SECTION 18 – ORIGINAL AND FINAL CROSS SECTIONS

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Original and Final Cross Sections

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18.1 ORIGINAL CROSS SECTIONS

Original cross sections must be checked to verify that the plans accurately reflect the existing ground at the time the contract starts. Section 3 of these instructions includes remarks about obtaining original check sections, depending on whether the contract has an item for construction engineering. The PEMS should check the original cross sections as outlined in the SS and Section 3.5 of these instructions.

18.2 FINAL CROSS SECTIONS

Taking, checking, and plotting of final cross sections should keep pace with the finishing of shoulders, ditches and backslopes. Data collection for final cross sections should be obtained by Department personnel, consultants working for the Department, or Department personnel working in coordination with the Contractor and confirming the actual elevation shots and distance measurements taken by the Contractor. The Contractor's data alone may not be used for determining final pay quantities for earthwork.

When taking final cross sections, record offset information such as edge of surface, flow line of pipes, where final section crosses original ground line, grade breaks, and any other information needed to provide a clear picture after plotting the final cross section.

When starting the surveying process, start from a benchmark that was established on the original survey and then tie into all original benchmarks which can be located. In the notes, record the elevation computed for the benchmark, also the original elevation. Do not carry elevations ahead but start at each benchmark by using the original established elevation.

If an error is made in the notes, do not erase or delete the error. Instead, cross out the incorrect figure and place the correct figure above. Check all survey notes and verify they are correct. Take complete sections at all stations taken on the original survey.

If the last offset reading from centerline does not correspond within ±0.2 ft from original ground as indicated in the original sections, the reason for the deviation must be found and corrected. This may require checking in the field after final cross sections have been plotted. All sections, when plotted on the original sections, must form a closed area. When field checking is needed to close a section, make a note on original sections that the section was closed in the field.

Care should be used in sectioning and plotting final cross sections. Concise and accurate information is key.

If there has been a line change made, record the offsets from the original line in the notes so the information can be taken into consideration when plotting the final sections.

All notes should be complete, legible, and self-explanatory. Each day's set of notes should indicate the date, weather, and names of the crewmembers and their assigned duties.

Field notes help provide documentation of proper alignment and grade during construction of the contract. They provide the Department with a tool for analyzing and making construction determinations. Field notes are a permanent part of the official public record for the contract.