

Samykktt þann
07 MAI 2008
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NO.	DESCRIPTION	DATE
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PAGE TITLE:
POOL / SPA DATA

DATE: 10/5/07

FILE: Master Plans.dwg

LAYOUT: Pool - Spa Data (2)

DRAWN BY: SAL

CHECKED BY: MTW

PROJECT NO.: SHEET NO.:

2.2

Balance Tank Size	21.33 -m ³	5,636 -gal	5.70 -m ³	1,504 -gal	0.84 -m ³	222 -gal	0.78 -m ³	206 -gal	0.56 -m ³	147 -gal	1.11 -m ³	5 -gal	0.56 -m ³	147 -gal	1.11 -m ³	5 -gal	21.33 -m ³	94 -gal	6.54 -m ³	28.78 -ft ³	3.00 -m ³	13.22 -ft ³
Days to replace pool volume	30 days	30 days	20 days	20 days	10 days	10 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days	1 days
Dilution rate	3.56 -m ³ /hr	15.65 -gpm	0.36 -m ³ /hr	1.57 -gpm	0.11 -m ³ /hr	0.46 -gpm	0.29 -m ³ /hr	1.26 -gpm	0.20 -m ³ /hr	0.90 -gpm	0.41 -m ³ /hr	1.79 -gpm	0.20 -m ³ /hr	0.90 -gpm	0.41 -m ³ /hr	1.79 -gpm	3.56 -m ³ /hr	15.65 -gpm	0.46 -m ³ /hr	2.03 -gpm	1.10 -m ³ /hr	4.85 -gpm
Piping Systems																						
Design Velocities for piping systems*																						
gravity flow -main drains	0.50 m/s	1.64 fps	0.30 m/s	0.98 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps
gravity flow -gutters	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps	0.50 m/s	1.64 fps
suction flows -main drain	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps
suction flows -gutters	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps	0.92 m/s	3.00 fps
Discharge flows	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps	2.44 m/s	8.00 fps
Design capacity of main drain (of total flow)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Main drain flow is designed for:	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity
Main drain quantity	4.00	4.00	2.00	2.00	2.0	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Flow per main drain	160.00 -m ³ /hr	704 -gpm	85.43 -m ³ /hr	376 -gpm	12.63 -m ³ /hr	56 -gpm	10.41 -m ³ /hr	46 -gpm	7.40 -m ³ /hr	33 -gpm	10.41 -m ³ /hr	46 -gpm	7.40 -m ³ /hr	33 -gpm	10.41 -m ³ /hr	46 -gpm	7.40 -m ³ /hr	33 -gpm	10.41 -m ³ /hr	46 -gpm	7.40 -m ³ /hr	33 -gpm
Main drain grating velocity flow is designed for:	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps	0.305 m/s	1.00 fps
Main drain grating open area (nominal %)	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%	32%
Total main drain grating open area	0.15 -m ²	226.0 -in ²	0.08 -m ²	120.7 -in ²	0.01 -m ²	17.8 -in ²	0.01 -m ²	14.7 -in ²	0.01 -m ²	10.5 -in ²	0.01 -m ²	10.5 -in ²	0.01 -m ²	10.5 -in ²	0.01 -m ²	10.5 -in ²	0.01 -m ²	10.5 -in ²	0.01 -m ²	10.5 -in ²	0.01 -m ²	10.5 -in ²
Main drain outlet size (flange):	300.00 -mm	11.8 in.	250.00 -mm	9.8 in.	200.00 -mm	7.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.
Main drain return line:	355.00 -mm	14.0 in.	250.00 -mm	9.8 in.	200.00 -mm	7.9 in.	160.00 -mm	6.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.
Main drain invert	19.80 -m		20.95 -m		20.95 -m		21.51 -m		21.51 -m		21.51 -m		21.51 -m		21.51 -m		21.51 -m		21.51 -m		21.51 -m	
Design capacity of gutter connections (of total flow rate)	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Design flow rate of gutter at quiescent (of total flow rate)	50%	50%	50%	50%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	50%	50%	50%	50%	50%	50%
Gutter flow is designed for	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity	gravity
Gutter collector (outfall) connections	4.00	4.00	2.00	2.00	2.0	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00
Gutter Collector (outfall) flange size:	300.00 -mm	11.8 in.	250.00 -mm	9.8 in.	150.00 -mm	5.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	100.00 -mm	3.9 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.
Gutter collector return line:	315.00 -mm	12.4 in.	225.00 -mm	8.9 in.	160.00 -mm	6.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	110.00 -mm	4.3 in.	125.00 -mm	4.9 in.	125.00 -mm	4.9 in.	125.00 -mm	4.9 in.
Integral gutter supply connections:	2.00	2.00	1.00	1.00	2.0	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Gutter Supply convertor flange size:	300.00 -mm	11.8 in.	250.00 -mm	9.8 in.	150.00 -mm	5.9 in.	100.00 -mm	3.9 in.	65.00 -mm	2.6 in.	65.00 -mm	2.6 in.	65.00 -mm	2.6 in.	65.00 -mm	2.6 in.	65.00 -mm	2.6 in.	65.00 -mm	2.6 in.	65.00 -mm	2.6 in.
Integral pool gutter supply line size:	315.00 -mm	12.4 in.	250.00 -mm	9.8 in.	160.00 -mm	6.3 in.	75.00 -mm	3.0 in.	75.00 -mm	3.0 in.	75.00 -mm	3.0 in.	75.00 -mm	3.0 in.	75.00 -mm	3.0 in.	75.00 -mm	3.0 in.	75.00 -mm	3.0 in.	75.00 -mm	3.0 in.
Water make-up line sizing	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.	50.00 -mm	2.0 in.
Water Dilution % of flow	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Water Dilution	3.56 -m ³ /hr	423	0.36 -m ³ /hr	113	0.11 -m ³ /hr	17	0.29 -m ³ /hr	14	0.20 -m ³ /hr	10	0.20 -m ³ /hr	10	0.20 -m ³ /hr	10	0.20 -m ³ /hr	10	1.60 -m ³ /hr	423	0.49 -m ³ /hr	130	0.20 -m ³ /hr	53
*worst case sizing at minimum flows																						
Perimeter Gutter Systems																						
Gutter channel width	355.00 -mm	14.0 in.	355.00 -mm	14.0 in.	355.00 -mm	14.0 in.	204.80 -mm	8.1 in.	204.80 -mm	8.1 in.	204.80 -mm	8.1 in.	204.80 -mm	8.1 in.	204.80 -mm	8.1 in.	204.80 -mm	8.1 in.	204.80 -mm	8.1 in.	204.80 -mm	8.1 in.
Gutter channel height (minimum)	304.80 -mm	12.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.	254.00 -mm	10.0 in.
Gutter channel supply size (minimum)	486.30 -cm ²	75.4 -in ²	129.82 -cm ²	20.1 -in ²	19.20 -cm ²	3.0 -in ²	15.82 -cm ²	2.5 -in ²	11.25 -cm ²	1.7 -in ²	11.25 -cm ²	1.7 -in ²	11.25 -cm ²	1.7 -in ²	11.25 -cm ²	1.7 -in ²	11.25 -cm ²	1.7 -in ²	11.25 -cm ²	1.7 -in ²	11.25 -cm ²	1.7 -in ²
Gutter return channel (minimum)	1458.91 -cm ²	226.1 -in ²	389.46 -cm ²	60.4 -in ²	57.59 -cm ²	8.9 -in ²	47.46 -cm ²	7.4 -in ²	33.75 -cm ²	5.2 -in ²	33.75 -cm ²	5.2 -in ²	33.75 -cm ²	5.2 -in ²	33.75 -cm ²	5.2 -in ²	33.75 -cm ²	5.2 -in ²	33.75 -cm ²	5.2 -in ²	33.75 -cm ²	5.2 -in ²
Number of surge Control Weirs	28-ea.	28-ea.	8-ea.	8-ea.	2-ea.	2-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.	1-ea.



POOL / SPA DATA

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