



Allowable Roof Construction Load ($C_D = 1.25$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (lb/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

3-1/8-INCH WIDTH		SPAN (ft)																				
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
6	484	245	140	87	56	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1/2	757	483	277	172	114	78	55	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	1092	696	481	301	199	138	99	72	54	---	---	---	---	---	---	---	---	---	---	---	---	---
10-1/2	1487	949	657	480	319	222	160	118	89	68	53	---	---	---	---	---	---	---	---	---	---	---
12	1944	1241	859	629	479	334	241	179	136	105	82	65	52	---	---	---	---	---	---	---	---	---
13-1/2	2462	1572	1088	797	608	478	346	257	196	152	119	95	77	62	51	---	---	---	---	---	---	---
15	3040	1942	1345	985	752	591	477	355	271	211	167	133	108	88	72	60	---	---	---	---	---	---
16-1/2	3680	2351	1629	1193	911	717	578	476	364	283	224	180	146	120	99	82	69	58	---	---	---	---
18	4381	2799	1939	1421	1085	854	689	567	472	370	294	236	192	158	131	109	92	77	66	56	---	---
19-1/2	5143	3286	2277	1669	1275	1004	810	665	551	464	376	303	247	204	169	142	119	101	86	73	63	---
21	5965	3812	2642	1937	1479	1166	940	766	636	535	455	381	311	257	214	179	152	129	110	94	81	---
22-1/2	6849	4377	3035	2225	1700	1339	1072	875	726	611	520	448	385	318	265	223	189	161	138	118	102	---
24	7794	4982	3454	2533	1935	1518	1213	990	821	692	589	507	441	386	325	273	232	198	170	146	126	---
25-1/2	8800	5625	3900	2860	2186	1705	1362	1112	923	777	662	570	496	434	383	330	280	240	206	178	154	---
27	9867	6308	4374	3208	2440	1901	1520	1240	1030	867	739	637	554	485	428	380	335	287	247	214	185	---

3-1/2-INCH WIDTH		SPAN (ft)																				
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
6	542	275	157	97	63	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1/2	848	540	310	193	127	87	62	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	1223	780	539	337	223	154	110	81	61	---	---	---	---	---	---	---	---	---	---	---	---	---
10-1/2	1666	1063	735	538	357	248	179	132	100	76	59	---	---	---	---	---	---	---	---	---	---	---
12	2177	1390	962	704	537	374	270	200	152	117	92	73	58	---	---	---	---	---	---	---	---	---
13-1/2	2757	1760	1219	893	681	535	387	288	219	170	134	107	86	70	57	---	---	---	---	---	---	---
15	3405	2175	1506	1103	842	662	534	398	304	236	187	149	121	99	81	67	56	---	---	---	---	---
16-1/2	4122	2633	1824	1336	1020	803	648	533	407	317	251	202	164	134	111	92	77	65	54	---	---	---
18	4907	3135	2172	1592	1215	957	772	631	523	415	329	265	215	177	147	122	103	87	73	62	53	---
19-1/2	5760	3680	2551	1870	1428	1124	903	736	610	513	421	339	277	228	189	159	134	113	96	82	70	---
21	6681	4270	2960	2170	1657	1302	1040	848	704	592	504	427	348	288	239	201	170	144	123	105	91	---
22-1/2	7671	4903	3399	2492	1903	1486	1187	968	803	676	576	496	430	357	297	250	212	180	154	133	114	---
24	8730	5580	3868	2837	2158	1681	1343	1096	909	766	652	562	488	427	364	306	260	221	190	164	142	---
25-1/2	9856	6300	4368	3204	2423	1887	1508	1231	1022	860	733	631	549	480	424	370	314	268	231	199	173	---
27	11051	7065	4899	3584	2702	2105	1683	1373	1140	960	818	705	613	537	473	420	375	321	277	239	208	---

Alaskan Yellow Cedar
Non-Snow Roof Loads





Allowable Roof Construction Load ($C_D = 1.25$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (Ibf/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

5-1/8-INCH WIDTH		SPAN (ft)																			
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
12	3188	2035	1409	1031	786	547	395	293	222	172	134	107	85	69	55	---	---	---	---	---	---
13-1/2	4037	2578	1785	1307	997	784	567	422	321	249	196	156	126	102	83	68	56	---	---	---	---
15	4986	3184	2206	1616	1233	963	768	583	445	346	273	219	177	144	119	98	81	68	57	---	---
16-1/2	6035	3855	2671	1957	1486	1156	923	752	596	465	368	295	240	196	162	135	113	95	80	67	57
18	7185	4590	3181	2331	1755	1366	1090	888	736	607	482	388	315	259	215	179	151	127	108	91	78
19-1/2	8434	5389	3735	2716	2046	1592	1271	1036	859	722	615	497	405	334	277	232	196	166	141	120	103
21	9783	6252	4334	3128	2357	1835	1465	1195	991	833	710	610	510	421	351	294	249	211	180	154	133
22-1/2	11233	7179	4942	3568	2689	2093	1672	1364	1131	952	811	698	606	522	435	366	310	264	226	194	167
24	12783	8170	5589	4035	3041	2368	1892	1544	1281	1078	918	790	686	601	529	448	380	324	278	240	207
25-1/2	14432	9214	6273	4530	3414	2659	2125	1734	1439	1211	1032	889	772	676	596	529	460	393	338	292	253
27	16182	10273	6995	5051	3808	2966	2371	1934	1606	1352	1152	992	862	755	666	591	527	471	405	350	304
28-1/2	18032	11386	7753	5599	4221	3289	2629	2145	1781	1500	1279	1102	957	839	740	657	586	525	473	416	362
30	19982	12554	8548	6174	4655	3627	2900	2367	1965	1655	1412	1216	1057	926	817	726	648	581	523	473	426
31-1/2	22032	13775	9381	6776	5109	3981	3183	2599	2158	1818	1550	1336	1162	1018	899	798	712	639	576	521	473
33	24070	15050	10249	7403	5583	4351	3479	2840	2359	1988	1695	1461	1271	1114	983	873	780	700	631	571	519

5-1/2-INCH WIDTH		SPAN (ft)																			
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
12	3421	2184	1512	1106	843	588	424	315	239	184	144	114	91	74	59	---	---	---	---	---	---
13-1/2	4333	2766	1916	1403	1070	838	608	453	345	267	210	168	135	109	89	73	60	---	---	---	---
15	5351	3417	2367	1734	1320	1026	819	626	477	371	293	235	190	155	127	105	87	73	61	51	---
16-1/2	6477	4137	2866	2100	1584	1232	983	801	640	499	395	317	257	211	174	145	121	101	85	72	61
18	7710	4926	3413	2484	1870	1455	1162	947	784	652	517	416	338	278	231	192	162	136	115	98	83
19-1/2	9051	5783	4008	2894	2180	1696	1354	1104	915	770	655	533	435	358	298	249	210	178	151	129	111
21	10499	6709	4618	3333	2511	1955	1561	1273	1056	888	756	650	548	452	376	316	267	227	193	166	143
22-1/2	12055	7704	5267	3802	2865	2230	1782	1453	1205	1014	864	743	645	560	467	393	332	283	242	208	180
24	13718	8749	5956	4300	3240	2523	2016	1645	1365	1148	978	842	731	640	564	481	408	348	298	257	223
25-1/2	15488	9819	6685	4827	3638	2833	2264	1847	1533	1291	1100	947	822	720	635	563	494	422	362	313	271
27	17366	10947	7453	5382	4057	3160	2526	2061	1711	1441	1228	1057	919	805	709	629	561	503	435	376	326
28-1/2	19352	12133	8262	5966	4498	3504	2801	2286	1898	1598	1362	1174	1020	894	788	699	624	560	504	446	388
30	21397	13377	9109	6579	4960	3865	3090	2522	2094	1764	1504	1296	1126	987	871	773	690	619	557	504	457
31-1/2	23478	14678	9996	7220	5444	4242	3392	2769	2299	1937	1652	1423	1238	1085	957	850	759	681	614	555	504
33	25649	16037	10921	7889	5949	4636	3707	3026	2514	2118	1806	1557	1354	1187	1048	930	831	746	672	608	553



Allowable Roof Construction Load ($C_D = 1.25$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (Ibf/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

6-3/4-INCH WIDTH		SPAN (ft)																			
Depth (in)	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
18	6045	4138	2986	2248	1749	1396	1138	943	792	635	510	415	341	283	236	198	167	142	120	102	87
19-1/2	7084	4821	3479	2620	2039	1628	1327	1100	925	787	655	534	440	365	306	258	218	186	158	136	116
21	8158	5552	4007	3019	2350	1876	1530	1269	1067	908	781	672	555	462	387	327	278	237	203	175	151
22-1/2	9303	6332	4571	3444	2681	2142	1746	1449	1219	1038	893	775	678	573	482	408	347	297	256	221	191
24	10519	7160	5169	3895	3033	2423	1977	1640	1380	1176	1012	878	769	677	590	501	427	366	316	273	237
25-1/2	11805	8037	5803	4373	3406	2722	2220	1843	1551	1321	1138	988	865	762	676	603	518	445	384	333	290
27	13162	8961	6471	4877	3799	3036	2477	2056	1731	1475	1270	1104	967	852	756	674	604	533	461	401	349
28-1/2	14588	9933	7173	5407	4212	3367	2748	2281	1921	1637	1410	1225	1073	947	840	750	672	605	547	477	416
30	16084	10952	7909	5963	4646	3714	3031	2517	2120	1807	1557	1353	1186	1046	928	829	743	669	605	549	491
31-1/2	17648	12018	8680	6545	5099	4077	3328	2764	2328	1985	1710	1487	1303	1150	1021	911	818	737	666	605	551
33	19281	13131	9485	7152	5573	4456	3638	3021	2545	2171	1871	1627	1426	1258	1118	998	895	807	730	663	604
34-1/2	20983	14290	10323	7785	6066	4851	3961	3290	2772	2364	2038	1772	1554	1372	1218	1088	977	880	797	724	660
36	22753	15496	11194	8443	6580	5262	4297	3569	3008	2566	2212	1924	1687	1489	1323	1182	1061	957	866	787	718
37-1/2	24590	16748	12100	9126	7113	5689	4646	3859	3253	2775	2393	2081	1825	1612	1432	1280	1149	1036	939	853	778
39	26494	18046	13038	9834	7665	6131	5007	4160	3507	2992	2580	2245	1969	1739	1545	1381	1240	1119	1014	921	840

8-3/4-INCH WIDTH		SPAN (ft)																			
Depth (in)	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52
24	9043	6528	4919	3830	3060	2495	2070	1742	1484	1277	1108	970	854	757	649	554	475	409	354	307	268
25-1/2	10150	7328	5523	4301	3436	2803	2326	1958	1668	1435	1247	1091	962	853	760	671	577	498	432	376	328
27	11317	8171	6159	4797	3833	3128	2596	2185	1862	1603	1393	1219	1075	953	850	762	686	598	519	453	396
28-1/2	12544	9058	6829	5319	4251	3469	2880	2425	2066	1780	1546	1354	1194	1060	945	847	763	689	618	540	473
30	13831	9989	7531	5866	4689	3827	3177	2676	2281	1965	1708	1496	1319	1171	1045	937	844	763	692	630	558
31-1/2	15178	10962	8265	6439	5148	4202	3489	2939	2506	2159	1877	1644	1451	1288	1149	1031	929	840	762	694	634
33	16583	11978	9032	7037	5627	4593	3814	3213	2740	2361	2053	1799	1588	1410	1259	1129	1018	921	836	761	696
34-1/2	18048	13037	9831	7661	6125	5001	4154	3500	2985	2572	2237	1961	1731	1537	1373	1232	1110	1005	913	832	760
36	19571	14138	10662	8309	6644	5425	4506	3797	3239	2792	2428	2129	1879	1669	1491	1338	1207	1092	992	905	827
37-1/2	21152	15281	11525	8982	7183	5866	4873	4107	3503	3020	2627	2303	2034	1807	1614	1449	1307	1183	1075	981	897
39	22792	16466	12419	9680	7742	6323	5253	4427	3777	3257	2833	2485	2194	1950	1742	1565	1411	1278	1162	1059	969
40-1/2	24489	17693	13345	10402	8320	6795	5646	4759	4061	3502	3047	2672	2360	2098	1875	1684	1519	1376	1251	1141	1044
42	26244	18962	14303	11149	8919	7285	6053	5103	4354	3755	3268	2867	2532	2251	2012	1807	1631	1477	1343	1226	1122
43-1/2	28056	20272	15292	11921	9536	7790	6473	5458	4658	4017	3496	3067	2710	2409	2154	1935	1746	1582	1439	1313	1202
45	29926	21624	16313	12717	10174	8311	6907	5824	4971	4287	3732	3274	2893	2572	2300	2066	1865	1690	1538	1404	1285

Notes:

- (1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.
- (2) Span = simply supported beam.
- (3) Maximum deflection = L/180 under total load. Other deflection limits may apply.
- (4) Service condition = Dry
- (5) Tabulated values represent total loads and have taken the beam weight (assumed 35 pcf) into account.
- (6) Sufficient bearing length shall be provided at supports
- (7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.



Allowable Roof Snow Load ($C_D = 1.15$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (lb/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

3-1/8-INCH WIDTH		SPAN (ft)																				
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
6	445	245	140	87	56	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1/2	696	444	277	172	114	78	55	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	1004	640	442	301	199	138	99	72	54	---	---	---	---	---	---	---	---	---	---	---	---	---
10-1/2	1368	872	603	441	319	222	160	118	89	68	53	---	---	---	---	---	---	---	---	---	---	---
12	1788	1141	789	578	440	334	241	179	136	105	82	65	52	---	---	---	---	---	---	---	---	---
13-1/2	2264	1445	1000	732	558	439	346	257	196	152	119	95	77	62	51	---	---	---	---	---	---	---
15	2796	1785	1236	905	691	543	438	355	271	211	167	133	108	88	72	60	---	---	---	---	---	---
16-1/2	3385	2162	1497	1097	837	659	531	437	364	283	224	180	146	120	99	82	69	58	---	---	---	---
18	4029	2574	1783	1306	997	785	633	521	434	364	294	236	192	158	131	109	92	77	66	56	---	---
19-1/2	4730	3022	2094	1535	1171	922	744	610	506	425	362	303	247	204	169	142	119	101	86	73	63	---
21	5487	3506	2430	1781	1360	1071	863	704	583	491	418	359	311	257	214	179	152	129	110	94	81	---
22-1/2	6300	4026	2791	2046	1562	1231	985	803	666	561	477	411	356	312	265	223	189	161	138	118	102	---
24	7169	4582	3176	2329	1779	1395	1115	909	754	635	541	465	404	354	311	273	232	198	170	146	126	---
25-1/2	8095	5174	3587	2630	2009	1567	1252	1021	847	713	608	523	454	398	351	311	277	240	206	178	154	---
27	9076	5801	4022	2950	2244	1747	1397	1140	946	796	679	584	508	444	392	348	310	278	247	214	185	---

3-1/2-INCH WIDTH		SPAN (ft)																				
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
6	498	275	157	97	63	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1/2	780	497	310	193	127	87	62	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	1124	717	495	337	223	154	110	81	61	---	---	---	---	---	---	---	---	---	---	---	---	---
10-1/2	1532	977	676	494	357	248	179	132	100	76	59	---	---	---	---	---	---	---	---	---	---	---
12	2002	1278	884	647	493	374	270	200	152	117	92	73	58	---	---	---	---	---	---	---	---	---
13-1/2	2536	1619	1121	820	625	492	387	288	219	170	134	107	86	70	57	---	---	---	---	---	---	---
15	3132	2000	1385	1014	773	608	490	398	304	236	187	149	121	99	81	67	56	---	---	---	---	---
16-1/2	3791	2421	1677	1228	937	738	595	489	406	317	251	202	164	134	111	92	77	65	54	---	---	---
18	4513	2883	1997	1463	1117	879	709	579	480	403	329	265	215	177	147	122	103	87	73	62	53	---
19-1/2	5298	3385	2345	1719	1312	1033	829	676	560	471	401	339	277	228	189	159	134	113	96	82	70	---
21	6145	3927	2721	1995	1523	1197	956	779	646	543	462	398	345	288	239	201	170	144	123	105	91	---
22-1/2	7056	4509	3125	2291	1750	1365	1091	889	738	621	528	454	394	345	297	250	212	180	154	133	114	---
24	8030	5132	3557	2608	1984	1545	1234	1007	835	703	598	515	447	391	345	306	260	221	190	164	142	---
25-1/2	9066	5794	4017	2946	2228	1735	1386	1131	938	790	673	579	503	440	388	344	307	268	231	199	173	---
27	10165	6498	4505	3296	2484	1935	1546	1262	1047	882	751	647	562	492	434	385	343	307	277	239	208	---

Alaskan Yellow Cedar
Snow Roof Loads





Allowable Roof Snow Load ($C_D = 1.15$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (lb/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

5-1/8-INCH WIDTH		SPAN (ft)																			
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
12	2932	1871	1295	947	722	547	395	293	222	172	134	107	85	69	55	---	---	---	---	---	---
13-1/2	3713	2370	1641	1201	916	720	567	422	321	249	196	156	126	102	83	68	56	---	---	---	---
15	4586	2928	2028	1485	1132	885	705	574	445	346	273	219	177	144	119	98	81	68	57	---	---
16-1/2	5551	3545	2456	1799	1366	1062	847	690	571	465	368	295	240	196	162	135	113	95	80	67	57
18	6608	4221	2924	2143	1613	1255	1001	816	676	568	482	388	315	259	215	179	151	127	108	91	78
19-1/2	7757	4956	3434	2496	1880	1463	1168	951	788	663	564	484	405	334	277	232	196	166	141	120	103
21	8999	5750	3985	2876	2166	1686	1346	1097	909	765	651	559	485	421	351	294	249	211	180	154	133
22-1/2	10332	6602	4545	3280	2471	1924	1536	1252	1039	874	744	640	555	485	427	366	310	264	226	194	167
24	11758	7514	5140	3710	2795	2176	1738	1418	1176	989	842	725	629	550	485	429	380	324	278	240	207
25-1/2	13275	8475	5769	4165	3138	2444	1952	1593	1321	1112	947	815	708	619	546	484	431	386	338	292	253
27	14885	9449	6432	4644	3500	2726	2178	1777	1475	1241	1058	910	791	692	610	541	482	432	389	350	304
28-1/2	16587	10473	7130	5148	3881	3023	2416	1971	1636	1377	1174	1011	878	769	678	601	536	481	433	391	354
30	18381	11546	7862	5677	4280	3334	2665	2175	1805	1520	1296	1116	970	849	749	665	593	532	479	433	392
31-1/2	20267	12670	8627	6230	4697	3659	2925	2387	1982	1669	1423	1226	1066	934	823	731	652	585	527	476	432
33	22141	13842	9426	6808	5133	3999	3197	2610	2167	1825	1556	1341	1166	1022	901	800	714	641	577	522	474

5-1/2-INCH WIDTH		SPAN (ft)																			
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
12	3146	2008	1390	1017	775	588	424	315	239	184	144	114	91	74	59	---	---	---	---	---	---
13-1/2	3984	2544	1761	1289	983	770	608	453	345	267	210	168	135	109	89	73	60	---	---	---	---
15	4921	3142	2176	1593	1213	942	751	611	477	371	293	235	190	155	127	105	87	73	61	51	---
16-1/2	5957	3805	2635	1930	1455	1132	903	735	608	499	395	317	257	211	174	145	121	101	85	72	61
18	7092	4530	3138	2283	1719	1337	1067	869	720	605	514	416	338	278	231	192	162	136	115	98	83
19-1/2	8325	5319	3685	2660	2003	1559	1244	1014	840	706	600	516	435	358	298	249	210	178	151	129	111
21	9657	6170	4246	3064	2308	1796	1434	1169	969	815	693	596	517	452	376	316	267	227	193	166	143
22-1/2	11088	7086	4843	3495	2633	2050	1637	1334	1107	931	792	681	591	517	455	393	332	283	242	208	180
24	12618	8046	5477	3953	2979	2319	1852	1510	1253	1054	898	772	670	586	516	457	407	348	298	257	223
25-1/2	14247	9030	6147	4438	3344	2604	2080	1697	1408	1185	1009	868	754	660	581	515	459	411	362	313	271
27	15974	10068	6854	4949	3730	2905	2321	1893	1571	1322	1127	970	842	737	650	576	514	460	414	374	326
28-1/2	17800	11160	7598	5486	4135	3221	2574	2100	1743	1467	1250	1077	935	819	722	640	571	512	461	416	377
30	19682	12304	8377	6049	4560	3552	2839	2317	1923	1620	1380	1189	1033	905	798	708	632	566	510	461	418
31-1/2	21596	13501	9193	6639	5005	3899	3117	2544	2112	1779	1516	1306	1135	994	877	779	695	623	561	507	460
33	23594	14750	10044	7254	5470	4261	3407	2781	2309	1945	1658	1429	1242	1088	960	852	761	682	615	556	505



Allowable Roof Snow Load ($C_D = 1.15$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (lb/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

6-3/4-INCH WIDTH		SPAN (ft)																			
Depth (in)	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
18	5559	3805	2745	2066	1607	1282	1044	865	727	618	510	415	341	283	236	198	167	142	120	102	87
19-1/2	6515	4432	3198	2408	1873	1495	1218	1009	848	721	620	534	440	365	306	258	218	186	158	136	116
21	7502	5105	3684	2774	2159	1724	1405	1164	979	833	716	621	542	462	387	327	278	237	203	175	151
22-1/2	8555	5822	4202	3165	2464	1967	1604	1330	1118	952	818	710	621	546	482	408	347	297	256	221	191
24	9674	6584	4752	3581	2787	2226	1815	1506	1267	1078	928	805	704	620	549	489	427	366	316	273	237
25-1/2	10857	7390	5335	4020	3130	2500	2039	1692	1424	1212	1043	906	792	698	619	551	493	444	384	333	290
27	12105	8240	5949	4484	3491	2790	2276	1888	1589	1354	1165	1012	886	780	692	617	552	497	449	401	349
28-1/2	13417	9134	6595	4971	3872	3094	2524	2095	1763	1503	1294	1124	984	867	769	686	614	553	499	453	412
30	14793	10072	7273	5482	4270	3413	2785	2312	1946	1659	1428	1241	1087	958	850	758	680	612	553	501	456
31-1/2	16232	11052	7982	6017	4687	3747	3058	2538	2138	1822	1569	1364	1195	1054	935	834	748	674	609	552	503
33	17735	12076	8721	6576	5123	4095	3343	2775	2338	1993	1717	1492	1307	1153	1024	914	819	738	668	606	552
34-1/2	19300	13142	9492	7157	5577	4458	3639	3022	2546	2171	1870	1626	1425	1257	1116	997	894	806	729	662	603
36	20928	14252	10294	7762	6049	4836	3948	3279	2763	2356	2030	1765	1547	1366	1213	1083	972	876	792	720	656
37-1/2	22618	15403	11127	8391	6539	5229	4269	3546	2988	2548	2196	1910	1674	1478	1313	1172	1052	949	859	780	711
39	24370	16597	11990	9042	7047	5635	4602	3822	3221	2748	2368	2060	1806	1595	1417	1265	1136	1024	927	843	768

8-3/4-INCH WIDTH		SPAN (ft)																			
Depth (in)	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52
24	8315	6001	4521	3519	2811	2292	1900	1598	1361	1170	1016	888	782	692	616	551	475	409	354	307	268
25-1/2	9333	6737	5076	3952	3157	2574	2135	1797	1530	1316	1143	999	880	780	695	622	559	498	432	376	328
27	10407	7513	5662	4409	3522	2873	2383	2006	1708	1470	1277	1117	984	873	778	696	626	565	512	453	396
28-1/2	11536	8329	6277	4889	3906	3187	2644	2226	1896	1632	1418	1241	1094	970	865	775	697	629	570	519	473
30	12720	9185	6923	5392	4309	3516	2918	2457	2093	1802	1566	1371	1209	1072	956	857	771	697	632	575	524
31-1/2	13958	10080	7599	5919	4731	3860	3205	2698	2300	1981	1721	1507	1329	1179	1052	943	849	767	696	633	578
33	15251	11014	8304	6469	5171	4220	3504	2951	2515	2167	1883	1650	1455	1291	1152	1033	931	841	763	695	634
34-1/2	16598	11988	9038	7042	5630	4595	3815	3214	2740	2361	2052	1798	1586	1408	1257	1127	1016	919	834	759	693
36	17999	13000	9803	7638	6107	4985	4140	3487	2974	2562	2228	1952	1723	1530	1366	1225	1104	999	907	826	755
37-1/2	19454	14052	10596	8257	6602	5390	4477	3772	3217	2772	2411	2113	1865	1656	1479	1327	1196	1082	983	896	819
39	20962	15142	11419	8899	7116	5810	4826	4066	3468	2989	2600	2279	2012	1787	1596	1433	1292	1169	1062	968	885
40-1/2	22523	16271	12271	9563	7648	6245	5188	4372	3729	3215	2796	2452	2165	1923	1718	1542	1391	1259	1144	1043	954
42	24137	17438	13152	10250	8198	6695	5562	4687	3999	3448	2999	2630	2322	2064	1844	1656	1493	1352	1229	1121	1025
43-1/2	25805	18643	14062	10960	8766	7159	5948	5014	4278	3688	3209	2814	2486	2209	1974	1773	1599	1448	1317	1201	1099
45	27524	19886	15000	11692	9352	7639	6347	5350	4565	3937	3425	3005	2654	2359	2108	1894	1708	1548	1407	1284	1175

Notes:

- (1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.
- (2) Span = simply supported beam.
- (3) Maximum deflection = L/180 under total load. Other deflection limits may apply.
- (4) Service condition = Dry
- (5) Tabulated values represent total loads and have taken the beam weight (assumed 35 pcf) into account.
- (6) Sufficient bearing length shall be provided at supports
- (7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.



Allowable Floor Load ($C_D = 1.0$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (lb/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

3-1/8-INCH WIDTH		SPAN (ft)																			
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
6	301	152	86	52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1/2	590	299	171	106	69	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	872	521	298	185	122	84	59	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10-1/2	1188	758	477	297	196	136	97	71	53	---	---	---	---	---	---	---	---	---	---	---	---
12	1553	991	685	446	296	205	147	108	81	62	---	---	---	---	---	---	---	---	---	---	---
13-1/2	1967	1255	869	635	424	295	212	157	118	91	71	56	---	---	---	---	---	---	---	---	---
15	2430	1551	1074	786	585	407	294	218	165	128	100	79	63	51	---	---	---	---	---	---	---
16-1/2	2942	1878	1300	952	726	545	394	293	223	172	135	108	87	70	57	---	---	---	---	---	---
18	3502	2236	1549	1134	865	681	514	383	292	226	179	143	115	94	77	63	52	---	---	---	---
19-1/2	4111	2626	1819	1332	1017	800	645	489	373	290	230	184	149	122	100	83	69	58	---	---	---
21	4769	3047	2111	1547	1180	929	748	610	469	365	289	232	188	154	128	106	89	74	63	53	---
22-1/2	5476	3499	2424	1777	1356	1068	854	696	577	452	358	288	234	193	160	133	112	94	80	68	57
24	6232	3982	2760	2023	1544	1211	967	788	654	550	437	352	287	236	196	164	138	117	99	85	72
25-1/2	7036	4496	3116	2285	1745	1360	1086	886	734	618	526	425	347	286	238	199	168	143	121	104	89
27	7890	5042	3495	2562	1948	1517	1212	988	820	690	587	450	342	285	239	202	172	147	126	108	94

3-1/2-INCH WIDTH		SPAN (ft)																			
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
6	337	170	96	59	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
7-1/2	661	335	191	118	77	52	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9	977	583	334	208	137	94	66	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10-1/2	1331	849	534	333	220	152	108	79	59	---	---	---	---	---	---	---	---	---	---	---	---
12	1740	1110	768	500	332	230	165	121	91	69	54	---	---	---	---	---	---	---	---	---	---
13-1/2	2203	1406	973	712	475	330	238	176	133	102	79	62	---	---	---	---	---	---	---	---	---
15	2722	1737	1203	880	655	456	329	244	185	143	112	89	71	57	---	---	---	---	---	---	---
16-1/2	3295	2103	1456	1066	813	610	441	328	249	193	152	121	97	79	64	52	---	---	---	---	---
18	3922	2505	1735	1270	969	762	575	428	326	254	200	160	129	105	86	71	59	---	---	---	---
19-1/2	4605	2941	2037	1492	1139	896	719	548	418	325	257	206	167	136	112	93	77	64	54	---	---
21	5342	3412	2364	1732	1322	1038	829	675	525	409	324	260	211	173	143	119	99	83	70	59	---
22-1/2	6133	3918	2715	1990	1519	1185	946	771	639	506	401	323	262	216	179	149	125	105	89	76	64
24	6980	4460	3091	2265	1723	1341	1071	873	723	608	490	394	321	265	220	184	155	131	111	95	81
25-1/2	7881	5036	3490	2559	1934	1506	1202	980	813	684	582	476	388	320	266	223	188	160	136	116	100
27	8836	5647	3915	2863	2157	1679	1342	1094	908	764	650	559	464	383	319	268	226	192	164	141	121

Alaskan Yellow Cedar
Floor Loads





Allowable Floor Load ($C_D = 1.0$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (lb/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

5-1/8-INCH WIDTH		SPAN (ft)																				
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
12	2548	1625	1124	732	486	337	241	178	133	102	78	61	---	---	---	---	---	---	---	---	---	---
13-1/2	3226	2059	1425	1042	696	484	348	257	194	149	116	91	72	57	---	---	---	---	---	---	---	---
15	3985	2544	1761	1289	959	668	482	357	271	209	164	130	104	83	67	54	---	---	---	---	---	---
16-1/2	4824	3080	2133	1561	1185	893	646	480	365	283	222	177	142	115	94	77	63	51	---	---	---	---
18	5743	3668	2540	1860	1400	1088	842	627	478	371	293	234	189	154	126	104	86	71	59	---	---	---
19-1/2	6742	4306	2983	2168	1632	1269	1012	802	612	476	376	302	244	200	164	136	113	94	79	66	55	---
21	7821	4996	3462	2497	1880	1462	1167	951	769	599	474	381	309	253	209	174	146	122	103	87	73	---
22-1/2	8981	5738	3948	2849	2145	1669	1332	1085	899	741	588	472	384	316	262	218	183	154	131	111	94	---
24	10220	6530	4465	3222	2427	1889	1508	1229	1019	856	717	578	471	387	322	269	226	191	163	139	118	---
25-1/2	11540	7365	5012	3617	2725	2121	1694	1381	1145	963	819	697	569	469	390	327	276	234	199	170	146	---
27	12939	8212	5589	4034	3039	2366	1890	1541	1278	1075	915	787	679	560	467	392	331	282	240	206	178	---
28-1/2	14419	9102	6195	4472	3370	2624	2096	1709	1418	1193	1016	874	759	663	553	465	394	335	287	247	213	---
30	15978	10035	6831	4932	3717	2894	2312	1886	1565	1317	1122	965	838	734	646	546	463	395	339	292	252	---
31-1/2	17618	11012	7497	5413	4079	3177	2539	2071	1719	1447	1232	1061	921	807	711	630	540	461	396	342	296	---
33	19248	12031	8191	5915	4458	3472	2775	2264	1879	1582	1348	1161	1008	883	778	690	616	534	459	397	344	---

5-1/2-INCH WIDTH		SPAN (ft)																				
Depth (in)	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	
12	2734	1744	1206	786	521	361	259	191	143	109	84	65	51	---	---	---	---	---	---	---	---	---
13-1/2	3462	2209	1529	1118	747	519	374	276	209	160	125	98	78	62	---	---	---	---	---	---	---	---
15	4277	2730	1890	1383	1029	717	517	383	291	224	176	139	111	89	72	58	---	---	---	---	---	---
16-1/2	5177	3305	2289	1676	1263	959	693	515	392	303	238	190	152	123	101	82	67	55	---	---	---	---
18	6163	3936	2726	1982	1492	1159	904	673	513	398	314	251	203	165	135	111	92	76	63	52	---	---
19-1/2	7236	4621	3201	2310	1738	1352	1078	861	657	511	404	324	262	214	176	146	121	101	85	71	59	---
21	8394	5362	3689	2661	2003	1558	1243	1013	825	643	509	409	332	272	225	187	156	131	110	93	79	---
22-1/2	9638	6157	4207	3035	2286	1778	1419	1156	958	795	631	507	412	339	281	234	197	166	140	119	101	---
24	10968	6993	4758	3433	2586	2012	1606	1309	1085	912	770	620	505	416	345	289	243	205	175	149	127	---
25-1/2	12384	7848	5341	3854	2904	2260	1805	1471	1220	1026	873	748	610	503	418	351	296	251	214	183	157	---
27	13886	8750	5955	4298	3239	2521	2013	1642	1361	1145	975	839	728	601	501	421	355	302	258	221	190	---
28-1/2	15474	9699	6602	4765	3591	2796	2233	1821	1511	1271	1082	931	808	707	594	499	422	360	308	265	228	---
30	17110	10694	7279	5255	3960	3084	2464	2009	1667	1403	1195	1028	893	781	689	586	497	424	363	313	271	---
31-1/2	18774	11734	7988	5767	4347	3385	2705	2207	1831	1541	1313	1130	982	859	757	672	580	495	425	367	318	---
33	20511	12821	8728	6302	4750	3700	2957	2412	2002	1686	1436	1237	1074	941	829	735	656	573	493	426	370	---



Allowable Floor Load ($C_D = 1.0$) for EWS 20F-V12/AC and 20F-V13/AC in Dry-Service Conditions (lb/ft)

Fb = 2,000 psi, Fv = 265 psi, E = 1,500,000 psi

6-3/4-INCH WIDTH		SPAN (ft)																			
Depth (in)	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50
18	4830	3305	2383	1793	1394	1110	826	630	489	386	308	249	202	166	137	113	93	77	64	53	---
19-1/2	5661	3850	2776	2090	1625	1296	1055	806	627	496	397	322	263	216	179	149	124	104	87	73	61
21	6519	4435	3199	2408	1873	1494	1217	1008	789	625	501	407	334	276	229	192	161	135	114	96	81
22-1/2	7435	5058	3649	2748	2138	1706	1390	1152	968	774	622	506	416	345	287	241	203	172	146	124	105
24	8407	5720	4127	3109	2419	1931	1573	1304	1096	933	761	620	510	424	354	298	252	214	183	156	133
25-1/2	9436	6421	4634	3490	2716	2169	1768	1466	1232	1049	902	749	617	513	430	363	308	262	224	192	165
27	10521	7160	5168	3893	3030	2420	1973	1636	1376	1171	1007	874	738	615	516	436	371	317	272	234	202
28-1/2	11661	7937	5729	4317	3360	2684	2189	1815	1527	1300	1119	971	849	729	612	518	441	378	325	280	243
30	12857	8752	6318	4761	3707	2961	2415	2004	1686	1436	1236	1073	939	827	720	610	520	446	384	332	288
31-1/2	14108	9604	6934	5226	4069	3251	2652	2201	1852	1578	1358	1179	1032	910	806	711	608	522	450	390	339
33	15414	10494	7577	5711	4448	3554	2900	2406	2026	1726	1486	1291	1130	996	883	787	704	605	523	454	395
34-1/2	16775	11421	8247	6216	4842	3870	3157	2621	2206	1880	1619	1407	1232	1086	963	859	770	693	603	524	457
36	18190	12385	8944	6742	5252	4198	3426	2844	2395	2041	1758	1527	1338	1180	1047	934	837	754	681	600	524
37-1/2	19660	13386	9667	7288	5678	4539	3704	3075	2590	2208	1902	1653	1448	1277	1134	1011	907	817	739	670	598
39	21183	14424	10418	7854	6119	4892	3993	3315	2793	2381	2051	1783	1562	1378	1224	1092	979	882	798	724	660

8-3/4-INCH WIDTH		SPAN (ft)																			
Depth (in)	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52
24	7224	5212	3925	3054	2437	1986	1646	1383	1177	986	803	661	549	459	386	327	278	237	202	173	148
25-1/2	8109	5851	4407	3430	2738	2232	1850	1555	1323	1137	971	800	666	558	471	399	340	291	249	214	185
27	9042	6526	4916	3826	3055	2491	2065	1737	1478	1271	1103	957	797	669	566	481	411	352	303	262	226
28-1/2	10023	7235	5451	4243	3389	2763	2292	1928	1641	1412	1225	1071	943	794	672	572	490	421	363	314	273
30	11052	7978	6012	4680	3739	3049	2529	2128	1812	1559	1353	1184	1043	924	791	674	578	498	431	374	325
31-1/2	12129	8756	6599	5138	4105	3348	2778	2338	1991	1713	1488	1302	1147	1017	906	788	676	583	505	439	383
33	13253	9568	7211	5616	4487	3661	3038	2557	2178	1875	1628	1425	1256	1114	993	889	784	678	588	512	447
34-1/2	14424	10415	7850	6114	4886	3986	3308	2785	2373	2043	1775	1554	1370	1215	1083	971	874	781	679	592	518
36	15641	11295	8514	6632	5300	4325	3590	3023	2576	2218	1927	1688	1488	1320	1178	1055	950	859	778	679	596
37-1/2	16906	12209	9204	7169	5731	4677	3882	3269	2787	2400	2086	1827	1611	1430	1276	1144	1030	931	844	769	680
39	18217	13156	9919	7727	6177	5041	4186	3525	3005	2589	2250	1971	1739	1543	1377	1235	1112	1006	913	831	759
40-1/2	19574	14137	10659	8305	6639	5419	4500	3790	3232	2784	2420	2121	1871	1661	1483	1330	1198	1084	984	896	818
42	20977	15152	11425	8902	7117	5810	4825	4064	3466	2986	2596	2275	2008	1783	1592	1428	1287	1164	1057	963	880
43-1/2	22427	16199	12215	9518	7611	6213	5160	4348	3708	3195	2778	2435	2149	1909	1704	1529	1378	1247	1133	1032	943
45	23922	17280	13031	10155	8120	6630	5507	4640	3957	3411	2966	2600	2295	2039	1821	1634	1473	1333	1211	1104	1009

Notes:

- (1) For preliminary design use only. Final design should include a complete analysis, including bearing stresses and lateral stability.
- (2) Span = simply supported beam.
- (3) Maximum deflection = L/360 under live load. Where additional stiffness is desired or for other live/total load ratios, design for deflection must be modified per requirements.
- (4) Service condition = Dry
- (5) Tabulated values represent total loads based on live/total load = 0.8 and have taken the beam weight (assumed 35 pcf) into account.
- (6) Sufficient bearing length shall be provided at supports
- (7) Maximum beam shear is located at a distance from the supports equal to the depth of the beam.