INFORMATION HANDOUT

MATERIALS INFORMATION

PAVEMENT SAMPLE CORING RECORD

PAVEMENT SAMPLES TEST REPORT

PAVEMENT SAMPLE CORING RECORD

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PAVEMENT CORE RECORD

Dist. 02 Co. Tri Rte 299 P.M. 26.18/36.89

Contract # : 02-2E2601 Sheet 1 of 1

Cored By : Terry McCormick Date 10-6-10

Federal # :

Job # :

Contract Limits : AC Thickness - And get enough AC off. To get oil content + Grading at each location

SOURCE	CHARGE	E.A.	SPECIAL D. #	ACTIVITY
03 - 319	02 - 319	2E2601		1185

CORE NO.	LOCATION			PAVEMENT THICKNESS		BIT DATA		REMARKS
	STATION	LANE	POSITION	DESIGN	ACTUAL	CORE DIA.	SERIAL NO.	
				AC		8 inch		
1	26.18	E/B	3FT. LFL	0.75'				
2	26.18	E/B	11FT. LFL	0.95'				LFL = Left Fog line
3	26.18	W/B	1FT. LFL	0.55'				
4	28.00	E/B	2½FT. LFL	0.83'				
5	28.00	E/B	9FT. LFL	0.75'				
6	28.00	W/B	2FT. LFL	0.7'				
7	28.99	E/B	1FT. LFL	0.95'				
8	28.99	E/B	9FT. LFL	0.7'				
9	28.99	W/B	2FT. LFL	0.8'				
10	31.5	E/B	1FT. LFL	0.7'				
11	31.5	E/B	9FT. LFL	0.7'				
12	31.5	W/B	2FT. LFL	0.65'				
13	36.89	E/B	1FT. LFL	0.85'				
14	36.89	E/B	9FT. LFL	0.8'				
15	36.89	W/B	1FT. LFL	0.8'				

PAVEMENT SAMPLES TEST REPORT

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

TEST REPORT

TL-0302 (Rev. 5/96)

FRONT

TEST NUMBER	DATE	
D73709	1/12/10	
	CALC. TRM	APPROV. W. JENKINS
	DATE 1/27/10	

REPORT OF TESTS ON

PRELIMINARY TESTS ON AC CORE SAMPLES (CORE No. 10)

IF CONTRACT, USE CONTRACT ITEM

SOURCE DIST	SOURCE UNIT	CHG. DIST.	EXPENDITURE AUTHORIZATION	SUB-JOB
03	3119	02	2E2601	

SPECIAL DESIGNATION (Use When Applicable)	F.A.	ACTIVITY OR OBJECT	AMOUNT
	11	8 5	

	AS RECEIVED	RET. CRUSHED	AS USED BY VOL.	AS USED BY WT.	SPECIF. / LIMITS SOUGHT	SURFACE AREA FACTORS	SURFACE AREA
50 mm							
37.5 mm							
25.0 mm							
19.0 mm	100						
12.5 mm	98						
9.5 mm	93						
6.35 mm	66						0.4
4.75 mm	48					0.4	
2.36 mm	29					0.8	
1.18 mm	22					1.6	
600 µm	16					2.9	
300 µm	12					6.1	
150 µm	9					12.3	
75 µm	6					32.8	
BITUMEN	7.06*					SURFACE AREA m²/kg	

NOTE: All Surface Area Factors Must Be Used In Calculations

SPECIMEN	A	B	C	D	E
TEMPERATURE					
MOISTURE					
BIT. GRADE					
BIT. RATIO					
SP. GR. BRIQ.					

SPECIF. STABILOMETER

VOIDS

SPECIF. SWELL

SURFACE FLUSHING

DISTRICT ENGINEER		METS	
DIST. MAT'LS. ENGINEER		PAVEMENT	
RESIDENT ENGINEER		ACCOUNTING	
CONSTRUCTION DEPT.	/	J. GASIK	H
~~310~~ 202.3 EXT & GRADE		306 SP. GR.	
217 S.E.		305 SWELL	G
302 FILM STRIP		311 MOIST.	
304.1 STAB. (CONTROL)		303 CKE	
304.2 STAB. (DESIGN)		367 OBC	
307 M.V.S.	/	382 IGN.	F

MOISTURE VAPOR SUSCEPT

HOURS				SPECIF.
MOIST. ABSORB.				
STABILOMETER				
BIT. RATIO				
SP. GR. BRIQ.				

Ko = Kr = Km =

SPECIFIC GRAVITY AGGREGATE

		E
AS RECEIVED F	C	
RET. CRUSHED F	C	

ABRASION TESTS	% LOSS	SPECIF.
LOS ANGELES - 100Rev		
LOS ANGELES - 500Rev		

FILM STRIPPING

CRUSHED PARTICLES

(C)	(F)	COMB.

SAND EQUIVALENT VALUE = SPECIF. =

RECOMMENDED BITUMEN CONTENT

GRADING AS USED WAS OBTAINED BY COMBINING SAMPLES AS FOLLOWS

% WT.	% VOL.	TEST NO.	DESCRIPTION

REMARKS

* UNCORRECTED.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

SAMPLE IDENTIFICATION CARD

TL-0101 (REV. 10/97)

CARD NUMBER C 692826

☐ PRELIMINARY TESTS
☐ PROCESS TESTS
☐ ACCEPTANCE TESTS

INDEPENDENT ASSURANCE TESTS
☐ DIST. LAB
☐ TRANS. LAB

☐ SPECIAL TESTS

SAMPLE SENT TO:
☐ HDQTRS. LAB
☐ BRANCH LAB
☐ DIST. LAB

FIELD NO. 73709
DIST. LAB NO. 73710
LOT NO. 73711
SHIPMENT NO.
P.O. OR REQ. NO.
AUTHORIZATION NO. 02-2E2601

SAMPLE OF AC CORES

FOR USE IN GRADING - OIL CONTENT

SAMPLE FROM STREET SAMPLE - #10 - #11 - #12

DEPTH

LOCATION OF SOURCE ~~CALTRANS~~ TRAVEL WAY OS WT W/B OS WT E/B WHO CENTER OF double yellow LINE

THIS SAMPLE IS SHIPPED IN (NO. CONTAINERS) 1
AND IS ON E OF A GROUP OF 1
SAMPLES REPRESENTING (TONS, GALS, BBLS, STA. ETC.) 3 EA AC CORES

OWNER OR MANUFACTURER CALTRANS

TOTAL QUANTITY AVAILABLE
TEST RESULTS DESIRED ☑ NORMAL ☐ PRIORITY
DATE NEEDED

REMARKS GRADING - OIL CONTENT

COVER ADDITIONAL INFORMATION WITH LETTER

DATE SAMPLEED 10-6-10
BY TERRY McCormick TITLE TEI
DIST, CO, RTE, PM 02-TRI-299-PM 26.18/36.89

LIMITS

CONT. NO. 02-2E2601
FED. NO.
RES. ENGR. OR SUPT. WAYNE BROWN - JOEL GASIK
ADDRESS
CONTRACTOR

MAIL TO SAME DESTINATION AS SAMPLE

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

TEST REPORT

TL-0302 (Rev. 5/96)

TEST NUMBER	DATE	
D73710	1/12/10	
	CALC. [illegible]	APPROV. W. JENKINS
	DATE 1/27/10	

REPORT OF TESTS ON

PRELIMINARY TESTS ON AC CORE SAMPLES (CORE No. 11)

IF CONTRACT, USE CONTRACT ITEM

SOURCE DIST.	SOURCE UNIT	CHG. DIST.	EXPENDITURE AUTHORIZATION	SUB-JOB
03	3119	02	2E2601	

SPECIAL DESIGNATION (Use When Applicable)	F.A.	ACTIVITY OR OBJECT	AMOUNT
	11	85	

	AS RECEIVED	RET. CRUSHED	AS USED BY VOL.	AS USED BY WT.	SPECIF. / LIMITS SOUGHT	SURFACE AREA FACTORS	SURFACE AREA
50 mm							
37.5 mm							
25.0 mm							
19.0 mm	100						
12.5 mm	98						
9.5 mm	92						
6.35 mm	64						0.4
4.75 mm	41					0.4	
2.35 mm	30					0.8	
1.18 mm	22					1.6	
600 µm	16					2.9	
300 µm	12					6.1	
150 µm	9					12.3	
75 µm	6					32.8	
BITUMEN	6.66*					SURFACE AREA m²/kg	

NOTE: All Surface Area Factors Must Be Used In Calculations

SPECIMEN	A	B	C	D	E
TEMPERATURE					
MOISTURE					
BIT. GRADE					
BIT. RATIO					
SP. GR. BRIQ.					

SPECIF.	STABILOMETER

VOIDS

SPECIF.	SWELL

SURFACE FLUSHING

	DISTRICT ENGINEER		METS
	DIST. MAT'LS. ENGINEER		PAVEMENT
	RESIDENT ENGINEER		ACCOUNTING
	CONSTRUCTION DEPT.	/	J. GASIK
/	310 202.3 EXT & GRADE		308 SP. GR.
	217 S.E.		305 SWELL
	302 FILM STRIP		311 MOIST.
	304.1 STAB. (CONTROL)		303 CK.E
	304.2 STAB. (DESIGN)		357 OBC
	307 M.V.S.	/	382 IGN.

H G F E D C B A

MOISTURE VAPOR SUSCEPT

HOURS				SPECIF.
MOIST. ABSORB.				
STABILOMETER				
BIT. RATIO				
SP. GR. BRIQ.				

Ke = Kf = Km =

SPECIFIC GRAVITY AGGREGATE

AS RECEIVED F	C	
RET. CRUSHED F	C	

ABRASION TESTS	% LOSS	SPECIF.
LOS ANGELES - 100Rev		
LOS ANGELES - 500Rev		

FILM STRIPPING

CRUSHED PARTICLES

{C}	{F}	COMB.

SAND EQUIVALENT VALUE = SPECIF. =

RECOMMENDED BITUMEN CONTENT

GRADING AS USED WAS OBTAINED BY COMBINING SAMPLES AS FOLLOWS

% WT.	% VOL.	TEST NO.	DESCRIPTION

REMARKS

* UNCORRECTED

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

SAMPLE IDENTIFICATION CARD

TL-0101 (REV. 10/97)

CARD NUMBER C 692826

☐ PRELIMINARY TESTS
☐ PROCESS TESTS
☐ ACCEPTANCE TESTS
INDEPENDENT ASSURANCE TESTS
☐ DIST. LAB
☐ TRANS. LAB
☐ SPECIAL TESTS

SAMPLE SENT TO:
☐ HDQTRS. LAB
☐ BRANCH LAB
☐ DIST. LAB

FIELD NO. 73709
DIST. LAB NO. 73710
LOT NO. 73711
SHIPMENT NO.
P.O. OR REQ. NO.
AUTHORIZATION NO. 02-2E2601

SAMPLE OF 8" AC CORES

FOR USE IN GRADING - OIL CONTENT

SAMPLE FROM STREET SAMPLE - #10 - #11 - #12

DEPTH

LOCATION OF SOURCE ~~CATRANS~~ TRAVEL WAY OS WT W/B OS WT E/B HAND CENTER OF double yellow line

THIS SAMPLE IS SHIPPED IN (NO. CONTAINERS) 1
AND IS ON E OF A GROUP OF 1
SAMPLES REPRESENTING (TONS, GALS, BBLS, STA, ETC.) 3 EA AC CORES

OWNER OR MANUFACTURER CATRANS

TOTAL QUANTITY AVAILABLE
TEST RESULTS DESIRED ☑ NORMAL ☐ PRIORITY
DATE NEEDED

REMARKS GRADING - OIL CONTENT

COVER ADDITIONAL INFORMATION WITH LETTER

DATE SAMPLEED 10-6-10
BY TERRY McCormick TITLE TRT
DIST, CO, RTE, PM 02-TRI-299-PM 26.18/36.89

LIMITS

CONT. NO. 02-2E2601
FED. NO.
RES. ENGR. OR SUPT. WAYNE BROWN - JOEL GASIK
ADDRESS
CONTRACTOR

MAIL TO SAME DESTINATION AS SAMPLE

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

TEST REPORT

TL-0302 (Rev. 5/96)

TEST NUMBER	DATE	
D73711	1/12/10	
	CALC. MJH.	APPROV. W. JENKINS
	DATE 1/27/10	

REPORT OF TESTS ON

PRELIMINARY TESTS ON AC CORE SAMPLES (CORE No. 12)

IF CONTRACT, USE CONTRACT ITEM

SOURCE DIST	SOURCE UNIT	CHG. DIST.	EXPENDITURE AUTHORIZATION	SUB-JOB
03	319	02	2E2601	

SPECIAL DESIGNATION (Use When Applicable)	F.A.	ACTIVITY OR OBJECT	AMOUNT
	11	85	

	AS RECEIVED	RET. CRUSHED	AS USED BY VOL.	AS USED BY WT.	SPECIF. / LIMITS SOUGHT	SURFACE AREA FACTORS	SURFACE AREA
50 mm							
37.5 mm							
25.0 mm							
19.0 mm	100						
12.5 mm	98						
9.5 mm	93						
6.35 mm	71						0.4
4.75 mm	59					0.4	
2.35 mm	39					0.8	
1.18 mm	27					1.6	
600 µm	19					2.9	
300 µm	13					6.1	
150 µm	10					12.3	
75 µm	7					32.8	
BITUMEN	6.58 %					SURFACE AREA m²/kg	

NOTE: All Surface Area Factors Must Be Used In Calculations

SPECIMEN	A	B	C	D	E
TEMPERATURE					
MOISTURE					
BIT. GRADE					
BIT. RATIO					
SP. GR. BRIQ.					

SPECIF.	STABILOMETER

	VOIDS

SPECIF.	SWELL

	SURFACE FLUSHING

	DISTRICT ENGINEER		METS
	DIST. MAT'LS. ENGINEER		PAVEMENT
	RESIDENT ENGINEER		ACCOUNTING
	CONSTRUCTION DEPT.	/	J. GASIK
/	~~340~~ 202.3 EXT & GRADE		308 SP. GR.
	217 S.E.		305 SWELL
	302 FILM STRIP		311 MOIST.
	304.1 STAB. (CONTROL)		303 CK.E
	304.2 STAB. (DESIGN)		367 OBC
	307 M.V.S.	/	382 IGN.

H G F E D C B A

MOISTURE VAPOR SUSCEPT

HOURS				SPECIF.
MOIST. ABSORB.				
STABILOMETER				
BIT. RATIO				
SP. GR. BRIQ.				

Ke = Kf = Km =

SPECIFIC GRAVITY AGGREGATE

AS RECEIVED F	C	
RET. CRUSHED F	C	

ABRASION TESTS

	% LOSS	SPECIF.
LOS ANGELES - 100Rev		
LOS ANGELES - 500Rev		

FILM STRIPPING

CRUSHED PARTICLES

(C)	(F)	COMB.

SAND EQUIVALENT VALUE = SPECIF. =

RECOMMENDED BITUMEN CONTENT

GRADING AS USED WAS OBTAINED BY COMBINING SAMPLES AS FOLLOWS

% WT.	% VOL.	TEST NO.	DESCRIPTION

BITUMEN RATIO

REMARKS

* UNCORRECTED.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

SAMPLE IDENTIFICATION CARD

TL-0101 (REV. 10/97)

CARD NUMBER C 692826

☐ PRELIMINARY TESTS
☐ PROCESS TESTS
☐ ACCEPTANCE TESTS
INDEPENDENT ASSURANCE TESTS
☐ DIST. LAB
☐ TRANS. LAB
☐ SPECIAL TESTS

SAMPLE SENT TO:
☐ HDQTRS. LAB
☐ BRANCH LAB
☐ DIST. LAB

FIELD NO. 73709
DIST. LAB NO. 73710
LOT NO. 73711
SHIPMENT NO.
P.O. OR REQ. NO.
AUTHORIZATION NO. 02-2E2601

SAMPLE OF 8# AC CORES
FOR USE IN GRADING - OIL CONTENT
SAMPLE FROM STREET SAMPLE - #10 - #11 - #12
DEPTH
LOCATION OF SOURCE ~~[illegible]~~ TRAVEL WAY OS WT W/B OS WT E/B HAND CENTER OF double yellow line
THIS SAMPLE IS SHIPPED IN (NO. CONTAINERS) 1
AND IS ON E OF A GROUP OF 1
SAMPLES REPRESENTING (TONS, GALS, BBLS, STA, ETC.) 3 EA AC CORES
OWNER OR MANUFACTURER CALTRANS
TOTAL QUANTITY AVAILABLE
TEST RESULTS DESIRED ☑ NORMAL ☐ PRIORITY
DATE NEEDED
REMARKS GRADING - OIL CONTENT

COVER ADDITIONAL INFORMATION WITH LETTER
DATE SAMPLEED 10-6-10
BY TERRY McCormick TITLE TEI
DIST, CO, RTE, PM 02-TRI-299-PM 26.18/36.89
LIMITS
CONT. NO. 02-2E2601
FED. NO.
RES. ENGR. OR SUPT. LANCE BROWN - JOEL GASIK
ADDRESS
CONTRACTOR

MAIL TO SAME DESTINATION AS SAMPLE

RECLAIMED ASPHALT PAVEMENT AGGREGATE GRADATION, ASPHALT BINDER CONTENT, AND THEORETICAL MAXIMUM SPECIFIC GRAVITY

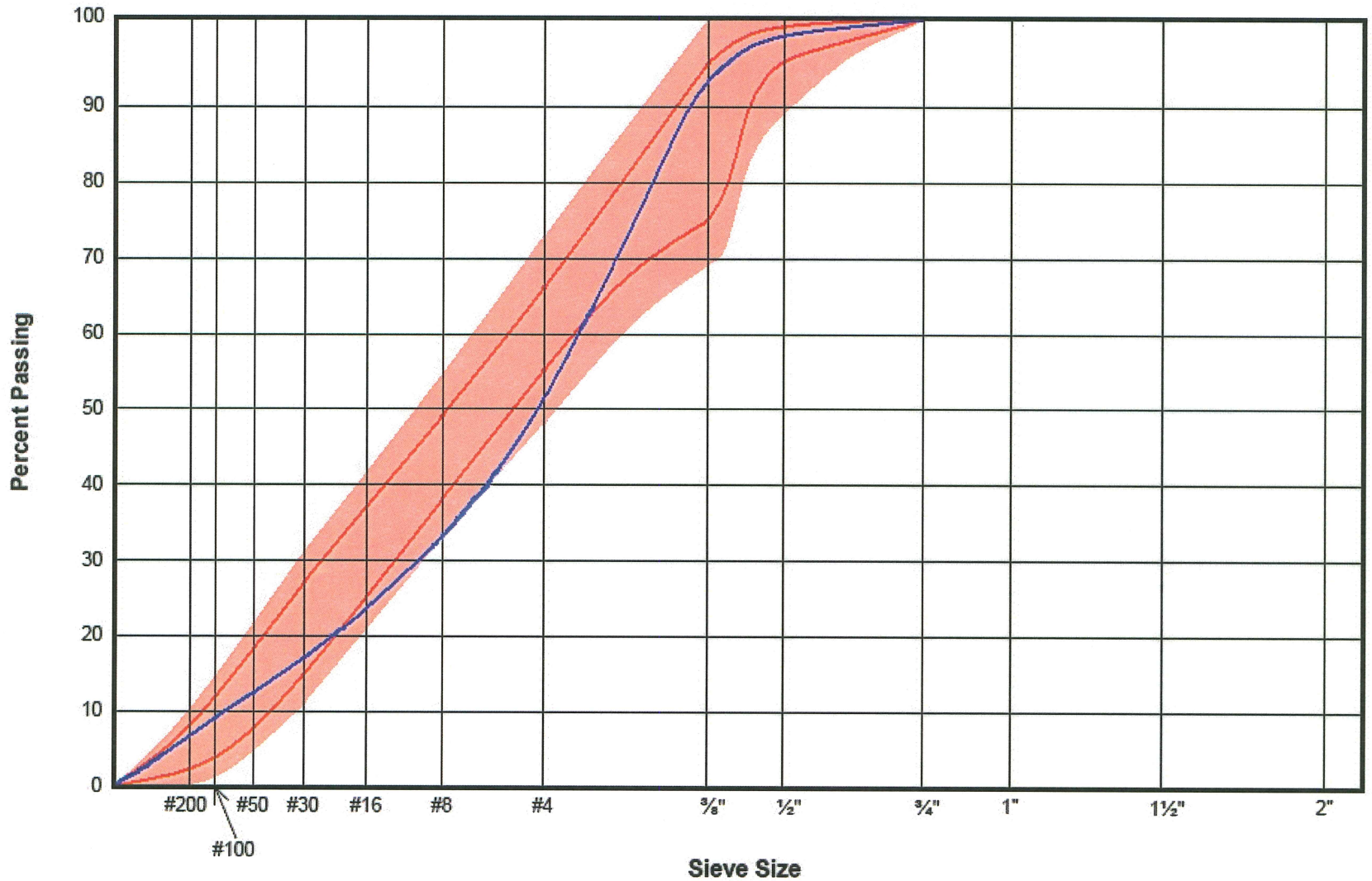
HMA TYPE	PRODUCER NAME	PRODUCER MIX IDENTIFICATION NUMBER	DATE	RAP SOURCE
8-inch AC Cores Nos. 10, 11, & 12	N/A	Sample Nos. D73709, D73710, & D73711	1/27/10	In-place

Sieve Size		ASTM D 2172 (Method B), CT 202, and CT 309 [1]				CT 382 and CT 202 [2]				Aggregate Gradation Correlation Factor [3]
		Sample 1	Sample 2	Sample 3	Average [4]	Sample 1	Sample 2	Sample 3	Average	
% Passing	2"									
	1½"									
	1"									
	¾"					100.0	100.0	100.0	100.0	
	½"					97.5	97.9	98.0	97.8	
	⅜"					92.9	92.4	93.0	92.8	
	No. 4					48.2	46.9	58.7	51.3	
	No. 8					29.4	29.7	39.1	32.7	
	No. 16					21.6	22.2	26.6	23.5	
	No. 30					15.8	16.2	18.6	16.9	
	No. 50					11.9	11.9	13.2	12.3	
	No. 100					8.6	8.6	9.7	9.0	
	No. 200					6.0	6.0	7.1	6.4	
Asphalt Binder Content						*Report Only* 7.1	*Report Only* 6.7	*Report Only* 6.6	*Report Only* 6.8	—
Maximum Specific Gravity						—	—	—	—	—

[1] A minimum of three samples is required. Determine the asphalt binder content of each RAP sample under ASTM D 2172, Method B. Perform a sieve analysis on each sample of recovered aggregate under CT 202, Appendix A. Determine the theoretical maximum specific gravity (Rice) of each RAP sample under CT 309, Section J.

[2] A minimum of three samples is required. Burn asphalt from each RAP sample in accordance with CT 382. Calculate and report asphalt binder content for information only. Perform a sieve analysis on each sample of recovered aggregate in accordance with CT 202, Appendix A for each ignition oven to be used for testing during production.

[3] The correlation factor for each sieve is determined by taking the average gradation of the ASTM D 2172 samples minus the average gradation of the CT 382 samples.

[4] Average aggregate gradation and asphalt binder content (ASTM D 2172 test results) used to calculate mix design batch weights.

FHWA 0.45 Power Gradation Chart