

**Department of Design and** Construction

**Thomas Foley** Commissioner Safety & Site Support Division **Office of Quality Assurance** 

Concrete and Asphalt Generic Mix Design Approval # 2023 - 132

Alla Ayzenshtat Deputy Commissioner Safety & Site Support

30-30 Thomson Avenue Date: Long Island City, NY 11101

> To: Tel. 718 / 391-1624 www.nyc.gov/ddc

12/15/2023

Matthew D. Harrison, **Green Asphalt** 

> Juan Martinez, PE, Director Office of Quality Assurance

From:

leg States

Date Submitted: 12/13/2023

Plant: Green Asphalt

NYSDOT Facility Numbers: H0385

Laboratory: MT Group - Intertek

Mix Design Type: 3RA Binder - 30% RAP

Generic Mix Design Serial Number: GreenAsphalt/3RA/Binder/Generic/NYCDDC/12/23/132

Generic Mix Design Date: 11/20/2023

Generic Mix Design Expiration Date: 12/31/2025

- This mix design is approved only for the NYSDOT Facility Numbers listed above. Comments: 1)
  - 2) Approval is valid only if facilities listed above remain on the DDC OQA Approved list of Concrete and/or Asphalt Plants.
  - 3) Approval is limited to the material sources and aggregate sizes shown on the mix design.
  - 4) Dosage of admixtures may be adjusted by the plant within manufacturer's written guidelines, but admixtures not listed may not be added.

Reviewed & Prepared by:

Scott Cruz, QA Inspector

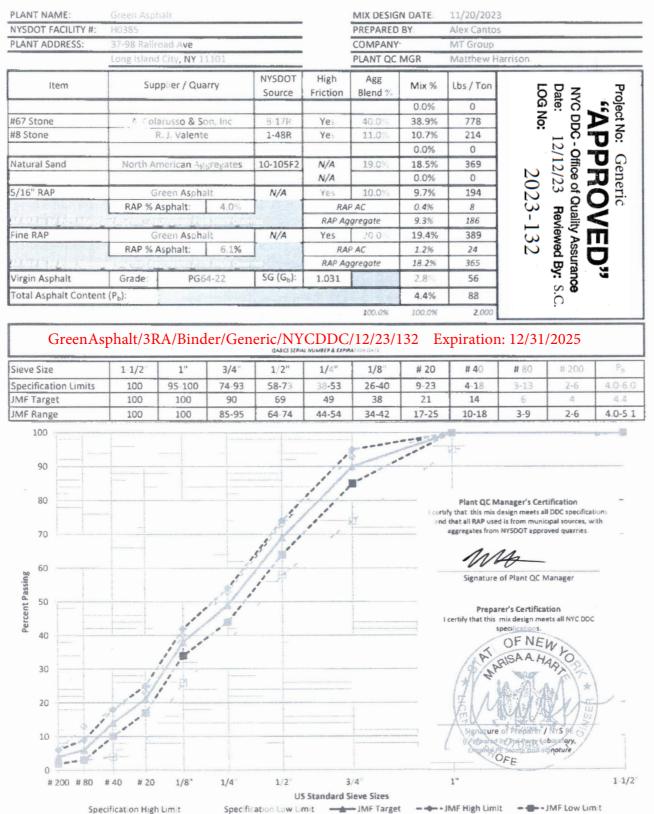
Nades Shahat

Recommended for Acceptance by: Nader Shehata, PE, Deputy Director



### **QA & CONSTRUCTION SAFETY BUREAU**

ASPHALT JOB MIX FORMULA SHEET - 3 RA BINDER MIX





Sieve 1.5" 1" 3/4' 1/4 1/8' #20 #40

#80

#200

Pan

Totals

## **QA & CONSTRUCTION SAFETY BUREAU**

AGGREGATE SPECIFIC GRAVITY & COMBINED GRADATION WORKSHEET - 3 RA BINDER MIX

NYSDOT FACIL TY #.

PLANT NAME: Green Asphalt

% Ret.

0.0

100.0

100.0

0.0

D.0

1.1

100.0

11

11

					Aver	age Bin	Gradat	tions							
Not	Used	#67 \$	itone	#8 S	tone	Nat	Used	Natura	il Sand	Not	Used	5/16	RAP	Fin	e RAP
% Ret.	% Pass	% Ret.	% Pass	% Ret	% Pass	% Ret.	Se Pass	Net.	% Pass	% Ret	% Pass	% Ret.	% Pass	% Ret.	% Pass
	100.0	0.0	100.0	1.1	100.0		100 0	0.0	100.0		100.0	0.0	100.0	0.0	100.0
	100.0	0.0	100.0	0.0	100.0		100 0	0.0	100.0		100.0	0.0	100.0	0.0	100.0
	100.0	25 6	74.4	0.5	100.0		100 0	0.0	100.0		100.0	0.0	100.0	0.0	100.0
	100.0	15	22.9	. 4.0	100.0		100 0	0.0	100.0		100.0	0.0	100.0	0.0	100.0
	100.0	16.7	6.2		42 9		100 0	0.0	100.0		100.0	63.4	36.6	5.6	94.4
	100.0	51	11	20.2	16.7		100 0	4.9	95.1		100.0	18.6	18.0	15.7	78.7
	100.0	0.0	11	15.9	0.8		100 0	35.1	50.0		100.0	9.7	8.3	7,4	41.3
	100.0	0.0	11	2.00	0.8		100 0	5.5	34.5		100.0	0.0	8.3	8.8	32.5

.9.4 51

2.3

2.8

100 0

2.8

0.0

H0385

MIX DESIGN DATE:

100.0

100.0

0.0

0.0

8.3

100.0

8.3

8.3

11/20/2023

13.4

9.9

9.2

100.0

19.1 9.2

Stockpiles Sampled By: Alex Ca t Date Sampled: 11 2

100.0

0.8

0.8

Gradation Technician: Izak Ara Date Tested: 11/

#### **Coarse Aggregate Specific Gravity per ASTM C127**

0.0

Discard portion of sample that passes the 1/4 sleve. Only Perform this test if agaregate is 10% or more coarse less than 90% passing the 1/4" slevel

100 0

100 0

	Not Used	#67 Stone	#8 Stone	Not Used	Natural Sand	Not Used	S/16" RAP	Fine RAP
% Coarse Agg.		93.8%	57 1%		0.0%		63.4%	5.6%
Test Required?	NO	YES	YES	NO	NO	NO	YES	NO
A) Wt. in Air		3156.8	8223.7				323 4	
B) Wt. SSD		3174.1	37.39.5				3247 6	
C) Wt. in Water		2005.8	2041.0				2063 7	
G <sub>sb</sub> (A/(B-C)		2.702	2.690				2.734	*==
G <sub>14</sub> (A/(A-C)		2.743	2 726				2.760	***

#### Fine Aggregate Specific Gravity per ASTM C128

Discard partion of sample that does not pass the #4 sleve.

Only Perform	this test i	f 10% or	more passes	the .	1/4" Sieve
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	Not Used	#67 Stone	#8 Stone	Not Used	Natural Sand	Not U == d	5/16 RAP	F ne RAP
% Fine Agg.		6.2%	42.9%		100.0%		35.6%	94.4%
Test Required?	NO	NO	YE5	NO	YES	NO	YES	YES
A) Wt. in Air			499.1		498.4		499.6	502.5
B) Wt. Flask + Water			1451.6		1451.6		1451.6	1451 6
E) Wt. Flask + Water → Sample			1767.1		1764.5		1769.4	1770.7
s) Wt. SSD			501.7		501.3		\$01.9	504.1
G <sub>cb</sub> (A/(B+S-C)			2.680		2.645	+ # #	2.714	2.711
G <sub>14</sub> (A/(B+A-C)			2.718		2.687	***	2 748	2 740

			Combined A	ggregate Spec	ific Gravity			
	Nat Used	#67 Stone	#8 Stone	Not Used	Natural Sand	Not Used	5/16 RAP	F ne RAP
Combined G <sub>sb</sub>		2.702	2.686		2.645		2 726	2.716
Combined G <sub>50</sub>		2.743	2.723		2.687		2 755	2 740

S. G. Technician: Alex Cantos Date Tested: 11/6/2023

#### **Combined Average Gradations, % Passing**

Bin	Agg	1.5*	1"	3/4"	1/2"	1/4"	1/8"	#20	#40	#80	#200
Not Used	Blend 0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
#67 Stone	40.0%	40.0	40.0	29.8	9.2	2.5	0.4	0.4	0.4	0.4	0.4
#8 Stone	11.0%	11.0	11.0	11.0	11.0	4.7	1.8	0.1	0.1	0.1	0.1
Not Used	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Natural Sand	19.0%	19.0	19.0	19.0	19.0	19.0	18.1	11.4	6.6	1.0	0.5
Not Used	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/16" RAP	10.0%	10.0	10.0	10.0	10.0	3.7	1.8	0.8	0.8	0.8	0.8
Fine RAP	20.0%	20.0	20.0	20.0	20.0	18.9	15.7	8.3	6.5	3.8	1.8
Total	100.0%	100.0	100.0	89.8	69.2	48.7	37.9	21.0	14.4	6.1	37
Specification Limits	100	95-100	74-93	58-73	38-53	26-40	9-23	4-18	3-13	2-6	



Green Asphalt

PLANT NAME

#### **QA & CONSTRUCTION SAFETY BUREAU** ASPHALT TRIAL GRADATION WORKSHEET - 3 RA BINDER MIX

NYSDOT FACILITY #: H0385

MIX DESIGN DATE

11/20/2023

	di e di i rap	acconstruction and production														
	Batch	P.	3													
BATCH 1	Batch G	and the second second	1280					Ratch	Malahta	Retained	on Sleve	C				
	Detting	Agg.	Mix	Batch	Asph.		1		weights,	retained		- Grams				
Bin	}	Blend	Blend	Grams	Grams	1.5"	1	3/4	1/2'	1/4	1/8"	#20	#40	#80	#200	Pan
Not Used		0.0%	0.0%	0.0	and the second	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
\$67 Stone		40.0%	38.6%	494 1		0.0	0.0	126.5	254.5	82 5	25.2	0.0	0.0	0.0	0.0	5.4
#8 Stone		11.0%	10.6%	135.9	1.2.4.2	0.0	0.0	0.0	0.0	77 6	35.6	21.6	0.0	0.0	0.0	1.1
Not Used		0.0%	0.0%	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Natural Sand		19.0%	18.3%	234 7	1.28	0.0	0.0	0.0	0.0	0.0	115	82.4	59.8	69.0	5.4	6.6
Not Used		0.0%	0.0%	0.0	a Sale	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/16" RAP		10.0%	10.1%	128.7	5.1	0.0	0.0	0.0	0.0	81 6	23.9	12.5	0.0	0.0	0.0	5.5
ine RAP		20.0%	20.5%	263.1	16.0	0.0	0.0	0.0	0.0	14 7	41.3	98.4	23.2	35.3	26.0	8.2
Virgin Asphalt		Same	1.8%	23.6	23.6	1.000	1999		1.2	1000	1000			1000000	Sector Sector	1999 - S.
otal Mix		100.0%	100.0%	1280.0	44.8	0.0	0.0	126.5	254.5	256.4	137 5	214 9	83.0	104.3	31.4	26.8
and and a same of the later on grant tell later	Contractor of the local data		unacier course and	and the second second	3 50%		name of the second second	and the second second second	and the second second second	-		-			Transferration and the second	
-	Batch	P.	1. 1													
BATCH 2	Batch G	-	1280					Ratch	Malahaa	Detained	on flaur	Carton				
A REAL PROPERTY AND A REAL	U UUUUU	COLUMN STREET, ST.	Mix	Batch	Arch	r	1	oatch	reagnis,	THE LOUIS C	on Sieve	- urams	3			
Bin		Agg. Biend	Blend	Grams	Asph. Grams	1.5"	1	3/4	1/2	1/4"	1/8"	#20	#40	#80	#200	Pan
Not Used		and the second second second	and the second second second	ADDRESS OF TAXABLE PARTY.	stams	0.0	0.0	0.0			0.0	0.0	0.0	0.5		0.0
167 Stone	+	0.0%	0.0%	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18 Stone		11.0%	10.6%	491.5		0.0	0.0	125.8	253.1	82.1	25.1 35.4	0.0	0.0	0.0	0.0	5.4
iot Used	+	0.0%	0.0%	135.2		0.0	0.0	0.0	0.0	0.0	35.4	21.5	0.0	0.0	0.0	1.1
vot used Vatural Sand		19.0%	18.2%	233.5		0.0	0.0	0.0	0.0	0.0	0.0	81 9	0.0 \$9.5	0.0 68.6	0.0	0.0
vot Used		0.0%	0.0%	233.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5
ADE OPEO			10.0%	128.0	51	0.0	0.0	0.0	0.0	81.2	23.8	12.4	0.0	0.0	0.0	0.0
VIC" DAD	1		10.070	120.0	21	0.0	and the owner water water water			and an owner of the second	and the subscription in succession	and descent of the set			25.9	3.5
T O'T HELENALDER AND DATES TO A DESCRIPTION OF THE PARTY		10.0%	20.46/	261 7	10.0	0.0	0.01		0.01							
ine RAP		20.0%	20.4%	261 7	16.0	0.0	0.0	0.0	0.0	14.7	41.1	97.9	23.0	35.1	20.9	0.1
Fine RAP Virgin Asphalt		20.0%	2.4%	30.1	30.1											
5/16" RAP Fine RAP Virgin Asphalt Total Mix			A DESCRIPTION OF TAXABLE PARTY.	a no and product of the set	30.1 51.2	0.0	0.0	0.0	0.0 253.1	14.7 255.1	41.1	213.7	23.0 82.6	35.1	31.3	26.6
Fine RAP /irgin Asphalt fotal Mix		20.0% 100.0%	2.4% 100.0%	30.1	30.1											
Fine RAP Virgin Asphalt	Batch	20.0% 100.0%	2.4% 100.0% 4.5	30.1	30.1 51.2			125.8	253.1	255.1	136.8	213.7				
Fine RAP Virgin Asphalt Total Mix		20.0% 100.0% s P <sub>b</sub> irams:	2.4% 100.0% 4.5 1280	30.1 1280.0	30.1 51.2 4.00%			125.8	253.1	255.1		213.7				
Fine RAP Virgin Asphalt Total Mix	Batch	20.0% 100.0% P <sub>b</sub> irams: Agg.	2.4% 100.0% 4.5 1280 Mix	30.1 1280.0 Batch	30.1 51.2 4.00%			125.8	253.1	255.1	136.8	213.7				
Ine RAP /Irgin Asphalt fotal Mix BATCH 3 Bin	Batch	20.0% 100.0% Pb irams: Agg. Blend	2.4% 100.0% 4.5 1280 Mix Blend	30.1 1280.0 Batch Grams	30.1 51.2 4.00%	0.0	0.0	125.8 Batch 3/4	253 1 Weights, 1/2'	255.1 Retained 1/4	136.8 I on Sleve 1/8'	213.7 - Grams #20	82.6 #40	103 7 #80	31.3 #200	26.6 Pan
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used	Batch	20.0% 100.0% Pb irams: Agg. Blend 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0%	30.1 1280.0 Batch Grams 0.0	30.1 51.2 4.00%	0.0 1.5" 0.0	0.0	125.8 Batch 3/4 0.0	253.1 Weights, 1/2' 0.0	255.1 Retained 1/4 0.0	136.8 on Sleve 1/8' 0.0	213.7 - Grams #20 0.0	82.6 #40 0.0	103 7 #80 0.0	31.3 #200 0.0	26.6 Pan 0.0
Ine RAP Virgen Asphelt Total Mix BATCH 3 Bin Not Used I67 Stone	Batch	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2%	30.1 1280.0 Batch Grams 0.0 489.0	30.1 51.2 4.00%	0.0 1.5" 0.0 0.0	0.0	125.8 Batch 3/4 0.0 125.2	253.1 Weights, 1/2' 0.0 251.8	255.1 Retained 1/4 0.0 81 7	136.8 on Sieve 1/8' 0.0 24.9	213.7 - Grams #20 0.0 0.0	82.6 #40 0.0 0.0	103 7 #80 0.0 0.0	31.3 #200 0.0 0.0	26.6 Pan 0.0 5.4
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone 18 Stone	Batch	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0% 11.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5%	30.1 1280.0 Batch Grams 0.0 489.0 134 S	30.1 51.2 4.00%	0.0 1.5" 0.0 0.0 0.0	0.0 1 0.0 0.0 0.0	125.8 Batch 3/4 0.0 125.2 0.0	253.1 Weights, 1/2 <sup>.</sup> 0.0 251.8 0.0	255.1 Retained 1/4 0.0 81 7 76.8	136.8 on Sieve 1/8' 0.0 24.9 35.2	213.7 - Grams #20 0.0 0.0 21.4	82.6 #40 0.0 0.0 0.0	103 7 #80 0.0 0.0 0.0	31.3 #200 0.0 0.0 0.0	26.6 Pan 0.0 5.4 1 1
line RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used #67 Stone Not Used	Batch	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0% 11.0% 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0	30.1 51.2 4.00%	0.0 1.5" 0.0 0.0 0.0 0.0	0.0 1 0.0 0.0 0.0 0.0	125.8 Batch 3/4 0.0 125.2 0.0 0.0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0	255.1 Retained 1/4 0.0 81.7 76.8 0.0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0	213.7 - Grams #20 0.0 0.0 21.4 0.0	82.6 #40 0.0 0.0 0.0 0.0	#80 0.0 0.0 0.0 0.0	\$200 0.0 0.0 0.0 0.0 0.0	25.5 Pan 0.0 5.4 11 0.0
line RAP Virgin Asphalt Fotal Mix BATCH 3 Bin Not Used #67 Stone #8 Stone Not Used Not Used Natural Sand	Batch	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 18.1%	30.1 1280 0 Batch Grams 0.0 489.0 134 5 0.0 232 3	30.1 51.2 4.00%	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0	253 1 253 1 1/2' 0.0 251.8 0.0 0.0 0.0	255.1 Retained 1/4 0.0 81 7 76.8 0.0 0.0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4	213.7 - Grams #20 0.0 0.0 21.4 0.0 81.5	82.6 #40 0.0 0.0 0.0 0.0 59.2	#80 0.0 0.0 0.0 0.0 0.0 0.0 68.3	\$200 0.0 0.0 0.0 0.0 5.3	26.6 Pan 0.0 5.4 1 1 0.0 6.5
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used Not Used Natural Sand Not Used Natural Sand	Batch	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 18.1% 0.0%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0	30.1 51.2 4.00%	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0	253 1 253 1 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0	255.1 Retained 1/4 0.0 81 7 76.8 0.0 0.0 0.0 0.0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0	213.7 • Grams #20 0.0 0.0 21.4 0.0 81.5 0.0	\$2.6 #40 0.0 0.0 0.0 59.2 0.0	#80 0.0 0.0 0.0 0.0 0.0 58.3 0.0	\$200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 Pan 0.0 5.4 1.1 0.0 6.5 0.0
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used Stone 18 Stone 18 Stone 18 Stone 18 Stone 18 Stone 18 Stone 18 Stone 50 Stone 18 Stone 18 Stone 19 Sto	Batch	20.0% 100.0% P <sub>b</sub> frams: Agg. Blend 0.0% 11.0% 0.0% 19.0% 10.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 18.1% 0.0% 9.9%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3	30.1 51.2 4.00% Asph Grams 5.1	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 1 0.0 0.0 0.0 0.0 0.0 0.	Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 80.7	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23 7	213.7 - Grams #20 0.0 0.0 0.0 21.4 0.0 81.5 0.0 12.4	\$2.6 #40 0.0 0.0 0.0 59.2 0.0 0.0	#80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	\$200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Pan 0.0 5.4 11 0.0 6.5 0.0 5.5
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used Ha Stone Ha Stone Ha Stone Not Used Not Used Satural Sand Not Used Si Jian RAP Tine RAP	Batch	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 18.1% 0.0% 9.9% 20.3%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3 260.4	30.1 51.2 4.00% Asph Grams 5.1 15.9	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0	253 1 253 1 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0	255.1 Retained 1/4 0.0 81 7 76.8 0.0 0.0 0.0 0.0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0	213.7 • Grams #20 0.0 0.0 21.4 0.0 81.5 0.0	\$2.6 #40 0.0 0.0 0.0 59.2 0.0	#80 0.0 0.0 0.0 0.0 0.0 58.3 0.0	\$200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 Pan 0.0 5.4 1.1 0.0 6.5 0.0
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone 18 Stone 18 Stone Not Used Not Used Not Used Store Not Used Vot Vot Used Vot Used Vot Used Vot Used Vot Vot Used Vot Vot Us	Batch G	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 10.0% 20.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 18.1% 0.0% 9.9% 20.3% 2.9%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3 260.4 36.6	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6	1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	8atch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 80.7 14.6	136.8 on Sleve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9	213.7 → Grams #20 0.0 0.0 21.4 0.0 81.5 81.5 0.0 12.4 97.4	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9	#80 0.0 0.0 0.0 68.3 0.0 0.0 0.0 34 9	31.3 #200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 25.8	26.6 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone 18 Stone 18 Stone Not Used Not Used Not Used Store Not Used Vot Vot Used Vot Used Vot Used Vot Used Vot Vot Used Vot Vot Us	Batch G	20.0% 100.0% P <sub>b</sub> frams: Agg. Blend 0.0% 11.0% 0.0% 19.0% 10.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 18.1% 0.0% 9.9% 20.3%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3 260.4	30.1 51 2 4 00% Asph Grams 5.1 15.9 36.6 57 6	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 0.0 1 0.0 0.0 0.0 0.0 0.0 0.	Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 80.7	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23 7	213.7 - Grams #20 0.0 0.0 0.0 21.4 0.0 81.5 0.0 12.4	\$2.6 #40 0.0 0.0 0.0 59.2 0.0 0.0	#80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	\$200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	Pan 0.0 5.4 11 0.0 6.5 0.0 5.5
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 467 Stone 468 Stone Not Used Natural Sand Not Used 5/16" RAP Ine RAP Virgin Asphalt	Batch G	20.0% 100.0% irams: Agg. Blend 0.0% 11.0% 0.0% 19.0% 20.0% 100.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 9.9% 20.3% 2.9% 100.0%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3 260.4 36.6	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6	1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	8atch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 80.7 14.6	136.8 on Sleve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9	213.7 → Grams #20 0.0 0.0 21.4 0.0 81.5 81.5 0.0 12.4 97.4	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9	#80 0.0 0.0 0.0 68.3 0.0 0.0 0.0 34 9	31.3 #200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 25.8	26.6 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone 188 Stone Nat Used Nat Used Stofe RAP Ine RAP Virgin Asphalt Total Mix	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0% 19.0% 10.0% 20.0% 19.0% 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 9.9% 20.3% 2.9% 100.0% 5.	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3 260.4 36.6	30.1 51 2 4 00% Asph Grams 5.1 15.9 36.6 57 6	1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 253.7	136.8 on Sleve 1/8' 0.0 24.9 35.2 0.0 0 11.4 0.0 23.7 40.9 136.1	213.7 + Grams #20 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9	#80 0.0 0.0 0.0 68.3 0.0 0.0 0.0 34 9	31.3 #200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 25.8	26.6 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1
Ine RAP Virgin Asphalt Fotal Mix BATCH 3 Bin Not Used #67 Stone #85 Stone Not Used Natural Sand Not Used S/16" RAP Fine RAP Virgin Asphalt	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0% 19.0% 10.0% 20.0% 19.0% 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 9.9% 20.3% 2.9% 100.0%	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3 260.4 36.6	30.1 51 2 4 00% Asph Grams 5.1 15.9 36.6 57 6	1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 253.7	136.8 on Sleve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9	213.7 + Grams #20 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9	#80 0.0 0.0 0.0 68.3 0.0 0.0 0.0 34 9	31.3 #200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 25.8	26.6 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1
Ine RAP Virgin Asphelt fotal Mix BATCH 3 Bin Not Used Not Used Not Used Natural Sand Not Used Natural Sand Vot Used Virgin Asphalt Total Mix BATCH 4	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0% 19.0% 10.0% 20.0% 19.0% 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 9.9% 20.3% 2.9% 100.0% 5.	30.1 1280.0 Batch Grams 0.0 489.0 134.5 0.0 232.3 0.0 127.3 260.4 36.6	30.1 51 2 4 00% Asph Grams 5.1 15.9 36.6 57 6	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2 125.2 Batch	253 1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 253.7 Retained	136.8 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 11.4 0.0 23.7 40.9 136.1 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	213.7 + Grams #20 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6 - Grams	82.6 #40 0.0 0.0 59.2 0.0 0.0 22.9 82.1	103 7 #80 0.0 0.0 0.0 68.3 0.0 68.3 0.0 0.0 34 9 103 2	\$1.3 \$200 0.0 0.0 0.0 0.0 0.0 5.3 0.0 0.0 25.8 31.1	26.6 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1 26.5
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone 18 Stone Stone Stone Vat Used Vatural Sand Vat Used Sylfe" RAP Ine RAP Virgin Asphalt Total Mix	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0% 19.0% 10.0% 10.0% 10.0% 100.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 9.9% 20.3% 20.3% 2.9% 100.0% 5. 1280	30.1 1280 0 Grams 0.0 489.0 134 5 0.0 232 3 0.0 127 3 260.4 36.6 1280.0	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 57.6 57.6	1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 253.7	136.8 on Sleve 1/8' 0.0 24.9 35.2 0.0 0 11.4 0.0 23.7 40.9 136.1	213.7 + Grams #20 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9	#80 0.0 0.0 0.0 68.3 0.0 0.0 0.0 34 9	31.3 #200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 25.8	26.6 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone Not Used Not Used Not Used Not Used Stone Not Used Stone Not Used Vot Used Vot Used Vot Used Vot Used Stone Band Mathematical Mix BATCH 4 Bin	Batch G	20.0% 100.0% Pb irams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0% 10.0% 20.0% 100.0% 100.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 18.1% 0.0% 9.9% 20.3% 2.9% 100.0% 5. 1280 Mix	30.1 1280 0 8atch Grams 0.0 489.0 134 5 0.0 232 3 0.0 232 3 0.0 127 3 260.4 36.6 1280.0 8atch	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph.	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2 125.2 Batch	253 1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 253.7 Retained	136.8 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 11.4 0.0 23.7 40.9 136.1 0.3 0.0 0.0 0.0 0.0 0.0 0.0 0.0	213.7 + Grams #20 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6 - Grams	82.6 #40 0.0 0.0 59.2 0.0 0.0 22.9 82.1	103 7 #80 0.0 0.0 0.0 68.3 0.0 68.3 0.0 0.0 34 9 103 2	\$1.3 \$200 0.0 0.0 0.0 0.0 0.0 5.3 0.0 0.0 25.8 31.1	26.6 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1 26.5
Ine RAP Virgin Asphelt otal Mix BATCH 3 Bin Not Used 167 Stone 18 Stone 18 Stone 18 Stone 10 Used 16 Vised 16 Vised BATCH 4 Bin Not Used	Batch G	20.0% 100.0% Pb reams: Agg. Blend 0.0% 40.0% 11.0% 0.0% 19.0% 0.0% 10.0% 20.0% 10.0% 10.0% 20.0% 10.0% Agg. Blend Agg. Agg. Blend Agg. A	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 9.9% 20.3% 2.9% 100.0% 5. 1280 Mix 8lend	30.1 1280 0 Batch Grams 0.0 489.0 134 5 0.0 0 232 3 0.0 127 3 260.4 36.6 1280.0 8atch Grams	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph.	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2 Batch 3/4	253 1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 80.7 14.6 253.7 Retained 1/4	136.8 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9 136.1 136.1	213.7 + Grams #20 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6 - Grams #20	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9 82.1 82.1	103 7 #80 0.0 0.0 0.0 68.3 0.0 68.3 0.0 68.3 0.0 34 9 103 2 #80	\$1.3 \$200 0.0 0.0 0.0 5.3 0.0 0.0 25.8 31.1 \$1.1	26.6 Pan 0.0 5.4 1.1 1.0 0 6.5 0.0 5.5 8.1 26.5 Pan
Ine RAP Virgin Asphelt fotal Mix BATCH 3 Bin Not Used 167 Stone 18 Stone 18 Stone 18 Stone 18 Stone 18 Stone 18 Stone 167 Stone 18 Stone 18 Stone 18 Stone 18 Stone 18 Stone 18 Stone 19 Stone 19 Stone 19 Stone 19 Stone 19 Stone 10 Stone 10 Stone 10 Stone 10 Stone 10 Stone 10 Stone 10 Stone 10 Stone	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 11.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0% 10.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 18.1% 0.0% 18.1% 0.0% 10.0% 5. 1280 Mix 100.0%	30.1 1280 0 8atch Grams 0.0 489.0 1345 0.0 232 3 0.0 232 3 0.0 232 3 0.0 127 3 260.4 36.6 1280.0 1280.0	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph.	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2 125.2 Batch 3/4 <sup>-</sup> 0.0	253.1 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 817 7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 0 23.7 40.9 136.1 on Sieve 1/8' 0.0 0.0 23.7 40.9 136.1	213.7 + Grams #20 0.0 0.0 21.4 0.0 21.4 0.0 12.4 97.4 212.6 - Grams #20 0.0	82.6 #40 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	103 7 #80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 34 9 103 2 #80 0.0	313 \$200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 25.8 311 ¥200 0.0 0.0	26.6 Pan 0.0 5.4 11 0.0 6.5 5.5 8.1 26.5 26.5 Pan 0.0
line RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used Vistore Not Used Stone Not Used Vistore Not Used Vistore Not Used Vistore BATCH 4 Bin Not Used Stone Bin Not Used Store Bin Not Used Store Bin Not Used Store Bin Not Used Store Bin Not Used Store Bin Bin Not Used Store Bin Store Bin Bin Bin Bin Bin Bin Bin Bin	Batch G	20.0% 100.0% Pb irams: Agg. Blend 0.0% 11.0% 0.0% 10.0% 20.0% 100.0% 20.0% 100.0% 20.0% 100.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 18.1% 0.0% 18.1% 0.0% 20.3% 2.9% 100.0% 5. 1280 Mix 8lend 0.0% 38.0%	30.1 1280 0 8atch Grams 0.0 489.0 134 5 0.0 232 3 0.0 127 3 260.4 36.6 1280.0 127 3 260.4 36.6 1280.0 127 3 260.4 36.6 1280.0 0.0 486.4	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph.	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 817 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9 136.1 on Sieve 1/8' 0.0 24.8	213.7 + Grams #20 0.0 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6 - Grams #20 0.0 0.0	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9 82.1 #40 0.0 0.0 0.0	103 7 #80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	\$200 0.0 0.0 0.0 0.0 5.3 0.0 25.8 311 #200 0.0 0.0 0.0 0.0	26.5 Pan 0.0 5.4 11 0.0 6.5 0.0 5.5 8.1 26.5 8.1 26.5 9an 0.0 9an
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone 18 Stone 167 Stone 18 Stone Not Used Staff RAP Time RAP Vingin Asphalt Total Mix BATCH 4 Bin Not Used 857 Stone 18 Stone 18 Stone 18 Stone	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 0.0% 10.0% 20.0% roms Agg. Blend 0.0% 40.0% 100.0	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 18.1% 0.0% 2.9% 20.3% 2.9% 100.0% 5. 1280 Mix Blend 0.0% 88.0% 100.5%	30.1 1280 0 8atch Grams 0.0 489.0 134 5 0.0 232 3 0.0 232 3 0.0 232 3 260.4 36.6 1280.0 8atch Grams 0.0 486.4 133.8	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph.	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 125.2 Batch 3/4 <sup>-</sup> 3/4 <sup>-</sup> 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	253 1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	136.8 1/8' 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9 136.1 0.0 136.1 0.0 23.7 40.9 136.1 0.0 23.7 40.9 136.2 0.0 1.1.4 0.0 2.3.7 40.9 1.2 0.0 2.3.7 40.9 1.2 0.0 2.3.7 40.9 1.2 0.0 2.3.7 40.9 1.2 0.0 2.3.7 40.9 1.3.6 1.4 0.0 2.3.7 40.9 1.3.6 1.4 0.0 2.3.7 40.9 1.3.6 1.4 0.0 2.3.7 40.9 1.3.6 1.3 1.4 0.0 2.3.7 1.4 0.0 2.3.7 1.4 0.0 2.3.7 1.4 0.0 2.3.7 1.0 0.0 2.3.7 1.0 0.0 2.3.7 1.0 0.0 2.3.7 1.0 0.0 2.3.7 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	213.7 - Grams #20 0.0 0.0 0.12.4 0.0 81.5 0.0 12.4 97.4 212.6 - Grams #20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	82.6 #40 0.0 0.0 0.0 59.2 0.0 0.0 22.9 82.1 82.1	103 7 #80 0.0 0.0 0.0 0.0 0.0 0.0 34 9 103 2 #80 0.0 0.0 0.0 0.0	#200 0.0 0.0 0.0 0.0 0.0 0.0 25.8 31.1 №200 0.0 0.0 0.0 0.0	26.6 Pan 0.0 5.4 11 0.0 6.5 8.1 26.5 8.1 26.5 8.1 26.5 8.1 0.0 5.4 11
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 167 Stone 18 Stone 18 Stone Not Used Natural Sand Vat Used Natural Sand Not Used Bin Not Used Bin Not Used 167 Stone 18 Stone Not Used Not Us	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 40.0% 10.0% 20.0% 10.0% Agg. 100.0% 10.0% Agg. 100.0% 10.0% 0.0% 10.0% 0.0% 0.0% 10.0% 0.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 10.5% 0.0% 9.9% 20.3% 2.9% 100.0% 5. 1280 Mix 8lend 0.0% 38.0% 0.0%	30.1 1280 0 8atch Grams 0.0 489.0 134 5 0.0 232 3 0.0 127 3 260.4 36.6 1280.0 8atch Grams 0.0 486.4 133.8 0.0	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph.	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 125.2 Batch 3/4 0.0 124.5 0.0 0.0 0.0 0.0	253 1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 80.7 14.6 253.7 Retained 1/4 0.0 81.2 76.2 76.4 0.0 80.7 14.5 14 0.0 80.7 14.5 14 0.0 80.7 14.5 14 0.0 14 14 0.0 14 17 14 14 17 14 17 16.8 17 16.8 17 16.8 17 16.8 17 16.8 17 16.8 17 16.8 16.9 17 16.9 16.9 17 16.9	136.8 100 Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9 136.1 136.1 136.1 136.1 136.2 0.0 0.0 24.9 3.5 0.0 0.0 24.9 3.5 0.0 0.0 1.4 0.0 23.7 40.9 1.4 0.0 23.7 40.9 1.4 0.0 23.7 40.9 1.4 0.0 23.7 40.9 1.4 0.0 23.7 40.9 1.4 0.0 0.0 0.0 1.1.4 0.0 0.2 1.5 1.4 0.0 0.0 0.0 1.1.4 0.0 0.2 1.5 1.4 0.0 0.0 0.0 1.1.4 0.0 0.2 1.5 1.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	213.7 + Grams #20 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6 - Grams #20 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	82.6 #40 0.0 0.0 59.2 0.0 22.9 82.1 82.1 #40 0.0 0.0 0.0 0.0 0.0	103 7 #80 0.0 0.0 0.0 68.3 0.0 68.3 0.0 68.3 0.0 0.0 103 2 #80 0.0 0.0 0.0 0.0 0.0 0.0	\$200 0.0 0.0 0.0 5.3 0.0 0.0 25.8 31 1 \$25.8 31 1 \$25.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 Pan 0.0 5.4 1.1 1.0 0.0 5.5 8.1 26.5 Pan 0.0 5.4 0.0 5.4 1.1 0.0
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used Vatural Sand Not Used Nat Used Nat Used Nat Used Sofi6" RAP Virgin Asphalt Total Mix BATCH 4 Bin Not Used 85 Stone 85 Stone 85 Stone 85 Stone 85 Stone 18 Stone 19 Stone 10 Stone	Batch G	20.0% 100.0% Pb rams: Agg. Blend 0.0% 11.0% 100.0% 10.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 9.9% 20.3% 2.9% 100.0% 5. 1280 Mix 8lend 0.0% 5. 1280 Mix 8lend 0.0% 5. 1280 Mix 10.5% 10.5% 10.5% 10.5%	30.1 1280 0 8atch Grams 0.0 489.0 134 5 0.0 134 5 0.0 127 3 260.4 36.6 1280.0 127 3 260.4 36.6 1280.0 1280.0 127 3 260.4 36.6 1280.0 1280.0 1280.0 127 3 260.4 36.6 1280.0 1280.0 127 3 260.4 36.6 1280.0 10000000000000000000000000000000000	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph.	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 125.2 Batch 3/4 <sup>-</sup> 0.0 124.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 817 7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 0.0 23.7 40.9 136.1 on Sieve 1/8' 0.0 24.8 35.0 0.0 24.8 35.0 0.0 24.8 35.0 0.0 0.0 24.9 136.1 136.1 137.1 136.1 137.1 136.1 137.1	213.7 + Grams #20 0.0 0.0 0.12.4 0.0 12.4 97.4 212.6 - Grams #20 0.0 0.0 0.0 0.0 0.0 0.1 21.3 0.0 0.0 0.1 0.0 0.0 0.0 0.0 0.0	82.6 82.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 22.9 82.1 82.1 82.1 82.1 82.1 82.1	103 7 #80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 34 9 103 2 #80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	#200     0.0     0.0     0.0     0.0     0.0     0.0     0.0     25.8     311     #200     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     5.3	26.6 Pan 0.0 5.4 11 0.0 6.5 8.1 26.5 8.1 26.5 8.1 26.5 8.1 0.0 5.5 8.1 0.0 0.5 5.5 7.5 7.5 0.0 0.5 5.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7
Ine RAP Virgin Asphelt Total Mix BATCH 3 Bin Not Used 857 Stone 85 Stone 18 Stone 18 Stone 18 Stone 19 Stone 19 Stone 10 St	Batch G	20.0% 100.0% Pb irams: Agg. Blend 0.0% 11.0% 0.0% 10.0% 20.0% 100.0% 20.0% 100.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 18.1% 0.0% 20.3% 2.9% 20.3% 2.9% 100.0% 5. 1280 Mix 8lend 0.0% 5. 1280 Mix 10.5% 0.0% 10.5% 0.0%	30.1 1280 0 8atch Grams 0.0 489.0 134.5 0.0 232.3 0.0 0.2 260.4 36.6 1280.0 127.3 260.4 36.6 1280.0 0.0 0.0 0.486.4 133.8 0.0 231.0 0.0 0.0 0.0 0.0	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph. Grams	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	253.1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	136.8 on Sieve 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9 136.1 on Sieve 1/8' 0.0 24.8 35.0 0.0 24.8 35.0 0.0 24.8 35.0 0.0 24.8 35.0 0.0 24.9 1/8' 0.0 24.9 1/8' 0.0 0.0 11.4 0.0 0.0 11.4 0.0 0.0 11.4 0.0 0.0 11.4 0.0 0.2 11.4 0.0 0.2 11.4 0.0 0.2 1.5 0.0 0.0 11.4 0.0 0.2 1.5 0.0 0.0 11.4 0.0 0.2 1.5 0.0 0.0 1.1 0.0 0.2 1.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	213.7 + Grams #20 0.0 0.0 0.0 21.4 0.0 81.5 0.0 12.4 97.4 212.6 *20 0.0 0.0 0.0 2.13 0.0 0.0 0.0 2.13 0.0 0.0 81.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	82.6 82.6 0.0 0.0 0.0 59.2 0.0 0.0 22.9 82.1 82.1 82.1 82.1 82.1 82.1 82.1 82.6	103 7 #80 0.0 0.0 0.0 0.0 0.0 0.0 34 9 103 2 #80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	#200 0.0 0.0 0.0 0.0 0.0 0.0 25.8 31 1 #200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 Pan 0.0 5.4 1.1 0.0 6.5 8.1 26.5 8.1 26.5 8.1 26.5 8.1 26.5 8.1 26.5 8.1 26.5 8.1 0.0 0.5 5 8.1 10 0.0 5 5 8.1 10 0.0 5 5 8.1 11 0.0 0 5.4 11 0.0 0 5.4 11 0.0 0 5.4 11 0.0 0 5.4 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 0.0 0 5.5 14 11 1 0 0 0 0 5.5 14 11 1 0 0 0 0 5.5 14 11 1 0 0 0 5.5 14 10 10 0 0 5.5 1 10 0 0 5 5 5 8.1 10 0 0 5 5 5 8.1 10 0 0 5 5 5 8.1 10 0 0 5 5 5 8.1 10 0 0 5 5 5 8.1 10 0 0 5 5 5 5 8.1 10 0 0 0 5 5 5 8.1 10 0 0 0 0 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Fine RAP Virgin Asphelit Total Mix BATCH 3 Bin Not Used 457 Stone H8 Stone Not Used Natural Sand Not Used S/16" RAP Fine RAP Virgin Asphalit Total Mix BATCH 4	Batch G	20.0% 100.0% Fb rams: Agg. Blend 0.0% 11.0% 0.0% 10.0% 20.0% 10.0% rams Agg. Blend 0.0% 40.0% 10.0% 10.0% 10.0% 10.0% 10.0%	2.4% 100.0% 4.5 1280 Mix Blend 0.0% 38.2% 0.0% 18.1% 2.9% 20.3% 2.9% 100.0% 18.0% 5. 1280 Mix Blend 0.0% 88.0% 10.5% 0.0% 18.1% 0.0% 9.9% 10.5% 0.0% 18.1% 0.0% 18.1% 0.0% 18.1% 0.0% 18.1% 0.0% 18.1% 0.0% 18.1% 0.0% 18.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	30.1 1280 0 8atch Grams 0.0 489.0 134 5 0.0 232 3 0.0 127 3 260.4 36.6 1280.0 8atch Grams 0.0 486.4 133.8 0.0 231.0 0.0 0.126.7	30.1 51.2 4.00% Asph Grams 5.1 15.9 36.6 57.6 4.50% Asph. Grams 5.1 5.7 5.7 5.7 5.7 5.7 5.7 5.7 5.7	0.0 1.5" 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 1 0.0 0.0 0.0 0.0 0.0 0.0 0.	125.8 Batch 3/4 0.0 125.2 0.0 0.0 0.0 0.0 0.0 0.0 125.2 Batch 3/4 <sup>-</sup> 0.0 124.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	253 1 Weights, 1/2' 0.0 251.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	255.1 Retained 1/4 0.0 81.7 76.8 0.0 0.0 0.0 0.0 80.7 14.6 253.7 Retained 1/4 0.0 83.2 76.4 0.0 0.0 83.2 76.4 0.0 0.0 83.2 76.4 0.0 0.0 80.3	136.8 1/8' 0.0 24.9 35.2 0.0 11.4 0.0 23.7 40.9 136.1 0.0 23.5 0.0 24.8 35.0 0.0 11.3 0.0 23.6	213.7 + Grams #20 0.0 0.0 0.12.4 0.0 81.5 0.0 12.4 97.4 212.6 #20 0.0 0.0 0.0 0.0 0.0 0.0 12.3 0.0 81.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0	82.6 #40 0.0 0.0 59.2 0.0 22.9 82.1 82.1 82.1 82.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	103 7 #80 0.0 0.0 0.0 0.0 0.0 0.0 34 9 103 2 #80 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	#200 0.0 0.0 0.0 0.0 0.0 0.0 25.8 31.1 #200 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	26.6 Pan 0.0 5.4 11 0.0 5.5 8.1 26.5 8.1 26.5 8.1 0.0 0.0 5.4 11 0.0 6.5 4 11 0.0 0.5 5.4

BATCH 5	Batch	P.	1.24														
DATCH J	Batch G	rams.	128					Batch 1	Weights,	Retained	on Sleve	• Grams					
Bin		Agg. Blend	Mix Blend	Batch Grams	Asph. Grams	1.5	1	3/4	1/2-	1/4-	1/8~	#20	#40	#80	#200	Pan	
Not Used		0.0%	0.0%	0.0	1000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
#67 Stone		40.0%	37.8%	483.8	1.1	0.0	0.0	123 9	249.2	80.8	24.7	0.0	0.0	0.0	0.0	5.3	483
#8 Stone		11.0%	10.4%	133.1		0.0	0.0	0.0	0.0	76.0	34.9	21.2	0.0	0.0	0.0	1.1	133
Not Used		0.0%	0.0%	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Natural Sand		19.0%	18.0%	229.8	1.5.55	0.0	0.0	0.0	0.0	0.0	113	80.7	58.6	67.6	5.3	6.4	229
Not Used		0.0%	0.0%	0.0	1000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
5/16" RAP		10.0%	9.8%	126.0	5.0	0.0	0.0	0.0	0.0	79.9	23.4	12.2	0.0	0.0	0.0	5.4	126
Fine RAP		20.0%	20.1%	257.6	15.7	0.0	0.0	0.0	0.0	14.4	40.4	96.4	22.7	34.5	25.5	8.0	257
Virgin Asphalt			3.9%	49.6	49.6				No.	a Salara	1000			Statistics of			49
Total Mix		100.0%	100.0%	1280.0	70.4	0.0	0.0	123.9	249.2	251.1	134.7	210.4	81.3	102.1	30.8	26.2	1280
					\$ 50%		Constant of	An useral		and the second							

5 00%



### **QA & CONSTRUCTION SAFETY BUREAU**

ASPHALT MAXIMUM DENSITY & MARSHALL PROPERTIES WORKSHEET - 3 RA BINDER MIX

PLANT NAME: Green Asphalt NYSDOT FACILITY #. H0385

MIX DESIGN DATE: 11/20/2023

### Theoretical Maximum Specific Gravity G<sub>mm</sub> per ASTM D2041

Trial Batch		1		2		3		4		5
Pb	3.	5%	4.	0%	4.	5%	5.	0%	5.	5%
A) Sample in Air (grams)	2077.4	2046.9	2063.7	2055 9	2063.6	2075.1	2046.7	2071.2	2063.2	2077.5
8) Pycnometer in Water (Grams)	1318.8	1326.5	1318.8	1326 5	1318.8	1326.5	1318.8	1326.5	1318 8	1326.5
C) Sample & Pycnometer in Water (Grams)	2585. <b>6</b>	2573.6	2569.3	2570.6	2562.1	2578.3	2546.6	2570.3	2549.8	2568.2
G <sub>mm</sub> (A/(A+B-C))	2.563	2.559	2.538	2.533	2.516	2.520	2.499	2.503	2.479	2.486
Average G <sub>mm</sub>	2.5	561	2.	535	2.5	518	2.5	501	2.4	182
Density Technician:	Alex Canto	)S			Date Teste	d	11/13	/2023	]	

### **Computation of Marshall Mix Properties (75 Blows per Side)**

COLUMN TWO IS NOT THE OWNER.	And the second se	A REAL PROPERTY AND A REAL						1						
	Weight	SSD	Weight	Sample	Bulk SG	Max SG	% Air	Unit	Meas	Corr	Corr.	Marshal	Marshall	
	In Air	Weight	In Water	Volume	G <sub>mb</sub>	Gmin	Pa	Weight	Stability	Factor	Stability	Flow	Quotient	
	Grams	Grams	Grams	CC		1.0	%	PCF	lbs	lbs	lbs	0.01"	lb/0.01"	
	А	В	С	D	E	F	G	Н	J	K	٤	М	N	
				B C	A/D	5 - 5	(F-E)/F	E*62 4			J*K		L/M	

TRIAL BAT	CH 1		P <sub>b</sub> =	3.5%									
Specimen A	1274.4	1276.4	741.1	535 3	2.381	2.561	7.04%		2560	0.96	2460	8.1	304
Specimen B	1270.6	1272.8	739.6	533.2	2.383	2 561	6.95%		2520	0.96	2420	8.6	281
Specimen C	1272.3	1274.2	739.4	534 8	2.379	2.561	7.11%	Sec. State	2460	0.96	2360	8.6	274
Average					2.381	2.561	7.03%	148.6		N. Server Star	2410	8.4	287

TRIAL BAT	CH 2		P <sub>b</sub> =	4.0%									
Specimen A	1269.6	1271.2	742.4	528.8	2.401	2.535	5.29%		2740	0.96	2630	9.2	286
Specimen B	1271.2	1272.8	742 9	529.9	2.399	2.535	5.37%	All and a second	2690	0.96	2580	8.8	293
Specimen C	1273.6	1275 4	744.2	531.2	2.398	2.535	5.42%		2650	0.96	2540	9.6	265
Average		Sec. Berge	S. Ellistenses		2.399	2.535	5.36%	149.7			2580	9.2	281

TRIAL BATC	CH 3		P <sub>b</sub> =	4.5%									
Specimen A	1270.6	1271.8	744.ŭ	527.2	2.410	2.518	4.29%		2860	0.96	2750	11.0	250
Specimen B	1267.7	1268.6	745.1	523.5	2 422	2 518	3.83%		2890	0.96	2770	10.8	256
Specimen C	1268.4	1269.3	743.6	525.7	2.413	2.518	4.18%	Sec. 2	2720	0.96	2610	10.4	251
Average	a Carlo State		Fly St	Sec. And	2 415	2 518	4.09%	150 7	and the second	Sec. Sec.	2710	10.7	252

TRIAL BAT	CH 4		P <sub>b</sub> =	5.0%									
Specimen A	1267.5	1268.3	745.8	522.5	2.426	2.501	3.01%		2890	1	2890	11.4	254
Specimen B	1271.6	1272.5	<b>749</b> 0	523.5	2.429	2.501	2.88%		2960	0.96	2840	11.4	249
Specimen C	1269.3	1270.3	746.2	524.1	2.422	2.501	3.16%		2920	0.96	2800	11.9	235
Average		e	and the second		2.426	2.501	3.00%	151.4			2840	11.6	246

RIAL BATC	CH 5		P <sub>b</sub> =	5.5%									
Specimen A	1268.4	1269.0	750.2	518.8	2.445	2.482	1.50%		2840	1	2840	12.8	222
Specimen B	1269.5	1270.3	749.0	521.3	2.435	2.482	1.88%		2760	1	2760	13.5	204
Specimen C	1266-8	1267.5	746.5	521.0	2.431	2.482	2.04%		2840	1	2840	13.1	217
Average				Constant States	2.437	2.482	1.81%	152.1	No. States		2810	13.1	214

Marshall Technician.	Alex Cantos	Date Tested	11/13/2023
	A REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PROPERT		



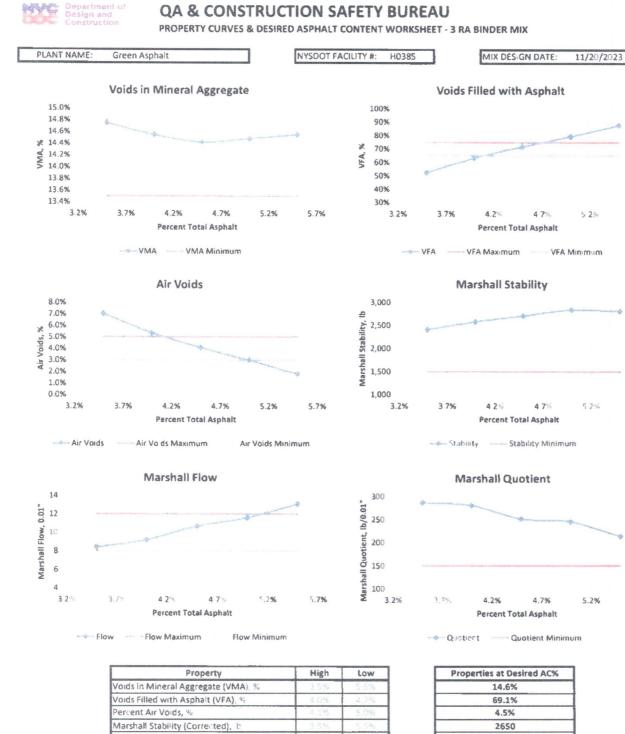
# **QA & CONSTRUCTION SAFETY BUREAU**

MIX VOLUMETRIC PROPERTIES WORKSHEET - 3 RA BINDER MIX

PLANT:	Green Asphalt	NYSDOT	FACILITY #	•	H0385	MIX DESIG	11/20/2023					
Agg. Blend %	Constituent Material	NYSDOT	G <sub>sa</sub>	G <sub>sb</sub>	Total Mix Composition by Weight Trial Batch							
Dicita /o		Jource			1	2	3	4	5			
0.0%	Not Used				0.0%	0.0%	0.0%	0.0%	0.0%			
40.0%	#67 Stone	8-17R	2.743	2.702	38.6%	38.4%	38.2%	38.0%	37.8%			
11.0%	#8 Stone	1-48R	2.723	2.686	10.6%	10.6%	10.5%	10.5%	10.4%			
0.0%	Not Used				0.0%	0.0%	0.0%	0.0%	0.0%			
19.0%	Natural Sand	10-105F2	2.687	2.645	18.3%	18.2%	18.1%	18.1%	18.0%			
0.0%	Not Used				0.0%	0.0%	0.0%	0.0%	0.0%			
10.0%	5/16" RAP	and the second second	2.755	2.726	10.1%	10.0%	9.9%	9.9%	9.8%			
20.0%	Fine RAP	San States	2.740	2.716	20.6%	20.4%	20.3%	20.2%	20.1%			
	Virgin Asphalt		1993.5.51	POLICE B-	1.8%	2.4%	2.9%	3.4%	3.9%			
100.0%					100.0%	100.0%	100.0%	100.0%	100.0%			

	Mix General Properties	N		Trial Batch							
				1	2	3	4	5			
Pb	Percent Total Asphalt Binder, %			3.5%	4.0%	4.5%	5.0%	5.5%			
Pba	Percent Absorbed Asphalt Binder, %			0.17%	0.06%	0.10%	0.13%	0.11%			
Pbe	Percent Effective Asphalt Binder, %	in the second	A.ST.C	3.34%	3.95%	4.41%	4.88%	5.39%			
DP	Dust Proportion (0.6 to 1.2 desired)	1.5.6.6.1		0.9	1.1	1.2	1.3	1.5			
G <sub>mm</sub>	Mix Maximum Specific Gravity		- CER	2.561	2.535	2.518	2.501	2.482			
G <sub>mb</sub>	Mix Bulk Specific Gravity			2.381	2.399	2.415	2.426	2.437			
Gsb	Aggregate Bulk Gravity			2.695	2.695	2.695	2.695	2.695			
Gse	Aggregate Effective Gravity			2.707	2.699	2.702	2.704	2.703			
$G_{sa}$	Aggregate Apparent Specific Gravity			2.730	2.730	2.730	2.730	2.730			

<b>N</b> /	lix Acceptance Properties	Low	High					Tri	al Batch	1			
VI.	wix Acceptance Properties		Limit	1			2		3		4		5
VMA	Voids in Mineral Aggregate, %	13.5%		Y	14.7%	~	14.5%	~	14.4%	1	14.5%	~	14.5%
V IVIA	Note: All five	trial batches	must mee	the	minimun	n VA	1A requir	eme	ent.				
VFA	Voids Filled with Asphalt, %	65%	75%	×	52.3%	×	63.1%	-	71.6%	×	79.3%	X	87.6%
Pa	Percent Air Voids, %	3.0%	5.0%	×	7.0%	×	5.4%	V	4.1%	1	3.0%	×	1.8%
	Marshall Stability (Corrected), lb	1500		de	2410	w.	2580	V	2710	~	2840	~	2810
	Marshall Flow, 0.01"	8	12	V	8.4	V	9.2	- Ja	10.7	V	11.6	×	13.1
Reading and	Marshall Quotient, Ib/0.01"	150		.1	287	Nº.	281	1	252	1	246	V	214



5.7%

57%

5.7%

10.4

259.6

Desired Asphalt Content is the midpoint, unless the midpoint is on the VMA curve's positive slope. If this is the case, the Desired Asphalt Content is as close as possible to the bottom of the VMA curve, within the Overlap Range.

4.4%

4.4%

4.7

4.19

Marshall Flow, 0 01

Overlap

Marshall Quotient, lb/0.01

Midpoint

Desired Total Asphalt Content Pb