PAPB.01 Description. This work shall consist of constructing a Porous Asphalt Pavement Base (PAPB) course comprised of aggregate and polymer-modified asphalt binder mixed in a central plant and spread and compacted on a prepared surface.

All numbered specification references in this document refer to Ohio Department of Transportation (ODOT), Construction and Materials Specifications.

The requirements of Item 401 apply, except as modified by this specification.

PAPB.02 Composition.

Furnish materials conforming to:

- Asphalt binder: 702.01, PG 64-22 Modified with 5-percent SBR Latex\(^1\), or PG76-22M(ER80) (ER80 denotes Elastic Recovery to be 80 min.)
- Aggregates: 703.05
- Coarse aggregate angularity, percent fractured (two or more faces), ASTM D5821: 100
- Mineral filler: 703.07
- Rubber compound: 702.14

Notes:
1. Provide a quantity of asphalt binder and rubber compound as required to produce a composition of 95 ±0.3 percent asphalt binder to 5 ±0.3 percent rubber solids by weight

Do not use reclaimed asphalt concrete pavement.

Combine asphalt binder with no. 57 or 67 size aggregate such that its content is 3.5 percent by weight of the mix.

PAPB.03 Design Verification. A minimum of 3 weeks before the production of the mixture, submit for approval a computed blend of aggregate and asphalt binder, and production temperature range. Use ODOT JMF forms for this submittal. Final design acceptance is subject to field verification and actual performance. Field verification may include additional testing by the owner.

PAPB.04 Mixing. Mix the aggregate and asphalt binder material within the established temperature range until all the aggregate is coated. Provide a mixture that does not show draindown of the asphalt binder, is shiny, completely coated, and is not dull or brown in appearance; a sign of excessive absorption or low asphalt binder content.

PAPB.05 Weather Limitations. Spread the mixture only when the atmospheric temperature is at least 45 °F (7 °C) and rising. Do not place the mixture when rain is imminent. Cease all operations if rain occurs during placement. Do not place the mixture during any weather conditions that would cause its degradation, segregation, or contamination.

PAPB.06 Spreading and Compacting. Spread the mixture in a method that produces a smooth, uniform layer before compacting. Take measures to ensure the surface over which the PAPB is being placed is not displaced or damaged during the paving process. Using a rubber-tired paver is permitted unless it displaces or damages the underlying layer; otherwise, use a track-mounted paver.

Compact the mixture using a minimum of two (2) passes of a static tandem steel wheel roller, completely seating the aggregate particles. Compact the mixture sufficiently to support the weight of the equipment that will place the next layer of pavement. Do not over-compact resulting in crushed or broken aggregate. Complete rolling before the mix temperature has dropped below 250 °F (120 °C).

If breakup at the edge of the mat occurs during compaction provide lateral support using forms or other methods approved by the owner. Do not contaminate the mixture with this lateral support.

Form transverse construction joints by cutting back into the completed work to form a vertical face.

PAPB.07 Thickness Tolerances. Ensure the placed PAPB conforms to the specified thickness by randomly checking the thickness during construction. Remove and replace all sections varying from the specified thickness by more than ±1/2-inch (±12 mm).
PAPB.08 Surface Tolerance. Ensure that the finished surface is uniform and varies no more than 1/4 inch (6 mm) from a 10-foot (3 m) straightedge applied longitudinally to the asphalt mat. Remove and replace any section found to be out of tolerance.

PAPB.09 Quality Control Testing. Each day before the start of production, obtain two separate samples of the aggregate stockpile and test the samples for gradation. If both samples fall within the gradation bands for the aggregate size, the Contractor may produce mix all day. If one or both of the samples fail the gradation test, do not begin production until the owner’s representative is satisfied that the stockpile conforms to requirements. Record results. If any material is added to the stockpile, immediately take another sample and test it.

Test the mix according to 441.09 for asphalt binder content and gradation. Control the mixture production as follows:
A. If a single asphalt binder content is more than ±0.5 percent beyond the JMF, immediately take and test and additional sample.
B. If two consecutive asphalt binder content tests are more than ±0.5 percent beyond the JMF, notify the owner’s representative and cease production until the problem is corrected.
C. If the Range difference in any three consecutive asphalt binder content tests is greater than 0.6 percent immediately notify the owner’s representative.
D. If the Range difference in any three consecutive gradation tests for the No. 4 (4.75 mm) sieve is greater than 10.0 percent, immediately notify the owner’s representative.
E. If Range deviations as specified continue, cease production.

Range is defined as the difference between the largest and the smallest acceptance test result within an acceptance period (production day or lot).

PAPB.10 Acceptance. Acceptance of the asphalt binder content will be based on the field inspection of the coating on the aggregate. To be accepted, the mixture should be coated with shiny black coating of asphalt binder and not be brown or dull in appearance. If the delivered mix is brown or dull in appearance, increase the asphalt binder content to the satisfaction of the owner.

PAPB.11 Protection of the PAPB. Do not haul over the mixture. Protect the mixture at all times from contamination by soil or other fine material.

PAPB.12 Method of Measurement. The Owner will measure the accepted quantities of PAPB by the number of square yards (square meters) of the specified thickness directed to be placed.

PAPB.13 Basis of Payment. The Owner will pay for accepted quantities, complete in place, at the contract price as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAPB</td>
<td>Square Yard</td>
<td>Porous Asphalt Pavement Base</td>
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