

Work Type Definition: Construction Surveying



I. Minimum requirements:

The work to be under the direct supervision of a Minnesota licensed Land Surveyor or Professional Engineer

II. 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 contractors are able to perform all the required work for the project in accordance with the construction contract requirements; and so that the owner or its agent 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, the contractor's project schedule and inspection activities that occur.

III. 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).
- H. All work shall be performed timely on a schedule as requested by the owner or its agent. Overtime may be required to ensure timely completion so as to not delay the contractors' activities.

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IV. Provided by Hennepin County

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

A. Contract documents

V. 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;
- F. Pay Item quantity documentation; clear and grub, rock excavation, muck, earth and gravel, seeding and sodding, etc.

MnDOT resource materials to be supplied by the consultant as may be needed for a project may include the following:

- A. MnDOT Standard Specifications for Construction
- B. Construction Surveying Work plan Schedule
- C. MnDOT Survey and Mapping Manual
- D. Staking Information Sheets
- E. MnDOT Bituminous Manual
- F. MnDOT Bridge Construction Manual
- G. MnDOT Bridge Standard Plans Manual
- H. MnDOT Concrete Manual
- I. MnDOT Contract Administration Manual
- J. MnDOT Grading and Base Manual
- K. MnDOT Standard Plans Manual
- L. MnDOT Standard Plates Manual
- M. MnDOT Standard Signs Manual
- N. MnDOT Technical Manual
- O. MnDOT Traffic Engineering Manual
- P. MnDOT Labor Compliance Manual
- Q. MnDOT Technical Certification Handbook
- R. MnDOT Technical Memorandums
- S. Minnesota Manual of Uniform Traffic Control Devices (MN MUTCD)
- T. MnDOT Laboratory Manual
- U. MnDOT Landscape Projects Manual