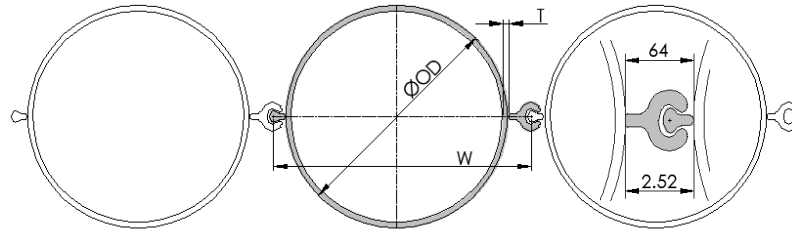




Predictable, Quantifiable Retaining Wall Systems for All Soil Types



O-Pile 50 - 775  
 KEY: (50 = Section Modulus in cm<sup>3</sup>/m)  
 (775 = System Width in mm)

O-Pile® systems are available for immediate shipment, these are examples from an endless variety of possible O-Pile®, please configure your own system on O-Pile.com.

\* The average weight (per square unit of wall) is usually the most relevant calculation for comparing piling solution costs of the acceptable bending moment, assuming equal or greater minimum thickness of the sheet pile section.

SECTION	UNIT OF WALL			BENDING MOMENT/MEL											
	Diameter OD	Thickness Wall T	System Width W	Section Modulus	Interlock Strength	Moment of Inertia	Weight- Connector Ratio *			50	60	65	X70	X80	Mariner® Steel ASTM A690
							50%	75%	100%						
in.	in.	in.	in <sup>2</sup> /ft	k/ft	in <sup>4</sup> /ft	lbs/ft <sup>2</sup>	lbs/ft <sup>2</sup>	lbs/ft <sup>2</sup>	k-ft/ft	k-ft/ft	k-ft/ft	k-ft/ft	k-ft/ft	k-ft/ft	
O-Pile 19-388	12.8	0.38	15.3	34.4	233.9	219.5	43.4	45.3	47.3	143.5	172.2	186.5	199.8	231	143.5
O-Pile 25-470	16	0.38	18.5	45.5	233.9	364.2	44.3	45.9	47.5	189.7	227.6	246.6	264.1	305.4	189.7
O-Pile 26-470	16	0.39	18.5	47.6	233.9	381	45.4	47.0	48.6	198.4	238.1	258	276.3	319.5	198.4
O-Pile 29-521	18	0.38	20.5	52.4	233.9	471.7	44.7	46.2	47.6	218.4	262.1	283.9	304.1	351.6	218.4
O-Pile 29-470	16	0.44	18.5	52.5	233.9	419.9	50.6	52.2	53.8	218.7	262.4	284.3	304.5	352.1	218.7
O-Pile 30-521	18	0.39	20.5	54.9	233.9	493.7	45.8	47.3	48.7	228.6	274.3	297.1	318.2	368	228.6
O-Pile 31-470	16	0.47	18.5	56.3	233.9	450.5	53.8	55.4	57.0	234.6	281.5	305	326.7	377.7	234.6
O-Pile 32-470	16	0.5	18.5	59.3	233.9	474.3	56.9	58.5	60.1	247	296.4	321.1	343.9	397.7	247
O-Pile 32-572	20	0.38	22.5	59.3	233.9	593.3	45.1	46.4	47.7	247.2	296.7	321.4	344.2	398	247.2
O-Pile 33-521	18	0.44	20.5	60.5	233.9	544.6	51.2	52.6	54.1	252.1	302.6	327.8	351.1	405.9	252.1
O-Pile 34-572	20	0.39	22.5	62.1	233.9	621.2	46.2	47.5	48.8	258.8	310.6	336.5	360.4	416.7	258.8
O-Pile 35-521	18	0.47	20.5	65	233.9	584.7	54.4	55.8	57.3	270.7	324.8	351.9	376.9	435.8	270.7
O-Pile 36-470	16	0.56	18.5	65.9	233.9	527.3	63.1	64.7	66.3	274.6	329.5	357	382.4	442.1	274.6
O-Pile 37-521	18	0.5	20.5	68.4	233.9	615.9	57.6	59.0	60.5	285.1	342.2	370.7	397	459	285.1
O-Pile 37-572	20	0.44	22.5	68.6	233.9	685.7	51.7	53.0	54.3	285.7	342.9	371.4	397.8	460	285.7
O-Pile 39-470	16	0.62	18.5	72.4	233.9	579	69.2	70.8	72.5	301.5	361.9	392	419.9	485.5	301.5
O-Pile 40-674	24	0.38	26.5	73.2	233.9	878.9	45.6	46.8	47.9	305.2	366.2	396.7	424.9	491.3	305.2
O-Pile 40-572	20	0.47	22.5	73.7	233.9	736.6	54.9	56.2	57.6	306.9	368.3	399	427.3	494.1	306.9
O-Pile 41-521	18	0.56	20.5	76.2	233.9	685.6	63.9	65.4	66.8	317.4	380.9	412.7	442	511	317.4
O-Pile 42-674	24	0.39	26.5	76.7	233.9	920.5	46.8	47.9	49.0	319.6	383.6	415.5	445	514.6	319.6
O-Pile 42-572	20	0.5	22.5	77.6	233.9	776.3	58.2	59.5	60.8	323.5	388.2	420.5	450.4	520.8	323.5
O-Pile 46-521	18	0.62	20.5	83.8	233.9	753.9	70.2	71.7	73.1	349	418.8	453.7	485.9	561.9	349
O-Pile 46-674	24	0.44	26.5	84.8	233.9	1017.3	52.4	53.5	54.6	353.2	423.9	459.2	491.8	568.7	353.2
O-Pile 47-572	20	0.56	22.5	86.5	233.9	865.1	64.6	66.0	67.3	360.5	432.6	468.6	501.9	580.3	360.5
O-Pile 47-775	28	0.38	30.5	87.2	233.9	1220.9	46.1	47.0	48.0	363.4	436	472.4	505.9	585	363.4
O-Pile 50-674	24	0.47	26.5	91.1	233.9	1093.8	55.7	56.8	58.0	379.8	455.7	493.7	528.8	611.4	379.8

O-Pile 50-775	28	0.39	30.5	91.4	233.9	1279.2	47.2	48.2	49.1	380.7	456.9	494.9	530.1	612.9	380.7
O-Pile 51-826	30	0.38	32.5	94.2	233.9	1413.1	46.2	47.1	48.0	392.5	471	510.3	546.5	631.9	392.5
O-Pile 52-572	20	0.62	22.5	95.2	233.9	952.2	71.1	72.4	73.7	396.8	476.1	515.8	552.4	638.7	396.8
O-Pile 52-674	24	0.5	26.5	96.1	233.9	1153.6	59.1	60.2	61.3	400.5	480.7	520.7	557.7	644.8	400.5
O-Pile 54-826	30	0.39	32.5	98.7	233.9	1480.8	47.4	48.3	49.2	411.3	493.6	534.7	572.7	662.2	411.3
O-Pile 55-775	28	0.44	30.5	101.1	233.9	1414.8	52.9	53.9	54.9	421.1	505.3	547.4	586.3	677.9	421.1
O-Pile 55-877	32	0.38	34.5	101.2	233.9	1619.4	46.4	47.2	48.1	421.7	506.1	548.2	587.2	678.9	421.7
O-Pile 58-877	32	0.39	34.5	106.1	233.9	1697.2	47.5	48.4	49.2	442	530.4	574.6	615.4	711.5	442
O-Pile 58-674	24	0.56	26.5	107.3	233.9	1287.6	65.7	66.8	68.0	447.1	536.5	581.2	622.5	719.8	447.1
O-Pile 59-928	34	0.38	36.5	108.2	233.9	1839.9	46.5	47.3	48.1	450.9	541.1	586.2	627.9	726	450.9
O-Pile 59-775	28	0.47	30.5	108.7	233.9	1522.1	56.3	57.3	58.3	453	543.6	588.9	630.7	729.3	453
O-Pile 59-826	30	0.44	32.5	109.2	233.9	1638.3	53.1	54.0	54.9	455.1	546.1	591.6	633.6	732.6	455.1
O-Pile 61-572	20	0.75	22.5	112.1	233.9	1121.2	84.9	86.2	87.5	467.2	560.6	607.3	650.5	752.1	467.2
O-Pile 61-928	34	0.39	36.5	113.4	233.9	1928.4	47.7	48.5	49.3	472.7	567.2	614.4	658.1	760.9	472.7
O-Pile 62-775	28	0.5	30.5	114.7	233.9	1606.1	59.7	60.7	61.7	478	573.6	621.4	665.6	769.5	478
O-Pile 62-978	36	0.38	38.5	115.2	233.9	2074.4	46.6	47.4	48.2	480.2	576.2	624.3	668.6	773.1	480.2
O-Pile 64-877	32	0.44	34.5	117.4	233.9	1878.2	53.3	54.2	55.0	489.1	586.9	635.9	681	787.4	489.1
O-Pile 64-826	30	0.47	32.5	117.5	233.9	1762.9	56.6	57.5	58.4	489.7	587.6	636.6	681.8	788.4	489.7
O-Pile 64-674	24	0.62	26.5	118.3	233.9	1419.4	72.3	73.5	74.6	492.9	591.4	640.7	686.2	793.5	492.9
O-Pile 65-978	36	0.39	38.5	120.8	233.9	2174.5	47.8	48.6	49.3	503.4	604	654.4	700.9	810.4	503.4
O-Pile 66-1029	38	0.38	40.5	122.3	233.9	2323.2	46.7	47.4	48.2	509.5	611.4	662.3	709.4	820.2	509.5
O-Pile 67-826	30	0.5	32.5	124	233.9	1860.6	60.0	60.9	61.8	516.8	620.2	671.9	719.6	832.1	516.8
O-Pile 68-928	34	0.44	36.5	125.6	233.9	2134.7	53.5	54.3	55.1	523.2	627.8	680.2	728.5	842.3	523.2
O-Pile 68-623	22	0.75	24.5	125.9	233.9	1384.9	85.8	87.0	88.2	524.6	629.5	681.9	730.4	844.5	524.6
O-Pile 68-877	32	0.47	34.5	126.3	233.9	2021.6	56.8	57.6	58.5	526.5	631.7	684.4	733	847.5	526.5
O-Pile 69-1029	38	0.39	40.5	128.2	233.9	2435.4	47.9	48.6	49.4	534.1	640.9	694.3	743.6	859.8	534.1
O-Pile 69-775	28	0.56	30.5	128.2	233.9	1794.7	66.5	67.5	68.5	534.1	641	694.4	743.7	859.9	534.1
O-Pile 70-674	24	0.69	26.5	129.1	233.9	1549.1	80.0	81.1	82.3	537.9	645.5	699.3	748.9	866	537.9
O-Pile 70-1080	40	0.38	42.5	129.3	233.9	2586	46.8	47.5	48.2	538.8	646.5	700.4	750.1	867.3	538.8
O-Pile 72-877	32	0.5	34.5	133.4	233.9	2134	60.2	61.1	62.0	555.7	666.9	722.4	773.8	894.7	555.7
O-Pile 72-978	36	0.44	38.5	133.8	233.9	2407.6	53.6	54.4	55.2	557.3	668.8	724.5	776	897.2	557.3
O-Pile 73-928	34	0.47	36.5	135.2	233.9	2298	57.0	57.8	58.6	563.2	675.9	732.2	784.2	906.8	563.2
O-Pile 73-1080	40	0.39	42.5	135.6	233.9	2711.1	48.0	48.7	49.4	564.8	677.8	734.3	786.4	909.3	564.8
O-Pile 74-1131	42	0.38	44.5	136.3	233.9	2863	46.9	47.6	48.2	568.1	681.7	738.5	790.9	914.5	568.1
O-Pile 75-826	30	0.56	32.5	138.7	233.9	2080.1	66.8	67.8	68.7	577.8	693.4	751.1	804.5	930.2	577.8
O-Pile 76-674	24	0.75	26.5	139.7	233.9	1676.7	86.6	87.7	88.8	582.2	698.6	756.8	810.6	937.3	582.2
O-Pile 77-775	28	0.62	30.5	141.5	233.9	1980.7	73.3	74.3	75.2	589.5	707.4	766.4	820.8	949.1	589.5
O-Pile 77-1029	38	0.44	40.5	141.9	233.9	2697	53.8	54.5	55.2	591.4	709.7	768.9	823.5	952.2	591.4
O-Pile 77-928	34	0.5	36.5	142.7	233.9	2426.1	60.5	61.3	62.1	594.6	713.6	773	828	957.3	594.6
O-Pile 77-1131	42	0.39	44.5	142.9	233.9	3001.7	48.1	48.8	49.4	595.6	714.7	774.3	829.3	958.8	595.6
O-Pile 78-1182	44	0.38	46.5	143.4	233.9	3154.1	47.0	47.6	48.3	597.4	716.8	776.6	831.7	961.7	597.4
O-Pile 78-978	36	0.47	38.5	144	233.9	2592.3	57.1	57.9	58.7	600.1	720.1	780.1	835.5	966	600.1

O-Pile 81-877	32	0.56	34.5	149.2	233.9	2386.6	67.1	68.0	68.9	621.5	745.8	808	865.4	1000.6	621.5
O-Pile 81-1080	40	0.44	42.5	150.1	233.9	3002.8	53.9	54.6	55.3	625.6	750.7	813.3	871.1	1007.2	625.6
O-Pile 81-674	24	0.81	26.5	150.2	233.9	1802.2	93.1	94.2	95.3	625.7	750.9	813.5	871.3	1007.4	625.7
O-Pile 81-1182	44	0.39	46.5	150.3	233.9	3307.2	48.2	48.8	49.4	626.4	751.6	814.3	872.1	1008.4	626.4
O-Pile 82-978	36	0.5	38.5	152.1	233.9	2737.2	60.6	61.4	62.2	633.6	760.3	823.7	882.2	1020	633.6
O-Pile 83-1029	38	0.47	40.5	152.9	233.9	2904.3	57.3	58.0	58.8	636.9	764.3	828	886.8	1025.4	636.9
O-Pile 83-826	30	0.62	32.5	153.1	233.9	2296.7	73.7	74.6	75.5	638	765.6	829.4	888.3	1027.1	638
O-Pile 84-775	28	0.69	30.5	154.6	233.9	2164.2	81.1	82.1	83.1	644.1	772.9	837.3	896.8	1037	644.1
O-Pile 85-1283	48	0.38	50.5	157.4	233.9	3778.7	47.1	47.7	48.3	656	787.2	852.8	913.4	1056.1	656
O-Pile 86-1131	42	0.44	44.5	158.3	233.9	3325.2	54.0	54.7	55.3	659.8	791.7	857.7	918.6	1062.2	659.8
O-Pile 86-928	34	0.56	36.5	159.7	233.9	2714.3	67.4	68.2	69.0	665.3	798.3	864.9	926.3	1071	665.3
O-Pile 87-674	24	0.88	26.5	160.5	233.9	1925.5	100.6	101.8	102.9	668.6	802.3	869.2	930.9	1076.4	668.6
O-Pile 87-1029	38	0.5	40.5	161.4	233.9	3067	60.8	61.5	62.3	672.6	807.1	874.4	936.5	1082.8	672.6
O-Pile 87-1080	40	0.47	42.5	161.7	233.9	3234.2	57.4	58.1	58.8	673.8	808.5	875.9	938.1	1084.7	673.8
O-Pile 89-1334	50	0.38	52.5	164.5	233.9	4112.2	47.2	47.7	48.3	685.4	822.4	891	954.3	1103.4	685.4
O-Pile 89-686	24.5	0.88	27.0	164.5	233.9	2015	100.9	102.0	103.1	685.4	822.5	891	954.3	1103.4	685.4
O-Pile 89-877	32	0.62	34.5	164.8	233.9	2636.2	74.0	74.9	75.7	686.5	823.8	892.5	955.9	1105.2	686.5
O-Pile 89-1283	48	0.39	50.5	165.1	233.9	3962.5	48.3	48.9	49.5	687.9	825.5	894.3	957.9	1107.5	687.9
O-Pile 90-1182	44	0.44	46.5	166.5	233.9	3664.1	54.1	54.8	55.4	694	832.7	902.1	966.2	1117.2	694
O-Pile 90-826	30	0.69	32.5	167.4	233.9	2510.5	81.6	82.5	83.4	697.4	836.8	906.6	971	1122.7	697.4
O-Pile 91-775	28	0.75	30.5	167.5	233.9	2345	87.8	88.8	89.8	697.9	837.5	907.3	971.8	1123.6	697.9
O-Pile 92-978	36	0.56	38.5	170.2	233.9	3063.2	67.6	68.4	69.2	709.1	850.9	921.8	987.3	1141.6	709.1
O-Pile 92-1131	42	0.47	44.5	170.6	233.9	3581.8	57.6	58.2	58.9	710.7	852.8	923.9	989.5	1144.1	710.7
O-Pile 92-674	24	0.94	26.5	170.6	233.9	2046.8	107.1	108.2	109.3	710.7	852.8	923.9	989.6	1144.2	710.7
O-Pile 92-1080	40	0.5	42.5	170.8	233.9	3415.7	61.0	61.7	62.4	711.6	853.9	925.1	990.8	1145.6	711.6
O-Pile 93-1385	52	0.38	54.5	171.5	233.9	4459.9	47.2	47.8	48.3	714.7	857.7	929.1	995.2	1150.6	714.7
O-Pile 93-1334	50	0.39	52.5	172.5	233.9	4312.4	48.4	48.9	49.5	718.7	862.5	934.4	1000.7	1157.1	718.7
O-Pile 95-928	34	0.62	36.5	176.4	233.9	2999.2	74.3	75.1	75.9	735.1	882.1	955.6	1023.5	1183.5	735.1
O-Pile 97-1436	54	0.38	56.5	178.6	233.9	4821.6	47.3	47.8	48.3	744.1	892.9	967.3	1036	1197.9	744.1
O-Pile 97-1182	44	0.47	46.5	179.4	233.9	3947.3	57.7	58.3	59.0	747.6	897.1	971.9	1040.9	1203.6	747.6
O-Pile 97-1385	52	0.39	54.5	179.9	233.9	4677.2	48.4	49.0	49.5	749.6	899.5	974.4	1043.7	1206.7	749.6
O-Pile 97-1131	42	0.5	44.5	180.2	233.9	3783.3	61.1	61.8	62.4	750.6	900.8	975.8	1045.2	1208.5	750.6
O-Pile 97-877	32	0.69	34.5	180.2	233.9	2882.8	82.0	82.8	83.7	750.7	900.9	975.9	1045.3	1208.6	750.7
O-Pile 97-775	28	0.81	30.5	180.2	233.9	2523.4	94.5	95.5	96.4	751	901.2	976.3	1045.7	1209	751
O-Pile 98-674	24	1	26.5	180.5	233.9	2166.1	113.5	114.6	115.7	752.1	902.5	977.7	1047.2	1210.8	752.1
O-Pile 98-1029	38	0.56	40.5	180.7	233.9	3433.3	67.8	68.6	69.3	752.9	903.5	978.8	1048.3	1212.1	752.9
O-Pile 98-826	30	0.75	32.5	181.4	233.9	2721.6	88.3	89.3	90.2	756	907.2	982.8	1052.6	1217.1	756
O-Pile 99-1283	48	0.44	50.5	183	233.9	4391.3	54.3	54.9	55.5	762.4	914.8	991.1	1061.5	1227.4	762.4
O-Pile 100-1486	56	0.38	58.5	185.6	233.9	5197.6	47.3	47.8	48.4	773.4	928.1	1005.5	1076.9	1245.2	773.4
O-Pile 101-1436	54	0.39	56.5	187.3	233.9	5056.8	48.5	49.0	49.5	780.4	936.4	1014.5	1086.6	1256.3	780.4
O-Pile 102-978	36	0.62	38.5	188.1	233.9	3385.8	74.6	75.3	76.1	783.8	940.5	1018.9	1091.3	1261.8	783.8
O-Pile 102-1182	44	0.5	46.5	189.5	233.9	4169.6	61.2	61.9	62.5	789.7	947.6	1026.6	1099.6	1271.4	789.7

O-Pile 103-1334	50	0.44	52.5	191.2	233.9	4779.6	54.4	54.9	55.5	796.6	955.9	1035.6	1109.2	1282.5	796.6
O-Pile 103-1080	40	0.56	42.5	191.2	233.9	3824.6	68.0	68.7	69.4	796.8	956.2	1035.8	1109.4	1282.8	796.8
O-Pile 104-775	28	0.88	30.5	192.8	233.9	2699.2	102.2	103.2	104.2	803.3	964	1044.3	1118.5	1293.3	803.3
O-Pile 104-928	34	0.69	36.5	193	233.9	3280.9	82.3	83.2	84.0	804.1	965	1045.4	1119.7	1294.6	804.1
O-Pile 105-1486	56	0.39	58.5	194.7	233.9	5451.3	48.5	49.1	49.6	811.2	973.4	1054.6	1129.5	1306	811.2
O-Pile 106-826	30	0.81	32.5	195.3	233.9	2929.8	95.1	96.0	96.9	813.8	976.6	1058	1133.2	1310.2	813.8
O-Pile 106-877	32	0.75	34.5	195.4	233.9	3126.3	88.8	89.7	90.5	814.1	977	1058.4	1133.6	1310.7	814.1
O-Pile 106-1283	48	0.47	50.5	197.1	233.9	4731.6	57.9	58.5	59.1	821.5	985.7	1067.9	1143.8	1322.5	821.5
O-Pile 108-1385	52	0.44	54.5	199.4	233.9	5184.4	54.5	55.0	55.5	830.8	997	1080.1	1156.8	1337.6	830.8
O-Pile 108-1588	60	0.38	62.5	199.7	233.9	5991.8	47.4	47.9	48.4	832.2	998.6	1081.9	1158.7	1339.8	832.2
O-Pile 108-1029	38	0.62	40.5	199.8	233.9	3795.9	74.8	75.6	76.3	832.4	998.9	1082.2	1159.1	1340.2	832.4
O-Pile 109-1131	42	0.56	44.5	201.8	233.9	4237.1	68.2	68.9	69.5	840.7	1008.8	1092.9	1170.6	1353.5	840.7
O-Pile 111-775	28	0.94	30.5	205.2	233.9	2872.5	108.8	109.8	110.8	854.9	1025.9	1111.4	1190.3	1376.3	854.9
O-Pile 111-978	36	0.69	38.5	205.8	233.9	3704.9	82.7	83.4	84.2	857.6	1029.1	1114.9	1194.1	1380.7	857.6
O-Pile 111-1334	50	0.47	52.5	206	233.9	5150.5	58.0	58.5	59.1	858.4	1030.1	1115.9	1195.2	1382	858.4
O-Pile 112-1639	62	0.38	64.5	206.8	233.9	6410.1	47.5	47.9	48.4	861.6	1033.9	1120	1199.6	1387.1	861.6
O-Pile 112-1436	54	0.44	56.5	207.6	233.9	5605.7	54.5	55.1	55.6	865.1	1038.1	1124.6	1204.5	1392.7	865.1
O-Pile 112-1283	48	0.5	50.5	208.3	233.9	4999	61.5	62.1	62.6	867.9	1041.4	1128.2	1208.4	1397.2	867.9
O-Pile 113-826	30	0.88	32.5	209	233.9	3135.4	102.9	103.8	104.7	870.9	1045.1	1132.2	1212.7	1402.1	870.9
O-Pile 113-928	34	0.75	36.5	209.4	233.9	3559.4	89.2	90.0	90.8	872.4	1046.9	1134.1	1214.7	1404.5	872.4
O-Pile 113-1588	60	0.39	62.5	209.5	233.9	6284.7	48.6	49.1	49.6	872.9	1047.5	1134.7	1215.4	1405.3	872.9
O-Pile 114-877	32	0.81	34.5	210.4	233.9	3366.9	95.6	96.4	97.3	876.8	1052.2	1139.8	1220.8	1411.6	876.8
O-Pile 114-1080	40	0.62	42.5	211.5	233.9	4229.6	75.0	75.7	76.4	881.2	1057.4	1145.5	1226.9	1418.6	881.2
O-Pile 115-1182	44	0.56	46.5	212.3	233.9	4670.8	68.3	69.0	69.6	884.6	1061.6	1150	1231.7	1424.2	884.6
O-Pile 116-1385	52	0.47	54.5	214.9	233.9	5587.2	58.1	58.6	59.2	895.4	1074.5	1164	1246.7	1441.5	895.4
O-Pile 117-1486	56	0.44	58.5	215.8	233.9	6043.5	54.6	55.1	55.6	899.3	1079.2	1169.1	1252.2	1447.9	899.3
O-Pile 117-1639	62	0.39	64.5	216.9	233.9	6723.7	48.7	49.1	49.6	903.7	1084.5	1174.8	1258.3	1454.9	903.7
O-Pile 117-775	28	1	30.5	217.4	233.9	3043.3	115.4	116.4	117.4	905.7	1086.9	1177.5	1261.1	1458.2	905.7
O-Pile 118-1334	50	0.5	52.5	217.7	233.9	5441.9	61.6	62.1	62.7	907	1088.4	1179.1	1262.8	1460.2	907
O-Pile 118-1029	38	0.69	40.5	218.7	233.9	4154.9	83.0	83.7	84.4	911.2	1093.4	1184.5	1268.7	1466.9	911.2
O-Pile 120-826	30	0.94	32.5	222.5	233.9	3338.2	109.6	110.5	111.4	927.3	1112.7	1205.5	1291.1	1492.9	927.3
O-Pile 120-1131	42	0.62	44.5	223.2	233.9	4686.9	75.2	75.9	76.6	929.9	1115.9	1208.9	1294.8	1497.1	929.9
O-Pile 121-978	36	0.75	38.5	223.4	233.9	4020.6	89.6	90.3	91.1	930.7	1116.8	1209.9	1295.9	1498.4	930.7
O-Pile 121-1436	54	0.47	56.5	223.8	233.9	6041.7	58.1	58.7	59.2	932.4	1118.8	1212.1	1298.2	1501	932.4
O-Pile 122-877	32	0.88	34.5	225.3	233.9	3604.6	103.5	104.3	105.2	938.7	1126.4	1220.3	1307	1511.2	938.7
O-Pile 122-928	34	0.81	36.5	225.6	233.9	3834.6	96.0	96.9	97.7	939.9	1127.8	1221.8	1308.6	1513.1	939.9
O-Pile 123-1385	52	0.5	54.5	227.1	233.9	5903.7	61.7	62.2	62.8	946.1	1135.3	1229.9	1317.3	1523.1	946.1
O-Pile 125-1080	40	0.69	42.5	231.5	233.9	4630.7	83.2	83.9	84.6	964.7	1157.7	1254.2	1343.3	1553.1	964.7
O-Pile 125-1588	60	0.44	62.5	232.3	233.9	6968.6	54.7	55.2	55.7	967.9	1161.4	1258.2	1347.6	1558.2	967.9
O-Pile 126-1486	56	0.47	58.5	232.6	233.9	6514	58.2	58.7	59.2	969.3	1163.2	1260.1	1349.7	1560.6	969.3
O-Pile 126-1283	48	0.56	50.5	233.4	233.9	5601.8	68.6	69.2	69.8	972.5	1167	1264.3	1354.1	1565.7	972.5
O-Pile 127-1182	44	0.62	46.5	234.9	233.9	5167.6	75.4	76.1	76.7	978.7	1174.5	1272.3	1362.7	1575.7	978.7

O-Pile 127-826	30	1	32.5	235.9	233.9	3538.4	116.2	117.1	118.0	982.9	1179.5	1277.7	1368.5	1582.4	982.9
O-Pile 128-1436	54	0.5	56.5	236.5	233.9	6384.3	61.8	62.3	62.8	985.2	1182.3	1280.8	1371.8	1586.1	985.2
O-Pile 128-1029	38	0.75	40.5	237.4	233.9	4510.2	89.9	90.6	91.4	989.1	1186.9	1285.8	1377.1	1592.3	989.1
O-Pile 130-877	32	0.94	34.5	240	233.9	3839.3	110.2	111.1	111.9	999.8	1199.8	1299.8	1392.1	1609.6	999.8
O-Pile 130-1639	62	0.44	64.5	240.5	233.9	7455.9	54.8	55.2	55.7	1002.1	1202.6	1302.8	1395.3	1613.4	1002.1
O-Pile 130-978	36	0.81	38.5	240.7	233.9	4332.9	96.4	97.2	98.0	1003	1203.6	1303.9	1396.5	1614.7	1003
O-Pile 130-928	34	0.88	36.5	241.6	233.9	4106.7	104.0	104.8	105.6	1006.5	1207.9	1308.5	1401.5	1620.5	1006.5
O-Pile 131-1893	72	0.38	74.5	242	233.9	8713.8	47.6	48.0	48.4	1008.5	1210.2	1311.1	1404.3	1623.7	1008.5
O-Pile 132-1334	50	0.56	52.5	244	233.9	6099.1	68.7	69.3	69.9	1016.5	1219.8	1321.5	1415.4	1636.5	1016.5
O-Pile 132-1131	42	0.69	44.5	244.4	233.9	5132.5	83.4	84.1	84.8	1018.3	1222	1323.9	1417.9	1639.5	1018.3
O-Pile 133-940	34.5	0.88	37.0	245.6	233.9	4237.4	104.1	104.9	105.7	1023.5	1228.2	1330.6	1425.1	1647.8	1023.5
O-Pile 133-1486	56	0.5	58.5	245.8	233.9	6883.7	61.8	62.3	62.8	1024.4	1229.2	1331.7	1426.3	1649.1	1024.4
O-Pile 135-1588	60	0.47	62.5	250.4	233.9	7512	58.3	58.8	59.3	1043.3	1252	1356.3	1452.7	1679.7	1043.3
O-Pile 136-1080	40	0.75	42.5	251.4	233.9	5027.9	90.2	90.9	91.6	1047.5	1257	1361.7	1458.5	1686.4	1047.5
O-Pile 137-1893	72	0.39	74.5	253.9	233.9	9141.2	48.9	49.3	49.7	1058	1269.6	1375.4	1473.1	1703.3	1058
O-Pile 137-877	32	1	34.5	254.4	233.9	4071.1	116.9	117.8	118.6	1060.2	1272.2	1378.2	1476.2	1706.8	1060.2
O-Pile 137-1385	52	0.56	54.5	254.5	233.9	6617.6	68.9	69.4	69.9	1060.5	1272.6	1378.7	1476.6	1707.3	1060.5
O-Pile 138-1029	38	0.81	40.5	255.9	233.9	4861.8	96.8	97.5	98.3	1066.2	1279.4	1386	1484.5	1716.5	1066.2
O-Pile 139-1182	44	0.69	46.5	257.3	233.9	5660.1	83.7	84.3	84.9	1072	1286.4	1393.6	1492.6	1725.8	1072
O-Pile 139-928	34	0.94	36.5	257.4	233.9	4375.6	110.8	111.6	112.4	1072.5	1287	1394.2	1493.3	1726.6	1072.5
O-Pile 139-978	36	0.88	38.5	257.9	233.9	4641.8	104.4	105.2	106.0	1074.5	1289.4	1396.8	1496.1	1729.8	1074.5
O-Pile 139-1283	48	0.62	50.5	258.3	233.9	6199.9	75.8	76.3	76.9	1076.4	1291.6	1399.3	1498.7	1732.9	1076.4
O-Pile 140-1639	62	0.47	64.5	259.3	233.9	8037.7	58.4	58.9	59.3	1080.3	1296.4	1404.4	1504.2	1739.3	1080.3
O-Pile 143-1588	60	0.5	62.5	264.6	233.9	7939.2	62.0	62.5	62.9	1102.7	1323.2	1433.5	1535.3	1775.2	1102.7
O-Pile 143-1436	54	0.56	56.5	265.1	233.9	7157.3	69.0	69.5	70.0	1104.5	1325.4	1435.9	1537.9	1778.2	1104.5
O-Pile 143-1131	42	0.75	44.5	265.4	233.9	5574	90.5	91.1	91.8	1105.9	1327.1	1437.7	1539.9	1780.5	1105.9
O-Pile 146-1334	50	0.62	52.5	270.1	233.9	6751.3	75.9	76.5	77.0	1125.2	1350.3	1462.8	1566.7	1811.5	1125.2
O-Pile 146-1080	40	0.81	42.5	271.1	233.9	5421.3	97.1	97.8	98.5	1129.4	1355.3	1468.3	1572.6	1818.3	1129.4
O-Pile 147-928	34	1	36.5	273	233.9	4641.5	117.5	118.3	119.1	1137.6	1365.1	1478.9	1584	1831.5	1137.6
O-Pile 148-1639	62	0.5	64.5	274	233.9	8495.2	62.0	62.5	63.0	1141.8	1370.2	1484.4	1589.8	1838.2	1141.8
O-Pile 148-1029	38	0.88	40.5	274.2	233.9	5209.8	104.9	105.6	106.3	1142.5	1371	1485.3	1590.8	1839.3	1142.5
O-Pile 148-978	36	0.94	38.5	274.9	233.9	4947.3	111.3	112.0	112.8	1145.2	1374.2	1488.8	1594.5	1843.7	1145.2
O-Pile 149-1486	56	0.56	58.5	275.7	233.9	7718.2	69.1	69.6	70.1	1148.5	1378.2	1493.1	1599.2	1849.1	1148.5
O-Pile 151-1182	44	0.75	46.5	279.5	233.9	6148.3	90.7	91.3	92.0	1164.4	1397.3	1513.8	1621.3	1874.7	1164.4
O-Pile 152-1893	72	0.44	74.5	281.7	233.9	10139.6	55.0	55.4	55.8	1173.6	1408.3	1525.6	1634	1889.3	1173.6
O-Pile 152-1385	52	0.62	54.5	281.8	233.9	7326.3	76.0	76.6	77.1	1174.1	1408.9	1526.3	1634.8	1890.2	1174.1
O-Pile 153-1283	48	0.69	50.5	283	233.9	6793.2	84.0	84.6	85.2	1179.4	1415.2	1533.2	1642.1	1898.7	1179.4
O-Pile 153-2198	84	0.38	86.5	284.4	233.9	11944.7	47.8	48.1	48.5	1185	1422	1540.5	1649.9	1907.7	1185
O-Pile 154-1131	42	0.81	44.5	286.3	233.9	6011.4	97.4	98.1	98.8	1192.7	1431.3	1550.6	1660.7	1920.2	1192.7
O-Pile 157-1080	40	0.88	42.5	290.5	233.9	5810.8	105.2	105.9	106.6	1210.6	1452.7	1573.8	1685.6	1949	1210.6
O-Pile 157-978	36	1	38.5	291.6	233.9	5249.5	118.1	118.8	119.6	1215.2	1458.2	1579.7	1691.9	1956.3	1215.2
O-Pile 158-1029	38	0.94	40.5	292.3	233.9	5554.3	111.7	112.5	113.2	1218	1461.7	1583.5	1696	1961	1218

O-Pile 158-1436	54	0.62	56.5	293.5	233.9	7924.9	76.2	76.7	77.2	1223	1467.6	1589.9	1702.8	1968.9	1223
O-Pile 160-1334	50	0.69	52.5	295.9	233.9	7398.5	84.2	84.8	85.3	1233.1	1479.7	1603	1716.9	1985.2	1233.1
O-Pile 160-1588	60	0.56	62.5	296.8	233.9	8903.6	69.2	69.7	70.2	1236.6	1483.9	1607.6	1721.8	1990.8	1236.6
O-Pile 161-2198	84	0.39	86.5	298.4	233.9	12531.9	49.0	49.4	49.7	1243.2	1491.9	1616.2	1731.1	2001.5	1243.2
O-Pile 163-1182	44	0.81	46.5	301.5	233.9	6632.1	97.7	98.4	99.0	1256.1	1507.3	1632.9	1748.9	2022.2	1256.1
O-Pile 164-1893	72	0.47	74.5	303.7	233.9	10933.4	58.7	59.1	59.5	1265.4	1518.5	1645.1	1762	2037.3	1265.4
O-Pile 165-1486	56	0.62	58.5	305.3	233.9	8547.1	76.3	76.8	77.3	1271.9	1526.3	1653.4	1770.9	2047.6	1271.9
O-Pile 165-1131	42	0.88	44.5	306.9	233.9	6444.8	105.6	106.2	106.9	1278.7	1534.5	1662.4	1780.5	2058.7	1278.7
O-Pile 166-1639	62	0.56	64.5	307.4	233.9	9528.1	69.3	69.8	70.2	1280.7	1536.8	1664.9	1783.1	2061.8	1280.7
O-Pile 166-1283	48	0.75	50.5	307.6	233.9	7381.7	91.1	91.7	92.3	1281.5	1537.8	1666	1784.4	2063.2	1281.5
O-Pile 167-1385	52	0.69	54.5	308.8	233.9	8029.9	84.4	84.9	85.5	1286.8	1544.2	1672.9	1791.7	2071.7	1286.8
O-Pile 167-1080	40	0.94	42.5	309.8	233.9	6196.6	112.1	112.8	113.5	1291	1549.1	1678.2	1797.5	2078.3	1291
O-Pile 167-1029	38	1	40.5	310.3	233.9	5895.2	118.6	119.3	120.0	1292.8	1551.4	1680.6	1800.1	2081.3	1292.8
O-Pile 173-1893	72	0.5	74.5	321.1	233.9	11557.9	62.3	62.7	63.1	1337.7	1605.3	1739	1862.6	2153.6	1337.7
O-Pile 173-1334	50	0.75	52.5	321.6	233.9	8040.8	91.3	91.9	92.5	1340.1	1608.2	1742.2	1866	2157.5	1340.1
O-Pile 173-1436	54	0.69	56.5	321.7	233.9	8687.1	84.5	85.0	85.6	1340.6	1608.7	1742.8	1866.6	2158.3	1340.6
O-Pile 174-1182	44	0.88	46.5	323.3	233.9	7111.8	105.9	106.5	107.2	1346.9	1616.3	1751	1875.4	2168.4	1346.9
O-Pile 176-1131	42	0.94	44.5	327.3	233.9	6874.2	112.5	113.2	113.9	1363.9	1636.7	1773.1	1899.1	2195.8	1363.9
O-Pile 177-1588	60	0.62	62.5	328.7	233.9	9862	76.5	76.9	77.4	1369.7	1643.7	1780.6	1907.1	2205.1	1369.7
O-Pile 177-1080	40	1	42.5	328.9	233.9	6578.5	119.0	119.7	120.4	1370.5	1644.6	1781.7	1908.3	2206.4	1370.5
O-Pile 178-2198	84	0.44	86.5	331.1	233.9	13904.4	55.2	55.5	55.9	1379.4	1655.3	1793.2	1920.6	2220.7	1379.4
O-Pile 179-1283	48	0.81	50.5	331.9	233.9	7965.5	98.2	98.8	99.4	1382.9	1659.5	1797.8	1925.5	2226.4	1382.9
O-Pile 180-1486	56	0.69	58.5	334.6	233.9	9370.2	84.7	85.2	85.7	1394.4	1673.2	1812.7	1941.5	2244.8	1394.4
O-Pile 181-1385	52	0.75	54.5	335.7	233.9	8728.2	91.5	92.1	92.6	1398.7	1678.5	1818.4	1947.6	2251.9	1398.7
O-Pile 184-1639	62	0.62	64.5	340.5	233.9	10554.8	76.6	77.0	77.5	1418.7	1702.4	1844.2	1975.3	2283.9	1418.7
O-Pile 186-1182	44	0.94	46.5	344.9	233.9	7587.2	112.9	113.5	114.1	1437	1724.4	1868.1	2000.8	2313.4	1437
O-Pile 187-1334	50	0.81	52.5	347.1	233.9	8678.1	98.4	99.0	99.6	1446.4	1735.6	1880.3	2013.8	2328.5	1446.4
O-Pile 187-1131	42	1	44.5	347.6	233.9	7299.6	119.4	120.1	120.8	1448.3	1738	1882.8	2016.6	2331.7	1448.3
O-Pile 189-1436	54	0.75	56.5	349.8	233.9	9443.8	91.7	92.2	92.7	1457.4	1748.9	1894.6	2029.2	2346.3	1457.4
O-Pile 192-1283	48	0.88	50.5	356	233.9	8544.6	106.4	107.0	107.6	1483.4	1780.1	1928.5	2065.5	2388.2	1483.4
O-Pile 192-2198	84	0.47	86.5	357	233.9	14996	58.9	59.2	59.6	1487.7	1785.2	1934	2071.4	2395.1	1487.7
O-Pile 194-1893	72	0.56	74.5	360.2	233.9	12968.8	69.7	70.0	70.4	1501	1801.2	1951.3	2090	2416.5	1501
O-Pile 194-1588	60	0.69	62.5	360.5	233.9	10814.2	84.9	85.4	85.9	1502	1802.4	1952.6	2091.3	2418.1	1502
O-Pile 195-1385	52	0.81	54.5	362.4	233.9	9421.3	98.6	99.2	99.7	1509.8	1811.8	1962.8	2102.2	2430.7	1509.8
O-Pile 196-1486	56	0.75	58.5	363.8	233.9	10187.7	91.8	92.3	92.8	1516	1819.2	1970.8	2110.9	2440.7	1516
O-Pile 197-1182	44	1	46.5	366.3	233.9	8058.3	119.8	120.5	121.1	1526.2	1831.4	1984	2125	2457	1526.2
O-Pile 201-1334	50	0.88	52.5	372.4	233.9	9310.5	106.7	107.3	107.8	1551.8	1862.1	2017.3	2160.6	2498.2	1551.8
O-Pile 201-1639	62	0.69	64.5	373.4	233.9	11575	85.0	85.5	85.9	1555.8	1866.9	2022.5	2166.2	2504.7	1555.8
O-Pile 203-2198	84	0.5	86.5	377.5	233.9	15855.2	62.6	62.9	63.3	1572.9	1887.5	2044.8	2190.1	2532.3	1572.9
O-Pile 204-1436	54	0.81	56.5	377.6	233.9	10195.2	98.8	99.3	99.9	1573.3	1888	2045.3	2190.6	2532.9	1573.3
O-Pile 205-1283	48	0.94	50.5	380	233.9	9119	113.5	114.1	114.7	1583.2	1899.8	2058.1	2204.3	2548.8	1583.2
O-Pile 210-1385	52	0.88	54.5	388.8	233.9	10109.3	106.9	107.5	108.0	1620.1	1944.1	2106.1	2255.7	2608.2	1620.1

O-Pile 211-1588	60	0.75	62.5	392	233.9	11760.4	92.1	92.6	93.1	1633.4	1960.1	2123.4	2274.3	2629.6	1633.4
O-Pile 212-1486	56	0.81	58.5	392.8	233.9	10999.6	99.0	99.5	100.0	1636.9	1964.2	2127.9	2279.1	2635.2	1636.9
O-Pile 214-1334	50	0.94	52.5	397.5	233.9	9938	113.7	114.3	114.9	1656.3	1987.6	2153.2	2306.2	2666.6	1656.3
O-Pile 215-1893	72	0.62	74.5	399.2	233.9	14372.1	77.0	77.4	77.8	1663.4	1996.1	2162.5	2316.1	2678	1663.4
O-Pile 218-1283	48	1	50.5	403.7	233.9	9688.8	120.5	121.1	121.7	1682.1	2018.5	2186.7	2342.1	2708	1682.1
O-Pile 218-1436	54	0.88	56.5	405.2	233.9	10941.2	107.1	107.6	108.2	1688.5	2026.1	2195	2350.9	2718.3	1688.5
O-Pile 219-1639	62	0.75	64.5	406.1	233.9	12589.1	92.2	92.7	93.2	1692.1	2030.5	2199.7	2356	2724.1	1692.1
O-Pile 224-1385	52	0.94	54.5	415.1	233.9	10792.3	114.0	114.5	115.1	1729.5	2075.4	2248.4	2408.1	2784.4	1729.5
O-Pile 227-1486	56	0.88	58.5	421.6	233.9	11806	107.3	107.8	108.3	1756.8	2108.2	2283.9	2446.2	2828.4	1756.8
O-Pile 228-1334	50	1	52.5	422.4	233.9	10560.6	120.8	121.4	121.9	1760.1	2112.1	2288.1	2450.7	2833.6	1760.1
O-Pile 228-1588	60	0.81	62.5	423.3	233.9	12700.4	99.3	99.8	100.3	1764	2116.7	2293.1	2456.1	2839.8	1764
O-Pile 228-2198	84	0.56	86.5	423.7	233.9	17797.2	70.0	70.3	70.6	1765.6	2118.7	2295.3	2458.4	2842.5	1765.6
O-Pile 233-1436	54	0.94	56.5	432.7	233.9	11681.8	114.2	114.8	115.3	1802.8	2163.3	2343.6	2510.1	2902.3	1802.8
O-Pile 236-1893	72	0.69	74.5	438	233.9	15768.1	85.5	85.9	86.3	1825	2190	2372.5	2541.1	2938.1	1825
O-Pile 236-1639	62	0.81	64.5	438.6	233.9	13596.8	99.4	99.9	100.4	1827.5	2193	2375.8	2544.6	2942.2	1827.5
O-Pile 238-1385	52	1	54.5	441.2	233.9	11470	121.1	121.6	122.2	1838.1	2205.8	2389.6	2559.4	2959.3	1838.1
O-Pile 243-1486	56	0.94	58.5	450.2	233.9	12606.8	114.4	115.0	115.5	1876	2251.2	2438.8	2612.1	3020.2	1876
O-Pile 245-1588	60	0.88	62.5	454.5	233.9	13634.6	107.7	108.2	108.6	1893.7	2272.4	2461.8	2636.7	3048.7	1893.7
O-Pile 248-1436	54	1	56.5	459.9	233.9	12417.2	121.3	121.8	122.4	1916.2	2299.5	2491.1	2668.1	3085	1916.2
O-Pile 253-2198	84	0.62	86.5	469.8	233.9	19730.5	77.3	77.7	78.0	1957.4	2348.9	2544.6	2725.4	3151.2	1957.4
O-Pile 254-1639	62	0.88	64.5	470.9	233.9	14598.3	107.8	108.3	108.8	1962.1	2354.6	2550.8	2732	3158.9	1962.1
O-Pile 257-1893	72	0.75	74.5	476.6	233.9	17156.7	92.8	93.2	93.6	1985.7	2382.9	2581.4	2764.9	3196.9	1985.7
O-Pile 258-1486	56	1	58.5	478.6	233.9	13402	121.6	122.1	122.6	1994.4	2393.2	2592.7	2776.9	3210.7	1994.4
O-Pile 261-1588	60	0.94	62.5	485.4	233.9	14562.6	114.8	115.3	115.8	2022.6	2427.1	2629.4	2816.2	3256.2	2022.6
O-Pile 271-1639	62	0.94	64.5	503	233.9	15593.6	115.0	115.5	115.9	2095.9	2515.1	2724.7	2918.3	3374.2	2095.9
O-Pile 277-1893	72	0.81	74.5	514.9	233.9	18537.9	100.0	100.4	100.8	2145.6	2574.7	2789.3	2987.4	3454.2	2145.6
O-Pile 278-2198	84	0.69	86.5	515.6	233.9	21655.1	85.9	86.2	86.6	2148.3	2578	2792.8	2991.2	3458.6	2148.3
O-Pile 278-1588	60	1	62.5	516.2	233.9	15484.8	122.0	122.5	122.9	2150.7	2580.8	2795.9	2994.5	3462.4	2150.7
O-Pile 288-1639	62	1	64.5	534.9	233.9	16582.7	122.2	122.6	123.1	2228.9	2674.6	2897.5	3103.4	3588.3	2228.9
O-Pile 298-1893	72	0.88	74.5	553.1	233.9	19911.8	108.5	108.9	109.3	2304.6	2765.5	2996	3208.9	3710.2	2304.6
O-Pile 302-2198	84	0.75	86.5	561.2	233.9	23570.9	93.2	93.6	93.9	2338.4	2806.1	3039.9	3255.9	3764.6	2338.4
O-Pile 318-1893	72	0.94	74.5	591.1	233.9	21278.4	115.8	116.2	116.6	2462.8	2955.3	3201.6	3429.1	3964.9	2462.8
O-Pile 327-2198	84	0.81	86.5	606.6	233.9	25478	100.6	100.9	101.3	2527.6	3033.1	3285.9	3519.3	4069.2	2527.6
O-Pile 339-1893	72	1	74.5	628.8	233.9	22637.7	123.0	123.4	123.8	2620.1	3144.1	3406.1	3648.1	4218.1	2620.1
O-Pile 351-2198	84	0.88	86.5	651.8	233.9	27376.4	109.1	109.5	109.8	2715.9	3259.1	3530.7	3781.5	4372.4	2715.9
O-Pile 375-2198	84	0.94	86.5	696.8	233.9	29266.3	116.4	116.8	117.1	2903.4	3484.1	3774.4	4042.6	4674.2	2903.4
O-Pile 399-2198	84	1	86.5	741.6	233.9	31147.5	123.7	124.1	124.4	3090	3708	4017	4302.4	4974.7	3090