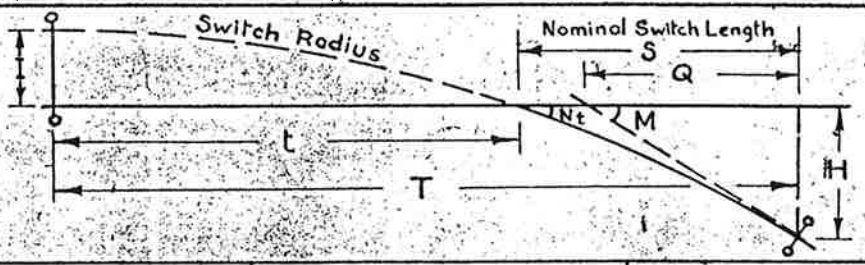
PERMANENT WAY
NOTES

SWITCH CONSTANTS (1)
FLEXIBLE AND STRAIGHT SWITCHES. BH

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

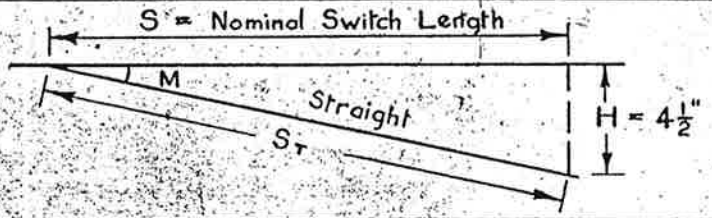
FLEXIBLE SWITCHES



S
'B' = 22·
'C' = 28·
'D' = 34·

	'B' Switches	'C' Switches	'D' Switches	
M	19·01357683921	23·52756563689	30·53237376385	M
H	·8362044236247	·8523176815813	·8349314288460	H
Q	15·88824222867	20·04390361094	25·48560200891	Q
Switch Radius	729·4265944448	1131·491077749	2000·0	Switc Radiu
Natural Angle	8·630301907561	10·75819149036	14·21059869268	Natur Angl
Nt	46·05310241175	57·81202668355	64·88904567569	Nt
I	·1719422572486	·1692591926410	·2374824063375	I
T	38·33694876396	48·07043392279	65·48668009069	T
t	15·83694876396	19·57043392279	30·82001342402	t
Neutral Radius	605·02083	944·02083	1557·106783694	Neutr Radiu
Neutral Angle	8·0	10·0	12·84937635081	Neutr Angl
X	2801·609981410	4270·894746850	7223·707448393	X
Y	361·5161042205	553·5463447982	932·2258476553	Y
Z	·05255765152508	·04248414757137	·03274334004534	Z
$2\sqrt{Y}$	38·02715367842	47·05513127378	61·06474752776	$2\sqrt{Y}$
CosM	·9986178915212	·9990971410254	·9994637930824	Cos
G−H	3·872128909709	3·856015651752	3·873401904487	G−
$\frac{G-H}{2}$	1·936064454854	1·928007825876	1·936700952244	

STRAIGHT SWITCHES



	18' Switches	20' Switches	30' Switches	
M	48·00520776832	53·33802042142	80·00312487794	M
S	18·0	20·0	30·0	S
S_T	18·00390582624	20·00351531606	30·00234365845	S
Neutral Radius	1728·562479659	2133·895816857	4800·562492678	Neutr Radiu
Neutral Angle	13·53935586104	15·04521204005	22·57308678515	Neutr Ang
X	19974·49976495	24658·35166146	55473·16658204	X
Y	2304·499972879	2844·944422476	6400·499990235	Y
Z	·02082881368184	·01874670497034	·01249902355193	Z
$2\sqrt{Y}$	96·01041553663	106·6760408428	160·0062497559	$2\sqrt{Y}$
CosM	·9997830567281	·9998242650850	·9999218841541	Cos
G−H	4·3	4·3	4·3	G−
$\frac{G-H}{2}$	2·16	2·16	2·16	$\frac{G-}{2}$

DEFINITIONS

- NEUTRAL RADIUS { THE RADIUS WHICH TANGENTS WITH THE SWITCH RADIUS AT THE HEEL AND WITH THE THROUGH STRAIGHT.
- NEUTRAL ANGLE { THE CROSSING ANGLE PRODUCED BY THE NEUTRAL RADIUS CONTINUED ACROSS 4'-8½" GAUGE.
- NATURAL ANGLE { THE CROSSING ANGLE PRODUCED BY THE SWITCH RADIUS CONTINUED ACROSS 4-8½" GAUGE.
- USE OF X, Y, & Z — SEE 'FUNDAMENTAL 'LEAD' DATA SHEET