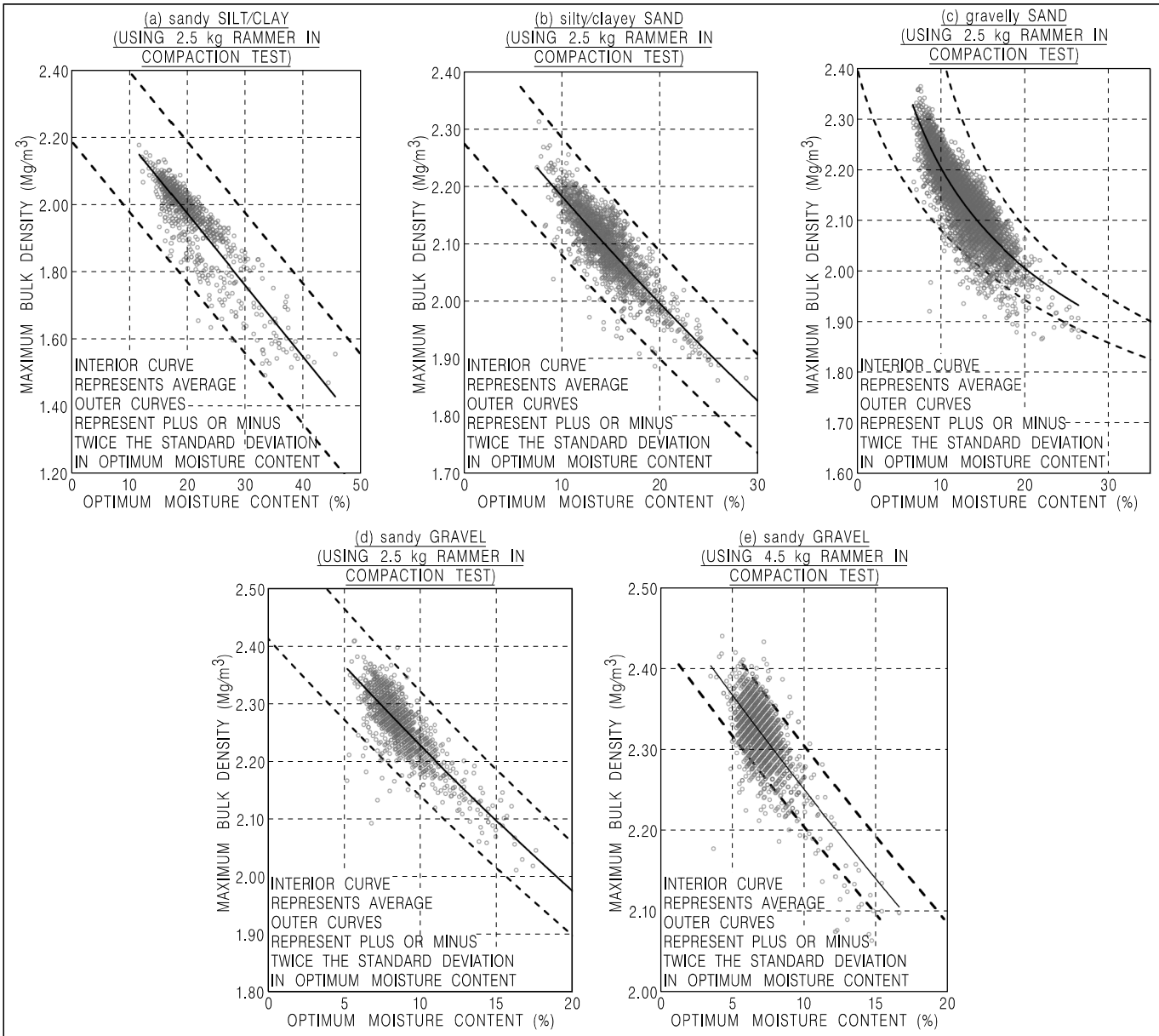

FIGURE 2 – RELATIONSHIPS BETWEEN MAXIMUM BULK DENSITY AND OPTIMUM MOISTURE CONTENT

TABLE 1: RELATIONSHIP BETWEEN MAXIMUM BULK DENSITY AND OPTIMUM MOISTURE CONTENT FOR VARIOUS MATERIAL

SOIL TYPE	RAMMER USED TO DETERMINE THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH GEOSPEC 3	BEST-FIT RELATIONSHIP
sandy SILT/CLAY	2.5 kg	$\rho_m = -0.021w_o + 2.399$
silty/clayey SAND	2.5 kg	$\rho_m = 2.385e^{-0.009w_o}$
gravelly SAND	2.5 kg	$\rho_m = 2.996w_o^{-0.134}$
sandy GRAVEL	2.5 kg	$\rho_m = 2.514e^{-0.012w_o}$
sandy GRAVEL	4.5 kg	$\rho_m = 2.491e^{-0.01w_o}$

NOTES:

1. THIS METHOD FOR DETERMINING THE DIFFERENCE BETWEEN THE OPTIMUM MOISTURE CONTENT AND IN-SITU MOISTURE CONTENT OF A MATERIAL IS APPLICABLE TO THE MATERIAL WITH PROPERTIES FALLING WITHIN THE LIMIT OF ± TWO STANDARD DEVIATIONS IN OPTIMUM MOISTURE CONTENT AS SHOWN IN FIGURES 2(a) TO 2(e). CHECK THE PROPERTIES OF MATERIAL BEING TESTED BASED ON THE SOIL TYPE.

2. THE APPROXIMATE VALUE OF OPTIMUM MOISTURE CONTENT (w_o) CAN BE DETERMINED BASED ON THE MAXIMUM CONVERTED BULK DENSITY AND THE RELATIONSHIPS BETWEEN MAXIMUM BULK DENSITY (ρ_m) AND OPTIMUM MOISTURE CONTENT (w_o) IN TABLE 1.

3. THE MOISTURE CONTENT ADJUSTMENT VALUE (z_c) SHALL BE CALCULATED AS FOLLOWS:

$$z_c = \frac{z_m}{1+z_m}(w_o - z_m)$$

REF.	REVISION	SIGNATURE	DATE
–	FORMER DRG NO. C2006A.	Original Signed	12.2023

THE HILF METHOD OF RAPID COMPACTION CONTROL (SHEET 2 OF 2)

CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

SCALE DIAGRAMMATIC

DATE JAN 1991

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