

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS OFFICE OF THE SECRETARY MANILA

FEB 26 2006



SUBJECT: DPWH Standard Specification for Portland Cement Concrete Pavement with Wire Mesh, Item 312

In line with the mandate of the Department in providing effective standard specifications to be used in the implementation of various infrastructure projects and in view of the need of setting standard specification for Portland Cement Concrete Pavement with Wire Mesh, the attached DPWH Standard Specification for Portland Cement Concrete Pavement with Wire Mesh, Item 312, is hereby prescribed for the guidance and compliance of all concerned.

This specification shall form part of the revised edition of the DPWH Standard Specifications (Volume II – Highways, Bridges and Airports).

This order takes effect immediately.

HERMOGENE Acting Set



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DPWH STANDARD SPECIFICATION FOR ITEM 312 - PORTLAND CEMENT CONCRETE PAVEMENT WITH WIRE MESH

312.1 Desciption

This Item shall consist of furnishing and placing of wire mesh as reinforcement in Portland Cement Concrete Pavement, constructed on the prepared base in accordance with this specification and in conformity with the lines, grades, thickness and typical cross-section shown on the plans or as established by the Engineer.

312.2 Material Requirements

312.2.1 Wire Mesh / Bar Mat

The diameter of wire for lateral and longitudinal directions shall not be less than 6mm in diameter.

312.2.2 Tie Wire

It shall be No. 16 gauged annealed wire.

312.2.3 Spacers

It shall be constructed of steel and of suitable design and strength to hold reinforcement accurately in place before and during the placing of concrete. All spacers shall be approved by the Engineer.

312.2.4 Portland Cement

It shall conform to the requirements of Subsection 311.2.1, Portland Cement, Item 311 – Portland Cement Concrete Pavement.

312.2.5 Fine Aggregate

It shall conform to the requirements of Subsection 311.2.2, Fine Aggregate, Item 311 – Portland Cement Concrete Pavement.

312.2.6 Coarse Aggregate

It shall conform to the requirements of Subsection 311.2.3, Coarse Aggregate, Item 311 – Portland Cement Concrete Pavement.

312.2.7 Water

It shall conform to the requirements of Subsection 311.2.4, Water, Item 311 – Portland Cement Concrete Pavement.

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 312.2.8 Reinforcing Steel (Slip bars/Dowels, Tie bars, End Reinforcements) It shall conform to the requirements of Subsection 311.2.5, Reinforcing Steel, Item 311 – Portland Cement Concrete Pavement.

312.2.9 Joint Fillers

It shall conform to the requirements of Subsection 311.2.6, Joint Fillers, Item 311 – Portland Cement Concrete Pavement.

312.2.10 Admixtures

It shall conform to the requirements of Subsection 311.2.7, Admixtures, Item 311 – Portland Cement Concrete Pavement.

312.2.11 Curing Materials

It shall conform to the requirements of Subsection 311.2.8, Curing Materials, Item 311 – Portland Cement Concrete Pavement.

312.2.12 Calcium Chloride

It shall conform to the requirements of Subsection 311.2.9, Calcium Chloride, Item 311 – Portland Cement Concrete Pavement.

312.2.13 Storage of Cement and Aggregate

It shall conform to the requirements of Subsection 311.2.10, Storage of Cement and Aggregate, Item 311 – Portland Cement Concrete Pavement.

312.2.14 Proportioning, Consistency and Strength of Concrete

It shall conform to the requirements of Subsection 311.2.11, Proportioning, Consistency and Strength of Concrete, Item 311 – Portland Cement Concrete Pavement.

312.3 Construction Requirements

312.3.1 Quality Control of Concrete

It shall conform to the requirements of Subsection 311.3.1, Quality Control of Concrete, Item 311 – Portland Cement Concrete Pavement.

312.3.2 Equipment

It shall conform to the requirements of Subsection 311.3.2, Equipment, Item 311 – Portland Cement Concrete Pavement.

312.3.3 Preparation of Grade

It shall conform to the requirements of Subsection 311.3.3, Preparation of Grade, Item 311 – Portland Cement Concrete Pavement.

312.3.4 Setting Forms

It shall conform to the requirements of Subsection 311.3.4, Setting Forms, Item 311 – Portland Cement Concrete Pavement.

312.3.5 Conditioning of Subgrade or Base Course

It shall conform to the requirements of Subsection 311.3.5, Conditioning of Subgrade or Base Course, Item 311 – Portland Cement Concrete Pavement.

312.3.6 Fabrication of Wire Mesh

The spacing on the lateral direction is twice wider than that of the longitudinal direction. The weight of wire mesh shall not be less than 3 kg/m^2 . It shall be fabricated by welding or binding at each crossing point and shall meet the requirements of ASTM A185.

312.3.7 Installation of Wire Mesh

After placement of slip bar placed at every 9.0 m maximum interval for weakened plane joint, wire mesh shall be placed at a depth of 5.0 cm to 7.5 cm below the surface of the slab or at 2/3 of thickness from the bottom of the pavement. It shall be supported by any approved support assemblies or spacers against displacement and shall be tied to it using the wires. The sheets of the welded wire mesh shall be flat, and proper care shall be observed in handling and placing it to ensure its installation in the proper position.

Welded wire mesh that have become bent or kinked shall be rejected.

312.3.8 Handling, Measuring and Batching Materials

It shall conform to the requirements of Subsection 311.3.6, Handling, Measuring and Batching Materials, Item 311 – Portland Cement Concrete Pavement.

312.3.9 Mixing Concrete

It shall conform to the requirements of Subsection 311.3.7, Mixing Concrete, Item 311 – Portland Cement Concrete Pavement.

312.3.10 Limitation of Mixing

It shall conform to the requirements of Subsection 311.3.8, Limitation of Mixing, Item 311 – Portland Cement Concrete Pavement.

312.3.11 Placing Concrete

It shall conform to the requirements of Subsection 311.3.9, Placing Concrete, Item 311 – Portland Cement Concrete Pavement.

312.3.12 Test Specimens

It shall conform to the requirements of Subsection 311.3.10, Test Specimens, Item 311 – Portland Cement Concrete Pavement.

312.3.13 Strike-off of Concrete and Placement of Reinforcement

It shall conform to the requirements of Subsection 311.3.11, Strike-off of Concrete and Placement of Reinforcement, Item 311 – Portland Cement Concrete Pavement.

312.3.14 Joints

It shall conform to the requirements of Subsection 311.3.12, Joints, Item 311 – Portland Cement Concrete Pavement.

312.3.15 Final Strike-off (Consolidation and Finishing)

It shall conform to the requirements of Subsection 311.3.13, Final Strike-off (Consolidation and Finishing), Item 311 – Portland Cement Concrete Pavement.

312.3.16 Surface Test

It shall conform to the requirements of Subsection 311.3.14, Surface Test, Item 311 – Portland Cement Concrete Pavement.

312.3.17 Curing

It shall conform to the requirements of Subsection 311.3.15, Curing, Item 311 - Portland Cement Concrete Pavement.

312.3.18 Removal of Forms

It shall conform to the requirements of Subsection 311.3.16, Removal of Forms, Item 311 – Portland Cement Concrete Pavement.

312.3.19 Sealing of Joints

It shall conform to the requirements of Subsection 311.3.17, Sealing of Joints, Item 311 – Portland Cement Concrete Pavement.

312.3.20 Protection of Pavement

It shall conform to the requirements of Subsection 311.3.18, Protection of Pavement, Item 311 – Portland Cement Concrete Pavement.

312.3.21 Concrete Pavement – Slip Form Method

It shall conform to the requirements of Subsection 311.3.19, Concrete Pavement – Slip Form Method, Item 311 – Portland Cement Concrete Pavement.

312.3.22 Acceptance of Concrete

It shall conform to the requirements of Subsection 311.3.20, Acceptance of Concrete, Item 311 – Portland Cement Concrete Pavement.

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312.3.23 Opening to Traffic

It shall conform to the requirements of Subsection 311.3.21, Opening to Traffic, Item 311 – Portland Cement Concrete Pavement.

312.3.24 Tolerance and Pavement Thickness

It shall conform to the requirements of Subsection 311.3.22, Tolerance and Pavement Thickness, Item 311 – Portland Cement Concrete Pavement.

312.4 Method of Measurement

The area to be paid for under this Item shall be the number of square meters (m^2) of concrete pavement with wire mesh placed and accepted in the completed pavement. The width for measurements will be the width from outside edge to outside edge of completed pavement as placed in accordance with the Plans or as otherwise required by the Engineer in writing. The length will be measured horizontally along the centerline of each roadway or ramp. Any curb and gutter placed shall not be included in the area of concrete pavement measured.

312.5 Basis of Payment

The accepted quantity, measured as prescribed in Section 312.4, shall be paid for at the contract unit price for Portland Cement Concrete Pavement with wire mesh, which price and payment shall be full compensation for preparation of roadbed and finishing of shoulders, unless otherwise provided by the Special Provisions, furnishing all materials for mixing, placing, finishing and curing all concrete, for furnishing and placing all joint materials, for sawing weakened plane joints, for fitting the prefabricated center metal joint, for facilitating and controlling traffic, and for furnishing all labor, equipment, tools and incidentals necessary to complete the Item.

Payment will be made under:

Pay Item Number	Description	Unit of Measurement
. 312	PCC Pavement (Reinforced	Square meter
	with wire mesh)	

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