

RIDOT HMA Matrix

	Class NMAS	Typical Lift Thickness		Typical Use
		Inches		
		Min.	Max.	
Dense Base Courses	Class 19 HMA	3	5 3/4	Base or other underlying layers. Preferred mix for lifts greater than or equal to 3"
	Class 12.5 HMA	2	3 3/4	Surface, Base or other underlying layers. Patching, Utilities, Waterways
Dense Surface Courses	Class 9.5 HMA	1 1/2	2 3/4	Surface, *Bridges, Driveways, Leveling, Patching, Utilities, Waterways, Misc.
	Class 4.75 HMA	3/4	1 1/4	Surface, Surface for Bike Paths, Sidewalks, Leveling, Patching, Utilities, Waterways, Misc.
Special Courses & Others	Friction Course (FC) Friction Course for Shoulders	1 1/2		Limited Access/Interstate - Surface and *Bridge Deck Surface *Bridge Decks on the Interstate or Limited Access Roads should have 1.5" Friction over 1.5" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS over the membrane and/or concrete deck.
	PPEST	1		Pavement Preservation Overlay (not generally specified)
	FDR	Varies		Base and/or Surface (not generally specified)

HMA = Hot Mix Asphalt, NMAS = Nominal Maximum Aggregate Size, FC = Friction Course, PPEST = Paver Placed Elastomeric Surface Treatment, FDR = Full Depth Reclamation

Notes:

1. "Class" will refer to dense HMA courses. "Class" is followed by a number representing the NMAS of the mix in millimeters.
2. a) The term "binder" is used to mean liquid asphalt. b) The term "modified" refers to the polymer/rubber modification of binder. Modified binders are used in all paver placed surface courses unless otherwise designated. These binders will require more effort for compaction in the field, especially when the temperature differential between mixing and ambient temperatures is greatest. Other additives for binder will be referred to in the specification (i.e. WMA, anti-stripping, etc.).
3. Minimum lift thickness may be calculated as 4 times the NMAS. For example: Class 12.5 HMA, 4 x 12.5mm = 50 mm or 2 inches as a lift thickness (this rule excludes special courses). In general, using more lifts will provide for a smoother pavement and the largest NMAS should be used for each lift.
4. Hot Mix Asphalt Items that have a quantity of over 3,000 Tons, should have PAY ADJUSTMENTS for air voids, binder content, and in place density. Use the applicable Standard Item Code "(MODIFIED) CLASS X.X WITH PAY ADJUSTMENTS" The Materials section will calculate the HMA pay adjustment amount and evaluate the Rideability pay adjustment amount for the quantity associated with Item Code 416.9901 – PAY ADJUSTMENTS.
5. The Materials section should be consulted in the early stages of design for pavement treatment options and minimum thickness required for full depth pavement areas.