

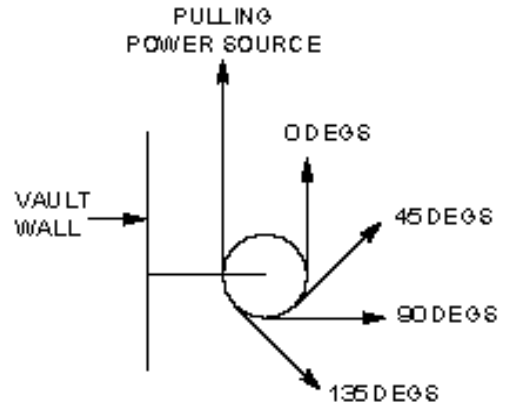
# CONSTRUCTION GUIDELINE

### PULLING CABLE AROUND BLOCKS

Maximum allowable cable pulling tension for one Hilti carbon steel "Kwik Bolt II" anchor. Tabulated values below include a 4:1 safety factor for anchor failure.

#### 5/8" BOLT DIAMETER

Angle in Degrees	2000 psi Concrete				3000 psi Concrete		
	Embedment Depth				Embedment Depth		
	2.75"	4"	7"		2.75"	4"	7"
0	1540	1920	1920		1540	1920	1920
15	1510	1910	1930		1530	1920	1930
30	1460	1890	1960		1510	1940	1970
45	1410	1880	2010		1490	1960	2040
60	1370	1880	2100		1480	2020	2160
75	1370	1930	2240		1520	2120	2330
90	1420	2040	2460		1600	2290	2570
105	1540	2240	2790		1750	2560	2950
120	1770	2610	3330		2040	3020	3550
135	2210	3290	4280		2560	3850	4600



#### 3/4" BOLT DIAMETER

Angle in Degrees	2000 psi Concrete				3000 psi Concrete		
	Embedment Depth				Embedment Depth		
	3.25"	4.75"	8"		3.25"	4.75"	8"
0	2070	2560	2560		2070	2560	2560
15	2030	2540	2570		2050	2570	2580
30	1930	2480	2590		2000	2600	2640
45	1830	2430	2650		1950	2670	2760
60	1750	2400	2740		1920	2780	2930
75	1730	2430	2900		1940	2950	3180
90	1780	2540	3150		2020	3210	3550
105	1920	2780	3550		2210	3640	4110
120	2190	3210	4210		2550	4320	4980
135	2730	4030	5380		3200	5540	6840

#### 1" BOLT DIAMETER

Angle in Degrees	2000 psi Concrete				3000 psi Concrete		
	Embedment Depth				Embedment Depth		
	4.5"	6"	9"		4.5"	6"	9"
0	3540	4600	4600		3800	4600	4600
15	3460	4540	4600		3750	4590	4620
30	3290	4390	4620		3640	4560	4690
45	3110	4230	4680		3520	4550	4830
60	2980	4120	4800		3440	4590	5040
75	2940	4130	5020		3440	4730	5380
90	3010	4280	5400		3570	5030	5890
105	3240	4640	6030		3880	5560	6690
120	3710	5340	7100		4470	6480	7980
135	4620	6680	9040		5590	8190	10250

ORIGINATOR

STANDARDS COORDINATOR

STANDARDS SUPERVISOR

UNIT DIRECTOR

*Keith "BMAC-HOG" Rozand*

*James S. Horn*

*John C. Hansen*

*Betty Robin*

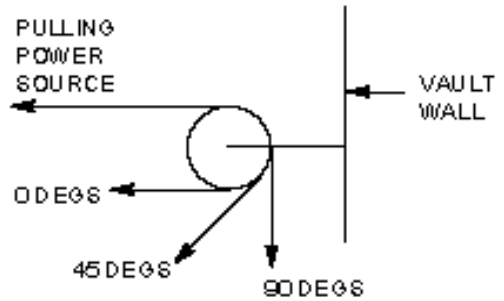
# CONSTRUCTION GUIDELINE

## PULLING CABLE AROUND BLOCKS

Maximum allowable cable pulling tension for one Hilti carbon steel "Kwik Bolt II" anchor. Tabulated values below include a 4:1 safety factor for anchor failure.

### 5/8" BOLT DIAMETER

Angle in Degrees	2000 psi Concrete			3000 psi Concrete		
	Embedment Depth			Embedment Depth		
	2.75"	4"	7"	2.75"	4"	7"
0	800	1200	1600	940	1430	1740
15	810	1220	1620	950	1440	1750
30	850	1270	1670	990	1500	1810
45	920	1360	1770	1060	1600	1900
60	1020	1500	1920	1180	1750	2050
75	1180	1720	2140	1350	1970	2270
90	1420	2040	2460	1600	2290	2570



### 3/4" BOLT DIAMETER

Angle in Degrees	2000 psi Concrete			3000 psi Concrete		
	Embedment Depth			Embedment Depth		
	3.25"	4.75"	8"	3.25"	4.75"	8"
0	990	1470	2000	1160	2070	2470
15	1000	1490	2020	1180	2090	2490
30	1050	1550	2100	1230	2160	2560
45	1130	1670	2230	1320	2290	2680
60	1270	1850	2430	1470	2500	2870
75	1470	2130	2730	1690	2790	3150
90	1780	2540	3150	2020	3210	3550

### 1" BOLT DIAMETER

Angle in Degrees	2000 psi Concrete			3000 psi Concrete		
	Embedment Depth			Embedment Depth		
	4.5"	6"	9"	4.5"	6"	9"
0	1670	2420	3340	2030	3000	3840
15	1690	2450	3380	2060	3040	3880
30	1770	2560	3510	2150	3170	4010
45	1910	2760	3740	2320	3390	4250
60	2140	3080	4100	2580	3740	4610
75	2490	3560	4630	2980	4260	5130
90	3010	4280	5400	3570	5030	5890