Bar Size	Area (in.^{2})	Top Bars (1)	Others (2)	Top Bars (3)	Others (4)
#3	0.11	1’-4”	1’-2”	1’-1”	1’-0”
#4	0.2	1’-9”	1’-6”	1’-5”	1’-3”
#5	0.31	2’-2”	1’-11”	1’-9”	1’-6”
#6	0.44	2’-7”	2’-3”	2’-1”	1’-10”
#7	0.6	3’-3’	2’-10”	2’-7”	2’-3”
#8	0.79	4’-3”	3’-9”	3’-5”	3’-0”
#9	1	5’-4”	4’-9”	4’-3”	3’-9”
#10	1.27	6’-9”	6’-0”	5’-5”	4’-10”
#11	1.56	8’-4”	7’-4”	6’-8”	5’-11”
#14	2.25	11’-6”	10’-2”	9’-3”	8’-2”
#18	4	14’-11”	13’-2”	11’-11”	10’-6”

Notes:

(1) $1.7 \times l_d$

(2) $1.5 \times l_d$

(3) $1.7 \times 0.8 \times l_d$

(4) $1.5 \times 0.8 \times l_d$

5. Development length is modified for ≥ 6-in. spacing and minimum 3-in. clear spacing between bars.

6. d_b < Cover; $2d_b$ < Clear Spacing

7. Value is for normal-weight concrete.

8. Top bars are horizontal bars with more than 12 in. of fresh concrete below the reinforcement.

DEVELOPMENT LENGTH FOR EPOXY-COATED BARS IN TENSION

f_c’ = 4 ksi

Figure 62-2H