Version: V03.40

Oklahoma Department of Transportation Mix Design Report

Asphalt Concrete, Type S4 (PG 76-28 OK) Mat'l. Code: asco010
(Material Full Name and Material Code)

Insoluble ID: I1
(Design Type and Design Type ID)

J.O.B. Const Co P/S # m00562
(Producer/Supplier Name and Producer/Supplier Code)

WS4qc0101603300
(Mix ID)

J.O.B. Const. Co (Cameron, OK) - 300TPH PLANT ID # m00562-03
(Plant Name and Plant ID)

Aggregate	Producer/Supplier	% USED
3/4" Chips	APAC-Central #018 (Spiro, OK) P/S # m002484003	20
1/2" Chips	APAC-Central #018 (Spiro, OK) P/S # m002484003	25
Coarse Scrns.	APAC-Central #018 (Spiro, OK) P/S # m002484003	40
Sand (Unlisted Source)	Arkansas River Sand (Braden Bottoms)	15

Warm Mix Asphalt (WMA) Technology: TEREX (Foaming Process) qual028 Terex Roadbuilding m00801
(Product Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Asphalt Cement: Asphaltic Cement Type PG 76-28 OK, acem001, Lion Oil Co. (Muskogee, OK), m00511
(Material Full Name, Material Code, Producer/Supplier Name, Producer/Supplier Code)

Requires Form 93-E0 signed by the Department for production use.
-Oklahoma D.O.T. Materials-

Sieve Size	APAC-Central #018 (Spiro, OK) P/S # m002484003	APAC-Central #018 (Spiro, OK) P/S # m002484003	APAC-Central #018 (Spiro, OK) P/S # m002484003	Arkansas River Sand (Braden Bottoms)					Comb. Agg.	JMF	Min.	Max.	% Tol. (±)
	3/4" Chips	1/2" Chips	Coarse Scrns.	Sand (Unlisted Source)									
3/4 in (19 mm)	100	100	100	100					100	**100**	100	100	0
1/2 in (12.5 mm)	63	100	100	100					93	**93**	86	100	7
3/8 in (9.5 mm)	34	85	100	98					83	**83**	76	90	7
#4 (4.75 mm)	6	17	97	88					57	**57**	50	64	7
#8 (2.36 mm)	3	3	67	75					39	**39**	34	44	5
#16 (1.18 mm)	2	3	46	63					29	**29**	25	33	4
#30 (.600 mm)	2	3	36	49					23	**23**	19	27	4
#50 (.300 mm)	2	3	30	32					18	**18**	14	22	4
#100 (.150 mm)	1	1	20	9					10	**10**	7	13	3
#200 (.075 mm)	1.4	1.3	7.0	2.2					3.7	**3.7**	1.7	5.7	2
AC Content %									5.7	**5.7**	5.3	6.1	0.4

Warm Mix Asphalt (WMA) Additive % 2.0

	°F (°C)	Required
Mix temperature @ discharge from mixer:	275 (135)	± 20 °F (± 10 °C)
Optimum roadway compaction temperature:	260 (127)	
Laboratory mixing temperature:	325 (163)	
Laboratory compaction temperature:	300 (149)	

Tests on Asphalt Cement	Found
Specific Gravity @ 77 ° F	1.0100

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Tests on Compressed Mixtures (@ Design AC)	# Gyr.	% Density of Gmm	% Density Required
Nini	8	88.4	85.5 - 89.0
Ndes	80		96.0

Tests on Aggregates		Required		Units
Durability Index	80	40	min.	%
F.A.A. %U		N/A		%
Flat and Elongated	0	10	max.	%
Fractured Faces	100/100	98/95	min.	%
Insoluble Residue	92.9	40	min.	%
LA Abrasion	33	40	max.	%
Micro-Deval	16.3	25	max.	%
Permeability	5.9	12.5	max.	10^{-5}cm/s
Sand Equivalent	68	50	min.	%
Pba	0.96			
IOC	0.64			%
Gse	2.579			
Gsb	2.517			
Specimen Weight				g

Tests on Compressed Mixtures

%AC	Gmb	Gmm	% Density of Gmm	% Density Required Design / Field	% VMA	% VMA Required Design / Field	% VFA	% VFA Required
5.2	2.238	2.386	93.8	96.0 / 94.5 - 97.4	15.7	14.5 / 14.0	60.5	72 - 77
5.7	2.274	2.369	96.0		14.8		73.0	
6.2	2.284	2.352	97.1		14.9		80.5	

Dust Prop.
0.9
0.8
0.7

Dust Prop. Req. 0.6 - 1.6

ITS (PSI) 159.3 75 min.
TSR 0.82 0.80 / 0.75 min. (Design / Field)
Compacted Wt. (lbs/sy/1" thick) = 104.2 @ 5.7 % Asphalt Cement

Hamburg Rut Test Depth (mm) 1.59 12.50 max. @ 20,000 cycles

MEETS SPECIFICATION REQUIREMENTS PER SPECIAL PROVISION 708-26(a-f) 09

Comments:

Last Modified By: Williams, Bobby Ray bwilli01
(User Name and User ID)

Date: 3/15/2017
(mm/dd/yyyy)