

UNITED STATES
SURVEYOR GENERAL'S OFFICE.

COLORADO.

Denver, 188

Louis P. Ouellette Esq.
U. S. Dep. Surveyor.

SIR:

In executing the surveys embraced in your contract of even date herewith, you will, in addition to the instructions of the Manual, and printed instructions to Surveyors General, dated June 1, 1864 (copies of which have been placed in your hands) observe and comply with the following, viz:

You are required to establish all corners in a *permanent* and *workmanlike* manner, otherwise the great aim of the surveying service will not have been attained. You will describe them *fully* in your field notes; the description "established as per instructions" is not sufficient; you will therefore state in your field notes the length and diameter of posts, the depth set in ground, and the size of pits. Where stones are used, for making corners, mounds of earth are not required, but you will *dig pits* in the same manner as for corners marked by posts and mounds, giving length, breadth and thickness of stone, and depth set in ground. As your cornerman follows in the rear of the surveying party, unfaithfulness on his part will not be readily detected unless you give it your personal attention, and as the proper establishment of corners is one of the most important features of the surveying service, I especially enjoin upon you not to trust altogether to your cornerman, but that you see to it that this part of the work, as well as all other, is faithfully performed. Also, when passing through timbered land, see that the lines are properly blazed, so that they may be readily traced.

In a region remote from timber and destitute of stone, in addition to the manner of establishing corners by mounds of earth with deposits at the point of the corner, you are required to drive in the center of one

of the pits at each section and township corner, sawed or hewed stakes, not less than two inches square and two feet long, said stakes to be marked in the manner prescribed in the Manual, for marking corner posts, and to be driven one foot in the ground. At corners common to four townships or sections the stakes are to be driven in the pit southeast of the mound; and at corners common to two townships or sections, they are to be driven in the pit east of the corner. This requirement does not apply to quarter section corners.

The first section of the Act of Congress of May 30th, 1862, provides that contracts for the survey of the public lands shall not become binding upon the United States, until approved by the Commissioner of the General Land Office, except in such cases as the Commissioner shall otherwise specially order. As no special order has been made with regard to your contract, you will not begin work until you have received notice of the approval of said contract.

My attention has been called to a neglect on the part of deputies in the matter of noting a summary of objects and data required by the Manual at page eighteen. You will be careful to give all this data in detail, as a failure to do so will subject you to all the penalties of a failure to comply with your contract.

You will, while engaged in running and establishing guide meridian standard and range lines, test the accuracy of your work and the condition of your instruments by at least one observation upon a circumpolar star in each twelve miles of line and upon subdivisional surveys you will make not less than three such celestial observations, upon different days, between the commencement and close of surveying operations in any given township. You will make complete records in your returns under proper dates, of the making of such observations, showing the style, number and condition of the instrument in use, the angle formed by comparing the line last run with the meridian as thus determined.

You will provide yourself with not less than two good surveying chains of steel wire, which should be of No. 12, American gauge, all the joints of which should be securely brazed. The four-pole chain must be adjusted to lengths of 66.06 feet. You will preserve one of these chains unused in ordinary field work, and those used in the field must be compared therewith before and after each day of field service. You will fully acquaint all your field employes with the requirements of the Manual and additional instructions so far as they relate to the measurement and marking of lines and corners of public land surveys.

Before beginning the subdivisional surveys of a township you will make a preliminary survey by re-tracing all the township boundaries. Where no subdivisions have been made on either side of a township boundary, it will be corrected if necessary, in point of alignment as well as measurement by establishing the section corners at lawful distances from the south or east boundaries of the township (as the case may be) and upon a right line extending between the township corners.

In all cases such necessary corrections will be made as will place the section corners at the aforesaid lawful distances from the south or east boundary, in order that a legal subdivision of the township may be made, and where new corners are thus necessarily established, the distance, be it ten links or more, and direction between new and old corners must be carefully noted.

Where the south boundary of a township is not coincident with that of an adjoining township, corners on the range lines will, if not found to be in proper positions, be so established as to admit of the regular and lawful subdivision of each township, the same as if the adjoining township or townships were not in existence, but distances and directions between all corners upon township lines examined as herein provided must be shown.

Where subdivisional lines have been closed upon a township boundary in advance of the preliminary survey of the same, its alignment will not be changed.

In cases where townships adjoin *regularly*, and one or more boundary lines of a township to be subdivided have, for purposes of subdivision of adjoining townships, been examined in accordance with these instructions, further examination of the same will be omitted. The application of this principle is equally important in the subdivision of part of a township where the remainder is unsurveyable. Where witness trees are not at hand, the new corners will be marked in the same manner as the original, except that a pit will be dug on the *north* as well as upon the south side of the mound of a section corner, and in like manner an additional pit will be dug on the *west* side of a quarter-section corner, and record made of the facts in each case, in the field-notes of the survey, to aid in identification of the new corners.

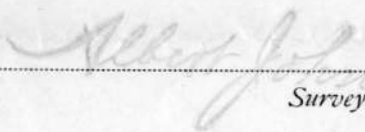
If, upon subsequent subdivision of adjoining townships, it is found that the new corners will form proper points for starting or closing corners of the same, they will be adopted as such, and the old corners will be obliterated.

Inasmuch as you will be allowed the minimum rate per mile for retracement of township boundaries, you will, in all cases where you may find the original corner in proper position, make such repairs as may be necessary to restore or make its condition equal to the requirements of the Manual.

You will fully describe previously established corners upon which your surveys commence and close and in order to satisfy this office that such corners have been actually found and identified, the condition of the post, mound, and pit or pits and descriptions of witness trees (if any) and the bearings and distances thereto must be recorded in the field-notes in the same manner as for the establishment of an original corner.

Any infraction of the requirements of the Manual of surveying instructions or other instructions referred to in your contract, will result in the forfeiture of your contract, disqualify you from future employment in the surveying service, and any infringement of your sworn obligation, when detected by special examiners, whom it is intended to send into the field for the purpose of inspecting the surveys, will be punished to the extent of the law applicable in such cases.

Very respectfully,


Surveyor General.

Where subdivision lines have been closed upon a township boundary in advance of the preliminary survey of the same, its alignment will not be changed.

In cases where township section corners have been established by a survey which has been examined in accordance with these instructions, further examination of the same will be omitted. The application of this principle is equally important in the subdivision of part of a township where the remainder is unsurveyed. When witness trees are not at hand, the new corners will be marked in the same manner as the original, except that a pit will be dug on the west as well as upon the south side of the mound of a section corner, and in like manner an additional pit will be dug on the west side of a quarter-section corner, and record made of the facts in each case in the field notes, the survey, to aid in identification of the new corners.

When a new corner is established, it is assumed that the old corner will remain in place. The new corner will form proper points for starting closing corners of the same, they will be adopted as such, and the old corners will be obliterated.

Inasmuch as you will be allowed the minimum rate per mile for reticement of township boundaries, you will, in all cases where you may find the original corner in proper position, make such repairs as may be necessary to restore or make its condition equal to the requirements of the Manual.

You will fully describe previously established corners upon which your surveys commenced close and in order to enter this office that such corners have been actually found and identified, the condition of the post, mound, and pit or pits and description of witness trees, if any, and the bearings and distances thereon must be recorded in the field notes in the same manner as for the establishment of an original corner.

Any infraction of the requirements of the Manual of surveying instructions or other instructions referred to in your contract will result in the forfeiture of your contract, and you from future employment in the surveying service, and any infringement of your sworn obligation, when detected by special examiners, whom it is intended to send into the field for the purpose of inspecting the surveys, will be punished to the extent of the law applicable in such cases.

Very respectfully,

Surveyor General