

**Item No. 311
Adjusting Structures****311.1 Description**

This item shall govern the removal and replacement of surfacing, furnishing of materials, adjusting and/or repositioning existing structures, valve boxes, pull boxes, survey monument boxes and water meters in accordance with these specifications to the locations or elevations indicated on the Drawings or as directed by the Engineer or designated representative. This item shall also govern any pumping, bailing and drainage required to complete the Work and Standard Specification Item No. 121, "Trench Safety Systems" for trench walls when indicated on the Drawings.

311.2 Submittals

The submittal requirements of this specification item must include:

- A. Aggregate type, gradations and physical characteristics for the Portland cement concrete mix.
- B. Proposed proportioning of materials for the mortar mix.
- C. Type structures and proposed adjustment technique (lowering, raising, lateral displacement).
- D. Type structure, repair technique and materials to be furnished (new replacement or reuse of existing) Type of mixing plant and associated equipment including chart indicating the calibration of each cold bin.

311.3 Materials

Precast reinforced concrete rings and castings in good condition, which are removed from the structures to be adjusted, may be reused with the written approval of the Engineer or designated representative. Additional materials required shall conform to the details indicated on the Drawings.

A. Portland Cement Concrete

The Portland cement concrete shall be Class A conforming to TXDOT Standard Specification Item No. 421, "Hydraulic Cement Concrete".

B. Mortar

Unless otherwise specified or approved by the Engineer or designated representative, mortar shall conform to requirements of TXDOT Standard Specification item No. 421, "Hydraulic Cement Concrete."

311.4 Construction Methods

- A. All adjustments shall be completed prior to the placement of the final surface.

- B. Pull box and valve box components scheduled for reuse shall be carefully removed and the contact areas shall be cleaned of all mortar, concrete, grease and sealing compounds. Any items broken in the process of removal and cleaning shall be replaced in kind by the Contractor at its own expense.
- C. If the adjustment involves slight lowering or raising a valve box or survey monument box, the outside shell of a slip or screw casing shall be excavated to its full length and adjusted to the proposed grade. Pipe castings shall be excavated to the depth required to cut from or weld a section to the casing as may be needed to adjust the ring to the proposed elevation. The ring shall be welded to the casing prior to pouring concrete around the casing.
- D. If the adjustment involves a vertical (lowering or raising) or a horizontal reassignment of a water meter and the property owner's cut off valve, this work shall be completed in accordance with Standard Installation Details included in the New Braunfels Utilities Standard Details.
- E. After the adjustments have been completed and cured, structures within the paved area shall be paved as indicated on the Drawings.

311.5 Measurement

The work performed and materials furnished as prescribed by this item as indicated shall be measured per each.

311.6 Payment

All work performed by this item will be considered subsidiary to other bid items unless it is included as a separate bid item in the contract documents then all work performed as required herein and measured as provided under "Measurement" will be paid for at the unit bid price. The bid prices shall include full compensation for furnishing all labor; all materials; all royalty and freight involved; all hauling and delivering; and all tools, equipment and incidentals necessary to complete the work. Payment will not be made for unauthorized work.

Payment will be made under one of the following:

Pay Item: Adjusting Water Meters and Boxes	Per Each
Pay Item: Repositioning & Adjusting Water Meters and Boxes	Per Each
Pay Item: Adjusting Gas Valve Boxes to Grade	Per Each
Pay Item: Adjusting Survey Monument Boxes to Grade	Per Each
Pay Item: Adjusting Water Valve Boxes to Grade	Per Each
Pay Item: Adjusting Pull Boxes to Grade	Per Each

End