

**Quadrant:** N  
**Section:** 11  
**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: RAP/Sand/Grn  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	100
19 mm (3/4"):	100	100
12.5 mm (1/2"):	100	99
9.5 mm (3/8"):	96	95
4.75 mm (#4):	64	69
2.36 mm (#8):	52	51
1.18 mm (#16):	42	41
0.60 mm (#30):	29	27
0.30 mm (#50):	14	12
0.15 mm (#100):	8	7
0.075 mm (#200):	5.2	4.8
Binder Content (Pb):	6.2	6.1
Eff. Binder Content (Pbe):	5.5	5.3
Dust-to-Binder Ratio:	0.9	0.9
Rice Gravity (Gmm):	2.447	2.449
Avg. Bulk Gravity (Gmb):	2.349	2.371
Avg Air Voids (Va):	4.0	3.2
Agg. Bulk Gravity (Gsb):	2.636	2.633
Avg VMA:	16.4	15.5
Avg. VFA:	76	79

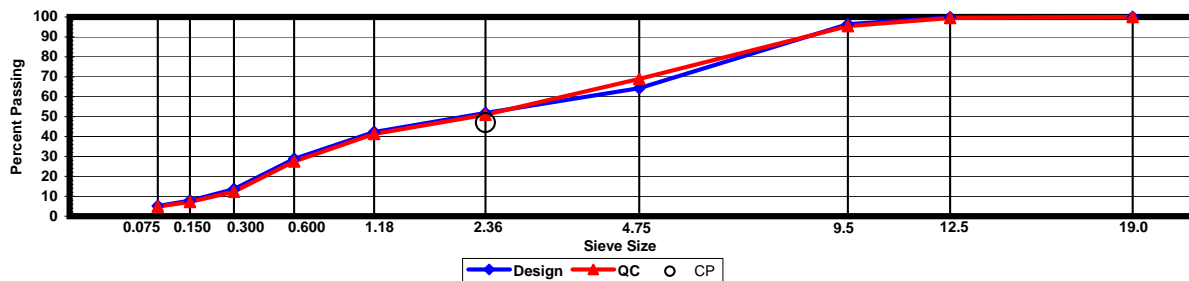
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 11, 2009  
 24 Hour High Temperature (F): 95  
 24 Hour Low Temperature (F): 76  
 24 Hour Rainfall (in): 0.00  
 Planned Subot Lift Thickness (in): 1.3  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Asphalt Content (Plant Setting)	5.6
89 Columbus Granite	24.0
Shorter Coarse Sand	26.0
Fine Fraction Local RAP	15.0
Coarse Fraction Local RAP	35.0
As-Built Sublot Lift Thickness (in):	1.2
Total Thickness of All 2009 Sublots (in):	7.1
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	PG67-22
Target Tack Application Rate (gal/sy):	0.05
Approx. Avg. Temperature at Plant (F):	275
Avg. Measured Mat Compaction:	92.1%



**General Notes:**

- Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section # (sequential) and subplot (top=1);
- The total HMA thickness of all structural study sections (N1-N11 and S8-S12) ranges from 5-3/4 to 14 inches by design;
- All non-structural sections are supported by a uniform perpetual foundation in order to study surface mix performance;
- SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- All liquid asphalt purchased for use in Track reconstruction contained LOF 6500 antistripping additive at a rate of 0.5 percent

**Quadrant:** N  
**Section:** 11  
**Sublot:** 2

**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: RAP/Lms/Sand  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	99
19 mm (3/4"):	94	93
12.5 mm (1/2"):	87	86
9.5 mm (3/8"):	78	79
4.75 mm (#4):	54	58
2.36 mm (#8):	46	47
1.18 mm (#16):	37	39
0.60 mm (#30):	26	27
0.30 mm (#50):	14	14
0.15 mm (#100):	8	8
0.075 mm (#200):	5.1	5.7
Binder Content (Pb):	4.8	4.7
Eff. Binder Content (Pbe):	4.2	4.1
Dust-to-Binder Ratio:	1.2	1.4
Rice Gravity (Gmm):	2.542	2.541
Avg. Bulk Gravity (Gmb):	2.440	2.446
Avg Air Voids (Va):	4.0	3.7
Agg. Bulk Gravity (Gsb):	2.698	2.697
Avg VMA:	13.9	13.6
Avg. VFA:	72	72

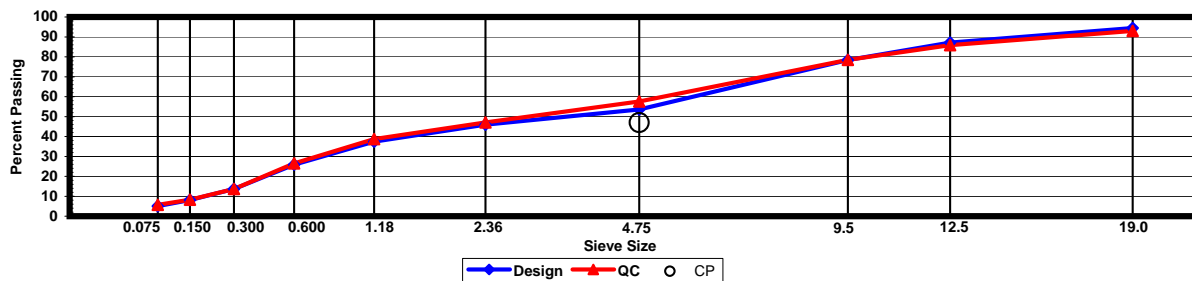
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 4, 2009  
 24 Hour High Temperature (F): 94  
 24 Hour Low Temperature (F): 73  
 24 Hour Rainfall (in): 0.00  
 Planned Subot Lift Thickness (in): 2.8  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Asphalt Content (Plant Setting)	5.8
78 Opelika Limestone	15.0
57 Opelika Limestone	15.0
Shorter Coarse Sand	20.0
Fine Fraction Local RAP	20.0
Coarse Fraction Local RAP	30.0
As-Built Sublot Lift Thickness (in):	3.0
Total Thickness of All 2009 Sublots (in):	7.1
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NTSS-1HM
Target Tack Application Rate (gal/sy):	0.05
Approx. Avg. Temperature at Plant (F):	275
Avg. Measured Mat Compaction:	93.1%



**General Notes:**

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- The total HMA thickness of all structural study sections (N1-N11 and S8-S12) ranges from 5-3/4 to 14 inches by design;
- All non-structural sections are supported by a uniform perpetual foundation in order to study surface mix performance;
- SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- All liquid asphalt purchased for use in Track reconstruction contained LOF 6500 antistripping additive at a rate of 0.5 percent

**Quadrant:** N  
**Section:** 11  
**Sublot:** 3

**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: RAP/Lms/Sand  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	97
19 mm (3/4"):	94	89
12.5 mm (1/2"):	87	83
9.5 mm (3/8"):	78	75
4.75 mm (#4):	54	54
2.36 mm (#8):	46	44
1.18 mm (#16):	37	37
0.60 mm (#30):	26	25
0.30 mm (#50):	14	13
0.15 mm (#100):	8	8
0.075 mm (#200):	5.1	5.3
Binder Content (Pb):	4.8	4.6
Eff. Binder Content (Pbe):	4.2	4.0
Dust-to-Binder Ratio:	1.2	1.3
Rice Gravity (Gmm):	2.542	2.544
Avg. Bulk Gravity (Gmb):	2.440	2.439
Avg Air Voids (Va):	4.0	4.1
Agg. Bulk Gravity (Gsb):	2.698	2.695
Avg VMA:	13.9	13.7
Avg. VFA:	72	70

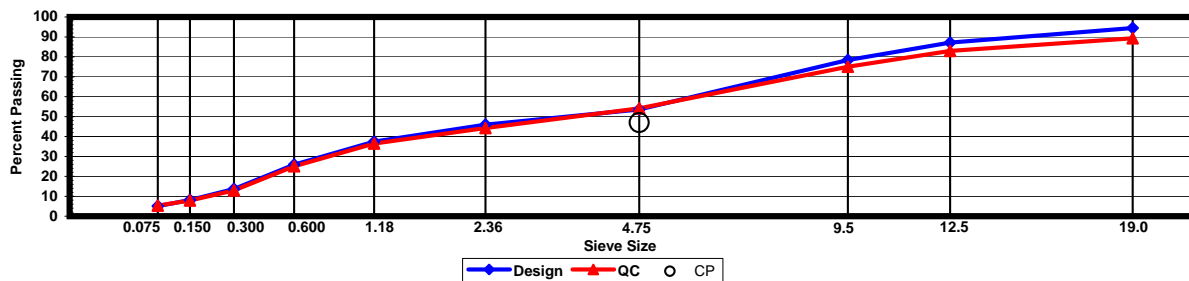
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 4, 2009  
 24 Hour High Temperature (F): 94  
 24 Hour Low Temperature (F): 73  
 24 Hour Rainfall (in): 0.00  
 Planned Subot Lift Thickness (in): 3.0  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Asphalt Content (Plant Setting)	5.8
78 Opelika Limestone	15.0
57 Opelika Limestone	15.0
Shorter Coarse Sand	20.0
Fine Fraction Local RAP	20.0
Coarse Fraction Local RAP	30.0
As-Built Sublot Lift Thickness (in):	2.9
Total Thickness of All 2009 Sublots (in):	7.1
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NA
Target Tack Application Rate (gal/sy):	NA
Approx. Avg. Temperature at Plant (F):	275
Avg. Measured Mat Compaction:	94.2%



**General Notes:**

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- The total HMA thickness of all structural study sections (N1-N11 and S8-S12) ranges from 5-3/4 to 14 inches by design;
- All non-structural sections are supported by a uniform perpetual foundation in order to study surface mix performance;
- SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- All liquid asphalt purchased for use in Track reconstruction contained LOF 6500 antistripping additive at a rate of 0.5 percent