ELECTRIC BRANCH CIRCUIT

AND

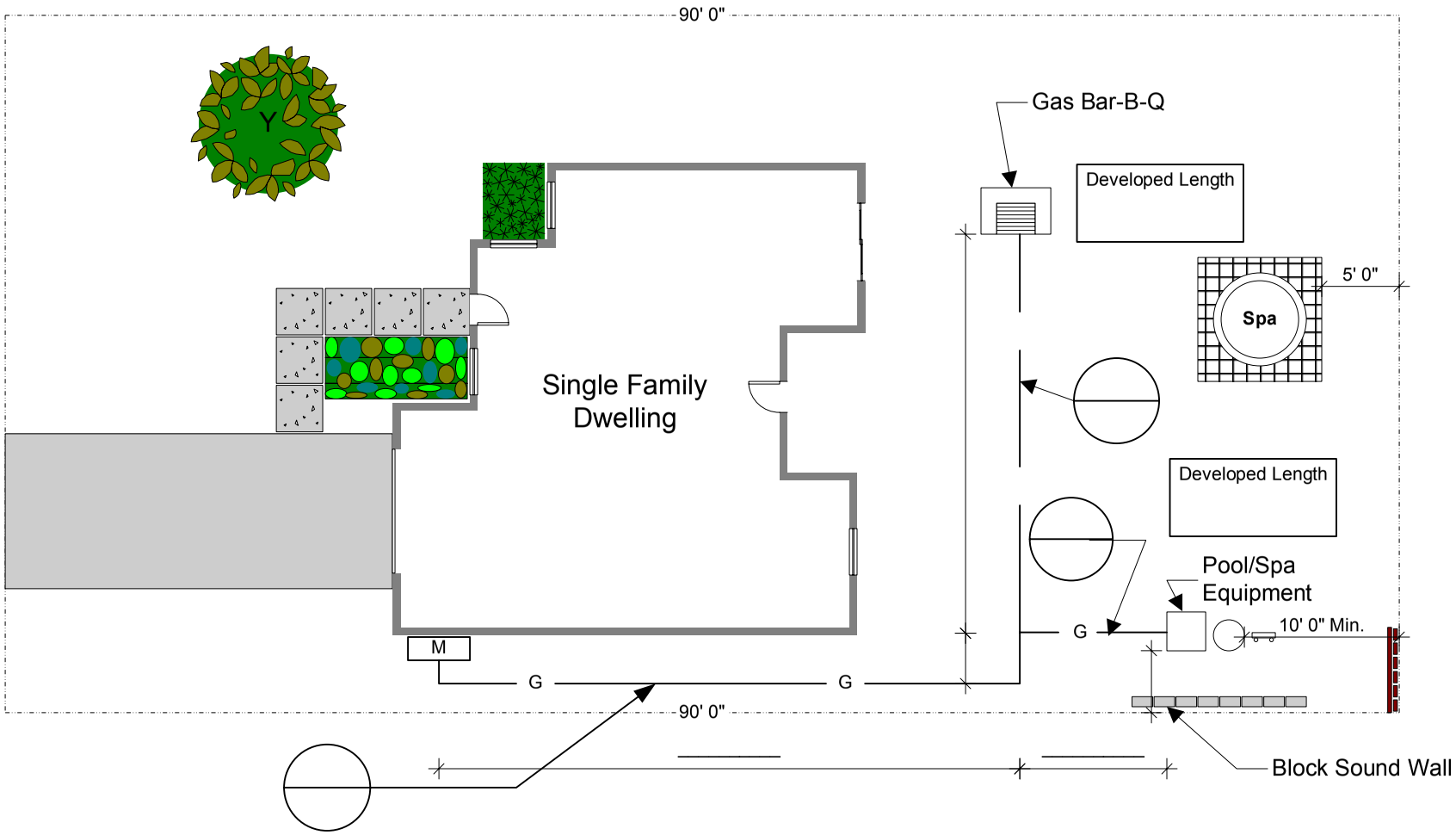
GAS PIPE SIZING

FOR

RESIDENTIAL SPA HEATERS

AND

GAS BARBEQUES



NOTES:

1. Based on the National Electrical Code (NEC) Table 310-16 for equipment terminals rated at 60^0C. For Terminals rated at 75^0C on equipment rated at 100 Amps or greater, see table 310-16 for alternate acceptable wire sizes.
2. Based on the NEC, Chapter 9, Table 3B, using a minimum THHN/THWN type wire insulation.
3. Based on the NEC Table 300-5.
4. Based on the Uniform Plumbing Code (UPC) Section 1211.5.
5. UPC Section 1211.16 Requires an insulated 18 ga. copper tracer wire with all plastic gas pipe with both ends terminating above grade.
6. UMC Section 806.7 requires that outdoor appliances with integral vents shall have the vent openings at least 4 feet from an openable window and from property line except when adjacent to a public way.
7. Check with your local gas purveyor to determine whether a new meter with a larger supply outlet is required to accomodate the additional demand.

YARD GAS PIPE SIZING EXCERSIZE

	1st Appliance/ (Supply Piping)	2nd Appliance
BTU per cubic foot of natural gas		
BTU of the appliance(/s)		
CFH (Cubic Feet per Hour)	/	
Developed Length		
Minimum Pipe Size(/s)	/	

CITY OF CORONA
BUILDING DEPARTMENT

LAST REVISION

1	October 14, 1996
2	January 16, 1997
3	December 20, 2001
4	January 5, 2004

BUILDING & SAFETY
Gas & Electric Spa Pipe and Branch Circuit Sizing Examples & Requirements

GAS APPLIANCES & SPA HEATERS							
BTU Input Rating (1000)	50	150	200	250	300	350	400
CFH (Btu/Btu per cubic foot (Use 1100))	45	136	182	227	273	318	364

EXCERPT FROM GAS PIPE SIZING TABLES					
Length in Feet	**Pipe Size, Inches**				
	½	**3/4**	**1**	**1 1/4**	**1 ½**
	Cubic Feet Per Hour (CFH)				
10	174	363	684		
20	119	249	470		
30	96	200	377	775	
40	82	171	323	663	
50	73	152	286	588	
60	66	138	259	532	
70	61	127	239	490	
80	56	118	222	456	
90	53	111	208	428	
100	50	104	197	404	
125		93	174	358	536
150		84	158	324	486
200		72	135	278	416

ELECTRIC SPA HEATERS						
kVA (Watts)	120 Volts			220 Volts		
	Amps (kVA/V)	**Min. Breaker Size**	**Min.Wire[1] /Conduit[2] Size**	**Amps** (kVA/V)	**Min. Breaker Size**	**Min.Wire[1] /Conduit[2] Size**
5	42	50	**#6**/3/4"	23	30	**#10**/1/2"
5.5	46	50	**#6**/3/4"	25	30	**#10**/1/2"
6	50	50	**#6**/3/4"	27	30	**#10**/1/2"
6.5	54	60	**#6**/3/4"	30	30	**#10**/1/2"
7	58	60	**#4**/1"	32	40	**#8**/3/4"
7.5	63	70	**#4**/1"	34	40	**#8**/3/4"
8	67	70	**#4**/1"	36	40	**#8**/3/4"
8.5	71	80	**#3**/1"	39	40	**#8**/3/4"
9	75	80	**#3**/1"	41	50	**#6**/3/4"
9.5	79	80	**#3**/1"	43	50	**#6**/3/4"
10	83	90	**#3**/1"	45	50	**#6**/3/4"
10.5	88	90	**#2**/1"	48	50	**#6**/3/4"
11	92	100	**#2**/1"	50	50	**#6**/3/4"
11.5	96	100	**#1**/1 1/4"	52	60	**#6**/3/4"
12	100	100	**#1**/1 1/4"	55	60	**#6**/3/4"

MINIMUM BURIAL DEPTHS						
	Electrical Conduit[3]				**Gas Piping[4]**	
	Rigid Metal Conduit	Rigid Non-Metallic Conduit	Residential ≤ 120V & 20A w/GFCI	≤ 30V (Irrigation & Lighting)	Metal	PVC/PE
Unless specified.	6"	18"	12"	6"	12"	18"
2" conc. in the trench.	6"	12"	6"	6"		
Under 4" ext. slab.	4"	4"	4"	4"		