

REVISION OF SECTION 625 CONSTRUCTION SURVEYING

Section 625 of the standard specifications is hereby revised as follows:

Delete section 625 and replace with the following:

DESCRIPTION

625.01 This work consists of the construction surveying, calculating, and staking necessary for the construction of all elements of the project. The work shall be done under the supervision of a Professional Land Surveyor (PLS) who is licensed in the State of Colorado.

Locating, preserving, referencing, installing and restoring land monuments such as Primary Control monuments from which the Right of Way or any land boundary will be calculated, described or monumented, Public Land Survey System (PLSS) monuments, General Land Office (GLO) monuments, Bureau of Land Management (BLM) monuments, Mineral Survey (MS) monuments, Right of Way (ROW) monuments, property boundary monuments and offsets, range points, benchmarks, easement monuments, and other monuments that are required by law or regulation to be established by a PLS, and the determination of any land boundary, shall be done under the supervision of a Professional Land Surveyor (PLS) who is licensed in the State of Colorado.

MATERIALS AND EQUIPMENT

625.02 The Contractor shall furnish all personnel, survey equipment, safety equipment, materials, and traffic control necessary to perform the required construction surveying and staking. All surveying equipment, including Electronic Distance Meters (EDM), total stations, theodolites, levels, rods, tapes, tripods, tribrachs, and Global Positioning System (GPS) receivers and equipment.

If any survey equipment is found to be functioning outside the manufacturer's specified tolerance, certification from an approved repair facility showing that the instruments have been repaired, properly adjusted, or both if necessary shall be included in the survey records and submitted to the City Surveyor's Office before being used.

CONSTRUCTION REQUIREMENTS

625.03 A Construction Survey Conference shall be held with the City Surveyor's Office prior to performing any surveying work under this section. The Contractor's Surveyor (PLS) and Party Chief shall attend. A Construction Survey Checklist shall be completed and signed by the City Surveyor's Office and the contractor.

The Contractor shall check and verify all established Primary horizontal and vertical control points.

All survey records generated shall be the property of the City and shall be available to the City Surveyor's Office for inspection or reproduction at all times. All survey records shall be transmitted to the City Surveyor's Office for inclusion into the project records before final project acceptance.

Electronic formats may be acceptable, please coordinate with the City Surveyor's Office.

Copies of any new Monument Records filed by the PLS with the State Board of Registration shall be submitted to the City Surveyor prior to filing.

625.04 Contractor Surveying. The Contractor's PLS shall perform all construction surveying and staking that is necessary for construction of the project.

625.05 Staking. It is the responsibility of the Contractor's PLS to adhere to industry standards and acceptable practices in regards to staking. Any restaking will be the responsibility of the Contractor's PLS at no cost to the City.

625.06 Accuracy and Tolerances. It is the responsibility of the Contractor's PLS to adhere to industry standards and applicable standards with regard to horizontal and vertical accuracy tolerances.

625.07 Responsibility and Inspection. Supervision and coordination of construction surveying and staking is the Contractor's responsibility. The City Surveyor's Office or Engineer may inspect the Contractor's surveying; however such inspection will not relieve the Contractor of any responsibility for accuracy or completeness of work. All Contractor surveying inaccuracies, errors, or omissions shall be corrected at the Contractor's expense.

625.08 Reset Monuments and Stakes. Survey monuments, benchmarks, and other significant stakes that are damaged, destroyed, or made inaccessible by the progress of construction shall be replaced, transferred or reestablished at the Contractor's expense.

Locating, preserving, referencing, installing and restoring land monuments as described in 625.01, shall be done in accordance with Section 629, under the supervision of a PLS who is experienced and competent in Right of Way and boundary surveying and licensed in the State of Colorado.

625.09 Changes. All changes in lines and grades required by field conditions and all discrepancies in grades, alignment, location or dimensions detected by the Contractor shall be immediately submitted to the Engineer in writing. No changes in given data or plans will be allowed unless approved by the Engineer in writing. All changes shall be documented by the contractor.

625.10 Pay Quantities Measurements. The Engineer will perform all interim and final measurements deemed necessary by the City to determine contract pay quantities. The Contractor shall establish and maintain Control points and stationing as required for these measurements.

625.11 Survey Records. Survey records shall be completed as the work is done. Field survey notes for construction surveying and checking by the Contractor shall be recorded in survey records in conformance with industry standards and acceptable practices.

All survey records generated shall be the property of the City and shall be available to the City Surveyor's Office or the Engineer for inspection or reproduction at all times. All survey records shall be transmitted to the City Surveyor's Office for inclusion into the project records before final project acceptance. All survey records shall be stamped with the seal of, and signed by, the responsible PLS.

Electronic submittal of survey records may be acceptable, please coordinate with the City Surveyor's Office.

METHOD OF MEASUREMENT

625.12 Construction surveying will not be measured but will be paid for on a lump sum basis.

BASIS OF PAYMENT

625.13 Payment for construction surveying will be the contract lump sum bid and will be full compensation for all surveying work necessary to complete the project to include all resetting of stakes, marks, monuments and preparing survey documentation as required.

Partial payment for construction surveying, as determined by the Engineer, will be made as the work progresses.

Payment will be made under:

<u>PAY ITEM</u>	<u>PAY UNIT</u>
Construction Surveying	Lump Sum

Traffic control for construction surveying will be measured and paid for in accordance with Section 630.

END OF REVISION OF SECTION 625