

**Quadrant:** S  
**Section:** 7  
**Sublot:** 1

**Laboratory Diary**

General Description of Mix and Materials

Design Method: Super  
 Compactive Effort: 100 gyrations  
 Binder Performance Grade: 76-22  
 Modifier Type: GTR  
 Aggregate Type: Limestone/Porph  
 Design Gradation Type: Coarse

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"):	96	97
9.5 mm (3/8"):	85	89
4.75 mm (#4):	52	59
2.36 mm (#8):	33	37
1.18 mm (#16):	20	22
0.60 mm (#30):	12	13
0.30 mm (#50):	8	9
0.15 mm (#100):	6	7
0.075 mm (#200):	4.9	5.6
Binder Content (Pb):	5.6	6.0
Eff. Binder Content (Pbe):	4.7	5.1
Dust-to-Binder Ratio:	1.0	1.1
Rice Gravity (Gmm):	2.464	2.454
Avg. Bulk Gravity (Gmb):	2.365	2.372
Avg Air Voids (Va):	4.0	3.3
Agg. Bulk Gravity (Gsb):	2.620	2.625
Avg VMA:	14.8	15.0
Avg. VFA:	73	78

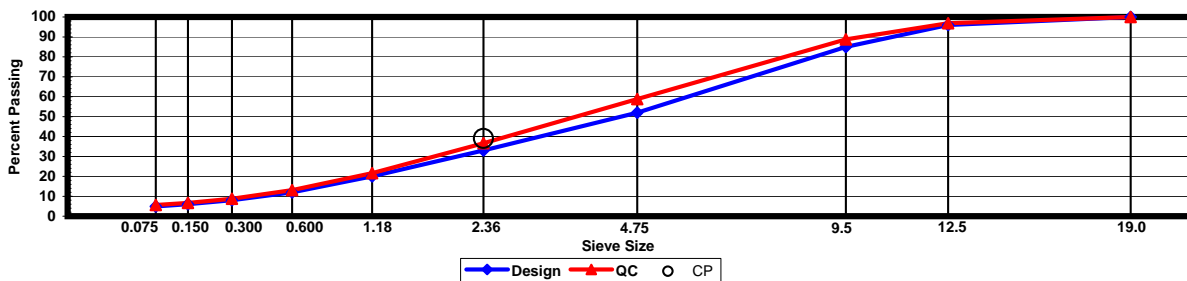
**Construction Diary**

Relevant Conditions for Construction

Completion Date: July 30, 2009  
 24 Hour High Temperature (F): 90  
 24 Hour Low Temperature (F): 74  
 24 Hour Rainfall (in): 0.04  
 Planned Sublot Lift Thickness (in): 1.8  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Asphalt Content (Plant Setting)	6.1
Maryland Heights, MO 1/2"	22.0
Maryland Heights, MO 3/8"	30.0
Maryland Heights, MO Man Sand	28.0
Iron Mountain, MO Porphyry Man Sand	18.0
Hyd Lime	2.0
As-Built Sublot Lift Thickness (in):	1.7
Total Thickness of All 2009 Sublots (in):	1.7
Approx. Underlying HMA Thickness (in):	30.5
Type of Tack Coat Utilized:	PG67-22
Target Tack Application Rate (gal/sy):	0.03
Approx. Avg. Temperature at Plant (F):	340
Avg. Measured Mat Compaction:	93.0%



**General Notes:**

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