

SPECIFICATION SECTION 05200 – ASPHALT TREATED BASE COURSE

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SPECIFICATION SECTION 05200 - ASPHALT TREATED BASE COURSE

1. DESCRIPTION

This Specification Section prescribes the supply and placing of asphalt treated base course laid on a prepared and approved aggregate base course in accordance with this Specification Section and the lines, levels, grades, dimensions and cross sections shown on the Drawings and as required by the Engineer.

2. MATERIAL REQUIREMENTS

2.1 Reference Standards

The most recent editions of the following standards shall apply to the materials covered in this Specification Section:

Vietnamese Standards:

TCVN8859-2011	Graded Aggregate Base and Subbase Pavement Specification for Construction and Acceptance Construction and Approval Methods on Grade Aggregate Foundation in Highway Pavement
22TCN346-06	Testing Procedure on Definition of Compaction of Road Foundation and Embankment by Sand Cone Method
22TCN333-06	Procedures of Soil and Macadam Compaction in Laboratory
22TCN332-06	Testing Procedures on Definition of CBR Value for Soil and Macadam in Laboratory
TCVN 8819:2011	Asphalt Concrete Pavement – Specification for Construction and Acceptance of Asphalt Concrete Pavement
22TCN345-06	Technology Process for Construction and Approval of the Thin Covering Layer of High Roughness Asphalt Concrete.
22TCN319-04	Polymer Asphalt - Technical Requirement and Testing Method.
22TCN279-01	Technical Requirement and Testing Method of Solid Asphalt.
TCVN8863-01	Technical Specifications for Bituminous Surface Treatment
TCVN8865-11	Method for Measuring and Assessment of Roughness by the International Roughness Index (IRI)
TCVN8866-11	Standard Test Method for Measuring Pavement Mactotexture Depth using a Volumetric Technique
22TCN318-04	Testing Process for Determination of Abrasion of Aggregate by Los Angeles Method.

International Standards:

AASHTO T104	Soundness of Aggregate by use of Sodium or Magnesium Sulfate
AASHTO M17	Mineral Filler for Bituminous Paving Mixtures
AASHTO M20	Penetration Graded Asphalt Cement
AASHTO M226	Viscosity Graded Asphalt Cement
AASHTO T11-05	Materials Finer Than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing. ASTM C117-03
AASHTO T27-99	Sieve Analysis of Fine and Coarse Aggregates. ASTM C 136-96
AASHTO T49	Penetration of Bitumen
AASHTO T50	Float Test for Bitumen
AASHTO T51	Ductility of Bitumen
AASHTO T 53-96(2004)	Softening Point of Bitumen (Ring-and-Ball Apparatus). ASTM D36-95 (2000)
AASHTO T96	Resistance to Degrading of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
AASHTO T104	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate
AASHTO T164	Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
AASHTO T165	Effect of Water on Cohesion of Compacted Bituminous Mixtures
AASHTO T166	Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface-Dry Specimens
AASHTO T168	Sampling Bituminous Paving Mixtures
AASHTO T170	Recovery of Asphalt from Solution by Abson Method
AASHTO T176	Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
AASHTO T179	Effect of Heat and Air on Asphalt Materials (Thin Film Oven Test)
AASHTO T182	Coating and Stripping of Bitumen-Aggregate Mixtures
AASHTO T209	Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
AASHTO T230	Method B. Standard Method of Test for Determining Degree

of Pavement Compaction of Bituminous Aggregate Mixtures

AASHTO T245 Resistance to Plastic Flow of Bituminous Mixtures using Marshall Apparatus

ASTM E950 Standard Test Method for Measuring the Longitudinal Profile of Traveled Surfaces with an Accelerometer Established Inertial Profiling Reference

American Asphalt Institute Manual MS-2

Manual for Asphalt Pavement, Japan Road Association (JRA)

The Policy for Draining Asphalt Concrete Surface Courses, Japan Road Association (JRA)

Activities of Porous Asphalt on Expressways, Japan Highway Public Corporation.

2.2 Material Requirements

Aggregates shall conform to the requirements for crushed rock in Specification Section 05100 Subbase and Base Courses except that the grading shall be as shown in Table below.

Aggregate Grading	Combined Aggregates
Sieve Size	% by weight passing
mm	Crushed Rock
50	100
37.5	90 – 100
28	75 – 90
19	60 – 70
9.5	18 – 48
4.75	6 - 29
0.6	0 - 8
Asphalt Binder	% by weight of total mixture as found by analysis 3.0 - 4.0

Asphaltic materials shall conform with the requirements of Specification Section 06200 Asphalt Concrete Binder and Surface Courses. In the absence of any requirement or permission to the contrary, bitumen of 80-100 penetration shall be used.

Mineral filler shall conform with the requirements of Specification Section 06200 Asphalt Concrete Binder and Surface Courses.

Preparations of materials shall be carried out according to the requirements of Specification Section 06200 Asphalt Concrete Binder and Surface Courses.

3. CONSTRUCTION REQUIREMENTS

Construction methods shall conform to the requirements of Specification Section 06200 Asphalt Concrete Binder and Surface Course.

The Asphalt Treated Base Course shall be compacted to at least 95 % of maximum density determined by the in-situ density test in accordance with AASHTO T 238 and AASHTO T 239 or other approved test procedures.

4. MEASUREMENT AND PAYMENT

4.1 Method of Measurement

- a) Areas for asphalt treated base course shall be measured for payment in square meters from the Drawings and/or the Contractor's shop drawings approved by the Engineer. The measurement shall be conducted on plan over the top surface of the aforementioned course. The area of the asphalt treated base course, which forms a triangle along at the side of the asphalt treated base course shall not be measured for payment; the cost of the work in the triangles shall be deemed included in the unit rates.
- b) The Asphalt Treated Base Courses provisions, material requirements and construction requirements identified in this Specification Section shall be measured for payment in pay item 05200-01.
- c) Any Asphalt Treated Base Courses Works not specifically identified in this Specification Section but which are necessary for the performance of the Works shall be deemed to be included in pay item 05200-01.

4.2 Basis of Payment

The work under this Specification Section shall be paid for in accordance with the applicable unit prices as indicated in the Bill of Quantities and given below. Payment shall constitute full compensation for performing the requirements of the Contract for the item of work as specified including furnishing all necessary labor, materials, tools, equipment, incidentals and tests.

<u>Pay Item</u>	<u>Description</u>	<u>Unit</u>
05200	Asphalt Treated Base Course	
05200-01	Asphalt Treated Base Course, thickness=10cm	m ²