



Track Spacing and Structure Limiting Dimensions

The following data on track spacing has been derived from *Track Construction Without Tears*, published by Slater's (Plasticard) Ltd and is reproduced with their permission.

Space Between Adjacent Tracks

(Usually measured between the outside edges of the rail heads).

	Prototype		Model	Track Centres
	mm	imperial	mm	mm
Standard between a pair of main lines	1829	6ft 0in	42	77
Between a pair of main lines and one or a pair of additional running lines	3048	10ft 0in	70	105
Between a main line and siding	3048	10ft 0in	70	105
Between a main line and catch siding	1829	6ft 0in	42	77
Between goods yard sidings	1829	6ft 0in	42	77
Between goods yard sidings for carriageways	7315	24ft 0in	168	203
Between coal sidings	1829	6ft 0in	42	77
Between marshalling or sorting sidings	2134	7ft 0in	49	84
Between carriage sidings	2438	8ft 0in	56	91
Additional space to allow for lamp posts between sidings. etc.	610 to 1220	2ft 0in to 4ft 0in	14 to 28	91 to 105
Additional space to allow for large main line signal post	1372 to 1524	4ft 6in to 5ft 0in	32 to 35	109 to 112
Additional space to allow for ordinary main line signal post	1220	4ft 0in	28	105
Additional space for siding signal post	1118-1	3ft 8in	26	103

Note: The Guild Standard track centre distances are 80mm between main lines and 90mm between sidings. Additional spacing may be necessary on curves, refer to Part 2, Section 1.3. The track centres shown in the table above include a 3mm allowance for the width of the rail-heads.

Clearance Between Tracks And Structures. Etc

	Prototype		Model (mm)
	mm	imperial	mm
Absolute minimum horizontal clearance to structures above platform height	1372	4ft 6in	32
As above. but desirable figure	1524	5ft 0in	35
Minimum clearance to structures in goods yards (eg: shed doors)	1295	4ft 3in	30
As above, but desirable figure	1372 to 2134	4ft 6in to 7ft 0in	32 to 49
Absolute minimum vertical clearance on passenger lines	4420	14ft 6in	101
As above. but desirable figure	4572	15ft 0in	105
Absolute minimum vertical clearance in goods yards	4267	14ft 0in	98

Passenger Platforms

	Prototype		Model (mm)
	mm	imperial	mm
Height of platform above rail level	914	3ft 0in	21
Horizontal distance from outer edge of rail to extreme edge of platform coping	635	2ft 1in	15
Overhang of coping from wall face	305	1ft 0in	7
Minimum distance of pillars. etc. from edge of platform	1829	6ft 0in	42
Width of platform. small stations	1829	6ft 0in	42
Width of platform. large stations	3658	12ft 0in	84
Inclination of ramped ends	1 in 8		1 in 8

Goods And Mineral Loading Stages

Height above rail of:

	Prototype		Model (mm)
Stage for (un)loading general goods	1067	3ft 6in	24
Cattle stage	1067	3ft 6in	24
Horse stage	1067	3ft 6in	24
Stage for loading high sided wagons with minerals, etc. by tipping	2438 to 2896	8ft 0in to 9ft 6in	56 to 66
Stage for coaling locos	1520	5ft 0in	35

Similar horizontal clearances apply as for passenger platforms, but an extra 1in is usually allowed.

Carriage Loading Docks

For loading a road vehicle onto a wagon, etc.

	Prototype		Model (mm)
Height above rail level	1220	4ft 0in	28

Water Columns And Cranes

	Prototype		Model (mm)
Space required when column is between tracks	3353	11ft 0in	77
Distance from rail to centre of column when column is outside tracks	1981	6ft 6in	47
Distance of column behind signal of line on which engine takes water	18288	60ft 0in	420

Water Troughs

	Prototype		Model (mm)
Height of rim above rail level	76	3 in	2
Height of water above rail level	51	2 in	1

Turntables

	Prototype		Model (mm)
Space between rim of turntable and an adjacent track	2743	9ft 0in	63

Engine Pits

	Prototype		Model (mm)
Width between side walls	1143	3ft 9in	26
Depth of pit below rail level (inside)	660 to 737	2ft 2in to 2ft 5in	15 to 17
Depth of pit below rail level (outside;)	914 to 991	3ft 0in to 3ft 3in	21 to 23



Overbridges

	Prototype		Model (mm)
Minimum clear opening for single line	4166	13ft 8in	96
As above. but desirable figure	4724	15ft 6in	108
Minimum clear opening for double line	7569	24ft 10in	174
As above, but desirable figure	8077	26ft 6in	185
Minimum clear opening for four lines with one 10ft space	15596	51ft 2in	358
As above. but desirable figure with one 10ft 6in space	16307	53ft 6in	375
Minimum headway	4420	14ft 6in	101
Desirable headway	4572	15ft 0in	105
Width between parapets, turnpike road	10668	35ft 0in	245
Width between parapets, public carriage road	7620	25ft 0in	175
Width between parapets. private road	3658	12ft 0in	84
Height of parapets	1220	4ft 0in	28

Underbridges

	Prototype		Model (mm)
Headway - turnpike road	4377	16ft 0in	112
- public carriage road	4572	15ft 0in	105
- private road	4267	14ft 0in	98
Widths of roadways - as for overbridges			
Height of parapets	1312	4ft 6in	32
Desirable width between parapets - single line	4724	15ft 6in	109
- double line	8077	26ft 6in	185

Buffer Stop

	Prototype		Model (mm)
Length of buffer beam	2286	7ft 6in	53
Height of centre of beam above rail	1067	3ft 6in	25

Earthworks

	Prototype		Model (mm)
Width of cutting at 2ft below rail level for double track with 6ft space	9144	30ft 0in	210
Width of embankment at 2ft below rail level for double track with 6ft space	9144	30ft 0in	210
Inclination of slopes for ordinary ground	1.5:1		1.5:1

Ballast

	Prototype		Model (mm)
Bottom ballast. Thickness	229	9in	5
Bottom ballast, width for single line	3353	11ft 0in	77
Top ballast, level of surface	top of sleeper		
Top ballast, distance of top edge from rail	991	3ft 3in	23
Maximum size of sieve	51	2in	1

Check Rails on Curves

According to the Board of Trade Rules, a check rail must be provided to the inside rail of the curve on curves of 10 chains (4620mm or 15ft 2in in 7mm scale) radius or less. This check rail is often slightly elevated above the running rails and made from 11ft 0in older second hand rail. Curves of greater than 10 chains radius are often checked if high speeds are required and, in certain other places be the track curved or straight, such as; on viaducts or bridges over a certain length and over paved level crossings (to both rails) etc.

Most model curves are sharper than 4620mm (15ft 2in) and are left unchecked. It is suggested that curves of less than 1m (40in) are fitted with check rails for appearance purposes.

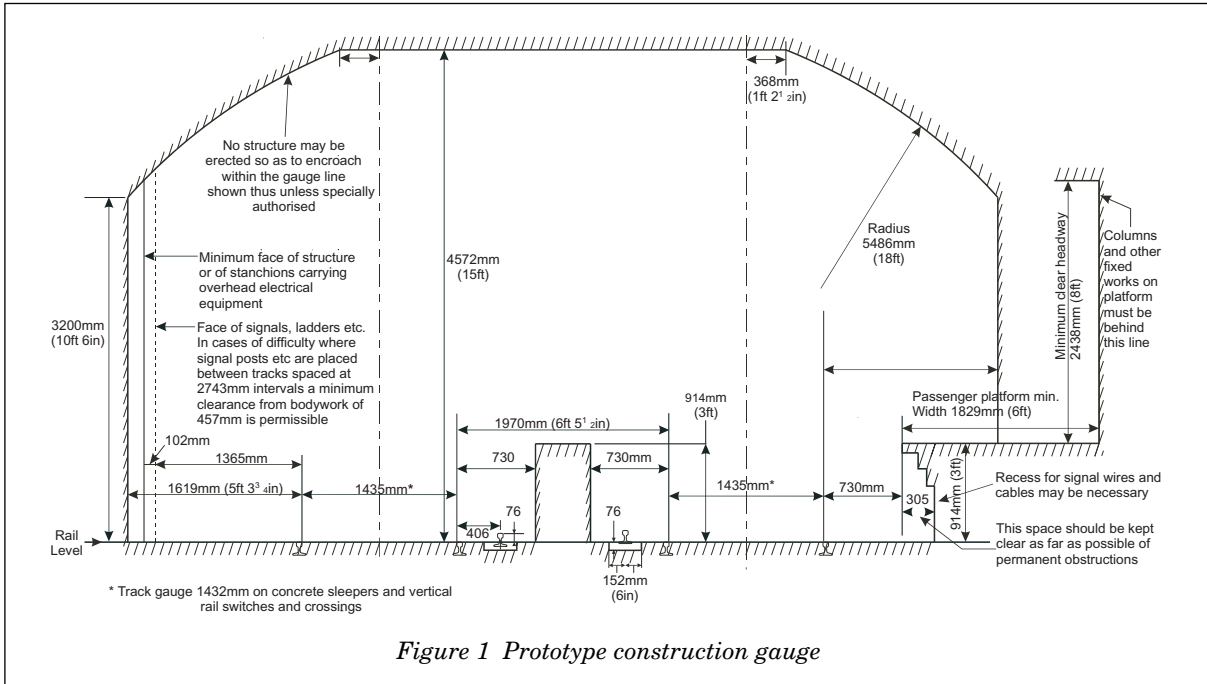


Figure 1 Prototype construction gauge

The horizontal distances between prototype tracks and adjacent structures are increased for curved track to allow for the throw-over of long vehicles. Radius of Curve in metres - all horizontal distances increased by

100	257mm	200	128 mm	300	85mm
400	64mm	500	51mm	750	34mm
1000	26mm	1500	17mm	2000	13mm

The model equivalents tracks are shown in Data Sheet D2.1.1 located in Part 2.

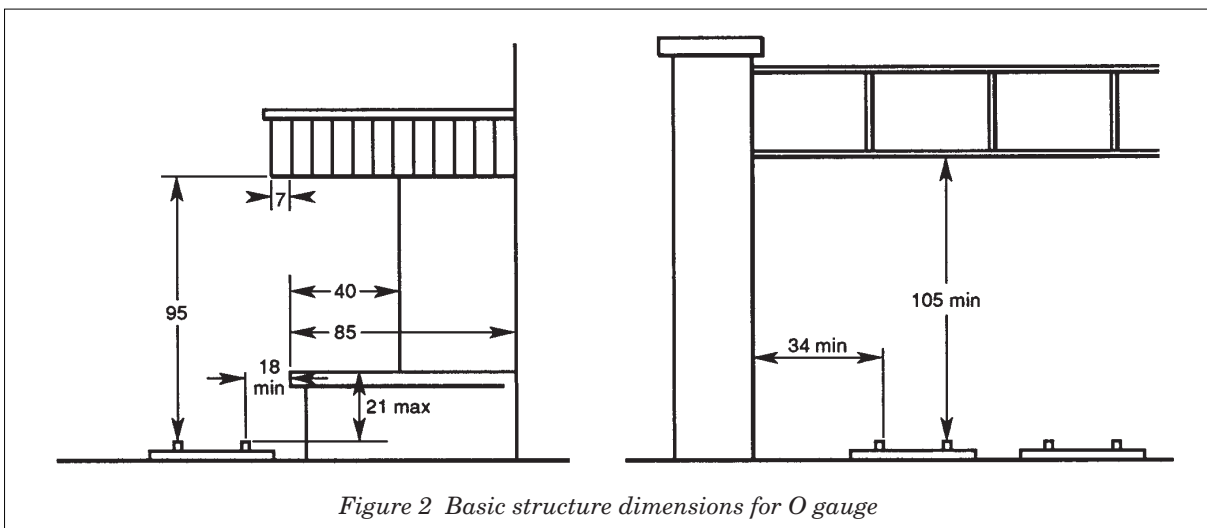


Figure 2 Basic structure dimensions for O gauge