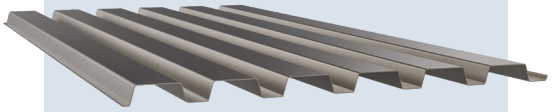
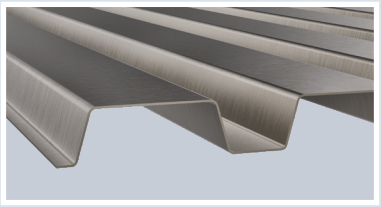
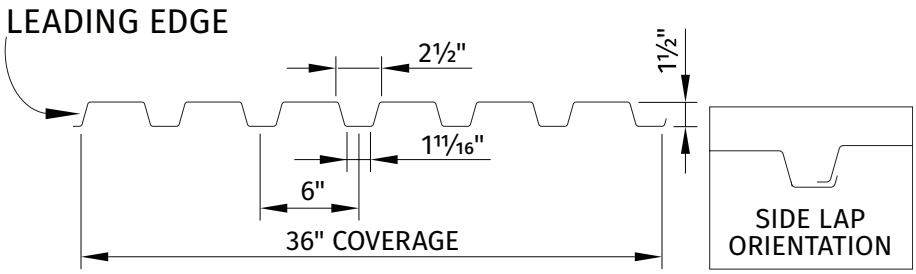
STEEL ROOF DECK

B | 50 ksi | ASD





B Deck is a steel roof deck with a 1½" deep profile. As a roof deck it resists gravity, wind uplift, and diaphragm shear loads. In carrying these loads, B Deck serves as a stabilizer for the roof framing and a base for a roofing system. This profile is the most common steel deck type. CSC's B deck has nestable sidelaps which can provide a quicker orientation process in the field and is typically connected with screws.



SECTION PROPERTIES

Gage	Design Thickness (in.)	Overall Depth (in.)	Weight (lbs/ft²)	Moment of Inertia I_p(in⁴)	Moment of Inertia I_n(in⁴)	Eff. Section Modulus S_p(in³)	Eff. Section Modulus S_n(in³)	FM Spans	
								Single (ft-in)	Triple (ft-in)
22	0.0295	1.50	1.63	0.153	0.176	0.171	0.178	6'-2"	7'-3"
20	0.0358	1.50	1.97	0.196	0.222	0.230	0.237	6'-9"	7'-8"
18	0.0474	1.50	2.62	0.276	0.298	0.313	0.320	7'-10"	9'-2"
16	0.0598	1.50	3.3	0.364	0.378	0.402	0.406	8'-9"	10'-4"

NOTE:
- Properties are based on a unit width of 12 in. in accordance with AISI S100-16.
- Material according to ASTM A653 Grade 50 (Fy = 50 ksi). ASTM A1008 available by special order. Gray or white primer available on either substrate.
- Factory Mutual (FM) allowable spans are based on the deck material only. An appropriate attachment must be specified to achieve these spans.

WEB CRIPPLING (LB/FT)

Gage	Exterior			Interior	
	1½"	2"	3"	3"	5"
22	804	883	1017	1370	1415
20	1150	1260	1444	1989	2048
18	1930	2105	2397	3399	3479
16	2964	3219	3646	5280	5374

NOTE:
- Web crippling table is based on one flange loading.
- Two flange loading is available upon request.

MAXIMUM ALLOWABLE UNIFORM TOTAL LOADS (PSF)

Gage	Nominal Thickness (in.)	Loads	Single Span							
			4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"
22	0.0295"	F	214	137	95	70	53	42	34	28
		D	157	80	47	29	20	14	10	8
20	0.0358"	F	288	184	128	94	72	57	46	38
		D	201	103	60	38	25	18	13	10
18	0.0474"	F	391	250	174	128	98	77	63	52
		D	283	145	84	53	35	25	18	14
16	0.0598"	F	503	322	223	164	126	99	80	66
		D	373	191	111	70	47	33	24	18

Gage	Nominal Thickness (in.)	Loads	Double Span							
			4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"
22	0.0295"	F	216	140	98	72	55	44	35	29
		D	378	193	112	71	47	33	24	18
20	0.0358"	F	286	185	130	96	73	58	47	39
		D	484	248	143	90	61	42	31	23
18	0.0474"	F	385	250	175	129	99	78	64	53
		D	682	349	202	127	85	60	44	33
16	0.0598"	F	488	317	222	164	126	99	81	67
		D	899	460	266	168	112	79	58	43

Gage	Nominal Thickness (in.)	Loads	Triple Span							
			4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"
22	0.0295"	F	266	173	121	89	69	54	44	37
		D	296	151	88	55	37	26	19	14
20	0.0358"	F	351	229	161	119	91	72	59	49
		D	379	194	112	71	47	33	24	18
18	0.0474"	F	473	308	217	160	123	98	79	66
		D	533	273	158	100	67	47	34	26
16	0.0598"	F	598	391	274	203	156	124	101	83
		D	704	360	208	131	88	62	45	34

NOTE:
- Loads at rows marked “F” are the loads controlled by deck strength, and those marked “D” are the uniform live loads controlled by a deflection of L/240 or a maximum of 1".
- Loads at rows marked “F” should be compared to maximum allowable loads obtained from load combination in accordance with ASCE 7. Deck weight should be included when determining dead load.
- Web crippling controls loads shown in brackets and are calculated with the end bearing length equal to 2" and the interior bearing length equal to 4". Increased bearing can result in a higher load limit where web crippling controls.

CANAM STEEL CORPORATION

Visit CSCSteelUSA.com/Contact
to find your sales rep.

May 2026 | Rev. 1