

NorthEast Transportation Training & Certification Program

HMA Marshall Volumetric Properties Test Report (T 166, T 245)

Date/Time:		Lab/Location:	
Weather:		Date Rec'd #:	Random Sample: Yes No
Project:		Lab Login #:	Lot #:
Contract #:		Material ID:	Sublot #:
Contractor:		Material #:	Sample Location:
Pay Item #:		Sample #:	Station:
Source:		Sample Type: OC A-V IA DR Other	Offset:
Plant Type:		Sampled By/Cert. #:	

Bulk Specific Gravity of Compacted HMA (T 166)			
Specimen #:			
Mass of Dry Specimen in Air (A):			
Mass of Specimen at SSD (B):			
Mass of Specimen in Water (C):	(@ 77 +/- 1.8 °F)		
Specimen Volume (V):	(B-C)		
Bulk Specific Gravity of Specimen (G _{mb}):	(A / (B - C))		
Unit Weight, lb/ft ³ :	(G _{mb} * 62.4)		

Volumetric Analysis of Compacted HMA				
Theoretical Maximum Specific Gravity (G _{mm}):	(From T 209)			
Percent Minus 75 µm of Sample (75 µm):	(From T 11)			
Percent PG Binder of Sample (P _b):				
Bulk Specific Gravity of Combined Aggregate (G _{sb}):				
Specific Gravity of PG Binder (G _b):				
Percent Voids in Mix (P _a):	(100 * ((G _{mm} - G _{mb}) / G _{mm}))			
Voids in the Mineral Agg. (VMA):	(100 - ((G _{mb} * (100 - P _b)) / G _{sb}))			
Voids Filled with Asphalt (VFA):	((100 * (VMA - P _a)) / VMA)			
Effective Agg. Specific Gravity (G _{se}):	(100 - P _b) / ((100/G _{mm}) - (P _b /G _b))			
Percent Binder Absorbed: (P _{ba}):	(100 * ((G _{se} - G _{sb}) / (G _{se} * G _b))) * G _b			
Percent Binder Effective: (P _{be}):	(P _b - ((P _{ba} / 100) * (100 - P _b)))			
Fines to Effective Asphalt Ratio:	(75 µm / P _{be})			

Average	Specification

HMA Marshall Stability and Flow (T 245)				
Number of Blows Each Side:				
Marshall Specimen Fabrication Temp.:	(°F)			
Maximum Load Dial Reading:				
Volume (V)/ Height Correction Factor (Vcf):				
Uncorrected Stability (Su):				
Corrected Stability (Sc):	(Vcf * Su)			
Flow in 0.01 in.:				

Comments:

Tested by:	Reviewed by:
Certification #:	Certification #:
Date:	Date:

Results Within Specification Limits: ☐

Results Outside Specification Limits: ☐