4.4 BH-36 Composite Deck

3 ½" Total Slab Depth

Light Weight Concrete (110 pcf)

Concrete Volume 0.776yd³/100ft²

ASC STEEL DECK
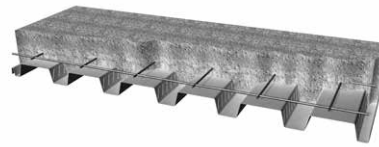
BH-36 3 1/2 " Slab Depth, 110 pcf LWC

Maximum Unshored Span	Gage	Single	Double	Triple	Gage	Single	Double	Triple
	22	7' - 1"	7' - 2"	8' - 6"	18	9' - 9"	11' - 4"	12' - 0"
	20	8' - 7"	9' - 0"	10' - 2"	16	10' - 6"	12' - 11"	12' - 7"

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	570	483	403	341	279	227	187	156	131	112	96	83	72	63	55
	LRFD, φW	796	653	544	459	391	337	293	256	225	199	177	157	141	126	114
	L/360	-	-	-	279	227	187	156	131	112	96	83	72	63	55	
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
22	Arc Spot Weld 1/2" Effective Dia	1978	1915	1862	1833	1793	1759	1729	1702	1679	1669	1649	1631	1615	1601	1587
	PAF Base Steel ≥ .25"	1663	1628	1599	1590	1568	1549	1532	1517	1503	1503	1491	1481	1472	1463	1456
	PAF Base Steel ≥ 0.125"	1638	1606	1578	1571	1550	1532	1516	1502	1490	1490	1479	1469	1461	1453	1445
	#12 Screw Base Steel ≥ .0385"	1616	1585	1559	1554	1534	1517	1502	1489	1477	1478	1468	1459	1450	1443	1436
	Concrete + Deck = 24.8 psf I_{cr} = 23.1 in⁴/ft ASD M_{no}/Ω= 20.2 kip-in/ft V_n/Ω = 1.43 kip/ft															
	$(I_{cr}+I_u)/2$ = 30.96589 in⁴/ft I_u = 38.8 in⁴/ft LRFD ϕM_{no}= 31.0 kip-in/ft ϕV_n = 2.85 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	570	518	471	374	299	243	200	167	141	120	103	89	77	67	59
	LRFD, φW	930	763	637	538	460	397	345	302	266	236	210	188	168	151	137
	L/360	-	-	-	374	299	243	200	167	141	120	103	89	77	67	59
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
20	Arc Spot Weld 1/2" Effective Dia	2129	2051	1986	1955	1906	1864	1827	1795	1766	1756	1732	1710	1690	1672	1655
	PAF Base Steel ≥ .25"	1744	1701	1666	1659	1632	1608	1587	1568	1552	1554	1540	1527	1515	1505	1495
	PAF Base Steel ≥ 0.125"	1715	1675	1641	1637	1611	1588	1569	1551	1536	1538	1525	1513	1502	1492	1483
	#12 Screw Base Steel ≥ .0385"	1690	1652	1621	1618	1593	1572	1553	1537	1522	1525	1513	1501	1491	1481	1473
	Concrete + Deck = 25.1 psf I_{cr} = 26.0 in⁴/ft ASD M_{no}/Ω= 23.5 kip-in/ft V_n/Ω = 1.43 kip/ft															
	$(I_{cr}+I_u)/2$ = 33.22565 in⁴/ft I_u = 40.5 in⁴/ft LRFD ϕM_{no}= 36.0 kip-in/ft ϕV_n = 2.85 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	570	518	475	416	333	271	223	186	157	133	114	99	86	75	66
	LRFD, φW	1141	957	799	676	579	500	436	383	338	300	268	240	216	195	177
	L/360	-	-	-	416	333	271	223	186	157	133	114	99	86	75	66
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
18	Arc Spot Weld 1/2" Effective Dia	2441	2334	2245	2212	2144	2086	2034	1989	1949	1942	1908	1877	1849	1824	1801
	PAF Base Steel ≥ .25"	1913	1854	1805	1806	1767	1734	1705	1679	1656	1664	1644	1626	1610	1595	1581
	PAF Base Steel ≥ 0.125"	1875	1819	1773	1776	1740	1708	1681	1656	1634	1644	1625	1608	1592	1578	1565
	#12 Screw Base Steel ≥ .0385"	1848	1795	1751	1756	1721	1690	1664	1640	1620	1630	1612	1595	1580	1566	1554
	Concrete + Deck = 25.8 psf I_{cr} = 30.6 in⁴/ft ASD M_{no}/Ω= 29.3 kip-in/ft V_n/Ω = 1.43 kip/ft															
	$(I_{cr}+I_u)/2$ = 36.94795 in⁴/ft I_u = 43.3 in⁴/ft LRFD ϕM_{no}= 44.8 kip-in/ft ϕV_n = 2.85 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	570	518	475	439	363	295	243	203	171	145	125	108	94	82	72
	LRFD, φW	1141	1037	951	808	692	599	523	459	406	361	323	290	261	236	215
	L/360	-	-	-	-	363	295	243	203	171	145	125	108	94	82	72
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
16	Arc Spot Weld 1/2" Effective Dia	2774	2636	2521	2490	2402	2325	2259	2200	2147	2146	2101	2061	2025	1991	1961
	PAF Base Steel ≥ .25"	2094	2018	1955	1967	1916	1873	1834	1800	1770	1788	1762	1738	1716	1696	1678
	PAF Base Steel ≥ 0.125"	2020	1951	1893	1910	1864	1823	1788	1757	1729	1749	1725	1703	1682	1664	1647
	#12 Screw Base Steel ≥ .0385"	2029	1960	1902	1919	1872	1832	1796	1765	1737	1758	1733	1711	1690	1672	1655
	Concrete + Deck = 26.5 psf I_{cr} = 34.6 in⁴/ft ASD M_{no}/Ω= 34.8 kip-in/ft V_n/Ω = 1.43 kip/ft															
	$(I_{cr}+I_u)/2$ = 40.32627 in⁴/ft I_u = 46.0 in⁴/ft LRFD ϕM_{no}= 53.2 kip-in/ft ϕV_n = 2.85 kip/ft															

	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) for all vertical load spans, WWF Size or Area of Steel per foot width					
	3/4" Welded Shear Studs	6x6 W1.4xW1.4	6x6 W2.9xW2.9	6x6 W4.0xW4.0	4x4 W4xW4	4x4 W6xW6
All Gages		A_s = 0.028 in²/ft	A_s = 0.058 in²/ft	A_s = 0.080 in²/ft	A_s = 0.120 in²/ft	A_s = 0.180 in²/ft
	6 in o.c.	2720	4070	5060	6860	9560
	12 in o.c.	2720	4070	5060	6860	9560
	18 in o.c.	2720	4070	5060	6860	8790

BH-36 Composite Deck 4.4

4" Total Slab Depth
Light Weight Concrete (110 pcf)

Concrete Volume 0.931yd³/100ft²

1 Hour Fire Rating

BH-36 4" Slab Depth, 110 pcf LWC

Maximum Unshored Span	Gage	Single	Double	Triple		Gage	Single	Double	Triple
	22	6' - 10"	7' - 0"	8' - 1"		18	9' - 3"	10' - 11"	11' - 7"
	20	8' - 2"	8' - 8"	9' - 8"		16	10' - 0"	12' - 4"	12' - 1"

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	679	615	513	434	371	320	277	231	194	165	142	122	106	93	82
	LRFD, φW	1013	831	692	585	499	430	374	327	288	255	227	202	181	163	147
	L/360	-	-	-	-	-	-	277	231	194	165	142	122	106	93	82
	LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
22	Arc Spot Weld 1/2" Effective Dia	2303	2239	2186	2157	2117	2083	2053	2026	2003	1993	1973	1955	1939	1925	1911
	PAF Base Steel ≥ .25"	1987	1952	1923	1914	1892	1873	1856	1841	1827	1827	1815	1805	1796	1787	1780
	PAF Base Steel ≥ 0.125"	1962	1930	1902	1896	1874	1856	1840	1826	1814	1814	1803	1793	1785	1777	1769
	#12 Screw Base Steel ≥ .0385"	1940	1909	1883	1878	1858	1841	1826	1813	1801	1802	1792	1783	1774	1767	1760
	Concrete + Deck = 29.4 psf I_{cr}= 33.8 in⁴/ft ASD M_{no}/Ω= 25.7 kip-in/ft V_n/Ω = 1.70 kip/ft															
	$(I_{cr}+I_u)/2$ = 45.86102 in⁴/ft I_u = 57.9 in⁴/ft LRFD ϕM_{no}= 39.3 kip-in/ft ϕV_n = 3.40 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	679	617	566	509	436	360	297	247	208	177	152	131	114	100	88
	LRFD, φW	1186	974	812	687	587	507	441	387	341	303	270	241	217	195	176
	L/360	-	-	-	-	-	360	297	247	208	177	152	131	114	100	88
	LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
20	Arc Spot Weld 1/2" Effective Dia	2453	2375	2310	2279	2231	2188	2151	2119	2090	2080	2056	2034	2014	1996	1979
	PAF Base Steel ≥ .25"	2068	2025	1990	1983	1956	1932	1911	1892	1876	1878	1864	1851	1839	1829	1819
	PAF Base Steel ≥ 0.125"	2039	1999	1965	1961	1935	1912	1893	1875	1860	1862	1849	1837	1826	1816	1807
	#12 Screw Base Steel ≥ .0385"	2014	1976	1945	1942	1917	1896	1877	1861	1846	1849	1837	1825	1815	1805	1797
	Concrete + Deck = 29.7 psf I_{cr}= 38.1 in⁴/ft ASD M_{no}/Ω= 29.9 kip-in/ft V_n/Ω = 1.70 kip/ft															
	$(I_{cr}+I_u)/2$ = 49.1641 in⁴/ft I_u = 60.3 in⁴/ft LRFD ϕM_{no}= 45.8 kip-in/ft ϕV_n = 3.40 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	679	617	566	522	485	400	330	275	232	197	169	146	127	111	98
	LRFD, φW	1358	1227	1025	868	743	643	561	492	435	387	346	310	279	252	229
	L/360	-	-	-	-	-	400	330	275	232	197	169	146	127	111	98
	LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
18	Arc Spot Weld 1/2" Effective Dia	2765	2658	2569	2536	2468	2410	2358	2313	2273	2266	2232	2201	2174	2148	2125
	PAF Base Steel ≥ .25"	2237	2179	2129	2130	2091	2058	2029	2003	1980	1988	1968	1950	1934	1919	1905
	PAF Base Steel ≥ 0.125"	2199	2144	2097	2100	2064	2032	2005	1980	1958	1968	1949	1932	1916	1902	1889
	#12 Screw Base Steel ≥ .0385"	2172	2119	2075	2080	2045	2015	1988	1965	1944	1954	1936	1919	1904	1890	1878
	Concrete + Deck = 30.4 psf I_{cr}= 45.0 in⁴/ft ASD M_{no}/Ω= 37.5 kip-in/ft V_n/Ω = 1.70 kip/ft															
	$(I_{cr}+I_u)/2$ = 54.67341 in⁴/ft I_u = 64.4 in⁴/ft LRFD ϕM_{no}= 57.3 kip-in/ft ϕV_n = 3.40 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	679	617	566	522	485	437	360	300	253	215	184	159	138	121	107
	LRFD, φW	1358	1235	1132	1040	892	772	674	593	525	467	418	376	339	307	279
	L/360	-	-	-	-	-	437	360	300	253	215	184	159	138	121	107
	LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
16	Arc Spot Weld 1/2" Effective Dia	3098	2960	2845	2814	2726	2649	2583	2524	2471	2470	2425	2385	2349	2315	2285
	PAF Base Steel ≥ .25"	2418	2342	2279	2291	2241	2197	2158	2124	2094	2112	2086	2062	2040	2020	2002
	PAF Base Steel ≥ 0.125"	2345	2275	2217	2234	2188	2147	2112	2081	2053	2073	2049	2027	2006	1988	1971
	#12 Screw Base Steel ≥ .0385"	2353	2284	2226	2243	2196	2156	2120	2089	2061	2082	2057	2035	2015	1996	1979
	Concrete + Deck = 31.1 psf I_{cr}= 51.0 in⁴/ft ASD M_{no}/Ω= 44.6 kip-in/ft V_n/Ω = 1.70 kip/ft															
	$(I_{cr}+I_u)/2$ = 59.64416 in⁴/ft I_u = 68.2 in⁴/ft LRFD ϕM_{no}= 68.3 kip-in/ft ϕV_n = 3.40 kip/ft															

|	LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) for all vertical load spans, WWF Size or Area of Steel per foot width					
	3/4" Welded Shear Studs	6x6 W1.4xW1.4	6x6 W2.9xW2.9	6x6 W4.0xW4.0	4x4 W4xW4	4x4 W6xW6
All Gages		A_s = 0.028 in²/ft	A_s = 0.058 in²/ft	A_s = 0.080 in²/ft	A_s = 0.120 in²/ft	A_s = 0.180 in²/ft
	6 in o.c.	3090	4440	5430	7230	9930
	12 in o.c.	3090	4440	5430	7230	9930
	18 in o.c.	3090	4440	5430	7230	8790

B PANELS

4.4 BH-36 Composite Deck

4¾" Total Slab Depth

Light Weight Concrete (110 pcf)

Concrete Volume 1.162yd³/100ft²

2 Hour Fire Rating

ASC STEEL DECK
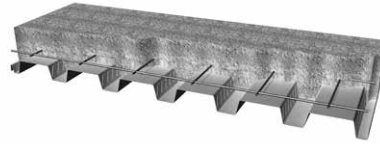
BH-36 4 3/4 " Slab Depth, 110 pcf LWC

	Gage	Single	Double	Triple		Gage	Single	Double	Triple
Maximum Unshored Span	22	6' - 5"	6' - 9"	7' - 7"		18	8' - 8"	10' - 4"	10' - 11"
	20	7' - 8"	8' - 4"	9' - 1"		16	9' - 5"	11' - 7"	11' - 7"

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	855	778	689	583	499	431	376	330	291	259	231	203	177	154	136
	LRFD, φW	1360	1116	931	787	672	580	505	442	390	345	307	275	246	222	200
	L/360	-	-	-	-	-	-	-	-	-	-	203	177	154	136	
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
22	Arc Spot Weld 1/2" Effective Dia	2789	2725	2672	2643	2603	2569	2539	2512	2489	2479	2459	2442	2425	2411	2397
	PAF Base Steel ≥ .25"	2473	2438	2409	2400	2378	2359	2342	2327	2313	2313	2301	2291	2282	2273	2266
	PAF Base Steel ≥ 0.125"	2449	2416	2388	2382	2361	2342	2326	2312	2300	2300	2289	2280	2271	2263	2255
	#12 Screw Base Steel ≥ .0385"	2426	2395	2369	2364	2344	2327	2312	2299	2287	2288	2278	2269	2261	2253	2246
	Concrete + Deck = 36.3 psf		Icr = 54.7 in³/ft		ASD		Mno/Ω= 34.4 kip-in/ft		Vn/Ω = 2.14 kip/ft							
	(Icr+Iu)/2 = 76.05533 in⁴/ft		Iu = 97.4 in⁴/ft		LRFD		φMno= 52.6 kip-in/ft		φ Vn = 4.28 kip/ft							

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	855	778	713	658	588	509	444	390	345	293	252	217	189	165	146
	LRFD, φW	1597	1312	1095	927	793	685	597	524	462	411	366	328	295	266	241
	L/360	-	-	-	-	-	-	-	-	-	293	252	217	189	165	146
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
20	Arc Spot Weld 1/2" Effective Dia	2939	2861	2796	2765	2717	2674	2637	2605	2576	2566	2542	2520	2500	2482	2466
	PAF Base Steel ≥ .25"	2554	2512	2476	2469	2442	2418	2397	2379	2362	2364	2350	2337	2325	2315	2305
	PAF Base Steel ≥ 0.125"	2525	2485	2451	2447	2421	2398	2379	2361	2346	2348	2335	2323	2312	2302	2293
	#12 Screw Base Steel ≥ .0385"	2500	2463	2431	2428	2403	2382	2363	2347	2332	2335	2323	2311	2301	2291	2283
	Concrete + Deck = 36.6 psf		Icr = 61.7 in³/ft		ASD		Mno/Ω= 40.2 kip-in/ft		Vn/Ω = 2.14 kip/ft							
	(Icr+Iu)/2 = 81.45304 in⁴/ft		Iu = 101.2 in⁴/ft		LRFD		φMno= 61.5 kip-in/ft		φ Vn = 4.28 kip/ft							

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	855	778	713	658	611	570	535	456	384	327	280	242	210	184	162
	LRFD, φW	1711	1555	1392	1179	1011	875	763	671	594	528	472	424	383	346	314
	L/360	-	-	-	-	-	-	-	456	384	327	280	242	210	184	162
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
18	Arc Spot Weld 1/2" Effective Dia	3251	3144	3055	3022	2954	2896	2844	2799	2759	2752	2718	2687	2660	2634	2611
	PAF Base Steel ≥ .25"	2724	2665	2615	2616	2577	2544	2515	2489	2466	2474	2454	2436	2420	2405	2391
	PAF Base Steel ≥ 0.125"	2685	2630	2583	2587	2550	2518	2491	2466	2445	2454	2435	2418	2402	2388	2375
	#12 Screw Base Steel ≥ .0385"	2658	2605	2561	2566	2531	2501	2474	2451	2430	2440	2422	2405	2390	2377	2364
	Concrete + Deck = 37.3 psf		Icr = 73.4 in³/ft		ASD		Mno/Ω= 50.7 kip-in/ft		Vn/Ω = 2.14 kip/ft							
	(Icr+Iu)/2 = 90.62195 in⁴/ft		Iu = 107.8 in⁴/ft		LRFD		φMno= 77.6 kip-in/ft		φ Vn = 4.28 kip/ft							

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	855	778	713	658	611	570	535	497	419	356	305	264	230	201	177
	LRFD, φW	1711	1555	1426	1316	1219	1056	922	812	719	641	574	516	466	423	385
	L/360	-	-	-	-	-	-	-	497	419	356	305	264	230	201	177
	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) 36/4 Attachment Pattern															
16	Arc Spot Weld 1/2" Effective Dia	3584	3446	3331	3300	3212	3136	3069	3010	2958	2956	2911	2871	2835	2801	2771
	PAF Base Steel ≥ .25"	2904	2828	2765	2777	2727	2683	2644	2610	2580	2598	2572	2548	2526	2506	2488
	PAF Base Steel ≥ 0.125"	2831	2761	2703	2721	2674	2633	2598	2567	2539	2560	2535	2513	2492	2474	2457
	#12 Screw Base Steel ≥ .0385"	2839	2770	2712	2729	2682	2642	2606	2575	2547	2568	2543	2521	2501	2482	2465
	Concrete + Deck = 37.9 psf		Icr = 83.7 in³/ft		ASD		Mno/Ω= 60.7 kip-in/ft		Vn/Ω = 2.14 kip/ft							
	(Icr+Iu)/2 = 98.87916 in⁴/ft		Iu = 114.0 in⁴/ft		LRFD		φMno= 92.9 kip-in/ft		φ Vn = 4.28 kip/ft							

	LRFD - Available Diaphragm Shear Capacity, φSₙ (plf / ft) for all vertical load spans, WWF Size or Area of Steel per foot width				
	3/4" Welded Shear Studs	6x6 W1.4xW1.4 As = 0.028 in²/ft	6x6 W2.9xW2.9 As = 0.058 in²/ft	6x6 W4.0xW4.0 As = 0.080 in²/ft	4x4 W4xW4 As = 0.120 in²/ft	4x4 W6xW6 As = 0.180 in²/ft
All Gages	6 in o.c.	n/a	4990	5980	7780	10480
	12 in o.c.	n/a	4990	5980	7780	10480
	18 in o.c.	n/a	4990	5980	7780	8790

BH-36 Composite Deck 4.4

5 ¾" Total Slab Depth
Light Weight Concrete (110 pcf)

Concrete Volume 1.47yd³/100ft²

3 Hour Fire Rating

Maximum Unshored Span	Gage	Single	Double	Triple
	22	6' - 0"	6' - 6"	7' - 1"
	20	7' - 1"	7' - 10"	8' - 5"

BH-36 5 3/4 " Slab Depth, 110 pcf LWC

Gage	Single	Double	Triple
18	8' - 1"	9' - 8"	10' - 2"
16	8' - 9"	10' - 10"	10' - 11"

Gage 22

Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
ASD, W/Ω	1114	1013	928	794	680	588	512	450	398	353	316	283	255	230	209
LRFD, φW	1848	1518	1267	1071	916	791	689	604	533	473	421	377	339	305	276
L/360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
Arc Spot Weld 1/2" Effective Dia	3437	3373	3320	3291	3252	3217	3187	3160	3137	3127	3107	3090	3073	3059	3045
PAF Base Steel ≥ .25"	3121	3086	3057	3049	3026	3007	2990	2975	2961	2961	2950	2939	2930	2922	2914
PAF Base Steel ≥ 0.125"	3097	3064	3036	3030	3009	2990	2974	2960	2948	2948	2937	2928	2919	2911	2904
#12 Screw Base Steel ≥ .0385"	3074	3043	3018	3012	2993	2975	2960	2947	2935	2936	2926	2917	2909	2901	2894

Concrete + Deck = 45.4 psf I_{cr} = 91.8 in⁴/ft ASD M_{no}/Ω = 46.6 kip-in/ft V_n/Ω = 2.79 kip/ft
$(I_{cr}+I_u)/2$ = 133.1157 in⁴/ft I_u = 174.4 in⁴/ft LRFD ϕM_{no} = 71.3 kip-in/ft ϕV_n = 5.57 kip/ft

Gage 20

Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
ASD, W/Ω	1114	1013	928	857	796	695	607	533	472	420	376	338	305	276	251
LRFD, φW	2177	1790	1495	1266	1084	937	817	717	634	563	503	451	406	367	333
L/360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
Arc Spot Weld 1/2" Effective Dia	3587	3509	3445	3413	3365	3322	3286	3253	3224	3214	3190	3168	3148	3130	3114
PAF Base Steel ≥ .25"	3203	3160	3124	3118	3090	3066	3045	3027	3010	3012	2998	2985	2974	2963	2953
PAF Base Steel ≥ 0.125"	3173	3133	3100	3095	3069	3047	3027	3009	2994	2996	2983	2971	2960	2950	2941
#12 Screw Base Steel ≥ .0385"	3149	3111	3079	3076	3051	3030	3011	2995	2980	2983	2971	2959	2949	2940	2931

Concrete + Deck = 45.8 psf I_{cr} = 104.1 in⁴/ft ASD M_{no}/Ω = 54.7 kip-in/ft V_n/Ω = 2.79 kip/ft
$(I_{cr}+I_u)/2$ = 142.3442 in⁴/ft I_u = 180.6 in⁴/ft LRFD ϕM_{no} = 83.7 kip-in/ft ϕV_n = 5.57 kip/ft

Gage 18

Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
ASD, W/Ω	1114	1013	928	857	796	743	696	655	609	543	487	423	367	322	283
LRFD, φW	2228	2026	1857	1623	1391	1205	1052	926	820	730	653	587	530	480	437
L/360	-	-	-	-	-	-	-	-	-	-	-	423	367	322	283
LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
Arc Spot Weld 1/2" Effective Dia	3899	3792	3703	3670	3602	3544	3493	3447	3407	3400	3366	3336	3308	3282	3259
PAF Base Steel ≥ .25"	3372	3313	3264	3264	3226	3192	3163	3137	3114	3122	3102	3084	3068	3053	3039
PAF Base Steel ≥ 0.125"	3333	3278	3232	3235	3198	3166	3139	3114	3093	3102	3083	3066	3050	3036	3023
#12 Screw Base Steel ≥ .0385"	3307	3254	3209	3214	3179	3149	3122	3099	3078	3088	3070	3053	3038	3025	3012

Concrete + Deck = 46.4 psf I_{cr} = 124.8 in⁴/ft ASD M_{no}/Ω = 69.5 kip-in/ft V_n/Ω = 2.79 kip/ft
$(I_{cr}+I_u)/2$ = 158.3282 in⁴/ft I_u = 191.8 in⁴/ft LRFD ϕM_{no} = 106.4 kip-in/ft ϕV_n = 5.57 kip/ft

Gage 16

Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
ASD, W/Ω	1114	1013	928	857	796	743	696	655	619	586	534	461	401	351	309
LRFD, φW	2228	2026	1857	1714	1592	1462	1278	1125	998	890	797	718	649	589	536
L/360	-	-	-	-	-	-	-	-	-	-	534	461	401	351	309
LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) 36/4 Attachment Pattern															
Arc Spot Weld 1/2" Effective Dia	4232	4094	3979	3948	3860	3784	3717	3658	3606	3604	3560	3519	3483	3449	3419
PAF Base Steel ≥ .25"	3553	3476	3413	3425	3375	3331	3292	3258	3228	3246	3220	3196	3174	3154	3136
PAF Base Steel ≥ 0.125"	3479	3409	3352	3369	3322	3282	3246	3215	3187	3208	3183	3161	3141	3122	3105
#12 Screw Base Steel ≥ .0385"	3487	3418	3360	3377	3330	3290	3255	3223	3196	3216	3191	3169	3149	3130	3113

Concrete + Deck = 47.1 psf I_{cr} = 143.2 in⁴/ft ASD M_{no}/Ω = 83.7 kip-in/ft V_n/Ω = 2.79 kip/ft
$(I_{cr}+I_u)/2$ = 172.76 in⁴/ft I_u = 202.3 in⁴/ft LRFD ϕM_{no} = 128.1 kip-in/ft ϕV_n = 5.57 kip/ft

All Gages

LRFD - Available Diaphragm Shear Capacity, φSn (plf / ft) for all vertical load spans, WWF Size or Area of Steel per foot width

| 3/4" Welded Shear Studs	6x6 W1.4xW1.4	6x6 W2.9xW2.9	6x6 W4.0xW4.0	4x4 W4xW4	4x4 W6xW6
	A_s = 0.028 in²/ft	A_s = 0.058 in²/ft	A_s = 0.080 in²/ft	A_s = 0.120 in²/ft	A_s = 0.180 in²/ft
6 in o.c.	n/a	5730	6720	8520	11220
12 in o.c.	n/a	5730	6720	8520	11220
18 in o.c.	n/a	5730	6720	8520	8790

4.4 BH-36 Composite Deck

5 ¹¹⁄₁₆" Total Slab Depth

Light Weight Concrete (110 pcf)

Concrete Volume 1.452yd³/100ft²

3 Hour Fire Rating

ASC STEEL DECK
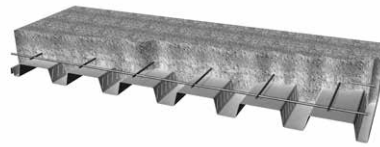
BH-36 5 11/16" Slab Depth, 110 pcf LWC

Maximum Unshored Span	Gage	Single	Double	Triple
	22	6' - 0"	6' - 6"	7' - 1"
	20	7' - 2"	7' - 10"	8' - 5"

	Gage	Single	Double	Triple
	18	8' - 2"	9' - 8"	10' - 2"
	16	8' - 10"	10' - 10"	10' - 11"

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	1097	997	914	780	668	578	504	442	391	347	310	278	251	226	205
	LRFD, φW	1817	1492	1245	1053	901	778	677	594	524	464	414	370	333	300	271
	L/360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	LRFD - Available Diaphragm Shear Capacity, φS$_n$ (plf / ft) 36/4 Attachment Pattern															
22	Arc Spot Weld 1/2" Effective Dia	3396	3332	3279	3251	3211	3177	3146	3120	3096	3086	3067	3049	3033	3018	3005
	PAF Base Steel ≥ .25"	3081	3046	3016	3008	2986	2966	2949	2934	2921	2920	2909	2899	2890	2881	2873
	PAF Base Steel ≥ 0.125"	3056	3023	2996	2989	2968	2950	2934	2920	2907	2907	2897	2887	2878	2870	2863
	#12 Screw Base Steel ≥ .0385"	3034	3003	2977	2972	2952	2935	2920	2907	2895	2896	2886	2876	2868	2861	2854
	Concrete + Deck = 44.9 psf I$_{cr}$ = 89.2 in⁴/ft ASD M$_{no}$/Ω = 45.9 kip-in/ft V$_n$/Ω = 2.74 kip/ft															
	(I$_{cr}$+I$_u$)/2 = 128.9338 in⁴/ft I$_u$ = 168.7 in⁴/ft LRFD φM$_{no}$ = 70.2 kip-in/ft φ V$_n$ = 5.49 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	1097	997	914	844	784	683	596	524	464	413	369	332	299	271	246
	LRFD, φW	2140	1759	1469	1244	1065	921	803	705	623	554	494	443	399	361	327
	L/360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	LRFD - Available Diaphragm Shear Capacity, φS$_n$ (plf / ft) 36/4 Attachment Pattern															
20	Arc Spot Weld 1/2" Effective Dia	3547	3469	3404	3373	3324	3282	3245	3212	3183	3174	3150	3128	3108	3090	3073
	PAF Base Steel ≥ .25"	3162	3119	3083	3077	3049	3026	3005	2986	2970	2971	2957	2945	2933	2922	2913
	PAF Base Steel ≥ 0.125"	3133	3093	3059	3055	3029	3006	2986	2969	2953	2956	2943	2931	2920	2910	2901
	#12 Screw Base Steel ≥ .0385"	3108	3070	3038	3036	3011	2990	2971	2954	2940	2943	2930	2919	2909	2899	2890
	Concrete + Deck = 45.2 psf I$_{cr}$ = 101.1 in⁴/ft ASD M$_{no}$/Ω = 53.8 kip-in/ft V$_n$/Ω = 2.74 kip/ft															
	(I$_{cr}$+I$_u$)/2 = 137.8871 in⁴/ft I$_u$ = 174.7 in⁴/ft LRFD φM$_{no}$ = 82.3 kip-in/ft φ V$_n$ = 5.49 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	1097	997	914	844	784	731	686	645	598	533	474	409	356	312	274
	LRFD, φW	2194	1995	1829	1594	1367	1184	1034	909	805	717	642	577	521	472	429
	L/360	-	-	-	-	-	-	-	-	-	474	409	356	312	274	
	LRFD - Available Diaphragm Shear Capacity, φS$_n$ (plf / ft) 36/4 Attachment Pattern															
18	Arc Spot Weld 1/2" Effective Dia	3859	3752	3663	3630	3562	3503	3452	3407	3367	3359	3326	3295	3267	3242	3219
	PAF Base Steel ≥ .25"	3331	3272	3223	3224	3185	3152	3122	3096	3074	3082	3062	3044	3027	3012	2999
	PAF Base Steel ≥ 0.125"	3293	3237	3191	3194	3158	3126	3098	3074	3052	3062	3043	3026	3010	2996	2983
	#12 Screw Base Steel ≥ .0385"	3266	3213	3169	3174	3139	3108	3082	3058	3037	3048	3029	3013	2998	2984	2972
	Concrete + Deck = 45.9 psf I$_{cr}$ = 121.2 in⁴/ft ASD M$_{no}$/Ω = 68.3 kip-in/ft V$_n$/Ω = 2.74 kip/ft															
	(I$_{cr}$+I$_u$)/2 = 153.3782 in⁴/ft I$_u$ = 185.6 in⁴/ft LRFD φM$_{no}$ = 104.5 kip-in/ft φ V$_n$ = 5.49 kip/ft															

Gage	Vertical Load Span (ft-in)	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
	ASD & LRFD - Available Superimposed Load Capacity, W (psf)															
	ASD, W/Ω	1097	997	914	844	784	731	686	645	610	577	517	447	388	340	299
	LRFD, φW	2194	1995	1829	1688	1567	1436	1255	1105	980	874	783	705	637	578	527
	L/360	-	-	-	-	-	-	-	-	-	517	447	388	340	299	
	LRFD - Available Diaphragm Shear Capacity, φS$_n$ (plf / ft) 36/4 Attachment Pattern															
16	Arc Spot Weld 1/2" Effective Dia	4191	4053	3939	3907	3819	3743	3676	3617	3565	3563	3519	3479	3442	3409	3378
	PAF Base Steel ≥ .25"	3512	3436	3373	3385	3334	3290	3252	3218	3188	3206	3179	3155	3134	3114	3095
	PAF Base Steel ≥ 0.125"	3438	3369	3311	3328	3281	3241	3206	3174	3147	3167	3143	3120	3100	3082	3065
	#12 Screw Base Steel ≥ .0385"	3447	3377	3320	3337	3290	3249	3214	3183	3155	3175	3151	3128	3108	3090	3073
	Concrete + Deck = 46.5 psf I$_{cr}$ = 138.9 in⁴/ft ASD M$_{no}$/Ω = 82.2 kip-in/ft V$_n$/Ω = 2.74 kip/ft															
	(I$_{cr}$+I$_u$)/2 = 167.3616 in⁴/ft I$_u$ = 195.8 in⁴/ft LRFD φM$_{no}$ = 125.8 kip-in/ft φ V$_n$ = 5.49 kip/ft															

All Gages	**LRFD - Available Diaphragm Shear Capacity, φS$_n$ (plf / ft) for all vertical load spans, WWF Size or Area of Steel per foot width**					
	3/4" Welded Shear Studs	6x6 W1.4xW1.4 A$_s$ = 0.028 in²/ft	6x6 W2.9xW2.9 A$_s$ = 0.058 in²/ft	6x6 W4.0xW4.0 A$_s$ = 0.080 in²/ft	4x4 W4xW4 A$_s$ = 0.120 in²/ft	4x4 W6xW6 A$_s$ = 0.180 in²/ft
	6 in o.c.	n/a	5680	6670	8470	11170
	12 in o.c.	n/a	5680	6670	8470	11170
	18 in o.c.	n/a	5680	6670	8470	8790