A. OVERVIEW

Consultant selected for this work will be required to provide traffic engineering studies and design on an on-call basis. Traffic engineering studies include investigations of existing urban and rural traffic operations. The study contents may include signal warrant investigations, sign inventories, roundabout investigations, intersection and crossing diagrams, crash location and other highway safety manual evaluations, traffic flow and volume studies, vehicle speed studies, microscopic simulations using various software programs, and any other studies as defined in the Institute of Transportation Engineers (ITE) Manual of Transportation Engineering Studies.

Traffic engineering design involves the use of traffic engineering to improve traffic operations and safety by the effective use of traffic control devices and design geometrics. This includes preparing design plans, specifications and any other engineering related functions.

The Consultant may assist or conduct public informational meetings and hearings with local communities, stakeholders, and state or federal agencies. The Consultant may also be asked to participate in support of Value Engineering activities.

The Consultant may assist the Nebraska Department of Transportation (NDOT) staff with training opportunities with signal design, operations, maintenance, and other specialized software as described below in Section C.

The Consultant may need to gather field data to complete the work.

B. QUALIFICATIONS, KNOWLEDGE, AND EXPERIENCE

This work will be completed by, or under the direct supervision of, a professional engineer licensed in the State of Nebraska. Consultant shall ensure that all employees have sufficient training and experience in developing traffic engineering studies and design, including data collection and analysis.

Consultant shall have a working knowledge of and use, when applicable, the following non-exclusive list of publications:

- Manual on Uniform Traffic Control Devices (MUTCD) 11th Edition (https://mutcd.fhwa.dot.gov/),
- Nebraska 2019 Supplement to MUTCD or latest adopted version (https://dot.nebraska.gov/business-center/contractor/mutcd/),
- ITE's Manual of Transportation Engineering Studies, 2nd Edition,
- ITE's Trip Generation Manual, 11th Edition,
- NDOT's Roadway Design Manual (dot.nebraska.gov/business-center/design-consultant/rd-manuals/),
- A Policy on Geometric Design of Highways and Streets, 7th Edition,
- Highway Capacity Manual 6th Edition: A Guide for Multimodal Mobility Analysis Highway Safety Manual,
- Highway Safety Manual including supplements.

C. SOFTWARE AND EQUIPMENT REQUIREMENTS

Consultant shall use the following software:

- HCS2023 or newer
- Synchro version 11 or newer
- MicroStation version V8i or newer, including AutoTURN
- Microsoft Office version 2019 or newer

The following software may be helpful, but is not required for this work:

- VISSIM
- CORSIM/TSIS
- SIDRA
- PetraPro
- SignCAD

D. EXPECTATIONS FOR THE DELIVERABLES

Consultant will submit all studies, and drafts of all design plans and specifications, to NDOT or LPA for review, editing and approval. Submittals will be reviewed and approved by NDOT or LPA. Consultant shall address all issues raised by NDOT's or LPA's review and make all necessary changes to the work.

The consultant shall compile and provide all data and corresponding field observations to NDOT or the LPA for review.

Public meeting materials and information shall be provided to NDOT or LPA for review before being presented to the public.

Deliverables will be submitted in hard copy or electronic form as outlined in the Task Order.

Studies, plans, data, presentation materials, and any documents created or obtained will be the property of NDOT or LPA.