NorthEast Transportation Training & Certification Program

HMA Pavement Nuclear Density Test Report (D 2950)

Date/Time: September 17, 2020 **Location:** Tilcon, CT

Weather: Sunny **Date Rec'd #:** 9/17/2020 **Random Sample:** No

Project: Durham Meadows Waterline - Durham, CT **Lab Login #:** - **Lot #:** -

Contract #: 19-75-012-102 **Material ID:** SP 1.0" **Sublot #:** -

Contractor: Ludlow Construction Co., Inc. **Material #:** - **Sample Location:** First Lift

Pay Item #: - **Sample #:** - **Station:** See Below

Source: Tilcon, CT **Sample Type:** QC **Offset:** See Below

Plant Type: - **Sampled By/Cert. #:** Stephen Sturges/#4395

Density Gauge Information			
Make:	Troxler	Date of Calibration:	4/1/2020
Model #:	3440	Source of Calibration:	Q/C Resource
Serial #:	17249	Standard Count:	-
Gauge #:	17249	Duration of Test:	15 Seconds
Other:	-	Thickness of Lift Tested:	3.0"

Density of HMA in Place by Nuclear Method (D 2950)

Sublot #	Station	Offset	Time	Random (Y/N)	(B) Max Theor. Density (From T 209)	(A) In-Place Density, kg / m^3	% Compaction (A/B * 100)
-	108+50	-	-	N	167.2	156.1	**93.3**
-	108+75	-	-	N	167.2	155.9	**93.1**
-	109+00	-	-	N	167.2	154.8	**92.6**
-	109+25	-	-	N	167.2	155.4	**92.9**
-	109+50	-	-	N	167.2	154.9	**92.6**
-	109+75	-	-	N	167.2	155.1	**92.8**
-	110+00	-	-	N	167.2	154.5	**92.4**
-	110+25	-	-	N	167.2	155.4	**92.9**
-	110+50	-	-	N	167.2	155.2	**92.8**
-	110+75	-	-	N	167.2	155.3	**92.9**
-	111+00	-	-	N	167.2	155.4	**92.9**
-	111+25	-	-	N	167.2	155.4	**92.9**
-	111+50	-	-	N	167.2	154.6	**92.5**

Comments:

Tested by: Stephen Sturges Reviewed by: Nicholas Lisowski

Certification #: 4395 Certification #: 3139

Date: 9/17/2020 Date: 9/23/2020

Test Results Within Engineering Limits: **YES** ☑ **NO** ☐

NorthEast Transportation Training & Certification Program

HMA Pavement Nuclear Density Test Report (D 2950)

Date/Time:	September 17, 2020	**Location:**	Tilcon, CT
Weather:	Sunny	**Date Rec'd #:**	9/17/2020
Random Sample:	No		
Project:	Durham Meadows Waterline - Durham, CT	**Lab Login #:**	-
Lot #:	-		
Contract #:	19-75-012-102	**Material ID:**	SP 1.0"
Sublot #:	-		
Contractor:	Ludlow Construction Co., Inc.	**Material #:**	-
Sample Location:	Second Lift		
Pay Item #:	-	**Sample #:**	-
Station:	See Below		
Source:	Tilcon, CT	**Sample Type:**	QC
Offset:	See Below		
Plant Type:	-	**Sampled By/Cert. #:**	Stephen Sturges/#4395

Density Gauge Information			
Make:	Troxler	Date of Calibration:	4/1/2020
Model #:	3440	Source of Calibration:	Q/C Resource
Serial #:	17249	Standard Count:	-
Gauge #:	17249	Duration of Test:	15 Seconds
Other:	-	Thickness of Lift Tested:	3.0"

Density of HMA in Place by Nuclear Method (D 2950)

Sublot #	Station	Offset	Time	Random (Y/N)	(B) Max Theor. Density (From T 209)	(A) In-Place Density, kg / m^3	**% Compaction (A/B * 100)**
-	108+50	-	-	N	167.2	155.3	**92.9**
-	108+75	-	-	N	167.2	155	**92.7**
-	109+00	-	-	N	167.2	155.7	**93.1**
-	109+25	-	-	N	167.2	155.4	**92.9**
-	109+50	-	-	N	167.2	156.3	**93.5**
-	109+75	-	-	N	167.2	157	**93.9**
-	110+00	-	-	N	167.2	156.6	**93.7**
-	110+25	-	-	N	167.2	156	**93.3**
-	110+50	-	-	N	167.2	155.7	**93.1**
-	110+75	-	-	N	167.2	156.9	**93.8**
-	111+00	-	-	N	167.2	157.7	**94.3**
-	111+25	-	-	N	167.2	157.9	**94.4**
-	111+50	-	-	N	167.2	157.3	**94.1**

Comments:

Tested by:	Stephen Sturges	Reviewed by:	Nicholas Lisowski
Certification #:	4395	Certification #:	3139
Date:	9/17/2020	Date:	9/23/2020

Test Results Within Engineering Limits: **YES** ☑ **NO** ☐

NorthEast Transportation Training & Certification Program

HMA Field Temperatures Test Report (Sub-Base, Air, Mix)

Date/Time:	September 17, 2020	**Location:**	Tilcon, CT		
Weather:	Sunny	**Date Rec'd #:**	9/17/2020	**Random Sample:**	No
Project:	Durham Meadows Waterline	**Lab Login #:**	-	**Lot #:**	-
Contract #:	19-75-012-102	**Material ID:**	SP 1.0"	**Sublot #:**	-
Contractor:	Ludlow Construction Co., Inc.	**Material #:**	-	**Sample Location:**	First & Second Lift
Pay Item #:	-	**Sample #:**	-	**Station:**	See Below
Source:	Tilcon, CT	**Sample Type:**	QC	**Offset:**	See Below
Plant Type:	-	**Sampled By/Cert. #:**	Stephen Sturges/#4395		

Temperature Reference Information			
Weather:	Sunny	Sub Base Temperature, ºF (BT):	66
Thermometer Type:	Infrared Temp Gun	Air Temperature High, ºF (ATH):	72
Calibration Source:	Manufacturer	Air Temperature Low, ºF (ATL):	68
Calibration Date:			

HMA Field Temperature Measurements

Sublot #	Station	Offset	Time	Mat, in.	Random (Y/N)	Location	Mix Temp, ºF (MT)
-	108+50	-	-	3"	N	Route 17	310
-	108+75	-	-	3"	N	Route 17	
-	109+00	-	-	3"	N	Route 17	
-	109+25	-	-	3"	N	Route 17	
-	109+50	-	-	3"	N	Route 17	317
-	109+75	-	-	3"	N	Route 17	
-	110+00	-	-	3"	N	Route 17	
-	110+25	-	-	3"	N	Route 17	
-	110+50	-	-	3"	N	Route 17	308
-	110+75	-	-	3"	N	Route 17	
-	111+00	-	-	3"	N	Route 17	
-	111+25	-	-	3"	N	Route 17	302
-	111+50	-	-	3"	N	Route 17	

Comments:

Tested by: Stephen Sturges — Reviewed by: Nicholas Lisowski

Certification #: 4395 — Certification #: 3139

Date: 9/17/2020 — Date: 9/23/2020

Test Results Within Engineering Limits: **YES** ☑ **NO** ☐