LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DOTD 03-22-4195
English
Rev. 4/98

LABORATORY MOISTURE - DENSITY RELATIONSHIP
DOTD TR 418 - Methods C & D
(English)

PROJECT NO: _____ DATE: _____ LAB NO: _____

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

TESTED BY: _____ CHECKED BY: _____

	SAND	SHELL	TOTAL
PERCENT BY VOLUME	V_1 =	V_2 =	$V_1 + V_2 = 100$
UNIT WEIGHT, lb/ft³	S_1 =	S_2 =	
THEORETICAL UNIT WEIGHT OF MIX, lb/ft³	S_1V_1 =	S_2V_2 =	$S_1V_1 + S_2V_2$ =
PERCENT BY WEIGHT SAND-SHELL	W_1 =	W_2 =	$W_1 + W_2$ =
MIX WEIGHT OF SAND-SHELL, lb	(W_1 x 15) ÷ 100 =	(W_2 x 15) ÷ 100 =	D = 15.00

*MAX. DRY WT. DENSITY OF MATERIAL (From TR 418, Method C), lb/ft³	A		
*REQUIRED % BY VOL. OF ADDITIVE (___ TR 432-B, ___ specified)	B		
*% WT. OF ADDITIVE (____ chart, ____ formula)	C		
DRY WT. OF MATERIAL (Rep. portion) (____ Shell, ___ Sand-Shell), lb	D		15.00
*WT. OF ADDITIVE TO BE ADDED, lb	E	(C x D) ÷ 100	
*TOTAL DRY WT. OF MATERIAL AND ADDITIVE, lb	F	D + E	

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

CURVE POINT NO.	***		1	2	3	4	5	6
PAN NO. (if applicable)	***							
WATER ADDED, mL	G	See Calculations						
WT. MOLD, BASE (if appl.) & WET MATL, lb	H							
WT. MOLD & BASE (if applicable), lb	I							
WT. WET COMPACTED MATERIAL, lb	J	H - I						
VOLUME OF MOLD (or specimen), ft³	K							
WT. OF PAN & DRY MATERIAL, lb	L							
WT. OF PAN, lb	M							
WT. OF DRY MATERIAL, lb	DW	L - M						
WT. OF WATER, lb	WW	J - DW						
WET DENSITY, lb/ft³	WWD	J/K						
MOISTURE CONTENT, %	MC	(WW/DW) x 100						
DRY DENSITY, lb/ft³	DWD	$\frac{WWD}{100 + MC} \times 100$						

REMARKS: _____