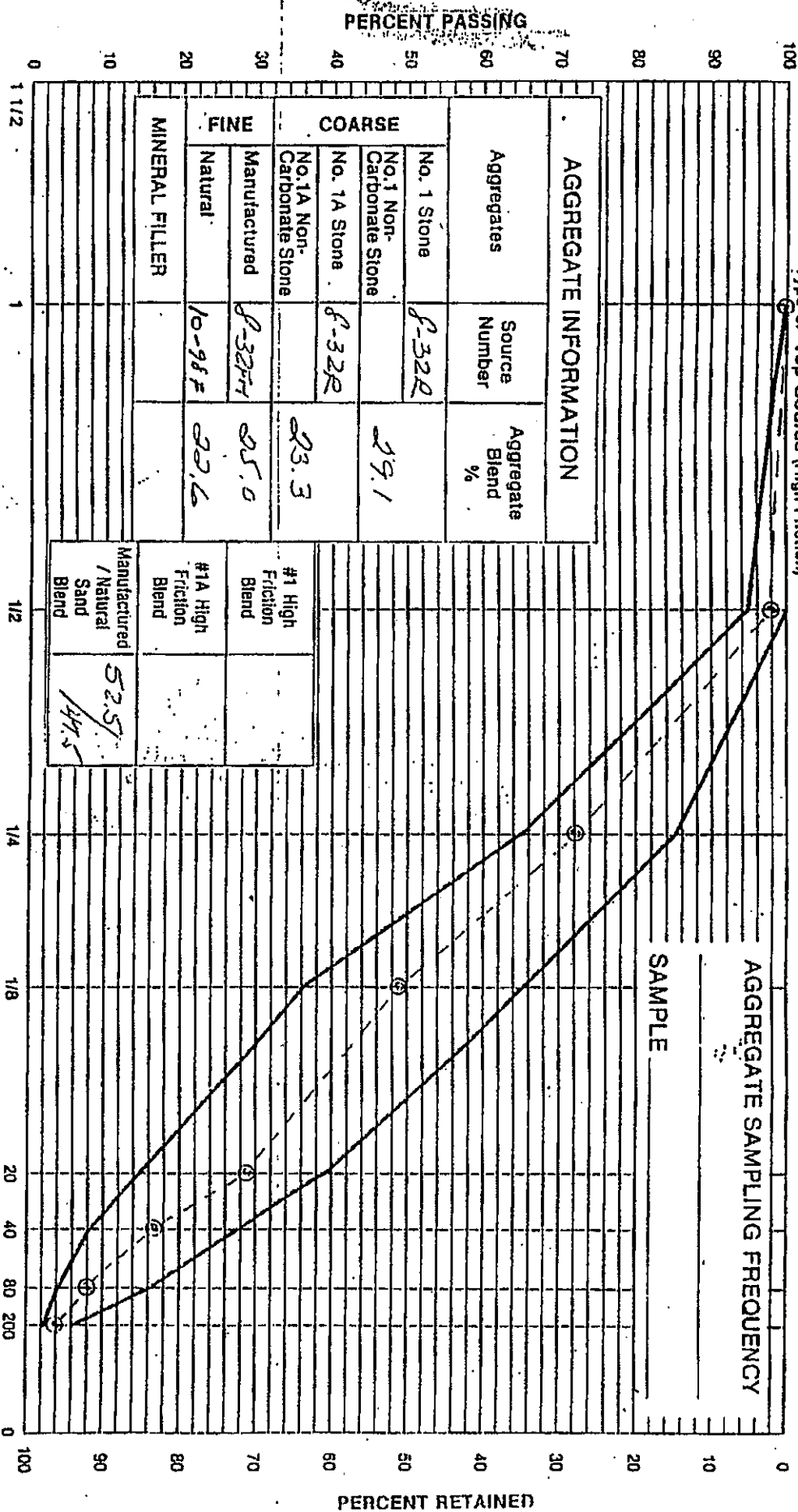


NEW YORK STATE  
DEPARTMENT OF TRANSPORTATION  
MATERIALS BUREAU  
JOB MIX FORMULA  
MARSHALL MIX DESIGN  
Type 6F Top Course (High Friction)

Facility No. \_\_\_\_\_ Formula No. \_\_\_\_\_  
Plant: FLUSHING ASPHALT, LLC Region 11  
Plant Location: FLUSHING NY  
Submitted By: R. HARRIS & C Date: 1-6-2016  
(SUBMISSION INSTRUCTIONS ON BACK)



Recommended for Approval by Regional Director \_\_\_\_\_ Date \_\_\_\_\_  
Approved by Director, Materials Bureau \_\_\_\_\_  
Asphalt Grade: AC 20  
PC64A



COMBINED MARSHALL GRADATION  
AT THE % ASPHALT CEMENT INDICATED

% A.C.	AGGREGATE COMPONENT (BIN)	% BATCH	GRAMS BATCH	WEIGHT RETAINED (GRAMS)							TOTAL Wgt. Ret.	TOTAL	Min. Filler	TOTAL			
				1"	3/4"	1/2"	1/4"	1/8"	20	40					80	200	PAN
2.5	Composite	100.0	1137.6											100.0	1137.6		
				1"	3/4"	1/2"	1/4"	1/8"	20	40	80	200	PAN				
1200.0 gr x 5.2 = 62.4 % A.C. = 1137.6 gr. Aggregate														1200.0 gr - 62.4 = 1137.6 gr. Aggregate			
5.5	Composite	100.0	1132.8											100.0	1132.8		
				1"	3/4"	1/2"	1/4"	1/8"	20	40	80	200	PAN				
1200.0 gr x 5.6 = 67.2 % A.C. = 1132.8 gr. Aggregate														1200.0 gr - 67.2 = 1132.8 gr. Aggregate			
6.0	Composite	100.0	1128.0											100.0	1128.0		
				1"	3/4"	1/2"	1/4"	1/8"	20	40	80	200	PAN				
1200.0 gr x 6.0 = 72.0 % A.C. = 1128.0 gr. Aggregate														1200.0 gr - 72.0 = 1128.0 gr. Aggregate			
4.6	Composite	100.0	1123.2											100.0	1123.2		
				1"	3/4"	1/2"	1/4"	1/8"	20	40	80	200	PAN				
1200.0 gr x 6.4 = 76.8 % A.C. = 1123.2 gr. Aggregate														1200.0 gr - 76.8 = 1123.2 gr. Aggregate			
8.6	Composite	100.0	1118.4											100.0	1118.4		
				1"	3/4"	1/2"	1/4"	1/8"	20	40	80	200	PAN				
1200.0 gr x 6.8 = 81.6 % A.C. = 1118.4 gr. Aggregate														1200.0 gr - 81.6 = 1118.4 gr. Aggregate			



Specimen	Asphalt Content	Weight - Grams			S.S.D.	Volume CC	Specific Gravity			Voids Total Mix	Unit Wt. Lb/Cu Ft (128.5)	Stability-Lb		Flow 0.01 In.
		In Air	In Water				Bulk Gmb	Theor. Gmm	h			Measured	Corrected	
A	5.2	1201.9	695.8	1203.6	507.8	2.367	2.572		1700	1768	6.0			
B	"	1215.7	700.2	1211.9	511.7	2.366	"		1900	1900	8.5			
C	"	1196.8	690.8	1198.1	507.3	2.359	"		1875	1950	7.0			
AVG.	5.2					2.364	2.572	5.89	1475		7.2			
A	5.6	1204.3	695.8	1205.0	509.2	2.365	2.490		2050	2050	9.5			
B	"	1200.9	685.4	1202.3	506.9	2.367	"		1900	1976	9.0			
C	"	1231.0	696.1	1202.4	506.3	2.372	"		1925	2002	9.0			
AVG.	5.6					2.369	2.490	4.86	1478		9.2			
A	6.0	1210.5	701.0	1211.4	510.4	2.371	2.471		2150	2150	11.5			
B	"	1258.7	700.0	1210.0	510.0	2.370	"		2225	2225	12.0			
C	"	1192.1	691.3	1193.1	501.8	2.377	"		2175	2262	10.0			
AVG.	6.0					2.373	2.471	3.97	1481		11.2			
A	6.4	1205.6	697.3	1206.3	509.0	2.368	2.449		2000	2000	14.5			
B	"	1207.1	698.9	1208.0	509.1	2.371	"		2100	2100	13.0			
C	"	1198.2	691.8	1199.1	509.3	2.362	"		1950	2028	13.5			
AVG.	6.4					2.367	2.449	3.35	1477		13.7			
A	6.8	1200.6	692.2	1201.1	508.9	2.359	2.429		1875	1875	15.5			
B	"	1200.5	692.1	1201.0	508.9	2.359	"		1700	1700	17.5			
C	"	1202.0	692.8	1202.5	509.7	2.358	"		1775	1775	16.5			
AVG.	6.8					2.359	2.429	2.88	1472		16.5			

PREPARED BY R. K. BEFFNER DATE 1-6-2016

NEW YORK STATE  
DEPARTMENT OF TRANSPORTATION  
MATERIALS BUREAU

MIX TYPE                      REGION 11  
PRODUCER FLUSHING ASPHALT LLC

MAXIMUM SPECIFIC GRAVITY OF BITUMINOUS PAVING MIXTURES  
ASTM D-2041 (RICE METHOD)

LOCATION FLUSHING NY

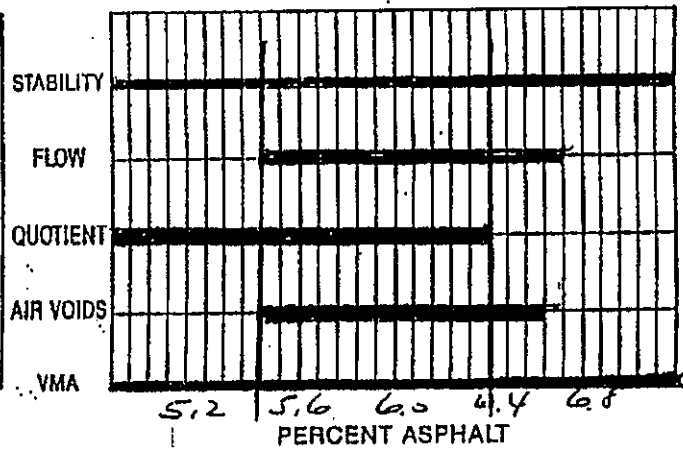
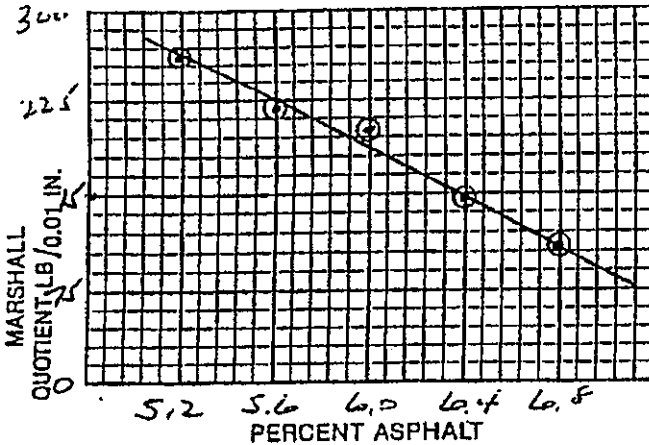
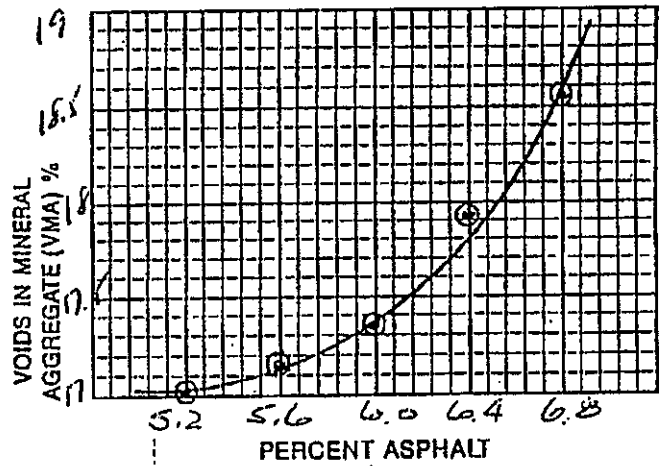
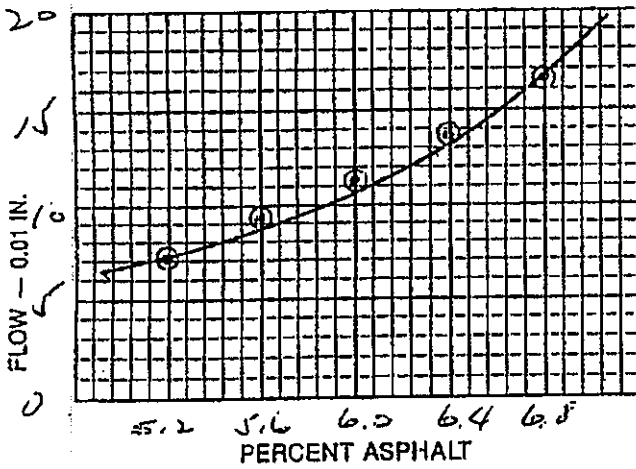
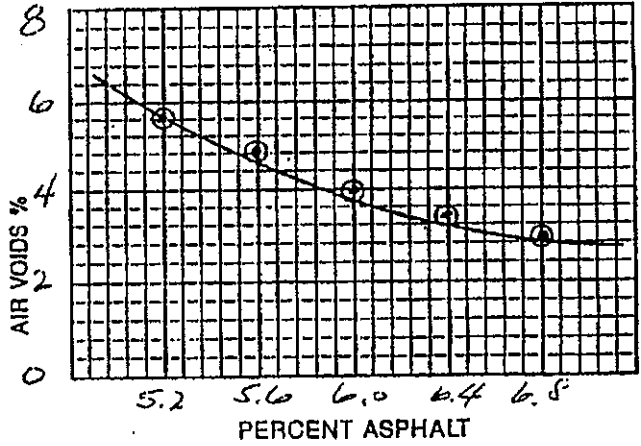
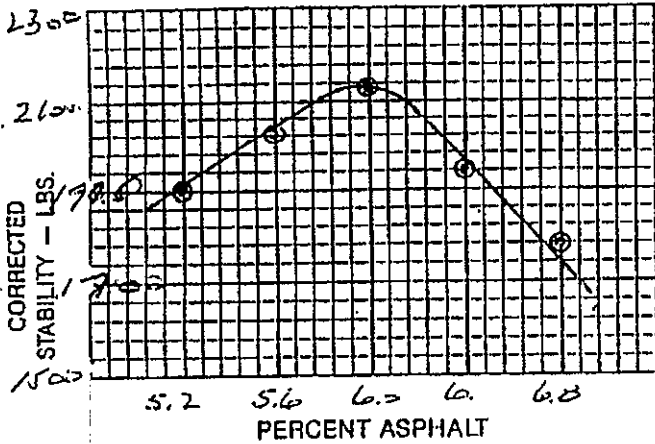
Maximum Specific Gravity of Bituminous Paving Mixture = G<sub>mm</sub>  
A = Weight of dry sample in air (grams)  
D = Weight of flask filled with airless water at 77°F (25°C) grams  
E = Weight of flask filled with water and sample at 77°F (25°C) grams  
 $G_{mm} = \frac{A}{A+D-E}$

ASPHALT CONTENT	5.2		5.6		6.0		6.4		6.8	
	%		%		%		%		%	
TEST NO..	1	2	1	2	1	2	1	2	1	2
A	1217.6	1229.5	1271.5	1259.2	1222.6	1231.7	1211.7	1214.2	1219.6	1221.6
D	7419.5	7419.5	7419.5	7419.5	7419.5	7419.5	7419.5	7419.5	7419.5	7419.5
E	8152.8	8159.5	8180.6	8172.6	8146.7	8153.1	8139.2	8137.5	8137.4	8137.8
A+D-E	4844.3	4890.5	5100.4	5060.1	4955.4	4955.1	4962.5	4962.2	5011.7	5033.3
G <sub>mm</sub>	2.514	2.509	2.491	2.488	2.468	2.473	2.451	2.447	2.431	2.427
Average G <sub>mm</sub>	2.512		2.480		2.471		2.449		2.429	

Test By E. HOFFNER on 1-6-2016

Producer FLUSHING ASPHALT LLC Location FLUSHING NY

MARSHALL TEST PROPERTY CURVES AND RANGE DATA



COMMON OVERLAP RANGE 5.6-6.4

SUBMITTED BY R. HOFFNER

MID POINT 6.0  
(OPTIMUM AC CONTENT)

DATE 1-6-2016

VALUES AT OPTIMUM AC CONTENT

PROPERTY	STABILITY	FLOW	QUOTIENT	AIR VOIDS	VMA
SPEC.	1500	8-16	150 mil	3.0-5.0	16
ACTUAL	2212	11.2	197.5	3.97	17.35