



## Iowa Department of Transportation

### SPECIAL PROVISIONS FOR WATER SERVICES

Polk County  
STP-E-1945(804)--8V-77

Effective Date  
March 18, 2014

**THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

#### **127011.01 DESCRIPTION.**

This work shall consist of checking the depth, lowering, relocating and replacing water services and related items such as stop boxes, valves and taps. Figures referenced in this special provision are included in the plans.

#### **127011.02 MATERIALS.**

All materials used shall meet the requirements of the City of Des Moines plumbing code and the Des Moines Water Works Rules and Regulations.

#### **127011.03 CONSTRUCTION.**

##### **A. Permits, Licenses, and Inspections.**

1. All work shall comply with the requirements of the City of Des Moines Plumbing Code and the Des Moines Water Works Rules and Regulations. The Contractor shall obtain all permits, pay all fees, and schedule all plumbing inspections as required by the City of Des Moines Permit and Development Office. All work shall be done by a plumber licensed in the City of Des Moines.
2. Prior to starting any work on a project (preconstruction) and after all construction is complete (post construction) the Engineer shall arrange with Des Moines Water Works for an inspection of all water service stop boxes within the project limits. The Contractor will be required to attend both inspections and assist with exposing the stop boxes. The preconstruction inspection will document defects to existing stop boxes. The post construction inspection will verify that the stop boxes have been installed/adjusted/protected to the requirements of this specification.

**B. Water Service Tap.**

1. A new water service tap is required if the existing tap is either 1/2 inch or 3/4 inch and not insulated.
2. Excavate and prepare the site in accordance with Des Moines Water Works Rules and Regulations.
3. Schedule Des Moines Water Works to install the service tap, and pay all Des Moines Water Works fees for the installation.
4. Backfill and compact the excavation site In accordance with Article 127011.03, L.

**C. Relocate Water Service Stop Box.**

1. Relocate stop box, as shown in Figure WS-1, from its existing location to the new location shown on the plans or as designated by the Engineer.
2. When the existing stop box is not as indicated on the plans, the relocation shall be verified by the Engineer before proceeding with the work.

**D. Check Depth of Water Service.**

1. Excavate water service, measure and assure that existing water service is a minimum of 60 inches below the finished grade and not in conflict with proposed sewers, walls, and other structures.
2. If the depth of the service is not adequate, the service shall be lowered in accordance with the plans, and this specification.

**E. Lower Water Service.**

1. Lower existing water service that meets plumbing code standards to provide a minimum of 60 inches of earth cover and to provide minimum clearances at proposed sewers, walls, and structures as shown in Figures WS-2, WS-3, and WS-4.
2. Replace stop box and pipe and fittings if required.

**F. Lower Water Service with New Copper.**

1. Replace services that do not meet plumbing code standards with new 1 inch copper tubing from the water main to and including the stop box. If the work area extends beyond the stop box, replace service to the limits of the work area.
2. Lower to provide a minimum of 60 inches earth cover and to provide minimum clearances at proposed sewers, walls, and structures as shown in Figures WS-2, WS-3 and WS-4.

**G. New Water Service.**

1. At locations where plumbing code standards require that the existing water service must be reconstructed in conjunction with relocating water services or relocating stop boxes, and in locations where a new water main is installed, a new water service shall be constructed from the water main to and including the stop box.
2. The new service shall be constructed to provide a minimum of 60 inches of earth cover and to provide minimum clearances at proposed sewers, walls, and structures as shown in Figures WS-2, WS-3, and WS-4.

3. Utilize the existing corporation tap on the water main if allowed (see water service tap) and provide all new materials required.

#### **H. Relocate Water Service.**

1. Relocate the existing water service that meets plumbing code standards when there is conflict with sewer construction as shown in Figure WS-4.
2. Relocate Stop Box if required.

#### **I. Disconnect Water Service.**

1. Disconnect abandoned water service or water service stubs.
2. Abandon in accordance with the requirements of the City of Des Moines Plumbing Code and Des Moines Water Works Rules and Regulations. The water services shall be cut at the corporation stop and the stop closed. The stop box consisting of the stem and riser shall be completely removed.

#### **J. Adjust Stop Box to New Grade.**

1. Adjust all stop boxes within the project limits to finish grade as per Figure WS-5.
2. Stop box caps that are located in a new PCC sidewalk or new PCC driveway shall be protected to prevent adhesion to the PCC by installing either a non-corrosive permanent sleeve or a temporary sleeve around the stop box cap while placing the PCC. Temporary sleeves shall be removed after placement of the PCC.

#### **K. Flushing and Testing.**

Flush and test the service in accordance with requirements of the City of Des Moines Plumbing Code and Des Moines Water Works Rules and Regulations.

#### **L. Backfilling.**

1. Place backfill in the trench immediately after water service work has been completed and inspected.
2. Within street right-of-way, compact each lift to at least 95% of maximum Standard Proctor Density, otherwise compact to at least 90%.
3. In areas 3 feet or more below pavement structure, place backfill in lifts no thicker than 8 inches.
4. In areas less than 3 feet below pavement structure, place backfill in lifts no thicker than 6 inches.
5. Terminate backfill at 8 inches below finish grade in areas to remain unpaved, and to subgrade elevation in areas to be paved. Place 8 inches of topsoil in unpaved areas.
6. Dispose of surplus and unsuitable materials.
7. Hydraulic compaction is not allowed.

### **127011.04 METHOD OF MEASUREMENT.**

#### **A. General.**

No separate measurement will be made for excavation, backfill and compaction, except where excavated material is found to be unsuitable for backfill and cannot be made suitable in the opinion of Engineer, it shall be replaced with suitable backfill material. Suitable backfill replacement material located within the project limits will be measured and paid separately under "Replacement of Unsuitable Backfill Material".

**B. Relocate Water Service Stop Box.**

1. The Engineer will count each separate Water Service Stop Box relocated, except as described in Article 127011.04, B, 2.
2. Stop boxes relocated in conjunction with "Water Service-New", "Water Service-Lower 6-inch," or "Water Service-Lower 1-inch with New Copper" will not be counted.

**C. New Stop Box Housing and New Stop Box Rod.**

The Engineer will count the number of each item completed as described in Figure WS-5.

**D. Check Depth of Water Service.**

The Engineer will count the number of Check Depth Water Services as follows:

1. Water services which are checked for depth and do not require lowering, relocation, replacement with a new service, or stop box relocation will be counted.
2. Water services which are checked for depth and found to require lowering, relocation, replacement with a new service, or stop box relocation will not be counted.
3. Water services checked for depth that are located in an individual trench will be counted individually.
4. Multiple water services checked for depth that are located in one trench will be counted as one check depth (measurement will be made for first service checked and additional measurement will not be made for subsequent services in the same trench).

**E. Lower Water Service, Lower Water Service with Copper, New Water Service, Relocate Water Service, Disconnect Water Service, Water Service Tap.**

The Engineer will count the number of each item completed for each size of water service as follows:

1. Water services that are located in an individual trench will be counted individually.
2. Multiple water services are located in one trench will be counted as 1 each for the first service and each additional water service located in the same trench shall be counted as 1/2 each.

**127011.05 BASIS OF PAYMENT.**

**A. General.**

The cost of permits, fees, excavation, backfill, testing and disinfection shall be considered incidental to this work.

**B. Relocate Water Service Stop Box.**

1. Payment will be made at the unit bid price for each Relocate Water Service Stop Box completed. Bid price shall include all work and materials required to move the stop box from its existing location to its new location. The bid price shall assume the following:
  - a. Existing ground key stop shall remain in place.
  - b. New ground key stop with connections shall be installed.

- c. Where required, a new service box stem and rod shall be installed.
  - 2. Stop boxes relocated in conjunction with “New Water Service”, “Lower Water Service,” or “Lower Water Service with New Copper” will be considered incidental to those items and not be counted for separate payment.
- C. New Stop Box Housing and New Stop Box Rod.**  
Payment will be made at the unit bid price for each item of work completed. Bid price shall include all work and materials required to complete the work.
- D. Check Depth of Water Service**  
Payment will be made at the unit bid price for each Check Depth of Water Service completed. Bid price shall include all work and materials required to complete the work.
- E. Lower Water Service, Lower Water Service with Copper, New Water Service.**  
Payment will be made at the unit bid price for each item of work completed. Bid price shall include all work and materials required to complete the work. The bid price shall include a new stop box and any additional pipe and fittings required.
- F. Relocate Water Service.**  
Payment will be made at the unit bid price for Relocate Water Service completed. Bid price shall include all work and materials required to complete the work. The bid price shall include any additional pipe and fittings required.
- G. Disconnect Water Service, Water Service Tap.**  
Payment will be made at the unit bid price for each item completed. Bid price shall include all work and materials required to complete the specified work on the water service. Removal and replacement of the street pavement, sidewalks, and driveways are paid under separate bid items.