

Standard Work Categories anticipated for these services may include:

- 107A Bridge Design - Major
- 107B Bridge Design - Minor
- 109A Construction Inspection - Bridge
- 208 Bridge Structural Analysis

A. OVERVIEW

The consultant will provide bridge related services for NDOT such as:

1. Preliminary Engineering Services including Bridge Data Sheet development and Type, Size, and Location plans (TS&L's)
2. Final Bridge Design (including load rating of bridges per the current BIPP)
3. Bridge Plan production
4. Independent structural design reviews
5. Support in Value Engineering activities
6. Special design projects including, but not limited to, bridge repair and maintenance projects such as:
 - a. Joint replacements
 - b. Concrete repairs
 - c. Curb repairs
 - d. Bridge rail remodel
 - e. Bridge deck repairs
 - f. Bridge deck overlays
 - g. Superstructure and Substructure repairs
7. Construction phase services including but not limited to:
 - a. Calculating girder shims,
 - b. Shop drawing review
 - c. Providing construction consultation

B. QUALIFICATIONS, KNOWLEDGE AND EXPERIENCE

1. All work must be completed by, or under, the direct supervision of a Nebraska licensed professional civil engineer. The Consultant shall use engineers experienced with all aspects of bridge design related to the services to be provided.
2. The Consultant's team shall have working knowledge of and follow, when applicable:
 - a. Bridge design industry standards
 - b. The NDOT Bridge Office Policies and Procedures Manual. (BOPP)
 - c. AASHTO LRFD Bridge Design Specifications

- d. NDOT Standard Specifications for Highway Construction
- e. NDOT Approved Products List
- f. Special Provisions and Specifications developed by NDOT's Bridge Division
- g. Local, State and federal laws and regulations that pertain to bridge design

C. SOFTWARE AND EQUIPMENT REQUIREMENTS

- 1. The Consultant's design files must be compatible with MicroStation V08.11.09.829 or later (the State's drafting software), and must adhere to the State's drafting procedures, guidelines, and file naming convention. The design software must be GEOPAK V08.11.09.872 or later
- 2. Reports and documents must be submitted in a form compatible with Microsoft Office products unless otherwise directed.
- 3. The Consultant shall provide all software and computer equipment required to complete the work including any analysis software required to perform the bridge design work.

D. EXPECTATIONS FOR THE DELIVERABLES

- 1. Plans and special provisions must be developed in compliance with the manuals, guidelines and specifications as listed in the Qualifications, Knowledge and Experience section.
- 2. Bridge plans for new construction will typically be submitted to NDOT for review and comment at preliminary, 75% completion stage, 90% completion stage, and final. Bridge repair plans must be submitted at 90% and 100% completion for review and comment. Final turn-in for all bridge projects shall include stamped and signed plans, all special provisions, and cost estimates.
- 3. Plans will be completed and submitted in accordance with the schedule set out in the Task Orders. Occasionally, the NDOT may require the plans be completed on a "rush" basis for emergency repairs.
- 4. Consultant's services will be used directly or incorporated into NDOT project plans for use in bidding and constructing projects.