Cantilever Soldier Beams:

1. Machine drill caisson shafts. Caissons are to be located so that the soldier beams may be accurately aligned and so that the lagging will be in the proper relation to the intended face of the retaining structure.

2. Provide protection against sloughing or caving of caisson holes by using steel pipe casing, as required by the Special Inspector.

3. All structural shapes and plates shown on the design documents are minimum sizes required; equal or greater sizes may be substituted with the prior approval of the Special Inspector. Beams shall be shop sand-blasted and shop corrosion protected, as specified; all bare steel and welds shall be permanently corrosion protected.

4. Place soldier beams and immediately fill caissons with structural concrete to depths shown on the drawing. Fill remainder of caisson hole to grade with lean concrete.

5. Excavate and place lagging between beams and behind outer (front) beam flanges, in lifts, concurrently wedging and backfilling voids (even small voids) behind lagging, down to top of caissons.

6. Weld flat bar hooks to soldier beam. Permanently corrosion protect all field installed plates and welds.

7. Construct concrete wall. Outer face of wall must be vertically plumb and horizontally flat.

Tieback Soldier Beams:

1. Machine drill caisson shafts. Caissons are to be located so that the soldier beams may be accurately aligned and so that the lagging will be in the proper relation to the intended face of the retaining structure.

2. Provide protection against sloughing or caving of caisson holes using casing, as required by the Special Inspector.

3. All structural shapes and plates shown on the design documents are minimum sizes required; equal or greater sizes may be substituted with the prior approval of the Special Inspector. Beams shall be shop sand-blasted and shop corrosion protected, as specified; all bare steel and welds shall be permanently corrosion protected.

4. Place soldier beams and immediately fill caissons with structural concrete to depths shown on the drawing. Fill balance of caisson with lean concrete.

5. Excavate and place lagging between beams and behind outer (front) beam flanges, in lifts, concurrently wedging and backfilling space and voids (even small voids) behind the lagging, down to level of upper tieback anchors.

6. Install upper tiebacks (see "Tieback Anchors", steps 1 thru 6).

7. Test upper tiebacks (see "Tieback Anchors", steps 7 thru 9).

8. Excavate and place lagging between beams and behind outer (front) beam flanges, in lifts, concurrently wedging and backfilling voids (even small voids) behind lagging, down to level of lower tieback anchors.

9. Install lower tiebacks (see "Tieback Anchors", steps 1 thru 6).

10. Test lower tiebacks (see "Tieback Anchors", steps 7 thru 9).

11. Excavate and place lagging between beams and behind outer (front) beam flanges, in lifts, concurrently wedging and backfilling voids (even small voids) behind lagging, down to top of caissons.

12. Weld flat bar hooks to soldier beam. Permanently corrosion protect all field installed plates and welds.

13. Construct concrete wall. Outer face of wall must be vertically plumb and horizontally flat.