

Work Type Definition and Submittal Requirements
11.3 Construction Surveying

Work Type Definition

Pages 1-2 detail the work type definition. In order to become *pre-qualified* for this work type, please see the “Work Type Submittal Requirements” on pages 3-4.

I. Description

Construction Surveying is defined as accurately providing all necessary computations, stakes and marks to establish lines, slopes, elevations, points, and continuous profile grades in accordance with MnDOT Specification 1508 and the requirements shown in the Plan for Construction Staking; so that the Consultants are able to perform all the required work for the project in accordance with the construction contract requirements; and so that Consultant is able to complete all necessary inspection and Contract Administration duties. The surveying generally requires frequent, separate project visits by Consultant’s personnel to the Project to accommodate the various stages of construction and inspection activities that occur.

II. Standards and Specifications

Standards and specifications required for a project under this work type may include the following:

- A. All work performed in accordance with applicable specifications, rules & regulations;
- B. All stakes and marks are set according to the Staking Information Sheets included in the plan according to Plan, Proposal, Standard Specifications and MnDOT Surveying and Mapping Manual
- C. Traffic control devices are furnished and installed according to the current Field Manual for Temporary Traffic Control Zone Layouts (MN MUTCD);
- D. Field operations are in accordance with Occupational Safety & Health Administration (OSHA) regulations and accepted safety practices.
- E. Construction Surveying of all project construction is as indicated in MnDOT Specification 1508;
- F. Reference points installed as needed for the use of any public utility crews that are accomplishing utility relocation or construction associated with the Construction Contract.
- G. Bridge and Structure Construction staking (which includes setting and re-establishing Working Points and Reference Points by XYZ coordinates).

III. Provided By MnDOT

**Information to be supplied by MnDOT for a project may include the following:
The most recent version of some or all of the following:**

- A. Contract Documents
- B. MnDOT Standard Specifications for Construction
- C. Construction Surveying Work plan Schedule
- D. MnDOT Survey and Mapping Manual
- E. Staking Information Sheets
- F. MnDOT Bituminous Manual
- G. MnDOT Bridge Construction Manual
- H. MnDOT Bridge Standard Plans Manual

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- I. MnDOT Concrete Manual
- J. MnDOT Contract Administration Manual
- K. MnDOT Grading and Base Manual
- L. MnDOT Standard Plans Manual
- M. MnDOT Standard Plates Manual
- N. MnDOT Standard Signs Manual
- O. MnDOT Technical Manual
- P. MnDOT Traffic Engineering Manual
- Q. MnDOT Labor Compliance Manual
- R. MnDOT Technical Certification Handbook
- S. MnDOT Technical Memorandums
- T. Minnesota Manual of Uniform Traffic Control Devices (MN MUTCD)
- U. MnDOT Laboratory Manual
- V. MnDOT Landscape Projects Manual

IV. Provided by Consultant

Deliverables to be supplied by the consultant for a project may include the following:

- A. Construction Surveying project-specific reports and documents.
- B. Coordinates and reference ties for final alignment monumentation;
- C. Reference ties for control station monumentation; minimum of two permanent monuments set;
- D. Field notes that were used to set construction stakes, control the Project, and document monument location;
- E. Survey data; Utility as-builts and changes to plan, in 3rd order accuracy;
- F. Pay Item Quantity Documentation; Clear and Grub, rock excavation, muck, earth and gravel, seeding and sodding, etc

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Work Type Submittal Requirements

A consultant firm becomes pre-qualified based on the qualifications of the personnel that are employed by the firm and by meeting the demonstrated requirements.

Key Personnel Requirements	
Minimum Number of Staff:	At least two individuals are required: <ul style="list-style-type: none"> • One of who is a Professional Land Surveyor <u>or</u> Professional Civil Engineer (to supervise the Construction Surveying). • Survey Party Chief
Professional Certification/Licensure:	Land Surveyor: <ul style="list-style-type: none"> • Professional Land Surveyor, licensed in Minnesota Professional Engineer: <ul style="list-style-type: none"> • The engineer must be a Minnesota Board Registered Professional Civil Engineer as specified under Minimum Number of Staff.
Work Type Submittal Requirements*	
I. Resume and Relevant Project Experience Form (Form PQ1) <i>Submit in Word format</i>	A. Complete Parts, 1, 1A, and 2 of form PQ1 <u>Part 1:</u> Fill out general information and names of personnel, including other professional and technical support personnel. <u>Part 1A:</u> Fill out for each <u>Survey Party Chief</u> listed in Part 1. <ul style="list-style-type: none"> • Survey Party Chief: Must demonstrate five (5) years of experience in construction and field surveying is required. Satisfactory experience must be demonstrated on At least five (5) projects in the last three (3) years. • The firm must have a working knowledge (as demonstrated by the submittal requirements) of MnDOT Specifications 1508. <u>Part 2:</u> Project Examples are not applicable to this work type. Qualifying experience of staff in the category/level of work must be documented in part 1A. <u>Part 3:</u> Not Applicable for this work type.
II. Proof of Professional Certification/Licensure <i>Submit in PDF format</i>	A. Provide current copy Professional Certification/ Licensure

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***Work Type Submittal Instructions:**

Create a CD or flash drive that includes the following individual files or folders in this order:

- I. Resume and Relevant Project Experience Form (Form PQ1)
- II. Proof of Professional Certification/Licensure

Each file should be saved in the format identified above.
Submit 5 copies of the CD or flash drive.

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