



## Iowa Department of Transportation

### SPECIAL PROVISIONS FOR EXCAVATION FOR STRUCTURES IN LEVEE CRITICAL AREA

Pottawattamie County  
IM-NHS-80-1(309)2--03-78  
IM-NHS-80-1(369)2--03-78

Effective Date  
May 21, 2013

**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.**

#### **120054.01 DESCRIPTION.**

The work under this contract is located adjacent to federally constructed levees along the Indian Creek and Missouri River. As such, no improvement shall be passed over, under, or through the levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the levees other than the construction under this contract and these special provisions without prior approval of the U.S. Army Corps of Engineers (USACE). The limits of the levee critical area are 300 feet riverward and 500 feet landward of the levee. The following foundation elements fall within these limits:

- West and East Abutment
- Pier Nos. 1 and 2
- Sign Foundation Removal
- Sign Foundations

#### **120054.02 WORK ZONE REQUIREMENTS.**

Areas within these limits disturbed by excavation, sheet piles, other intrusions or disturbances of the soil shall be restored as described in this special provision. Any construction within the levee critical area limits that is not directly related to the construction of the abutments, piers and foundations noted above shall not commence without prior approval of the Engineer and the USACE.

#### **120054.03 CONSTRUCTION.**

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

1. Open excavation shall consist of 3 Horizontal:1 Vertical side for abutments and 2 Horizontal:1 Vertical side for all other construction.
2. Excavated soils shall be sorted by soil type, classified and stockpiled.
3. The sand backfill shall be placed in the excavation as it was encountered in the initial excavation.
4. The clay backfill shall be placed in the excavation as it was encountered in the initial excavation.

**B. Abutment Construction.**

Abutments shall be constructed within the levee section as per the contract documents. Excavations for construction of the abutments shall be by open excavation to the limits as per the contract documents. As such, no excavation or penetration of the existing ground beyond the limits as per the contract documents will be permitted with the exception of the abutment piling. Excavations for the east abutment construction shall not commence until the temporary impervious levee has been constructed and approved.

**C. Pier Foundation Construction.**

Piers shall be constructed within the levee critical area as per the contract documents. Excavations for construction of the piers shall be by open excavation to the limits as per the contract documents. As such, no excavation or penetration of the existing ground beyond the limits as per the contract documents will be permitted with the exception of the piling.

**D. Sign Foundation Removal.**

Existing sign foundations are located within the levee critical area. Excavations for removal of the foundations shall be by open excavation to the limits of removal as per the contract documents. As such, no excavation or penetration of the existing ground will be permitted beyond the limits as per the contract documents.

**E. Sign Foundation Construction.**

Sign foundations shall be constructed within the levee critical area as per the contract documents. Excavations for construction of the foundations shall be by open excavation to the limits as per the contract documents. As such, no excavation or penetration of the existing ground beyond the limits as per the contract documents will be permitted with the exception of the foundation piling (if needed).

**F. Materials.**

1. Lean or fat clay shall consist of cohesive materials having at least 50% passing the U.S. Standard 200 mesh sieve size. Cohesive materials include materials classifying as fat (or lean) clay (CL,CH), having a Plasticity Index of 10 or greater, and falling between the "U" line and the "A" line on Figure 3 in ASTM D 2487 – Standard Tests for Classifications of Soils for Engineering Purposes. Lean clay (CL) shall have a Liquid Limit less than 50.
2. Moisture and density control of the embankments shall be based on the standard Proctor compaction test (Materials I.M. 309). Cohesive materials shall be compacted to a density of at least 95% of the maximum dry density and be within -1 to +4% of the optimum moisture content at the time of compactive effort is applied which may require the addition of water or aeration of materials. Non-cohesive materials will be placed in a moist condition and compacted with approved equipment to a density of at least 95% of the maximum dry density. Sampling and testing of borrow shall be in accordance with Materials I.M. 204.

**120054.04 METHOD OF MEASUREMENT.**

Measurement will be as specified in the bid item Excavate and Dewater.

**120054.05 BASIS OF PAYMENT.**

All work as described above is included in the bid item Excavate and Dewater.