DELIVERABLES 25
- K. DATE OF COMPLETION 26

ARTICLE II – COST PLUS FIXED FEE CONPENSATION OF CONSULTANT **27**
- A. GENERAL FEE 27
- B. LIMITATION OF COSTS 29
- C. PAYMENTS 29
- D. ANNUAL INDIRECT COST RATE SUBMISSIONS 29
- E. RECORDS, REPORTS AND FINAL AUDIT 30

ARTICLE III – GENERAL PROVISIONS **32**
- A. HEARINGS, ETC. 32
- B. CONTRACT PROPOSALS 32

ARTICLE IV – STANDARD PROVISIONS **33**
- A. STANDARD SPECIFICATIONS 33
- B. REVIEW BY STATE AND FHWA – CONFERENCES – INSPECTIONS 33
- C. EXTENT OF CONTRACT 33
- D. REVISIONS TO REPORTS, PLANS OR DOCUMENTS 34
- E. ADDITIONAL SERVICES 35
- F. OWNERSHIP OF PLANS 35
- G. SUBLETTING 36
- H. GENERAL CONPLIANCE WITH LAWS, ETC. 36
- I. BROKERAGE 37
- J. CONTRACTUAL RELATIONS 37
- K. AGREEMENT MODIFICATION 39
- L. EXTENSION OF COMPLETION DATE(S) 39
- M. TITLE VI (NONDISCRIMINATION OF FEDERALLY-ASSISTED PROGRAMS) COMPLIANCE 39
- N. DISADVANTAGED BUSINESS ENTERPRISE POLICY REQUIREMENTS 41
- O. DOCUMENTATION 42
- P. CLEAN AIR AND WATER ACTS 42

ATTACHMENTS

A. **SCOPE OF SERVICES FOR PRELIMINARY DESIGN** Prepared by TEC, Inc. dated February 11, 2025

AGREEMENT EXECUTION ATACHMENTS

1. CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS, ETC.
2. CONSULTANT DISCLOSURE STATEMENT FOR PREPARATION OF ENVIRONMENTAL EVALUATIONS
3. CERTIFICATION OF CONSULTANT/SUBCONSULTANT
4. CERTIFICATION OF STATE DEPARTMENT OF TRANSPORTATION
5. CERTIFICATION FOR FEDERAL-AID CONTRACTS EXCEEDING $100,000 IN FEDERAL FUNDS
6. SIGNATURE PAGE
7. CERTIFICATION OF GOOD STANDING
8. CERTIFICATION OF AUTHORITY/VOTE
9. CERTIFICATION OF INSURANCE

MOULTONBOROUGH
X-A004(678)
41581
PRELIMINARY DESIGN

AGREEMENT
FOR PROFESSIONAL SERVICES

PREAMBLE

THIS AGREEMENT made this 10th day of July in the year 2025 by and between the STATE OF NEW HAMPSHIRE, hereinafter referred to as the STATE, acting by and through its COMMISSIONER OF THE DEPARTMENT OF TRANSPORTATION, hereinafter referred to as the COMMISSIONER, acting under Chapter 228 of the Revised Statutes Annotated, and TEC, Inc., with principal place of business at 169 Ocean Boulevard, in the Town of Hampton, State of New Hampshire, hereinafter referred to as the CONSULTANT, witnesses that:

The Department of Transportation, State of New Hampshire, hereinafter referred to as the DEPARTMENT, requires professional engineering and environmental consulting services to select an appropriate proposed action that is supported by the community, technically feasible, environmentally permittable, and economical; develop an approved Environmental Document; and bring the proposed action to a public hearing for layout approval for the intersection of NH Route 25 and Sheridan Road in the Town of Moultonborough.

The CONSULTANT'S Fee Proposal dated February 11, 2025, is hereby adopted by reference and considered to be part of this AGREEMENT.

This AGREEMENT becomes effective upon approval by the Governor and Council.

ARTICLE I - DESCRIPTION OF PROFESSIONAL SERVICES TO BE RENDERED

NOW THEREFORE, in consideration of the undertakings of the parties hereinafter set forth, the DEPARTMENT hereby engages the CONSULTANT, who agrees to render services to the DEPARTMENT which shall include, but not be restricted to, the following items, in accordance with conditions and terms hereinafter set forth:

A. LOCATION AND DESCRIPTION OF PROJECT

This project involves the study of improvements of the NH Route 25 and Sheridan Road intersection in the Town of Moultonborough. The intersection was identified in the 2008 Corridor Study completed by the Lakes Regional Planning Commission (LRPC) to document the existing traffic conditions, understand anticipated the potential development of the corridor, and develop access management recommendations of the corridor.

The Moultonborough 41581 project proposes to address safety and operations for the intersection of NH Route 25 and Sheridan Road. The anticipated project length will begin 1000' west (near Kids Point Road) and ending 500' east of the intersection, there may be impacts to the Red Hill River (outlet from Garland Pond and conveys to Mill Pond). approximately 1.1 miles west of the NH Route 109. Concerns identified by the 2008 Corridor Study:

- Difficulty turning left from NH Route 25 to Sheridan Road
- Prevalent wildlife crossing and priority habitat along the Red Hill River
- The intersection was identified as the top priority by the Moultonborough Police Chief in 2008.
- Pedestrian and bicyclist accommodations for Sheridan Road

B. GENERAL SCOPE OF WORK

The development of the preliminary engineering for this project is expected to be performed in two phases (Preliminary Design and Final Design). The goals of the Preliminary Design engineering efforts of this project are to select an appropriate proposed action that is supported by the community, technically feasible, environmentally permittable, and economical; develop an approved Environmental Document; and bring the proposed action to a public hearing for layout approval. The development of improvement alternatives will include public participation involving public and private stakeholders and the public in the decision-making process to aid in the determination of the proposed action and the development of an approved National Environmental Policy Act (NEPA) document. Final Design will encompass the engineering and permitting efforts needed to advance the design from NEPA approval to project advertising, including final design plans, specifications and

estimates for the project. This scope of services is for the first phase (Preliminary Design) only; Final Design is not included in this scope of work.

The development of improvement alternatives will include a dynamic public participation program involving public and private stakeholders and the general public in the decision-making process to aid in the determination of the proposed action. The following general tasks are included, but not limited to the Preliminary Design:

1. Preliminary design to identify deficiencies and develop alternatives.
2. Traffic Data Collection & Analysis
3. Highway Safety Analysis & Design
4. Environmental investigations to prepare and complete all appropriate environmental documentation to satisfy NEPA.
5. Public outreach and involvement support services, including a Public Hearing
6. ROW layout and plan development, including any necessary survey work, for reestablishing and documenting the existing highway right-of-way in a manner suitable for recording at the Registry of Deeds.
7. Access Management
8. Roadway design associated with the preferred alternative.
9. Drainage design, including appropriate water quality evaluations.
10. Maintenance of Traffic
11. Concurrent Contract Administration

Assuming a successful Public Hearing, and upon completion of the Preliminary Design (Part B), the DEPARTMENT reserves the right to either negotiate a scope and fee for Final Design (Part C) to prepare final design plans, specifications and estimates for the project limits, or terminate the contract.

C. SCOPE OF WORK (PRELIMINARY DESIGN)

The work, as further described in the CONSULTANT's Scope of Services dated February 11, 2025 hereinafter referred to as Attachment A, requires the development and refinement of engineering plans and technical documentation. The tasks for Preliminary Design have been divided into three categories: Preliminary Design, Environmental Documentation and Public Participation. The Preliminary Design tasks cover the work required to reevaluate and develop improvement alternatives to arrive at a proposed action. The Environmental Documentation tasks cover the work required to document impacts of the alternatives to all relevant natural and cultural resources. The Public Participation tasks cover public outreach for all aspects of the project. Final design will be undertaken by Part 'C' of the

design efforts and will encompass the engineering efforts needed to advance the design from NEPA approval to project advertising.

For reporting and budgeting purposes, the CONSULTANT shall track and invoice all costs for each project independently. The work shall be as described in the CONSULTANT's Scope of Services, ATTACHMENT A, and requires the development and refinement of engineering plans and technical documentation in accordance with the following criteria and involving the following work effort:

a. Preliminary Design:

Preliminary Design shall consist of all efforts needed to collect data, prepare base plans, develop a range of reasonable alternatives, evaluate alternatives, and investigate their consequences to allow the Department to select a proposed action, in accordance with the policy and procedures of the DEPARTMENT and the provisions of this AGREEMENT. The CONSULTANT shall be responsible for developing engineered plans through an iterative process of design and review involving the DEPARTMENT, STATE, and Federal environmental resource agencies, regional planning commissions, the local community, and the public.

The CONSULTANT shall be responsible for the preparation of complete designs, including all plans, specifications for work not included in the current specifications of the DEPARTMENT, computations, estimates, and documents for required submissions to the DEPARTMENT, the Federal Highway Administration, and/or any other STATE or Federal agency, that may be required.

The engineering design shall take into consideration all factors affecting the cost of the construction, such as site-specific foundation considerations; earthwork quantities; erosion and sedimentation control; traffic control; water-quality-treatment issues; construction phasing and complexity; utilities affected; right-of-way needs; environmental issues and commitments; cost; construction materials; etc.

Designs shall conform to the current standards, specifications, policies, and guidelines enumerated in the Federal Aid Policy Guide, Subchapter G, Part 625, or to 23 Code of Federal Regulations, Part 625 and the DEPARTMENT'S Design Manuals, and most current Standard Plans for Road Construction, except as approved.

All plotting, drafting, and calculations performed by the CONSULTANT shall be independently checked by members of the CONSULTANT'S staff other than those who performed the original work. The work of each stage submission (including quantity estimates) shall have been appropriately checked. The CONSULTANT shall verify all computations and design calculations. The CONSULTANT shall furnish one (1) permanent, legible copy and one electronic format (PDF) copy of the design calculations, suitably bound, and when directed, all study plans,

work plans, alternate studies, and estimates indexed in accordance with DEPARTMENT procedures.

Data Collection

The CONSULTANT shall collect any pertinent information available within the project limits including, lane geometries, traffic control information, utility locations, or other available materials. The CONSULTANT shall conduct a field review of the project area to identify key engineering controls, topographic features, natural and cultural resource constraints, and land uses that could have a bearing on the design.

The CONSULTANT shall gather traffic volume data as needed to analyze existing and future traffic operations under both no-build and build conditions within the project area. Previous traffic counts that are currently available through the NHDOT Transportation Data Management System. The Consultant will collect Turning Movement Counts (TMCs) on a Wednesday or Thursday non- holiday from 7AM to 7PM on days, when snow is not expected. This data will be used along with the crash analysis to determine if any new traffic control is needed on NH Route 25 at the intersection with Sheridan Road.

The TMCs should be classified into the following categories: passenger vehicles, heavy vehicles, and pedestrians. The CONSULTANT shall process the raw TMC data to create peak hour volume turning movement diagrams, calculate truck percentages and peak hour factors. The traffic data will be submitted to the DEPARTMENT for review prior to the development of the design alternatives.

In addition, the CONSULTANT will collect 7-day, twenty-four-hour (24 hr.) traffic data of NH Route 25 to validate the turning movement counts, establish pandemic adjustments, calibrate the traffic analysis, determine the growth rate, and facilitate the pavement design. The FHWA 13-category axle-based classification will be obtained for each project and submitted to Bureau of Traffic to prepare the ADL calculations. The ATR should also collect speed data to assist with safety and speed analyses.

Any additional data to support multimodal analysis, safety, public outreach, and the environmental documentation will be collected by the CONSULTANT.

Topographic Survey mapping

The DEPARTMENT will conduct the topographic survey(s) and process the data, which the CONSULTANT will then incorporate into the digital terrain model and base plan. The most recent ortho-rectified digital aerial photographs are available online through NH GRANIT (https://granit.unh.edu/), if needed. The CONSULTANT will submit requests for supplemental survey, as necessary.

ARTICLE I

Existing Right-of-Way (ROW) Plan Development

This work will be performed a CONSULTANT licensed to practice the profession of Land Surveying in New Hampshire. The CONSULTANT shall be responsible for coordination efforts and will participate in the ROW meetings that will be scheduled with the DEPARTMENT. The CONSULTANT shall be responsible for the coordination and be available for direct contact for all survey related communications with the DEPARTMENT, including the scheduling of a kickoff meeting with the Bureau of Right of Way for the purpose of obtaining the DEPARTMENT's Right of Way record information for the subject corridor.

The CONSULTANT shall complete an Existing Right of Way Survey of the identified section of NH Route 25, including all intersecting municipal or State roads extending to a minimum distance of 500 ft. beyond the limits of the proposed improvements. All survey work must be completed in accordance with the minimum standards for a Category 3 Urban Class Boundary Survey as defined in the - NH Land Rules 500 and comply with the Technical Standards portion of the aforementioned, and duly defined in the 2017 NHDOT Survey and Technical Standards Manual, requiring all survey work to be supervised by a NH Licensed Land Surveyor. The survey shall include, but is not limited to, a complete field survey locating all available boundary and right of way monumentation and all relevant lines of occupation along the subject corridor.

The CONSULTANT shall prepare an Existing ROW Plan set depicting the ROW limits, record alignments, all standard surveying mapping geometrics, including metes and bounds, curve data, tie lines, additional state interests and easements, centerline station and offset information for all relevant existing ROW record lines and monuments. The CONSULTANT will develop the Existing ROW survey and control through the following process:

i. ROW Facilitation Meeting: An initial meeting with the DEPARTMENT for project overview, review of historic ROW information and turnover of DEPARTMENT project data and ROW;

ii. Records Research: The CONSULTANT's is required to research the following record archival venues until all relevant record information to the subject project is obtained for consideration of the Right of Way limit determination; municipal records, historical records, state archive records, DOT records, county registry and probate records, and other facilities as needed.

iii. Boundary Survey: The CONSULTANT shall complete the boundary survey in accordance with aforementioned standards with an expected process as follows. Any

planned deviation from this process must be approved by the DEPARTMENT prior to execution.:

1. Field reconnaissance of ROW and abutting boundary monuments.
2. Establish geodetic control network on NH State Plane Coordinate System.
3. Conduct an, on the ground field survey, of the existing ROW and abutting boundary monuments.
4. Process survey control data using least squares adjustment at 95% confidence level. Process side shot data on adjusted control network and verify.
5. Develop ROW alignments and establish ROW limits based on the processed field survey data.

iv. Existing ROW Plan Review: The CONSULTANT shall submit Preliminary ROW Plans and a written Survey Report outlining the basis of the survey findings and final Right of Way determination. for review by the DEPARTMENT's Bureau of Right of Way Land Titles Section. The CONSULTANT will be required to attend all ROW facilitation meetings that involve survey related discussions.

v. Development of Final Existing ROW Plan: The CONSULTANT shall address all DEPARTMENT comments resulting from the Preliminary ROW Plan review through a written explanation of how review comments were addressed. Once finalized, the CONSULTANT will be required to record the Existing Right of Way Plan in the applicable County Registry of Deeds. The CONSULTANT shall provide the DEPARTMENT with the Exiting ROW Plans in DGN file format and one full size PDF copy of the recorded plan. The CONSULTANT shall provide the DEPARTMENT with all supporting survey data, including but not limited to; raw data files, adjustment reports, field book notes, geodetic control data, coordinate file of all survey points in ASCII file format and alignment data in .cl or XML format.

Traffic Analysis & Reporting

The CONSULTANT shall complete any macroscopic and microscopic evaluations for the various alternatives as needed to analyze existing and future traffic operations under both no-build and build conditions within each project area. Capacity analyses are anticipated to be done using Synchro for signalized and unsignalized intersections and SIDRA for roundabouts.

It is assumed that construction will be completed by 2030. Traffic volumes will be projected to 2050 using an annual growth rate, of at least one-percent (1.0%), which will be developed through coordination of the Town of Moultonborough, Lakes Regional Planning Commission, NHDOT, and calculated based on research of historical data in the area. One AM

& one PM scenario will be analyzed for each design alternative identified in ATTACHMENT A for the corridor and intersections and the no-build condition.

The CONSULTANT shall provide both a draft and final technical memorandum detailing the forecasting methodologies. A traffic operations report will be compiled documenting existing, no-build and build traffic conditions, traffic modeling methodology and results, signal warrant results. The traffic analysis will be conducted in accordance with the NHDOT Synchro Inputs Checklist and will be reported in terms of Level of Service (LOS) based on delay outputs from Synchro and queue data at Redding Lane and Birch Lane based on ten averaged runs of SimTraffic, as well as and other Measures of Effectiveness (MOEs) determined appropriate for the project and proposed by the CONSULTANT. The results of the traffic and crash data analysis will be submitted to NHDOT for comment, which will be incorporated in the final Design Report.

Crash Data Collection & Analysis

The CONSULTANT shall evaluate crash data provided by the DEPARTMENT (in Excel format) to determine the expected highway safety performance for each alternative, including the no-build alternative. The CONSULTANT shall consider how the alternatives would impact safety.

Crash data for the intersection and approach roadway segments tabulating crash records based on type, location, and severity up to ten-years. The CONSULTANT shall assess and note patterns of the tabulated data to address potential traffic safety problems. Collision diagrams will not be required.

The results of the crash data analysis will be presented in a technical memorandum that will be submitted to NHDOT for review prior to incorporation in the final Design Report. When appropriate, the AASHTO Highway Safety Manual will be referred to predict the safety performance of the proposed design alternatives.

Alternative Development & Evaluation

The CONSULTANT will develop and evaluate a range of alternatives and investigate their consequences to allow the DEPARTMENT to select a proposed action. The alternatives development will coincide with the public outreach working group, informational and public officials' meetings.

Reasonable Alternatives:

It is anticipated that up to two (2) different reasonable design alternatives will be developed for the project. Each alternative will be developed to an equal level of detail. Lanes, shoulders, slope impact limits, right of way requirements, environmental impacts, and potential water

quality protection measures will be determined for each reasonable alternative. Intersection alternatives will include turn lane warrants, signal warrants, sight distance improvements, design vehicle turning movement improvements.

Each alternative will be submitted to the Department for review. Each submission will include conceptual level plan, profile, typical sections, and cross-sections. In locations where the proposed improvements are minimal and the roadway footprint does not change (e.g. minimal widening, milling, and resurfacing, etc.), general (non-critical) cross-sections will not be provided. Cross-sections at all typical (non-critical) driveway locations will not be required.

Conceptual level traffic control will be presented at this time to determine if there are major differences in the alternatives. This is expected to be a short explanation with critical sections, showing phasing, if needed.

A basic drainage study will be performed for the project area. The purpose of this study is to identify existing drainage patterns, establish proposed drainage outlets, and determine the right-of-way that will be required for BMP measures. A basic drainage study will be performed for the project based on conceptual drainage and preliminary BMP locations. The purpose of this study is to identify existing drainage patterns, evaluate culverts and stream crossings, establish presumed proposed drainage outlets with approximate flows and determine the right-of-way that will be required for the conceptual BMP measures developed. There will be no closed system analysis or design performed as part of this study. A report will be provided outlining the conceptual pre and post flows at all the presumed outlet locations. This study will be performed only for one of the design alternatives (likely the one featuring the most impervious surface area).

The alternatives will be summarized in a comparison matrix and accompanied by conceptual level cost estimates, with clear explanations of assumptions used to develop the estimates. Calculations supporting the major item categories will be provided at a level consistent with the level of design detail.

Post-Hearing and Slope & Drain Submissions

The CONSULTANT will revise and further develop the selected alternative to address and satisfy the DEPARTMENT's response to Public Hearing public comments and following the Finding of Necessity. The submission shall consist revised selected alternative roadway, traffic control, drainage and water quality, presentation plans, and other alternative plans developed as well as design, traffic, and drainage reports affected by the public hearing response and DEPARTMENT comments. In addition, the CONSULTANT will continue to advance the project by completing the Slope and Drain Submission. The submissions will follow the

DEPARTMENT's Post-Hearing and Slope and Drain Submissions Design Review Checklists and Project Development Process.

Cost Estimates

Conceptual cost estimates will be developed to progress preliminary design and reduce the range of alternatives for the alternatives. The conceptual alternatives will be compared using a high-level cost per lane mile approach from data supplied by the DEPARMENT.

For the reasonable alternatives and prior to the Public Hearing an estimate will be provided that quantifies items such as pavement, roadway select materials, earthwork, structures, and other major cost items as appropriate, and apply the Department's current weighted average unit prices. Other items such as drainage, traffic control, signing and pavement markings will be estimated on a percentage basis. A spreadsheet will be provided by the Department to assist in the development of this estimate. Right of way acquisition costs will be determined from approximate assessed value of impacted property, relocation assistance and other associated acquisition expenses. Environmental mitigation costs will be estimated based on approximate impacts of wetlands and streams.

Design Report

The CONSULTANT shall prepare a Design Report to document the existing conditions for each project, and to summarize the design decisions and engineering details of the proposed action. Any rejected alternatives should also be documented to explain the justification for their rejection. The Design Report format will be supplied by the Department. If a design exception is required, the CONSULTANT shall prepare the design exception document and shall provide supporting documentation to justify the exception.

Project Team Meetings

Project team meetings will be held periodically over the course of the Preliminary Design. Informal meetings (in-person or virtual) will take place, when needed, to discuss design details, coordinate internal DEPARTMENT meetings, coordinate submissions, environmental documentation, or other information to clarify expectations and advance the project are included in the Preliminary Engineering, Environmental, and Public Involvement efforts. These meetings are in addition to the working group and public informational meetings listed under the Public Participation section below.

Formal Project Meetings (in-person or virtual), as referred to as Over-the-Shoulder Meetings, requiring multiple Bureaus and formal decisions when questions and issues that may include resource constraints, impacts of alternatives, schedule, and cost issues. These meetings will involve CONSULTANT and DEPARTMENT staff, but may also include representatives

of the Town, Lakes Region Planning Commission, state or federal agencies, or others as appropriate.

Approved Action Deliverables

The CONSULTANT'S final submission shall include hard copy of plans, as well as electronic CAD/D files. The CAD/D files shall consist of the base plans with enhancements in MicroStation format, using DEPARTMENT naming conventions, line styles and character styles. The CAD/D files shall also contain a proposed 3D top line model, complete out to the slope limits. The horizontal, vertical (profiles), and pavement layout shall allow further development toward final design. In addition, the following shall be provided for the preferred alternative: design calculations to support superelevations, preliminary traffic control plan/critical sections, draft construction schedule, proposed right-of-way layout, major utility impacts documented, draft typical sections, cost estimate with supporting quantity calculations, and outstanding issues/concerns.

b. Environment

The NEPA Documentation task covers the documentation needed to comply with the National Environmental Policy Act (NEPA) (including Cultural Resource investigations in accordance with Section 106 of the National Historic Preservation Act). The CONSULTANT shall develop a formal Purpose and Need statement, identify and document impacts of the alternatives to all relevant natural and cultural resources, and identify any permitted requirements. Each intersection is expected to have independent utility and the CONSULTANT shall collect, document, and prepare the NEPA documentation separately.

Data Collection

The CONSULTANT shall review relevant data sources to identify all environmental resources and/or constraints present within the Project Area. Resources to be identified include:

i. Water-Based Resources

1. Groundwater: Data regarding aquifers, public water supplies and wells within the study area will be gathered from appropriate sources such as the GRANIT GIS database, New Hampshire Department of Environmental Services (NHDES) mapping, NHDES Drinking Water and Groundwater Bureaus, inventory data, municipal data or municipal mapping. The CONSULTANT will describe these resources and display them on project mapping. Data will also be needed to identify any sensitive resources directly adjacent and potentially down gradient of the project area. The mapped resources will be assessed and

described in terms of their current and potential use and their relative proximity and potential hydrological connection to the project area. In addition, consideration shall be given to stormwater conveyance and treatment in the vicinity of the drinking water supplies and wellhead protection areas.

2. Surface Waters: The CONSULTANT will review all current regulatory requirements and constraints associated with surface water resources which will be identified and summarized in the environmental document. A review of the most recently approved State 303(d) list will be conducted to identify water quality impairments and Total Maximum Daily Loads (TMDLs) within the project area. The proposed action and alternatives, if necessary, will be assessed to determine adherence to any existing TMDL implementation plans, watershed management plans, and active water quality related permits including but not limited to NHDES Alteration of Terrain (AOT) and; EPA NPDES for Small Municipal Separate Storm Sewers (MS4), and for Construction activities (CGP).

The CONSULTANT will investigate appropriate water quality treatment measures necessary to minimize nutrient impacts on surface waters. This shall include a pavement area analysis to determine the percent of the pavement treated prior to discharge with the goal of 100% capture and treatment. The approximate size and placement of structural Best Management Practices (BMPs) will be shown at the Public Hearing. BMP placement and type will be compliant with current AOT requirements and consideration soil conditions, depth to bedrock, groundwater tables, wellhead protection areas, drinking water protections, groundwater protections, and the proximity to the project's stormwater discharge points.

3. Floodplains: FEMA floodplain and floodway information will be gathered from appropriate sources and displayed on project mapping.

4. Wetlands: The CONSULTANT will delineate wetlands, determine their functions and values within the study area limits based on state and federal criteria, and will collect sufficient field data to document the delineation and state and federal jurisdiction. Wetlands will continue to be identified using the 2007 wetland permit numerical designation. If access to private property is required, landowners will be notified by the DEPARTMENT. The CONSULTANT will survey wetland flagging using a GPS unit with sub-meter accuracy. The CONSULTANT will note any unusual features such as invasive species, disturbed areas, or uncommon wetland types such as bogs or vernal pools. This information will be provided in plan format and in a report that is stamped by a Certified

Wetland Scientist (CWS) with a current NH certification, which includes the location of the features, classifications of wetlands present within the wetlands, descriptions of the each wetland's hydrology, soils and vegetation, flagging number system of each delineated feature, photographs, functions and values (including the Wetlands Function-Value Evaluation Form from the Highway Methodology Workbook Supplement), Wetland Determination Data Plot Forms with paired upland and wetland sample data points, and the results of the stream crossing assessments. If required, the CONSULTANT will identify potential wetland mitigation opportunities either within each project or the surrounding area.

5. Invasive Species: The CONSULTANT will determine the presence of invasive species in conjunction with other project field investigations. The type and extent of each distinctive invasive plant population will be identified within the project limits. Approximate locations of populations will be located with GPS and shown on the project plans.

6. Stream Crossings: The CONSULTANT will identify all intermittent and perennial stream crossings within the project study limits. The CONSULTANT will complete stream crossing field data collection assessments for any of the streams identified as tier 3 in accordance with Env-Wt 900 and any applicable NHDOT field data collection forms. The delineations at stream crossings shall be at a minimum 100' upstream and downstream of the crossing. Data collection shall include a longitudinal profile through the crossing with relative inlet and outlet invert elevations and upstream and downstream streambed elevations. The CONSULTANT will determine the watershed size for each crossing and determine the corresponding Tier classification using the USGS Stream Stats tool. The CONSULTANT will perform Stream Crossing Evaluations in accordance with the NHDES Stream Crossing Rules Env-Wt 900 series to aid in determination of a design that meets the NHDES Stream Crossing Guidelines, and/or alternative design. The specific streams crossing assessments and evaluations required for the project includes the Red Hill River.

7. Land-Based Resources

   a. Soils: Soil series within the study area will be mapped based on existing databases, including the distribution of prime, statewide, local, or unique farmland soils.

   b. Active Farmlands: Active farmlands will be identified and described.

c. Public and Conserved Lands: Publicly owned lands, bicycle and pedestrian trails, and privately conserved lands will be identified.

d. Section 4(f) Resources: Public parks, historic sites, fish and wildlife refuges, or other areas subject to Section 4(f) will be identified.

e. Section 6(f) Resources: Lands receiving Section 6(f) funds will be identified based on coordination with the Department of Natural & Cultural Resources (DNCR) the NH Department of Resources and Economic Development.

8. Wildlife

a. Wildlife and Habitat: Wildlife resources will be identified with information from the NH Wildlife Action Plan and supplemented as needed by field reconnaissance.

b. Fisheries: The fisheries resource information will be updated based on coordination with NH Fish and Game and the US National Marine Fisheries Service.

c. Threatened and Endangered Species: Threatened and endangered species information will be gathered through coordination with the NH Department of Natural and Cultural Resources, NH Fish and Game Department, and the US Fish and Wildlife Service, as well as field investigations. The CONSULTANT will use the US Fish and Wildlife Service's on-line Information for Planning and Consultation (IPaC) tool for review of identified federally listed species, as well as the Natural Heritage Bureau's data check tool. An acoustic bat surveys is expected for the projects.

9. Cultural Resources (Historic): The CONSULTANT will prepare and submit, through the DEPARTMENT, a NH Division of Historical Resources (NHDHR) Request for Project Review (RPR) form for Transportation projects or the Section 106 Programmatic Agreement Appendix A or B Certification Forms, as applicable. The CONSULTANT will be responsible to complete all National Register eligibility survey forms in accordance with NHDHR Survey Policy and Manuals. The CONSULTANT will conduct all Section 106 public outreach efforts with Consulting Parties and municipalities. The CONSULTANT will prepare a draft effect memo and, if needed, e106 for submission to the Advisory Council on Historic Preservation and a Memorandum of Agreement for the Adverse Effect. If needed, following a determination of adverse effect, the CONSULTANT will coordinate with the DEPARTMENT, the lead federal agent, NHDHR, and Consulting Parties on appropriate mitigation.

ARTICLE I

Preparation of an Architectural Survey Plan (ASP) is assumed as a planning document for NHDHR.

10. Cultural Resources (Archaeology): The CONSULTANT shall undertake a Phase IA Archaeological Sensitivity Assessment followed by a Phase IB Intensive Archaeological Investigation of areas of sensitivity that may be impacted by the project alternatives, if necessary. The CONSULTANT shall produce a comprehensive report indicating the results of the investigations, identifying areas of sensitivity, and presenting recommendations, if needed for Phase II Determination of Eligibility and Phase III Data Recovery. The CONSULTANT shall complete all necessary phases of archaeology as required to reach a Public Hearing, understanding that additional phases may be completed in Part B.

Should the Phase 1A investigation identify any sensitive areas that may be impacted by the design alternatives, these areas may be further evaluated through a Phase 1B investigation to determine if resources are present. The CONSULTANT will provide a report in Part A to summarize Phase 1A/1B findings and recommendations. Phase II and any other archeological investigations will be included as an environmental commitment in the NEPA documentation and advanced during Preliminary Design (Part B) of the project.

11. Social and Economic Resources: The DEPARTMENT will develop the socio-economic analysis of the regional social and economic resources. The CONSULTANT will review the Department's analysis and identify the relationship between the study area transportation/circulation pattern, regional and local municipalities' Master Plans, and the businesses and residents within its immediate influence. The CONSULTANT will prepare a short narrative that summarize the applicability of the Department's analysis to each project.

12. Noise: This project is not anticipated to require noise analysis or mitigation, however the CONSULTANT shall perform, as necessary, tasks required to assess the impacts qualitatively on properties to satisfy the National Environmental Policy Act (NEPA) review.

13. Air Quality: This project is not anticipated to require air quality analysis or mitigation, however the CONSULTANT shall perform, as necessary, tasks required to assess the potential air quality impacts of the project to determine and/or achieve compliance with the State of New Hampshire Air Quality Implementation Plan, and the provisions set forth in the Clean Air Act Amendments (CAAA) and NEPA.

14. Contaminated Properties: A database search will be undertaken to identify areas with records of hazardous materials or contamination within 1,000 feet of the project limits. This work will also require a review of historic aerial photographs to evaluate past and current land use, and field surveys of the project area to look for observable physical evidence of contamination or potential contamination sources. This information will be described in a summary report that includes a list of all parcels with potential contamination concerns.

The CONSULTANT will coordinate with the DEPARTMENT's Bureau of Environment's Contamination Program to confirm findings and will assess measures required to conduct geotechnical investigations within areas of potential contamination.

15. Limited Reuse Soil (LRS): The CONSULTANT shall determine the quantity of LRS generated during construction, by phase if applicable, and determine the ability, due to quantities and any applicable construction phasing, to reuse the LRS within the project limits. The CONSULTANT shall determine and provide figures for potential temporary on-construction-site stockpile locations for excavated LRS.

16. Construction Impacts: The CONSULTANT shall perform, as necessary, tasks required to assess the potential construction impacts on the natural, cultural and socio-economic resources present within the project areas qualitatively and include identification of BMP's to minimize impacts. Potential construction impacts and likely mitigation measures will be described. These may include detours during construction; erosion and sediment control; air, noise, and dust pollution; and special measures that may be needed to protect water quality.

Agency Coordination

The CONSULTANT will attend up to three (3) of the DEPARTMENT's monthly Natural Resource Agency meetings and coordinate a field meeting, if needed, with the agencies to review resource impacts. The CONSULTANT will also attend up to three (3) of the DEPARTMENT's monthly Cultural Resource meetings and possible field visit, with the lead federal agent and the NHDHR to discuss historic resources and Section 106 findings. The CONSULTANT will be responsible for supplying support graphics, making presentations, and preparing meeting minutes.

Project Purpose and Need

The CONSULTANT will develop a formal Purpose and Need Statement for the project consistent with NEPA and other Federal guidelines.

Alternatives Development and Evaluation

ARTICLE I

The CONSULTANT will develop a Summary Matrix of the impacts and effects of the reasonable design alternatives for use by the DEPARTMENT and stakeholders as a planning tool determine the proposed alternative. The alternatives screening and selection process will be summarized in the Environmental Study. This will include initial alternatives concepts, screening criteria and results, and the basis for eliminating alternatives or options.

Description of Proposed Action

The CONSULTANT will describe the Proposed Action in detail, including location, dimensions, traffic patterns, amenities, or facilities such as pedestrian crossings, construction issues, and estimated costs. Conceptual plan, profile, and cross-section views will be included.

Environmental Impacts of the Proposed Action

As outlined in ATTACHMENT A, the CONSULTANT will identify resource impacts, potential measures to minimize or mitigate impacts, and possible resource enhancements that could be achieved by the Proposed Alternatives, for the following resources/impacts:

Land Use	Social and Economic Resources	Farmlands
Air Quality	Noise	Groundwater Resources
Surface Water Resources	Chloride Loading	Pollutant Loading (TN, TP & TSS)
Floodplains	Wetlands	Wetland Mitigation
Wildlife/ Vegetation/ Fisheries	Threatened or Endangered Species	Parks/Recreation/Conservati on Lands
Cultural Resources	Hazardous Materials/Contamination	Limited Reuse Soils
Visual Resources	Environmental Justice (provided by the DEPARTMENT)	Construction Impacts
Summary of Impacts	Environmental Commitments	

An individual Categorical Exclusion (non-Programmatic) is assumed for purposes of the scope of work and cost for each project. The environmental narrative accompanying the Categorical Exclusion documentation package is anticipated to be approximately 20 pages based on the size, type and context of the project. Mapping for the report will be limited to a topographic map and simple aerial overview (3-4 sheets). Agency correspondence and supporting materials will be provided in appendices.

The floodplain evaluation for the NEPA review will map the location of floodplain/floodway encroachments and discuss project compliance with Executive Order

11988. For purposes of Section 7 compliance, it is assumed that the project will have "no effect" on federally listed species for each project.

In addition, Land acquisition impacts will be summarized, including any potential displacements. A detailed analysis of neighborhoods, land use, community services, farmlands, energy and utilities is not anticipated to be required.

Section 4(f)

If necessary, the CONSULTANT will prepare a Section 4(f) evaluation that complies with applicable Federal laws and regulations, including Section 4(f) of the Department of Transportation Act, 23 CFR 774, FHWA's Section 4(f) Policy Paper, and other resources as appropriate. The evaluation will include: a description of Section 4(f) resources; a description of any project "use" of the resources; an alternatives analysis, including a least overall harm analysis; measures to minimize harm; coordination activities with NH State Historic Preservation Officer (SHPO), lead Federal agency; and conclusions.

Potential historic and parkland resources potentially subject to Section 4(f) will be identified and mapped. In terms of level of effort, it is assumed that the preferred alternative will have only a de minimis impact to Section 4(f) resources. An individual Section 4(f) review that has extensive alternatives analysis requirements is anticipated for the project.

Section 6(f)

If any Section 6(f) properties are identified in the scope above and potential impacts to 6(f) properties are required to be quantified. Preliminary activities identified no section 6(f) resources; therefore, this scope assumes that there are no 6(f) properties impacted.

Draft Environmental Document/Section 4(f) Evaluation

The Draft Environmental Document will document the resource impacts outlined in Section C.2.f above. The Environmental Document will incorporate, either directly or by reference, the alternatives analysis and conclusions reached in Section C.2.d above and in the subsequent selection of the proposed alternative. The document will also identify which environmental permits are required, but the actual permit applications will not be undertaken until final design. The Section 4(f) evaluation, resource reports, agency correspondence, and public meeting summaries will be appended. An administrative Draft will be prepared for review by the DEPARTMENT and the lead Federal agency. After comments are addressed by the CONSULTANT, the Draft Environmental Document will be submitted to the DEPARTMENT, the lead Federal agency, and all other parties as

directed, for review. Four printed copies and 3 CDs of the Draft Environmental Document /4(f) Evaluation shall be provided by the CONSULTANT.

It is assumed that the level of environmental study for this project will be a Categorical Exclusion (CE) with supporting technical documentation.

Final Environmental Document/Section 4(f) Evaluation

Following review of the Draft Environmental Document and comments received at the Public Hearing, the CONSULTANT will meet with the DEPARTMENT and the lead Federal agency to review and address comments as needed. The CONSULTANT will then revise and resubmit the document. It is anticipated one review will be necessary. Four printed copies of the Final Environmental Document/4(f) Evaluation will be provided to the DEPARTMENT as well as 1 CD (or thumb drive) of the document.

It is assumed that the level of environmental study for this project will be an individual Categorical Exclusion with supporting technical documentation. The Draft Environmental Document package will be revised based on DEPARTMENT and FHWA comments. Two rounds of DEPARTMENT review and one round of FHWA review are anticipated.

c. Public Participation

The CONSULTANT shall support a dynamic public participation process that enhances the DEPARTMENT'S "Public Involvement Procedures for New Hampshire Transportation Improvement Projects". The CONSULTANT shall prepare presentation graphics, handouts and support displays for public participation and posting to the DEPARTMENT's project webpage and be available to make presentations and draft meeting minutes for each project. The Public Outreach Process Specific tasks include:

Prepare a Public Involvement Plan

The CONSULTANT will prepare a Public Involvement Plan outlining all elements of the tasks listed below. Virtual tools (mobile applications, visualizations, do-it-yourself videos, crowdsourcing, virtual town hall, etc.) should be considered as part of the plan and used when appropriate. It is envisioned the Public Involvement Plan will kick-off the public outreach for the project by initiating contact and input with the Town, setting public involvement goals and expectations, and include a detailed schedule of all activities. It is assumed that implementation of the plan will be a joint effort, performed by the Consultant, the DEPARTMENT, and the Town. The following tasks will be outside of the CONSULTANT scope of work:

- Preparation of public informational meeting/hearing notices.
- Coordination and reservation of meeting spaces.

- Mailing list development and coordination.

Formally responding to public inquiries (outside of the public hearing, public informational and working group meetings). It is envisioned that the DEPARTMENT will respond to public inquiries with CONSULTANT's input.

FHWA Every Day Counts Initiative 5: An allowance has been established for encouraging virtual public involvement throughout the duration of the project. These efforts are intended to supplement the graphic material prepared for the Working Group, Public Official, and Public Informational meetings:

- Provide content for the project website hosted by the DEPARTMENT
- Provide content for social media accounts the Department currently maintains
- Incorporate polling and survey tools, such as interactive, real-time polling by text into Public Meetings and workshops
- Live-stream meetings on social media and post 'educational' videos of the project in-between meetings
- The CONSULTANT shall help prepare one questionnaire/survey for each of the public informational meetings to solicit additional input on the design alternatives. As an example, the DEPARTMENT currently maintains a license for MetroQuest license, an online public engagement tool that utilizes game-like planning techniques to create compelling, interactive and educational surveys. MetroQuest offers 14 screen templates designed to optimize engagement quickly (within five minutes) and the platform is compatible with any device – laptops, tablets, smart phones and kiosks. The CONSULTANT may support the creation of said surveys through the DEPARTMENT, or other approved method to solicit feedback.
- The CONSULTANT shall gather and draft responses to public inquiries received through the project website and other social media outlets for approval and distribution. The CONSULTANT shall prepare meeting minutes for distribution amongst design team members.

<u>Working Group / Project Advisory Committee / Stakeholder Meetings</u>

The CONSULTANT, in consultation with the Town, will assist the DEPARTMENT in identifying appropriate stakeholders and assembling a working group whose role will be to advise the design team on the development and evaluation of design alternatives. Working group meetings will be held as needed with project stakeholders to review and discuss alternatives and to facilitate local input into important design decisions. It is assumed that six

(6) working group/project advisory/stakeholder meetings will be held throughout the duration of the project.

A working group meeting may be held in advance of the public information meetings, public officials, and the public hearing. The group's expertise will assist in the formulation and exploration of the early, larger set of alternatives, will inform the development of the preferred alternative and will enhance the public hearing process. It is advantageous to garner the working group's feedback before sharing project progress with the public. The CONSULTANT will prepare any needed informational handouts and presentation materials, will assist with presentations as needed, and will document the proceedings. Generally, no advertising is needed for the working group meetings, as once the working group is established, these meetings will be announced on the project website and/or by E-mail.

Public Informational Meetings & Public Official Meetings

Two (2) Public Officials Meetings and two (2) Public Informational Meetings are anticipated to be held to involve the public and other interested parties (including any Section 106 Consulting Parties) in the project development process. It is assumed the first Public Informational Meeting will take place early in the design to facilitate discussion of the reasonable range of design alternatives, while the second Public Informational Meeting will focus on the proposed action and will occur during the NEPA process prior to finalizing the Draft Environmental Document. The two (2) public officials' meetings are assumed to support the alternative decision-making and briefings with the Town leadership and/or planning level committees.

The CONSULTANT will prepare any needed informational handouts, presentation materials and graphics, and will assist with presentations and technology, as needed. As outlined in ATTACHMENT A, it is assumed the appropriate technical and number of staff to present, manage, conduct, support and facilitate meetings from the CONSULTANT and its subconsultants will attend these meetings. It is assumed that the following tasks will be outside of the CONSULTANT'S scope of work:

- Providing a stenographer to capture meeting minutes.
- Advertising the meeting in local media and project website.

Public Hearing

A formal Public Hearing will be held at the end of Preliminary Design for layout of the proposed action and environmental document to include the existing metes and bounds property boundary information. The CONSULTANT will prepare any needed informational handouts and presentation materials and will assist with presentations as needed. The

CONSULTANT will also assist the DEPARTMENT in formally addressing comments received through the public hearing process. The CONSULTANT will also assist the DEPARTMENT in formally addressing comments received through the public hearing process.

D. GEOTECHNICAL

The DEPARTMENT will complete the full geotechnical program required for the project. The CONSULTANT shall provide preliminary and final subsurface exploration plan development and siting of the subsurface explorations by providing the station(s), offset(s) and associated GPS coordinate(s) for proposed subsurface exploration locations for all, as well as highway design.

E. UTILITIES

The utility coordination for this project will be performed by the DEPARTMENT. The CONSULTANT shall provide existing detail plans to the DEPARTMENT for submission to the utility companies for utility verification. The CONSULTANT shall incorporate utility locations, as identified by the individual utility owner through the verification process, into the plans.

F. QUALITY CONTROL

The CONSULTANT shall be the Engineer-of-Record for this work, as such the CONSULTANT shall be responsible to ensure that the design and supporting documentation is accurate, checked, and thoroughly reviewed prior to each submission. DEPARTMENT staff will review the CONSULTANT'S submissions to ensure that DEPARTMENT objectives are being met and standard practices and procedures are adhered to. It is the CONSULTANT's and the Engineer-of-Record's responsibility to ensure the design is complete, accurate and meets all DEPARTMENT requirements.

The DEPARTMENT will reject any data that does not comply with the above. The DEPARTMENT will decide when the data and services have fully met the project requirements. The CONSULTANT will not be paid for insufficient work.

The CONSULTANT's designated Quality Control personnel shall sign-off on each submission prior to transmittal to the DEPARTMENT. The CONSULTANT shall, upon request, provide to the DEPARTMENT any and/or all QC documentation pertaining to work efforts on the project.

G. MATERIAL FURNISHED BY THE DEPARTMENT OF TRANSPORTATION

The DEPARTMENT will furnish the following data to the CONSULTANT:

1. Electronic files in US Customary units of the following information in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements for incorporation into the plans by the CONSULTANT:

a. Any available electronic topographical mapping within the project area shall be provided along with any pertinent electronic supporting information (survey field notes, ASCII point file, SDR data files, etc.).

b. Electronic drawings in MicroStation format of roadway typical cross-sections and other detail sheets shall be provided, when available from the DEPARTMENT'S CAD/D library, upon request by the CONSULTANT, in accordance with the current DEPARTMENT CAD/D Procedures and Requirements.

2. Right-of-Way data: Any additional information collected or prepared by the DEPARTMENT that could supplement the CONSULTANT's Right-of-Way Boundary (e.g. existing right-of-way layout per record plans, property lines to a tax map level, parcel owners, title abstracting, etc.) will be provided by the DEPARTMENT in MicroStation format for incorporation into the plans by the CONSULTANT.
3. Plans of prior highway and bridge construction projects within the project limits, as available.
4. The location of all existing and proposed utilities through direct contact with the various utility companies.
5. Geotechnical investigations and recommendations, if available: Electronic files of the Environmental resource data collected in previous studies.
6. Crash data within the study area.
7. Traffic count data.
8. The DEPARTMENT's latest high-resolution color aerial photography (which is geo-referenced and ortho-rectified).

H. WORK SCHEDULE AND PROGRESS REPORTS

See Supplemental Scope of Work, Attachment A for additional detail on the services to be provided.

The CONSULTANT shall begin performance of the services designated in the AGREEMENT promptly upon receipt from the DEPARTMENT of a Notice to Proceed and the material to be furnished as herein described. The CONSULTANT shall complete these services without delay unless unable to do so for causes not under the CONSULTANT'S control.

The CONSULTANT'S sequence of operation and performance of the work under the terms of this AGREEMENT shall be varied at the direction of the DEPARTMENT to give priority in critical areas so that schedules and other STATE commitments, either present or future, can be met.

The CONSULTANT shall report progress to the DEPARTMENT in conjunction with DEPARTMENT'S Standardized Invoicing process. Invoices shall be submitted for each month that

there has been more than $10,000 in cumulative billable work since the last invoice, and at least quarterly. For months with no progress or less than $10,000 cumulative work since the last invoice, a status report briefly describing the reasons for little or no progress shall be submitted

I. SUBMISSION OF REPORTS, PLANS AND DOCUMENTS

Each submission shall be supplemented with such drawings, illustrations and descriptive matter as are necessary to facilitate a comprehensive review of proposed concepts. Any and all CAD/D-related work during the course of this project shall be performed in conformance with the DEPARTMENT'S CAD/D Procedures and Requirements in effect at the time of execution of this AGREEMENT, which will be coordinated on each assignment.

Presentation and Documentation

The CONSULTANT shall prepare updated colored presentation plans at each formal submission and for presentation at DEPARTMENT meetings as defined below. This is in addition to any public informational/hearing meetings.

1. Technical Reports: The CONSULTANT shall prepare technical reports, as necessary, throughout the duration of the project to document and summarize relevant technical data. This includes, but is not limited to: Design Report, stormwater reports, or Geotechnical Reports. The intent is to support the design through documentation of critical design decisions with technical reports and supporting material.
2. Design Report: The CONSULTANT shall update the Design Report using the NHDOT's most recent form, at each submission to document the existing conditions within the project, and to summarize the design decisions and engineering details of the proposed action.
3. Design Exceptions: Design exceptions, if required, will be completed by the CONSULTANT._
4. Project Collaboration Meetings: It is expected that over the course of the project, a series of informal collaboration meetings will be held. These collaboration meetings, attended by key Department staff and key Consultant staff, are to be held well in advance of formal submissions. The Consultant will update Department staff on the project status and their approach to various design issues followed by an open and collaborative discussion with Department staff and the Consultant team sharing their thoughts and suggestions on how best to advance the design. The consultant shall be responsible for scheduling the meetings, preparing an agenda and other presentation materials, and for preparing meeting notes.
5. Project Management Meetings: It is expected that over the course of the project, Project Management Meetings will be held at least bi-monthly through the duration of the design.

They will take place to discuss a variety of project management issues, such as outstanding issues, and design schedule. The CONSULTANT shall be responsible for meeting minutes.

6. Department Meeting Presentations: The CONSULTANT shall prepare, present, and explain the project when requested by the DEPARTMENT. These meetings could include, but aren't limited to, Front Office, Estimate Review Committee, Traffic Control Committee, Design Submission meetings, Pre-Advertising meeting, Natural and Cultural Resource meetings. This shall include the preparation and explanation of sketches, alternatives, and plans during the project development process. Meeting notes and conference report memos shall be the responsibility of the CONSULTANT.

Upon completion of the AGREEMENT, the CONSULTANT shall turn over all documentation, including, but not limited to, all reports, test results, drawings, plans, and all financial supporting documentation in their original format and in the format submitted to the DEPARTMENT.

J. DELIVERABLES

All work and supporting documents compiled under this AGREEMENT shall be developed by the CONSULTANT and delivered to the DEPARTMENT according to the following formats;

Electronic Transfer of Data: The DEPARTMENT requires the following to ensure compatibility with software used by the DEPARTMENT and to ensure the efficient and timely exchange of computer files between the DEPARTMENT and the CONSULTANT.

All files submitted must be fully compatible with the formats listed in this document without any conversion or editing by the DEPARTMENT. Any files requiring conversion and/or editing by the DEPARTMENT will not be accepted. All files shall be virus free. All files shall use the DEPARTMENT'S file naming convention.

Computer Aided Design/Drafting (CAD/D) files: All CAD/D files shall be in accordance with the Deliverable Requirements described in the DEPARTMENT'S CAD/D Procedures and Requirements in effect at the time this AGREEMENT was executed, or any later version. All files submitted must be fully compatible with the current version of MicroStation being used by the DEPARTMENT. (The DEPARTMENT'S CAD/D Procedures and Requirements document can be found on the CAD/D website by following the "Downloads" link at www.nh.gov/dot/cadd/.)

Word Processing, Spreadsheet, and Database Files: For each Phase, all relevant files shall be provided in a format fully compatible, as appropriate, with the following:

Word Processing:	Microsoft Word 2016 or NHDOT compatible version
Spreadsheets:	Microsoft Excel 2016 or NHDOT compatible version
Databases:	Microsoft Access 2016 or NHDOT compatible version

These specifications will be updated as necessary to reflect changes in DEPARTMENT software such as adding new software or updating to new versions of existing software. In such instances, the CONSULTANT will be promptly notified.

Computer File Exchange Media: Electronic files shall be exchanged between the DEPARTMENT and the CONSULTANT using the following media as appropriate for Windows Operating Systems:

File Transfer Sites, Bluebeam, SharePoint.

Email: Files 20 MB or smaller may be transferred via Email. If compressed, the files should be self-extracting and encrypted based on content.

Copies: The CONSULTANT shall provide hard (paper) and electronic copies of the deliverables for each Phase of Work. For all deliverables, provide electronic copies in two electronic versions; an electronic version in the original electronic file format (i.e., MicroStation (*.dgn), Microsoft Word (*.docx), Microsoft Excel (*.xlsx), etc.) and an electronic version in Adobe Acrobat (*.pdf) file format.

Website Information:

a. Website Content: All external NHDOT websites created under this AGREEMENT shall meet the ADA Section 508 requirements as stated in the NH DoIT Website Standards. Those standards are outlined in Vendor Resources and Procurement | NH Department of Information Technology.

b. Website Documents: All documents posted to a website created under this AGREEMENT, or that are submitted to be posted to a NHDOT website, shall meet ADA Section 508 accessibility requirements. Compliance requirements can be found at https://www.section508.gov/create/.

Upon completion of the AGREEMENT, the CONSULTANT shall turn over all documentation, including, but not limited to, all reports, test results, drawings, plans, and all financial supporting documentation in the formats described above.

K. Date of Completion

In accordance with the Governor and Council Resolution authorizing this AGREEMENT, the date of completion for the Design of professional services rendered under this AGREEMENT is December 31, 2027.

ARTICLE II

ARTICLE II – COST PLUS FIXED FEE CONPENSATION OF CONSULTANT

A. GENERAL FEE

In consideration of the terms and obligations of this AGREEMENT, the STATE, through the DEPARTMENT, hereby agrees to pay and the CONSULTANT agrees to accept as full compensation for all services rendered to the satisfaction of the DEPARTMENT under this AGREEMENT, an amount equal to the sum of the following costs:

1) Actual salaries approved by the DEPARTMENT paid to technical and other employees by the CONSULTANT, including salaries to principals, for the time such employees are directly utilized on work necessary to fulfill the terms of this AGREEMENT.

   An overtime premium of one and one half times the direct labor rate for non-exempt employees working beyond the standard 40 hours per workweek may be allowed for special circumstances when approved by the DEPARTMENT in writing in advance. The overhead portion of non-exempt employees' salary rates shall not be adjusted. Engineers are not eligible for overtime premium rates.

   Direct salary costs are estimated at:

   $119,210.30

2) Overhead costs applicable to the direct salary costs. The audited indirect cost rate, as submitted to and approved by the DEPARTMENT, will be applied to the direct salary costs. The CONSULTANT'S audited indirect cost rate for fiscal year ending June 30, 2024, **183.64%** shall be used for invoicing for the life of the AGREEMENT.

   Overhead costs are estimated at:

   $218,917.80

3) A fixed fee amount based on the estimated risk to be borne by the CONSULTANT [maximum 10.00% of Labor Costs (including overhead costs)] for profit and non-reimbursed costs.

   The fixed fee is:

   $33,812.81

4) Reimbursement for direct expenses, including, but not limited to, subconsultants with a subcontract value of less than $200,000, printing, reproductions and travel not included in normal overhead expenses. The

reimbursable costs for mileage and for per diem (lodging and meals) shall be that allowed by the CONSULTANT'S established policy but shall not exceed that allowed in the Federal Acquisition Regulations (Subpart 31.205-46) and in the Federal Travel Regulation. Mileage and per diem costs shall be subject to approval by the DEPARTMENT. Subconsultants with a subcontract value of less than $200,000 shall be invoiced as direct expenses and do not require individual invoices.

Direct expenses are estimated at:

$236,181.74

5) Reimbursement for potential unpaid indirect costs, 2.5% of the direct labor total, should the DEPARTMENT owe the CONSULTANT funds, and the negotiated funds have been exhausted at the time of reconciliation. These funds are added after profit and shall not be reallocated for any reason.

Indirect Cost Rate Reconciliation:

$2,980.26

AGREEMENT NOT-TO-EXCEED TOTAL $611,102.91

The amount payable under categories 1), 2), and 4) may be reallocated within the not-to-exceed total upon mutual agreement of the DEPARTMENT and the CONSULTANT. Reallocations shall be properly documented for Final Audit purposes, but do not require a formal amendment.

The total amount to be paid under this AGREEMENT shall not exceed **$611,102.91,** the sum of the amounts shown in Article II, Section A (which amount is based on the CONSULTANT'S fee and manhour estimates of 2,142 hours), except by agreement of all parties made after supplemental negotiations and documented by a formal amendment to the AGREEMENT. Should circumstances beyond the control of the CONSULTANT require extension of the time of completion more than one (1) year, the general fee may be renegotiated and documented by a formal amendment to the AGREEMENT; however, the fixed fee (b) shall not change for reasons of work duration alone. The fixed fee (b) shall only change when there has been a significant increase or decrease in the scope of work outlined in this AGREEMENT.

B. LIMITATION OF COSTS

1. Costs incurred against this AGREEMENT shall not exceed the total amount specified in Article II, Section A unless otherwise authorized. The CONSULTANT shall give the DEPARTMENT a ninety (90)-day written notice when it appears that this limit will be exceeded.
2. It is expected that the total cost to the STATE shall be the not-to-exceed amount specified in Article II, Section A, and the CONSULTANT agrees to use best efforts to perform the work specified in the AGREEMENT and all obligations under this contract within this not-to-exceed amount.
3. The STATE shall not be obligated to reimburse the CONSULTANT for costs incurred in excess of the not-to-exceed amount specified in Article II, Section A.
4. Changes to the scope of work shall not be considered an authorization to the CONSULTANT to exceed the not-to-exceed amount specified in Article II, Section A.

C. PAYMENTS

Monthly payments on account of services rendered under this AGREEMENT will be made upon submission of invoices by the CONSULTANT to the DEPARTMENT. The CONSULTANT shall follow the DEPARTMENT'S Standardized Invoicing format. The CONSULTANT shall invoice monthly for work performed in order to not accrue undue outstanding liability to the DEPARTMENT. The fixed fee shall be invoiced during the billing period based upon the overall percent complete calculated within the approved progress report found in the DEPARTMENT'S Standardized Invoicing.

Actual salaries paid and the indirect cost rate shown in Article II, Section A, shall be used until such time as true costs of salary burden and overhead are fixed by Final Audit. At that time, payments shall be adjusted to agree with the indirect cost rates as determined by Final Audit for the period in which the work was performed, as approved by the DEPARTMENT.

D. ANNUAL INDIRECT COST RATE SUBMISSIONS

The CONSULTANT and all subconsultants with a subcontract value of $200,000 or greater shall submit their audited indirect cost rate and related documents annually for the life of this AGREEMENT as follows:

To comply with the Federal Acquisition Requisitions (FAR), the CONSULTANT'S Indirect Cost Rate Audit must meet the following requirements:

- Be conducted by an independent Certified Public Accountant (CPA), a Federal government agency, or another state transportation agency.

- Be conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS) issued by the U.S. Government Accountability Office (GAO) and with the cost principles and procedures set forth in Part 31 of the FAR.
- Follow the guidance of the most recent American Association of State Highway Transportation Officials Uniform Audit and Accounting Guide for Audits of Architectural and Engineering Consulting Firms (AASHTO Audit Guide).

In addition to the Indirect Cost Rate Audit, CONSULTANTS shall submit the following documentation:

- AASHTO Internal Control Questionnaire (ICQ) for Consulting Engineers form with the required attachments.
- Certification of Final Indirect Costs as required pursuant to 23 CFR 172.11 and FHWA Order 4470.1A.
- Complete copy of the CONSULTANT'S annual audited financial statements.
- Analysis of reasonableness of executive compensation as outlined in the AASHTO Audit Guide.
- Cognizant letter, if available.
- A listing of all contracts, with dollar amounts, the CONSULTANT has currently with the DEPARTMENT as a prime consultant or subconsultant.

Annual indirect cost rate submissions are due within 6 months of the CONSULTANT'S fiscal year end and shall be submitted to the DEPARTMENT'S Internal Audit Office electronically to DOT-InternalAudit@dot.nh.gov or in writing.

E. RECORDS, REPORTS AND FINAL AUDIT

The CONSULTANT shall maintain adequate cost records for all work performed under this AGREEMENT. All records and other evidence pertaining to cost incurred shall be made available at all reasonable times during the AGREEMENT period and for three (3) years from the date of final expenditure report for examination by the STATE, Federal Highway Administration, or other authorized representatives of the Federal Government, and copies thereof shall be furnished if requested. Applicable cost principles are contained in the Federal Acquisition Regulations (FAR) in Title 48 of the Code of Federal Regulations (Subpart 31.2 and Subpart 31.105).

The DEPARTMENT shall have the right, at the time of Final Audit, to review all items charged on this project. If, in the opinion of the DEPARTMENT, such payment is unreasonable, the CONSULTANT shall be required to justify such payment or payments before they will be approved as direct or indirect costs.

ARTICLE II

All costs as described in Article II Section A.1 through A.5 are to be determined by actual records kept during the term of the AGREEMENT, which are subject to Final Audit by the STATE and Federal Governments. The final payment, and all partial payments made, may be adjusted to conform to this Final Audit. In no case will any adjustments exceed the not-to-exceed amount specified in Article II, Section A. All Subconsultant costs may also be subject to Final Audit by the STATE and Federal Governments.

ARTICLE III – GENERAL PROVISIONS

A. HEARINGS, ETC.

The DEPARTMENT will make all arrangements for and hold all necessary hearings in connection with the project.

B. CONTRACT PROPOSALS

After the CONSULTANT has furnished to the DEPARTMENT contract drawings, special provisions, specifications, and estimate of quantities by items, the DEPARTMENT will prepare the documents for receipt of proposals from construction contractors and for execution of a construction contract or contracts.

ARTICLE IV – STANDARD PROVISIONS

A. STANDARD SPECIFICATIONS

The CONSULTANT agrees to follow the provisions of the Design Manuals, Standard Specifications for Road and Bridge Construction, and Standard Plans for Road and Bridge Construction of the DEPARTMENT; A Policy on Geometric Design of Highways and Streets and LRFD Bridge Design Specifications of the American Association of State Highway and Transportation Officials (AASHTO), and amendments thereto, and/or other professional codes or standards applicable to the services to be performed under this AGREEMENT. When a publication (including interim publications) is specified, it refers to the most recent date of issue in effect at the time of execution of this AGREEMENT.

B. REVIEW BY STATE AND FHWA – CONFERENCES – INSPECTIONS

It is mutually agreed that all portions of the work covered by this AGREEMENT shall be subject to the inspection by duly-authorized representatives of the STATE and Federal Highway Administration, United States Department of Transportation, at such time or times as the STATE or Federal Highway Administration deems appropriate.

The location of the office where the work will be available for inspection by STATE and Federal Highway Administration representatives is 169 Ocean Boulevard, Hampton, NH.

It is further mutually agreed that any party, including the duly-authorized representatives of the Federal Highway Administration, may request and obtain conferences, visits to the site, and inspection of the work at any reasonable time.

C. EXTENT OF CONTRACT

1. Contingent Nature of AGREEMENT

   Notwithstanding anything in this AGREEMENT to the contrary, all obligations of the STATE, including, without limitation, the continuance of payments, are contingent upon the availability and continued appropriation of funds, and in no event shall the STATE be liable for any payments in excess of such available appropriated funds. In the event of a reduction or termination of those funds, the STATE shall have the right to terminate this AGREEMENT.

2. Termination

   The DEPARTMENT shall have the right at any time, and for any cause, to terminate the work required of the CONSULTANT by this AGREEMENT by written notice of such termination provided to the CONSULTANT by the DEPARTMENT, and, in the event of such a termination of this AGREEMENT without fault on the part of the CONSULTANT, the CONSULTANT

shall be entitled to compensation for all work theretofore satisfactorily performed, pursuant to this AGREEMENT, such compensation to be fixed, insofar as possible, based upon the work performed prior to termination. If no contract or contracts for construction of the project contemplated by this AGREEMENT is (are) entered into within two (2) years after satisfactory completion of the services outlined in Article I, all of the services contemplated by this AGREEMENT shall be deemed to have been completed.

It shall be a breach of this AGREEMENT if the CONSULTANT shall fail to render timely the services required under this AGREEMENT, in accordance with sound professional principles and practices, to the reasonable satisfaction of the DEPARTMENT, or shall be in such financial condition as to be unable to pay its just debts as they accrue, or shall make an assignment for the benefit of creditors, or shall be involved in any proceeding, voluntary or involuntary, resulting in the appointment of a receiver or trustee over its affairs, or shall become dissolved for any cause. In the event of the happening of any one or more of the foregoing contingencies, or upon the substantial breach of any other provisions of this AGREEMENT by the CONSULTANT, its officers, agents, employees, and subconsultants, the DEPARTMENT shall have the absolute right and option to terminate this AGREEMENT forthwith, and, in addition, may have and maintain any legal or equitable remedy against the CONSULTANT for its loss and damages resulting from such breach or breaches of this AGREEMENT; provided, however, that as to all plans, drawings, tracings, estimates, specifications, reports, proposals, sketches, diagrams, and calculations, together with all material and data theretofore furnished to the DEPARTMENT by the CONSULTANT, of a satisfactory nature in accordance with this AGREEMENT, which plans, drawings, tracings, etc., are of use to the DEPARTMENT, the CONSULTANT shall be entitled to a credit, based on the contract rate for the work so performed in a satisfactory manner and of use and benefit to the DEPARTMENT.

D. REVISIONS TO REPORTS, PLANS OR DOCUMENTS

The CONSULTANT shall perform such additional work as may be necessary to correct errors in the work required under the AGREEMENT caused by errors and omissions by the CONSULTANT without undue delays and without additional cost to the DEPARTMENT.

Furthermore, prior to final approval of plans, specifications, estimates, reports, or documents by the DEPARTMENT, the CONSULTANT shall make such revisions of them as directed by the DEPARTMENT, without additional compensation therefor, except as hereinafter provided:

1. If, after its written approval thereof, the DEPARTMENT shall require changes to the plans or documents that revise engineering or other factors specifically approved, thereby necessitating revisions of the contract plans or documents, or,
2. When applicable, if during the term of this AGREEMENT, a revision of the alignment is ordered by the DEPARTMENT to the extent that the revised alignment will lie completely or partially outside the limit of the survey data plotted by the CONSULTANT (this does not apply to those adjustments and refinements to the alignments anticipated under the scope of work), or,
3. If, after approval by the DEPARTMENT of the final contract plans or documents, the CONSULTANT shall be ordered in writing by the DEPARTMENT to make revisions, or to perform services other than those necessary to adapt said plans, reports, or documents to conditions observed during field inspections and encountered during construction; the CONSULTANT shall be entitled to compensation therefor in accordance with Article II, Section A, such compensation to be in addition to the fee specified in Article II, Section A, for its original work on the plans, reports or documents.

E. ADDITIONAL SERVICES

If, during the term of this AGREEMENT, additional professional services are required due to a revision in the limits of the project, or it becomes necessary to perform services not anticipated during negotiation, the DEPARTMENT may, in writing, order the CONSULTANT to perform such services, and the CONSULTANT shall be paid a fee in accordance with the provisions of Article II, Section A.

If, during the term of this AGREEMENT, additional professional services are performed by the CONSULTANT due to the fact that data furnished by the DEPARTMENT are not usable or applicable, the STATE will, upon written approval by the DEPARTMENT, reimburse the CONSULTANT for such additional design services in accordance with the provisions of Article II, Section A.

If additional services are performed by the CONSULTANT through its own acts, which are not usable or applicable to this project, the cost of such additional services shall not be reimbursable.

F. OWNERSHIP OF PLANS

All data, plans, drawings, tracings, estimates, specifications, proposals, sketches, diagrams, calculations, reports, or other documents collected, prepared, or undertaken either manually or electronically by the CONSULTANT under the provisions of this AGREEMENT, immediately shall become the property of the DEPARTMENT, and, when completed, shall bear the CONSULTANT'S endorsement. The CONSULTANT shall surrender to the DEPARTMENT, upon demand at any time,

or submit to its inspection, any data, plan, drawing, tracing, estimate, specification, proposal, sketch, diagram, calculation, report, or document which shall have been collected, prepared, or undertaken by the CONSULTANT pursuant to this AGREEMENT, or shall have been hitherto furnished to the CONSULTANT by the DEPARTMENT. The CONSULTANT shall have the right, with the written approval of the DEPARTMENT, to use any of the data prepared by it and hitherto delivered to the DEPARTMENT at any later stage of the project contemplated by this AGREEMENT.

G. SUBLETTING

The CONSULTANT shall not sublet, assign or transfer any part of the CONSULTANT'S services or obligations under this AGREEMENT without the prior approval and written consent of the DEPARTMENT.

All subcontracts shall be in writing and those exceeding $10,000 shall contain all provisions of this AGREEMENT, including "Certification of CONSULTANT/Subconsultant". A copy of each subcontract shall be submitted for the DEPARTMENT'S files.

For subconsultants working on design, hazardous materials, geotechnical services, etc., the minimum limits of their professional liability (errors and omissions) insurance coverage shall be not less than $2,000,000 in the aggregate, with a deductible of not more than $75,000. For subconsultant contracts with less risk, e.g., wetland evaluations, materials inspection and testing, structural steel fabrication inspection, underwater bridge inspection, research, bridge deck condition surveys, land surveying, mapping, noise studies, air-quality studies, etc., the minimum limits of their professional liability (errors and omissions) insurance coverage shall be not less than $1,500,000 in the aggregate, with a deductible of not more than $50,000. For subconsultant contracts with no risk, e.g., archaeology, cultural resources, data gathering, traffic counting etc., professional liability insurance shall not be required. Subconsultants completing field exploration for geotechnical, hazardous materials/environmental, and subsurface exploration shall also have pollution liability insurance coverage not less than $2,000,000 in the aggregate, with a deductible of not more than $75,000. If coverage is claims made, the period to report claims shall extend for not less than three years from the date of substantial completion of the construction contract.

H. GENERAL CONPLIANCE WITH LAWS, ETC.

The CONSULTANT shall comply with all Federal, STATE, and local laws and ordinances applicable to any of the work involved in this AGREEMENT and shall conform to the requirements and standards of STATE, municipal, railroad, and utility agencies whose facilities and services may be

affected by the construction of this project. The services shall be performed so as to cause minimum interruption to said facilities and services.

I. BROKERAGE

The CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, the STATE shall have the right to annul this Contract without liability, or, at its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

J. CONTRACTUAL RELATIONS

1. Independent Contractor

   The CONSULTANT agrees that its relation to the STATE is as an independent contractor and not as an agent or employee of the STATE.

2. Claims and Indemnification

   a. Non-Professional Liability Indemnification

      The CONSULTANT agrees to defend, indemnify and hold harmless the STATE and all of its officers, agents, and employees from and against any and all claims, liabilities, or suits arising from (or which may be claimed to arise from) any (i) acts or omissions of the CONSULTANT or its subconsultants in the performance of this AGREEMENT allegedly resulting in property damage or bodily injury, and/or, (ii) misconduct or wrongdoing of the CONSULTANT or its subconsultants in the performance of this AGREEMENT.

   b. Professional Liability Indemnification

      The CONSULTANT agrees to indemnify and hold harmless the STATE and all of its officers, agents, and employees from and against any and all claims, liabilities, or suits arising from (or which may be claimed to arise from) any negligent acts or omissions of the CONSULTANT or its subconsultants in the performance of professional services covered by this AGREEMENT.

   c. These covenants shall survive the termination of the AGREEMENT. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the STATE, which immunity is hereby reserved by the STATE.

ARTICLE IV

3. Insurance

   a. Required Coverage

   The CONSULTANT shall, at its sole expense, obtain and maintain in force the following insurance:

   1. Commercial or comprehensive general liability insurance, including contractual coverage, for all claims of bodily injury, death, or property damage, in policy amounts of not less than $250,000 per occurrence and $2,000,000 in the aggregate (STATE to be named as an additional insured); and
   2. Comprehensive automobile liability insurance covering all motor vehicles, including owned, hired, borrowed, and non-owned vehicles, for all claims of bodily injury, death, or property damage, in policy amounts of not less than $500,000 combined single limit; and
   3. Professional liability (errors and omissions) insurance coverage of not less than $2,000,000 in the aggregate. If coverage is claims made, the period to report claims shall extend for not less than three years from the date of substantial completion of the construction contract. No retention (deductible) shall be more than $75,000; and
   4. workers' compensation and employer's liability insurance as required by law.

   b. Proof of Insurance

   The policies described in paragraph (a) of this section and Section G shall be in the standard form employed in the STATE, issued by underwriters licensed or approved by the Department of Insurance of the STATE. Each policy shall contain a clause prohibiting cancellation or modifications of the policy earlier than 30 days, or 10 days in cases of non-payment of premium, after written notice thereof has been received by the STATE. The CONSULTANT shall provide to the STATE a certificate of insurance evidencing the required coverages, retention (deductible), and cancellation clause prior to submittal of the AGREEMENT to Governor and Council for approval and shall have a continuing duty to provide new certificates of insurance as the policies are amended or renewed.

4. No Third-Party Rights

It is not intended by any of the provisions of the AGREEMENT to make the public, or any member thereof, a third-party beneficiary of the AGREEMENT, or to authorize anyone not a party to this AGREEMENT to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this Contract. The duties, obligations, and responsibilities of the parties to this AGREEMENT with respect to third parties shall remain as imposed by law. No

portion of this AGREEMENT shall be understood to be a waiver of the STATE'S sovereign immunity.

5. Construction of AGREEMENT

This AGREEMENT is executed in a number of counterparts, each of which is an original and constitutes the entire AGREEMENT between the parties. This AGREEMENT shall be construed according to the laws of the STATE.

K. AGREEMENT MODIFICATION

The assignment of the CONSULTANT, generally established by the scope of work in this AGREEMENT, shall not be modified in any way without prior approval of the Governor and Council.

L. EXTENSION OF COMPLETION DATE(S)

If, during the course of the work, the CONSULTANT anticipates that one or more of the completion dates specified in this AGREEMENT cannot be met, it shall be the CONSULTANT'S responsibility to notify the DEPARTMENT in writing at least ninety (90) days prior to the completion date(s) in question. The CONSULTANT shall state the reasons that a completion date(s) cannot be met and request a revised date(s) for consideration by the DEPARTMENT.

M. TITLE VI (NONDISCRIMINATION OF FEDERALLY-ASSISTED PROGRAMS) COMPLIANCE

During the performance of this AGREEMENT, the CONSULTANT, for itself, its assignees and successors in interest agrees as follows:

(1) Compliance with Regulations: The CONSULTANT shall comply with Title VI of the Civil Rights Act of 1964 regulations relative to nondiscrimination in federally-assisted programs of the DEPARTMENT, such regulations entitled Title 49 Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the REGULATIONS), and which are herein incorporated by reference and made a part of this AGREEMENT.

(2) Nondiscrimination: The CONSULTANT, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, religion, age, sex, handicap, sexual orientation, or national origin in the selection and retention of subconsultants, including procurements of materials and leases of equipment specific to this project. The CONSULTANT shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the REGULATIONS, including employment practices when the AGREEMENT covers a program set forth in Appendix B of the REGULATIONS.

(3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all

solicitations either by competitive bidding or negotiation made by the CONSULTANT for work to be performed under a subcontract, including procurements of materials or leases of equipment specific to the project, each potential subconsultant or supplier shall be notified by the CONSULTANT of the CONSULTANT'S obligations under this AGREEMENT and the REGULATIONS relative to nondiscrimination on the grounds of race, color, religion, age, sex, handicap, sexual orientation, or national origin.

(4) Information and Reports: The CONSULTANT shall provide all information and reports required by the REGULATIONS or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the DEPARTMENT or the Federal Highway Administration to be pertinent to ascertain compliance with such REGULATIONS, orders and instructions. Where any information required of a CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the DEPARTMENT or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the CONSULTANT'S noncompliance with nondiscrimination provisions of this AGREEMENT, the DEPARTMENT shall impose sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the CONSULTANT under the AGREEMENT until the CONSULTANT complies; and/or

(b) cancellation, termination, or suspension of the AGREEMENT, in whole or in part.

(6) The CONSULTANT shall take such action with respect to any subcontract or procurement as the DEPARTMENT or the Federal Highway Administration may direct as a means of enforcing such provisions, including sanctions for noncompliance, provided, however, that in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a subconsultant or supplier as a result of such direction, the CONSULTANT may request the DEPARTMENT to enter into such litigation to protect the interests of the STATE, and, in addition, the CONSULTANT may request the United States to enter into such litigation to protect the interests of the United States.

(7) 23 CFR 710.405(b) and Executive Order 11246 entitled "Equal Employment Opportunity," as amended by Executive Order 11375 and as supplemented in Department of Labor REGULATIONS (41 CFR Part 60), shall be applicable to this AGREEMENT and any subagreements hereunder.

(8) Incorporation of Provisions: The CONSULTANT shall include the provisions of paragraphs (1) through (7) in every subcontract, including procurements of materials and leases of equipment specific to the project, unless exempt by the REGULATIONS, or directives issued pursuant thereto.

In accordance with EXECUTIVE ORDER 11246, the DEPARTMENT has the authority and responsibility to notify the Office of Federal Contract Compliance Programs of the United States Department of Labor if they become aware of any possible violations of Executive Order 11246 and 41 CFR Part 60. The Office of Federal Contract Compliance Programs is solely responsible for determining compliance with Executive Order 11246 and 41 CFR Part 60 and the CONSULTANT should contact them regarding related compliance issues.

N. DISADVANTAGED BUSINESS ENTERPRISE POLICY REQUIREMENTS

1. Policy. It is the policy of the United States Department of Transportation (USDOT) to ensure nondiscriminatory opportunity for Disadvantaged Business Enterprises (DBE's), as defined in 49 Code of Federal Regulations (CFR) Part 26, to participate in the performance of agreements and any subagreements financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 apply to this AGREEMENT.
2. Disadvantaged Business Enterprise (DBE) Obligation. The STATE and its CONSULTANTS agree to ensure nondiscriminatory opportunity for disadvantaged business enterprises, as defined in 49 CFR Part 26, to participate in the performance of agreements and any subagreements financed in whole or in part with Federal funds. In this regard, the STATE and its CONSULTANTS shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that disadvantaged business enterprises have the opportunity to compete for and perform work specified in the agreements. The STATE and its CONSULTANTS shall not discriminate on the basis of race, color, religion, age, sex, handicap, sexual orientation, or national origin in the award and performance of agreements financed in whole or in part with Federal funds.
3. Sanctions for Non-Compliance. The CONSULTANT is hereby advised that failure of the CONSULTANT, or any Subconsultant performing work under this AGREEMENT, to carry out the requirements set forth in paragraphs 1 and 2 above, shall constitute a breach of agreement and, after the notification of the United States Department of Transportation, may result in termination of this AGREEMENT by the STATE or such remedy as the STATE deems appropriate.

ARTICLE IV

O. DOCUMENTATION

The CONSULTANT shall document the results of the work to the satisfaction of the DEPARTMENT and the Federal Highway Administration. This shall include preparation of progress reports, plans, specifications, and estimates and similar evidences of attainment of objectives called for in this AGREEMENT.

P. CLEAN AIR AND WATER ACTS

If the amount of the AGREEMENT or subcontract thereunder exceeds $100,000, the CONSULTANT or subconsultant shall comply with applicable standards, orders, or requirements issued under Section 306 of the Federal Clean Air Act (43 U.S.C. 1857(h), Section 508 of the Federal Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15), which prohibit the use under non-exempt Federal contracts, grants, or loans of facilities included on the EPA List of Violating Facilities. The CONSULTANT or subconsultant shall report violations to the FHWA and to the U. S. Environmental Protection Agency Assistant Administrator for Enforcement (EN-329).

MOULTONBOROUGH - 41581

Intersection Improvements for NH Route 25 and Sheridan Road

ATTACHMENT A
SCOPE OF SERVICES FOR PRELIMINARY DESIGN

Revised for IGE – February 11, 2025

STATEMENT OF UNDERSTANDING

TEC, Inc. (TEC) proposes to provide professional engineering services to the New Hampshire Department of Transportation (NHDOT) for the Preliminary Design of intersection improvements at and in the vicinity of the unsignalized intersection of NH Route 25, signed as Whittier Highway, and Sheridan Road in Moultonborough, New Hampshire (the "Town"). The intersection is one of several intersections and corridor sections evaluated previously by the Lakes Region Planning Commission (LRPC) in its April 2008 publication *NH Route 25 Corridor Study* (the "Study"). Since the publishing of the Study, the LRPC and the Town identified a need to reprioritize the locations evaluated along the corridor based on input from the Town and its residents. This reprioritization has resulted in the intersections of NH Route 25 / Sheridan Road shifting to a lead location candidate for improvement by NHDOT as part of its Ten-Year Plan. The project has a target advertising date of FY2027 in the 2025-2034 Ten Year Plan.

The NH Route 25 / Sheridan Road project, designated as **NHDOT Project 41581,** will evaluate transportation infrastructure improvements and their natural, historical, and cultural impacts from a point 1,000-feet west of the intersection near Kids Point Road to a point 500-feet east of the intersection near the Red Hill River Crossing. The Project will focus on the concerns of the public; including, but not limited to, the ability to turn left from Route 25 eastbound to Sheridan Road and the cross-sectional needs to accommodate that movement, the prevalent wildlife crossing in the vicinity of the Red Hill River, overall vehicular safety where the Town of Moultonborough Police Department has identified the intersection as the top concern and priority, and the implementation of pedestrian and bicycle accommodations which currently lack along the corridor.

Building upon the infrastructure recommendations provided in the Study and utilizing the feedback and direction of the public participation process, TEC will commence and deliver on the Preliminary Design to collect all necessary data, prepare base plans utilizing topographic survey as collected by NHDOT, research right-of-way impacts, research historical / cultural / and environmental impacts, develop a range of alternatives that could reasonably be constructed while satisfying the operational and safety needs of this intersection, and investigate and evaluate each reasonable alternative.

TEC has extensive experience addressing safety and traffic operations for corridors and intersections throughout New England, while managing multidisciplinary teams. TEC will serve as the prime consultant to NHDOT with four (4) licensed subconsultants supplementing TEC's efforts, including:

- **Normandeau Associates** – environmental resource needs
- **Preservation Company** – cultural and historical preservation needs
- **Independent Archaeological Consulting (IAC)** – archaeological resource needs
- **Doucet Survey** – survey and right-of way (ROW) needs

SCOPE OF SERVICES

The TEC scope of services for **NHDOT Project 41581** is for the 'Preliminary Design' (Part B) only. 'Final Design' (Part C) is not included in this scope of services. The scope of services is as follows:

Task 1.0 Project Management, Coordination, Communications (PMCC)

TEC and the design team will meet regularly, including meetings with NHDOT and other appropriate stakeholders not specifically defined under general public participation. For each meeting, TEC will prepare and present meeting presentation materials such as meeting agendas, graphics, handouts, design documents/plans, and support displays to provide materials, where applicable. Meeting materials will be reviewed with NHDOT Project Manager prior to the meeting as applicable. In addition, TEC will prepare meeting minutes for each meeting related to the project, where applicable. All materials will be provided to attendees in advance of the meeting. The PMCC and administrative tasks anticipated for this project include:

1.1. *Project Initiation*: Project initiation, planning, and internal team mobilization.

1.2. *Kick-Off Meeting*: Project kick-off meeting with NHDOT, TEC, & subconsultants.

1.3. *Ongoing Coordination & Communications*: Ongoing coordination and communications with NHDOT & project team.

1.4. *Project Management Meetings*: The project team will attend monthly to discuss overall project management, schedule, and outstanding issues throughout the duration of design.

1.5. *NHDOT Front Office Meeting*: Assume six (6) meetings and preparatory work; including one (1) to review scope of work as part of the Alternatives Review, four (4) prior to each of the Public Officials Meetings and Public Information Meetings, and one (1) prior to the Public Hearing.

1.6. *Traffic Control Committee (TCC) Meeting and Presentation with NHDOT*: Assume one (1) meeting and preparatory work. This meeting will occur during Pre-Hearing Submission stage once the selected alternative is identified.

1.7. *Estimate Review Committee Meeting*: Assume one (1) meeting and preparatory work.

Note that additional meetings directly related to the alternative development and plan submission processes are defined in the individual tasks.

Task 2.0 Data Collection

TEC will lead the project team to collect and/or request pertinent existing reference information including:

2.1. *Historical Traffic Volumes*: Collect historical Average Annual Daily Traffic (AADT) volume information along NH Route 25 through the NHDOT Transportation Data Management System (TDMS) based on NHDOT permanent count stations, or other public sources, if available. Request and collect traffic generation information from the Town of Moultonborough related to any private or public development project that has been recently approved by the Town and/or in the planning process of the Town that may change the traffic volume data as collected for the project. Other traffic volumes, classification, and speed data available for the roadways will be collected by TEC as noted.

2.2. *Historical Crash Records*: Request and collect Town of Moultonborough Police Department crash reports and NHDOT record crash data for crashes that occurred within the project limits for the most recent ten-years of data at the time of project commencement.

2.3. *NHDOT Survey Files*: Request and collect NHDOT compatible electronic files of the existing conditions survey for the project limits. Upon review of the collected files and field reviews, TEC will produce an existing conditions/survey plan for Design Services use to submit utility first verification requests.

2.4. *Field Roadway Inventory*: Complete field inventory within the project limits including lane geometrics, traffic control information, utility locations, and other pertinent information.

2.5. *Not applicable to TEC scope of work.*

2.6. *Traffic Volume Collection*: Collect traffic volume and traffic parameter data for the subject location(s):

a. Collect turning movement counts (TMCs) at the intersection of NH Route 25 / Sheridan Road between 7:00 AM and 7:00 PM on a typical non-holiday Wednesday or Thursday between May and October (months above average month condition). Counts shall be classified by vehicles, heavy vehicles, pedestrians, and bicycles.

b. Collect Automatic Traffic Recorder (ATR) counts along NH Route 25 during a typical non-holiday 7-day period for 24-hours-a-day period to collect volume, speed, and FHWA 13-category vehicle classifications.

Task 3.0 Traffic Analysis and Crash Reporting

The traffic analysis and crash reporting tasks to be completed by TEC and anticipated for this project include:

3.1. *Traffic Volume Processing*: Process the raw turning movement count data for the intersection of NH Route 25 / Sheridan Road to determine peak hour factors and heavy vehicle percentages for the weekday morning and weekday evening.

3.2. *Traffic Volume Adjustment*: Review the NHDOT TDMS to determine whether an upward volume adjustment would be needed to reflect the 2019 pre-COVID conditions for day of week, hour of day, or ADT. Adjust the raw traffic volume data to average month with an application of the 2019 seasonal variation data available on the NHDOT website and annual growth, as coordinated with the Town, NHDOT, and LRPC and as based on historical data. The growth rate shall be at least 1.0%, except during the pandemic years where it should be assumed to be zero.

3.3. *Traffic Analysis Forecasting Memo*: Prepare a draft and final technical memorandum documenting the traffic forecasting methodologies to be utilized in the traffic analysis for NHDOT approval.

3.4. *Alternatives Traffic Operational Analyses*: Complete a macroscopic intersection analysis in Synchro 11.0 (for signalized and unsignalized intersections) and Sidra Intersection 9.0 (for roundabouts), as applicable, for the various alternatives under a Base Year Condition, an Opening Year Condition, and a Future Year Condition. A No-Build alternative, as well as each design alternative, will be evaluated for both the Opening Year Condition and the Future Year Condition. The Opening Year Condition will be evaluated as 2030 and the Future Year Condition will be evaluated as 2050.

3.5. *Alternatives Traffic Warrant Analyses*: Complete traffic warranting analyses; including traffic signal warrants and left-turn lane warrants for the intersection. Traffic signal warrants will consider all nine warrants (as applicable), based on the 2023 MUTCD. Calculations for both full warrants and reduced warrants will be completed, considering the posted speed of 45mph for the major street. Right turn reduction of minor street volumes shall be based on NCHRP 457. If 2050 warrants are met, but 2030 warrants are not, interpolate to determine what year warrants will initially be met. The warrant analyses will be sent to NHDOT along with a memo summarizing the findings on whether the warrants are met and for which conditions. The memo will document how many warrants are met, how strongly they are met, if warrants are forecasted to be met in the near future, and whether any volume warrants are met.

3.6. *Traffic Operations Report*: Prepare a traffic operations report detailing the traffic analysis including all methodologies and assumptions utilized. The results of the capacity and queue analysis included in the report, in accordance with the NHDOT Synchro Inputs Checklist, will be reported by volume-to-capacity (v/c) ratio, vehicle control delay, level of service (LOS), and both average and 95th percentile queues. The report will document all warranting conditions. The report will provide the results of additional Measures of Effectiveness (MOEs) as applicable. applicable. It is assumed

one (1) review meeting will be included to discuss results and comments by the Department.

3.7. *Crash Record Evaluation*: Evaluate crash data provided by NHDOT and the Town of Moultonborough. Determine the expected highway safety performance for each alternative, including the No-Build alternative, based on AASHTO Highway Safety Manual, the FHWA crash modification factor (CMF) clearinghouse, or other reliable safety performance measures.

3.8. *Crash Record Compilation*: Document the crash history in MS Excel by crash type, severity, location, and other key attributes of the crashes documented in the crash reports. Prepare collision diagrams (not required by NHDOT) if a particular crash trend is noted and the creation of diagrams would benefit project stakeholders in highlighting the preferred alternative.

3.9. *Crash History Memo*: Prepare a technical memorandum for NHDOT documenting the ten-year crash history and notable trends. It is assumed one (1) review meeting will be included to discuss results and comments by the Department.

3.10. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, TEC will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 3.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work. TEC will provide sign-off on each submission of work to NHDOT, or other parties, prior to transmittal.

The documentation of information and data from the traffic analysis and crash analysis will be incorporated in the Final Design Report noted subsequently in this Scope of Services.

Task 4.0 Right-of-Way (ROW) Survey and Plan Development

TEC, in conjunction with its subconsultant Doucet Survey, will complete ROW survey and plan development in conjunction with survey information provided by NHDOT.

4.1. *ROW Facilitation Meeting*: Attend a kick-off meeting with NHDOT Bureau of Right-of-Way for project overview, review of historic ROW information and turnover of NHDOT project data and ROW information. It is assumed that attendance of one (1) in-person meeting will be required at the NHDOT office in Concord, NH.

4.2. *Not applicable to TEC scope of work. See Doucet Survey scope.*

4.3. *Not applicable to TEC scope of work. See Doucet Survey scope.*

4.4. *Existing ROW Plan Review*: Attend ROW facilitation meetings that involve survey-related discussions. It is assumed that attendance of one (1) in-person meeting will be required at the NHDOT office in Concord, NH.

4.5. *Not applicable to TEC scope of work. See Doucet Survey scope.*

4.6. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, TEC will assist in a quality control and quality

assurance (QC/QA) final review of all materials related to the hierarchical Task 4.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. TEC will provide sign-off on each submission of work to NHDOT, or other parties, prior to transmittal.

Task 5.0 Alternative Screening & Refined Alternatives

TEC, in conjunction with its subconsultants, will develop a range of alternatives and investigate their consequences to allow NHDOT to select a proposed action. It is anticipated that up to two (2) different reasonable design alternatives will be developed for the project. Each alternative will be developed to an equal level of detail. The alternatives analysis development will coincide with the public outreach working group as well as the informational and public officials' meetings:

5.1. *Alternatives Screening*: Whereas NHDOT has specified the development of two (2) distinct alternatives, it is assumed that the individual parts and pieces of each alternative are not mutually exclusive, and that individual parts and pieces could be advanced as part of the selected alternative. For example, where one alternative specifies a left-turn lane and traffic signal control, the traffic signal control could be advanced into the design while the left-turn lane is not. This is assumed to avoid the potential for an infinite number of alternatives. The project team will develop a range of alternatives for screening to discuss internally with NHDOT, the Town's working group, and at the Public Information Meetings. This subtask would allow for internal decisions to be made without further evaluation of BMPs, alternative specific traffic control, structures, or the need to estimate refined quantities; but still allow for a screening level evaluation of costs, impacts to environmental resources, impacts to right-of-way, and other NEPA criteria. Conceptual alternatives will be compared using a high-level cost per lane mile approach from data supplied by NHDOT.

5.2. *Advancement of Refined Alternatives*: Select and advance two (2) different reasonable design alternatives to be further developed for the project in the subsequent subtasks. This task includes a review meeting with the Department to document public comment, design decisions, and advance the refined alternatives tasks below.

5.3. *Conceptual Plans*: Develop a conceptual level plan, profile, typical section, and cross-section (if needed based on change of footprint) for each alternative including impacts to right-of-way, environmental / cultural / archaeological resources (known to date based on prior tasks), and other pertinent impacts.

5.4. *Conceptual Layout*: Develop a conceptual level layout for traffic control for each alternative including description of major differences in alternatives via critical sections, phasing, etc.

5.5. *Drainage Study*: Prepare a basic drainage study for the project area for only one design alternative (most likely the alternative featuring the most impervious surface) to identify existing drainage patterns, establish proposed drainage outlets, and determine the right-of-way that will be required for Best Management Practices (BMP) measures. The study will outline pre- and post-flows at all the presumed outlet locations. This task will include a water quality review with NHDOT Bureau of Environment.

5.6. *Design Alternative Matrix*: Prepare a comparative matrix of each design alternative which will include comparisons for benefit and impacts to traffic control, traffic operations, traffic safety, cross-sectional geometrics, ROW impacts, natural & cultural impacts, utility impacts, overall feasibility, applicability to the purpose & need, and other such parameters which may be identified during the conceptual design.

5.7. *Alternatives Cost Estimates*: Prepare a conceptual level cost estimate with clear explanations of assumptions used to develop the estimate. Major items within the estimate will be categorized at a level consistent with the design level. Refined alternatives cost estimates will be prepared utilizing the Department's Preliminary Estimate Worksheet.

5.8. *Formal Project (OTS) Meetings*: The project team will also attend two (2) of three (3) OTS meetings with the following NHDOT Bureaus: Highway Design, Traffic, Safety, Environment, and possibly Construction. One (1) following alternative screening and one (1) at the conclusion of this Refined Alternatives Tasks to reconcile NHDOT comments into the Refined Alternatives in accordance with NHDOT requirements

5.9. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, TEC will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 5.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work. TEC will provide sign-off on each submission of work to NHDOT, or other parties, prior to transmittal.

Conceptual layout plans for each alternative will be presented as roll plan format for ease of viewing for the general public and stakeholders. At the conclusion of this Refined Alternatives Tasks, it anticipated that Estimate Review Committee (Task 1.7), a Front Office Meeting (Task 1.6), as well as a public involvement (Task 9.5, 9.7, and/or 9.8) will be completed.

Task 6.0 Pre-Hearing Submission

Upon acceptance of the selected alternative, following the Refined Alternatives Public Informational Meeting presentation, and prior to the Public Hearing and Finding of Necessity, TEC will revise and further advance the settled alternative. TEC will revise the conceptual level plan submission and prepare a Pre-Hearing submission including plans, specifications, and estimates in line with the Post-Hearing Submission Checklist. This submission shall incorporate:

6.1. *Preferred Alternative Analysis and Design*: Finalize preferred/selected alternative analysis and design including horizontal and vertical alignment of all pertinent temporary and permanent roadways within the limit of work.

6.2. *Drainage and Water Quality Treatment*: Identify the specific drainage and water quality treatment needs for the selected project. This task will include submission of a Draft Water Quality Memorandum and include a meeting with NHDOT Bureau of Environment.

6.3. *Slope Work Refinements*: Identify and prepare additional refinements to the slope work adjacent to the roadways of the selected alternatives including temporary and permanent erosion control measures.

6.4. *Geotechnical Documentation*: Document geotechnical information and recommendations that establish the pavement depths, underdrain requirements and the structural sub-base beneath the pavement. Provide preliminary and final subsurface exploration plan development and siting of the subsurface explorations by providing the station(s), offset(s) and associated GPS coordinate(s) for proposed subsurface exploration locations for all, as well as highway design.

6.5. *Temporary Traffic Control Development*: Identify the maintenance of traffic and construction sequencing for the purpose of establishing the overall construction limits including temporary traffic control, construction schedule, and/or detours as necessary. Analyze and review traffic control design for during construction and for after construction with the Bureaus of Highway Design and Construction during one (1) review meeting. Present draft temporary traffic control plans with Traffic Control Committee. The Traffic Control Committee meeting will occur during this stage; however, will be billed under Task 1.6.

6.6. *Right-of-Way Review*: Identify any impacts to right-of-way and review with the Bureau of Right of Way. Temporary construction & traffic control, permanent drainage and slope, and right-of-way acquisitions will be evaluated and proposed right-of-way file (PRW) submitted to Highway Design and Right-of-Way Survey Section. At the conclusion of this task, TEC anticipates one (1) review meeting with the Highway Design and Right-of-Way to review impacts, acquisitions, as well as temporary and permanent easements.

6.7. *Utility Coordination*: Verify above and underground utilities and determine potential utility conflicts for early utility coordination with the Department. Incorporate utility locations, as identified by the individual utility owner through the verification process, into the plans. One (1) round of revisions is expected after review by Design Services.

6.8. *Design Calculations*: Prepare preliminary design calculations for this submittal to include, but not limited to; guardrail calculations, earthwork balances and availability, drainage design, and pollutant loading calculations.

6.9. *Pre-Hearing Submission Plans*: Prepare updated deliverable Pre-Hearing Submission Plans to include:

a. Typical Sections for mainline roadways, side roads, and all temporary traffic control roadways, if necessary.

b. Construction details for applicable non-standard items or as needed.

~~c. General plans depicting existing conditions, existing utilities, existing ROW, existing environmental resources, and existing roadway characteristics.~~

d. Proposed permanent layout and detail plans denoting proposed design work.

e. Cut Sheets and roll plans showing slope lines, guardrail locations, drainage system details and drainage features, and proposed right of way lines, including drainage, slope and/or construction easements.

f. Profiles will be developed for mainline roadways, side roads and all temporary traffic control roadways.

~~g. Pavement marking, traffic signage, and traffic signal (if chosen as the selected alternative) plans.~~

h. Temporary Traffic Control and/or Detour Plans for all proposed stages of the selected alternative. Submitted as part of Task 6.5 but inclusive to plan set.

~~i. Drainage Plans.~~

j. Cross-Sections as applicable.

k. Draft Public Hearing Color Plan

6.10. *Project Design Report*: Prepare a Project Design Report from revisions and comments received. The Project Design Report will include:

a. A narrative describing the design with supporting design criteria documentation.

b. All design criteria (i.e. Engineering Report style list of deficiencies and solutions).

c. Finalized Traffic Analysis and Crash Analysis

d. Revised Preliminary Estimate

e. Documentation of Environmental Commitments

f. Documentation of Cultural / Historical / Archeological Commitments

g. Superelevation Calculations

h. Guardrail Calculations (as necessary)

i. List of Utility Conflicts

j. Documentation of any Pending/Outstanding Issues

k. Documentation of Right-of-Way impacts

l. Documentation of Utility impacts

~~m. Other materials deemed necessary based on the selected alternative.~~

6.11. *Cost Estimate & Quantity Calculations*: Prepare preliminary cost estimate updates including quantity calculations for Department review.

~~6.12. *NHDOT Bureau Task Meetings*: Assumes one (1) task meeting per applicable NHDOT Bureau and preparatory work.~~

6.13. *Formal Project (OTS) Meetings*: The project team will also attend one OTS (1) review meeting with NHDOT to assist with design decisions and completion of the Pre-Hearing Submission, and subsequently reconcile NHDOT comments into the Pre-Hearing submission in accordance with NHDOT requirements.

6.14. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, TEC will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 6.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone

other than those who performed the original work. TEC will provide sign-off on each submission of work to NHDOT, or other parties, prior to transmittal.

6.15. *Survey Request Plan*: Additional topographic survey may be required depending on the preferred alternative. TEC will complete a review of required additional survey and with plan identifying new areas for NHDOT's use in requesting additional ground survey through Bureau of ROW Survey Section.

~~6.16. *Geotechnical Request Plan*: Following review and approval of the preferred alternative plan, TEC will complete a plan for NHDOT's use in conducting geotechnical explorations through the Bureau of Materials & Research.~~

Task 7.0 Slope & Drain Submission

After successful completion of the public hearing and approval by the Department, TEC will revise and further advance the design of the selected alternative. TEC will revise the conceptual level plan submission and prepare a Slope & Drain submission including plans and estimates in line with the Slope & Drain Submission Checklist. This submission shall incorporate:

7.1. *Slope & Drain Plans*: Prepare updated deliverable Slope & Drain Plans to include:

a. Typical Sections for mainline roadways, side roads, and all temporary traffic control roadways, if necessary.

b. Construction details for applicable non-standard items or as needed.

~~c. General plans depicting existing conditions, existing utilities, existing ROW, existing environmental resources, and existing roadway characteristics.~~

d. Proposed permanent layout and detail plans denoting proposed design work. This includes proposed ROW and utility layouts as necessary.

e. Cut Sheets showing slope lines, guardrail locations, drainage system details and drainage features, and proposed right of way lines, including drainage, slope and/or construction easements.

f. Profiles will be developed for mainline roadways, side roads and all temporary traffic control roadways.

g. Update / finalize pavement marking, traffic signage, and traffic signal (if chosen as the selected alternative) plans. This will include detailed plan callouts, sign text sheets, and signal timing/phasing charts, as applicable.

h. Temporary Traffic Control and/or Detour Plan for all proposed stages of the selected alternative.

i. Drainage design BMPs including temporary and permanent erosion control measures.

j. Cross-Sections as applicable.

7.2. *Slope & Drain Calculations*: Prepare a calculations workbook which includes all necessary calculations completed to support the design of the selected alternative. This

may include traffic signal clearance interval calculations, design calculations to support superelevation, utility calculations, revised construction schedule, etc.

7.3. *Project Design Report*: Finalize the Project Design Report from revisions and comments received. This includes the AOT compliance memorandum as an attachment.

7.4. *Project Drainage Report*: Finalize the Project Drainage Report including: (2 bound copies)

a. A narrative describing the project drainage area with supporting documentation.

b. Plans showing existing watershed areas for the project.

c. Plans showing the proposed watershed areas for the project.

d. Calculations and backup material documenting existing (preconstruction) drainage flows.

e. Calculations and backup material documenting proposed (post construction) drainage flows. (This should also include any post development drainage conditions if applicable)

f. Complete documentation and backup for drainage appurtenances and controls, i.e. CB, ditch flows, gutter flows, treatment swales, detention/sedimentation basins.

g. BMP design treatments systems as required will be shown with calculations and Water Quality Memorandum revisions.

h. All calculations shall be referenced to each appurtenance as shown on the plans.

7.5. *Design Exceptions*: Prepare materials related to design exceptions identified for the selected alternatives. At this stage, this will include a preliminary summary document as to each exception and the preliminary justification.

7.6. *Cost Estimate & Quantity Calculations*: Prepare updated cost estimate update including quantity calculations for Department review.

7.7. *NHDOT Bureau Task Meetings*: Assumes one (1) task meeting per applicable NHDOT Bureau and preparatory work.

7.8. *Project Collaboration Meetings*: The project team will attend virtual design meetings with applicable NHDOT Bureaus and design representatives. TEC assumes up to two (2) design meetings as part of the Slope & Drain Plan submission. The project team will attend one (1) review meeting with NHDOT, and subsequently reconcile NHDOT comments into the Slope & Drain Plan submission in accordance with NHDOT requirements.

7.9. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, TEC will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 7.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work. TEC will provide sign-off on each submission of work to NHDOT, or other parties, prior to transmittal.

TEC's final submission will include electronic/digital CAD/D files. The CAD/D files shall consist of the base plans with enhancements in MicroStation format, using NHDOT naming conventions, line styles and character styles. The CAD/D files shall also contain a proposed 3D top line model, complete out to the slope limits.

Task 8.0 Environmental & NEPA Documentation

The Environmental & National Environmental Policy Act (NEPA) Documentation Task will run concurrently with other tasks accordingly and be primarily completed by Normandeau Associates, Preservation Company, and IAC, in conjunction with the prime consultant TEC. Where applicable, the following environmental documentation tasks include:

8.1. *Purpose and Need Statement*: Develop a formal Purpose and Need Statement consistent with NEPA and other federal guidelines. Consult with all stakeholders appropriately for a complete statement.

8.2. *Not applicable to TEC scope of work. See Normandeau scope.*

8.3. *Environmental Documentation - Desktop Resource Identification:* Although this task will primarily be complete by Normandeau, TEC will participate and complete the following subtasks:

8.3.1.2 *Watershed / Surface Water Review*: TEC will assist in the identification and gathering of data regarding surface waters, related to the requirements included in Alteration of Terrain, Construction General, Water Quality Certification, NH Shoreland and NH Dredge & Fill permits within the study area.

TEC will describe these resources/activities and display them on project mapping, describe permitting needs in the NEPA document, incorporate the permit requirements into the engineered design and proposal for bids. TEC will attend two (2) meetings with the NHDOT's Water Quality Program Manager to review the permit requirements. The potential for the project to affect water quality from impervious surfaces will be addressed and summarized in a permit compliance memo for review and concurrence by the NHDOT's Water Quality Program Manager. TEC, in coordination with Normandeau, will prepare a Water Quality Summary Memorandum.

8.4. *Not applicable to TEC scope of work. See Normandeau scope.*

8.5. *Not applicable to TEC scope of work. See Normandeau scope.*

8.6. *Not applicable to TEC scope of work. See Normandeau scope.*

8.7. *Not applicable to TEC scope of work. See IAC scope.*

8.8. *Historical Resources*: The following cultural resources data collection, permitting, and mapping actions will be completed by Preservation Company and supplemented by the project team.

e. *Effects Evaluations*: Five (5) effects evaluations are assumed for this project which will be led by Preservation Company. TEC will assist the Preservation Company on

the development of effects as compared to the design elements of the project. TEC will lead the development of the final effects memo.

8.9. *Not applicable to TEC scope of work. See Normandeau scope.*

8.10. *Not applicable to TEC scope of work. See Normandeau scope.*

8.11. *Not applicable to TEC scope of work. See Normandeau scope.*

8.12. *Not applicable to TEC scope of work. See Normandeau scope.*

8.13. *Natural Resource Agency Meetings*: Participate in up to three (3) NHDOT monthly Natural Resource Agency meetings and coordinate a field meeting, if needed, with the agencies to review resource impacts. Prepare and supply support graphics, presentations, and meeting minutes as necessary. These meetings will be attended by both TEC and Normandeau Associates on behalf of the project team.

8.14. *Cultural Resource Meetings*: Attendance at three (3) NHDOT monthly Cultural Resource Agency meetings and coordinate a field meeting, if needed, with the agencies to review resource impacts. Prepare and supply support graphics, presentations, and meeting minutes as necessary. These meetings will be attended by TEC, Normandeau Associates, IAC, and Preservation Company on behalf of the project team.

8.15. *Alternatives Development and Evaluation*: Develop a Summary Matrix of the impacts and effects of the reasonable design alternatives for the use of NHDOT and stakeholders as a planning tool to determine the selected alternative.

8.16. *Section 4(f)Documentation*: TEC will lead the preparation of a Section 4(f) evaluation that complies with applicable Federal laws and regulations, including Section 4(f) of the Department of Transportation Act, 23 CFR 774, FHWA's Section 4(f) Policy Paper, and other resources as appropriate. Three (3) rounds of revisions are expected to be completed following Environment's initial review, FHWA Division Review, and FHWA HQ review.

8.17. *Draft Categorical Exclusion (CE)*: TEC will coordinate with and assist Normandeau Associates on the Draft Categorical Exclusion (CE) documentation. Normandeau Associates will lead the preparation of this document. Two (2) rounds of revisions are anticipated with the Bureau of Environment and FHWA Division prior to the Public Hearing.

8.18. *Final CE Document:* TEC will coordinate with and assist Normandeau Associates on the Final CE Document. Following the comments received at the Public Hearing, the project team will meet with NHDOT and the lead Federal agency to review and address comments as needed. The project team will revise and resubmit the document. One (1) round of edits/comments after the Public Hearing is anticipated.

8.19. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, TEC and its subconsultants will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 8.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work. TEC

will provide sign-off on each submission of work to NHDOT, or other parties, prior to transmittal.

TEC's final submission will include digital copies of draft and final environmental document(s), assumed to be a Categorical Exclusion (CE) and Section 4(f), as well as digital copies of the documents.

Task 9.0 Public Involvement

TEC and the design team will support a dynamic public participation process. For each meeting, including working group meetings, TEC will prepare and present meeting presentation materials such as meeting/hearing notices, graphics, handouts, and support displays to provide materials for posting to the NHDOT Project website. In addition, TEC will prepare meeting minutes for each meeting related to the project. The public involvement task will include:

9.1. *Public Involvement Plan*: Prepare a Public Involvement Plan prior to other public outreach and involvement. Assist NHDOT in identifying appropriate stakeholders and assembling a working group whose role will be to advise the design team on the development and evaluation of design alternatives.

9.2. *Outreach and Input*: Outreach and solicit input with the Town of Moultonborough to set public involvement goals and expectations and include a detailed schedule of all activities related to the project. This task is intended to update the Public Involvement Plan two (2) rounds through the development of Part B.

9.3. *Meeting Preparation*: Assist in the preparation of each meeting, including a questionnaire/survey for each of the two (2) public informational meetings (only) to solicit additional input on the design alternatives. Meeting announcements, notification assistance (mailings), and coordination with the Town is included in this effort.

9.4. *Public Inquiry Input*: Provide input to NHDOT on public inquiries. Gather and draft responses to public inquiries received through the project website and other social media outlets for approval and distribution.

9.5. *Working Group Meetings*: Attend working group meetings with project stakeholders, as needed, to review and discuss alternatives and to facilitate local input into important design decisions. It is assumed that six (6) working group/project advisory/stakeholder meetings will be held throughout the duration of the project.

9.6. *Meeting Dry Runs*: The project team will participate in virtual and/or in person dry runs for each Public Information, Public Official, and working group meeting. This includes participation in ten (10) overall dry-run meetings.

9.7. *Public Officials Meetings*: Attend two (2) Public Officials Meetings to support the alternative decision-making and briefings with the Town leadership and/or planning level committees.

9.8. *Public Information Meetings*: Attend two (2) Public Information Meetings

a. One (1) early in design process to facilitate discussion of the reasonable range of design alternatives.

b. One (1) to focus on the proposed action during the NEPA process prior to finalizing the Draft Environmental Document.

9.9. *Formal Public Hearing*: Attend and support a formal Public Hearing held at the end of Preliminary Design for layout of the proposed action and environmental document to include the existing metes and bounds property boundary information. The Public Hearing Process incudes:

a. Revision of the Public Hearing Plan and Handout (for ROW's use to notify impacted abutters) after the Pre-Hearing Review. The final Public Hearing Plan and Design Report will be stamped.

b. Attendance at Utility Pre-Hearing Review (2 months before Public Hearing) which is led by NHDOT led.

c. Attendance and support at Dry-Run Meeting w/ ROW and Commission Members.

d. Attendance at Finding of Necessity w/ revised plans from Public Hearing.

e. Assistance and plan revisions and comment support of Report of the Commission as led by NHDOT led.

DELIVERABLE PACKAGING

All document deliverable materials, including design calculations, studies, study plans, work plans, alternative studies, and estimates will be furnished to NHDOT with one (1) permanent, legible copy and one (1) electronic format (PDF) copy, suitably bound, unless otherwise noted in this Scope of Services.

MATERIALS PROVIDED BY NHDOT

- Topographical survey within the defined project limits.
- Electronic drawings in MicroStation format of roadway typical cross-sections and other detail sheets in accordance with NHDOT CAD/D procedures and requirements.
- Prior plans of highway and bridge construction projects within the project limits, as available through the NHDOT Project Viewer.
- Traffic volume data that is historically available through the NHDOT TDMS.
- Crash data in the standard NHDOT excel format.
- High-level cost per lane mile approach data for alternatives screening (%-based major items estimate).
- NHDOT formatted estimation spreadsheet file for refined alternatives through Slope & Drain Submission.
- NHDOT formatted Design Report document file.
- Identification of Economic Justice (EJ) community locations and social and economic analysis of the regional social and economic resources.

- Upload all project related materials to the NHDOT project website and social media with support by the project team as noted in the Scope of Services.
- Response to public inquiries with support by the project team as noted in the Scope of Services.
- A geotechnical program and associated services based on information and direction by the project team as noted in the Scope of Services.
- Utility Coordination upon information and direction by the project team as noted in the Scope of Services.

SCOPE OF SERVICE ASSUMPTIONS

- Assumptions as to the number of meetings by subject matter are defined under the corresponding tasks.
- Alternatives may assume conceptual widening to accommodate existing drainage culvert at the intersection of NH Route 25 / Sheridan Road. This scope of services assumes that full bridge/culvert design, if needed, will be defined under Part C.
- Alternatives may assume that the limits of constructable widening of NH Route 25 is limited to avoid impacts to the bridge (Red Hill River), as discussed with NHDOT, located approximately 400-feet east of the intersection.

MOULTONBOROUGH - 41581

Intersection Improvements for NH Route 25 and Sheridan Road

ATTACHMENT A
SCOPE OF SERVICES FOR PRELIMINARY DESIGN

Revised for IGE – February 11, 2025

STATEMENT OF UNDERSTANDING

Normandeau Associates, Inc. (Normandeau) will serve as a subconsultant to TEC, Inc. (TEC) and complete tasks related to the archaeological resource needs for NHDOT Project 41581 at the intersection of NH Route 25 / Sheridan Road in Moultonborough, New Hampshire.

The environmental tasks include natural resource identification, environmental input for the Preliminary Design Report, and a draft and final National Environmental Policy Act ("NEPA") document. The following scope of work is proposed for the project area, which for the environmental assessment purposes, includes the land within the NH Route 25 right of way within the project area, including the median. For scoping purposes, the approximate right-of-way ("ROW") review area was assumed to be 15 acres for 41581.

TEC will be contracting directly with the necessary historical and archeological consultants for anticipated resources in the project area. Normandeau will work with the team to integrate the required information into the draft and final NEPA document.

SCOPE OF SERVICES

The TEC scope of services for **NHDOT Project 41581** is for the 'Preliminary Design' (Part B) only. 'Final Design' (Part C) is not included in this scope of services. The scope of services is as follows:

Task 1.0 Project Management, Coordination, Communications (PMCC)

Normandeau design team will meet regularly, including meetings with NHDOT and other appropriate stakeholders not specifically defined under general public participation. For each meeting, Normandeau will prepare and present meeting presentation materials applicable to the natural and environmental scope of work such as meeting agendas, graphics, handouts, design documents/plans, and support displays to provide materials, where applicable. Meeting materials will be reviewed with TEC prior to submission to the NHDOT Project Manager. In addition, Normandeau will prepare meeting minutes for each meeting related to the natural and environmental scope of work, where applicable. The PMCC and administrative tasks anticipated for this project include:

1.1. *Project Initiation*: Project initiation, planning, and internal team mobilization.

1.2. *Kick-Off Meeting*: Project kick-off meeting with NHDOT, TEC, & subconsultants.

1.3. *Ongoing Coordination & Communications*: Ongoing coordination and communications with NHDOT & project team. Normandeau has assumed five (5) 1-hour project team meetings in addition to various ongoing coordination.

1.4. *Project Management Meetings*: The project team will attend monthly meetings, as applicable to the scope of work, to discuss overall project management, schedule, and outstanding issues throughout the duration of design.

1.5. *Not applicable to Normandeau scope of work.*

1.6. *Not applicable to Normandeau scope of work.*

1.7. *Not applicable to Normandeau scope of work.*

Note that additional meetings directly related to the alternative development and plan submission processes are defined in the individual tasks.

Task 2.0 Data Collection

The project team will collect and/or request pertinent existing reference information including:

2.1. *Not applicable to Normandeau scope of work.*

2.2. *Not applicable to Normandeau scope of work.*

2.3. *Not applicable to Normandeau scope of work.*

2.4. *Not applicable to Normandeau scope of work.*

2.5. *Field Surrounding Inventory*: Conduct a field review of the project area to identify key engineering controls, topographic features, environmental and water resource needs constraints, and land uses that have a bearing on the design.

2.6. *Not applicable to Normandeau scope of work.*

Task 3.0 Traffic Analysis and Crash Reporting

All subtasks are not applicable to Normandeau scope of work.

Task 4.0 Right-of-Way (ROW) Survey and Plan Development

All subtasks are not applicable to Normandeau scope of work.

Task 5.0 Alternative Screening & Refined Alternatives

TEC, in conjunction with its subconsultants, will develop a range of alternatives and investigate their consequences to allow NHDOT to select a proposed action. It is anticipated that up to two (2) different reasonable design alternatives will be developed for the project. Each alternative will be developed to an equal level of detail. The alternatives analysis development will coincide with the public outreach working group as well as the informational and public officials' meetings:

5.1. *Alternatives Screening*: Normandeau will work with the project team to develop a range of alternatives for screening to discuss internally with NHDOT, the Town's working group, and at the Public Information Meetings.

5.2. *Not applicable to Normandeau scope of work.*

5.3. *Not applicable to Normandeau scope of work.*

5.4. *Not applicable to Normandeau scope of work.*

5.5. *Not applicable to Normandeau scope of work.*

5.6. *Design Alternative Matrix*: Normandeau will provide guidance related to environmental and natural resource needs in the preparation a comparative matrix of each design alternative which will include comparisons for benefit and impacts to traffic control, traffic operations, traffic safety, cross-sectional geometrics, ROW impacts, natural & cultural impacts, utility impacts, overall feasibility, applicability to the purpose & need, and other such parameters which may be identified during the conceptual design.

5.7. *Alternatives Cost Estimates*: Provide guidance related to environmental and natural resource needs in the preparation of a conceptual level cost estimate with clear explanations of assumptions used to develop the estimate.

5.8. *Formal Project (OTS) Meetings*: The project team will also attend two (2) OTS meetings with NHDOT Bureau of Environment. One (1) following alternative screening and one (1) at the conclusion of this Refined Alternatives Tasks to reconcile NHDOT comments into the Refined Alternatives in accordance with NHDOT requirements.

5.9. *Not applicable to Normandeau scope of work.*

Task 6.0 Pre-Hearing Submission

All subtasks are not applicable to Normandeau scope of work.

Task 7.0 Slope & Drain Submission

All subtasks are not applicable to Normandeau scope of work.

Task 8.0 Environmental & NEPA Documentation

It is anticipated that the project will qualify for a Programmatic Categorical Exclusion ("CE") under NEPA. The environmental document will identify and describe natural resources, hazardous materials, cultural resources, and resource impacts proposed for the project, and will include assessments for noise, air, traffic, and construction impacts prepared by others. The document will summarize alternatives considered (to be provided by others), describe potential measures to avoid, minimize or mitigate impacts, list environmental commitments, and will include maps, figures, correspondence with local, state, regional and federal agencies (including effects memo), and representative photographs.

The NEPA document will also identify which environmental permits are required, such as Wetlands, Shoreland, National Pollutant Discharge Elimination System ("NPDES") Construction General Permit, and compliance with the NHDES Alteration of Terrain Memorandum of Agreement with NHDOT. An Administrative Draft will be prepared for review by NHDOT. After comments are addressed by Normandeau, the Draft Categorical Exclusion will be submitted to NHDOT, and all other parties as directed, for review. Normandeau assumes the draft documents will be electronic.

If necessary, a Section 4(f) evaluation that complies with applicable Federal laws and regulations, including Section 4(f) of the Department of Transportation Act, 23 CFR 774, FHWA's Section 4(f) Policy Paper, and other resources as appropriate considerations will be included as an integral part of the Draft Categorical Exclusion (CE) documentation. TEC will lead the effort to draft the Section 4(f) document coordinating closely with the historical and archaeological consultants to complete this section of the report if required.

Following review of the Draft Categorical Exclusion (CE) documentation, Normandeau will review, and address comments as needed. Normandeau will then revise and resubmit the document. It is anticipated one review will be necessary. Normandeau assumes the final documents will be electronic.

The following environmental documentation tasks include:

8.1. *Purpose and Need Statement*: Normandeau will assist in the development of a formal Purpose and Need Statement consistent with NEPA and other federal guidelines with input from all stakeholders.

8.2. *Initial Environmental Correspondence*: Normandeau will send standard initial contact correspondence to Town officials and relevant local, regional, and State agencies, associations, and organizations to solicit feedback on potential environmental and cultural resource concerns, and to help identify social, historic, economic, and environmental issues and resources within the project area. The recipient list and draft letter will be reviewed by TEC and NHDOT prior to correspondence.

8.3. *Environmental Documentation - Desktop Resource Identification*: Normandeau will identify existing natural resources within the project areas described above, including wetlands, floodplains, rare species, conservation lands, recreational use, and surface and groundwater quality using outreach letters and available published resources as follows:

8.3.1. *Water-Based Resources*: The following water-based desktop resource identification actions will be completed by Normandeau:

8.3.1.1. *Groundwater*: Data regarding aquifers, public water supplies, and Wellhead Protection Areas within the study area will be gathered from appropriate sources such as the New Hampshire Geographically Referenced Analysis and Information Transfer System ("GRANIT") Geographic Information System ("GIS") database, New Hampshire Department of Environmental Services ("NHDES") mapping, or

publicly available municipal mapping. Normandeau will assess and describe these resources and display them on project mapping.

8.3.1.2. *Watershed / Surface Water Review*: Normandeau will consult the NHDES Wetland Permit Planning Tool ("WPPT") and NHDES consolidated list of water bodies subject to RSA 483-B for initial information regarding wetland and water resources. National Wetland Inventory mapping and poorly/very poorly drained soil layers will be mapped. Surface waters will be reviewed for all current regulatory requirements and constraints according to federal waters of the United States (WOTUS) and state jurisdiction, including a review of the most recently approved State 303(d) list, to identify water quality impairments and Total Maximum Daily Loads ("TMDLs") within the project area. Normandeau will review the project area for class A waters, Outstanding Resource Waters, Source Water Protection Areas, groundwater classification areas, wellhead and water supply intake protection areas, designated rivers jurisdiction, proximity to lakes and ponds subject to RSA 483-B, and consult available resources and GIS mapping to determine associated watershed size, stream tiers, and total project area within jurisdictional limits. Protected shoreland will be identified and included on project mapping. Watershed size for each crossing will be determined as will the corresponding Tier classification using the United States Geological Survey ("USGS") Stream Stats tool. For 41581, initial reviews indicate a Tier 3 (Red Hill River) crossing, a Tier 2 crossing (unnamed tributary to Red Hill River) near Sheridan Road, and one Tier 1 crossing near the west end of the review area. Garland Pond and Lees Pond, subject to RSA 483-B, are within or near the project area. Garland and Lees Pond are within one-quarter mile of the project area so Alteration of Terrain ("AOT") regulations will be relayed to the project team. Two (2) meetings with Mark Hemmerlein will be assumed: one (1) following alternatives screening and one (1) during pre-hearing submission. Surface water resources will be field delineated as described in section 8.4.1.1 including existing drainage structures when encountered and will include a review of all proposed drainage areas within the project area. Normandeau assumes approximately 200 feet of the project area east of the intersection with Sheridan Road may require a tree/sapling inventory to support Shoreland permitting, and this effort is captured under section 8.4.1.3. The protected shoreland extends north of this area, and depending on the final project area limits, may require additional inventory. For the purposes of this scope, all areas outside of the 200 feet will require a scope adjustment. Normandeau will work with TEC to calculate the impervious area change within the protected shoreland. Normandeau will also coordinate with TEC on drafting a water resource memo. Normandeau will provide TEC with a brief write up of the desktop information gathered as described above, and offer review and feedback on the final memo drafted by TEC.

8.3.1.3. *Collect FEMA Mapping*: Federal Emergency Management Agency ("FEMA") floodplain and floodway information will be gathered from appropriate sources and displayed on project mapping.

8.3.1.4. *Special Flood Hazard Areas*: The project area will be screened for overlap with the 100-year floodplain and results and requirements verified through consultation with the Office of Planning and Development in the New Hampshire Department of Business and Economic Affairs. Normandeau assumes project 41581 is within the 100-year floodplain for Garland Pond.

8.3.2. *Land-Based Resources*: The following land-based resources desktop resource identification actions will be completed by Normandeau:

8.3.2.1. *Farmland Soil Mapping*: Soil series within the study area will be mapped based on existing databases, including the distribution of prime, statewide, local, or unique farmland soils. Active farmlands will be identified and described.

8.3.2.2. *Review of Contaminated Site Data*: Review aerial photographs, the NHDES OneStop Database files, and NHDES Per- and Polyfluorinated Substances ("PFAS") mapping and obtain an Environmental Data Resources ("EDR")® search report to identify potential hazardous materials and PFAS sites within 1,000 ft of the project area and landfills within 4,000 ft. The available data will be supplemented with a site reconnaissance.

8.3.2.3. *Identification of Public and Conservation Lands*: Publicly owned lands, bicycle and pedestrian trails, and privately conserved lands will be identified through existing GIS mapping and coordination with local, state, and regional land managers. Conserved land is present within or near the 41581 Project Area (The Nature Conservancy and Town of Moultonborough managed lands).

8.3.2.4. *Identification of Section 4(f) Locations*: Publicly owned parks, wildlife refuges and historic sites (Section 4(f) Resources), bicycle and pedestrian trails and other recreational resources will be identified through the WPPT and GRANIT Conservation/Public Lands data layer, and information provided by the cultural resource subconsultants.

8.3.2.5. *Identification of Section 6(f) Locations*: NHDOT has noted through its Article I document that Section 6(f) properties are not affected by the project. In the event that further evaluation denotes that Section 6(f) properties are affected, lands receiving Section 6(f) funds will be identified based on coordination with the Department of Natural & Cultural Resources (DNCR) Division of Parks and Recreation.

8.3.2.6. *LCIP and LCHIP*: The Land Conservation Investment and Land and Community Investment Programs ("LCIP" and "LCHIP") will be contacted to identify any properties receiving funds from these programs in the project area.

8.3.2.7. *Land Use*: Active farmlands, residential properties, commercial, industrial and other land uses will be identified based on aerial photos and descriptions.

8.3.3. *Wildlife Resources Data Collection and Mapping*: The following wildlife resources data collection, permitting, and mapping actions will be completed by Normandeau and supplemented by the project team:

8.3.3.1. *Identification of Wildlife and Botanical Resources*: Normandeau will review the existing NH Natural Heritage Bureau ("NHB") database review obtained by NHDOT via the NHB DataCheck Tool and the existing US Fish & Wildlife Service ("USFWS") Official Species List obtained via IPaC. Normandeau will renew these database checks as they expire and the project progresses. Fish and wildlife habitat will be identified based on the state Wildlife Action Plan, the NH Fish and Game ("NHF&G") Wildlife Habitat Blocks and Corridors Map and field observations, to be conducted during the wetland delineation. Normandeau will communicate information about wildlife corridors and habitat strongholds to the design team to facilitate incorporation of the corridors/strongholds into project planning in accordance with RSA 228:46-c.

Following the initial coordination noted above to identify potential concerns, Normandeau will coordinate with the NHB at the DEPARTMENT's Natural Resource Agency Coordination Meetings (Included in Section 1) and through email regarding rare plant species, and exemplary natural communities.

The information listed in Fis 1004 will be compiled for coordination with NHF&G. The information will be provided to the NHDOT for review, with one round of comments addressed. Normandeau will provide the information to NHF&G for comment and will respond to questions.

Normandeau will coordinate with the design team/NHDOT to ensure any NHF&G and NHB conservation recommendations are acceptable. If there are concerns with recommendations, the Normandeau will coordinate with the NHDOT's Bureau of Environment to develop a response to NHF&G/NHB. Normandeau will send the response to the NHF&G/NHB recommendations. It is assumed one (1) meeting with Bureau of Environment to coordinate responses and information required. Normandeau further assumes that no species specific surveys will be needed other than those listed below.

The project is located within the range of the northern long-eared bat and tricolored bat, listed as federally endangered species. It is anticipated that the project will be eligible for review under the Federal Highway Administration and Federal Railroad Administration Range-wide Biological Assessment for Transportation Projects for Indiana Bat and Northern Long-Eared Bat Programmatic Consultation.

An acoustic survey is included in this scope. Normandeau will complete the regulatory review determination key in the USFWA IPaC tool for use in the NHDOT's coordination with USFWS. Normandeau will coordinate with the design team to determine which Avoidance and Minimization Measures are acceptable for the project, such as, a time of year restriction for tree clearing. The NHDOT will provide Normandeau with USFWS concurrence letter for inclusion in the Environmental Document.

If the project area is known to include habitat for Bald Eagles, Normandeau will complete the Northeast Bald Eagle Project Screening Form for the project and provide appropriate avoidance measures to the design team for incorporation into project planning. If the project is unable to implement all the recommended avoidance measures from the screening form, Normandeau will prepare a letter to facilitate coordination with the USFWS regional eagle coordinator to determine the appropriate next steps. The letter will include a brief description of the project, including its location and when project activities are planned to start; the activity category(s) from the screening form; the ID number(s) (e.g., AM 5) of the Avoidance Measure(s) the project is unable to implement; and the nest location(s), if available.

8.3.3.2. *Fisheries Resources Update*: Normandeau will review the National Oceanic and Atmospheric Administration ("NOAA") Essential Fish Habitat ("EFH") mapper and the Omnibus Essential Fish Habitat Amendment 2 to determine if EFH waterbodies or tributaries are present in the project area and which species' life stages could be supported by habitat in the project area. It is assumed that preparation of an EFH Assessment Form will not be required for this project based on a preliminary review of the mapper.

8.4. *Environmental Documentation – Field Investigations*: Normandeau New Hampshire Certified Wetland Scientists ("NHCWS") and field scientists will collect the following natural resource data, for use in permitting and mapping:

8.4.1. *Water-Based Resources*: The following water-based resources data collection, permitting, and mapping actions will be completed by Normandeau and supplemented by the project team.

8.4.1.1. *Wetland Delineation*: Delineate wetlands, determine their functions and values within the study area limits based on state and federal criteria, and collect sufficient field data to document the delineation and state and federal jurisdiction. Wetlands will consider the 2023 determination on Waters of the United States, where formerly regulated wetlands regulated at the federal level may no longer be considered jurisdictional, however, at the state level these resources are still protected. It should be noted that as of April 2024, the 2023 Rule associated with the Sackett Decision is still enjoined from taking effect in New Hampshire.

a. Normandeau will delineate jurisdictional wetlands within the project area with sequentially numbered flags in accordance with the 1987 U.S. Army Corps of Engineers ("USACE") Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0).

b. Wetland flag locations will be collected using a GPS unit with sub-meter accuracy. Wetland data will be collected on USACE Wetland Determination Data Sheets. Non-jurisdictional drainage features, Wildlife habitat, Shoreland within the project area, potential vernal pools, and any other relevant natural features will be documented with GPS and field notes.

c. Wetlands Function-Value Evaluation Form from the Highway Methodology Workbook Supplement will be completed for each wetland.

d. Wetland Determination Data Plot Forms with paired upland and wetland sample data points will be completed for each wetland that has proposed impacts.

e. Complete stream crossing field data collection assessments for any of the streams identified as Tier 1, Tier 2 or Tier 3 in accordance with Env-Wt 903.03 or Env-Wt 903.04 and any applicable NHDOT field data collection forms. For 41581, initial reviews indicate a Tier 3 (Red Hill River) crossing, a Tier 2 crossing (unnamed tributary to Red Hill River) near Sheridan Road, and one Tier 1 crossing near the west end of the review area. If Tier 1 streams cannot be assessed / collected, Normandeau will provide a narrative as to the reason why. TEC will provide peak discharge calculations, culvert inlet and outlet elevations, and proposed replacement structure information details. No hydrogeomorphic stream surveys are expected.

f. Normandeau will locate and flag the Top of Bank ("TOB") and Ordinary High Water Mark ("OHWM") of all jurisdictional streams within the project area.

g. Streams and wetlands will be classified according to the Federal Geographic Data Committee Classification of wetlands and deepwater habitats of the United States and assigned to a Water of the United States ("WOTUS") classification. Wetlands, streams, and vernal pools will be assessed with the United States Army Corps of Engineers Highway Methodology Workbook Supplement, Wetland Functions and Values, A Descriptive Approach. All required functional assessment data sheets, vernal pool data sheets, and wetland determination data forms will be provided for permitting purposes.

h. It is assumed one (1) meeting with the Bureau of Environment Wetlands Section will be conducted to review the wetlands, stream crossings, and vernal pool locations and delineations.

Normandeau assumes the delineations will be valid for the life of the Project and not require a revisit. (Delineations are valid for a period of 5 years from the date of delineation.)

8.4.1.2. *Vernal Pool Delineation:* Potential vernal pools within the ROW will be identified and GPS located, and if possible, visited in the spring to document breeding of obligate vernal pool species. Up to two vernal pools are included in scope. Vernal pool surveys will be completed following NHF&G and NHDES requirements and NHF&G vernal pool data forms and USACE vernal pool assessment data sheets will be completed for each vernal pool. A determination of whether each pool meets the Env-Wt 104.44 vernal pool definition will be made.

8.4.1.3. *Shoreland Tree/Sapling Inventory:* Removing trees and sapling within the waterfront buffer will necessitate a grid segment and point score system. Normandeau will identify trees and saplings within the waterfront buffer and develop a figure for portraying the point counts for each grid. Normandeau assumes the project ROW to be approximately 60 feet and the project length within 50 feet of nearby reference line elevation(s) to be about 200 feet. Normandeau assumes no project areas outside of this assumed area will need a tree inventory.

8.4.2. *Land-Based Resources*: The following land-based resources data collection, permitting, and mapping actions will be completed by Normandeau and supplemented by the project team:

8.4.2.1. *Incidental Observations*: Concurrent with natural resource surveys, observations, photographs, and GPS locations of stone walls and other historical features in the area of potential effect ("APE"), land use, observed rare/protected plants, and evidence of hazardous materials within the ROW will be recorded. Should rare plants be identified in the field or in the NHNHB data check, Normandeau will initiate coordination with NHNHB via email. However, development and implementation of additional species survey plans and reports, should that be necessary, would require a scope and fee amendment as mentioned above.

8.4.2.2. *Botanical Resources:* Small Whorled Pogonia (*Isotria medeoloides*) is identified on the USFWS IPaC report for both project areas. NHNHB did not identify any occurrences of known RTE plant species within the project areas. It is assumed that species-specific surveys will not be required for this species, although Normandeau is qualified to conduct them if recommended by USFWS or NHNHB.

8.4.2.3. *Wildlife Resources:* The following wildlife resources data collection, permitting, and mapping actions will be completed by Normandeau Associates and supplemented by the project team.

a. *Bat Acoustic Survey*: If it is determined that there will be tree clearing required to support this project or that AMMs will not be adequate, a bat acoustic survey will be performed for up to one linear kilometer at the project location. Bat acoustic surveys assume that tree limbing or clearing within the project area cannot adhere to time of year restrictions (where cutting is permissible during the inactive bat season of November 1 through April 14). A bridge/structure assessment form from the Bridge/Structure Assessment Form found in Appendix D of the FHWA/FRA/FTA – U.S. Fish & Wildlife Service Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat will be completed at the time of the acoustic survey and/or during other field investigations for structures within the project area, which includes bridges and culverts three feet in diameter or larger. Normandeau assumes two total structures are present within the Moultonborough 41581 project area . Normandeau assumes that the visual inspection(s) and acoustic survey will be valid for the life of the Project and not require return visits. (Visual inspections are valid for a period of 2 years from the date of inspection; acoustic surveys are valid for 5 years from the date of survey.)

b. A Normandeau wildlife biologist will review desktop wildlife habitat data and perform a site survey to identify important wildlife habitats and travel corridors in the project area. The wildlife biologist will assess habitat suitability for protected species identified in the NHNHB report and collect required information in accordance with Fis 1004 rules.

c. *Blanding's and Wood Turtles:* Both species have been identified within or near the proposed project areas. Normandeau assumes that species-specific surveys will not be required by NHF&G and recommended BMPs for avoidance will be reasonable.

8.4.2.4. *Invasive Species Determination*: Determine the presence of invasive species in conjunction with other project field investigations. Approximate locations of populations will be located with GPS-located within the project limits for inclusion on project plans as polygons and Type I and II invasive species information will be provided.

8.5. *Environmental Documentation – Reporting*: Normandeau will provide a wildlife habitat assessment report suitable for addressing all requirements in Fis 1004. Normandeau will provide a separate water quality memo briefly describing the desktop resources reviewed. A hazardous materials summary report listing properties identified as potential contamination sources identified during desktop and field tasks will also be provided. The report will summarize available

information on contaminated sites, identify data gaps, as applicable, and include recommendations for additional investigation if needed. A wetland summary report for wetlands, streams, vernal pools, rare plants and invasive species with descriptions, summary tables, and data sheets will also be developed. Normandeau will additionally provide natural resource information to TEC for inclusion in the design reports. Survey data will be provided to TEC in electronic format for inclusion on project plans. Data layers will include flag locations and labels, wetland and stream classifications, and invasive species type. Normandeau will review the plotted resource boundaries and suggest minor adjustments based on topography and field notes if needed. Normandeau will update this information throughout the project as requested.

8.6. *Wetland & Shoreland Permitting:* The Draft and Final Environmental Document will detail resource impacts within the project area. The document will also identify which environmental permits are required. It is assumed no permit applications are included in this work scope as they will not be undertaken until the final design. While some of the natural resource data will overlap, Normandeau is not providing significant assistance with data collected specifically for an Alteration of Terrain permit application, if one is required. Normandeau will support TEC with the permit application but assumes TEC will take lead and be responsible for new and existing impervious area calculations, area of earth disturbing activity, construction sequence and timeline, point and non-point sources, stream diversion plans, determination of Maximum Extent Practicable, and use of mixing zones.

8.7. *Not applicable to Normandeau scope of work.*

8.8. *Not applicable to Normandeau scope of work.*

8.9. *Social and Economic Resources*: Review NHDOT analysis on social and economic resources and identify the relationship between the study area transportation transportation/circulation pattern, regional and local municipalities' Master Plans, and the businesses and residents within its immediate influence. Prepare a short narrative that summarizes the applicability of the Department's analysis.

8.10. *Noise*: Normandeau assumes this project is not a Type I project based on the NHDOT Noise Policy, which will be documented as such in the NEPA document.

8.11. *Air Quality*: Normandeau will perform a qualitative assessment of the project's impact on air quality. Normandeau will perform, as necessary, tasks required to assess the potential air quality impacts of the project to determine and/or achieve compliance with the State of New Hampshire Air Quality Implementation Plan, and the provisions set forth in the Clean Air Act Amendments ("CAAA") and NEPA. Normandeau assumes no quantitative assessment of air quality is needed.

8.12. *Contamination*: Coordinate with NHDOT's Bureau of Environment's Contamination Program to confirm findings and assess measures required to conduct geotechnical investigations within areas of potential contamination. Determine the quantity of limited reuse soils ("LRS") generated during construction, by phase if applicable, and determine the ability, due to quantities and any applicable construction phasing, to

reuse the LRS within the project limits. Determine and provide figures for potential temporary on-construction-site stockpile locations for excavated LRS.

8.13. *Natural Resource Agency Meetings*: Participate in up to three (3) NHDOT monthly Natural Resource Agency meetings and coordinate a field meeting, if needed, with the agencies to review resource impacts. Prepare and supply support graphics, presentations, and meeting minutes as necessary. These meetings will be attended by both TEC and Normandeau on behalf of the project team.

8.14. *Cultural Resource Meetings*: Attendance at three (3) NHDOT monthly Cultural Resource Agency meetings and coordinate a field meeting, if needed, with the agencies to review resource impacts. Prepare and supply support graphics, presentations, and meeting minutes as necessary. These meetings will be attended by TEC, Normandeau, IAC, and Preservation Company on behalf of the project team.

8.15. *Alternatives Development and Evaluation*: Assist TEC in the development of a Summary Matrix of the impacts and effects of the reasonable design alternatives for the use of NHDOT and stakeholders as a planning tool to determine the selected alternative.

8.16. *Section 4(f)Documentation*: Coordinate with TEC on the preparation of a Section 4(f) evaluation. TEC will serve as the lead on the Section 4(f) documentation. Three (3) rounds of revisions are expected to be completed following Environment's initial review, FHWA Division Review, and FHWA HQ review.

8.17. *Draft Categorical Exclusion (CE)*: Identify resource impacts, potential measures to minimize or mitigate impacts, and possible resource enhancements that could be achieved by the proposed alternatives and prepare a Draft Categorical Exclusion (CE) documentation. Normandeau will serve as the lead on the CE documents. The CE documents resource impacts of the proposed action with comments addressed. The CE will incorporate, either directly or by reference, the alternatives analysis and conclusions reached in alternatives development and evaluation and in the subsequent selection of the selected alternative. The document will also identify which environmental permits are required. Applicable resource reports, agency correspondence, and public meeting summaries will be appended. An administrative Draft will be prepared for review by NHDOT and the lead Federal agency. After comments are addressed by the project team, the Draft Environmental Document will be submitted to NHDOT, the lead Federal agency, and all other parties as directed, for review. Two (2) rounds of revisions are anticipated with the Bureau of Environment and FHWA Division prior to the Public Hearing. The Draft Environmental Document will be made publicly available prior to the Public Hearing.

8.18. *Final CE Document:* Following the comments received at the Public Hearing, the project team will meet with NHDOT and the lead Federal agency to review and address comments as needed. The project team, led by Normandeau, will revise and resubmit the document. One (1) round of edits/comments after the Public Hearing is anticipated.

8.19. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, Normandeau will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task

8.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work.

Task 9.0 Public Involvement

9.1. *Not applicable to Normandeau scope of work.*

9.2. *Not applicable to Normandeau scope of work.*

9.3. *Not applicable to Normandeau scope of work.*

9.4. *Not applicable to Normandeau scope of work.*

9.5. *Not applicable to Normandeau scope of work.*

9.6. *Meeting Dry Runs*: Normandeau will participate in virtual and/or in person dry runs for the formal Public Hearing.

9.7. *Not applicable to Normandeau scope of work.*

9.8. *Not applicable to Normandeau scope of work.*

9.9. *Formal Public Hearing*: Normandeau will provide attendance and applicable support for a formal Public Hearing at the end of Preliminary Design for layout of the proposed action.

SCOPE OF SERVICE ASSUMPTIONS

- Existing plans for the project area including the ROW, edge of pavement, and previously delineated streams, drainageways, wetlands and invasive species will be provided in CAD or GIS format for uploading into GPS equipment prior to field work.
- Wetland delineation can only occur when soil is not frozen and snow cover is absent; growing season conditions are assumed.
- Additional rare species surveys or studies, if needed, would also be performed under an amendment.
- The presence of potential vernal pools will also be assessed if wetland delineations are not conducted during the spring vernal pool season.
- No sampling of surface water, groundwater and/or hazardous materials is proposed.
- NHDOT will provide an Environmental Justice analysis.
- Normandeau assumes this project is not a Type I noise project, and that no quantitative assessment of noise impacts will be required.
- It is assumed the project will not require a quantitative air quality assessment. If at a later date it is determined by the Department that the project will require an air quality or noise assessment, either/both will be prepared by others. The Department will provide the appropriate language regarding air quality and noise for inclusion in the NEPA document.
- Normandeau assumes that this project will be completed in conjunction with NHDOT Project 42602. If these projects cannot be completed concurrently, this scope would be

subject to additional travel time and fees.

MOULTONBOROUGH - 41581

Intersection Improvements for NH Route 25 and Sheridan Road

ATTACHMENT A
SCOPE OF SERVICES FOR PRELIMINARY DESIGN

October 31, 2024

STATEMENT OF UNDERSTANDING

Independent Archaeological Consulting (IAC) will serve as a subconsultant to TEC, Inc. (TEC) and complete tasks related to the archaeological resource needs for NHDOT Project 41581 at the intersection of NH Route 25 / Sheridan Road in Moultonborough, New Hampshire.

The environmental tasks include archaeological resource identification, archaeological input for the Preliminary Design Report, and a draft and final National Environmental Policy Act ("NEPA") document.

SCOPE OF SERVICES

The TEC scope of services for **NHDOT Project 41581** is for the 'Preliminary Design' (Part B) only. 'Final Design' (Part C) is not included in this scope of services. The scope of services is as follows:

Task 1.0 Project Management, Coordination, Communications (PMCC)

IAC, as a subconsultant to TEC and a member of the design team, will meet regularly, including meetings with NHDOT and other appropriate stakeholders not specifically defined under general public participation. For each meeting, IAC will prepare and present meeting presentation materials applicable to the archaeological resources scope of work such as meeting agendas, graphics, handouts, design documents/plans, and support displays to provide materials, where applicable. Meeting materials will be reviewed with TEC prior to submission to the NHDOT Project Manager. In addition, IAC will prepare meeting minutes for each meeting related to the archaeological resources scope of work, where applicable. The PMCC and administrative tasks anticipated for this project include:

1.1. *Project Initiation*: Project initiation, planning, and internal team mobilization.

1.2. *Kick-Off Meeting*: Project kick-off meeting with NHDOT, TEC, & subconsultants.

1.3. *Ongoing Coordination & Communications*: Ongoing coordination and communications with NHDOT & project team.

1.4. *Project Management Meetings*: The project team will attend monthly meetings, as applicable to the scope of work, to discuss overall project management, schedule, and outstanding issues throughout the duration of design.

1.5. *Not applicable to IAC scope of work.*

1.6. *Not applicable to IAC scope of work.*

1.7. *Not applicable to IAC scope of work.*

Note that additional meetings directly related to the alternative development and plan submission processes are defined in the individual tasks.

Task 2.0 Data Collection

The project team will collect and/or request pertinent existing reference information including:

2.1. *Not applicable to IAC scope of work.*

2.2. *Not applicable to IAC scope of work.*

2.3. *Not applicable to IAC scope of work.*

2.4. *Not applicable to IAC scope of work.*

2.5. *Field Surrounding Inventory*: Conduct a field review of the project area to identify key engineering controls, topographic features, archaeological resource needs constraints, and land uses that have a bearing on the design.

2.6. *Not applicable to IAC scope of work.*

Task 3.0 Traffic Analysis and Crash Reporting

All subtasks are not applicable to IAC scope of work.

Task 4.0 Right-of-Way (ROW) Survey and Plan Development

All subtasks are not applicable to IAC scope of work.

Task 5.0 Alternative Screening & Refined Alternatives

IAC, in conjunction with TEC, will assist in the development of a range of alternatives and investigate their consequences to allow NHDOT to select a proposed action.

5.1. *Alternatives Screening*: IAC will work with the project team to develop a range of alternatives for screening to discuss internally with NHDOT, the Town's working group, and at the Public Information Meetings.

5.2. *Not applicable to IAC scope of work.*

5.3. *Not applicable to IAC scope of work.*

5.4. *Not applicable to IAC scope of work.*

5.5. *Not applicable to IAC scope of work.*

5.6. *Design Alternative Matrix*: IAC will provide guidance related to archaeological resource needs in the preparation a comparative matrix of each design alternative which will include comparisons for benefit and impacts to traffic control, traffic operations, traffic safety, cross-sectional geometrics, ROW impacts, natural & cultural impacts, utility impacts, overall feasibility, applicability to the purpose & need, and other such parameters which may be identified during the conceptual design.

5.7. *Not applicable to IAC scope of work.*

5.8. *Formal Project (OTS) Meetings*: IAC will attend two (2) OTS meetings with NHDOT Bureau of Environment as needed. One (1) following alternative screening and one (1) at the conclusion of this Refined Alternatives Tasks to reconcile NHDOT comments into the Refined Alternatives in accordance with NHDOT requirements.

5.9. *Not applicable to IAC scope of work.*

Task 6.0 Pre-Hearing Submission

All subtasks are not applicable to IAC scope of work.

Task 7.0 Slope & Drain Submission

All subtasks are not applicable to IAC scope of work.

Task 8.0 Environmental & NEPA Documentation

The Environmental & National Environmental Policy Act (NEPA) Documentation Task will run concurrently with other tasks accordingly and be primarily completed by Normandeau Associates, Preservation Company, and IAC, in conjunction with the prime consultant TEC. The following environmental documentation tasks to be completed by IAC include:

8.1. *Not applicable to IAC scope of work.*

8.2. *Not applicable to IAC scope of work.*

8.3. *Not applicable to IAC scope of work.*

8.4. *Not applicable to IAC scope of work.*

8.5. *Not applicable to IAC scope of work.*

8.6. *Not applicable to IAC scope of work.*

8.7. *Archaeology Resources*: The following cultural resources data collection, permitting, and mapping actions will be completed by IAC.

a. *Documentation Search & Review*: This task includes a site file search of the NHDHR online database EMMIT to identify any known sites within 2.0 km of the project area, especially along nearby waterways. The task also includes a review of soil maps, LiDAR images, surficial geology and USGS topographic quadrangles to articulate the potential resources – water, well-drained soil for camp sites or

agriculture, lithic sources for tools, or clay for Native American or Euroamerican pottery or bricks – that would encourage Pre-Contact and/or Post-Contact settlement. The task also includes an assessment of whether the project area meets the criteria for Pre-Contact Native American or Post-Contact Euroamerican activity or occupation, as well as the likely site types (e. g., campground, hunting station, lithic workshop, homestead, mill site).

b. *Site Inspection*: A site inspection to view existing conditions of the project area, identify obvious disturbances or features (such as cellarholes, stone foundations, wells, or surface artifact scatters) and refine the desktop assessment based on real-world ground conditions.

c. *Construction Impacts*: Perform, as necessary, tasks required to assess the potential construction impacts on the archaeology resources present within the project areas qualitatively and include identification of BMP's to minimize impacts.

d. *Reporting*: Prepare a Phase IA technical report summarizing the result of all findings, including recommendations about whether further (Phase IB) archaeological survey is advised. Should the assessment identify no areas of archaeological sensitivity, IAC will draft an NHDHR short form report of the negative findings with recommendations for no further archaeological survey.

e. *Phase 1B:* Complete a Phase 1B archaeological survey (up to 140 STPs) including necessary field work, lab work, mill documentation, artifact preparation and curation, as needed, and report documentation / preparation.

f. *NHDOT Bureau Task Meetings*: Assumes one (1) task meeting with Bureau of Environment and preparatory work.

8.8. *Not applicable to IAC scope of work.*

8.9. *Not applicable to IAC scope of work.*

8.10. *Not applicable to IAC scope of work.*

8.11. *Not applicable to IAC scope of work.*

8.12. *Not applicable to IAC scope of work.*

8.13. *Not applicable to IAC scope of work.*

8.14. *Cultural Resource Meetings*: Attendance at three (3) NHDOT monthly Cultural Resource Agency meetings and coordinate a field meeting, if needed, with the agencies to review resource impacts. Prepare and supply support graphics, presentations, and meeting minutes as necessary. These meetings will be attended by TEC, Normandeau Associates, IAC, and Preservation Company on behalf of the project team.

8.15. *Not applicable to IAC scope of work.*

8.16. *Not applicable to IAC scope of work.*

8.17. *Draft Categorical Exclusion (CE)*: IAC will contribute as needed to the preparation of a Draft Categorical Exclusion (CE) documentation which documents resource impacts of the proposed action with comments addressed.

8.18. *Final CE Document:* IAC will contribute to the revised document. One (1) round of edits/comments after the Public Hearing is anticipated.

8.19. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, IAC will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 8.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work.

Task 9.0 Public Involvement

All subtasks are not applicable to IAC scope of work.

MOULTONBOROUGH - 41581

Intersection Improvements for NH Route 25 and Sheridan Road

ATTACHMENT A
SCOPE OF SERVICES FOR PRELIMINARY DESIGN

Revised for IGE – February 11, 2025

STATEMENT OF UNDERSTANDING

Preservation Company will serve as a subconsultant to TEC, Inc. (TEC) and complete tasks related to the cultural and historical preservation needs for NHDOT Project 41581 at the intersection of NH Route 25 / Sheridan Road in Moultonborough, New Hampshire.

The environmental tasks include cultural and historical resource identification and input for the Preliminary Design Report, and a draft and final National Environmental Policy Act ("NEPA") document.

SCOPE OF SERVICES

The TEC scope of services for **NHDOT Project 41581** is for the 'Preliminary Design' (Part B) only. 'Final Design' (Part C) is not included in this scope of services. The scope of services is as follows:

Task 1.0 Project Management, Coordination, Communications (PMCC)

Preservation Company, as a subconsultant to TEC and a member of the design team, will meet regularly, including meetings with NHDOT and other appropriate stakeholders not specifically defined under general public participation. For each meeting, Preservation Company will prepare and present meeting presentation materials applicable to the cultural and historical resources scope of work such as meeting agendas, graphics, handouts, design documents/plans, and support displays to provide materials, where applicable. Meeting materials will be reviewed with TEC prior to submission to the NHDOT Project Manager. In addition, Preservation Company will prepare meeting minutes for each meeting related to the cultural and historical resources scope of work, where applicable. The PMCC and administrative tasks anticipated for this project include:

1.1. *Project Initiation*: Project initiation, planning, and internal team mobilization.

1.2. *Kick-Off Meeting*: Project kick-off meeting with NHDOT, TEC, & subconsultants.

1.3. *Ongoing Coordination & Communications*: Ongoing coordination and communications with NHDOT & project team.

1.4. *Project Management Meetings*: The project team will attend monthly meetings, as applicable to the scope of work, to discuss overall project management, schedule, and outstanding issues throughout the duration of design.

1.5. *Not applicable to Preservation Company scope of work.*

1.6. *Not applicable to Preservation Company scope of work.*

1.7. *Not applicable to Preservation Company scope of work.*

Note that additional meetings directly related to the alternative development and plan submission processes are defined in the individual tasks.

Task 2.0 Data Collection

The project team will collect and/or request pertinent existing reference information including:

2.1. *Not applicable to Preservation Company scope of work.*

2.2. *Not applicable to Preservation Company scope of work.*

2.3. *Not applicable to Preservation Company scope of work.*

2.4. *Not applicable to Preservation Company scope of work.*

2.5. *Field Surrounding Inventory*: Conduct a field review of the project area to identify key engineering controls, topographic features, natural and cultural constraints, and land uses that have a bearing on the design.

2.6. *Not applicable to Preservation Company scope of work.*

Task 3.0 Traffic Analysis and Crash Reporting

All subtasks are not applicable to Preservation Company scope of work.

Task 4.0 Right-of-Way (ROW) Survey and Plan Development

All subtasks are not applicable to Preservation Company scope of work.

Task 5.0 Alternative Screening & Refined Alternatives

Preservation Company, in conjunction with TEC, will assist in the development of a range of alternatives and investigate their consequences to allow NHDOT to select a proposed action.

5.1. *Alternatives Screening*: Preservation Company will work with the project team to develop a range of alternatives for screening to discuss internally with NHDOT, the Town's working group, and at the Public Information Meetings.

5.2. *Not applicable to Preservation Company scope of work.*

5.3. *Not applicable to Preservation Company scope of work.*

5.4. *Not applicable to Preservation Company scope of work.*

5.5. *Not applicable to Preservation Company scope of work.*

5.6. *Design Alternative Matrix*: Preservation Company will provide guidance related to cultural and historical impacts in the preparation a comparative matrix of each design alternative which will include comparisons for benefit and impacts to traffic control, traffic operations, traffic safety, cross-sectional geometrics, ROW impacts, natural & cultural impacts, utility impacts, overall feasibility, applicability to the purpose & need, and other such parameters which may be identified during the conceptual design.

5.7. *Not applicable to Preservation Company scope of work.*

5.8. *Formal Project (OTS) Meetings*: Preservation Company will attend two (2) OTS meetings with NHDOT Bureau of Environment as needed. One (1) following alternative screening and one (1) at the conclusion of this Refined Alternatives Tasks to reconcile NHDOT comments into the Refined Alternatives in accordance with NHDOT requirements.

5.9. *Not applicable to Preservation Company scope of work.*

Task 6.0 Pre-Hearing Submission

All subtasks are not applicable to Preservation Company scope of work.

Task 7.0 Slope & Drain Submission

All subtasks are not applicable to Preservation Company scope of work.

Task 8.0 Environmental & NEPA Documentation

The Environmental & National Environmental Policy Act (NEPA) Documentation Task will run concurrently with other tasks accordingly and be primarily completed by Normandeau Associates, Preservation Company, and IAC, in conjunction with the prime consultant TEC. The following environmental documentation tasks to be completed by Preservation Company include:

8.1. *Not applicable to Preservation Company scope of work.*

8.2. *Not applicable to Preservation Company scope of work.*

8.3. *Not applicable to Preservation Company scope of work.*

8.4. *Not applicable to Preservation Company scope of work.*

8.5. *Not applicable to Preservation Company scope of work.*

8.6. *Not applicable to Preservation Company scope of work.*

8.7. *Not applicable to Preservation Company scope of work.*

8.8. *Historical Resources*: The following cultural resources data collection, permitting, and mapping actions will be completed by Preservation Company and supplemented by the project team.

a. *Request for Project Review*: Request for Project Review (RPR) report includes fieldwork and photography, review of previous survey within the Areas of Potential Effects (APE) via EMMIT, and the completion of tables identifying each property within or abutting the APE.

b. *Architectural Survey Plan*: The Architectural Survey Plan (ASP) includes fieldwork and photography, research through local and online repositories, coordinating plans and design documents with TEC, and production of the ASP. The plan will include a narrative summarizing the historic contexts in the area, results of previous survey, a table of properties within the APE, photographs and photo keys, and recommendations for further survey.

c. *Individual and Historic District Area Forms*: Individual inventory forms include fieldwork and photography, research through local and online repositories, and production of the surveys on NH Division of Historical Resources (NHDHR) individual inventory forms. Each form will include a statement of significance and recommendation of National Register eligibility. Five (5) individual inventory forms are assumed.

d. *Construction Impacts*: Perform, as necessary, tasks required to assess the potential construction impacts on the historical resources present within the project areas qualitatively and include identification of BMP's to minimize impacts.

e. *Effects Evaluations*: Effects evaluations include photography, coordinating plans and designs with TEC, and completion of effects tables. Five (5) effects evaluations are assumed. The evaluations will advise the final effects memo. TEC will lead the development of the final effects memo.

f. *NHDOT Bureau Task Meetings*: Assumes one (1) task meeting with Bureau of Environment and preparatory work.

8.9. *Not applicable to Preservation Company scope of work.*

8.10. *Not applicable to Preservation Company scope of work.*

8.11. *Not applicable to Preservation Company scope of work.*

8.12. *Not applicable to Preservation Company scope of work.*

8.13. *Not applicable to Preservation Company scope of work.*

8.14. *Cultural Resource Meetings*: Attendance at three (3) NHDOT monthly Cultural Resource Agency meetings and coordinate a field meeting, if needed, with the agencies to review resource impacts. Prepare and supply support graphics, presentations, and meeting minutes as necessary. These meetings will be attended by TEC, Normandeau Associates, IAC, and Preservation Company on behalf of the project team.

8.15. *Not applicable to Preservation Company scope of work.*

8.16. *Not applicable to Preservation Company scope of work.*

8.17. *Draft Categorical Exclusion (CE)*: Preservation Company will contribute as needed to the preparation of a Draft Categorical Exclusion (CE) which documents resource impacts of the proposed action with comments addressed.

8.18. *Final CE Document:* Preservation Company will contribute to the revised document. One (1) round of edits/comments after the Public Hearing is anticipated.

8.19. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, Preservation Company will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 8.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work.

Task 9.0 Public Involvement

All subtasks are not applicable to Preservation Company scope of work.

MOULTONBOROUGH - 41581

Intersection Improvements for NH Route 25 and Sheridan Road

ATTACHMENT A
SCOPE OF SERVICES FOR PRELIMINARY DESIGN

October 31, 2024

STATEMENT OF UNDERSTANDING

Doucet Survey will serve as a subconsultant to TEC, Inc. (TEC) and complete tasks related to the survey and right-of-way (ROW) needs for NHDOT Project 41581 at the intersection of NH Route 25 / Sheridan Road in Moultonborough, New Hampshire.

SCOPE OF SERVICES

The scope of services for **NHDOT Project 41581** is for the 'Preliminary Design' (Part B) only. 'Final Design' (Part C) is not included in this scope of services. The scope of services is as follows:

Task 1.0 Project Management, Coordination, Communications (PMCC)

Doucet Survey, as a subconsultant to TEC and a member of the design team, will meet regularly, including meetings with NHDOT and other appropriate stakeholders not specifically defined under general public participation. The PMCC and administrative tasks anticipated for this project include:

1.1. *Project Initiation*: Project initiation, planning, and internal team mobilization.

1.2. *Kick-Off Meeting*: Project kick-off meeting with NHDOT, TEC, & subconsultants.

1.3. *Ongoing Coordination & Communications*: Ongoing coordination and communications with NHDOT & project team.

1.4. *Project Management Meetings*: The project team will attend monthly to discuss overall project management, schedule, and outstanding issues throughout the duration of design.

1.5. *Not applicable to Doucet Survey scope of work.*

1.6. *Not applicable to Doucet Survey scope of work.*

1.7. *Not applicable to Doucet Survey scope of work.*

Task 2.0 Data Collection

Doucet Survey, in conjunction with TEC, will collect and/or request pertinent existing reference information including:

2.1. *Not applicable to Doucet Survey scope of work.*

2.2. *Not applicable to Doucet Survey scope of work.*

2.3. *NHDOT Survey Files*: Request and collect NHDOT compatible electronic files of the existing conditions survey for the project limits.

2.4. *Not applicable to Doucet Survey scope of work.*

2.5. *Field Surrounding Inventory*: Conduct a field review of the project area to identify key engineering controls, topographic features, natural and cultural constraints, and land uses that have a bearing on the design.

2.6. *Not applicable to Doucet Survey scope of work.*

Task 3.0 Traffic Analysis and Crash Reporting

All subtasks are not applicable to Doucet Survey scope of work.

Task 4.0 Right-of-Way (ROW) Survey and Plan Development

Doucet Survey, in conjunction with TEC, will complete ROW survey and plan development in conjunction with survey information provided by NHDOT.

4.1. *ROW Facilitation Meeting*: Attend a kick-off meeting with NHDOT Bureau of Right-of-Way for project overview, review of historic ROW information and turnover of NHDOT project data and ROW information. It is assumed that attendance of one (1) in-person meeting will be required at the NHDOT office in Concord, NH.

4.2. *Records Research*: Research of adequate thoroughness to support the determination of the ROW. Determination of abutting private property lines is beyond the scope of this project. Research will be performed at the following archival venues:

a. Town of Moultonborough Assessor, Public Works Department, & Land Use Department

b. Moultonborough Historical Society (if deemed necessary)

c. State of NH Archives and Records Management (if deemed necessary)

d. NHDOT

e. Carroll County Registry of Deeds

f. Carroll County Registry of Probate (if deemed necessary)

g. Other facilities (if deemed necessary)

4.3. *ROW Survey*: Complete a ROW survey in accordance with the minimum standards for a Category 3 Urban Class Boundary Survey as defined in the - NH Land Rules 500 and with the Technical Standards portion of the 2017 NHDOT Survey and Technical Standards Manual. ROW Survey to include:

a. Field reconnaissance of ROW and abutting boundary monuments.

b. Tying into the geodetic control network established by the NHDOT in conjunction with their Topographic Survey.

c. Conducting an on the ground field survey of the existing ROW and abutting boundary monuments.

d. Processing survey control data using least squares adjustment at 95% confidence level.

e. Processing side shot data on adjusted control network.

f. Developing ROW alignments and establishing ROW limits based on the processed field survey data.

4.4. *Existing ROW Plan Review*: Submit Preliminary ROW Plans and a written Survey Report outlining the basis of the survey findings and final Right of Way determination for review by the NHDOT's Bureau of Right of Way Land Titles Section. Attend ROW facilitation meetings that involve survey-related discussions. It is assumed that attendance of one (1) in-person meeting will be required at the NHDOT office in Concord, NH.

4.5. *Development of Final Existing ROW Plan*: Develop final existing ROW plans in accordance with NHDOT standards which include the following:

a. Address all NHDOT comments resulting from the Preliminary ROW Plan review through a written explanation of how review comments were addressed.

b. Record the Existing ROW Plan at the Carroll County Registry of Deeds.

c. Provide NHDOT with the Exiting ROW Plans in a .dwg file format inclusive of all points and layers, and in DGN file format, and one full size PDF copy of the recorded plan.

d. Provide NHDOT with all supporting survey data, including but not limited to; raw data files, adjustment reports, field book notes, geodetic control data, coordinate file of all survey points in ASCII file format and alignment data in .cl or XML format.

4.6. *QC/QA Review*: Although QC/QA will occur at each distinct task with billable hours allocated under each distinct task, Doucet Survey will complete a quality control and quality assurance (QC/QA) final review of all materials related to the hierarchical Task 4.0 to ensure accuracy, compliance with NHDOT standards /requirements, and compliance with the transportation engineering profession. Review will be conducted by someone other than those who performed the original work.

Task 5.0 Alternative Development and Evaluation

All subtasks are not applicable to Doucet Survey scope of work.

Task 6.0 Pre-Hearing Submission

All subtasks are not applicable to Doucet Survey scope of work.

Task 7.0 Slope & Drain Submission

All subtasks are not applicable to Doucet Survey scope of work.

Task 8.0 Environmental & NEPA Documentation

All subtasks are not applicable to Doucet Survey scope of work.

Task 9.0 Public Involvement

All subtasks are not applicable to Doucet Survey scope of work.

SCOPE OF SERVICE ASSUMPTIONS

- For the purposes of the existing ROW plan development, the side roads of concern will include only those roadways including all intersecting municipal or State roads (within 1,500-feet of the NH Route 25 / Sheridan Road intersection) extending to a distance of 500 feet beyond the edge of the Route 25 ROW.

Attachment 1

CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS

The CONSULTANT TEC, ~~proposed~~ subconsultant _____, hereby certifies that it has ✓, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Order 11246 and that it has ✓, has not _____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

TEC, INC.
(Company)

By: [signature]

PRINCIPLE
(Title)

Date: 27 MAY 25

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1), and must be submitted by consultants and proposed subconsultants only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts that are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally, only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime consultants and subconsultants who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such consultant submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

(Revised: June, 1980) **NOTE:** TO BE COMPLETED BY CONSULTANT WHEN SIGNING AGREEMENT.

Attachment 2

CONSULTANT DISCLOSURE STATEMENT
FOR PREPARATION OF
ENVIRONMENTAL EVALUATIONS

I hereby affirm that I have read and reviewed the Council on Environmental Quality (CEQ) regulation **[40 CFR 1506.5(b)(4)]** and related guidance issued by CEQ and that pursuant thereto this firm has no financial or other interest in the outcome of this project.

I further hereby affirm that the information provided herein is true and correct and acknowledge that any knowingly false statement or false representation as to any material part contained herein may subject me to a fine and/or imprisonment, pursuant to pertinent provisions of the United States Code.

27 MAY 25
(Date)

(Signature)

Attachment 3

CERTIFICATION OF CONSULTANT/SUBCONSULTANT

I hereby certify that I am the PRINCIPLE and duly-authorized representative of the firm of TEC, INC., and that neither I nor the above firm I here represent has:

(a) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONSULTANT) to solicit or secure this Contract,

(b) agreed, as an express or implied condition for obtaining this Contract, to employ or retain the services of any firm or person in connection with carrying out the Contract, or

(c) paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above CONSULTANT) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the Contract:

I/WE do also, under penalty of perjury under the laws of the United States, certify that, except as noted below, the company or any person associated therewith in the capacity of (owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federal funds): (a) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency; (b) has not been suspended, debarred, voluntarily excluded or determined ineligibility by any Federal agency within the past three years; (c) does not have a proposed debarment pending; and (d) has not been indicted, convicted or had a civil judgment rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

except as here expressly stated (if any):

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions.

I acknowledge that this certificate is to be furnished to the State Department of Transportation and the Federal Highway Administration, U. S. Department of Transportation, in connection with this Contract involving participation of Federal-aid highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

27 MAY 25
(Date)

(Signature)

Attachment 4

CERTIFICATION OF STATE DEPARTMENT OF TRANSPORTATION

I hereby certify that I am the Director of Project Development of the Department of Transportation of the State of New Hampshire, and the above consulting firm or its representatives has not been required, directly or indirectly, as an express or implied condition in connection with obtaining or carrying out this Contract, to:

(a) employ or retain, or agree to employ or retain, any firm or person, or

(b) pay, or agree to pay, to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind:

except as here expressly stated (if any):

7/10/25
(Date)

(Signature)

Attachment 5

CERTIFICATION FOR FEDERAL-AID CONTRACTS EXCEEDING $100,000 IN FEDERAL FUNDS

The prospective participant certifies, by signing and submitting this agreement, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower-tier subcontracts which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

Attachment 6

IN WITNESS WHEREOF the parties hereto have executed this AGREEMENT on the day and year first above written.

Consultant

WITNESS TO THE CONSULTANT

By: _____

Dated: 5/27/25

CONSULTANT

By: _____

PRINCIPLE
(TITLE)

Dated: 27 MAY 25

Department of Transportation

WITNESS TO THE STATE OF NEW HAMPSHIRE

By: Natasha Tula

Dated: 7/10/25

THE STATE OF NEW HAMPSHIRE

By: _____

Director of Project Development

for DOT COMMISSIONER

Dated: 7/10/25

Attorney General

This is to certify that the above AGREEMENT has been reviewed by this office and is approved as to form and execution.

Dated: 10/21/25

By: _____
Assistant Attorney General

Secretary of State

This is to certify that the GOVERNOR AND COUNCIL on _____ approved this AGREEMENT.

Dated: _____

Attest:

By: _____
Secretary of State

s:\admin\consult\master agreements\signpages(9).doc

Attachment B – Moultonborough 41581

The State and the Contractor acknowledge that RSA Chapter 21-I and Executive Order 14173 of January 21, 2025, place prohibitions on DEI initiatives and activities. To the extent any provision in this Contract conflicts with any applicable state or federal law, such provision is null and void.

MDK

State of New Hampshire

Department of State

CERTIFICATE

I, David M. Scanlan, Secretary of State of the State of New Hampshire, do hereby certify that TEC, INC. is a Massachusetts Profit Corporation registered to transact business in New Hampshire on June 20, 2005. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **538545**

Certificate Number: **0007193488**

IN TESTIMONY WHEREOF,
I hereto set my hand and cause to be affixed
the Seal of the State of New Hampshire,
this 4th day of June A.D. 2025.

David M. Scanlan
Secretary of State

Certificate of Authority # 1 *(Corporation, Non-Profit Corporation)*

Corporate Resolution

I, Jonathan A. Rockwell **hereby certify** that I am duly elected Clerk/Secretary/Officer of
(Name)
TEC, Inc. . I hereby certify the following is a true copy of a vote taken at
(Name of Corporation)

a meeting of the Board of Directors/shareholders, duly called and held on 1/28, 2025

at which a quorum of the Directors/shareholders were present and voting.

VOTED: That Mitchell D. Keamy, Jr. Principal (may list more than one person) is
(Name and Title)

duly authorized to enter into contracts or agreements on behalf of

TEC, Inc. with the State of New Hampshire and any of
(Name of Corporation)

its agencies or departments and further is authorized to execute any documents

which may in his/her judgment be desirable or necessary to effect the purpose of

this vote.

I hereby certify that said vote has not been amended or repealed and remains in full force and effect as of the date of the contract to which this certificate is attached. This authority **remains valid for thirty (30)** days from the date of this Corporate Resolution. I further certify that it is understood that the State of New Hampshire will rely on this certificate as evidence that the person(s) listed above currently occupy the position(s) indicated and that they have full authority to bind the corporation. To the extent that there are any limits on the authority of any listed individual to bind the corporation in contracts with the State of New Hampshire, all such limitations are expressly stated herein.

DATED: 5/27/2025 **ATTEST:** Jon A. Rockwell Clerk
(Name & Title)

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 5/27/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Alliant Insurance Services, Inc.
125 High St. Ste. 2205
Boston MA 02110

CONTACT NAME: Graham Hindle
PHONE (A/C, No, Ext): 332-208-2920 FAX (A/C, No):
E-MAIL ADDRESS: Graham.Hindle@alliant.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Hartford Accident and Indemnity Ins Co.	22357
INSURER B : Lexington Insurance Company	19437
INSURER C : Hartford Casualty Insurance Co	29424
INSURER D : Trumbull Insurance Company	27120
INSURER E : Twin City Fire Insurance Co	29459
INSURER F :	

INSURED TECINC0-01
TEC, Inc.
282 Merrimack Street, 2nd Floor
Lawrence MA 01843

COVERAGES **CERTIFICATE NUMBER:** 440605371 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY	Y		08 UEN OL6HM2	1/1/2025	1/1/2026	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY X PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
D	AUTOMOBILE LIABILITY			08 UEN OL5378 P4	1/1/2025	1/1/2026	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
C	X UMBRELLA LIAB X OCCUR			08 XHU OL6HE0	1/1/2025	1/1/2026	EACH OCCURRENCE	$ 10,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 10,000,000
	DED X RETENTION $ 10,000							$
E	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			08 WE OL6H4U	1/1/2025	1/1/2026	X PER STATUTE OTH-ER	
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N (Mandatory in NH)	N/A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
B	Architects and Engineers Prof			031710918	1/1/2025	1/1/2026	Each Claim Aggregate	$1,000,000 $2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RE: Moultonborough 41581 - NH Route 25 and Sheridan Road in the Town of Moultonborough.

State of New Hampshire is included as Additional Insured as required by written contract and executed prior to a loss, but limited to the operations of the Insured under said contract, with respect to the General Liability.

CERTIFICATE HOLDER

State of New Hampshire
Department of Transportation
7 Hazen Drive
Concord NH 03301

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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