

**Quadrant:** N  
**Section:** 3  
**Sublot:** 1

**Laboratory Diary**

General Description of Mix and Materials

Design Method: SMA  
 Compactive Effort: 75 gyrations  
 Binder Performance Grade: 76-22  
 Modifier Type: SBS  
 Aggregate Type: SMA 12.5 RAP  
 Design Gradation Type: SMA

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Target	QC
25 mm (1"):	100	100
19 mm (3/4"):	100	100
12.5 mm (1/2"):	86	88
9.5 mm (3/8"):	66	70
4.75 mm (#4):	27	32
2.36 mm (#8):	20	22
1.18 mm (#16):	NA	20
0.60 mm (#30):	16	18
0.30 mm (#50):	NA	16
0.15 mm (#100):	NA	15
0.075 mm (#200):	10.0	11.6
Binder Content (Pb):	6.4	6.1
Eff. Binder Content (Pbe):	6.4	6.1
Dust-to-Binder Ratio:	1.6	1.9
Rice Gravity (Gmm):	2.631	2.635
Avg. Bulk Gravity (Gmb):	2.549	2.572
Avg Air Voids (Va):	3.1	2.4
Agg. Bulk Gravity (Gsb):	2.944	2.933
Avg VMA:	18.9	17.6
Avg. VFA:	84	87

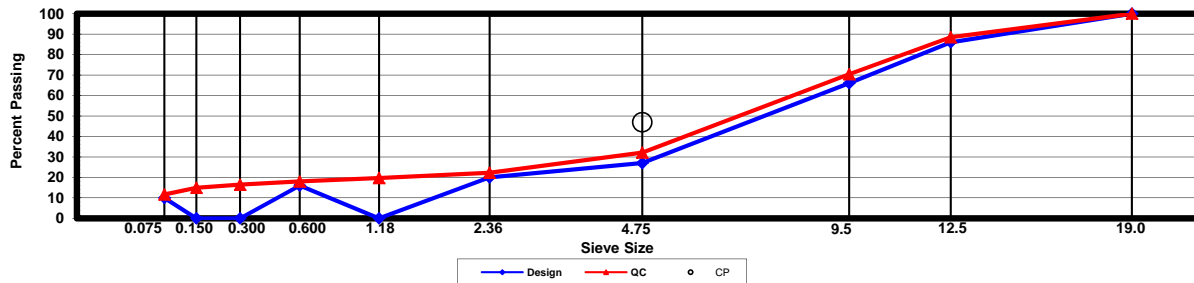
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 24, 2012  
 24 Hour High Temperature (F): 91  
 24 Hour Low Temperature (F): 67  
 24 Hour Rainfall (in): 0.00  
 Planned Subot Lift Thickness (in): 2.0  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Binder Content (Plant Setting)	6.2
Virginia 8	26.0
Virginia 78	25.0
Virginia Rock Dust	22.0
Beaeton 30	16.0
Virginia RAP	11.0
Liquid Antistrip	0.5
Cellulose	0.3
As-Built Sublot Lift Thickness (in):	2.1
Total Thickness of All 2012 Sublots (in):	9.7
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NTSS-1HM
Undiluted Target Tack Rate (gal/sy):	0.05
Approx. Avg. Temperature at Plant (F):	325
Avg. Measured Mat Compaction:	95.7%



**General Notes:**

- 1) Mixes are referenced by quadrant (E=East, N=North, W=West, S=South, L=Lee Rd 159), section number, and subplot (top=1);
- 2) SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- 3) Mixes not containing hydrated lime were run with either Gripper X antistrip or Evotherm Q1 warm mix additive at a 0.5% rate

**Quadrant:** N  
**Section:** 3  
**Sublot:** 2

**Laboratory Diary**

General Description of Mix and Materials

Design Method: Super  
 Compactive Effort: 65 gyrations  
 Binder Performance Grade: 67-22  
 Modifier Type: NA  
 Aggregate Type: Im-19.0D w/Rap 30  
 Design Gradation Type: DGA

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Target	QC
25 mm (1"):	100	100
19 mm (3/4"):	97	99
12.5 mm (1/2"):	87	91
9.5 mm (3/8"):	NA	77
4.75 mm (#4):	NA	49
2.36 mm (#8):	35	36
1.18 mm (#16):	NA	28
0.60 mm (#30):	NA	20
0.30 mm (#50):	NA	12
0.15 mm (#100):	NA	8
0.075 mm (#200):	6.0	5.9
Binder Content (Pb):	4.7	4.6
Eff. Binder Content (Pbe):	4.5	4.5
Dust-to-Binder Ratio:	1.3	1.3
Rice Gravity (Gmm):	2.517	2.536
Avg. Bulk Gravity (Gmb):	2.416	2.415
Avg Air Voids (Va):	4.0	4.8
Agg. Bulk Gravity (Gsb):	2.697	2.717
Avg VMA:	14.6	15.3
Avg. VFA:	73	69

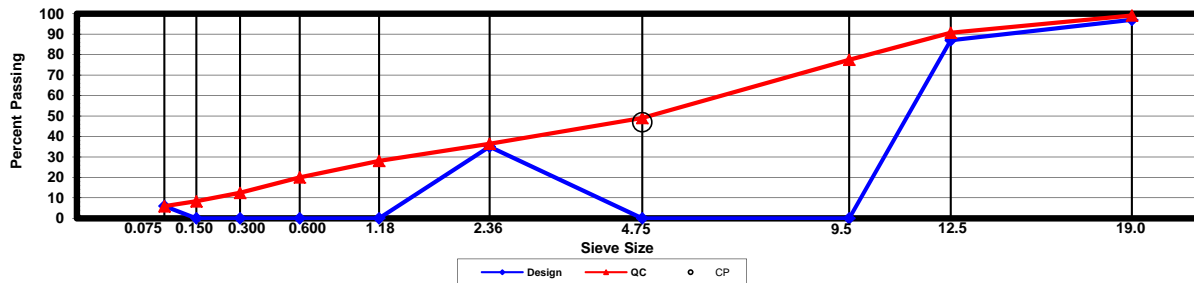
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 16, 2012  
 24 Hour High Temperature (F): 92  
 24 Hour Low Temperature (F): 72  
 24 Hour Rainfall (in): 0.00  
 Planned Subot Lift Thickness (in): 2.0  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Binder Content (Plant Setting)	4.3
Virginia 68	44.0
Virginia 26	16.0
Virginia Natural Sand	10.0
Virginia RAP	30.0
Liquid Antistrip	0.5
As-Built Sublot Lift Thickness (in):	2.1
Total Thickness of All 2012 Sublots (in):	9.7
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NTSS-1HM
Undiluted Target Tack Rate (gal/sy):	0.05
Approx. Avg. Temperature at Plant (F):	330
Avg. Measured Mat Compaction:	92.9%



**General Notes:**

- 1) Mixes are referenced by quadrant (E=East, N=North, W=West, S=South, L=Lee Rd 159), section number, and sublot (top=1);
- 2) SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- 3) Mixes not containing hydrated lime were run with either Gripper X antistrip or Evotherm Q1 warm mix additive at a 0.5% rate

**Quadrant:** N  
**Section:** 3  
**Sublot:** 3

**Laboratory Diary**

General Description of Mix and Materials

Design Method: Super  
 Compactive Effort: 65 gyrations  
 Binder Performance Grade: 67-22  
 Modifier Type: NA  
 Aggregate Type: Im-19.0D w/Rap 30  
 Design Gradation Type: DGA

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Target	QC
25 mm (1"):	100	100
19 mm (3/4"):	97	97
12.5 mm (1/2"):	87	85
9.5 mm (3/8"):	NA	74
4.75 mm (#4):	NA	45
2.36 mm (#8):	35	33
1.18 mm (#16):	NA	26
0.60 mm (#30):	NA	18
0.30 mm (#50):	NA	12
0.15 mm (#100):	NA	8
0.075 mm (#200):	6.0	5.8
Binder Content (Pb):	4.7	4.4
Eff. Binder Content (Pbe):	4.5	4.2
Dust-to-Binder Ratio:	1.3	1.4
Rice Gravity (Gmm):	2.517	2.585
Avg. Bulk Gravity (Gmb):	2.416	2.459
Avg Air Voids (Va):	4.0	4.9
Agg. Bulk Gravity (Gsb):	2.697	2.765
Avg VMA:	14.6	15.0
Avg. VFA:	73	67

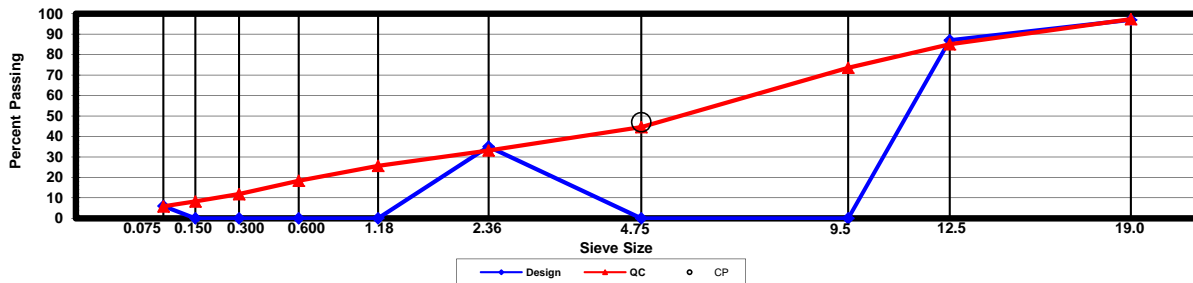
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 15, 2012  
 24 Hour High Temperature (F): 92  
 24 Hour Low Temperature (F): 69  
 24 Hour Rainfall (in): 0.00  
 Planned Subot Lift Thickness (in): 2.0  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Binder Content (Plant Setting)	4.3
Virginia 68	44.0
Virginia 26	16.0
Virginia Natural Sand	10.0
Virginia RAP	30.0
Liquid Antistrip	0.5
As-Built Sublot Lift Thickness (in):	1.9
Total Thickness of All 2012 Sublots (in):	9.7
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NTSS-1HM
Undiluted Target Tack Rate (gal/sy):	0.05
Approx. Avg. Temperature at Plant (F):	330
Avg. Measured Mat Compaction:	93.6%



**General Notes:**

- 1) Mixes are referenced by quadrant (E=East, N=North, W=West, S=South, L=Lee Rd 159), section number, and subplot (top=1);
- 2) SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- 3) Mixes not containing hydrated lime were run with either Gripper X antistrip or Evotherm Q1 warm mix additive at a 0.5% rate