

# Standards Wireway Fill Tables

## Wireway Fill Table Lay-In and Feed-through Type 12 and Type 3R (Based on 1999 National Electric Code)

Wireway Size and Maximum Number of Conductors Allowed (Areas shown are 20% of the full interior cross sectional area of the wireway.)													
Conductor Size AWG-MCM	"Area of Conductor (sq. in.) ,	Wireway Size					Conductor Size AWG-MCM	"Area of Conductor (sq. in.) ,	Wireway Size				
		2.50X2.50 (1.11 SQ. IN.)	4.00X4.00 (2.98 SQ. IN.)	6.00X6.00 (6.87 SQ. IN.)	8.00X8.00 (12.4 SQ. IN.)	12.00X6.00 (13.7 SQ. IN.)			2.50X2.50 (1.11 SQ. IN.)	4.00X4.00 (2.98 SQ. IN.)	6.00X6.00 (6.87 SQ. IN.)	8.00X8.00 (12.4 SQ. IN.)	12.00X6.00 (13.7 SQ. IN.)
<b>"RFH-2, FFH-2, RH"</b>													
18	0.0145	76	205	473	854	945	12	0.0181	61	164	379	684	757
16	0.0172	64	173	399	720	797	10	0.0243	45	122	282	509	564
14	0.0209	52	142	328	592	656	8	0.0437	25	68	157	283	313
12	0.0260	42	114	264	476	527	<b>"RHH", RHW*, RHW-2*, THHW, THW, AF, XF, XFF, THW-2, TW, "</b>						
<b>"RHW-2, RHH, RHW"</b>													
14	0.0293	37	101	234	422	467	14	0.0209	52	142	328	592	656
12	0.0353	31	84	194	350	388	12	0.0260	42	114	264	476	527
<b>"RHW-2, RHH, RHW, RH"</b>													
10	0.0437	25	68	157	283	313	10	0.0333	33	89	206	371	411
8	0.0835	13	35	82	148	164	8	0.0556	19	53	123	222	246
6	0.1041	10	28	65	118	131	6	0.0726	15	41	94	170	188
4	0.1333	8	22	51	92	102	4	0.0973	11	30	70	127	140
3	0.1521	7	19	45	81	90	3	0.1134	9	26	60	109	120
2	0.1750	6	17	39	70	78	2	0.1333	8	22	51	92	102
1	0.2660	4	11	25	46	51	1	0.1901	5	15	36	65	72
1/0	0.3039	3	9	22	40	45	1/0	0.2223	4	13	30	55	61
2/0	0.3505	3	8	19	35	39	2/0	0.2624	4	11	26	47	52
3/0	0.4072	2	7	16	30	33	3/0	0.3117	3	9	22	39	43
4/0	0.4754	2	6	14	26	28	4/0	0.3718	2	8	18	33	36
250	0.6291	1	4	10	19	21	250	0.4596	2	6	14	26	29
300	0.7088	1	4	9	17	19	300	0.5281	2	5	13	23	25
350	0.7870	1	3	8	15	17	350	0.5958	1	5	11	20	23
400	0.8626	1	3	7	14	15	400	0.6619	1	4	10	18	20
500	1.0082	1	2	6	12	13	500	0.7901	1	3	8	15	17
600	1.2135	0	2	5	10	11	600	0.9729	1	3	7	12	14
700	1.3561	0	2	5	9	10	700	1.1010	1	2	6	11	12
750	1.4272	0	2	4	8	9	750	1.1652	0	2	5	10	11
800	1.4957	0	1	4	8	9	800	1.2272	0	2	5	10	11
900	1.6377	0	1	4	7	8	900	1.3561	0	2	5	9	10
1000	1.7719	0	1	3	6	7	1000	1.4784	0	2	4	8	9
1250	2.3479	0	1	2	5	5	1250	1.8602	0	1	3	6	7
1500	2.6938	0	1	2	4	5	1500	2.1695	0	1	3	5	6
1750	3.0357	0	0	2	4	4	1750	2.4773	0	1	2	5	5
2000	3.3719	0	0	2	3	4	2000	2.7818	0	1	2	4	4
<b>"SF-2, SFF-2"</b>													
18	0.0115	96	259	597	1077	1192	<b>"TFN, TFFN, THHN, THWN, THWN-2"</b>						
16	0.0139	79	214	494	891	986	18	0.0055	200	541	1248	2252	2493
14	0.0172	64	173	399	720	797	16	0.0072	153	413	953	1720	1904
<b>"SF-1, SFF-1"</b>													
18	0.0065	169	458	1056	1905	2109	14	0.0097	113	307	708	1277	1413
<b>"RFH-1, AF, XF, XFF, AF, TF, TFF, TW, "</b>													
18	0.0080	138	372	858	1548	1713	12	0.0133	83	224	516	931	1030
16	0.0109	101	273	630	1136	1257	10	0.0211	52	141	325	587	649
14	0.0139	79	214	494	891	986	8	0.0366	30	81	187	338	374
							6	0.0507	21	58	135	244	270
							4	0.0824	13	36	83	150	166
							3	0.0973	11	30	70	127	140
							2	0.1158	9	25	59	106	118
							1	0.1562	7	19	43	79	87
							1/0	0.1855	5	16	37	66	73

The 1999 National Electric Code limits wireway fill as follows:

1. A wireway shall not contain more than thirty current-carrying conductors except where the ampacity has been adjusted according to Table 310-15(b)(2)(a).
2. The sum of the cross-sectional areas of all conductors shall not exceed 20% of the interior cross-sectional area of the wireway.

**Wireway Fill Table Lay-In and Feed-through Type 12 and Type 3R** (Based on 1999 National Electric Code)

Wireway Size and Maximum Number of Conductors Allowed (Areas shown are 20% of the full interior cross sectional area of the wireway.)													
Conductor Size AWG-MCM	"Area of Conductor (sq. in.)"												
		2.50X2.50 (1.11 SQ. IN.)	4.00X4.00 (2.98 SQ. IN.)	6.00X6.00 (6.87 SQ. IN.)	8.00X8.00 (12.4 SQ. IN.)	12.00X6.00 (13.7 SQ. IN.)	Conductor Size AWG-MCM	"Area of Conductor (sq. in.)"	2.50X2.50 (1.11 SQ. IN.)	4.00X4.00 (2.98 SQ. IN.)	6.00X6.00 (6.87 SQ. IN.)	8.00X8.00 (12.4 SQ. IN.)	12.00X6.00 (13.7 SQ. IN.)
<b>Continued</b>													
2/0	0.2223	4	13	30	55	61	2/0	0.2027	5	14	33	61	67
3/0	0.2679	4	11	25	46	51	3/0	0.2463	4	12	27	50	55
4/0	0.3237	3	9	21	38	42	4/0	0.3000	3	9	22	41	45
250	0.3970	2	7	17	31	34	<b>"XHHW, ZW, XHHW-2, XHH"</b>						
300	0.4608	2	6	14	26	29	14	0.0139	79	214	494	891	986
350	0.5242	2	5	13	23	26	12	0.0181	61	164	379	684	757
400	0.5863	1	5	11	21	23	10	0.0243	45	122	282	509	564
500	0.7073	1	4	9	17	19	8	0.0437	25	68	157	283	313
600	0.8676	1	3	7	14	15	6	0.0590	18	50	116	209	232
700	0.9887	1	3	6	12	13	4	0.0814	13	36	84	152	168
750	1.0496	1	2	6	11	13	3	0.0962	11	30	71	128	142
800	1.1085	0	2	6	11	12	2	0.1146	9	26	59	108	119
900	1.2311	0	2	5	10	11	1	0.1534	7	19	44	80	89
1000	1.3478	0	2	5	9	10	1/0	0.1825	6	16	37	67	75
<b>"PF, PGFF, PGF, PFF, PTF, PAF, PTFF, PAFF, TFE, FEP, PFA, FEPA, PFAH"</b>													
18	0.0058	190	513	1184	2135	2364	2/0	0.2190	5	13	31	56	62
16	0.0075	147	397	915	1651	1828	3/0	0.2642	4	11	25	46	51
14	0.0100	110	297	686	1238	1371	4/0	0.3197	3	9	21	38	42
12	0.0137	80	217	501	904	1000	250	0.3904	2	7	17	31	35
10	0.0191	57	156	359	648	717	300	0.4536	2	6	15	27	30
8	0.0333	33	89	206	371	411	350	0.5166	2	5	13	23	26
6	0.0468	23	63	146	264	292	400	0.5782	1	5	11	21	23
4	0.0670	16	44	102	184	204	500	0.6984	1	4	9	17	19
3	0.0804	13	37	85	154	170	600	0.8709	1	3	7	14	15
2	0.0973	11	30	70	127	140	700	0.9923	1	3	6	12	13
1	0.1399	7	21	49	88	98	750	1.0532	1	2	6	11	13
1/0	0.1676	6	17	40	73	81	800	1.1122	0	2	6	11	12
2/0	0.2027	5	14	33	61	67	900	1.2351	0	2	5	10	11
3/0	0.2463	4	12	27	50	55	1000	1.3519	0	2	5	9	10
4/0	0.3000	3	9	22	41	45	1250	1.7180	0	1	3	7	7
<b>"ZF, ZFF, Z"</b>													
18	0.0045	245	662	1526	2752	3047	1500	2.0157	0	1	3	6	6
16	0.0061	181	488	1125	2030	2247	1750	2.3127	0	1	2	5	5
14	0.0083	133	359	827	1492	1652	2000	2.6073	0	1	2	4	5
12	0.0117	94	254	587	1058	1171	<b>"KF-2, KFF-2"</b>						
10	0.0191	57	156	359	648	717	18	0.0031	356	961	2215	3995	4423
8	0.0302	36	98	227	410	454	16	0.0044	251	677	1560	2815	3116
6	0.0430	25	69	159	288	318	14	0.0064	172	465	1073	1935	2142
4	0.6250	1	4	10	19	21	12	0.0093	118	320	738	1331	1474
3	0.0855	12	34	80	144	160	10	0.0139	79	214	494	891	986
2	0.1029	10	28	66	120	133	<b>"KF-1, KFF-1"</b>						
1	0.1269	8	23	54	97	108	18	0.0026	424	1146	2641	4764	5273
1/0	0.1676	6	17	40	73	81	16	0.0037	298	805	1856	3347	3705
							14	0.0055	200	541	1248	2252	2493
							12	0.0083	133	359	827	1492	1652
							10	0.0127	86	234	540	975	1079

The 1999 National Electric Code limits wireway fill as follows:

1. A wireway shall not contain more than thirty current-carrying conductors except where the ampacity has been adjusted according to Table 310-15(b)(2)(a).
2. The sum of the cross-sectional areas of all conductors shall not exceed 20% of the interior cross-sectional area of the wireway.

# Industry Standards

## Wireway Fill Table Lay-In Type I (Based on 1999 National Electric Code)

Wireway Size and Maximum Number of Conductors Allowed (Areas shown are 20% of the full interior cross sectional area of the wireway.)															
Conductor Size AWG-MCM	"Area of Conductor (sq. in.) ,	2.50X2.50	4.00X4.00	6.00X6.00	8.00X8.00	10.00X10.00	12.00X12.00	Conductor Size AWG-MCM	"Area of Conductor (sq. in.) ,	2.50X2.50	4.00X4.00	6.00X6.00	8.00X8.00	10.00X10.00	12.00X12.00
		(1.25 SQ. IN.)	(3.20 SQ. IN.)	(7.20 SQ. IN.)	(12.8 SQ. IN.)	(20 SQ. IN.)	(28.8 SQ. IN.)			(1.25 SQ. IN.)	(3.20 SQ. IN.)	(7.20 SQ. IN.)	(12.8 SQ. IN.)	(20 SQ. IN.)	(28.8 SQ. IN.)
<b>"RFH-2, FFH-2, RH"</b>								12	0.0181	69	176	397	707	1104	1591
18	0.0145	86	220	496	882	1379	1986	10	0.0243	51	131	296	526	823	1185
16	0.0172	72	186	418	744	1162	1674	8	0.0437	28	73	164	292	457	659
14	0.0209	59	153	344	612	956	1377	<b>"RHH", RHW", RHW-2", THHW, THW, AF, XF, XFF, THW-2, TW, "</b>							
12	0.0260	48	123	276	492	769	1107	14	0.0209	59	153	344	612	956	1377
<b>"RHW-2, RHH, RHW"</b>								12	0.0260	48	123	276	492	769	1107
14	0.0293	42	109	245	436	682	982	10	0.0333	37	96	216	384	600	864
12	0.0353	35	90	203	362	566	815	8	0.0556	22	57	129	230	359	517
<b>"RHW-2, RHH, RHW, RH"</b>								6	0.0726	17	44	99	176	275	396
10	0.0437	28	73	164	292	457	659	4	0.0973	12	32	73	131	205	295
8	0.0835	14	38	86	153	239	344	3	0.1134	11	28	63	112	176	253
6	0.1041	12	30	69	122	192	276	2	0.1333	9	24	54	96	150	216
4	0.1333	9	24	54	96	150	216	1	0.1901	6	16	37	67	105	151
3	0.1521	8	21	47	84	131	189	1/0	0.2223	5	14	32	57	89	129
2	0.1750	7	18	41	73	114	164	2/0	0.2624	4	12	27	48	76	109
1	0.2660	4	12	27	48	75	108	3/0	0.3117	4	10	23	41	64	92
1/0	0.3039	4	10	23	42	65	94	4/0	0.3718	3	8	19	34	53	77
2/0	0.3505	3	9	20	36	57	82	250	0.4596	2	6	15	27	43	62
3/0	0.4072	3	7	17	31	49	70	300	0.5281	2	6	13	24	37	54
4/0	0.4754	2	6	15	26	42	60	350	0.5958	2	5	12	21	33	48
250	0.6291	1	5	11	20	31	45	400	0.6619	1	4	10	19	30	43
300	0.7088	1	4	10	18	28	40	500	0.7901	1	4	9	16	25	36
350	0.7870	1	4	9	16	25	36	600	0.9729	1	3	7	13	20	29
400	0.8626	1	3	8	14	23	33	700	1.1010	1	2	6	11	18	26
500	1.0082	1	3	7	12	19	28	750	1.1652	1	2	6	10	17	24
600	1.2135	1	2	5	10	16	23	800	1.2272	1	2	5	10	16	23
700	1.3561	0	2	5	9	14	21	900	1.3561	0	2	5	9	14	21
750	1.4272	0	2	5	8	14	20	1000	1.4784	0	2	4	8	13	19
800	1.4957	0	2	4	8	13	19	1250	1.8602	0	1	3	6	10	15
900	1.6377	0	1	4	7	12	17	1500	2.1695	0	1	3	5	9	13
1000	1.7719	0	1	4	7	11	16	1750	2.4773	0	1	2	5	8	11
1250	2.3479	0	1	3	5	8	12	2000	2.7818	0	1	2	4	7	10
1500	2.6938	0	1	2	4	7	10	<b>"TFN, TFFN, THHN, THWN, THWN-2"</b>							
1750	3.0357	0	1	2	4	6	9	18	0.0055	227	581	1309	2327	3636	5236
2000	3.3719	0	0	2	3	5	8	16	0.0072	173	444	1000	1777	2777	4000
<b>"SF-2, SFF-2"</b>								14	0.0097	128	329	742	1319	2061	2969
18	0.0115	108	278	626	1113	1739	2504	12	0.0133	93	240	541	962	1503	2165
16	0.0139	89	230	517	920	1438	2071	10	0.0211	59	151	341	606	947	1364
14	0.0172	72	186	418	744	1162	1674	8	0.0366	34	87	196	349	546	786
<b>"SF-1, SFF-1"</b>								6	0.0507	24	63	142	252	394	568
18	0.0065	192	492	1107	1969	3076	4430	4	0.0824	15	38	87	155	242	349
<b>"RFH-1, AF, XF, XFF, AF, TF, TFF, TW, "</b>								3	0.0973	12	32	73	131	205	295
18	0.0080	156	400	900	1600	2500	3600	2	0.1158	10	27	62	110	172	248
16	0.0109	114	293	660	1174	1834	2642	1	0.1562	8	20	46	81	128	184
14	0.0139	89	230	517	920	1438	2071	1/0	0.1855	6	17	38	69	107	155

The 1999 National Electric Code limits wireway fill as follows:

1. A wireway shall not contain more than thirty current-carrying conductors except where the ampacity has been adjusted according to Table 310-15(b)(2)(a).
2. The sum of the cross-sectional areas of all conductors shall not exceed 20% of the interior cross-sectional area of the wireway.

**Wireway Fill Table Lay-In Type I** (Based on 1999 National Electric Code)

Wireway Size and Maximum Number of Conductors Allowed (Areas shown are 20% of the full interior cross sectional area of the wireway.)																					
Conductor Size AWG-MCM	"Area of Conductor (sq. in.)"	Wireway Size						Conductor Size AWG-MCM	"Area of Conductor (sq. in.)"	Wireway Size											
		2.50X2.50 (1.25 SQ. IN.)	4.00X4.00 (3.20 SQ. IN.)	6.00X6.00 (7.20 SQ. IN.)	8.00X8.00 (12.8 SQ. IN.)	10.00X10.00 (20 SQ. IN.)	12.00X12.00 (28.8 SQ. IN.)			2.50X2.50 (1.25 SQ. IN.)	4.00X4.00 (3.20 SQ. IN.)	6.00X6.00 (7.20 SQ. IN.)	8.00X8.00 (12.8 SQ. IN.)	10.00X10.00 (20 SQ. IN.)	12.00X12.00 (28.8 SQ. IN.)						
<b>Continued</b>																					
2/0	0.2223	5	14	32	57	89	129	2/0	0.2027	6	15	35	63	98	142						
3/0	0.2679	4	11	26	47	74	107	3/0	0.2463	5	12	29	51	81	116						
4/0	0.3237	3	9	22	39	61	88	4/0	0.3000	4	10	24	42	66	96						
<b>"XHHW, ZW, XHHW-2, XHH"</b>																					
250	0.3970	3	8	18	32	50	72	14	0.0139	89	230	517	920	1438	2071						
300	0.4608	2	6	15	27	43	62	12	0.0181	69	176	397	707	1104	1591						
350	0.5242	2	6	13	24	38	54	10	0.0243	51	131	296	526	823	1185						
400	0.5863	2	5	12	21	34	49	8	0.0437	28	73	164	292	457	659						
500	0.7073	1	4	10	18	28	40	6	0.0590	21	54	122	216	338	488						
600	0.8676	1	3	8	14	23	33	4	0.0814	15	39	88	157	245	353						
700	0.9887	1	3	7	12	20	29	3	0.0962	12	33	74	133	207	299						
750	1.0496	1	3	6	12	19	27	2	0.1146	10	27	62	111	174	251						
800	1.1085	1	2	6	11	18	25	1	0.1534	8	20	46	83	130	187						
900	1.2311	1	2	5	10	16	23	1/0	0.1825	6	17	39	70	109	157						
1000	1.3478	0	2	5	9	14	21	2/0	0.2190	5	14	32	58	91	131						
<b>"PF, PGFF, PGF, PFF, PTF, PAF, PTFF, PAFF, TFE, FEP, PFA, FEPB, PFAH"</b>																					
18	0.0058	215	551	1241	2206	3448	4965	3/0	0.2642	4	12	27	48	75	109						
16	0.0075	166	426	960	1706	2666	3840	4/0	0.3197	3	10	22	40	62	90						
14	0.0100	125	320	720	1280	2000	2880	250	0.3904	3	8	18	32	51	73						
12	0.0137	91	233	525	934	1459	2102	300	0.4536	2	7	15	28	44	63						
10	0.0191	65	167	376	670	1047	1507	350	0.5166	2	6	13	24	38	55						
8	0.0333	37	96	216	384	600	864	400	0.5782	2	5	12	22	34	49						
6	0.0468	26	68	153	273	427	615	500	0.6984	1	4	10	18	28	41						
4	0.0670	18	47	107	191	298	429	600	0.8709	1	3	8	14	22	33						
3	0.0804	15	39	89	159	248	358	700	0.9923	1	3	7	12	20	29						
2	0.0973	12	32	73	131	205	295	750	1.0532	1	3	6	12	18	27						
1	0.1399	8	22	51	91	142	205	800	1.1122	1	2	6	11	17	25						
1/0	0.1676	7	19	42	76	119	171	900	1.2351	1	2	5	10	16	23						
2/0	0.2027	6	15	35	63	98	142	1000	1.3519	0	2	5	9	14	21						
3/0	0.2463	5	12	29	51	81	116	1250	1.7180	0	1	4	7	11	16						
4/0	0.3000	4	10	24	42	66	96	1500	2.0157	0	1	3	6	9	14						
<b>"ZF, ZFF, Z"</b>																					
18	0.0045	277	711	1600	2844	4444	6400	1750	2.3127	0	1	3	5	8	12						
16	0.0061	204	524	1180	2098	3278	4721	2000	2.6073	0	1	2	4	7	11						
14	0.0083	150	385	867	1542	2409	3469	<b>"KF-2, KFF-2"</b>													
12	0.0117	106	273	615	1094	1709	2461	18	0.0031	403	1032	2322	4129	6451	9290						
10	0.0191	65	167	376	670	1047	1507	16	0.0044	284	727	1636	2909	4545	6545						
8	0.0302	41	105	238	423	662	953	14	0.0064	195	500	1125	2000	3125	4500						
6	0.0430	29	74	167	297	465	669	12	0.0093	134	344	774	1376	2150	3096						
4	0.6250	2	5	11	20	32	46	10	0.0139	89	230	517	920	1438	2071						
3	0.0855	14	37	84	149	233	336	<b>"KF-1, KFF-1"</b>													
2	0.1029	12	31	69	124	194	279	18	0.0026	480	1230	2769	4923	7692	11076						
1	0.1269	9	25	56	100	157	226	16	0.0037	337	864	1945	3459	5405	7783						
1/0	0.1676	7	19	42	76	119	171	14	0.0055	227	581	1309	2327	3636	5236						
								12	0.0083	150	385	867	1542	2409	3469						
								10	0.0127	98	251	566	1007	1574	2267						

The 1999 National Electric Code limits wireway fill as follows:

1. A wireway shall not contain more than thirty current-carrying conductors except where the ampacity has been adjusted according to Table 310-15(b)(2)(a).
2. The sum of the cross-sectional areas of all conductors shall not exceed 20% of the interior cross-sectional area of the wireway.