

455 STRUCTURES FOUNDATIONS.
(REV 6-3-04) (FA 7-1-04) (1-05)

ARTICLE 455-1 (Pages 462-465) is expanded by the following:

455-1.4 Vibrations on Freshly Placed Concrete (Drilled Shafts and Piers): Ensure that freshly placed concrete is not subjected to vibrations greater than 1.5 in/sec from pile driving and/or drilled shaft casing installation sources located within the greater dimension of three shaft diameters (measured from the perimeter of the shaft closest to the vibration source) or 30 feet [10 m] (from the nearest outside edge of freshly placed concrete to the vibration source) until that concrete has attained its final set as defined by ASTM C-403.

SUBARTICLE 455-11.8 (Page 499) is deleted and the following substituted:

455-11.8 Pile Splices: Authorized splices in concrete piling, steel piling and test piling, which are made for the purpose of obtaining greater lengths than originally authorized by the Engineer, or to incorporate test piling in the finished structure, or for further driving of test piling, will be paid for as described in 455-12.12. No separate payment will be made for splices required to obtain the authorized length.

For concrete piles, where the head of the pile to be spliced is not more than 2 feet [0.6 m] below the elevation of cut-off, the Contractor, if he so elects, may cast the pile build-up with the cap, under the following conditions:

(a) Reinforcing steel and pile dimensions will conform in every respect to a standard splice.

(b) 9 feet [2.7 m] of piling, will be paid for as compensation for drilling and grouting the dowels and reinforcing steel and concrete used for-build up and all other costs for which provision has not otherwise been made.

SUBARTICLE 455-11.13 (Page 500) is deleted and the following substituted:

455-11.13 Preformed Pile Holes: The quantity to be paid for will be 30% of one foot [meter] of piling for each foot [meter] of completed Preformed Pile Holes acceptably provided, complete for the installation of the bearing piles, regardless of the type of pile installed therein. Only those holes authorized to be paid for, as provided in 455-5.9.3, will be included in the measurement for payment. The Engineer will authorize payment for Preformed Pile Holes only when the pile has been placed in proper position and has achieved the required penetration.

455-12 (Pages 500-502) is deleted and the following substituted:

455-12 Basis of Payment (All Piling).

455-12.1 Treated Timber Piling: Price and payment will be full compensation for furnishing all materials, including collars, metal shoes, copper cover sheets, preservatives and tar, and for wrapping pile clusters with wire cable, where so shown in the plans.

455-12.2 Prestressed Concrete Piling: Price and payment will be full compensation for the cost of furnishing and placing all reinforcing steel, predrilled holes, furnishing the material for and wrapping pile clusters with wire cable where so shown in the plans and grouting of

preformed pile holes when shown in the plans. Payment will be made in two increments: 70% of the unit price for Prestressed Concrete Piling for each foot (meter) fabricated and accepted as stockpiled materials, and 30% of the unit price for Prestressed Concrete Piling for the entire authorized length upon completion of driving.

455-12.3 Steel Piling: Price and payment will be full compensation for all labor, equipment, and materials required for furnishing and installing Steel Piling, including welding and painting as specified and the cost of predrilling pile holes described in 455-5.1.1. The cost of any sand or concrete fill and reinforcing steel in pipe piles will be included in the price for Steel Piling. Payment will be made in two increments: 70% of the unit price for Steel Piling for each foot (meter) fabricated and accepted as stockpiled materials, and 30% of the unit price for Steel Piling for the entire authorized length upon completion of driving.

Bracing and other metal parts attached to or forming a part of piling or bracing and not otherwise classified, will be measured and paid for as provided in Section 460.

455-12.4 Test Piles: Price and payment will be full compensation for all incidentals necessary to complete all the work of this item except splices, build-ups, pile extractions and preformed pile holes authorized by the Engineer and paid for under other pay items or payment methods. The cost of all additional work not listed above necessary to ensure required penetration and attain required bearing of the test piles will be included in the price bid per foot [meter] of Test Pile, including driving and all other related costs. Payment will be made in two increments: 70% of the unit price for Test Piles for each foot (meter) fabricated and accepted as stockpiled materials, and 30% of the unit price for Test Piles for the entire authorized length upon completion of driving.

455-12.5 Dynamic Load Tests: Price and payment will be full compensation for all labor, equipment, and materials required to perform this work.

455-12.6 Steel Sheet Piling:

455-12.6.1 Permanent Steel Sheet Piling: Price and payment will be full compensation for all labor, equipment, and materials required for furnishing and installing steel sheet piling including preformed holes, but will not include furnishing and placing anchors when an anchored wall system, is designed and detailed in the plans. In such cases, furnishing and installing anchors will be paid for separately.

455-12.6.2 Temporary Steel Sheet Piling: For critical temporary steel sheet pile walls, walls necessary to maintain the safety of the traveling public or structural integrity of nearby structures, roadways and utilities during construction, that are detailed in the plans, price and payment will be full compensation for all labor, equipment, and materials required for furnishing and installing steel sheet piling including preformed holes, and including anchors when an anchored wall system is required. Removal of the sheet piling, anchors, and incidentals will be included in the cost per square foot [square meter] for Steel Sheet Piling (Critical Temporary). When the temporary steel sheet pile walls are not detailed in the plans, the cost of furnishing and installation shall be incidental to cost of other related items and no separate payment shall be made. If the wall is not shown in the plans, but deemed to be critical as determined by the Engineer, then a design shall be furnished by the Department and paid for separately under Steel Sheet Piling (Critical Temporary).

455-12.7 Concrete Sheet Piling: Price and payment will be full compensation for furnishing all materials, including reinforcing steel, grouting, preformed holes and installation.

455-12.8 Preformed Pile Holes: There will be no separate pay item for Preformed Pile Holes. Payment will be made as 30% of the unit price per foot [meter] for Piling of the

applicable pile type, excluding sheet piling, for each linear foot [meter] of hole which is preformed when authorized by the Engineer. Price and payment will be full compensation for all labor, equipment, and materials required to perform this work.

455-12.9 Protection of Existing Structures: Price and payment will be full compensation for all labor, equipment, and materials required to perform this work.

455-12.10 Point Protectors: Price and payment will be full compensation for all labor, equipment, and materials required to perform this work.

455-12.11 Static Load Tests: Price and payment will be full compensation for all labor, equipment, and materials required to perform this work.

455-12.12 Pile Splices: The quantity of this item will be determined as provided in 455-11.8. Payment for each Steel Pile Splice authorized by the Engineer will be made as 20 feet [6 m] of additional steel piling. Payment for each Concrete Pile Splice authorized by the Engineer will be made as 30 feet [9 m] of additional prestressed concrete piling.

455-12.13 Prestressed Concrete Pile Cut-Off: There will be no separate pay item for pile cut-off. Payment for each cut-off will be made as 5 feet [1.5 m] of additional piling furnished.

455-12.14 Payment Items: Payment will be made under:

Item No. 455- 2-	Treated Timber Piling - per foot.
Item No. 2455- 2-	Treated Timber Piling - per meter.
Item No. 455- 14-	Concrete Sheet Piling - per foot.
Item No. 2455- 14-	Concrete Sheet Piling - per meter.
Item No. 455- 18-	Protection of Existing Structures - lump sum.
Item No. 2455- 18-	Protection of Existing Structures - lump sum.
Item No. 455- 34-	Prestressed Concrete Piling – per foot.
Item No. 2455- 34-	Prestressed Concrete Piling – per meter.
Item No. 455- 35-	Steel Piling – per foot.
Item No. 2455- 35-	Steel Piling – per meter.
Item No. 455-119-	Test Loads- each.
Item No. 2455-119-	Test Loads- each.
Item No. 455-120-	Point Protection - each.
Item No. 2455-120-	Point Protection - each.
Item No. 455-133-	Steel Sheet Piling - per square foot.
Item No. 2455-133-	Steel Sheet Piling - per square meter.
Item No. 455-137-	Dynamic Load Tests - each.
Item No. 2455-137-	Dynamic Load Tests - each.
Item No. 455-143-	Test Piles (Prestressed Concrete) – per foot.
Item No. 2455-143-	Test Piles (Prestressed Concrete) – per meter.
Item No. 455-144-	Test Piles (Steel) – per foot.
Item No. 2455-144-	Test Piles (Steel) – per meter.
Item No. 455-145-	Test Piles (Concrete Cylinder) – per foot.
Item No. 2455-145-	Test Piles (Concrete Cylinder) – per meter.