

Approximate Axle Load Capacity for Heavy Lift Cargo Discharged To On-Dock Railcar

Railcar Axles	Least Axle Spacing (ft)	Load Distribution			Max. Load Cap. (psf)	Impact (%)	Rail Cap. (kip)	Max. Axle Load (kip)
		Long. (ft)	Trans. (ft)	Area (ft ²)				
Crescent (Berth F206, F207)								
4	5	12	10.5	126	1050	20	70	55
4	5.5	12.5	10.5	131.25	1050	20	70	57
4	6	13	10.5	136.5	1050	20	70	60
6	4.5	16	10.5	168	1050	20	70	49
6	5	17	10.5	178.5	1050	20	70	52
6	5.5	18	10.5	189	1050	20	70	55
6	6	19	10.5	199.5	1050	20	70	58
8	4.5	20.5	10.5	215.25	1050	20	70	47
8	5	22	10.5	231	1050	20	70	51
8	5.5	23.5	10.5	246.75	1050	20	70	54
8	6	25	10.5	262.5	1050	20	70	57
10	4.5	25	10.5	262.5	1050	20	70	46
10	5	27	10.5	283.5	1050	20	70	50
10	5.5	29	10.5	304.5	1050	20	70	53
10	6	31	10.5	325.5	1050	20	70	57
12	4.5	29.5	10.5	309.75	1050	20	70	45
12	5	32	10.5	336	1050	20	70	49
12	5.5	34.5	10.5	362.25	1050	20	70	53
12	6	37	10.5	388.5	1050	20	70	57
CUT (Berth D28) - see attached map								
4	5	12	10.5	126	1500	20	80	79
4	5.5	12.5	10.5	131.25	1500	20	80	80
4	6	13	10.5	136.5	1500	20	80	80
6	4.5	16	10.5	168	1500	20	80	70
6	5	17	10.5	178.5	1500	20	80	74
6	5.5	18	10.5	189	1500	20	80	79
6	6	19	10.5	199.5	1500	20	80	80
8	4.5	20.5	10.5	215.25	1500	20	80	67
8	5	22	10.5	231	1500	20	80	72
8	5.5	23.5	10.5	246.75	1500	20	80	77
8	6	25	10.5	262.5	1500	20	80	80
10	4.5	25	10.5	262.5	1500	20	80	66
10	5	27	10.5	283.5	1500	20	80	71
10	5.5	29	10.5	304.5	1500	20	80	76
10	6	31	10.5	325.5	1500	20	80	80
12	4.5	29.5	10.5	309.75	1500	20	80	65
12	5	32	10.5	336	1500	20	80	70
12	5.5	34.5	10.5	362.25	1500	20	80	75
12	6	37	10.5	388.5	1500	20	80	80
16	4.5	38.5	10.5	404.25	1500	20	80	63
16	5	42	10.5	441	1500	20	80	69
16	5.5	45.5	10.5	477.75	1500	20	80	75
16	6	49	10.5	514.5	1500	20	80	80

Notes:

1. This table is intended to simplify preliminary planning for transport of heavy lift cargo.
2. Prior to commencing heavy lift operations in the Port of Long Beach, a written request must be submitted to the Chief Wharfingers Office requesting permission to handle the heavy lift operation.
This table does not waive existing heavy lift requirements or policies.
3. Users of this table are cautioned to use the Maximum Axle Load column for preliminary sizing of rail cars to transport cargo via on-dock rail .
4. Maximum axle loads for this table are determined by use of AREA Chapter 8.2.2.3 methodology for various rail car configurations.
5. Engineering considerations include the following:
 - a. Load is considered to be distributed evenly to each rail car axle.
 - b. Ballast depth = 2.5 ft, wharf slab thickness = 1 ft, tie length = 8 ft.