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END WALL DIMENSIONS (EXCLUSIVE OF MULTIPLE PIPE SPACING)

PIPE AND SPACING FOR MULTIPLE PIPE ENDWALL POSITIONS FOR SINGLE AND MULTIPLE

Span	Rise	Dimensions												Number And Type Of Pipe And Skew Angle Of Pipe												Approx. Equiv. Round Pipe																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		A				B				C				D				Single			Double			Triple			Quadruple																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
12"	18"	1.1	2.2	3.3	4.4	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.3	15.4	16.5	17.6	18.7	19.8	20.9	22.0	23.1	24.2	25.3	26.4	27.5	28.6	29.7	30.8	31.9	33.0	34.1	35.2	36.3	37.4	38.5	39.6	40.7	41.8	42.9	44.0	45.1	46.2	47.3	48.4	49.5	50.6	51.7	52.8	53.9	55.0	56.1	57.2	58.3	59.4	60.5	61.6	62.7	63.8	64.9	66.0	67.1	68.2	69.3	70.4	71.5	72.6	73.7	74.8	75.9	77.0	78.1	79.2	80.3	81.4	82.5	83.6	84.7	85.8	86.9	88.0	89.1	90.2	91.3	92.4	93.5	94.6	95.7	96.8	97.9	99.0	100.1	101.2	102.3	103.4	104.5	105.6	106.7	107.8	108.9	110.0	111.1	112.2	113.3	114.4	115.5	116.6	117.7	118.8	119.9	121.0	122.1	123.2	124.3	125.4	126.5	127.6	128.7	129.8	130.9	132.0	133.1	134.2	135.3	136.4	137.5	138.6	139.7	140.8	141.9	143.0	144.1	145.2	146.3	147.4	148.5	149.6	150.7	151.8	152.9	154.0	155.1	156.2	157.3	158.4	159.5	160.6	161.7	162.8	163.9	165.0	166.1	167.2	168.3	169.4	170.5	171.6	172.7	173.8	174.9	176.0	177.1	178.2	179.3	180.4	181.5	182.6	183.7	184.8	185.9	187.0	188.1	189.2	190.3	191.4	192.5	193.6	194.7	195.8	196.9	198.0	199.1	200.2	201.3	202.4	203.5	204.6	205.7	206.8	207.9	209.0	210.1	211.2	212.3	213.4	214.5	215.6	216.7	217.8	218.9	220.0	221.1	222.2	223.3	224.4	225.5	226.6	227.7	228.8	229.9	231.0	232.1	233.2	234.3	235.4	236.5	237.6	238.7	239.8	240.9	242.0	243.1	244.2	245.3	246.4	247.5	248.6	249.7	250.8	251.9	253.0	254.1	255.2	256.3	257.4	258.5	259.6	260.7	261.8	262.9	264.0	265.1	266.2	267.3	268.4	269.5	270.6	271.7	272.8	273.9	275.0	276.1	277.2	278.3	279.4	280.5	281.6	282.7	283.8	284.9	286.0	287.1	288.2	289.3	290.4	291.5	292.6	293.7	294.8	295.9	297.0	298.1	299.2	300.3	301.4	302.5	303.6	304.7	305.8	306.9	308.0	309.1	310.2	311.3	312.4	313.5	314.6	315.7	316.8	317.9	319.0	320.1	321.2	322.3	323.4	324.5	325.6	326.7	327.8	328.9	330.0	331.1	332.2	333.3	334.4	335.5	336.6	337.7	338.8	339.9	341.0	342.1	343.2	344.3	345.4	346.5	347.6	348.7	349.8	350.9	352.0	353.1	354.2	355.3	356.4	357.5	358.6	359.7	360.8	361.9	363.0	364.1	365.2	366.3	367.4	368.5	369.6	370.7	371.8	372.9	374.0	375.1	376.2	377.3	378.4	379.5	380.6	381.7	382.8	383.9	385.0	386.1	387.2	388.3	389.4	390.5	391.6	392.7	393.8	394.9	396.0	397.1	398.2	399.3	400.4	401.5	402.6	403.7	404.8	405.9	407.0	408.1	409.2	410.3	411.4	412.5	413.6	414.7	415.8	416.9	418.0	419.1	420.2	421.3	422.4	423.5	424.6	425.7	426.8	427.9	429.0	430.1	431.2	432.3	433.4	434.5	435.6	436.7	437.8	438.9	440.0	441.1	442.2	443.3	444.4	445.5	446.6	447.7	448.8	449.9	451.0	452.1	453.2	454.3	455.4	456.5	457.6	458.7	459.8	460.9	462.0	463.1	464.2	465.3	466.4	467.5	468.6	469.7	470.8	471.9	473.0	474.1	475.2	476.3	477.4	478.5	479.6	480.7	481.8	482.9	484.0	485.1	486.2	487.3	488.4	489.5	490.6	491.7	492.8	493.9	495.0	496.1	497.2	498.3	499.4	500.5	501.6	502.7	503.8	504.9	506.0	507.1	508.2	509.3	510.4	511.5	512.6	513.7	514.8	515.9	517.0	518.1	519.2	520.3	521.4	522.5	523.6	524.7	525.8	526.9	528.0	529.1	530.2	531.3	532.4	533.5	534.6	535.7	536.8	537.9	539.0	540.1	541.2	542.3	543.4	544.5	545.6	546.7	547.8	548.9	550.0	551.1	552.2	553.3	554.4	555.5	556.6	557.7	558.8	559.9	561.0	562.1	563.2	564.3	565.4	566.5	567.6	568.7	569.8	570.9	572.0	573.1	574.2	575.3	576.4	577.5	578.6	579.7	580.8	581.9	583.0	584.1	585.2	586.3	587.4	588.5	589.6	590.7	591.8	592.9	594.0	595.1	596.2	597.3	598.4	599.5	600.6	601.7	602.8	603.9	605.0	606.1	607.2	608.3	609.4	610.5	611.6	612.7	613.8	614.9	616.0	617.1	618.2	619.3	620.4	621.5	622.6	623.7	624.8	625.9	627.0	628.1	629.2	630.3	631.4	632.5	633.6	634.7	635.8	636.9	638.0	639.1	640.2	641.3	642.4	643.5	644.6	645.7	646.8	647.9	649.0	650.1	651.2	652.3	653.4	654.5	655.6	656.7	657.8	658.9	660.0	661.1	662.2	663.3	664.4	665.5	666.6	667.7	668.8	669.9	671.0	672.1	673.2	674.3	675.4	676.5	677.6	678.7	679.8	680.9	682.0	683.1	684.2	685.3	686.4	687.5	688.6	689.7	690.8	691.9	693.0	694.1	695.2	696.3	697.4	698.5	699.6	700.7	701.8	702.9	704.0	705.1	706.2	707.3	708.4	709.5	710.6	711.7	712.8	713.9	715.0	716.1	717.2	718.3	719.4	720.5	721.6	722.7	723.8	724.9	726.0	727.1	728.2	729.3	730.4	731.5	732.6	733.7	734.8	735.9	737.0	738.1	739.2	740.3	741.4	742.5	743.6	744.7	745.8	746.9	748.0	749.1	750.2	751.3	752.4	753.5	754.6	755.7	756.8	757.9	759.0	760.1	761.2	762.3	763.4	764.5	765.6	766.7	767.8	768.9	770.0	771.1	772.2	773.3	774.4	775.5	776.6	777.7	778.8	779.9	781.0	782.1	783.2	784.3	785.4	786.5	787.6	788.7	789.8	790.9	792.0	793.1	794.2	795.3	796.4	797.5	798.6	799.7	800.8	801.9	803.0	804.1	805.2	806.3	807.4	808.5	809.6	810.7	811.8	812.9	814.0	815.1	816.2	817.3	818.4	819.5	820.6	821.7	822.8	823.9	825.0	826.1	827.2	828.3	829.4	830.5	831.6	832.7	833.8	834.9	836.0	837.1	838.2	839.3	840.4	841.5	842.6	843.7	844.8	845.9	847.0	848.1	849.2	850.3	851.4	852.5	853.6	854.7	855.8	856.9	858.0	859.1	860.2	861.3	862.4	863.5	864.6	865.7	866.8	867.9	869.0	870.1	871.2	872.3	873.4	874.5	875.6	876.7	877.8	878.9	880.0	881.1	882.2	883.3	884.4	885.5	886.6	887.7	888.8	889.9	891.0	892.1	893.2	894.3	895.4	896.5	897.6	898.7	899.8	900.9	902.0	903.1	904.2	905.3	906.4	907.5	908.6	909.7	910.8	911.9	913.0	914.1	915.2	916.3	917.4	918.5	919.6	920.7	921.8	922.9	924.0	925.1	926.2	927.3	928.4	929.5	930.6	931.7	932.8	933.9	935.0	936.1	937.2	938.3	939.4	940.5	941.6	942.7	943.8	944.9	946.0	947.1	948.2	949.3	950.4	951.5	952.6	953.7	954.8	955.9	957.0	958.1	959.2	960.3	961.4	962.5	963.6	964.7	965.8	966.9	968.0	969.1	970.2	971.3	972.4	973.5	974.6	975.7	976.8	977.9	979.0	980.1	981.2	982.3	983.4	984.5	985.6	986.7	987.8	988.9	990.0	991.1	992.2	993.3	994.4	995.5	996.6	997.7	998.8	999.9

DATA AND ESTIMATED QUANTITIES FOR ONE ENDWALL

ROUND CONCRETE AND CORRUGATED METAL PIPE

CORRUGATED METAL PIPE ARCH

CONCRETE ENDWALL

Span	Rise	Dimensions												Number And Type Of Pipe And Skew Angle Of Pipe												Approx. Equiv. Round Pipe																																																																																																																																												
		A				B				C				D				Single			Double			Triple			Quadruple																																																																																																																																											
12"	18"	1.1	2.2	3.3	4.4	5.5	6.6	7.7	8.8	9.9	11.0	12.1	13.2	14.3	15.4	16.5	17.6	18.7	19.8	20.9	22.0	23.1	24.2	25.3	26.4	27.5	28.6	29.7	30.8	31.9	33.0	34.1	35.2	36.3	37.4	38.5	39.6	40.7	41.8	42.9	44.0	45.1	46.2	47.3	48.4	49.5	50.6	51.7	52.8	53.9	55.0	56.1	57.2	58.3	59.4	60.5	61.6	62.7	63.8	64.9	66.0	67.1	68.2	69.3	70.4	71.5	72.6	73.7	74.8	75.9	77.0	78.1	79.2	80.3	81.4	82.5	83.6	84.7	85.8	86.9	88.0	89.1	90.2	91.3	92.4	93.5	94.6	95.7	96.8	97.9	99.0	100.1	101.2	102.3	103.4	104.5	105.6	106.7	107.8	108.9	110.0	111.1	112.2	113.3	114.4	115.5	116.6	117.7	118.8	119.9	121.0	122.1	123.2	124.3	125.4	126.5	127.6	128.7	129.8	130.9	132.0	133.1	134.2	135.3	136.4	137.5	138.6	139.7	140.8	141.9	143.0	144.1	145.2	146.3	147.4	148.5	149.6	150.7	151.8	152.9	154.0	155.1	156.2	157.3	158.4	159.5	160.6	161.7	162.8	163.9	165.0	166.1	167.2	168.3	169.4	170.5	171.6	172.7	173.8	174.9	176.0	177.1	178.2	179.3	180.4	181.5