NORTH CAROLINA
D. O. T.
HIGHWAY DIV.

POLE-TYPE FOOTING ANALYSIS & DESIGN

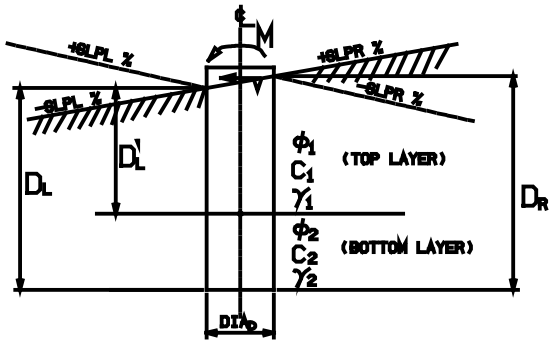
PROGRAM E77400

H	RUN NO.	DESCRIPTION	PROJECT	NAME	PHONE
H					

P	CARD NO.	WIDTH FACTOR	FOOTING DIAMETER (FT.)	LEFT DEPTH (FT.)	RIGHT DEPTH (FT.)	DEPTH TO ROTATION RATIO
P	01	200				067

S	LAYER NO.	ϕ^a ANGLE OF INTERNAL FRICTION	C COHESION (PSF)	UNIT WEIGHT (PCF)	± LEFT SLOPE %	± RIGHT SLOPE %
S	01				0000	0000
S	02					

L	CARD NO.	SHEAR (KIPS)	MOMENT (FT-KIPS)	REQ'D SAFETY FACTOR	DOT
L	01			150	B



P-CARD: WIDTH FACTOR- DETERMINES PARTICIPATING WIDTH OF PRESSURE BLOCK.

- 1.0 D FOR WALLS
- 2.0 D FOR CAST IN PLACE FOOTINGS (DEFAULT)
- 3.0 D FOR DRIVEN PILES

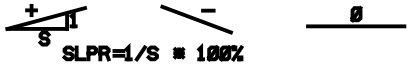
FOOTING DIAMETER – DIA_p (FT.)
LEFT SIDE DEPTH – D_L (FT.)
RIGHT SIDE DEPTH – D_R (FT.)
DEPTH TO ROTATION RATIO – D_L'/D_L (2/3 DEFAULT)

S-CARD: LAYER NO. – 01=TOP; 02=BOTTOM
ANGLE OF INTERNAL FRICTION – ϕ_1=TOP ; ϕ_2 =BOTTOM (DEGREES)
COHESION – C_1 =TOP; C_2=BOTTOM (PSF)
UNIT WEIGHT – γ_1=TOP; γ_2 =BOTTOM (PCF) USE γ_{sub} IF WATER PRESENT.

±LEFT SLOPE – SLPL (%)

SIGN IMMEDIATELY PRECEEDS PERCENTAGE, NO SIGN NEEDED IF SLOPE IS +

±RIGHT SLOPE – SLPR (%)



L-CARD: SHEAR – V (KIPS) APPLIED AT AVERAGE OF D_L & D_R.
MOMENT – M (FT-KIPS)
REQUIRED SAFETY FACTOR – S.F. (DEFAULT IS 1.50)
DIRECTION OF OVERTURNING – DOT TO LEFT (L); TO RIGHT (R); BOTH(B)=DEFAULT