



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

297. 13 DPWH
06-16-2010

JUN 15 2010

DEPARTMENT ORDER)

SUBJECT : DPWH Standard Specifications
on the Use of Lahar as Fine
Aggregates in Hot Rolled
Asphalt (HRA) and Asphaltic
Concrete (AC), Item 310A

No. _____

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Series of 2010)

In line with the mandate of the Department of providing effective standards for application in the implementation of various infrastructure projects and in view of the need of setting standard specifications on the use of lahar as fine aggregates in hot rolled asphalt and asphaltic concrete, the attached **DPWH Standard Specifications on the Use of Lahar as Fine Aggregates in Hot Rolled Asphalt (HRA) and Asphaltic Concrete (AC), Item 310A**, are hereby prescribed, for the guidance and compliance of all concerned.

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

This Order shall take effect immediately.


VICTOR A. DOMINGO
Acting Secretary



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DPWH STANDARD SPECIFICATIONS FOR

ITEM 310A – THE USE OF LAHAR AS REPLACEMENT TO FINE AGGREGATES IN ASPHALT BITUMINOUS MIX

310A.1 Description

This Item shall consist of furnishing and placing volcanic ash (lahar) as replacement to fine aggregates in Asphaltic Concrete (AC) and Hot Rolled Asphalt (HRA), constructed and laid hot on the prepared base in accordance with this Specification and in conformity with lines, grades, thickness and typical cross-section shown on the Plans, or as established by the Engineer.

310A.2 Materials Requirements

310A.2.1 Composition and Quality of Bituminous Mixture (Job-Mix Formula)

It shall conform to the applicable requirements of subsection 310.2.1.

310A.2.2 Bituminous Material

The kind of bituminous material to be used shall be Asphalt Cement. It shall conform to the applicable requirements of Item 702, Bituminous Materials.

310A.2.3 Aggregates

Aggregates shall conform to the applicable requirements of Subsection 310.2.3. The amount of lahar used for Asphaltic Concrete (AC) and Hot Rolled Asphalt (HRA) shall conform to whatever established job mix composition as determined by the Marshall Laboratory Method and shall comply to the following grading requirements:

310.A.2.3.1 Hot Rolled Asphalt with Lahar as Fine Aggregate

Test Sieve, mm	Percentage by mass of total aggregate passing test sieve
20	100
14	90-100
10	50-85
2.36	50-62
0.60	35-62
0.212	10-40
0.075	6-10

310A.2.2 Asphalt Concrete with Lahar as Fine Aggregate

Aggregates shall conform to Grading B of Item 310.

310A.2.4 Mineral Filler

It shall conform to the requirement of subsection 310.2.4. The amount of mineral filler for Asphaltic Concrete (AC) and Hot Rolled Asphalt (HRA) shall conform to whatever established job mix composition as determined by the Marshall Laboratory Method.

310A.2.5 Hydrated Lime

It shall conform to the requirement of subsection 310.2.5.

310A.2.6 Proportioning of Mixture

The proportion of bituminous material on the basis of total dry aggregate shall be from 5.0 to 8.0 mass percent. The exact percentage to be used shall be fixed by the Engineer in accordance with the job-mix formula and the other quality control requirements.

310A.3 Construction Requirements

The construction requirement shall be in accordance whenever applicable, with Section 310.3.

310A.4 Method of Measurement

The area to be paid for under Item 310 shall be the number of square meters (m^2) of asphalt pavement placed, compacted and accepted based on the thickness and density of the cores taken in accordance with Section 310.4.

However, lahar will not be measured separately.

310A.5 Basis of Payment

The accepted quantity, measured as prescribed in Section 1.4, shall be paid for at the contract unit price for Bituminous Concrete Surface Course, Hot-Laid, which price and payment shall be full compensation for furnishing all materials, handling, mixing, hauling, placing, rolling, compacting, labor, equipment, tools and incidentals necessary to complete this Item.