

GENERAL NOTES

- 1- CODE REQUIREMENTS:  
PRIVATE SWIMMING POOL AND SPAS MUST COMPLY WITH CHAPTER 424 & R4101 FLORIDA BUILDING CODE 2007
- 2- MECHANICAL REQUIREMENTS:  
ALL PIPING EQUIPMENT AND MATERIALS USED IN THE PLUMBING SYSTEM OF SWIMMING POOLS AND SPAS THAT ARE BUILT IN PLACE SHALL CONFORM TO THE FLORIDA BUILDING CODE, PLUMBING 424.2.3 & R4101.3. ALL PIPING MATERIALS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS INSTALLATION STANDARDS.
- 3- COMPLIANCE:  
ALL MATERIALS, PIPING, VALVES, EQUIPMENT OR APPLIANCES ENTERING INTO THE CONSTRUCTION OF SWIMMING POOL, SPAS OR PORTIONS THEREOF SHALL BE OF A TYPE COMPLYING WITH THE CODE OR OF A TYPE RECOMMENDED AND APPROVED BY A NATIONALLY RECOGNIZED TESTING AGENCY OR CONFORMING TO OTHER RECOGNIZED STANDARDS ACCEPTABLE TO ADMINISTRATIVE AUTHORITY.
- 4- ENGINEERING DESIGN:  
DESIGN, CONSTRUCTION AND WORKMANSHIP SHALL BE IN CONFORMITY WITH ANSIBSP-3, 4, 5 AND 6-2003, PUBLISHED BY THE INTERNATIONAL AQUATICS FOUNDATION OR OTHER ACCEPTED ENGINEERING PRACTICES.
- 5- TESTING AND CERTIFICATION:  
ALL POOL AND SPA SUCTION INLETS SHALL BE PROVIDED WITH A COVER THAT HAS BEEN TESTED AND ACCEPTED BY A RECOGNIZED TESTING FACILITY AND COMPLY WITH ANSABME A112.14.0M. SUCTION FITTINGS FOR USE IN SWIMMING POOLS, SPAS, HOT TUBS AND WHIRPOOL BATHTUB APPLIANCES\* EXCEPT ION: SURFACE SKIMMERS.
- 6- SAFETY NOTE:  
DO NOT USE OR OPERATE POOL OR SPA IF THE SUCTION INLET FITTING IS BROKEN, MISSING OR LOOSE.
- 7- WATER VELOCITY PER ANSIA/SP-7 2006 #4.4  
WATER VELOCITY IN FIELD FABRICATED PIPING IS BASED ON THE MAX. SYSTEM FLOW RATE. MAX. WATER VELOCITY IN BRANCH PIPING (THE PIPING BETWEEN THE DRAINS) SHALL BE LIMITED TO 8 FEET PER SECOND (FPS) WHEN ONE OF A PAIR IS BLOCKED. IN NORMAL OPERATION THEN, THE BRANCH SUCTION PIPING VELOCITY IS 5 FEET PER SECOND (FPS). ALL OTHER SUCTION PIPING VELOCITIES SHALL BE 6 FPS FOR PUBLIC POOLS OR 8 FPS FOR RESIDENTIAL POOLS.
- 8- MAX. SYSTEM FLOW RATE PER ANSIA/SP-7 2006 #4.4.1  
THE MAXIMUM SYSTEM FLOW RATE SHALL BE DETERMINED BY ONE OF THE FOLLOWING:  
- TDH CALCULATION FOR THE CIRCULATION SYSTEM OF EACH PUMP, OR  
- SHIPPLIED TDH CALCULATION, OR  
- THE MAX. FLOW CAPACITY (DETERMINE FROM PUMP FLOW CURVES) OF THE NEW OR REPLACEMENT PUMP (WHICH SHALL BE LIMITED BY THE CRITERIA OF ANSIA/SP-7 #4.4
- IMPORTANT NOTE: IF THE MAX. PUMP FLOW RATE GREATER THAN DRAIN FLOW RATE OR 8 FPS SUCTION FLOW RATE OR 10 FPS DISCHARGE FLOW RATE, THEN THE MAX. FLOW FROM THE PUMP CURVE OPTION HAS FAILED.  
IF SO, THE TOTAL DYNAMIC HEAD TDH CALCULATION SHALL BE REQUIRED TO DETERMINE IF THE SYSTEM IS ACCEPTABLE. USING TDH, DETERMINE NEW MAX. FLOW RATE FROM PUMP CURVE. IF IT IS GREATER THAN DRAIN FLOW RATE OR 8 FPS SUCTION FLOW RATE OR 10 FPS DISCHARGE FLOW RATE, THE SYSTEM IS NOT ACCEPTABLE.
- IF A VARIABLE SPEED PUMP IS USED, USE THE MAX. PUMP FLOW IN CALCULATIONS  
- FOR SIDE DRAINS, USE APPROPRIATE SIDE WALL DRAIN FLOW AS PUBLISHED BY MANUFACTURER  
- IN-FLOOR SUCTION OUTLET COVER/GRAVE MUST CONFORM TO MOST RECENT EDITION OF ASME/ANSI A112.19.3 AND BE EMBOSSED WITH THAT EDITION  
- PUMP FILTER & HEATER MAKE AND MODEL CANNOT CHANGED AND EQUIPMENT LOCATION CANNOT BE MOVED CLOSER TO POOL WITHOUT SUBMITTING A REVISED PLAN AND TDH CALCULATION FOR APPROVAL.  
- MIN. SYSTEM FLOW BASED ON MIN. FLOW PER SKIMMER OF 35 GPM  
- SYSTEM FLOW RATE MUST NOT EXCEED APPROVED COVER FLOW RATES  
- CENTER TO CENTER DISTANCE BETWEEN THE SUCTION PIPE OUTLETS SHALL BE 36 INCH MIN.  
- CHANNEL TYPE WITH 2 OR 3 OUTLETS IN ONE PORT SHALL BE AT LEAST 3" WIDE BY 31" LONG
- 9- PUMP:  
PER FBC 424.2.1.1 STRAINER, POOL CIRCULATING PUMPS SHALL BE EQUIPPED ON THE INLET SIDE WITH AN APPROVED TYPE HAIR AND LINT STRAINER WHEN USED WITH A PRESSURE FILTER. PER 424.2.1.2 INSTALLATION SHALL BE COMPLETED IN ACCORDANCE MANUPRS RECOMMENDATIONS. PER 424.2.1.3 CAPACITY: PUMPS SHALL HAVE DESIGN CAPACITY AT THE FOLLOWING HEADS: 1) PRESSURE DIAPHRAGMOUS EARTH, LEAST 60 FEET. 2) VACUUM D.E. 20 INCH VACUUM ON THE SUCTION SIDE AND 40 FEET TOTAL HEAD. 3) RABID SAND - AT LEAST 45 FEET. 4) HIGH RATE - AT LEAST 60 FEET. PER 424.2.1.5 PUMP IMPELLERS, SHAFT, IMPELLERS AND OTHER WORKING PARTS SHALL BE CORROSION RESISTANT MATERIALS.
- 10- CLEANER FITTINGS:  
PER ANSIBSP-3 4.12.10, THE VACUUM OR PRESSURE CLEANER FITTING(S) SHALL BE LOCATED IN AN ACCESSIBLE POSITION AT LEAST 6 INCHES AND NOT GREATER THAN 18 INCHES BELOW THE MINIMUM OPERATING WATER LEVEL, OR AS AN ATTACHMENT TO THE SKIMMER. ALL CLEANER SUCTION INLETS SHALL BE PROTECTED BY AN APPROVED, PERMANENTLY INSTALLED, SELF CLOSING FLAPPER ASSEMBLY.
- 11- VALVE:  
PER FBC 424.2.8.1 & R4101.8.1 VALVES SHALL BE MADE OF MATERIALS THAT ARE APPROVED IN THE FLORIDA BUILDING CODE, PLUMBING, VALVES LOCATED UNDER CONCRETE SLABS SHALL BE SET IN A PIT HAVING A LEAST DIMENSION OF FIVE PIPE DIAMETERS, MINIMUM 10 INCHES, FITTED WITH A SUITABLE COVER
- 11- WASTE WATER DISPOSAL:  
PER FBC 424.2.10 & R4101.10 DIRECT OR INDIRECT CONNECTIONS CANNOT BE MADE TO EXISTING FACILITIES WITHOUT THE PRIOR APPROVAL OF THE ADMINISTRATIVE AUTHORITY.
- 13- WATER SERVICE:  
PER FBC 424.2.4 & R4101.4 BACKFLOW PREVENTION DEVICE REQUIRED ON ALL PORTABLE WATER SERVICE
- 14- TESTS:  
ALL POOL PIPING SHALL BE INSPECTED AND APPROVED BEFORE COVER OR CONCEALMENT. IT SHALL BE TESTED AND APPROVED TIGHT UNDER A STATIC WATER OR AIR PRESSURE TEST OF NOT LESS THAN 35 PSI FOR 15 MINUTES. PER MANUFACTURERS RECOMMENDATIONS, NO AIR TEST SHALL BE APPROVED FOR PVC PIPE AND FITTINGS. SECTION 424.2.12.1 & R4101.12.2 PRESSURE TESTS.
- 15- WATER HEATING EQUIPMENT:  
SWIMMING POOL WATER HEATING EQUIPMENT SHALL CONFORM TO THE DESIGN CONSTRUCTION AND INSTALLATION REQUIREMENTS IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES AND SHALL BEAR THE LABEL OF A RECOGNIZED TESTING AGENCY, AND SHALL INCLUDE A CONSIDERATION OF COMBUSTION AIR, VENTING AND GAS SUPPLY REQUIREMENTS FOR WATER HEATERS SEC. 424.2.14.1 & R4101.14.1. IT MUST CONTAIN A THERMOSTATIC OR HIGH PRESSURE CONTROL SWITCH SO THE POOL WATER DOES NOT EXCEED 104 DEGREES F. SEC. 424.2.14.4 & R4101.14.4 WATER HEATING EQUIPMENT SHALL BE INSTALLED WITH FLANGES OR UNION CONNECTIONS ADJACENT TO THE HEATER. WATER HEATING EQUIPMENT SHALL COMPLY WITH FBC 412.1 ALL HEATERS MUST HAVE AN INTERNAL CHECK VALVE. PER FBC 19-612.1 ABC.2.2 THE POOL AND SPA SHALL BE PROVIDED WITH A COVER TO REDUCE HEAT LOSS (IF REQUIRED BY THE CITY)
- 16- GAS PIPING:  
GAS PIPING SHALL COMPLY WITH FBC, FUEL GAS SEC. 424.2.15 & R4101.15
- 17- ELECTRICAL:  
POOL LOCATION AND ELECTRICAL WIRING AND EQUIPMENT SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE 2003, SPECIFICALLY SECTION 680.
- 18- LADDERS AND STEPS:  
PER FBC 424.2.18 & R4101.18 ALL POOLS SHALL BE PROVIDED WITH A LADDER OR STEPS IN THE SHALLOW END WHERE WATER EXCEEDS 24 INCHES. WHERE WATER DEPTH EXCEEDS 5 FEET, THERE SHALL BE LADDERS, STAIRS OR UNDERWATER BENCHES/STAIRWAYS IN THE DEEP END.
- 19- FILTERS:  
PER FBC 424.2.20 & R4101.20 THE ENTIRE DESIGN OF WATCHED COMPONENTS SHALL HAVE SUFFICIENT CAPACITY TO PROVIDE A COMPLETE TURNOVER OF POOL WATER IN 12 HOURS OR LESS.
- 20- POOL FITTINGS:  
PER FBC 424.2.21 & R4101.21 POOL FITTINGS SHALL BE OF AN APPROVED TYPE AND DESIGN AS TO BE APPROPRIATE FOR THE SPECIFIC APPLICATION. PER FBC 424.2.13.2 JOINTS AND C CONNECTIONS, FBC PLUMBING SEC. 603.21, PURPLE PRIMER REQUIRED ON PVC PIPING
- 21- SKIMMERS:  
PER FBC 424.2.21.3 & R4101.21.3 SKIMMERS SHALL BE INSTALLED ON THE BASIS OF ONE PER 800 SF OF SURFACE AREA OR FRACTION THEREOF.
- 22- HYDROSTATIC RELIEF DEVICE:  
PER FBC 424.2.21.4 & R4101.21.4 IN AREAS OF ANTICIPATED WATER TABLE, AN APPROVED HYDROSTATIC RELIEF DEVICE SHALL BE INSTALLED. EXCEPT ION: PLASTIC LINER POOLS.
- 23- CONCRETE / STEEL:  
CONCRETE IS TO BE A MIX DESIGNED IN ACCORDANCE WITH ASTM C-44 BY A RECOGNIZED TESTING LABORATORY TO ACHIEVE A STRENGTH OF 3000 PSI. AT 28 DAYS (UNLESS OTHERWISE NOTED) WITH A PLASTIC AND NONVOLATILE MIX. PNEUMATICALLY APPLIED CONCRETE AND/OR SHOTCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 304.2R-04 AND ACI 506.2-04, RESPECTIVELY. ALL OTHER CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 304R-04. A CEMENT/AGGREGATE RATIO OF 1:2.5 SHALL BE PROVIDED. NO WATER IS TO BE ADDED AFTER TRUCK LEAVES PLANT WITHOUT APPROVAL OF ENGINEER. PLANT CONTROL, IS REQUIRED. MINIMUM MIX TIME AT POINT OF DEPOSIT IS 90 MINUTES. CONCRETE WORK SHALL BE AS PER REQUIREMENTS AND RECOMMENDATIONS OF ACI 301-04. REINFORCING, DEFORMED STEEL BARS SHALL BE A15 GRADE 60 (UNLESS OTHERWISE NOTED). FREE FROM OIL, LOOSE SCALE AND LOOSE RUST. REINFORCING, DEFORMED STEEL BARS SHALL BE BENT, LAPPED PLACED SUPPORTED AND FASTENED ACCORDING TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES (ACI 315-04) AND THE BUILDING CODE REQUIREMENTS FOR REINFORCING CONCRETE (ACI 318-04). IN CASE OF CONFLICT, THE MORE CONSERVATIVE VALUES SHALL BE USED.
- 24- SOIL STATEMENT:  
IN ACCORDANCE WITH FBC SECTION 1918, HAVE BEARING CAPACITY OF SOIL. BASED UPON RATIONAL ANALYSIS AND KNOWN VALUES IN THE VICINITY. THE IN-PLACE BEARING CAPACITY OF THE SOIL, BENEATH THE POOL, AND RELATED STRUCTURES SHOWN WITHIN THESE PLANS IS 2000 PSF AFTER EXCAVATION AND COMPACTION IN ACCORDANCE WITH CURRENT EDITION OF FBC. SHOULD ANY MUCK, MARL OR OTHER ORGANIC SOILS BE DISCOVERED ON EXCAVATION, THEY SHOULD BE REMOVED IN THEIR ENTIRETY. ALL CONSTRUCTION SHALL STOP AND THE ENGINEER OF RECORD SHALL BE CONTACTED TO CONDUCT AN INSPECTION, STRUCTURAL ELEMENTS ARE DESIGNED WITH A REQUIRED BEARING CAPACITY OF 2000 PSF. UNLESS OTHERWISE SPECIFIED.

- 25- POOL STAINING:  
THIS DESIGN ENGINEER ASSUMES NO RESPONSIBILITY FOR POOL CONSTRUCTION IN EASEMENT OR REQUIRED SETBACKS AREAS. PLOT PLANS NOT PREPARED FROM LEGAL SURVEYS OF THE EXISTING LOT AND RESIDENCE ARE SO INDICATED. THE POOL CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND ESTABLISH LOT LINES & LOCATION OF UTILITIES AT THE SITE AND CONTACT THE H.C.E. IF DIFFERENT THAN INDICATED ON PLAN. MINIMUM CLEARANCE DIMENSIONS SHALL BE HELD AS REQUIRED BY THE LOCAL REGULATORY AGENCY.
- 26- EXISTING STRUCTURES:  
THE POOL CONTRACTOR SHALL ALWAYS TAKE ALL PRECAUTIONS TO PROTECT EXISTING STRUCTURES FROM FAILURE BY SHEETING AND/OR SHORING OR OTHER METHODS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE SAFETY OF EXISTING STRUCTURES. IN CASE OF FOOTINGS UNDERMINING, CONTRACTOR SHALL POUR CONCRETE BETWEEN POOL AND FOOTING. TOP OF CONCRETE SHALL BE BOTTOM OF FOOTING. WIDTH OF POURED CONCRETE SHALL BE FOOTING WIDTH AT A MINIMUM
- 27- PIPING:  
PIPING SHALL BE 50CH. 40 BEARING 150F APPROVAL. PER FBC 2007 R4101. PIPING CAN BE (IF NEEDED) ENCASED IN THE CONCRETE OF THE POOL SHELL.
- 28- CONCRETE SLABS:  
ALL POOL EQUIPMENT SLABS SHALL COMPLY WITH SECTION 1820.3 OF FBC 2007
- 29- HANDHOLD:  
ANSI-SP-3 ARTICLE XV SECTION 13.3. A SECURED ROPE OR CERAMIC HANDHOLDS MUST BE PLACED AT OR NO MORE THAN 12" ABOVE THE NORMAL WATERLINE OF THE POOL
- 30- POWER LINE:  
OVERHEAD ELECTRIC LINES MUST BE LOCATED 10 FEET AND UNDERGROUND ELECTRIC LINES MUST BE LOCATED 5 FEET FROM POOL WATER EDGE.
- 31- BACKFILL & COMPACTION  
BACKFILL CONSTRUCTION AREAS TO PROPER ELEVATION. IF NEEDED USING CLEAN GRANULAR MATERIAL. FREE OF ORGANICS AND OTHER DELETERIOUS MATERIALS AND PLACED IN LIFTS NOT TO EXCEED 12 INCHES IN THICKNESS AND COMPACTED TO 95% OF THE ASTM D-1557 MODIFIED PROCTOR METHOD. BACKFILLING SHALL COMMENCE ONLY FOLLOWING REMOVAL FROM EXCAVATION OF ALL FORMS, WOOD, DEBRIS, AND OTHER DELETERIOUS MATERIALS. COMPACTION SHALL BE WITH EQUIPMENT SUITED TO SOIL BEING COMPACTED. MOISTEN OR ABRADE MATERIAL AS NECESSARY TO PROVIDE MOISTURE CONTENT COMPACT EACH LAYER TO NOT LESS THAN PERCENTAGE OF THAT WHICH WILL READILY FACILITATE OBTAINING SPECIFIED COMPACTION WITH EQUIPMENT USED. ENSURE THAT THE COMPACTION OF PREVIOUSLY PREPARED FILL AREAS HAS BEEN MAINTAINED PRIOR TO PLACING NEW LAYERS. AFTER INSTALLATION OF ANY PLUMBING AND ELECTRICAL PIPING DISTURBED AREAS SHALL BE RECOMPACTED.
- 32- ENTRAPMENT TESTING AND CERTIFICATION:  
ALL POOL AND SPA SUCTION INLETS SHALL BE PROVIDED WITH A COVER THAT HAS BEEN TESTED AND ACCEPTED BY A RECOGNIZED TESTING FACILITY AND COMPLY WITH ANSABME A112.14.0 "SUCTION FITTINGS FOR USE IN SWIMMING POOLS, SPAS, HOT TUBS AND WHIRLPOOL BATHTUB APPLIANCES" EXCEPT ION: SURFACE SKIMMERS.
- 33- WARNING:  
TO EMPTY POOL, AFTER CONSTRUCTION, FOR REPAIRS OR ANY OTHER REASON, THE HYDROSTATIC UPLIFT PRESSURES BENEATH THE POOL MUST BE ELIMINATED TO PREVENT THE POOL FROM FLOATING UPWARD. THE OWNER MUST CONSULT A POOL CONTRACTOR OR POOL REPAIR CONTRACTOR EXPERIENCED IN ELIMINATING UPLIFT PRESSURES.
- 34- NOTE 1:  
THIS PLAN IS NOT TRANSFERABLE FROM ONE CONTRACTOR TO ANOTHER
- 35- NOTE 2:  
UNLESS OTHERWISE SPECIFIED, ALL DETAILS SHOWN ARE NOT TO SCALE.
- 36- NOTE 3:  
POOL WALL SHALL BE REINFORCED WITH #8@8" O.C. E.V. WHERE LESS THAN 5 FEET FROM ANY EXISTING STRUCTURE OR RATIO (SEE SHEETING & SHORING DETAIL)
- 37- NOTE 4:  
POOL AND DECK ELEVATION SHALL BE LOWER THAN FINISH FLOOR ELEVATION OF THE HOUSE
- 38- NOTE 5:  
THERE IS ALWAYS THE POSSIBILITY THAT CONDITIONS IN THE FIELD MAY BE DIFFERENT FROM THOSE INDICATED IN AN ENGINEERING PERMIT DRAWINGS. THEREFORE, IF DIFFERENT CONDITIONS ARE ENCOUNTERED BEFORE OR DURING CONSTRUCTION, THE ENGINEER OF RECORD SHALL BE NOTIFIED TO REVIEW THE FINDINGS AND MAKE RECOMMENDATIONS AS NEEDED.
- 39- NOTE 6:  
STRUCTURAL ENGINEER MUST CERTIFY OR DESIGN REPLACEMENT ANCHOR AND DEADMAN SYSTEM FOR SEAWALL WITH IN 15 FEET OF POOL SEAWALL ANCHOR SYSTEM INSTALLATION MUST BE COMPLETE PRIOR TO START OF POOL CONSTRUCTION.
- 40- NOTE 7:  
NO DIVING BOARD AND NO DIVING IS ALLOW ON ANY POOL. LESS THAN 8 FEET DEEP AND SPECIFICALLY DESIGN FOR DIVING
- 41- BONDING  
CONTINUOUS SINGLE #8 ANG BARE COPPER WIRE SHALL BE BUNDLED TO A MIN. 4" TO 6" BELOW SUBGRADE. 18" TO 24" FROM INSIDE THE WALL OF SWIMMING POOL-SPA AROUND THE SWIMMING POOL-SPA PERIMETER, AND SHALL BE CONNECTED TO THE POOL STEEL REINFORCEMENT AT A MIN. 4 DIFFERENT LOCATIONS, EQUALLY SPACED.
- 42- NOTE 8:  
IT IS THE CONTRACTOR RESPONSIBILITY TO PROVIDE THE ENGINEER WITH AN ACCURATE SURVEY AND DRAWINGS THAT REPRESENTS THE EXISTING FIELD CONDITIONS, I.E. ADDITIONS, TREES, AC PADS, WALKWAYS, ETC.

