

Quadrant: N
Section: 8
Sublot: 1

Laboratory Diary

General Description of Mix and Materials

Design Method: Super
 Compactive Effort: 80 gyrations
 Binder Performance Grade: 67-22
 Modifier Type: NA
 Aggregate Type: Grn/Sand/RAP/RAS
 Design Gradation Type: DGA

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"):	100	99
9.5 mm (3/8"):	99	98
4.75 mm (#4):	70	66
2.36 mm (#8):	45	51
1.18 mm (#16):	35	41
0.60 mm (#30):	23	30
0.30 mm (#50):	14	17
0.15 mm (#100):	9	11
0.075 mm (#200):	6.1	7.1
Binder Content (Pb):	5.5	5.3
Eff. Binder Content (Pbe):	5.0	4.8
Dust-to-Eff. Binder Ratio:	1.2	1.5
RAP Binder Replacement (%):	19.9	18.0
RAS Binder Replacement (%):	15.9	19.2
Total Binder Replacement (%):	35.8	37.2
Rice Gravity (Gmm):	2.483	2.492
Bulk Gravity (Gmb):	2.383	2.415
Air Voids (Va):	4.0	3.1
Agg. Bulk Gravity (Gsb):	2.668	2.67
VMA:	15.5	14
VFA:	74	79

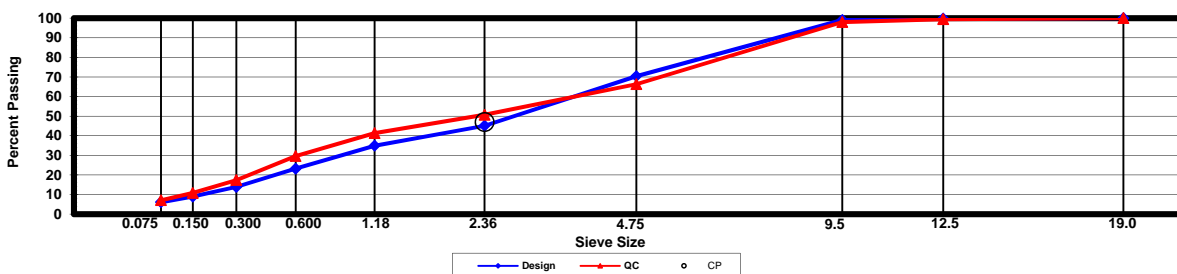
Construction Diary

Relevant Conditions for Construction

Completion Date: July 29, 2015
 24 Hour High Temperature (F): 96
 24 Hour Low Temperature (F): 74
 24 Hour Rainfall (in): 0.07
 Planned Sublot Lift Thickness (in): 1.5
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Binder Content (Plant Setting)	5.0
89 Granite	42.0
Coarse Sand	22.0
M10 Granite	11.0
EAP -1/2 RAP	20.0
EAP Post Consumer RAS	5.0
Evotherm P15	0.5
As-Built Sublot Lift Thickness (in):	1.5
Total Thickness of All New Sublots (in):	6.4
Approx. Underlying HMA Thickness (in):	4.9
Type of Tack Coat Utilized:	NTSS-1HM
Undiluted Target Tack Rate (gal/sy):	0.10
Approx. Avg. Temperature at Plant (F):	315
Avg. Measured Mat Compaction:	91.5%



General Notes:

- References are by quadrant (E=East, N=North, W=West, S=South, L=Lee Rd 159, U=US-280), section #, and sublot (top=1).
- DGA, SMA, & OGFC refer to dense graded asphalt, stone matrix asphalt, & open-graded friction course, respectively.
- Production Gsb estimated using the actual production Gse and the difference between Gse and Gsb in the mix design.

Section and/or Sublot Specific Notes:

A significant amount of additional rubber tired rolling was required in order to get the density of this mat to an acceptable level.

Quadrant: N
Section: 8
Sublot: 2

Laboratory Diary

General Description of Mix and Materials

Design Method: Super
 Compactive Effort: 60 gyrations
 Binder Performance Grade: HiMA
 Modifier Type: Kraton
 Aggregate Type: Lms/Sand/Grn/RAP
 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"):	85	88
9.5 mm (3/8"):	65	75
4.75 mm (#4):	49	55
2.36 mm (#8):	44	45
1.18 mm (#16):	35	36
0.60 mm (#30):	22	24
0.30 mm (#50):	12	13
0.15 mm (#100):	7	7
0.075 mm (#200):	4.8	4.7
Binder Content (Pb):	4.6	4.8
Eff. Binder Content (Pbe):	4.1	4.3
Dust-to-Eff. Binder Ratio:	1.2	1.1
RAP Binder Replacement (%):	20.0	16.9
RAS Binder Replacement (%):	0.0	0.0
Total Binder Replacement (%):	20.0	16.9
Rice Gravity (Gmm):	2.562	2.555
Bulk Gravity (Gmb):	2.460	2.452
Air Voids (Va):	4.0	4.0
Agg. Bulk Gravity (Gsb):	2.725	2.73
VMA:	13.9	14
VFA:	71	72

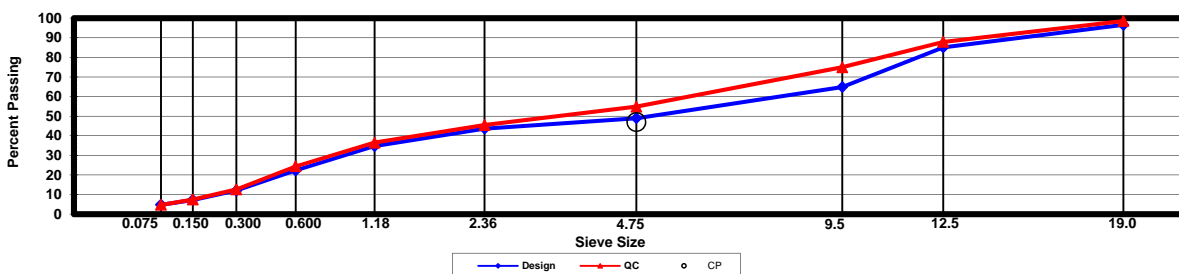
Construction Diary

Relevant Conditions for Construction

Completion Date: July 28, 2015
 24 Hour High Temperature (F): 97
 24 Hour Low Temperature (F): 74
 24 Hour Rainfall (in): 0.00
 Planned Sublot Lift Thickness (in): 2.3
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Binder Content (Plant Setting)	4.7
78 Limestone	32.0
57 Limestone	17.0
Coarse Sand	23.0
M10 Granite	11.0
EAP -1/2 RAP	17.0
Evotherm P15	0.5
As-Built Sublot Lift Thickness (in):	2.6
Total Thickness of All New Sublots (in):	6.4
Approx. Underlying HMA Thickness (in):	2.3
Type of Tack Coat Utilized:	NTSS-1HM
Undiluted Target Tack Rate (gal/sy):	0.08
Approx. Avg. Temperature at Plant (F):	320
Avg. Measured Mat Compaction:	95.2%



General Notes:

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- Production Gsb estimated using the actual production Gse and the difference between Gse and Gsb in the mix design.

Section and/or Sublot Specific Notes:

NA

Quadrant: N
Section: 8
Sublot: 3

Laboratory Diary

General Description of Mix and Materials

Design Method: Super
 Compactive Effort: 60 gyrations
 Binder Performance Grade: HiMA
 Modifier Type: Kraton
 Aggregate Type: Lms/Sand/Grn/RAP
 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	96
12.5 mm (1/2"):	85	83
9.5 mm (3/8"):	65	71
4.75 mm (#4):	49	51
2.36 mm (#8):	44	42
1.18 mm (#16):	35	34
0.60 mm (#30):	22	23
0.30 mm (#50):	12	12
0.15 mm (#100):	7	7
0.075 mm (#200):	4.8	4.7
Binder Content (Pb):	4.6	4.6
Eff. Binder Content (Pbe):	4.1	4.1
Dust-to-Eff. Binder Ratio:	1.2	1.2
RAP Binder Replacement (%):	20.0	17.9
RAS Binder Replacement (%):	0.0	0.0
Total Binder Replacement (%):	20.0	17.9
Rice Gravity (Gmm):	2.562	2.558
Bulk Gravity (Gmb):	2.460	2.469
Air Voids (Va):	4.0	3.5
Agg. Bulk Gravity (Gsb):	2.725	2.72
VMA:	13.9	13
VFA:	71	74

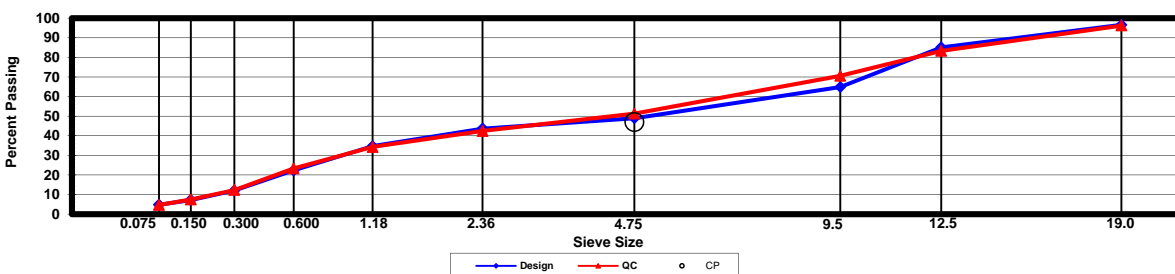
Construction Diary

Relevant Conditions for Construction

Completion Date: July 27, 2015
 24 Hour High Temperature (F): 95
 24 Hour Low Temperature (F): 73
 24 Hour Rainfall (in): 0.00
 Planned Subot Lift Thickness (in): 2.3
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Binder Content (Plant Setting)	4.7
78 Limestone	32.0
57 Limestone	17.0
Coarse Sand	23.0
M10 Granite	11.0
EAP -1/2 RAP	17.0
Evotherm P15	0.5
As-Built Sublot Lift Thickness (in):	2.3
Total Thickness of All New Sublots (in):	6.4
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NA
Undiluted Target Tack Rate (gal/sy):	NA
Approx. Avg. Temperature at Plant (F):	320
Avg. Measured Mat Compaction:	92.8%



General Notes:

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- Production Gsb estimated using the actual production Gse and the difference between Gse and Gsb in the mix design.

Section and/or Sublot Specific Notes:

NA