GENERAL POOL REQUIREMENTS

GENERAL NOTES

1. ALL DESIGN ELEMENTS OF THE SWIMMING POOL AND/OR SPA ARE REGULATED BY THE 2021 INTERNATIONAL SWIMMING POOL AND SPA CODE (ISPSC) AND THE TEXAS ADMINISTRATIVE CODE, TITLE 25 HEALTH SERVICES, PART 1 DEPARTMENT OF STATE HEALTH SERVICES, CHAPTER 265 GENERAL SANITATION, SUBSECTION L STANDARDS FOR PUBLIC POOLS AND SPAS (TDSHS 265).
2. GENERAL NOTES ON THIS SHEET DO NOT DEFINE ALL WORK REQUIRED IN THE PROJECT. CONTRACTORS SHALL REFER TO ALL PLANS AND SPECIFICATIONS FOR FULL DEFINITION OF WORK FOR THE PROJECT.
3. ALL WORK SHALL BE DONE IN CONFORMANCE WITH INTERNATIONAL CODE COUNCIL CODES AS REVISED AND ADOPTED BY THE CITY OF ROYSE CITY.
4. PRIOR TO BEGINNING CONSTRUCTION OF THE POOL AND/OR SPA, THE POOL CONTRACTOR MUST OBTAIN ALL REQUIRED PERMITS FROM THE CITY/COUNTY.
5. CLEAR SPACING BETWEEN MAIN DRAINS MUST BE A MINIMUM OF 3'-0" PER THE REQUIREMENTS OF TDSHS 265.
6. POOL CONTRACTOR TO PROVIDE A WATER-TIGHT STRUCTURE AT THE CONCLUSION OF THE PROJECT.
7. WATER PROOF, WATERTIGHT, IMPERVIOUS, AND/OR IMPERMEABLE AS SPECIFIED FOR THIS PROJECT ARE ALL DEFINED AS A COMPLETED AND FILLED WATER VESSEL WITH A MEASURABLE LOSS OF LESS THAN 25 GPD PER 1,000 SQUARE FEET OF WATER SURFACE AREA, EXCLUSIVE OF EVAPORATION.
8. WATER LOSSES FROM ALL SOURCES SHALL BE MEASURED BY THE POOL CONTRACTOR USING A METHOD APPROVED BY THE ENGINEER. THE POOL CONTRACTOR SHALL RECORD AND SEND RESULTS OF THE LOSS TESTING TO THE ENGINEER. IF TESTING INDICATES EXCESSIVE LOSSES THEN THE POOL CONTRACTOR SHALL SUBMIT TO THE ENGINEER A REMEDIATION PLAN FOR APPROVAL AND, ONCE APPROVED, PROCEED TO REMEDIATE WATER LOSSES.
9. TESTING FOR WORK & MATERIALS ON THE PROJECT WILL BE PERFORMED BY THE OWNER. IF THE MATERIAL BEING TESTED FAILS IN ANY WAY THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURTHER TESTING AND ANY ADDITIONAL WORK TO MEET THE DESIGN REQUIREMENTS.
10. AN EXPANSION JOINT IS DENOTED BY 'EJ' BETWEEN THE BACK OF POOL COPING AND THE CONCRETE DECKS. ALL POOL/SPA EXPANSION JOINTS SHALL BE SEALED WITH SELF-LEVELING URETHANE. REFER TO OTHERS FOR ADDITIONAL EXPANSION AND SAWED CONTROL JOINTS. DECK INSTALLER SHALL INSTALL EXPANSION JOINT MATERIALS.
11. ALL CORNERS PROTRUDING INTO POOLS SHALL HAVE A RADIUS OF 2" OR LARGER.
12. HOSE BIBS SHALL BE PROVIDED FOR WASHING DOWN THE POOL DECK (REFER TO OTHERS).
13. A DRINKING FOUNTAIN SHALL BE PROVIDED AND BE AVAILABLE TO ALL POOL USERS (REFER TO OTHERS).
14. INSTALL BUBBLER FEATURES AT BEACH ENTRY IN WATER DEPTHS APPROPRIATE FOR THEIR USE (CONSULT WITH BUBBLER MANUFACTURER).

DIMENSIONAL NOTES

1. CONSTRUCTION DIMENSIONAL TOLERANCE FOR WATER DEPTH AND STAIR RISERS IS TO BE +/- 1/4" IN THE POOL. CONSTRUCTION DIMENSIONAL TOLERANCE FOR LENGTH, WIDTH AND DEPTH IN THE DEEP END (WATER DEPTHS GREATER THAN 5-FT) MAY VARY +/- 3" IN THE POOL. ALL OTHER CONSTRUCTION DIMENSION TOLERANCES MAY VARY +/- 2" IN THE POOL.
2. WATER DEPTH AND POOL DIMENSIONS SHOWN ON PLANS ARE TO FINAL PLASTER OR TILE FINISH. ADD 3/8" (MINIMUM, OR 3/4" MAXIMUM) TO EACH DIMENSION FOR DISTANCE TO STRUCTURAL CONCRETE. STRUCTURAL DETAILS ARE MEASURED TO FINISHED CONCRETE.
3. WRITTEN DIMENSIONS GOVERN OVER SCALED DIMENSIONS.
4. REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR POOL DIMENSIONS AND HORIZONTAL CONTROL ON THE SITE.
5. POOL FLOOR SLOPES ARE SHOWN ON PLANS, BUT FLOOR SLOPES SHALL NOT EXCEED 1:12 (8.33%) IN ANY DIRECTION UNLESS SPECIFICALLY NOTED OTHERWISE.
6. POOL DECK SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE POOL RIM. UNLESS SPECIFICALLY NOTED OTHERWISE, POOL DECK SLOPES MAY NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION IN ORDER TO SATISFY THE REQUIREMENTS OF THE AMERICANS WITH DISABILITY ACT (ADA) AND THE TEXAS ACCESSIBILITY STANDARD (TAS). REFER TO DRAWINGS BY OTHERS FOR POOL DECK GRADING AND DRAINAGE.
7. REFER TO DRAWINGS BY OTHERS FOR DECK DIMENSIONS AND FINISHES.

POOL SAFETY EQUIPMENT:

1. A PHONE CAPABLE OF IMMEDIATELY SUMMONING EMERGENCY HELP MUST BE INSTALLED AT THE POOL SITE WITHIN 200 FT OF THE POOL WATER'S EDGE. IF ENCLOSURE FOR POOL WILL BE LOCKED AT ANY TIME, THE PHONE MUST BE INSTALLED OUTSIDE THE POOL ENCLOSURE IN ACCORDANCE TO SECTION 265.201(m) OF TDSHS 265. CONFIRM LOCATION WITH LANDSCAPE ARCHITECT/OWNER PRIOR TO PLACEMENT.
2. LIFESAVING EQUIPMENT SHALL BE PROVIDED AND MEET THE MINIMUM REQUIREMENTS OF THE TDSHS 265. ALL SAFETY EQUIPMENT SHALL BE INSTALLED WITHIN 20-FEET OF THE POOL'S WATER EDGE (1-SET OF EQUIPMENT REQUIRED).
3. EACH SET OF LIFESAVING EQUIPMENT SHALL CONSIST OF 12-FOOT (MINIMUM) CORROSION RESISTANT, NON-CONDUCTIVE, NON-TELESCOPING REACHING POLE, 1/4" - 3/8" THROWING ROPE THAT HAS A LENGTH OF AT LEAST TWO-THIRDS THE WIDTH OF THE WIDEST PART OF THE BODY OF WATER WITH A USCG APPROVED RING BUOY(15"-24" DIAMETER) ATTACHED (ALL LIFE SAVING EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OUTLINED IN THE TDSHS 265.
4. IF THE CLASS A, B, OR C POOL HAS A DIVING BOARD, AN APPROVED BACKBOARD MUST BE PROVIDED.
5. CLASS A AND B POOLS WITH LIFEGUARDS MUST BE EQUIPPED WITH A FIRST AID KIT MEETING ALL TDSHS CODE REQUIREMENTS.

PLASTER NOTES

1. POOL INTERIOR FINISHES, PATTERNS AND COLORS SHALL NOT OBSCURE THE VISIBILITY OF OBJECTS ON SURFACES WITHIN THE POOL OR SPA. ALL POOL INTERIOR SURFACES SHALL BE A LIGHT ENOUGH COLOR SO THAT AN 8-INCH BLACK DISK ON THE POOL OR SPA FLOOR AT THE DEEPEST POINT OF THE POOL OR SPA CAN BE CLEARLY AND IMMEDIATELY SEEN BY A PATRON STANDING ADJACENT TO THE POOL OR SPA AT A POINT CLOSEST TO THE DISK (TDSHS SECTION 265.184 (g)).
2. THE POOL OR SPA FINISH SURFACES SHALL BE SLIP-RESISTANT, BUT NOT INFLICT INJURY TO BARE FEET DURING NORMAL USE.
3. INSTALL PLASTER THICKNESS AS SHOWN ON THE PLANS. PLASTER SHALL NOT BE INSTALLED WITH A THICKNESS LESS THAN 3/8" OR GREATER THAN 3/4".
4. PLASTERING MAY ONLY BE PERFORMED WITH THE AMBIENT TEMPERATURE IS BETWEEN 40°F TO 90° F.
5. PLASTER SHALL NOT BE WORKED ONCE THE FINISH HAS PAST ITS FINAL SET.
6. THE PLASTERED STRUCTURE SHALL BE FILLED WITH WATER IMMEDIATELY AFTER PLASTER HAS SET UP.
7. PLASTERING SHALL NOT TAKE PLACE DURING WINDY CONDITIONS OR WHEN OTHER CONSTRUCTION IS TAKING PLACE THAT MAY CONTAMINATE THE PLASTER (SUCH AS PAINTING OR LANDSCAPE INSTALLATION NEARBY THE POOL).
8. IN SALT CHLORINE POOLS, DO NOT ADD SALT FOR 28 DAYS POST FILL TO ALLOW THE POOL PLASTER TO CURE.

POOL ENCLOSURE NOTES (BY OTHERS)

1. OUTLINE OF POOL ENCLOSURE IS INDICATED ON SHEET SP1.0. POOL ENCLOSURE CONSISTS OF FENCING, GATES AND PORTIONS OF BUILDINGS THAT ARE CONSTRUCTED ADJACENT TO POOL AREA.
2. POOL YARD ENCLOSURE/FENCING TO MEET THE MINIMUM REQUIREMENTS OF TDSHS 265.
3. BUILDINGS ADJACENT TO POOL AREA SHALL NOT HAVE OPERABLE WINDOWS THAT ALLOW UNSUPERVISED ACCESS ONTO POOL DECK.
4. ANY BUILDING DOORS THAT OPEN ONTO THE POOL DECK MUST BE SUPERVISED OR HAVE SELF-CLOSING, SELF-LATCHING HARDWARE THAT DOES NOT ALLOW SMALL CHILDREN ACCESS INTO THE POOL AREA WITHOUT SUPERVISION.
5. ALL GATES AND DOORS MUST HAVE SELF-CLOSING, SELF-LATCHING HARDWARE, CAPABLE OF BEING LOCKED, AND OPEN AWAY FROM THE BODY OF WATER.
6. FENCING THAT IS PART OF THE POOL ENCLOSURE SHALL NOT HAVE OPENINGS THAT PERMIT PASSAGE OF A 4-INCH DIAMETER SPHERE.
7. ANY FENCE USED AS AN ENCLOSURE MUST HAVE A MINIMUM EFFECTIVE PERPENDICULAR HEIGHT OF 4 FEET.
8. REFER TO ARCHITECT OR LANDSCAPE ARCHITECT DRAWINGS FOR FENCE DETAILS.
9. GATE HARDWARE MUST BE MOUNTED A MINIMUM OF 42" ABOVE WALKING SURFACE.
10. CHAIN LINK FENCING IS NOT PERMITTED.
11. FENCE SHALL BE OF "CLIMB-RESISTANT" CONSTRUCTION.
12. GATE HANDLES/ENTRY DEVICES SHOULD BE MOUNTED OUT OF REACH OF SMALL CHILDREN.

POOL SIGNAGE NOTES

1. OWNER IS RESPONSIBLE FOR PROVIDING ALL NECESSARY SIGNAGE UNLESS SPECIFICALLY PROVIDED BY THE POOL CONTRACTOR. SIGNAGE MUST BE EASILY SEEN FROM ALL AREAS OF THE POOL AND THE POOL DECK.
2. PROVIDE SIGNAGE ON POOL CHEMICAL STORAGE ENCLOSURE STATING "DANGER POOL CHEMICALS".
3. PROVIDE NFPA 704 MARKING SYSTEM IDENTIFICATION PLACARD ON ENTRY/EXIT OF ALL POOL EQUIPMENT ENCLOSURES.
4. PROVIDE ANY ADDITIONAL SIGNAGE NECESSARY FOR POOL THAT MEETS OR EXCEEDS THE REQUIREMENTS OF THE TEXAS DEPARTMENT OF STATE HEALTH SERVICES OR LOCAL CITY CODE.
5. IF THE MAJORITY OF CITIZENS IN THE AREA ARE NON-ENGLISH SPEAKING, AN IDENTICAL SET OF SIGNAGE SHALL BE PROVIDED IN THE DOMINATE LANGUAGE IN ADDITION TO THE ENGLISH SIGNAGE.
6. GENERAL SIGNAGE SHALL BE INSTALLED IN PLAIN VIEW OF POOL OR SPA AS FOLLOWS (ACCORDING TO TDSHS 265.201(j)(5):

REQUIRED POOL SIGNAGE	LETTER SYMBOL AND SIZE
"WARNING - NO LIFEGUARD ON DUTY" (WHERE NO LIFEGUARD REQUIRED OR PROVIDED.)	4 INCHES
"NO DIVING" AND INTERNATIONAL NO DIVING SYMBOL (WHERE NO LIFEGUARD REQUIRED OR PROVIDED.)	4 INCHES
"IN CASE OF EMERGENCY, DIAL 911"	4 INCHES
PRECISE LOCATION OF THE POOL ON OR WITH THE EMERGENCY PHONE (ADDRESS, OR DIRECTIONS, OR GPS LOCATION, OR BUILDING NUMBER, AS APPROPRIATE)	MINIMUM 1-INCH
HOURS OF OPERATION	MINIMUM 1-INCH
DIRECTIONS TO AND LOCATION OF EMERGENCY PHONE IF PHONE NOT VISIBLE IN POOL YARD	MINIMUM 2-INCHES
MAXIMUM USER LOAD LIMIT	MINIMUM 2-INCHES
"PETS IN THE POOL ARE PROHIBITED"	MINIMUM 2-INCHES
"DO NOT SWIM IF YOU HAVE BEEN ILL WITH DIARRHEA WITHIN THE PAST 2 WEEKS"	MINIMUM 2-INCHES
"CHANGING DIAPERS WITHIN THE POOL ENCLOSURE IS PROHIBITED"	MINIMUM 2-INCHES
"GLASS ITEMS ARE NOT ALLOWED IN THE POOL YARD"	MINIMUM 2-INCHES
"PERSONS UNDER THE AGE OF 14 MUST NOT BE IN THE POOL WITHOUT ADULT SUPERVISON"	MINIMUM 2-INCHES
"EXTENDED BREATH HOLDING ACTIVITIES ARE DANGEROUS AND PROHIBITED"	MINIMUM 2-INCHES

BONDING NOTES

1. ALL METAL COMPONENTS OF POOL (INCLUDING BUT NOT LIMITED TO LADDERS, REINFORCING STEEL, HANDRAILS, LIGHT NICHES, FOUNTAIN NOZZLES, AND MECHANICAL EQUIPMENT) SHALL BE ELECTRICALLY BONDED PER SECTION 680 OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (N.E.C.).
2. CONNECTIONS TO BONDED PARTS OF THE BONDING GRID FOR THE POOL SHALL BE MADE WITH UL LISTED BONDING CONNECTORS OR OTHERWISE AS REQUIRED BY SECTION 250.8 OF THE NATIONAL ELECTRIC CODE (N.E.C.).
3. PROVIDE CONTINUOUS BONDING LOOP CONNECTING THE METAL COMPONENTS OF THE POOL. BONDING WIRE SHALL BE 8 GA. (OR LARGER) COPPER.
4. BOND THE POOL REINFORCING STEEL TO THE DECK IN AT LEAST SIX EVENLY SPACED LOCATIONS WITH WIRE AND CLAMPS, TIE WIRE NOT SUFFICIENT.
5. BONDING SHALL BE WITH UL LISTED BONDING CONNECTORS AND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH SECTION 250.8 OF THE N.E.C.
6. PERIMETER SURFACES EXTENDING 3 FT (1-METER) BEYOND THE INSIDE WALL OF THE POOL SHALL BE BONDED USING METHODS COMPLIANT WITH 680.26(B)(2) OF THE N.E.C.
7. ALL FIXED METAL COMPONENTS WITHIN 5-FEET OF THE WATER'S EDGE SHALL BE BONDED AS REQUIRED BY THE N.E.C. 680.26(B)(1).
8. ALL LIGHT FIXTURES WITHIN 10 FT OF THE WATER'S EDGE AND ALL ELECTRICAL RECEPTACLES WITHIN 20 FT OF THE WATER'S EDGE SHALL COMPLY WITH REQUIRED GFCI PROTECTION PER 680.22 OF THE N.E.C.

UTILITY NOTES

1. CONTACT THE APPROPRIATE AUTHORITIES WITH RESPECT TO LOCATION OF EXISTING UTILITIES AT LEAST 48 HOURS PRIOR TO WORK IN THE AREA.
2. ONE CALL: 1-800-669-8344
3. IT'S THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.

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EQUIPMENT AND PLUMBING NOTES

WATER QUALITY NOTES

1. REQUIREMENTS OF THE TEXAS DEPARTMENT OF STATE HEALTH SERVICES (TAC TITLE 25 PART 1 CHAPTER 265 SUBCHAPTER 265.181-211) SHALL BE FOLLOWED AT ALL TIMES.
2. INITIAL FILL OF POOL/SPA WILL BE WITH WATER SUPPLIED BY EITHER THE OWNER (ON-SITE SUPPLY) OR BY OTHERS IMMEDIATELY UPON PLASTERING THE POOL. POTABLE WATER SHALL BE USED FOR THE INITIAL FILL AND THROUGH THE LIFE OF THE POOL. MAKE UP WATER MUST BE FROM A POTABLE SOURCE AND MEET APPLICABLE STANDARDS OF 30 TAC, CHAPTER 290 SUBCHAPTER D AND MEET ALL DEPARTMENT OR LOCAL REGULATORY AUTHORITY.
3. INITIAL FILL WATER SHALL CONTAIN LESS THAN 0.3PPM COPPER AND IRON. IF THE PERMANENT WATER SOURCE CAN NOT ACHIEVE THIS QUALITY OF WATER THE POOL CONTRACTOR SHALL SUPPLY SEQUESTERING AGENTS FOR 14 DAYS AFTER FILLING THE POOL. THE OWNER SHALL FURNISH AND MAINTAIN SEQUESTERING AGENTS FROM THE 15TH DAY ON.
4. THE POOL SHALL BE BRUSHED TWICE DAILY TO REMOVE LAITANCE FOR AT LEAST TWO WEEKS FOLLOWING PLASTERING AND FILLING. THE POOL FILTER SHALL BE BACKWASHED REGULARLY DURING THIS TIME TO RESTORE CLARITY TO THE WATER.

WATER CHEMISTRY REQUIREMENTS			
DISINFECTANT LEVELS	MINIMUM	IDEAL	MAXIMUM
POOL FREE AVAILABLE CHLORINE	1.0 PPM	2.0 - 3.0 PPM	8.0 PPM
SPA FREE AVAILABLE CHLORINE	2.0 PPM	3.0 PPM	8.0 PPM
POOL BROMINE	3.0 PPM	4.0 - 6.0 PPM	10.0 PPM
SPA BROMINE	4.0 PPM	5.0 PPM	10.0 PPM
COMBINED CHLORINE	NONE	NONE	0.4 PPM
pH	7.0	7.2 - 7.6	7.8
CYANURIC ACID	NONE	30 - 50 PPM	100 PPM
ORP	600 mV	650 - 750 mV	900 mV
ALKALINITY	60 PPM	60 - 180 PPM	180 PPM
CALCIUM HARDNESS IN POOLS	150 PPM	150 - 400 PPM	1000 PPM
CALCIUM HARDNESS IN SPAS	100 PPM	150 - 400 PPM	800 PPM
ALGAE	NONE	NONE	NONE
LSI	-1<LSI<1 (RECOMMEND WWW.POOLCALCULATOR.COM FOR SIMPLE CALCULATIONS)		
TURBIDITY	CLEAR; ZERO TURBIDITY		

GENERAL POOL ELECTRICAL NOTES

1. ALL ELECTRICAL INSTALLATIONS MUST COMPLY WITH THE 2023 N.E.C. OR MOST CURRENT EDITION OF THE (NEC).
2. GFCI PROTECTION IS REQUIRED FOR ALL RECEPTACLES WITHIN 20-FEET OF THE WATER'S EDGE AND FOR LIGHTING OUTLETS WITHIN 10-FEET OF THE WATER'S EDGE PER THE NEC 680.22
3. ALL CONDUIT TO BE WATERTIGHT SCHEDULE 80 PVC UNLESS NOTED OTHERWISE.
4. ACCORDING TO THE TEXAS DEPARTMENT OF STATE HEALTH SERVICES SECTION 265.192(n), AN ELECTRICIAN LICENSED IN THE STATE OF TEXAS SHALL CONDUCT A MINIMUM OF TWO INSPECTIONS DURING AND AFTER CONSTRUCTION.
5. POOL CONTRACTOR OR POOL CONTRACTOR'S ELECTRICIAN TO RUN LIGHTING CONDUIT AND CONDUCTORS TO J. BOX. J. BOX IS BY ELECTRICAL CONTRACTOR AND NOT BY POOL CONTRACTOR. CIRCUITING FROM J. BOX TO PANEL BY ELECTRICAL AND NOT BY POOL CONTRACTOR. ALL ELECTRICAL WORK PERFORMED ON THE SITE MUST BE COMPLETED BY LICENSED ELECTRICAL CONTRACTORS IN ACCORDANCE WITH CITY OF ROYCE CITY AND TDLR REQUIREMENTS.
6. JUNCTION BOXES MUST BE INSTALLED NOT LESS THAN 4-INCHES ABOVE THE GROUND OR NOT LESS THAN 8-INCHES ABOVE THE MAXIMUM WATER LEVEL, WHICHEVER PROVIDES THE GREATER ELEVATION PER NEC 680.24(A)(2)(a).
7. ELECTRICIAN SHALL WIRE POOL PUMPS AND OTHER EQUIPMENT TO THE PANEL (PANEL DESIGNED AND PROVIDED BY OTHERS). BREAKERS PROVIDED BY ELECTRICAL CONTRACTOR.
8. ELECTRICAL CONTRACTOR TO PROVIDE LIGHTING, VENTILATION, CONVENIENCE OUTLETS AND GENERAL POWER DISTRIBUTION WITHIN THE POOL MECHANICAL ROOM, SITE, AND NATATORIUM AS SHOWN IN THIS PLAN SET. NOT BY POOL CONTRACTOR.
9. LOW VOLTAGE WIRING BY POOL CONTRACTOR.
10. POOL CONTRACTOR TO PROVIDE ELECTRICAL EQUIPOTENTIAL BONDING FOR ALL METAL PARTS PER NEC ARTICLE 680. THE FOLLOWING LIST IS INTENDED TO ASSIST THE CONTRACTOR BUT IS NOT NECESSARILY ALL INCLUSIVE. REFER TO N.E.C. THE FOLLOWING ITEMS MUST BE BONDED:
    - METAL LADDERS, HAND RAILS, AND THEIR ANCHORAGE SLEEVES
    - METAL LIGHT NICHES, LUMINAIRES
    - POOL EQUIPMENT, MOTORS, HEATERS, AND OTHER METAL COMPONENTS
    - DECK REINFORCING STEEL GRID
    - POOL AND SPA REINFORCING STEEL GRID
    - METAL DOORS, WINDOWS, STEEL STRUCTURES WITHIN 5'-0" OF THE POOL WATER
    - METAL SLEEVES AND PARTS FOR THE HANDICAPPED LIFT
    - ANY OTHER METAL PART WITHIN 5'-0" OF THE WATER IN EXCESS OF 4 SQUARE INCHES OR PROJECTING INTO THE POOL BY MORE THAN 1"
11. FOR THIS PROJECT THE BONDING GRID IS THE REINFORCING STEEL IN THE POOL SHELL.
12. CONNECT ALL METAL PARTS TO THE BONDING GRID WITH #8 BARE COPPER WIRE. CLAMP TO REINFORCING STEEL WITH U.L. LISTED COMPRESSION SCREW CLAMPS. WRAPPING WIRE IS NOT ACCEPTABLE.
13. BOND THE POOL REINFORCING STEEL TO THE DECK IN AT LEAST SIX EVENLY SPACED LOCATIONS WITH WIRE AND CLAMPS. TIE WIRE IS NOT SUFFICIENT.
14. ANY ELECTRICAL WORK NOT SPECIFICALLY REQUIRED OF THE POOL CONTRACTOR IS THE RESPONSIBILITY OF THE BUILDING ELECTRICAL CONTRACTOR. IT IS THE INTENT OF THE CONSTRUCTION DOCUMENTS THAT ALL ELECTRICALLY POWERED DEVICES BE BOTH POWERED AND PROPERLY GROUNDED AND WORKING PROPERLY.
15. RIGID CONDUIT BURY DEPTH REQUIREMENTS: REF. TABLE 300.5 OF THE NEC

LOCATION	DIRECT BURY	METAL	SCH 80 PVC
BELOW PARKING, DRIVEWAYS	24"	24"	24"
AT POOL DECK WITH CONC. >4" THICK	18"	4"	4"
IN BUILDING	0"	0"	0"
LANDSCAPING, SODDED, GRASS, AREAS	24"	6"	18"

PLUMBING NOTES

1. BURIED POOL PLUMBING TO BE SCHEDULE 40 PVC (MINIMUM) AND BURIED A MINIMUM OF 24" BELOW FINISH GRADE. ALL PIPE SYSTEMS SHALL BE PRESSURE CHECKED TO A PRESSURE OF 25 PSI FOR 30 MINUTES TO ENSURE A WATERTIGHT SYSTEM. PRESSURE IN THE PIPE SYSTEM MUST BE MAINTAINED THROUGHOUT THE CONCRETE SHELL PLACEMENT AND DECK PLACEMENT PER SECTION 265.190(p) OF THE TDSHS.
2. PLUMBING MAY BE BURIED IN COMMON TRENCHES WHEN POSSIBLE.
3. PLUMBING LOCATIONS MAY VARY SLIGHTLY FROM THOSE SHOWN ON THIS DRAWING.
4. ALL PIPE SIZES ARE STATED IN NOMINAL PIPE SIZES
5. VALVES SHALL BE PROPORTIONAL FLOW TYPE VALVES (BALL), GATE VALVES ARE NOT ACCEPTABLE.
6. ALL VALVES 3" AND SMALLER SHALL BE SPEARS TRUE UNION VALVES OR EQUAL. ALL VALVES 4" AND GREATER SHALL BE ASAHI EPDM BUTTERFLY VALVES OR EQUAL
7. WATER SUPPLY LINES TO POOL AUTO-FILL UNITS SHALL HAVE REDUCED PRESSURE ZONE (RPZ) OR OTHER APPROVED BACKFLOW PREVENTION DEVICE REFER TO OTHERS FOR RPZ'S, WATER LINES AND BACKWASH DRAIN LINES TO BE EXTENDED TO EACH POOL EQUIPMENT ROOM.
8. ALL PLUMBING PENETRATIONS THROUGH CONCRETE POOL STRUCTURES OR BASINS HOLDING WATER SHALL HAVE NO-LEAK FLANGES INSTALLED. LINK SEAL GASKETS SHALL BE INSTALLED ON ALL PENETRATIONS THAT ARE CORED OR SLEEVED.
9. PIPE LAYOUT SHOWN IS SCHEMATIC IN NATURE AND INDICATES THE GENERAL PIPE ROUTING. OUTSIDE OF MINOR REALIGNMENTS AS REQUIRED BY FIELD CONDITIONS, IT IS ASSUMED PIPING INSTALLATION WILL FOLLOW THE DESIGNED LAYOUT. PIPE SYSTEMS SHALL BE INSTALLED IN SUCH A WAY TO REDUCE THE AMOUNT OF FITTINGS USED. CONTRACTOR SHALL REQUEST ANY CHANGE TO THE LAYOUT AND PROVIDE REDLINE DOCUMENTATION ON SP2.0 SHEET TO AQUEOUS ENGINEERING FOR APPROVAL BEFORE PIPING IS INSTALLED.
10. ALL INDIVIDUAL POOL INLET BRANCH LINES TO BE 1.5" UNLESS NOTED OTHERWISE.
11. ALL INDIVIDUAL SKIMMER BRANCH LINES TO BE 2" UNLESS NOTED OTHERWISE.
12. ALL POOL MAIN DRAIN SUMPS, FRAMES, AND GRATES MUST COMPLY WITH VIRGINIA GRAEME BAKER ACT. SUCTION DEVICES SHALL COMPLY WITH ANSI/APSP-16 VGB STANDARD.
13. POOL PLUMBING LOCATED BENEATH THE POOL/SPA FLOOR SHALL BE CONCRETE ENCASED SO IT IS INTEGRAL WITH THE POOL/SPA STRUCTURE. PLUMBING BENEATH POOL FLOOR SHALL NOT ENCROACH IN THE NORMAL THICKNESS OF THE FLOOR.
14. ALL PIPING IN THE POOL SYSTEM SHALL MEET AT A MINIMUM U.S. ASTM D-1785-2006 TYPE 1, GRADE 1, SCHEDULE 40 STANDARDS. ALL PLUMBING (PIPE AND FITTINGS) SHALL BE CHARLOTTE PIPE, SPEARS, MUELLER OR EQUAL MANUFACTURER.
15. ALL UNDERWATER POOL LIGHTS MUST BE INSTALLED WITH GFCI PROTECTION IN ACCORDANCE TO ARTICLE 680.22(B) (4) OF THE NATIONAL ELECTRICAL CODE (N.E.C.)
16. ALL POOL LIGHTING SHALL HAVE A PHOTOCELL AND TIMER. LIGHTS SHALL ALSO HAVE A MANUAL OVERRIDE SWITCH. SWITCH LOCATION TO BE COORDINATED WITH ARCHITECT/ LANDSCAPE ARCHITECT.

EQUIPMENT ROOM NOTES

1. ALL POOL MECHANICAL EQUIPMENT MUST BE NSF-50 APPROVED WHERE APPLICABLE.
2. POOL CONTRACTOR TO VERIFY HEATERS ARE NSF-LISTED AND ASME APPROVED FOR THE REQUIREMENTS OF THE STATE DEPARTMENT OF HEALTH. ALL HEATERS SHALL BE FURNISHED WITH GAUGES, PRESSURE AND FLOW SWITCHES, SAFETY DEVICES, AND OTHER APPURTENANCES REQUIRED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TLDR).
3. FIELD CONDITIONS MAY DICTATE ADJUSTMENTS TO POOL EQUIPMENT ARRANGEMENT SHOWN ON THE PLANS. POOL EQUIPMENT LAYOUT SHOWN IS ONE OF MANY FEASIBLE ARRANGEMENTS. POOL CONTRACTOR TO INSTALL ALL EQUIPMENT IN REGARDS TO MANUFACTURER INSTALLATION REQUIREMENTS.
4. ALL PIPE SIZES ARE STATED IN NOMINAL PIPE SIZES
5. ALL PUMPS SHALL HAVE A SUCTION (VACUUM) AND DISCHARGE GAUGE.
6. HOSE BIB IN EQUIPMENT ROOM (IF DESIRED) SHALL BE BY OTHERS.
7. EXPOSED POOL PLUMBING IN EQUIPMENT ROOMS TO BE SCHEDULE 40 PVC (OR BETTER).
8. ALL FILTERS SHALL HAVE INLET AND OUTLET PRESSURE GAUGES.
9. ALL OVERHEAD PLUMBING SHALL BE SUPPORTED BY UNISTRUT BRACING OR OTHER GROUND-SUPPORTED PIPE STANDS. OVERHEAD PIPING SHALL BE A MINIMUM OF 7'-6" ABOVE EQUIPMENT ROOM FLOOR. PIPE SUPPORTED THROUGH CEILING STRAPS MUST FIRST BE COORDINATED WITH THE PROJECTS STRUCTURAL ENGINEER.
10. ALL PUMP STRAINERS TO BE PROVIDED WITH SPARE STRAINER BASKET.
11. POOL EQUIPMENT FLOOR AND CHEMICAL CLOSET FLOOR SHALL BE SLOPED TO DRAIN TO A FLOOR DRAIN OR FLOOR SUMP (REFER TO OTHERS). IF A SUMP IS REQUIRED, CONTRACTOR SHALL FURNISH A SUMP PUMP, DISCHARGE PIPING AND ELECTRICAL REQUIRED TO OPERATE PUMP.
12. ALL CIRCUITS FOR CHEMICAL PUMPS AND FEEDERS SHALL BE INTERLOCKED WITH CIRCUITS FOR THE PRIMARY RECIRCULATION PUMP FOR THE POOL THEY SERVE. WHEN A PRIMARY RECIRCULATION PUMP IS TURNED OFF OR SHUTS DOWN, CHEMICAL PUMPS AND FEEDERS SHALL ALSO SHUT DOWN RATHER THAN CONTINUING TO FEED CHEMICALS INTO THE POOL PLUMBING LINES.
13. IF POOL OPERATOR CANNOT SEE THE FILTER BACKWASH DISCHARGE WHILE OPERATING THE FILTERS INSIDE THE EQUIPMENT ROOM, A SIGHT GLASS WILL NEED TO BE INSTALLED ON THE FILTER BACKWASH LINE(S)
14. GAS LINE FOR POOL HEATER SHALL BE DESIGNED AND INSTALLED BY OTHERS - NOT THE POOL CONTRACTOR. PRESSURE REGULATORS, DRIP LEGS, AND OTHER CODE-REQUIRED APPURTENANCES ARE BY OTHERS - NOT POOL CONTRACTOR.
15. CONCRETE HOUSEKEEPING PADS REQUIRED BENEATH ALL PUMPS AND HEATERS (NOT SHOWN FOR CLARITY). HOUSEKEEPING PADS TO BE 4" HIGH (MIN.) BUT MAY VARY IN HEIGHT TO ALIGN PLUMBING BETWEEN EQUIPMENT AND CORRESPONDING PLUMBING.
16. A FLOW METER SHALL BE INSTALLED ON EACH CIRCULATION SYSTEM SO THE FLOW THROUGH EACH FILTER CAN BE MEASURED. FLOW METERS SHALL BE ACCURATE WITHIN 10% OF TRUE FLOW AND CAPABLE OF MEASURING FLOW AT LEAST 1.5 TIMES GREATER THAN THE DESIGN FLOW OF THE SYSTEM
17. ALL EXPOSED POOL PLUMBING IN EQUIPMENT ROOM AREA SHALL BE LABELED TO IDENTIFY THE PIPING FUNCTION AND DIRECTION OF FLOW IN ACCORDANCE TO SECTION 265.190(q) OF THE TDSHS.
18. MOTORS FOR POOL PUMPS SHALL BE PREMIUM EFFICIENT MOTOR DESIGN AS DEFINED BY NEMA PREMIUM PROGRAM.
19. VENTILATION INSIDE POOL EQUIPMENT ROOM BY OTHERS (NOT SHOWN ON THESE DRAWINGS).
20. PLUMBER SHALL EXTEND A BACKWASH DRAIN LINE TO THE POOL EQUIPMENT AREA (COORDINATE LOCATION WITH POOL CONTRACTOR). DRAIN LINE SHALL BE TRAPPED AND VENTED BY PLUMBER PER PLUMBING CODE. LINE CAPACITY OF DRAIN LINE MUST BE 130 GPM (MINIMUM). (NOTE: FILTERS SHALL BE PLUMBED SO THAT THEY CAN BE BACKWASHED SEPARATELY).

STRUCTURAL NOTES

STRUCTURAL NOTES

1. CONCRETE:

1.1. POOL SHELLS SHALL BE INSTALLED WITH PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) OR CAST IN PLACE CONCRETE. REFER TO SPECIFICATIONS FOR CONCRETE MIX AND COMPRESSIVE STRENGTH REQUIREMENTS.

1.2. SHOTCRETE MIX AND INSTALLATION SHALL CONFIRM TO THE LATEST ACI (ACI 506) AND ASTM STANDARDS FOR SHOTCRETE CONSTRUCTION.

1.3. AN ACI /ASA CERTIFIED NOZZLEMAN IS REQUIRED TO INSTALL ALL SHOTCRETE MATERIAL. IT IS THE RESPONSIBILITY OF THE POOL CONTRACTOR TO ENSURE THE NOZZLEMAN IS PROPERLY TRAINED PRIOR TO POOL SHELL PLACEMENT

1.4. ALL CONCRETE TO BE CURED AND PLACED IN ACCORDANCE TO THE LATEST ACI STANDARDS.

1.5. ALL CONCRETE RELATED TO THE DESIGN SHOWN ON THESE PLANS SHALL BE TESTED TO ENSURE QUALITY CONTROL AND ASSURANCE THAT THE ACTUAL CONCRETE/SHOTCRETE PLACED MEETS OR EXCEEDS THE SPECIFICATION'S OF THE PROJECT. ALL TESTING TO BE DONE BY CERTIFIED ACI TECHNICIANS OF A THIRD PARTY COMPANY.

1.6. FORM OILS OR CURING AGENTS SHALL NOT BE USED ON SURFACES RECEIVING ANY TYPE OF FINISH. WATER BASED CURING COMPOUNDS ARE ALLOWED ONLY IF THE SURFACE IS TREATED WELL AND SAND OR WATER BLASTED PRIOR TO THE APPLICATION OF POOL FINISH

1.7. MAXIMUM AGGREGATE SIZE SHALL BE AS FOLLOWS:
- 1-1/2" --- CAST-IN-PLACE FOOTINGS AND SLABS ON GRADE.
- 1" --- CAST-IN-PLACE GRADE BEAMS, STRUCTURAL SUSPENDED SLABS AND WALLS.
- 1" --- SHOTCRETE/GUNITE STRUCTURES (SUCH AS POOL SHELLS)

2. REINFORCED STEEL:

2.1. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 DEFORMED BARS MANUFACTURED IN THE USA. BAR PLACEMENT AND DETAILING SHALL BE IN ACCORDANCE WITH ACI 318 (LATEST EDITION).

2.2. REINFORCING DOWELS SHALL HAVE THE SAME SIZE AND SPACING AS THE MAIN BARS THEY ADJOIN (MIN. LAP = 30*BAR DIAM.) THE MINIMUM SPLICE OF ALL CONTINUOUS BARS SHALL BE 40*BAR DIAM. (2'-0" MIN).

2.3. MINIMUM SPLICE LENGTH SHALL BE 50 TIMES THE BAR DIAMETER OR 18 INCHES, WHICHEVER IS GREATER.

2.4. CLEAR MINIMUM COVER OF CONCRETE OVER REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI 318 AND AS FOLLOWS:
- 1-1/2" --- FORMED CONCRETE AGAINST EARTH
- 3" --- CAST-IN-PLACE CONCRETE AGAINST EARTH
- 3/4" --- TOP OF SLABS-ON-GRADE
- 2" --- CAST-IN-PLACE CONCRETE RETAINING WATER
- BE CAREFUL TO MAINTAIN MINIMUM CLEARANCES ON ALL SHOTCRETE/GUNITE STRUCTURES SUCH AS POOL SHELLS. CONCRETE CLEARANCES LISTED ARE CRITICAL.

2.5. CONCRETE REINFORCING SHALL BE SECURED IN POSITION PRIOR TO PLACEMENT. IT IS RECOMMENDED THAT FLOOR STEEL BE SUPPORTED WITH PLASTIC CHAIRS OR METAL (SPIDER) CHAIRS WITH PLASTIC BEARING PLATES. DO NOT SUPPORT FLOORS WITH CHUNKS OF WOOD OR BROKEN BRICK PIECES.

CONCRETE SPECIFICATION:

LOCATION:	COMPRESSIVE STRENGTH (PSI)	W.C. RATIO*	MIX
CAST-IN-PLACE STRUCTURES (INCLUDING BUT NOT LIMITED TO FLOOR SLABS, POOL FLOORS, CAISSONS, POOL WALLS, RETAINING WALLS, ETC)	4,000	0.45-0.49	5.5 SACKS/C.Y. OR 517#/C.Y.
SHOTCRETE FOR POOLS (WET PROCESS)	4,000	0.45-0.59	7 SACKS/C.Y. OR 658#/C.Y.
CAST-IN-PLACE FOOTINGS, GRADE BEAMS, SLABS ON GRADE, HOUSEKEEPING PADS, ETC.	3,000	0.45-0.49	5 SACKS/C.Y. OR 658#/C.Y.

* CONCRETE SUPPLIER MAY SUBMIT DOCUMENTATION TO ENGINEER FOR REVIEW AND APPROVAL OF MIX DESIGNS THAT UTILIZE A DIFFERENT W/C RATION TO MEET THE SAME STRENGTH REQUIREMENT.

SOIL NOTES

1. SOIL PREPARATION:
- SOIL PREPARATION WILL BE PERFORMED BY THE SITE CONTRACTOR, NOT BY POOL CONTRACTOR (UNLESS SPECIFICALLY INCLUDED IN THE CONTRACT). ALL POOL STRUCTURES AND POOL DECKING HAVE BEEN DESIGNED ASSUMING THAT THE SOIL WILL BE PREPARED ACCORDING TO THE GEOTECHNICAL REPORT. THE SOILS SHALL BE PREPARED SUCH THAT THE POTENTIAL FOR VERTICAL RISE (PVR) FOR ANY EXPANSIVE SOILS WILL BE REDUCES TO 1-INCH OR LESS. ADDITIONALLY, ALL SOIL BENEATH THE POOL STRUCTURES (SHELL AND DECK) MUST HAVE NEGLIGIBLE SETTLEMENT OVER THE LIFE OF THE POOL.
- NO GEOTECHNICAL REPORT WAS PROVIDED FOR THIS SITE PRIOR TO DEVELOPING THE DESIGN FOR THE POOL. AS SUCH, THE OWNER ASSUMES THE ADDITIONAL RISKS ASSOCIATED BY ABSENCE OF A SOILS REPORT. THE STRUCTURAL DESIGN HAS BEEN DEVELOPED ACCORDING TO BEST ENGINEERING PRACTICES AND WITH THE ASSUMPTION THAT THE OWNER WILL PREPARE THE SOILS BENEATH THE POOL SO THAT THE POTENTIAL FOR VERTICAL RISE (PVR) FOR THE SOILS WILL BE REDUCED TO 1-INCH OR LESS. IF THIS PVR CANNOT BE ACHIEVED, CONTACT THE AQUATIC ENGINEER PRIOR TO CONSTRUCTION SO THE DESIGN CAN BE REVISED.
- EXCAVATION PERFORMED IN MOISTURE-CONDITIONED SOILS SHALL NOT BE LEFT OPEN FOR AN EXTENDED AMOUNT OF TIME SO SOILS DO NOT HAVE A CHANCE TO DRY OUT. A SELECT FILL OR GRAVEL CAP MAY BE REQUIRED TO PROTECT MOISTURE SENSITIVE SUBGRADES ONCE POOL EXCAVATION HAS BEEN COMPLETED.
- POSITIVE DRAINAGE AWAY FROM THE POOL STRUCTURE MUST BE PROVIDED DURING CONSTRUCTION AND MAINTAINED THROUGH THE LIFE OF THE POOL TO HELP PREVENT THE POSSIBILITY OF PONDING BELOW THE PROPOSED POOL.

1.1. IN ABSENCE OF A SOILS REPORT, ANY SOILS BEING USED AS FILL MATERIAL SHALL BE CONSIDERED "SELECT FILL" IF THEY HAVE THE FOLLOWING CHARACTERISTICS:
- SELECT FILL SOILS SHALL BE CLAYEY SAND (SC) OR A LOW PLASTICITY SANDY CLAY (CL) HAVING A LIQUID LIMIT LESS THAN 38 AND A PLASTICITY INDEX (PI) BETWEEN 7 AND 18.
- SELECT FILL SHALL BE FREE OF ORGANIC MATERIAL
- SELECT FILL SHALL HAVE NO PARTICLES MEASURING GREATER THAN 2-INCHES IN ANY DIRECTION, A PERCENT PASSING U.S. STANDARD SIEVE No.4 BETWEEN 40% AND 80% AND SIEVE No.40 PASSING SHOULD BE IN BETWEEN 10% AND 50%
- THE PERCENT PASSING SIEVE No.200 SHOULD BE LESS THAN 30%
- SELECT FILL SHALL BE INSTALLED IN 8-INCH LIFTS AND COMPACTED TO 95% OF THE MODIFIED PROCTOR DENSITY AT ± 3.0% OF OPTIMUM MOISTURE CONTENT FOR THE SOIL.

2. BACKFILL:

2.1. UNLESS OTHERWISE NOTED, USE SELECT FILL MATERIAL MEETING THE "FOUNDATIONS" NOTES ABOVE FOR BACKFILL BEHIND WALLS. BACKFILL SHALL BE COMPACTED BY "HAND-TAMPING." DO NOT USE MECHANICAL EQUIPMENT TO COMPACT BACKFILL BEHIND STRUCTURAL WALLS AS WALLS HAVE NOT BEEN DESIGNED FOR SURCHARGE LOADS OR SUCH MACHINERY.

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MADERA AMENITY CENTER
NEW OUTDOOR SWIMMING POOL
ROYSE CITY, TEXAS

Release/Revision:	Date:
PERMIT AND CONSTRUCTION	10.21.2024

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GENERAL NOTES

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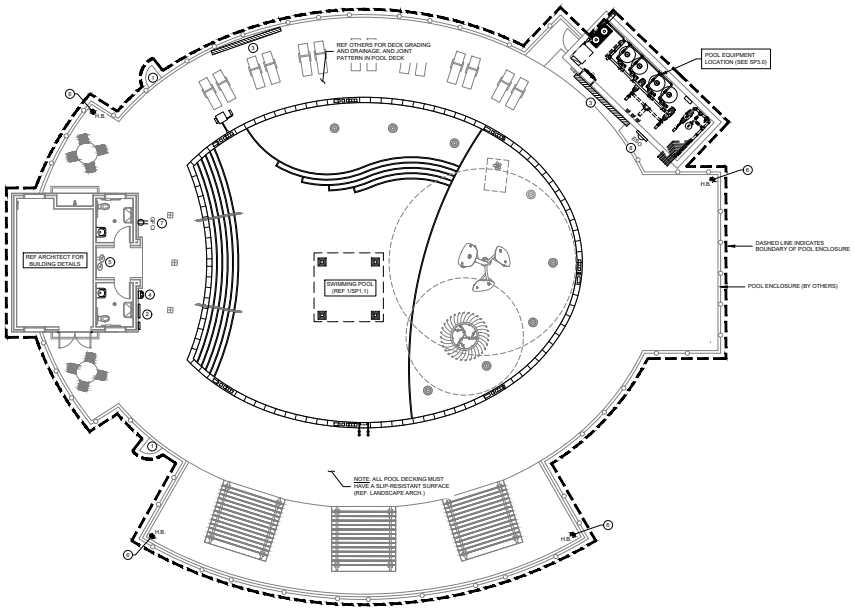

1 **SWIMMING POOL ENCLOSURE PLAN**

KEYED NOTES:

1. POOL YARD GATES MUST BE SELF-CLOSING, SELF-LATCHING AND LOCKABLE PER TEXAS DEPARTMENT OF HEALTH CODE.
2. PLACE ALL POOL WARNING/SAFETY SIGNAGE NEAR THIS LOCATION. COORDINATE WITH ARCHITECT; LOCATION MAY VARY
3. SHEPHERD'S CROOK AND US COAST GUARD APPROVED RING BUOY MOUNTED INSIDE POOL ENCLOSURE - 1 SET(S) REQUIRED; COORDINATE FINAL LOCATION W/ ARCHITECT AND HEALTH DEPARTMENT.
4. EMERGENCY PHONE AND SIGNAGE; PHONE TO BE LOCATED WITHIN 200-FEET OF POOL WATER'S EDGE (REF NOTES ON SP0.0). REFER TO DRAWINGS BY OTHERS FOR EXACT LOCATION.
5. DRINKING FOUNTAIN AND/OR BOTTLE FILLER REQUIRED FOR POOL USERS (REFER TO DRAWINGS BY OTHERS FOR EXACT LOCATION)
6. HOSE BIB REQUIRED FOR RINSING POOL DECK. COORDINATE FINAL LOCATION WITH LANDSCAPE ARCHITECT/PLUMBER (LOCATIONS MAY VARY).
7. GFCI ELECTRICAL RECEPTACLE - BY OTHERS - SHALL BE INSTALLED IN ACCORDANCE WITH 2023 NEC ARTICLE 680.22(A)(1) AND STATE CODE.
8. EMERGENCY SHUTOFF SWITCH - DISCONNECTS POWER TO POOL RECIRCULATION AND FEATURE PUMP(S). (INSTALL IN ACCORDANCE WITH ISPSC 313.7)

POOL DATA

POOL VOLUME:	57,880 GAL
POOL SURFACE AREA:	3,487 S.F.
POOL PERIMETER:	217'-2"
AVG. POOL DEPTH:	2.21 FT
REQUIRED TURNOVER RATE:	3.31 HOURS
RECIRC. PUMP Hp:	5 Hp
RECIRCULATION RATE:	340 GPM (170 GPM EACH)
ACTUAL TURNOVER RATE:	2.83 HOURS
UNATTENUATED BACKWASH RATE:	350 GPM
FILTER AREA:	7.69 S.F. (EACH)
FILTER CAPACITY:	154 GPM (EACH)
MAIN DRAIN SIZE:	18" x 18" (VGB-COMPLIANT) (EACH)
MAIN DRAIN CAPACITY:	816 GPM (EA. DRAIN)
POOL USER LIMIT:	435 PERSONS (1 USER PER 8 S.F.)

2 **NOTES & DATA TABLE**

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MADERA AMENITY CENTER
NEW OUTDOOR SWIMMING POOL
ROYSE CITY, TEXAS

Release/Revision:	Date:
PERMIT AND CONSTRUCTION	10.21.2024

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SWIMMING POOL SITE PLAN

Sheet No.
SP1.0

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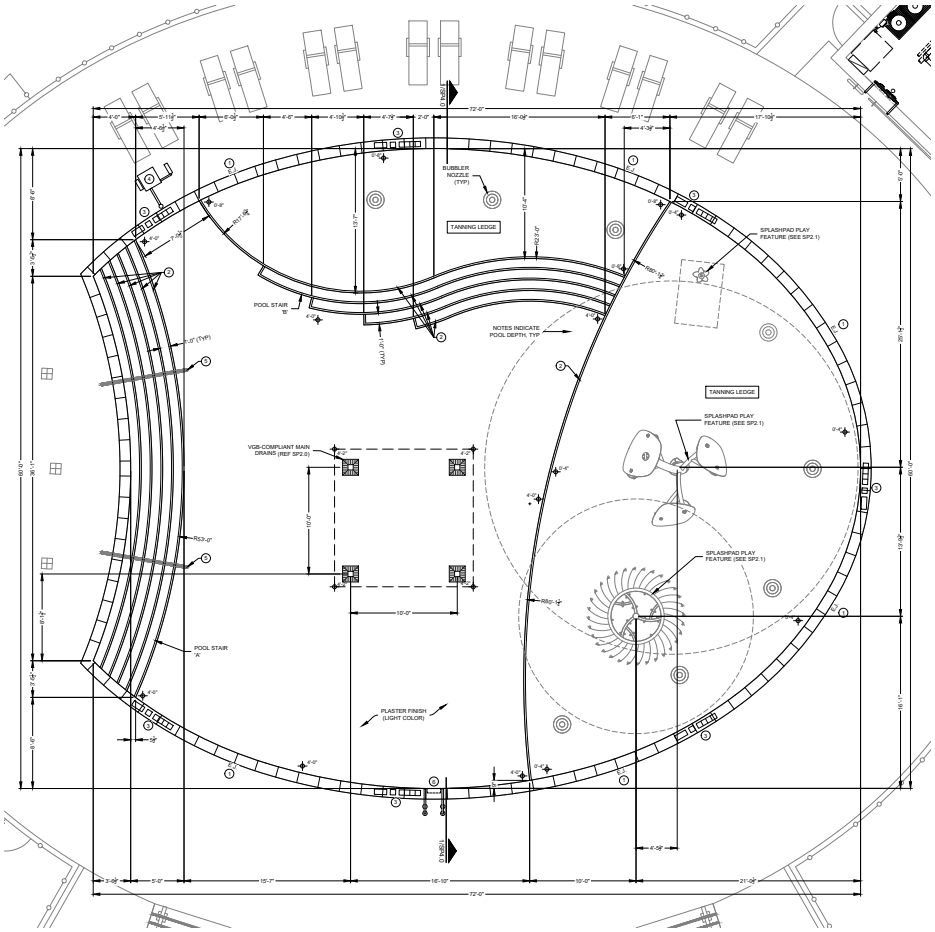

1 **SWIMMING POOL SITE PLAN**

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW THE POOL GEOMETRY, ADJACENT BUILDINGS, LOCATIONS OF THE POOL AND BUILDINGS, AND THE LOCATIONS OF PERIMETER FENCING AND GATES. REFER TO FOLLOWING DRAWINGS FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
2. REFER TO OTHERS FOR EXPANSION JOINTS AND CRACK CONTROL JOINTS IN POOL DECK
3. ALL ELECTRICAL OUTLETS IN THE POOL OR SPA YARD AND IN DRESSING OR SANITARY FACILITIES SERVING A POOL OR SPA SHALL BE PROTECTED WITH A GFCI.
4. NOTE TO LIGHTING DESIGNER: IF POOL WILL BE USED AFTER DARK, THE SITE MUST BE ILLUMINATED TO PROVIDE 10 HORIZONTAL FOOT-CANDLES (MIN) AT ALL WATER SURFACES AND POOL DECKS. (POOL DECK LIGHTING DESIGNED AND INSTALLED BY OTHERS - NOT POOL CONTRACTOR.)
5. SANITARY FACILITIES MUST COMPLY WITH SECTION 265.204 OF THE TEXAS DEPARTMENT OF HEALTH SERVICES CODE (REFER ARCHITECT).
6. EMERGENCY LIGHTING: FOR POOLS THAT WILL BE USED AFTER DARK, EMERGENCY LIGHTING MUST BE PROVIDED ALONG THE EGRESS ROUTE FROM THE POOL(S) TO THE EXIT GATE OF THE POOL YARD. EMERGENCY LIGHTING SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION NOT LESS THAN 0.1 FOOT-CANDLE AT ANY POINT ON THE WATER SURFACE OR ALONG THE POOL DECK, AND NOT LESS THAN AN AVERAGE OF 1.0 FOOT-CANDLE. AT THE END OF THE EMERGENCY LIGHTING TIME DURATION, THE ILLUMINATION LEVEL SHALL NOT BE LESS THAN 0.06 FOOT-CANDLE AT ANY POINT ON THE WATER SURFACE OR POOL DECK, AND NOT LESS THAN AN AVERAGE OF 0.6 FOOT-CANDLE.

KEYED NOTES:

1. 3/4" WIDE EXPANSION JOINT CONTINUOUS BETWEEN BACK OF POOL STRUCTURE AND ADJACENT DECK. SEAL JOINT WITH SELF-LEVELING URETHANE.
2. INSTALL 2" WIDE SLIP-RESISTANT TILE BAND AT HORIZONTAL AND VERTICAL EDGE OF ALL UNDERWATER LEDGES AND POOL STEPS.
3. DEPTH MARKINGS, "NO DIVING" LETTER TILES AND INTERNATIONAL NO DIVING SYMBOL ON POOL DECK SPACED AT DISTANCES NO GREATER THAN 25-FOOT INTERVALS AROUND POOL PERIMETER. LETTERS AND NUMERALS TO BE 4-INCHES TALL, CONTRASTING COLOR TO BACKGROUND TO WHICH THEY ARE APPLIED. CORRESPONDING SET OF DEPTH TILES REQUIRED INSIDE WATERLINE TILE BAND. ANY TILES ON WALKING SURFACES SHALL HAVE SLIP-RESISTANT FINISH.
4. ADA-COMPLIANT LIFT CHAIR REQUIRED INTO POOL. PROVIDE AN ADEQUATE FOOTING FOR LIFT CHAIR ANCHOR (REF MANUFACTURER). POOL CONTRACTOR TO INSTALL ANCHOR IN ACCORDANCE WITH SECTION 1009.2.1 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND MANUFACTURER'S INSTALLATION REQUIREMENTS.
5. 1.50" O.D. x 0.120" (MIN) WALL STAINLESS STEEL STAIR HANDRAIL. TOP OF RAIL SHALL BE 34"-36" ABOVE WALKING SURFACE. REFER TO LANDSCAPE ARCH. FOR TYPE/MANUFACTURER.
6. STAINLESS STEEL GRAB RAILS W/ SLIP-RESISTANT EMBEDDED POOL STEPS.

2 **NOTES**

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SWIMMING POOL SITE PLAN

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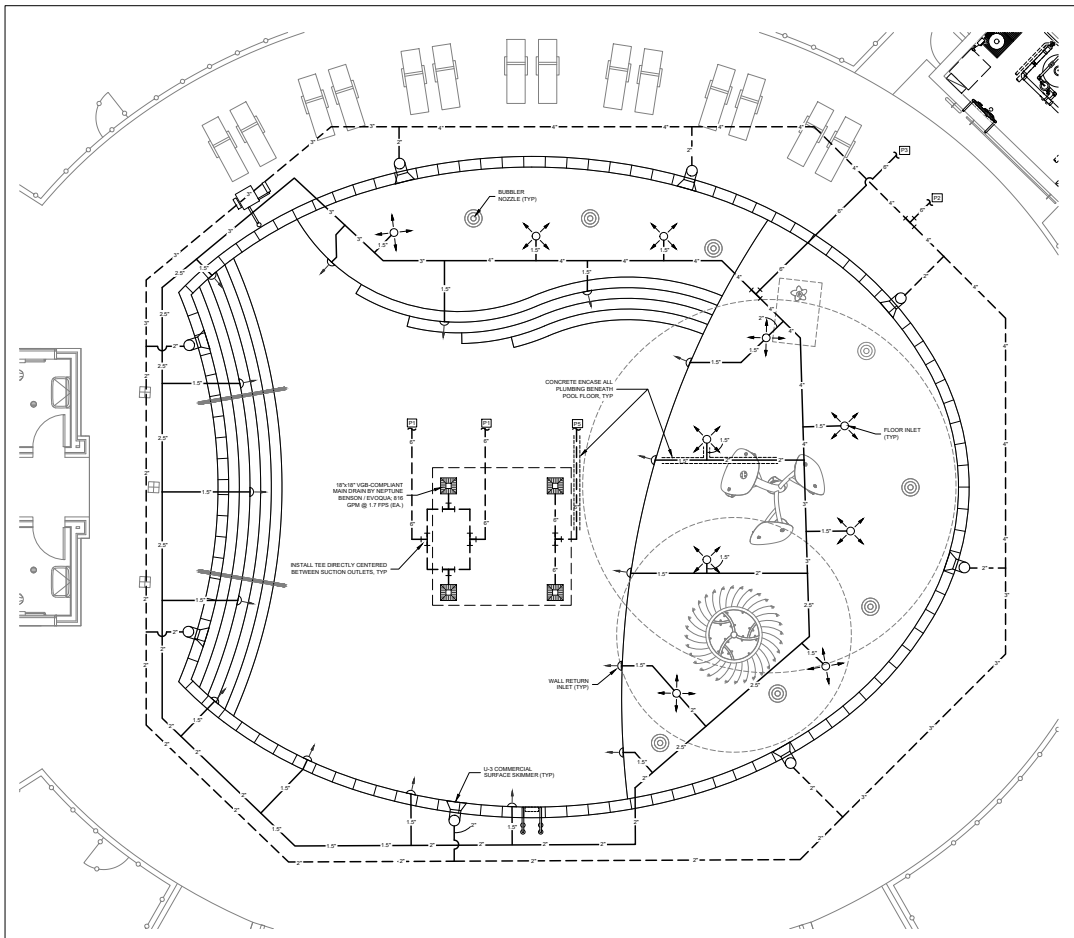

SYMBOL LEGEND

ITEM:	DESCRIPTION:
	U-3 COMMERCIAL SURFACE SKIMMER (HAYWARD, STA-RITE OR EQUAL)
	WALL INLET FITTING BODY WITH ADJUSTABLE EYEBALL INLET AND 2" DIAMETER ORIFICE
	ADJUSTABLE FLOOR INLET FITTING; INSTALL FLUSH WITH POOL FLOOR
	18"x18" VGB-COMPLIANT MAIN DRAIN BY NEPTUNE BENSON / EVOQUA, 816 GPM @ 1.7 FPS (EA.)
	COMMERCIALLY MANUFACTURED BUBBLER NOZZLE; TOP OF NOZZLE INSTALLED FLUSH W/ POOL FLOOR; MAX FLOW TO EACH FOUNTAIN NOZZLE = 20 GPM; HEIGHT OF FOUNTAIN PLUME SHALL BE 6"-18" ABOVE WATER SURFACE

PIPE SCHEDULE

ID	DESCRIPTION	SIZE:
P1	MAIN DRAIN SUCTION HEADER TO FILTER PUMP (QTY=2)	6"
P2	SKIMMER SUCTION HEADER TO FILTER PUMPS (QTY=1)	6"
P3	FILTERED RETURN HEADER	6"
P4	BUBBLER SUPPLY HEADER (QTY=1)	2.5"
P5	SUCTION HEADER TO FEATURE PUMP	6"
P6	2" VALVED FEATURE SUPPLY (QTY=4)	2"
P7	1.5" VALVED FEATURE SUPPLY (QTY=2)	1.5"

1 SWIMMING POOL PLUMBING PLAN

SCALE: 1/4"=1'-0"

2 NOTES

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SWIMMING POOL PLUMBING PLAN

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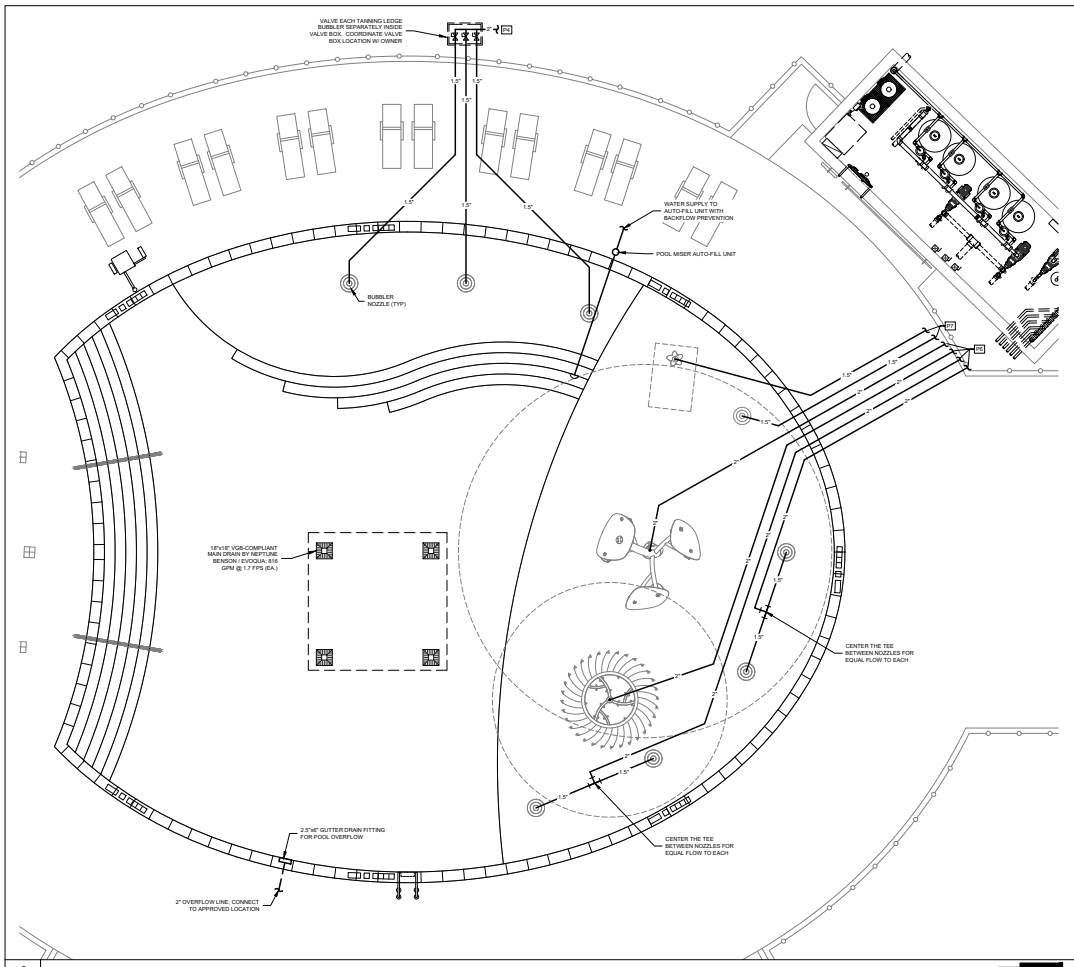

1 **SWIMMING POOL PLUMBING PLAN**

SCALE: 1/4"=1'-0"

SYMBOL LEGEND

ITEM:	DESCRIPTION:
	18"x18" VGB-COMPLIANT MAIN DRAIN BY NEPTUNE BENSON / EVOQUA; 816 GPM @ 1.7 FPS (EA.)
	2.5"x6" GUTTER DRAIN FITTING FOR POOL OVERFLOW; INSTALL FITTING IN WATERLINE TILE BENEATH POOL COPING
	FLOAT VALVE AUTO-FILL UNIT BY PENTAIR; T40FBK (OR EQUAL) 1" WATER SUPPLY
	COMMERCIALLY MANUFACTURED BUBBLER NOZZLE; TOP OF NOZZLE INSTALLED FLUSH W/ POOL FLOOR; MAX FLOW TO EACH FOUNTAIN NOZZLE = 30 GPM; HEIGHT OF FOUNTAIN PLUME SHALL BE 6"-18" ABOVE WATER SURFACE

PIPE SCHEDULE

ID:	DESCRIPTION	SIZE:
P1	MAIN DRAIN SUCTION HEADER TO FILTER PUMP (QTY=2)	6"
P2	SKIMMER SUCTION HEADER TO FILTER PUMPS (QTY=1)	6"
P3	FILTERED RETURN HEADER	6"
P4	BUBBLER SUPPLY HEADER (QTY=1)	2.5"
P5	SUCTION HEADER TO FEATURE PUMP	6"
P6	2" VALVED FEATURE SUPPLY (QTY=4)	2"
P7	1.5" VALVED FEATURE SUPPLY (QTY=2)	1.5"

2 **NOTES**

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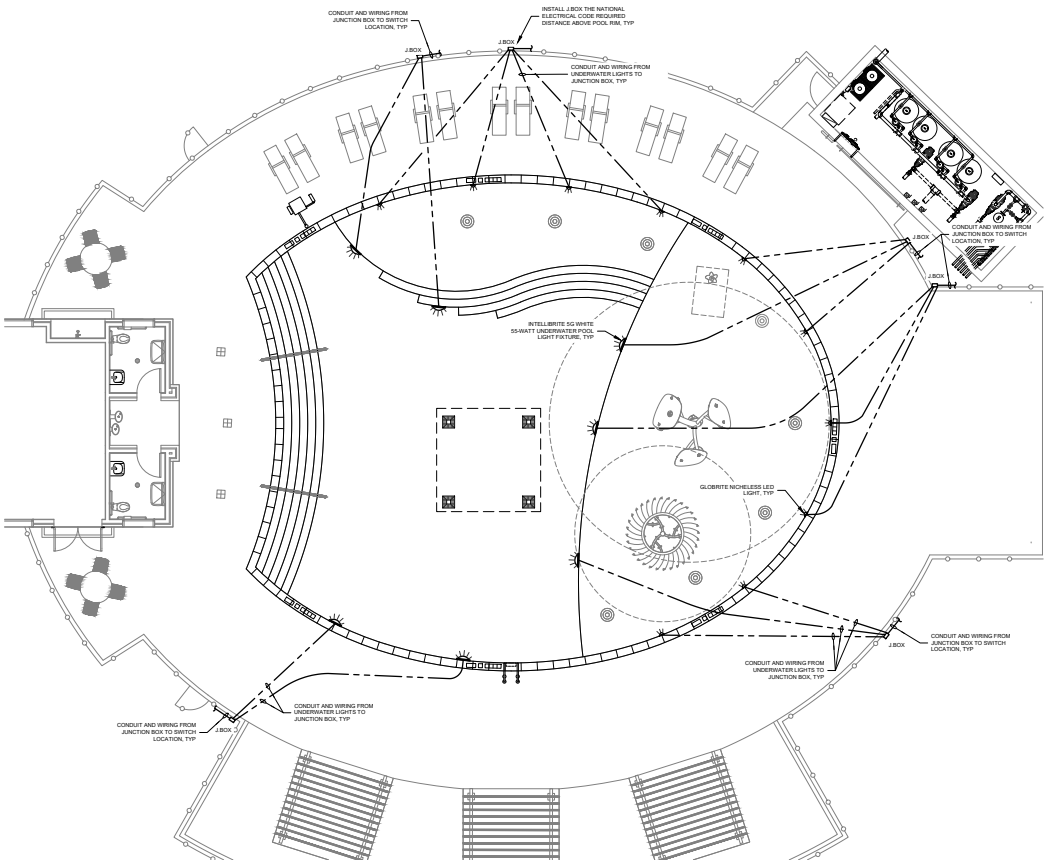

1 **SWIMMING POOL PLUMBING PLAN**

SCALE: 3/16"=1'-0"

SYMBOL LEGEND

ITEM:	DESCRIPTION:
	INTELLIBRITE 5G WHITE 55-WATT LED UNDERWATER POOL LIGHT FIXTURE (500-WATT INCANDESCENT EQUIVALENT) BY PENTAIR; 3600 LUMENS; 12-VOLT
	PENTAIR GLOBRITE NICHELESS LED POOL LIGHT; 15-WATTS; 12-VOLT; 4" MINIMUM WATER DEPTH TO TOP EDGE OF LENS; 100 WATTS OF INCANDESCENT EQUIVALENCE; 1300 LUMENS
	JUNCTION BOX; INSTALL THE MINIMUM REQUIRED DISTANCE ABOVE THE POOL RIM; ELECTRICIAN TO PROVIDE EXACT LOCATIONS FOR J-BOXES.

LIGHTING NOTES:

1. IF POOL WILL BE USED AFTER DARK, THE SITE MUST BE ILLUMINATED TO PROVIDE 10 HORIZONTAL FOOT-CANDLES (MIN) AT ALL WATER SURFACES AND POOL DECKS.
2. EMERGENCY LIGHTING: FOR POOLS THAT WILL BE USED AFTER DARK, EMERGENCY LIGHTING MUST BE PROVIDED ALONG THE EGRESS ROUTE FROM THE POOL(S) TO THE EXIT GATE OF THE POOL YARD.
3. EMERGENCY LIGHTING SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION NOT LESS THAN 0.1 FOOT-CANDLE AT ANY POINT ON THE WATER SURFACE OR ALONG THE POOL DECK, AND NOT LESS THAN AN AVERAGE OF 1.0 FOOT-CANDLE. AT THE END OF THE EMERGENCY LIGHTING TIME DURATION, THE ILLUMINATION LEVEL SHALL NOT BE LESS THAN 0.06 FOOT-CANDLE AT ANY POINT ON THE WATER SURFACE OR POOL DECK, AND NOT LESS THAN AN AVERAGE OF 0.6 FOOT-CANDLE.
4. PER TAC 265.190(a), EACH ELECTRICAL LINE TO AN UNDERWATER LIGHT IN A POOL OR SPA SHALL BE PROTECTED WITH A GFCI LOCATED IN THE CIRCUIT BREAKER FOR THE LIGHT AT THE BREAKER BOX OR IN AN OUTLET THROUGH WHICH THE POWER FOR THE LIGHT PASSES.
5. UNDERWATER LIGHTING SHOWN ON THIS SHEET MAY NOT PROVIDE THE CODE-REQUIRED LIGHT DISTRIBUTION THROUGHOUT THE POOL (AS A PHOTOMETRIC STUDY HAS NOT BEEN PERFORMED). PHOTOMETRIC ANALYSIS (IF REQ'D) SHALL BE BY OTHERS. IF ADDITIONAL LIGHTING IS REQUIRED FOR POOL AND/OR DECKS (OTHER THAN THE UNDERWATER LIGHTS SHOWN), THE ADDITIONAL LIGHTING WILL BE DESIGNED BY OTHERS.

POOL LIGHTING CALCULATIONS:

LIGHT TYPE:	QTY:	LUMENS (EA):	LUMENS TOTAL:
INTELLIBRITE	7	3,600	25,200
GLOBRITE	10	1,300	13,000
TOTAL LUMENS FOR ENTIRE POOL =			38,200 LUMENS

POOL SURFACE AREA = 3,487 S.F.
LIGHT DISTRIBUTION = 38,200 LUMENS / 3,487 S.F.
= 10.95 LUMENS / S.F.

2 **NOTES**

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AE Project No.: 24-202

Sheet Title:
SWIMMING POOL LIGHTING PLAN

Sheet No.:
SP2.2

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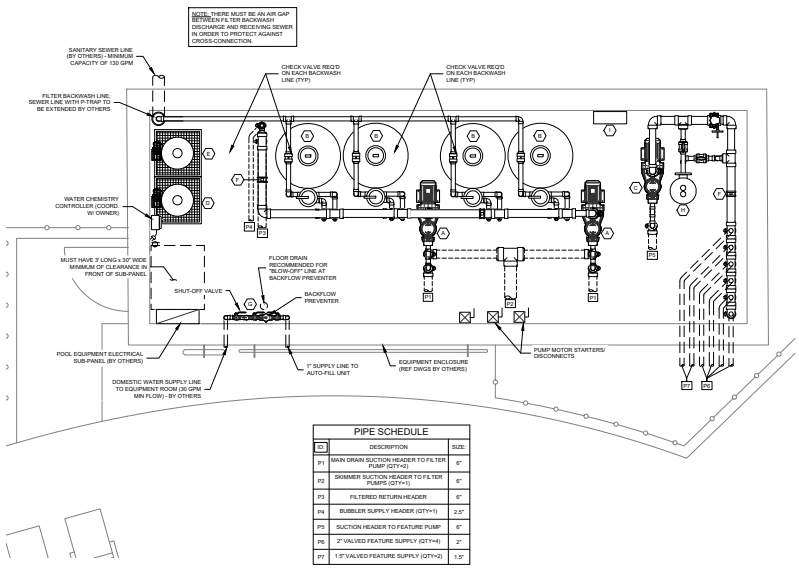


PIPE SCHEDULE		
ID:	DESCRIPTION	SIZE:
P1	MAIN DRAIN SUCTION HEADER TO FILTER PUMP (QTY=2)	6"
P2	SKIMMER SUCTION HEADER TO FILTER PUMPS (QTY=1)	6"
P3	FILTERED RETURN HEADER	6"
P4	BUBBLER SUPPLY HEADER (QTY=1)	2.5"
P5	SUCTION HEADER TO FEATURE PUMP	6"
P6	2" VALVED FEATURE SUPPLY (QTY=4)	2"
P7	1.5" VALVED FEATURE SUPPLY (QTY=2)	1.5"

1 EQUIPMENT ROOM LAYOUT

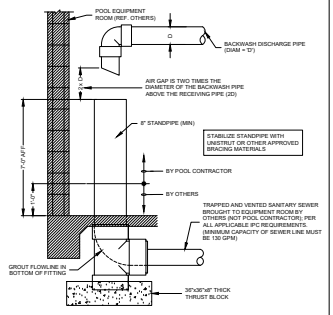
SCALE: 1/2"=1'-0"

EQUIPMENT SCHEDULE					
RECIRCULATION SYSTEM:					
ID:	DESCRIPTION	MFR:	MODEL No:	QTY:	ADDITIONAL COMMENTS:
A	POOL FILTRATION PUMP	SPECK	95-IX	2	5-Hp SPECK 95-IX SELF-PRIMING PUMP WITH INTEGRAL STRAINER; SET FLOW TO 170 GPM EACH; 208-230 VOLT SINGLE PHASE; 24.9-23.5 AMPS
B	HIGH RATE SAND FILTER	ASTER	66711-S3	4	36" DIAM. HIGH-RATE SAND FILTER FURNISHED WITH BACKWASH PIPING; 7.69 S.F. (EA); 153.8 GPM MAX CAPACITY (EA); FURNISH WITH MULTIPORT BACKWASH VALVE; PLUMB ALL FILTERS SO THEY CAN BE BACKWASHED SEPARATELY
C	POOL FEATURE PUMP	SPECK	95-IX	1	5-Hp SPECK 95-IX SELF-PRIMING PUMP WITH INTEGRAL STRAINER; SET FLOW TO 230 GPM EACH; 208-230 VOLT SINGLE PHASE; 24.9-23.5 AMPS
D	LIQUID CHLORINE	STENNER	---	1	CLASSIC SERIES ADJUSTABLE HEAD PERISTALTIC METERING PUMP FOR LIQUID CHLORINE SOLUTION FEED BY STENNER; ADJUSTABLE FEED RATE UP TO 80 GPD; FURNISH WITH 55-GALLON POLYETHYLENE CHEMICAL TANK (BY STENNER); 120V PLUG-IN DEVICE (REQUIRES ELEC RECEPTACLE); FURNISH TANK WITH CORROSION RESISTANT SPILL PLATFORM; VOLUME OF PLATFORM MUST EXCEED THE VOLUME OF CHEMICAL IN THE TANK.
E	pH CONTROL	STENNER	---	1	CLASSIC SERIES ADJUSTABLE HEAD PERISTALTIC METERING PUMP FOR MURIATIC ACID FEED BY STENNER; ADJUSTABLE FEED RATE UP TO 80 GPD; FURNISH WITH 30-GALLON POLYETHYLENE CHEMICAL TANK (BY STENNER); 120V PLUG-IN DEVICE (REQUIRES ELEC RECEPTACLE); FURNISH TANK WITH CORROSION RESISTANT SPILL PLATFORM; VOLUME OF PLATFORM MUST EXCEED THE VOLUME OF CHEMICAL IN THE TANK.
F	FLOW METER	BLUE & WHITE	---	2	CAPABLE OF MEASURING FLOW 1.5 TIMES THE DESIGN FLOW WITHIN 10% ACCURACY OF ACTUAL FLOW
G	WATER SUPPLY TO ROOM	---	---	---	30 GPM (MIN) 1" DOMESTIC WATER SUPPLY TO POOL EQUIPMENT ROOM AND BACKFLOW PREVENTION (WATTS 009 QT OR EQUAL) - BY OTHERS; POOL CONTRACTOR TO EXTEND A 1" MAKE UP WATER SUPPLY LINE TO FLOAT ACTIVATED AUTO-FILL UNIT. VALVE LINE
H	SECONDARY TREATMENT SYSTEM	CHLORKING	SAG 480A	1	CHLORKING SENTRY MODEL "SAG 480A" ULTRAVIOLET (UV) SANITIZER; FOUR (4) HIGH OUTPUT AMALGAM LAMPS; 120V, 60-Hz SINGLE-PHASE ELECTRICAL SERVICE REQUIRED; 4 A AMP LOAD (REQUIRES 20-AMP DEDICATED BREAKER); 4" INLET AND OUTLET FLANGES, 350GPM MAX RATED FLOW; 316L STAINLESS STEEL CHAMBER
I	UV CONTROL - CONTROL CABINET	CHLORKING	SAG 480A	1	ELECTRICAL CONTROL CABINET FOR UV SANITIZER (ITEM "H" ABOVE)

EQUIPMENT ROOM NOTES

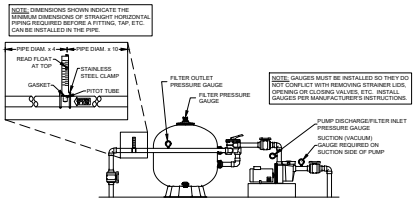
1. EQUIPMENT MAY BE REARRANGED SLIGHTLY FROM WHAT IS SHOWN ON THIS DRAWING TO PROVIDE EASE OF MAINTENANCE AND OPERATION (FIELD LOCATE).
2. EQUIPMENT AREA SLAB NEEDS TO BE SLOPED TO DRAIN. (REFER TO OTHERS FOR SLAB DRAINAGE).
3. REFER TO OTHERS FOR FLOOR DRAINS IN POOL EQUIPMENT ROOM.
4. POOL WATER pH CONTROL TO BE TESTED AND ADJUSTED BY A CERTIFIED POOL OPERATOR (CPO) IN ACCORDANCE TO 25 TAC 265.206(b)
5. THE FOLLOWING STATEMENT SHALL BE POSTED IN LETTERS AT LEAST 1/2 INCH IN HEIGHT, IN A CONSPICUOUS LOCATION, AND WITHIN THE AREAS OF THE AIR RELEASE FOR PRESSURE-TYPE FILTERS: "DO NOT START THE SYSTEM AFTER MAINTENANCE WITHOUT FIRST PROPERLY REASSEMBLING THE FILTER AND SEPARATION TANK AND OPENING ALL AIR RELEASE VALVES."
6. IN ORDER TO ENSURE PUMP WILL PRIME, THE PUMP MUST BE INSTALLED SO THAT THE SUCTION PIPE IS NO HIGHER THAN 4-FEET ABOVE THE NORMAL WATER LEVEL IN THE POOL.
7. REDUCERS INSTALLED AT SUCTION SIDES OF PUMPS SHOWN SHALL BE ECCENTRIC REDUCERS. REDUCERS ON DISCHARGE SIDES OF PUMPS SHALL BE CONCENTRIC REDUCERS.
8. ALL POOL PUMP MOTORS CONNECT TO 120 VOLT THROUGH 240 VOLT SINGLE PHASE CIRCUITS, SHALL BE PROVIDED WITH GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PROTECTION PER ARTICLE 680.21(C) N.E.C.
9. ELECTRICAL DISCONNECTS FOR POOLS AND SPAS INTENDED TO PROTECT SERVICE PERSONNEL SHALL BE ACCESSIBLE TO SERVICE PERSONNEL LOCATED WITHIN SIGHT OF THE POOL AND SPA EQUIPMENT AND LOCATED AT LEAST 5 FEET AWAY FROM THE INSIDE WALLS OF A POOL OR SPA. EACH DISCONNECTING MEANS SHALL DISCONNECT ALL UNGROUNDED CONDUCTORS TO THE EQUIPMENT IT SERVES. IF ELECTRICITY TO EQUIPMENT IS SUPPLIED THROUGH A LINE THAT PLUGS INTO AN OUTLET AND IF THE LINE MAY BE DISCONNECTED BY REMOVING THE PLUG FROM THE OUTLET, A SEPARATE DISCONNECT SWITCH IS NOT REQUIRED FOR THAT EQUIPMENT.
10. RPZ LOCATION MAY VARY (SHOWN HERE FOR CLARITY) REFER MEP ENGINEER. INSTALL RPZ IN A LOCATION THAT PROVIDES ACCESS FOR MAINTENANCE (FIELD LOCATE).
11. HOSE BIB (IF DESIRED BY OWNER) MAY BE INSTALLED IN POOL EQUIPMENT AREA (COORDINATE WITH OWNER).
12. ELECTRICAL CONDUIT SHALL NOT ENTER OR PASS THROUGH AN INTERIOR CHEMICAL STORAGE SPACE, EXCEPT AS REQUIRED TO SERVICE DEVICES INTEGRAL TO THE FUNCTION OF THE ROOM, SUCH AS PUMPS, VESSELS, CONTROLS, LIGHTING, AND SAFETY DEVICES.
13. LAMPS, INCLUDING FLUORESCENT TUBES, INSTALLED IN INTERIOR CHEMICAL STORAGE SPACES SHALL BE PROTECTED AGAINST BREAKAGE WITH A LENS OR OTHER COVER, OR OTHERWISE PROTECTED AGAINST RELEASE OF HOT MATERIALS.
14. WHERE REQUIRED, THE ELECTRICAL CONDUIT IN AN INTERIOR CHEMICAL STORAGE SPACE SHALL BE SEALED AND MADE OF MATERIALS THAT WILL NOT INTERACT WITH ANY CHEMICALS IN THE CHEMICAL STORAGE SPACE.
15. ALL POOL EQUIPMENT & LIGHTING SHALL BE FURNISHED WITH SHUNT-TRIP BREAKERS AND WIRED SUCH THAT POWER IS COMPLETELY DISCONNECTED WHEN THE EMERGENCY POWER OFF (EPO/ESO) SWITCH IS DEPRESSED. REFER TO SP1.0 FOR SWITCH LOCATIONS.

2 EQUIPMENT SCHEDULE & NOTES



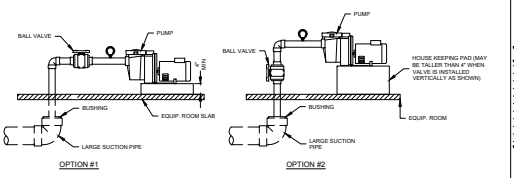
3 TYP. INDIRECT WASTE DETAIL

SCALE: 3/4"=1'-0"



4 GAUGES & FLOW METER DIAGRAM

SCALE: 1/2"=1'-0"



5 PUMP PLUMBING DIAGRAM

SCALE: 3/4"=1'-0"

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STATE OF TEXAS
BRYAN JIGLER
63965
LICENSED PROFESSIONAL ENGINEER
10/21/2024

MADERA AMENITY CENTER
NEW OUTDOOR SWIMMING POOL
ROYSE CITY, TEXAS

Release/Revision:	Date:
PERMIT AND CONTRACTION	10.21.2024

Designed: BW
Drawn: BW
Checked: BJ
AE Project No.: 24-202

Sheet Title:
EQUIPMENT ROOM LAYOUT

Sheet No.:
SP3.0

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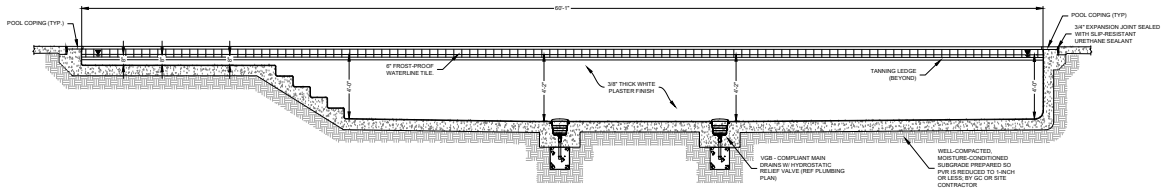

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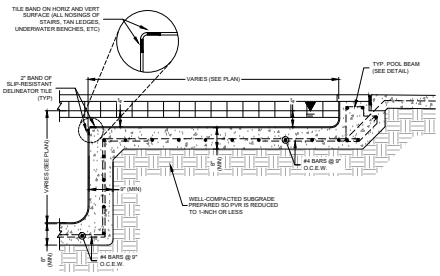
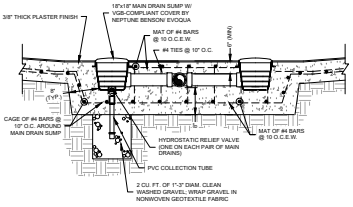
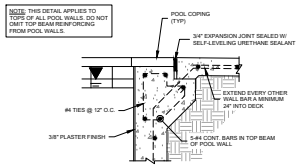


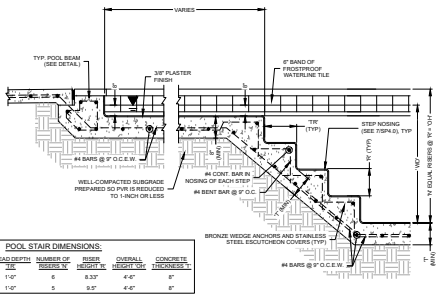
2 TANNING LEDGE DETAIL — SCALE: 3/4"=1'-0"



3 CHANNEL DRAIN DETAIL — SCALE: 3/4"=1'-0"



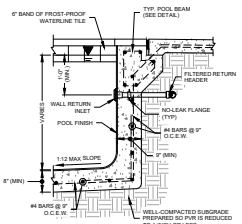
4 TYP. POOL BEAM — SCALE: 3/4"=1'-0"



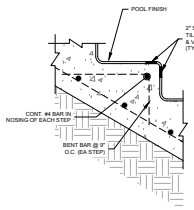
POOL STAIR DIMENSIONS:

ID.	WATER DEPTH "WD"	TREAD DEPTH "TD"	NUMBER OF RISERS "N"	RISER HEIGHT "R"	OVERALL HEIGHT "OH"	CONCRETE THICKNESS "t"
STAIR A	4'-0"	1'-0"	6	8.33"	4'-6"	8"
STAIR B	4'-0"	1'-0"	5	9.5"	4'-6"	8"

5 POOL STAIR DETAIL — SCALE: 3/4"=1'-0"



6 TYP. POOL WALL — SCALE: 3/4"=1'-0"



7 STEP NOSING DETAIL — SCALE: 1-1/2"=1'-0"

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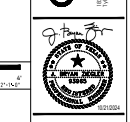

10/21/2024

MADERA AMENITY CENTER
NEW OUTDOOR SWIMMING POOL
ROYSE CITY, TEXAS

Release/Revision:	Date:
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AE Project No.: 24-203

Sheet Title:
SWIMMING POOL CROSS-SECTIONS

Sheet No.:
SP4.0

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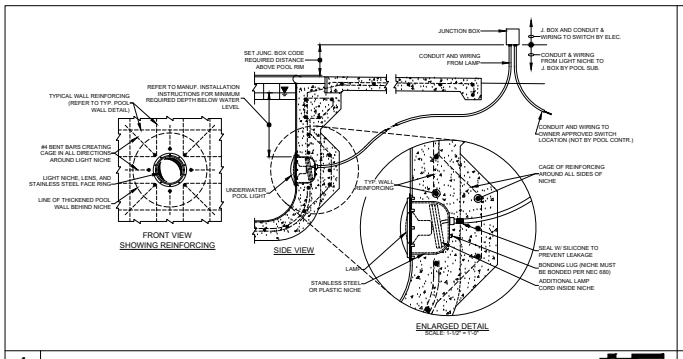
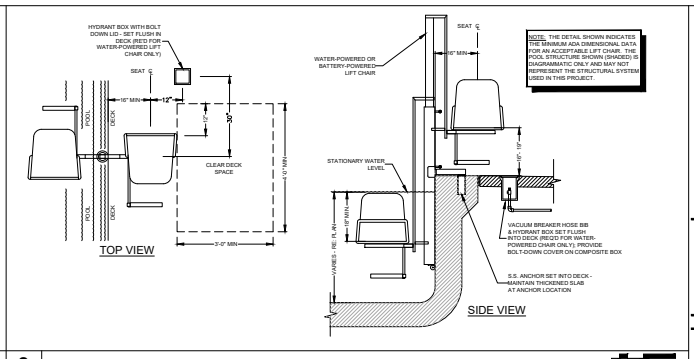


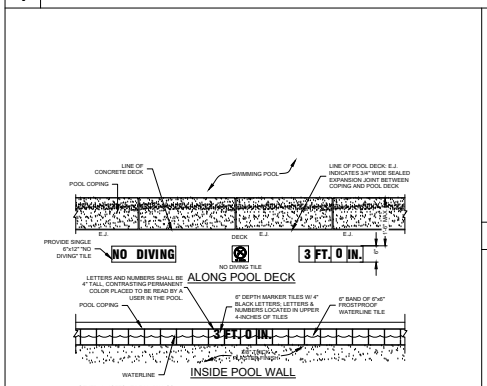
1 UNDERWATER LIGHT DETAIL

SCALE: 3/4"=1'-0"



2 ADA CHAIRLIFT DETAIL

SCALE: 3/4"=1'-0"

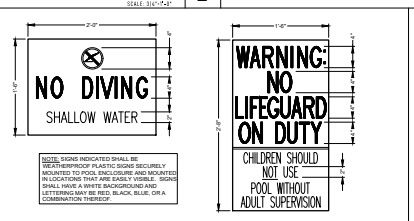


GENERAL NOTES - TILE MARKINGS:

- REFER TO PLAN SHEET FOR DEPTHS
- EACH DEPTH MARKER SHALL SHOW FEET AND INCHES. (EXCEPTION: TILE MARKINGS AT EVEN FOOT INCREMENTS - SUCH AS 2'-0" - ARE REQUIRED TO SHOW FEET OF DEPTH ONLY.)
- ALL DECK TILES ON WALKING SURFACES SHALL HAVE SLIP-RESISTANT FINISH.
- MAXIMUM SPACING BETWEEN DEPTH MARKINGS SHALL NOT EXCEED 25'-0" AROUND POOL PERIMETER.
- WHERE POOL FLOOR TRANSITIONS FROM SHALLOW END TO DEEP END, MARK THE DEPTH AT THE SHALLOW AND DEEP SIDES OF THE SLOPE AS WELL AS EVERY TWO-FOOT INCREMENT IN BETWEEN.
- DEPTH AND "NO DIVING" TEXT TO HAVE 4" TALL BLACK LETTERS ON WHITE BACKGROUND UNLESS NOTED OTHERWISE.
- DEPTH MARKINGS SHALL INDICATE WATER DEPTH MEASURED 3'-0" HORIZONTALLY FROM POOL WALL.

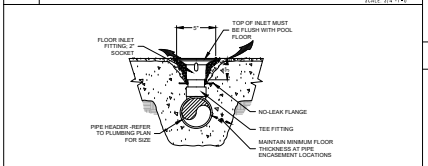
3 TYP. DEPTH & NO DIVING MARKINGS DETAIL

SCALE: 3/4"=1'-0"



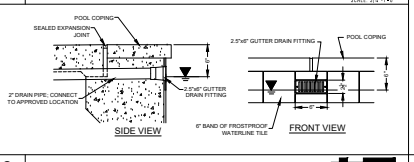
4 SAFETY SIGNAGE DETAIL

SCALE: 3/4"=1'-0"



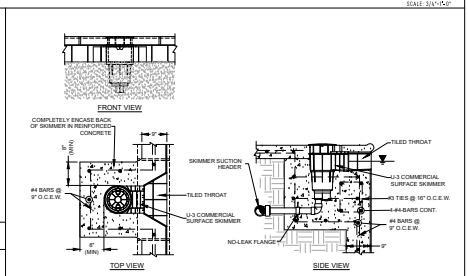
5 TYP. FLOOR INLET DETAIL

SCALE: 3/4"=1'-0"



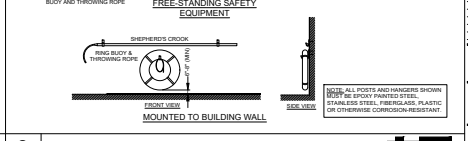
6 OVERFLOW FITTING DETAIL

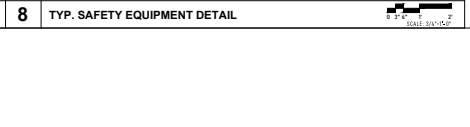
SCALE: 3/4"=1'-0"



7 TYP. SKIMMER DETAIL

SCALE: 3/4"=1'-0"





8 TYP. SAFETY EQUIPMENT DETAIL

SCALE: 3/4"=1'-0"

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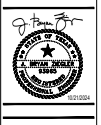

MADERA AMENITY CENTER
NEW OUTDOOR SWIMMING POOL
ROYSE CITY, TEXAS

Release/Revision:	Date:
PERMIT AND CONTRACTION	10.21.2024

Designed: BDA
Drawn: BDA
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SWIMMING POOL DETAILS

Sheet No.:
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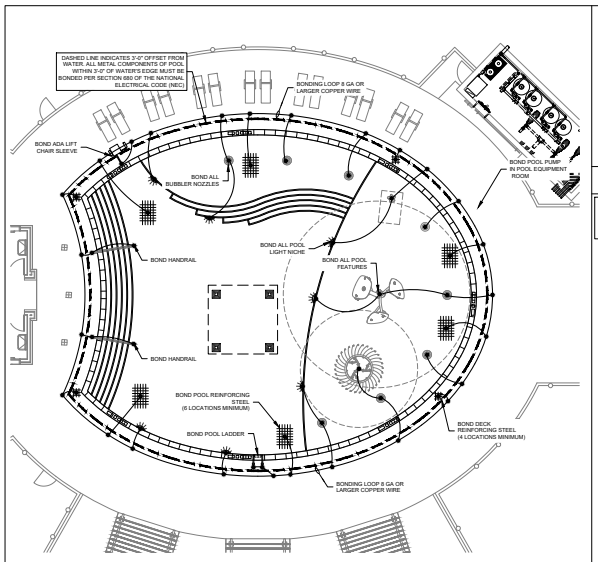
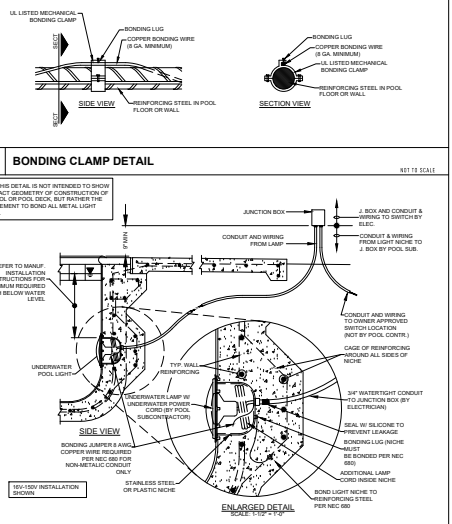


1 POOL BONDING SCHEMATIC

SCALE: 1/8"=1'-0"

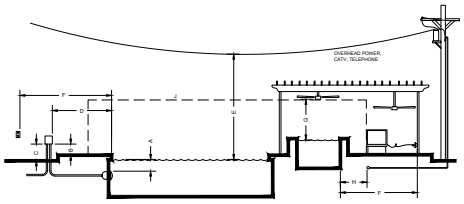


2 BONDING CLAMP DETAIL

NOT TO SCALE

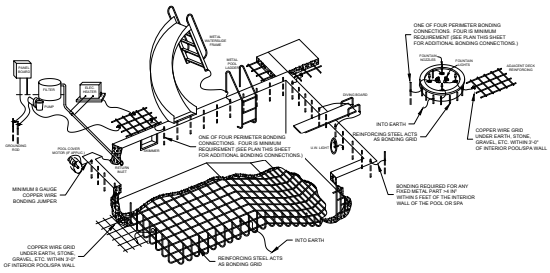
3 BONDING REQUIREMENTS - UNDERWATER LIGHTS

NOT TO SCALE



4 ELECTRICAL CLEARANCES AT POOLS & SPAS

NOT TO SCALE



5 EXAMPLES OF BONDED ELEMENTS

NOT TO SCALE

ALL POOLS AND SPAS TO HAVE A TELEPHONE THAT IS CAPABLE OF IMMEDIATELY SUMMONING HELP THAT IS READILY ACCESSIBLE AND WITHIN 200 FEET OF THE POOL OR SPA WATER. OTHER PROVISIONS APPLY AND ALTERNATIVE ELECTRONIC DEVICES FOR SUMMONING HELP MAY QUALIFY.

GROUNDING & BONDING NOTES

GENERAL POOL ELECTRICAL REQUIREMENTS:
NATIONAL ELECTRICAL CODE SECTION 680 (NEC 680) GOVERNS ELECTRICAL REQUIREMENTS IN ALL POOL, SPA AND FOUNTAIN STRUCTURES. NEC 680 IS INCORPORATED BY REFERENCE HEREIN IN ITS ENTIRETY AND SHALL BE IN SUCH FORCE AND EFFECT AS IF FULLY SHOWN HEREIN. EXCERPTS BELOW ARE SHOWN FOR YOUR CONVENIENCE.

GROUNDING
ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250 PARTS V, VI, AND VII. THE FOLLOWING EQUIPMENT SHALL BE GROUNDED: THROUGH WALL UNDERWATER LIGHTS WITH VOLTAGE RATINGS GREATER THAN 15V, ELECTRICAL EQUIPMENT WITHIN 5 FEET OF THE WATER FILLED BASIN INTERIOR WALL, JUNCTION BOXES, ELECTRICAL EQUIPMENT THAT CIRCULATES THE WATER, TRANSFORMER AND POWER SUPPLY ENCLOSURES, GFCI UNITS, PANELBOARDS THAT SERVE THE ELECTRICAL EQUIPMENT THAT OPERATES THE WATER FILLED BASIN.

UNDERGROUND WIRING MUST BE INSTALLED IN SCHEDULE 80 PVC RIGID CONDUIT. DIRECT BURY CABLE IS NOT ALLOWED. ALUMINUM CONDUIT IS NOT PERMITTED FOR THIS POOL WIRING INSTALLATION.

RECEPTACLES 15 OR 20 AMP 125V WITHIN 20 FEET OF THE INTERIOR WALL OF THE POOL OR SPA MUST HAVE GFCI PROTECTION. NO RECEPTACLES ARE ALLOWED WITHIN 7ft' OF THE INTERIOR WALL OF THE POOL OR SPA.

ALL SPA AND HOT TUB PUMP MOTORS MUST HAVE AN EMERGENCY SHUT OFF SWITCH THAT IS CLEARLY LABELED, VISIBLE WITHIN FIFTY FEET OF THE SPA, AND READILY ACCESSIBLE TO USERS. SHUT OFF SWITCH MUST BE INSTALLED FARTHER THAN 60' FROM THE SPA/HOT TUB WATER SURFACE. SHUT OFF SWITCH SHALL STOP PUMP MOTORS FOR RECIRCULATION PUMP, SPA JET BOOSTER PUMP, AND SPA AIR BLOWER.

WORKING SPACE IN FRONT OF A STARTER/DISCONNECT, DISTRIBUTION PANELS, MAIN LUGS, AND OTHER ELECTRICAL SERVICE EQUIPMENT REQUIRES ADEQUATE LIGHTING AND A 30" WIDE, 36" DEEP, AND 78" HIGH CLEAR AREA TO PERFORM SERVICE/MAINTENANCE ON ELECTRICAL EQUIPMENT.

LOW VOLTAGE LIGHTING MAY BE INSTALLED IN JUNCTION BOXES FLUSH WITH THE DECK. LOW VOLTAGE UNDER WATER LIGHTING DEFINED AS LIGHTS OPERATING AT OR BELOW 15V. FLUSH MOUNTED JUNCTION BOXES MUST BE FILLED WITH AN APPROVED POTTING COMPOUND AND MUST BE INSTALLED GREATER THAN 48" FROM THE INSIDE WALL OF THE WATER FILLED BASIN.

TRANSFORMERS AND POWER SUPPLIES USED FOR THE SUPPLY OF UNDERWATER LIGHTS MUST BE LISTED FOR SWIMMING POOL USE. WHERE THE POOL IS OUT DOORS THE TRANSFORMER AND POWER SUPPLY MUST BE LISTED FOR SWIMMING POOLS AND BE MARKED "FOR OUTDOOR USE".

BONDING

REINFORCING STEEL-NON ENCAPSULATED ONLY
UNENCAPSULATED STRUCTURAL REINFORCING SHALL BE BONDED TOGETHER BY STEEL TIE WIRES OR THE EQUIVALENT TO FORM THE BONDING GRID. THE STRUCTURAL REINFORCING STEEL SHALL BE BONDED WITH A FASTENER ADHERING TO NEC 250.8 IN NO LESS THAN FOUR LOCATIONS UNIFORMLY SPACED AROUND THE POOL PERIMETER.

POOLS LARGER THAN 5,000 SQ. FT SHALL HAVE AN ADDITIONAL BONDING GRID/REINFORCING STEEL JUMPER MEETING THE REQUIREMENTS OF NEC 250.8 FOR EVERY 1,000 SQ. FT OF POOL IN ADDITION TO 5,000 SQ FT. FOR EXAMPLE 6,100 SQ FT POOL WOULD REQUIRE FOUR (MINIMUM) PLUS 1.1 CONNECTION LOCATIONS. SIX CONNECTIONS FROM THE PERIMETER TO THE BONDING GRID WOULD BE REQUIRED IN THE EXAMPLE.

THE FOLLOWING EQUIPMENT IF SHOWN MUST BE CONNECTED TO THE BONDING GRID PER NEC 250.8.

METALIC COMPONENTS
ALL METALIC PARTS OF THE POOL STRUCTURE OR EMBEDDED THEREIN AND HAVING AN EXPOSED SURFACE AREA GREATER THAN FOUR SQUARE INCHES SHALL BE BONDED.

UNDERWATER LIGHTING
ALL METAL FORMING SHELLS, MOUNTING BRACKETS OF NO-NICHE LUMINARIES SHALL BE BONDED. REFER TO NEC 680 FOR LOW VOLTAGE EXCEPTIONS.

METAL FITTINGS
ALL METAL FITTINGS WITHIN OR ATTACHED TO THE POOL STRUCTURE SHALL BE BONDED.

ELECTRICAL EQUIPMENT
METAL PARTS OF ELECTRICAL EQUIPMENT ASSOCIATED WITH POOL WATER. FOR EXAMPLE POOL PUMPS WITH MOTORS AND POOL COVERS WITH MOTORS SHALL BE BONDED.

POOL HEATERS RATED IN EXCESS OF 50 AMPERES REQUIRE BONDING. REFER TO POOL HEATER INSTALLATION SPECIFIC INSTRUCTIONS REGARDING PARTS OF THE POOL HEATER THAT REQUIRE BONDING.

FIXED METAL PARTS
ALL FIXED METAL PARTS WITHIN 5 FEET OF THE INTERIOR WALL OF THE POOL OR SPA SHALL BE BONDED INCLUDING, BUT NOT LIMITED TO, METAL SHEATHED CABLES AND RACEWAYS, METAL PIPING, METAL AWNINGS, METAL FENCES, AND METAL DOOR AND WINDOW FRAMES. REFER TO NEC 680 FOR EXCEPTIONS.

NO METAL COMPONENTS IN POOL SHELL
IF THERE ARE NO METAL COMPONENTS IN THE POOL SHELL OR MOUNTED TO THE POOL SHELL AN INTENTIONAL BOND OF A MINIMUM 5.5. CONDUCTIVE SURFACE AREA OF 9 SQUARE INCHES MUST BE INSTALLED. THE BONDING PLATE MUST BE INSTALLED IN CONTACT WITH THE POOL WATER BY THE POOL CONTRACTOR IN A LOCATION AS DETERMINED BY THE ENGINEER.

PERIMETER SURFACES
BONDING GRID SHALL BE EXTENDED 3 FEET HORIZONTALLY BEYOND THE INSIDE WALL OF THE POOL OR SPA INTO THE ADJACENT SURFACES. BONDING GRID SHALL BE INSTALLED IN ADJACENT DECK, GRAVEL, NOT REINFORCED DECK, EARTH, LANDSCAPING, BUILDING, OR OTHER STRUCTURES PER NEC 680 'BURIED' DEFINITIONS.

CONNECTORS
BONDING CONNECTIONS SHALL BE MADE WITH UL LISTED BONDING CONNECTORS AND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH SECTION 250.8 OF THE NATIONAL ELECTRICAL CODE (NEC).

BONDING OUTSIDE THE POOL OR SPA SHELL
PERIMETER SURFACES EXTENDING 3-FT (1-METR) BEYOND THE INSIDE WALL OF THE POOL, SPA OR FOUNTAIN SHALL BE BONDED USING METHODS COMPLIANT WITH 680.26(B)(2) OF THE N.E.C.

LIGHT FIXTURES AND ELECTRICAL RECEPTACLES
ALL LIGHT FIXTURES WITH 10-FT OF THE WATER'S EDGE, AND ALL ELECTRICAL RECEPTACLES WITHIN 20-FT OF THE WATER'S EDGE SHALL COMPLY WITH REQUIRED GFCI PROTECTION PER 680.22 OF THE N.E.C.

6 BONDING NOTES

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LICENSED
PROFESSIONAL ENGINEER
10/21/2024

MADERA AMENITY CENTER
NEW OUTDOOR SWIMMING POOL
ROYSE CITY, TEXAS

Release/Revision:	Date:
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