

CONSTRUCTION CODE REQUIREMENTS

THESE PLANS WERE PREPARED AND SHALL COMPLY WITH THE

- a. FLORIDA STATE:
- 2023 FLORIDA BUILDING CODE 8th EDITION, RESIDENTIAL, CHAPTER NO. 45, SECTION: R4501
 - 2023 FLORIDA BUILDING CODE 8th EDITION, ENERGY CONSERVATION, CHAPTER NO. 4 SECTION: R403.10 POOLS AND PERMANENT SPA ENERGY CONSUMPTION (MANDATORY) SECTION: R403.11 PORTABLE SPA (MANDATORY) SECTION: R403.12 RESIDENTIAL POOL AND PERMANENT SPA
 - 2023 FLORIDA STATUTES, CHAPTER NO. 515 RESIDENTIAL SWIMMING POOL SAFETY ACT
- b. FEDERAL GOVERNMENT:
- 2014 ANSI/ APSP/ ICC-3: AMERICAN NATIONAL STANDARD FOR PERMANENTLY INSTALLED RESIDENTIAL SPAS SWIM SPAS R4501.6.1
 - 2012 ANSI/ APSP/ ICC-5: AMERICAN NATIONAL STANDARD FOR RESIDENTIAL INGROUND SWIMMING POOLS R4501.6.1
 - 2020 ANSI/APSP/ICC-7: AMERICAN NATIONAL STANDARD FOR SUCTION ENTRAPMENT AVOIDANCE IN SWIMMING POOLS, WADING POOLS, SPAS, HOT TUBS AND CATCH BASINS R4501.6.1, R4501.6.3, R4501.6.6
 - 2013 ANSI/ASHRAE-15: SAFETY STANDARDS FOR REFRIGERATION SYSTEMS.
 - 2012 ANSI/ APSP/ ICC 4-12 AMERICA NATIONAL STANDARD FOR ABOVE-GROUND/ ON-GROUND RESIDENTIAL SWIMMING POOLS R4501.6.1.
 - 2013 ANSI/ APSP/ ICC 6-13 AMERICA NATIONAL STANDARD FOR RESIDENTIAL PORTABLE SPAS AND SWIM SPAS
 - 2020 NATIONAL ELECTRICAL CODE (NEC) ARTICLE NO. 680

IMPORTANT NOTE:

POOL CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL ABOVE LISTED CODE REQUIREMENTS AS WELL AS ANY ADDITIONAL REQUIREMENTS PER LOCAL MUNICIPALITY THAT MAY BE MORE STRINGENT THAN THE ABOVE LISTED CODES REQUIREMENTS.

GENERAL POOL / SPA REQUIREMENTS:

- THE POOL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL DETAIL DESIGN REQUIREMENTS FOR EACH INDIVIDUAL POOL IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, AND ALL CONSTRUCTION SHALL MEET ALL APPLICABLE CODES INCLUDING PLUMBING, ELECTRICAL AND GAS.
- SEE ANSI/ NSPI-5 FOR DIVING WATER ENVELOPS.
- SLIDERS SHALL ALSO MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
- LADDER OR STAIRS ARE TO BE PROVIDED. ENTRY/ EXIT REQUIRED AT THE SHALLOW END AND DEEP END IF OVER 5 FEET DEEP ACCEPTABLE ARE STAIRS (10" MINIMUM TREAD WITH 240 SQUARE INCH MINIMUM AREA, 12" RISER WITH INTERMEDIATE TREADS AND RISERS UNIFORM). LADDERS, UNDERWATER SEATS, AND SWIM-OUTS (MAXIMUM 20" BELLOW WATERLINE
- OUTDOOR SWIMMING POOLS ARE TO HAVE BARRIERS THAT COMPLY WITH THE FLORIDA BUILDING CODE.
- ALL WALL SURROUNDING INDOOR SWIMMING POOLS SHALL COMPLY WITH THE FLORIDA BUILDING CODE.
- FINAL ELECTRICAL, AND BARRIER CODE, INSPECTIONS SHALL BE COMPLETED PRIOR TO FILING THE POOL WITH WATER.

SPECIAL SPA REQUIREMENTS:

- MAXIMUM WATER DEPTH 4', MAXIMUM SEAT DEPTH 28".
- FLOOR SLOPE 1:12
- MIN. TREAD 10" X 12" MAX. RISER.
- INTERMITTENTLY THE SPA SHALL HAVE A ONE HOUR TURNOVER, IF CONTINUOUS A SIX HOUR TURN OVER.
- MAXIMUM TEMPERATURE 104 DEGREES.

GENERAL STRUCTURAL NOTES:

1. THE MINIMUM CONCRETE COVER FOR #3 REBAR IS TO BE 2".
2. CONTINUOUS #3 REBAR SPLICES SHALL BE 18" (40 BAR DIAMETERS) MINIMUM LAP, STEEL TO BE BENT, LAPPED, AND PLACED IN CONFORMANCE WITH A.C.J. STANDARDS AND SPECS.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI AT 28 DAYS U.N.O.

ELECTRICAL REQUIREMENTS:

- WIRING AND BONDING AND ALL ELECTRICAL SHALL CONFORM TO NEC ARTICLE 680.
- NO OUTLET OR OVERHEAD POWER WITHIN 10', IF WITHIN 15' PROJECT WITH GFI.
- BRASS FITINGS TO J-BOX OR TRANSFORMER WHICHEVER IS FIRST WHICHEVER IS FIRST, EXCEPT WHERE PVC IS APPROVED.
- BONDING GRID PER NEC 680, 26
- OR
- NEC, 680, 26 (B) (2) (b) ALTERNATE MEANS EQUIPOTENT BONDING CONDUCTOR MUST FOLLOWING REQUIREMENTS:

- (1) 8 AWS BARE SOLID COPPER BONDING CONDUCTOR
- (2) THE BONDING CONDUCTOR MUST FOLLOW THE CONTOUR OF THE PERIMETER SURFACE
- (3) LISTED SPLICING DEVICES
- (4) BONDING CONDUCTOR MUST BE 18 TO 24 INC. FROM THE INSIDE WALLS OF THE POOL
- (5) BONDING CONDUCTOR MUST BE WITHIN OR UNDER THE PERIMETER SURFACE 4 TO 6 IN. BELOW THE SUBGRADE.

- ALL CONTROL ENCLOSURES (INCLUDING ACCESSORY ELECTRONIC EQUIPMENT WITH METAL ENCLOSURES), PUMP MOTORS, HEATERS, LIGHTS, LIGHT TRANSFORMERS, HANDRAIL AND LADDER DECK ANCHORS, WINDOW AND DOOR FRAMES WITHIN 5 FEET OR LESS OF THE WATER'S EDGE ARE TO BE GROUNDED IN ACCORDANCE WITH ARTICLE 680 OF THE 2020 NEC.
- ALL POOL PUMP MOTOR(S) TO HAVE GFCI PROTECTION (NEC 680.22 (B), FBC SECTION 27), AND FRC 4101.16

VELOCITY AND FLOW RATE NOTES:

- WATER VELOCITY IN FIELD-FABRICATED PIPING IS BASED ON THE MAXIMUM SYSTEM FLOW RATE.
- MAXIMUM WATER VELOCITY IN BRANCH SUCTION PIPING SHALL BE LIMITED TO 6 FEET PER SECOND (FPS)
- WHEN ONE OF A PAIR IS BLOCKED. IN NORMAL OPERATION THEN, THE BRANCH SUCTION PIPING VELOCITY
- 3 FEET PER SECOND. ALL OTHER SUCTION PIPING VELOCITIES SHALL BE 8 FPS FOR RESIDENTIAL POOLS.

- THE MAXIMUM SYSTEM FLOW RATE SHALL BE DETERMINED BY ONE OF THE FOLLOWING:

TDH CALCULATION FOR THE CIRCULATION SYSTEM OF EACH PUMP, OR A SIMPLIFIED TDH CALCULATION. DETERMINES THE MAXIMUM SYSTEM NOW RATE USING THE SHORTEST DISTANCE BETWEEN THE POOL AND THE PUMP. OMITTING THE CALCULATIONS FOR FIT LINGS/ VALVES, AND USING THE BEST PERFORMANCE RATINGS FOR FILTERS AND HEATERS: OR

THE MAXIMUM FLOW CAPACITY OF THE PUMP, WHICH SHALL BE LIMITED BY THE CRITERIA OF ANSI/APSP/ICC-7 SEC. 4.4.

FILTERS

FILTER SIZE TO BE DETERMINED BASED ON CALCULATED FLOW RATE (GPM) DIVIDED BY THE FOLLWING FILTER CAPACITY (PER APSP -15):

- A. CARTRIDGE = 0.375
 - B. SAND = 15
 - C. D.E. = 2
- FILTER BACKWASH VALVE (WHEN USED) MUST BE 2" (MIN.)

OR DIAMETER OF THE RETURN PIPE, WHICHEVER IS GREATER.

EQUIPMENT/PIPING REQUIREMENTS:

- THE MAXIMUM SYSTEM FLOW RATE "SEE TDH CALCULATIONS FOR NOTES".
 - EQUIPMENT FOUNDATIONS AND ENCLOSURES ALL POOL MOTORS AND EQUIPMENT SHALL BE INSTALLED IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - ACCESSIBILITY AND CLEARANCE, EQUIPMENT SHALL BE SO INSTALLED AS TO PROVIDE READY ACCESSIBILITY FOR CLEANING, OPERATING, MAINTENANCE AND SERVICING.
 - CIRCULATION SYSTEMS, COMPONENTS AND EQUIPMENT SHALL COMPLY WITH NSF 50.
 - THE MAXIMUM TURNOVER RATE IS 12 HOURS.
 - ALL FILTERS SHALL HAVE AN AIR RELEASE AND PRESSURE GAUGE.
 - SURFACE SKIMMERS SHALL MEET NSF 50 AND THERE SHALL BE ONE FOR EVERY 800 SQUARE FEEL OR SURFACE AREA ANDA 25 GPM MINIMUM EACH.
 - RETURN INLETS SHALL BE A MINIMUM OF ONE FOR EVERY 300 SQUARE FEET, RETURN VELOCITY 10FT/S, SPACING OF 10 FEET MINIMUM APART, EXCEPT THERAPY JETS AND SWIM JETS.
 - HYDROSTATIC RELIEF DEVICE, IN AREAS OF ANTICIPATED WATER TABLE AN APPROVED HYDROSTATIC REFIEF DEVICE SHALL BE INSTALLED.
- VALVES SHALL BE APROVED BY THE FLORIDA BUILDING CODE.
- HEATER SHALL MEET ANSE-Z21.56 OR UL 1261 OU UL 559 AND ANSI/APSP.
 - DISINFECTANT EQUIPMENT SHALL COMPLY WITH NSF-50 ANSI/NSPI-4 AND ANSI/NSPI-5 BYPASS ON HEATERS.
 - PRIMER AND GLUE ON EXPOSED ABOVE-GROUND ARE PIPING NOT REQUIRED TO BE COLORED.
 - PIPING SHALL BE SCHEDULE 40 PVC, NSF-PW, MAXIMUM PRESSURE VELOCITY 10 FT/S, AND SUCTION 8 FT/S.
 - MAIN DRAINS ARE OPTIONS "SEE TDH CALCULATIONS" OF THIS SET FOR DETAILS AND SPECIFICATIONS.
 - VACCUM CLEANER SUCTION FITTINGS SHALL BE PROTECTED BY A PERMANENTLY SELF-CLOSING FLAPPER VALVE MEETING ANSI/ASME A112.12.8M AND ANSI/APSP/ICC-7
 - ALL RETURN INLETS MUST BE DIRECTIONAL INLET FITTINGS.
 - THE FOLLOWING SHALL BE LABELED AT THE CIRCULATION EQUIPMENT LOCATION:
- PIPE

VALVES

PUMP(S) OFF SWITCH
- WHERE REQUIRED MEET 2023 FBC GAS AND MECHANICAL CODES (OR CODES CURRENTLY ENFORCER WITH MUNICIPALITY)

ENTRAPMENT PROTECTION FOR SUCTION OUTLETS:

- ENTRAPMENT PROTECTION FOR SUCTION OUTLETS SHALL BE INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF ANSI/APSP/ICC-7.

PUMPS:

- HAIR AND LINT STRAINERS ARE TO BE USED WITH RECIRCULATION SYSTEMS.
- FILTRATION PUMPS TO BE SIZED (BASED ON CALCULATED FLOW RATE IN GPM) TO TURNOVER POOL VOLUME IN SIX (6) HOUR MINIMUM OR 36 GPM (MIN.) WHICHEVER IS GREATER.
- FILTER COMPONENTS SHALL HAVE SUFFICIENT CAPACITY TP PROVIDE A COMPLETE TURNOVER OF POOL WATER IM TWELVE (12) HOUR OR LESS.
- RECIRCULATION PUMPS LESS THAN ONE HORSEPOWER (1 HP) SHALL BE TWO OR MORE PUMPS WITH ADEQUATE CONTROLLER. THE DEFAULT CIRCULATION MUST BE THE RESIDENTIAL FILTRATION (SLOWER) SPEED. THE SIMPLIFIED TOTAL DYNAMIC HEAD SHEET TO BE CALCULATED AND PLUMBING SIZE DETERMINED BASED ON (HIGHER) SPEED. THE HIGHER SPEED OVERRIDE IS NOT TO EXCEED ONE NORMAL DAY'S CYCLE OR 24 HOURS, WHICHEVER IS LESS I.E.: CONTROLLER RESETS PUMP TO SLOWER SPEED AT THE START OF THE NEXT CIRCULATIONS CYCLE.
- PUMPS THAT ARE USED FOR CIRCULATION ONLY (WITHOUT FILTRATION). SPA THERAPY PUMPS OR WATER FEATURE PUMPS ARE "EXEMPT" FROM THIS REQUIREMENT.
- POOL FILTRATION PUMPS SUCTION LINE (BEFORE PUMP) SHALL HAVE A STRAIGHT LENGHT OF PIPE (4 PIPE DIAMETERS MIN.) I.E.: 2" SUCTION LINE SHOULD HAVE (4 X 2" DIA.) 8" OF STRAIGHT PIPE FOM SUCTION INLET TO THE FIRST PVC FITTING.

SUCTION TYPE - SKIMMER / VACUUM NOTES:

- WHEN MAIN DRAINS ARE NOT INCLUDED, THE SKIMMER OR SURFACE OVERFLOW MUST BE HYDRAULICALLY DESIGNED TO THE MAXIMUM FLOW RATE OF THE POOL. SKIMMERS SHALL BE VENTED TO ATMOSPHERE THROUGH OPENINGS IN THE LID, OR THROUGH A SEPARATE VENT PIPE, DESIGNED IN ACCORDANCE WITH ANSI/PHTA/ICC -7 SECTION 4.5. SKIMMER EQUALIZER LINES SHALL NOT BE USED ON NEW CONSTRUCTION. EXISTING EQUALIZER(S) SOFAs SHALL COMPLY WITH ALL REQUIREMENTS OF ANSI/APSP/ICC-7, INCLUDING THE PROPER INSTALLATION OF A CERTIFIED SOFA. IF SKIMMER EQUALIZER LINES DO NOT COMPLY WITH THESE REQUIREMENTS, THEY SHALL BE CAPPED OFF OR REMOVED.
- WALL VACUUM FITTING (S). WHEN USED, VACUUM CLEANER FITTING(S) SHALL BE LOCATED IN AN ACCESSIBLE POSITION(S) AT LEAST 6 INCHES (152 MM) AND NO GREATER THAN 12 INCHES (457 MM) BELOW THE WATER LEVEL AND THE SELF-CLOSING, SELF-LATCHING FITTING SHALL COMPLY WITH IAPMO SPS-4.IN ADDITION, THE VACUUM PIPING SHALL BE EQUIPPED WITH A VALVE TO REMAIN IN THE CLOSED POSITION WHEN NOT IN USED.

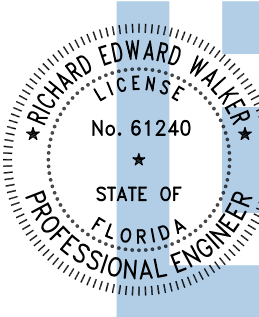
SUCTION TYPE - MAIN DRAIN / SUBMERGED SUCTION OUTLET NOTES:

- DUAL OUTLETS, I.E., TWO LISTED SUCTION OUTLETS, ARE PIPED TO A SINGLE, COMMON SUCTION LINE TO THE PUMPS(S). THE TEE FEEDING FROM THE COMMON LINE BETWEEN THE SUCTION OUTLETS, TO THE PUMPS(S) SHALL BE LOCATED APPROXIMATELY MIDWAY.
- BETWEEN THE OUTLETS WITH NOW OUT OF THE BRANCH OF THE TEE (SEE FIGURES ON SHEET 04). THE FLOW RATING OF EACH COVER/ GRATE SHALL BE AT LEAST EQUAL TO THE SYSTEMS MAXIMUM FLOW RATE.
- DUAL OUTLETS SHALL BE SEPARATED BY A MINIMUM OF 3 FEET (914 MM) MEASURED FROM CENTER TO CENTER OF THE SUCTION PIPES (SEE FIGURES ON SHEET 04) OR LOCATED ON TWO (2) DIFFERENT PLANES, I.E. ONE (1) ON THE BOTTOM AND ONE (1) ON THE VERTICAL WALL, OR ONE (1) EACH ON TWO (2) SEPARATE VERTICAL WALLS.
- THREE OR MORE LISTED SUCTION OUTLETS ARE PIPED IN PARALLEL TWO OF THE OUTLETS SHALL BE PIPED WITH THE TEE FEEDING THE SUCTION LINE TO THE PUMP(S) LOCATED APPROXIMATELY MIDWAY BETWEEN THE TWO OUTLETS. THE ADDITIONAL OUTLET (S) SHALL BE PERMITTED WHEN PIPED ACCORDING TO ANSI/APSP-7.
- A SINGLE LISTED CHANNEL OUTLET SHALL BE CONSIDERED ACCEPTABLE IF THE SIZE OF THE PERFORATED AREA IS 3" OR GREATER IN WIDTH AND 31" OR GREATER IN LENGTH.
- SINGLE OUTLET SWIM-JET SYSTEMS CONSIST OF A COMBINATION FITTING THAT INCORPORATES A SUCTION OUTLET AND INLET IN A SINGLE HOUSING THAT IS DESIGNED TO MOVE A LARGE VOLUME OF WATER AT HIGH VELOCITY IN A SINGLE DIRECTION. SUCH SYSTEMS SHALL BE TESTED AND LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY AS CONFORMING TO THE MOST RECENT EDITION OF ASME/ ANSI 112.19.8 AND INCLUDE A PERMANENTLY MARKED FLOW RATING TESTED TO PREVENT HAIR ENTRAPMENT. THEY ARE NOT GOVERNED BY THE VELOCITY LIMITATIONS OF ANSI/ APSP-7-4.4.

SCOPE OF WORK:
RESIDENTIAL SWIMMING POOL ENGINEERING
(POOL NOT DESIGNED FOR DIVING)

SHEET NO.	DRAWING INDEX
S/01	GENERAL NOTES
S/02	PLAN/ ELEVATIONS
S/03	DETAILS

This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



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DESIGN DATE:		11/19/2024
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