

Section 2106. Settlement Plates

2106.01 DESCRIPTION.

Furnish and install settlement plates consisting of a base plate, steel bar, steel riser pipe sections, PVC casing, inspection cover, and additional hardware and couplers which may be required as shown in the contract documents. The number of settlement plates will be shown in the contract documents.

2106.02 MATERIALS.

Meet the requirements of [Division 41](#).

A. Base Plate and Steel Bar.

Apply [Section 4153](#).

B. PVC Casing.

Apply [Section 4149](#).

2106.03 CONSTRUCTION.

A. General.

1. Furnish and install settlement plates at the locations specified in the contract documents.
2. Obtain the Engineer's approval for settlement plates before beginning embankment construction.

B. Initial Installation.

1. Install the base plate at least 6 inches (150 mm) below natural ground, firmly seated on a level surface. Place the PVC casing on the base plate, centered on the steel bar attached to the base plate. Fill the void between the casing and bar with commercial grade oakum, tightly packed, in order to keep the casing centered on the bar.
2. Construct an inspection cover as shown in the contract documents and place over the top of the casing. Leave the cover in place at all times, except when inspecting or monitoring the riser pipe.

C. Adding Extensions.

1. Add riser pipe extensions and couplers, as necessary, in 3 foot (1 m) increments as construction of the embankment progresses. Install extensions in a plumb line.
2. Add sections of PVC casing and couplers, as necessary, in order to prevent fill material from coming into contact with the steel pipe extensions.

D. Final Cleanup.

1. After all embankment construction and monitoring has been completed, adjust the tops of the riser pipe and PVC casing so they terminate below the final elevation of the embankment.
2. Remove riser pipe sections protruding above the surface of the embankment. Then cut the PVC casing at a point below the surface of the embankment. Cover with a PVC cap, solvent welded to the casing, in order to prevent the intrusion of soil and water.

E. Monitoring.

The Engineer will determine elevations of settlement plates in accordance with [Article 2526.03, G](#).

F. Limitations.

1. Take all necessary precautions to keep the alignment of the riser pipe and PVC casing in a plumb position.
2. Operate equipment so that the riser pipe and PVC casing are not damaged, displaced, or tilted out of plumb. Repair or replace all pipes that are damaged, displaced, or tilted out of plumb, at the discretion of the Engineer (at no additional cost to the Contracting Authority.)

2106.04 METHOD OF MEASUREMENT.

Settlement plates will not be measured directly for payment.

2106.05 BASIS OF PAYMENT.

Furnishing, installing, and extending settlement plates is incidental to embankment or excavation.