LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DOTD 03-22-4196
Metric
4/98

LABORATORY MOISTURE - DENSITY RELATIONSHIP
DOTD TR 418 - Methods E & F
(Metric)

PROJECT NO: _____ DATE: _____ LAB NO: _____

*TYPE ADDITIVE: _____ TYPE SOIL: _____ SAMPLE NO: _____

TESTED BY: _____ CHECKED BY: _____

SIEVE	*** ***		Wt. Retained, g	+25.0 mm Replacement $B_n/\{1 - (A/C)\}$	Prorated Wt. Ret., g (lb) (F)	% Retained (F/E) x 100 (G)	Adjusted Wt., g (G x 7000) ÷ 100	Accumulated Wt. g
25.0 mm	A							
19.0 mm	B_1			——›				
12,5 mm	B_2			——›				
4.75 µm	B_3			——›				
2.00 mm	B_4			——›				
Subtotal	C	$A + \sum B_{1..n}$	——›					
-2.00 mm	D		——›					7000
Total	E	C + D	——›			100	K = 7000	

*MAX. DRY DENSITY OF MATERIAL (___ TR 418-E, ___ TR 415-A), kg/m³	H		
*REQUIRED % BY VOL. OF ADDITIVE (___ TR 432-A, ___ TR 432-B, ___ TR 416, ___ specified)	I		
*% WT. OF ADDITIVE (_____ chart, _____ formula)	J		
DRY WT. OF MATERIAL (Representative Portion), g	K		7000
*WT. OF ADDITIVE TO BE ADDED, g	L	(J x K) ÷ 100	
*TOTAL DRY WT. OF MATERIAL AND ADDITIVE, g	M	K + L	

* *FOR USE WITH DOTD TR 418, METHOD F ONLY.*

CURVE POINT NO.	***		1	2	3	4	5	6
WATER ADDED, mL	N	See Calculations						
WT. MOLD, BASE (if applicable) & WET MATERIAL, g	O							
WT. MOLD & BASE (if applicable), g	P							
WT. WET COMPACTED MATERIAL, g	Q	O - P						
VOLUME OF MOLD (or specimen), m³	R							
WT. OF PAN & DRY MATERIAL, g	S							
WT. OF PAN, g	T							
WT. OF DRY MATERIAL, g	DW	S - T						
WT. OF WATER, g	WW	Q - DW						
WET DENSITY, kg/m³	WWD	$\frac{Q}{(1000)\ R}$						
MOISTURE CONTENT, %	MC	(WW/DW) x 100						
DRY DENSITY, kg/m³	DWD	$\frac{WWD}{100 + MC} \times 100$						

REMARKS: _____