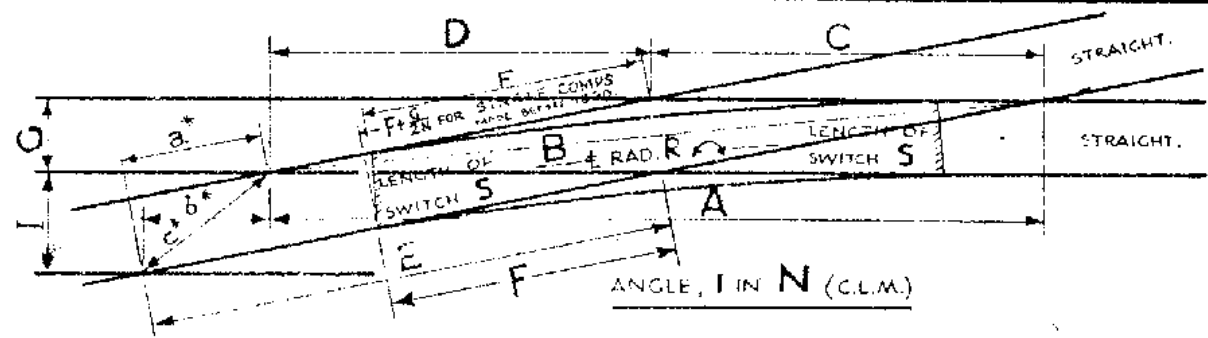


# PERMANENT WAY NOTES.

# DIMENSIONS, FORMULÆ ETC. FOR STANDARD DIAMONDS AND COMPOUNDS.

THESE NOTES ARE INTENDED FOR THE GUIDANCE AND ASSISTANCE OF STAFF ENGAGED UPON PERMANENT WAY WORK. THEY DO NOT IN ANY WAY MODIFY OR AMEND THE INSTRUCTIONS LAID DOWN IN F.D.I., STANDARD DRAWINGS, CIRCULARS ETC., WHICH SHOULD BE REFERRED TO IN ALL CASES.



\* FOR DIMENSIONS B, D AND C, SEE PERMANENT WAY NOTES, R1754, "CROSSOVER ROADS".

ANGLE N	A	B	C	D	E (FOR 6'-6" INTERVAL)	ADD FOR EA. ADDNL. FOOT OF INTERVAL	ADD FOR EA. ADDNL. INCH OF INTERVAL
2	18'-10"	19'-4 15/16"	10'-0 1/16"	8'-9 15/16"	13'-9 1/4"	2'-1 1/2"	2'13"
2 1/8	20'-0 8/16"	20'-6 3/4"	10'-6 11/16"	9'-5 1/2"	14'-6 15/16"	2'-2 15/16"	2'24"
2 1/4	21'-2 1/4"	21'-8 3/16"	11'-1 1/8"	10'-0 7/8"	15'-4 3/16"	2'-4 5/16"	2'36"
2 1/2	22'-4 1/4"	22'-10 3/8"	11'-3 1/2"	10'-8 1/4"	16'-1 1/16"	2'-5 1/4"	2'48"
2 3/4	23'-6 1/2"	24'-0 3/16"	12'-2 1/8"	11'-3 1/2"	16'-10 13/16"	2'-7 3/16"	2'60"
2 7/8	24'-8 3/8"	25'-2 1/8"	12'-9 11/16"	11'-10 1/16"	17'-8 3/16"	2'-8 3/8"	2'72"
2 3/4	25'-10 3/4"	26'-3 15/16"	13'-4 1/2"	12'-6 1/4"	18'-5 3/16"	2'-10 1/16"	2'84"
2 7/8	27'-0 7/8"	27'-5 5/8"	13'-11 3/8"	13'-1 1/2"	19'-3"	2'-11 3/8"	2'96"
3	28'-3"	28'-7 11/16"	14'-6 1/4"	13'-8 1/4"	20'-0 1/2"	3'-1"	3'08"
3 1/8	29'-5 1/8"	29'-9 5/8"	15'-1 1/8"	14'-4"	20'-10"	3'-2 7/16"	3'21"
3 1/4	30'-7 1/4"	30'-11 1/2"	15'-8"	14'-11 1/4"	21'-7 1/2"	3'-3 15/16"	3'33"
3 1/2	31'-9 3/8"	32'-1 1/2"	16'-2 7/8"	15'-6 1/2"	22'-5"	3'-5 3/8"	3'45"
3 3/4	32'-11 1/2"	33'-3 7/16"	16'-9 13/16"	16'-1 1/16"	23'-2 7/16"	3'-6 7/8"	3'57"
3 7/8	34'-1 1/8"	34'-5 7/16"	17'-4 1/16"	16'-8 15/16"	24'-0 1/8"	3'-8 5/16"	3'69"
3 7/8	35'-3 3/4"	35'-7 7/16"	17'-11 1/8"	17'-4 1/8"	24'-9 11/16"	3'-9 13/16"	3'82"
3 7/8	36'-5 7/8"	36'-9 7/16"	18'-6 1/16"	17'-11 5/16"	25'-7 1/4"	3'-11 1/4"	3'94"
4	37'-8"	37'-11 7/16"	19'-1 1/8"	18'-6 3/16"	26'-4 7/8"	4'-0 3/4"	4'06"
4 1/4	40'-0 1/4"	40'-3 3/4"	20'-3 7/16"	19'-8 13/16"	28'-0 1/16"	4'-3 3/16"	4'31"
4 1/2	42'-4 1/2"	42'-7 7/16"	21'-5 3/8"	20'-11 1/8"	29'-7 5/16"	4'-6 11/16"	4'56"
4 3/4	44'-8 3/4"	44'-11 15/16"	22'-7 3/8"	22'-1 3/8"	31'-2 3/16"	4'-9 5/8"	4'80"
5	47'-1"	47'-3 1/4"	23'-9 3/16"	23'-3 11/16"	32'-9 7/8"	5'-0 3/8"	5'05"
5 1/4	49'-5 1/4"	49'-7 7/16"	24'-11 5/16"	24'-5 15/16"	34'-5 3/16"	5'-3 3/16"	5'30"
5 1/2	51'-9 1/2"	52'-0"	26'-1 5/16"	25'-8 3/16"	36'-0 9/16"	5'-6 3/16"	5'55"
5 3/4	54'-1 1/4"	54'-4 3/16"	27'-3 5/16"	26'-10 3/16"	37'-7 7/8"	5'-9 1/2"	5'79"
6	56'-6"	56'-8 3/8"	28'-5 3/8"	28'-0 5/8"	39'-3 1/4"	6'-0 1/2"	6'04"
6 1/4	58'-10 1/4"	59'-0 1/4"	29'-7 3/8"	29'-2 7/8"	40'-10 3/8"	6'-3 1/2"	6'29"
6 1/2	61'-2 1/2"	61'-4 1/16"	30'-9 7/16"	30'-5 1/16"	42'-6"	6'-6 7/16"	6'54"
6 3/4	63'-6 3/4"	63'-8 15/16"	31'-1 1/16"	31'-7 7/16"	44'-1 1/8"	6'-9 7/16"	6'79"
7	65'-11"	66'-1"	33'-1 1/2"	32'-9 1/2"	45'-8 3/4"	7'-0 7/16"	7'04"
7 1/4	68'-3 1/4"	68'-5 5/16"	34'-3 3/16"	33'-11 11/16"	47'-4 3/16"	7'-3 7/16"	7'28"
7 1/2	70'-7 1/2"	70'-9 3/16"	35'-5 3/8"	35'-1 7/8"	48'-11 3/8"	7'-6 3/8"	7'53"
7 3/4	72'-11 3/4"	73'-1 7/16"	36'-7 7/16"	36'-4 1/16"	50'-7"	7'-9 3/8"	7'78"
8	75'-4"	75'-5 1/4"	37'-9 3/4"	37'-6 1/4"	52'-7 7/16"	8'-0 3/8"	8'03"

## FORMULÆ (ACCURATE)

- A = 2GN
- B = G√(4N²+1)
- C = G(N + 1/4N)
- D = G(N - 1/4N)
- E = I(N + 1/4N)
- F = C - √(375G(4N²+1)) + I
- R = 2GN²

## CURVED ROADS

IT IS NOT SUFFICIENTLY ACCURATE TO APPLY THE FORMULÆ AND DIMENSIONS TABULATED FOR STRAIGHT ROADS WHEN BOTH ROADS ARE CURVED TO THE SAME RADIUS AND IN THE SAME DIRECTION BUT THE DIMENSIONS REQUIRED FOR MANUFACTURING PURPOSES CAN BE OBTAINED AS FOLLOWS:-

$$\text{DIMENSION FOR CURVED ROADS} = \text{DIMENSION FOR STRAIGHT ROADS} \pm X$$

+ FOR OUTER SIDES  
- FOR INNER SIDES

DIMENSION	C	E
VALUE OF X (APPROX)	$\frac{C^2 N}{4R}$	$\frac{I^2 N}{4R}$
F	$F + \frac{G}{2N}$	$R$ (FT)