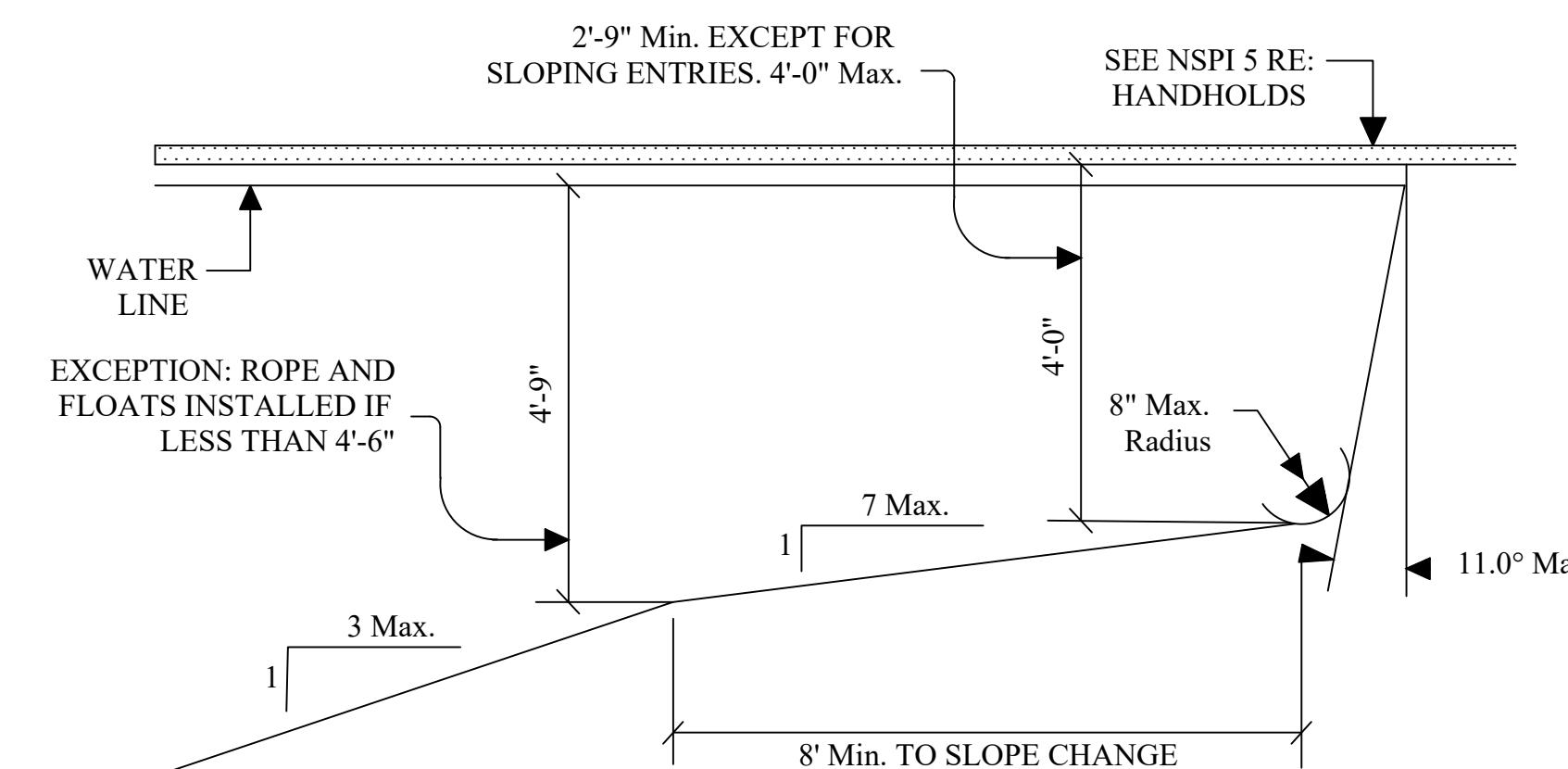


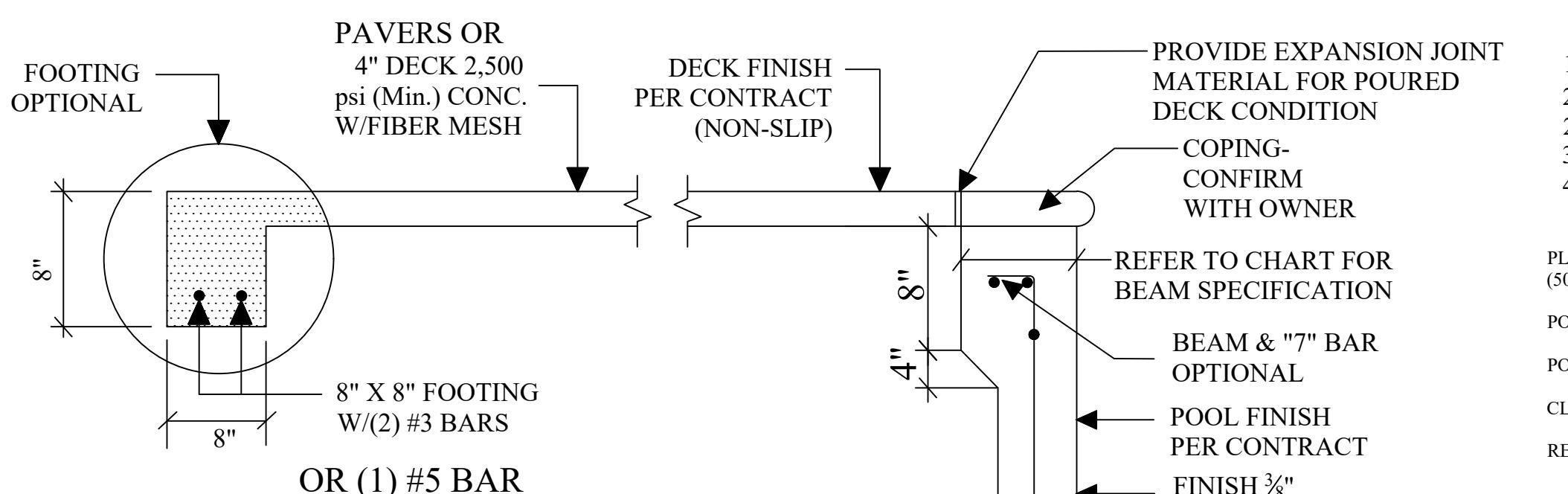
Pool Plan with Attached Spa - Sample Layout
(Refer to Attached Design Plan for Specific Dimensions)



Pool Section Detail

Scale: Not shown to scale

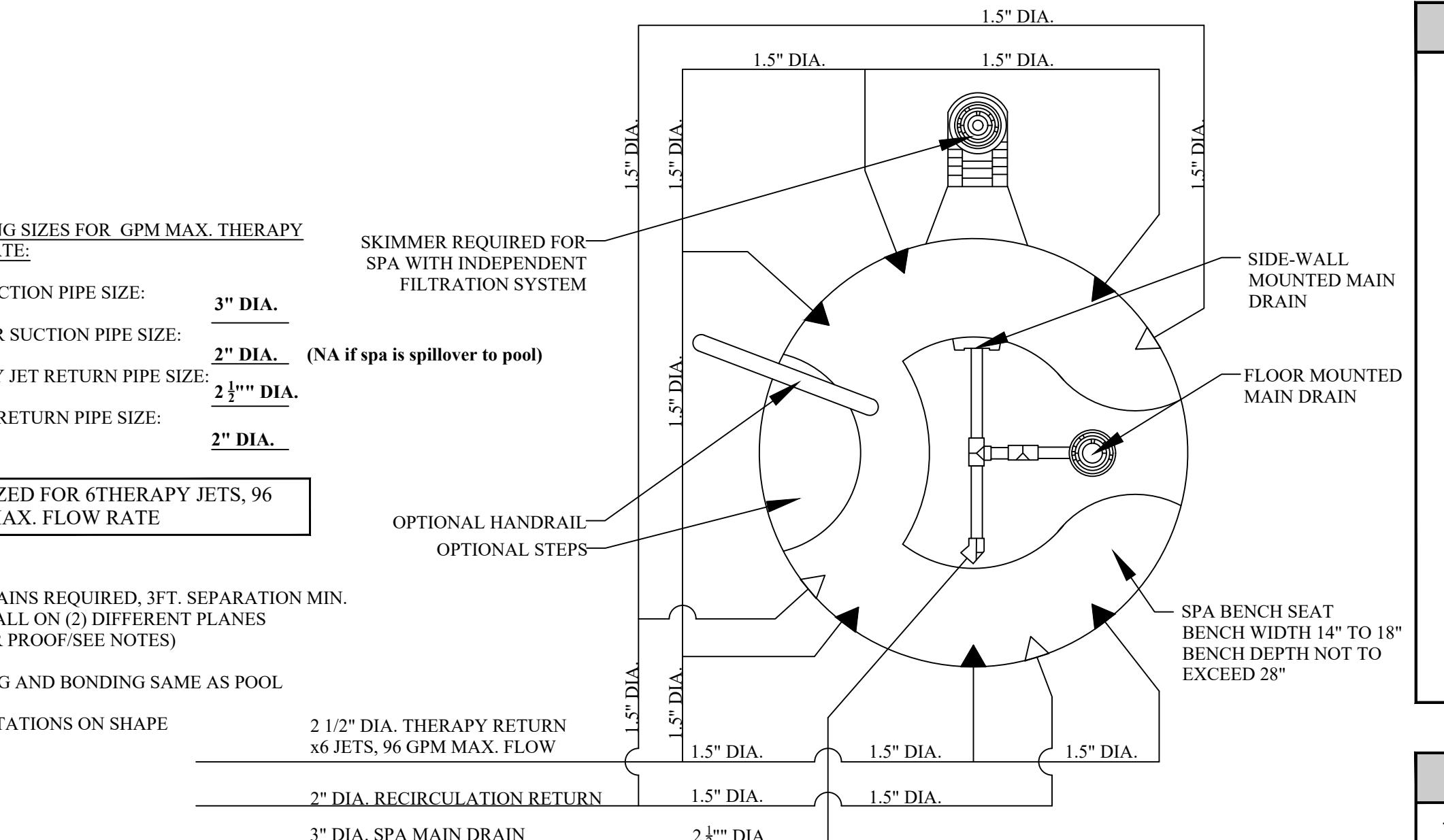
SB836, 6-20-07
FOR BONDING AND GROUNDING SYSTEMS FOR SWIMMING POOLS, THE USE OF AN UNDERGROUND BONDING CONDUCTOR MADE OF #8 AWG. BARE SOLID COPPER WIRE BURIED TO A MINIMUM DEPTH OF 6 INCHES BELOW SUBGRADE, AND 18 TO 24 INCHES FROM INSIDE WALL OF A SWIMMING POOL OR SPA, IS DEEMED A PERMISSIBLE ALTERNATIVE OR EQUIVALENT TO COMPLIANCE WITH s. 680.26(c) OF THE NATIONAL ELECTRICAL CODE.



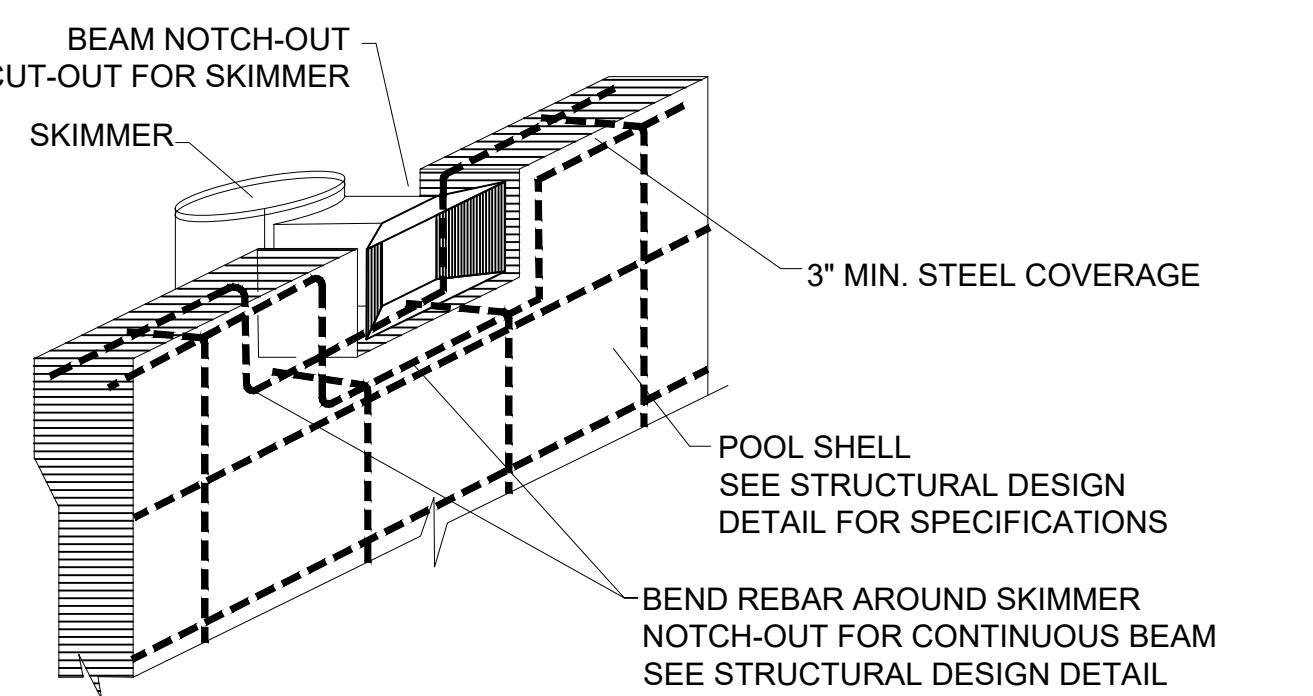
STRUCTURAL SUBJECT TO SUITABLE SOIL CONDITIONS

Pool/Spa Deck, Beam, Wall, & Floor
Scale: Not shown to scale

COMPLIES WITH 2023 FLORIDA BUILDING CODE, 8TH EDITION



Spa Plumbing Plan - Sample Layout
(Refer to Attached Design Plan for Specific Dimensions)



Steel at Skimmer Beam Detail
Scale: Not shown to scale

Design Parameters for System Flow Rate Calculation for Single Skimmer Pool:

Flow Rate Required For Single Skimmer: 35gpm minimum, 62 gpm maximum

Sample Pool Design based on Maximum Flow Rate for Single Skimmer Pool:

Pool Volume Calculation: 616 sq. ft x 4.5' ave depth x 7.481 gal/cf = 20,737 gallons

Turnover Time in Hours: 5.56 hours x 60 min/hr = 334 minutes

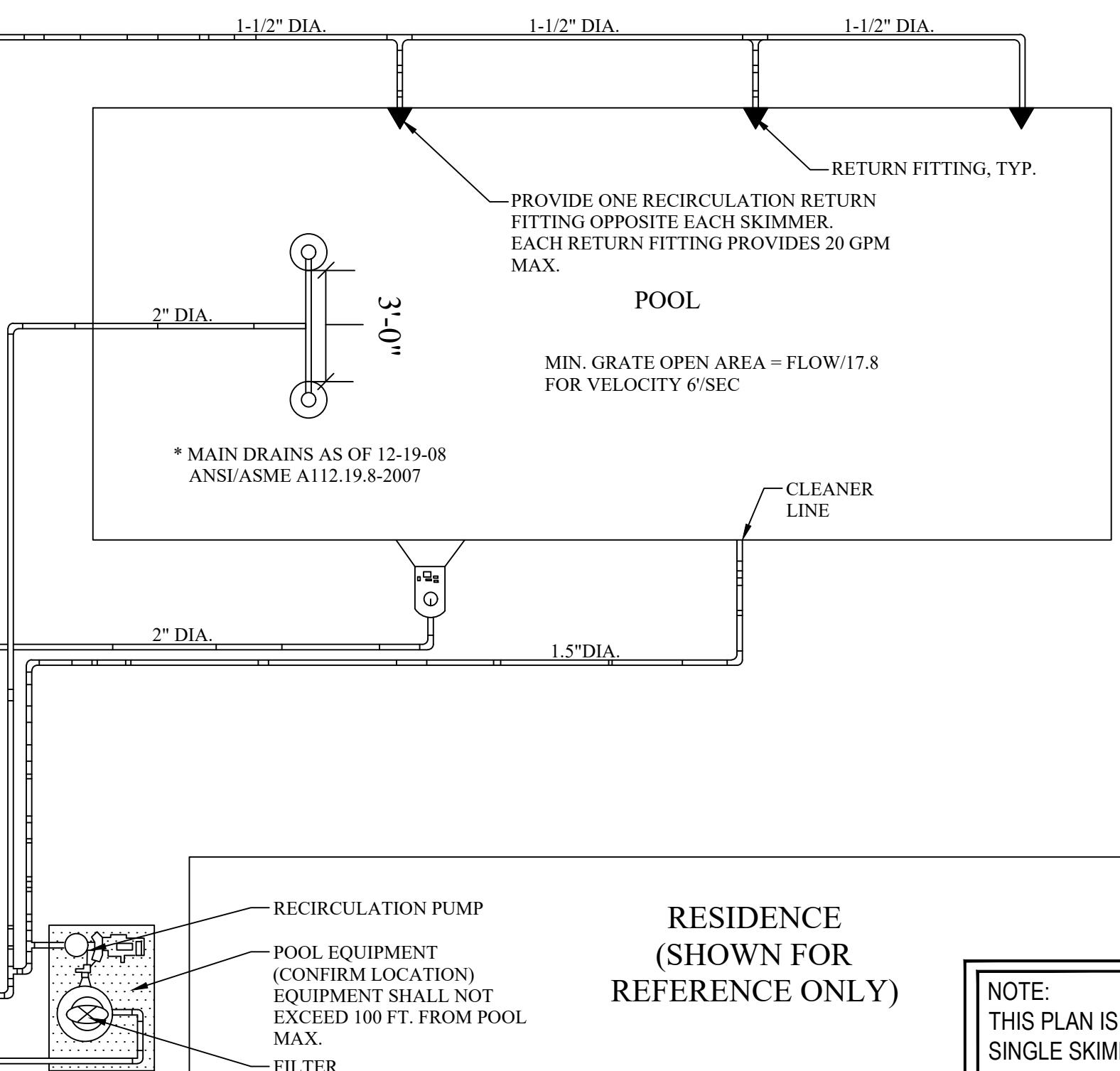
Flow Rate: 20,737 gallons / 334 minutes = 62 GPM (min.)

PIPE SIZING CHART (MAXIMUM)
FLOW BASED ON HAZEN-WILLIAMS
FORMULA FOR STANDARD SIZE
SCHEDULE 40 PVC PIPE

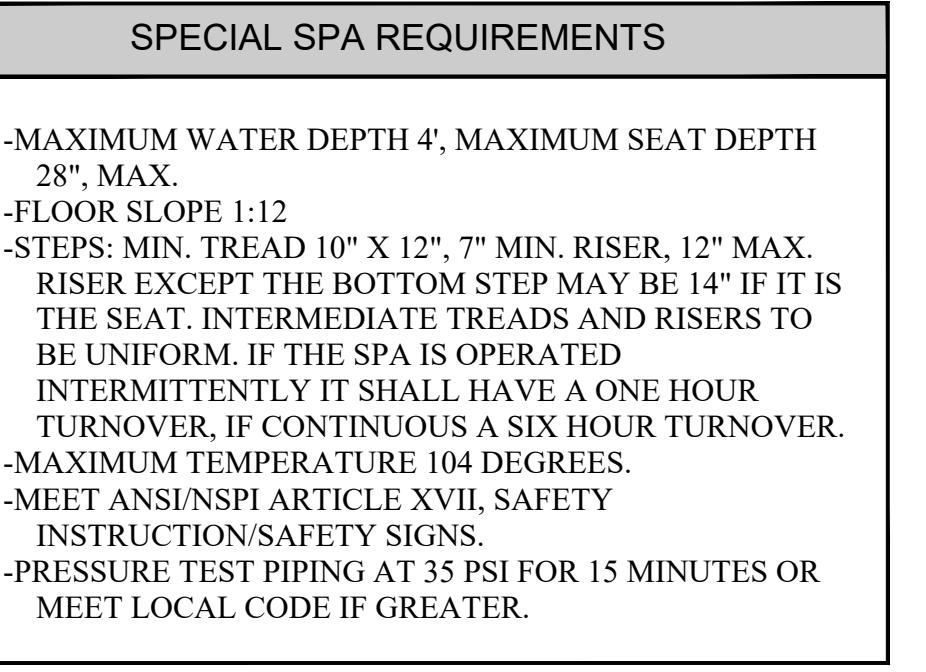
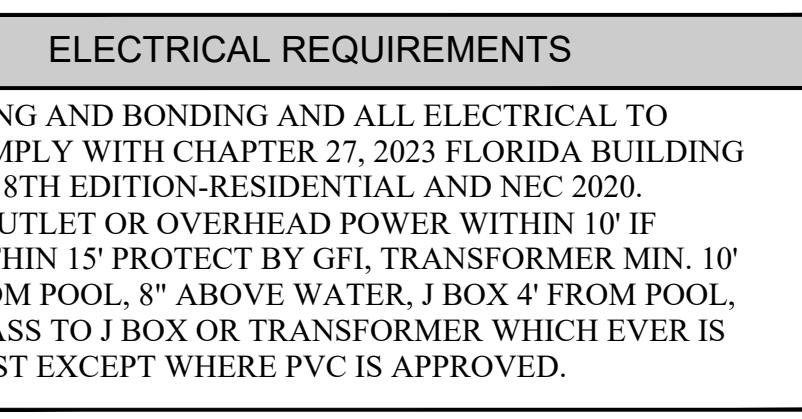
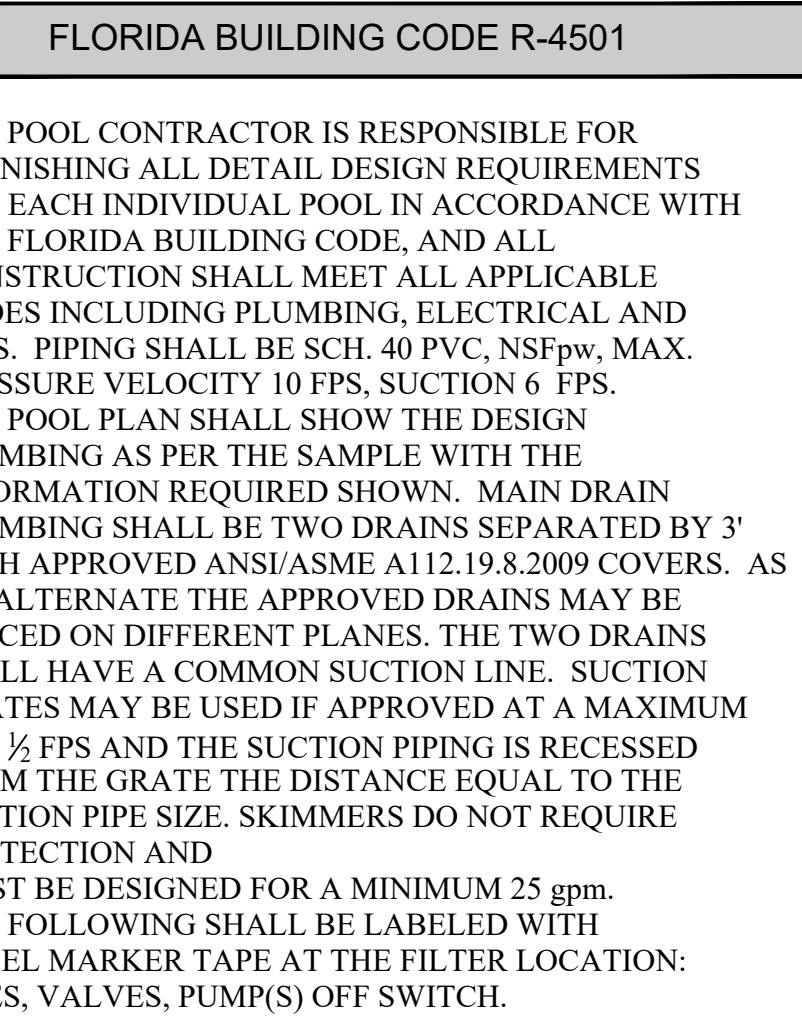
PIPE	SUCTION 6 FPS MAX. VELOCITY BRANCH LINE	PRESSURE 10 FPS MAX. VELOCITY RETURN LINE
1 1/2"	37 GPM	62 GPM
2"	62	103
2 1/2"	88	146
3"	138	227
4"	234	392

PLUMBING SIZE FOR SINGLE SKIMMER POOL (50 GPM MAX.)
POOL MAIN SUCTION PIPE SIZE: 2" DIA.
POOL SKIMMER SUCTION PIPE SIZE: 2" DIA.
CLEANER/VAC PIPE SIZE: 1 1/2" DIA.
RETURN PIPE SIZE: 1 1/2" DIA.

THIS DOCUMENT IS FOR SINGLE SKIMMER POOL APPLICATIONS ONLY.



Single Skimmer Pool Plumbing Plan - Sample Layout
(Refer to Attached Design Plan for Specific Dimensions)



GENERAL DESIGN REQUIREMENTS

-DESIGN, CONSTRUCTION AND WORKMANSHIP SHALL BE IN CONFORMITY WITH THE REQUIREMENTS OF APSP/ICC 3, APSP/ICC 4, APSP/ICC 5, AND APSP/ICC 6 AND APSP/ICC 7 BASED ON THE POOL TYPE.

-SEE NSPI FOR DIVING WATER ENVELOPES.

-SLIDES SHALL MEET THE MANUFACTURE'S INSTALLATION REQUIREMENTS.

-ALL POOLS WHETHER PUBLIC OR PRIVATE SHALL BE PROVIDED WITH A LADDER OR STEPS IN THE SHALLOW END WHERE THE WATER DEPTH EXCEEDS 24 INCHES (610 MM). IN PRIVATE POOLS WHERE WATER DEPTH EXCEEDS 3 FEET (1524 MM) THERE SHALL BE LADDERS, STAIRS OR UNDERWATER BENCHES/ SWIM-OUTS IN THE DEEP END. WHERE MANUFACTURED DIVING EQUIPMENT IS TO BE USED, BENCHES OR SWIM-OUTS SHALL BE RECESSED OR LOCATED IN A CORNER.

-CIRCULATION SYSTEMS, COMPONENTS AND EQUIPMENT SHALL COMPLY WITH NSF 50.

-THE MAXIMUM TURNOVER RATE IS 12 HOURS.

-FITS SHALL HAVE AN AIR RELEASE AND PRESSURE GAGE.

-PUMPS 3 HP AND LESS SHALL MEET ANSI/UL1081 CORROSION RESISTANT WITH STRAINER AND MEET THE REQUIRED FLOW.

-SURFACE SKIMMERS SHALL MEET NSF 50 AND THERE SHALL BE ONE FOR EVERY 800 SQUARE FEET OF SURFACE AREA.

-APPROVED MANUFACTURED INLET FITTINGS FOR THE RETURN OF RECIRCULATED POOL WATER SHALL BE PROVIDED ON THE BASIS OF AT LEAST ONE PER 300 SQUARE FEET (28 m²) OF SURFACE AREA. SUCH INLET FITTINGS SHALL BE DESIGNED AND CONSTRUCTED TO INSURE AN ADEQUATE SEAL TO THE POOL STRUCTURE AND SHALL INCORPORATE A CONVENIENT MEANS OF SEALING FOR PRESSURE TESTING OF THE POOL CIRCULATION PIPING. WHEN MORE THAN ONE INLET IS REQUIRED, THE SHORTEST DISTANCE BETWEEN ANY TWO REQUIRED INLETS SHALL BE AT LEAST 10 FEET (3048 MM). HEATER SHALL MEET ANSI-Z21.5 OR UL 1261 OR UL 559.

-DISINFECTANT EQUIPMENT SHALL COMPLY WITH NSF 50.

-PRESSURE TEST PIPING AT 35 PSI FOR 15 MINUTES OR MEET LOCAL CODE IF GREATER.

-RESIDENTIAL SWIMMING BARRIER REQUIREMENTS TO MEET SECTIONS 4501.17.

-WASTE DISPOSAL TO COMPLY WITH SECTION 454.2.10 R403.10 (MANDATORY)

POOLS & PERMANENT SPA ENERGY CONSUMPTION.

-THE ENERGY CONSUMPTION OF POOLS AND PERMANENT SPAS SHALL BE IN ACCORDANCE WITH SECTIONS R403.10. THROUGH R403.10.5.

IT HAS BEEN CERTIFIED THAT THESE DESIGN REQUIREMENTS ARE IN COMPLIANCE WITH THE 2023 FLORIDA BUILDING CODE 8TH EDITION, R4501, ANSI/APSP/ICC 3, ANSI/APSP/ICC 4, ANSI/APSP/ICC 5, AND ANSI/APSP/ICC 6 AND ANSI/APSP/ICC 7, ANSI/APSP/ICC 14, ANSI/APSP/ICC 15.

PIPE SIZING AND TDH REQUIREMENTS

REFER TO ATTACHED SIMPLIFIED TOTAL DYNAMIC HEAD WORKSHEET (STDH) FOR MAXIMUM SYSTEM FLOW RATE CALCULATIONS BASED ON ANSI/APSP-7 SPECIFICATIONS.

PLEASE NOTE:

THE PARAMETERS SET FOR THIS POOL ARE BASED ON THE MANUFACTURER'S SPECIFICATIONS FOR A SINGLE SKIMMER POOL WITH A 2" DIAMETER PORT. MAXIMUM SYSTEM FLOW RATE (MSFR) FOR A SINGLE SKIMMER POOL IS 62 GPM.

THE MAXIMUM FLOW OF THE VARIABLE SPEED PUMP CAN NOT BE DETERMINED WITHOUT CALCULATING THE TOTAL DYNAMIC HEAD (TDH) FOR THE SYSTEM WHICH IS BASED ON THE POOL DIMENSIONS PROVIDED BY THE CLIENT.

THE TOTAL FLOW RATE OF THE SYSTEM IS CALCULATED BY THE POOL VOLUME DIVIDED BY THE TURNOVER RATE OR THE MAXIMUM FLOW OF THE DESIGN FITTINGS.

ONCE THE MSFR IS DETERMINED, PIPES CAN BE SIZED BASED ON THE MAXIMUM VELOCITY REQUIREMENTS. FRICTION LOSS IN THE PIPES, FILTER AND HEATER ARE CALCULATED TO DETERMINE THE TDH.

THE TDH WILL BE TRANSLATED ON THE VARIABLE SPEED PUMP CURVE TO DETERMINE THE MAXIMUM PUMP FLOW AT THE MSFR. IF THE MAXIMUM PUMP FLOW EXCEEDS THE MSFR, THE PIPES WILL BE UPSIZED TO ACCOMMODATE THE PUMP FLOW. (REFER TO ATTACHED STDH WORKSHEET TO CONFIRM PIPE SIZES).

THE FLOW RATE OF THE VARIABLE SPEED PUMP WILL BE PROGRAMMED NOT TO EXCEED THE MSFR FOR A SINGLE SKIMMER POOL OR THE FLOW RATE BASED ON THE TDH CALCULATIONS.

PIPE SIZES ARE BASED ON THE MSFR CALCULATED BY THE ENGINEER OF RECORD (EOR) AND IN COMPLIANCE WITH ALL CODE REQUIREMENTS. NO OTHER DOCUMENTS MAY BE USED TO OBTAIN A PERMIT THAT ARE NOT APPROVED BY THE EOR.

DATE: 11-11-2025

SCALE: AS SHOWN

11-11-2025

AS SHOWN

11-11-2025