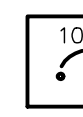


POOL BONDING REQUIREMENTS	
1.	THE POOL CONCRETE REINFORCING STEEL REBAR SHALL BE BONDED WITH STEEL TIE WIRES, OR EQUAL, AND SHALL THEREBY SERVE AS A EQUIPOTENTIAL BONDING GRID FOR ALL PARTS REQUIRED BY THE 2008 NEC 680.26 TO BE BONDED TOGETHER. BONDING LUGS TO BE SUPPLIED BY POOL CONTRACTOR.
2.	WHERE REINFORCING STEEL OF THE POOL SHELL OR THE REINFORCING STEEL OF COPING STONES AND DECK IS ENCAPSULATED WITH A NONCONDUCTIVE COMPOUND OR ANOTHER CONDUCTIVE MATERIAL IS NOT AVAILABLE, PROVISIONS SHALL BE MADE FOR AN ALTERNATIVE MEANS TO ELIMINATE VOLTAGE GRADIENTS THAT WOULD OTHERWISE BE PROVIDED BY UNENCAPSULATED, BONDED REINFORCING STEEL. THESE PROVISIONS ARE AS FOLLOWS:
A.	CREATE AN EQUIPOTENTIAL BONDING GRID CONSTRUCTED OF MINIMUM 8 AWG BARE SOLID CONDUCTORS. CONDUCTORS SHALL BE BONDED TO EACH OTHER AT ALL POINTS OF CROSSING. CONNECTIONS SHALL BE MADE AS REQUIRED BY 680.26.B.
B.	THE EQUIPOTENTIAL BONDING GRID SHALL COVER THE CONTOUR OF THE POOL AND THE POOL DECK EXTENDING 3 FEET HORIZONTALLY FROM THE INSIDE WALLS OF THE POOL. THE GRID SHALL BE ARRANGED IN A 12" X 12" NETWORK OF CONDUCTORS IN A UNIFORMLY SPACED PERPENDICULAR GRID PATTERN WITH A TOLERANCE OF 4".
C.	THE BELOW-GRADE GRID SHALL BE SECURED WITHIN OR UNDER THE POOL AND DECK MEDIA.
3.	THE FOLLOWING PARTS SHALL BE BONDED TOGETHER AND CONNECTED TO THE EQUIPOTENTIAL BONDING GRID:
A.	ALL METALLIC PARTS OF THE POOL STRUCTURE, INCLUDING COPING STONES, DECK, PERMANENT PLAY STRUCTURES, PERMANENT EXERCISE STRUCTURES.
B.	ALL METAL FITTINGS WITHIN OR ATTACHED TO THE POOL STRUCTURE.
C.	METAL PARTS ASSOCIATED WITH THE POOL WATER CIRCULATING SYSTEM, INCLUDING PUMPS, FILTERS, AND HEATERS.
D.	METAL PARTS ASSOCIATED WITH POOL COVERS.
E.	METAL SHEATHED CABLES AND RACEWAYS, METAL PIPING, AND ALL FIXED METAL PARTS WITHIN 5 FEET HORIZONTALLY OF INSIDE WALLS OF POOL AND WITHIN 12 FEET ABOVE THE MAXIMUM WATER LEVEL OF THE POOL.
F.	METAL PARTS ASSOCIATED WITH OBSERVATION STANDS, TOWERS, PLATFORMS, AND DIVING STRUCTURES.
4.	ISOLATED PARTS THAT ARE NOT MORE THAN 4" IN ANY DIMENSION AND DO NOT PENETRATE INTO THE POOL STRUCTURE MORE THAN 1" SHALL NOT REQUIRE BONDING.
5.	BONDING CONDUCTORS SHALL BE MINIMUM 8 AWG SOLID COPPER. ELECTRICAL CONTRACTOR SHALL COORDINATE APPROVED CONNECTOR TYPE AND METHOD WITH LOCAL ELECTRICAL AND/OR POOL INSPECTOR.
6.	SPECIFIC MANUFACTURER'S INSTRUCTIONS REGARDING BONDING OR GROUNDING OF POOL EQUIPMENT, WHETHER INDICATED HEREIN OR NOT, SHALL BE STRICTLY FOLLOWED.
7.	THE EQUIPOTENTIAL BONDING GRID SHALL NOT BE CONNECTED TO ANY ELECTRICAL DISTRIBUTION EQUIPMENT.
8.	ANY PARTS IN ADDITION TO THOSE DESCRIBED HEREIN THAT ARE INDICATED BY POOL CONTRACTOR OR LOCAL INSPECTION AUTHORITY SHALL BE BONDED TO THE EQUIPOTENTIAL BONDING GRID WITH NO ADDITIONAL COSTS INCURRED BY THE OWNER.
9.	ROPE ANCHORS WHICH ARE ATTACHED TO A STAINLESS STEEL GUTTER ARE INTERNALLY BONDED TO GUTTER AND SO DO NOT REQUIRE ADDITIONAL BONDING.
10.	THE ELECTRICAL CONTRACTOR SHALL COORDINATE BONDING WITH POOL CONTRACTOR AND GENERAL CONTRACTOR.

GENERAL NOTES FOR ALL DRAWINGS	
1.	UNLESS OTHERWISE NOTED, ITEMS SHOWN ON THE DRAWINGS SHALL BE AS FOLLOWS: LIGHT LINE WEIGHT = EXISTING TO REMAIN DARK LINE WEIGHT = NEW OR RELOCATED CROSS-HATCHING = TO BE REMOVED
2.	PROVIDE BATTERY PACKS FOR ALL EMERGENCY LUMINAIRES. EMERGENCY LUMINAIRES ARE INDICATED ON THE DRAWINGS AS SHADED AND/OR DENOTED AS "EM". UNLESS OTHERWISE NOTED, EACH LINEAR FLUORESCENT BATTERY PACK SHALL OPERATE ONE LAMP CONTINUOUSLY AT AN OUTPUT OF AT LEAST 1100 LUMENS.
3.	CONNECT ALL EXIT SIGNS AND EMERGENCY BATTERY PACKS AHEAD OF SWITCHING.
4.	FOR 120V, 20-AMPERE BRANCH CIRCUITS, PROVIDE THE FOLLOWING SIZE CONDUCTORS: 0-100 FEET: 12 AWG 101-175 FEET: 10 AWG 176-265 FEET: 8 AWG THE DISTANCES INDICATED REPRESENT THE LENGTH FROM THE PANELBOARD TO THE FARTHEST OUTLET ON THE CIRCUIT. PROVIDE 12 AWG PIGTAILS TO WIRING DEVICES AS NECESSARY.
5.	UNDERGROUND RACEWAYS AND RACEWAYS EMBEDDED IN SLABS: ALL ELBOWS AND VERTICAL RISERS (STUB-UPS) SHALL BE PVC-COATED RIGID METAL CONDUIT (RMC). THIS INCLUDES ALL SERVICE, FEEDER, BRANCH CIRCUIT, AND SYSTEMS RACEWAYS.
6.	SUBMITTALS: ALL ITEMS SHALL BE SUBMITTED SUFFICIENTLY IN ADVANCE OF WORK TO ALLOW AMPLE TIME FOR REVIEWS AND RESUBMITTALS AS MAY BE REQUIRED. SUBMIT ALL ITEMS REQUIRED FOR EACH SPECIFICATION SECTION CONCURRENTLY. PRODUCT DATA SHALL BE SUBMITTED IN 8-1/2" X 11" BOUND HARD COPY SUBMITTAL ITEM FOR IDENTIFICATION. THE LABEL SHALL INDICATE NAME OF FIRM OR ENTITY THAT PREPARED EACH SUBMITTAL, PROJECT NAME, DATE, REFERENCE TO APPLICABLE SPECIFICATION SECTION, NAME OF CONTRACTOR, NAME OF SUPPLIER, AND NAME OF MANUFACTURER. INCOMPLETE SUBMITTALS ARE NOT ACCEPTABLE, WILL BE CONSIDERED NONRESPONSIVE, AND WILL BE RETURNED OR DISCARDED WITHOUT REVIEW.
7.	RESUBMITTALS: MAKE RESUBMITTALS IN SAME FORM AS INITIAL SUBMITTAL.
8.	SUBMITTAL COORDINATION: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEW AND COORDINATION OF THE MECHANICAL, POOL, ELEVATOR, AND OTHER EQUIPMENT SUBMITTALS REQUIRING ELECTRICAL CONNECTION(S). THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO ROUGH-IN OF AN DISCREPANCIES BETWEEN THE ELECTRICAL CHARACTERISTICS INDICATED ON THE CONSTRUCTION DOCUMENTS AND THOSE LISTED ON THE SUBMITTAL DOCUMENTS.
9.	REQUESTS FOR INFORMATION (RFI'S): THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE REVIEW AND UNDERSTANDING OF THE CONTRACT DOCUMENTS. RFI'S SHALL NOT BE USED TO LOCATE INFORMATION FOR THE CONTRACTOR. THE ENGINEER WILL NOT RESPOND TO REQUESTS WHERE SUCH INFORMATION IS AVAILABLE FROM A CAREFUL STUDY AND COMPARISON OF THE CONTRACT DOCUMENTS, FIELD CONDITIONS, OR PRIOR PROJECT CORRESPONDENCE OR DOCUMENTATION.
10.	THE ELECTRICAL INSTALLATION SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF: A. FRUITA BUILDING DEPARTMENT B. CITY, COUNTY, AND STATE LAWS, ORDINANCES, AND AMENDMENTS. C. THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). D. THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC). E. THE RULES, REGULATIONS, AND STANDARDS OF THE UTILITY COMPANY SUPPLYING ELECTRIC SERVICE TO THE BUILDING.
11.	SHOULD ANY CHANGE TO THE CONSTRUCTION DOCUMENTS BE REQUIRED TO COMPLY WITH GOVERNMENTAL OR UTILITY REGULATIONS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO EXECUTION OF THE WORK. THIS WORK SHALL BE CARRIED OUT ACCORDING TO THE APPLICABLE REQUIREMENT(S) WITH THE INSTRUCTION OF THE ARCHITECT/ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
12.	UTILITIES: THE CONTRACTOR SHALL COOPERATE FULLY WITH THE LOCAL UTILITY COMPANIES WITH RESPECT TO THEIR SERVICES. THE CONTRACTOR SHALL INCLUDE IN THEIR BID ANY COSTS TO BE INCURRED RELATIVE TO THE POWER SERVICE (PRIMARY AND/OR SECONDARY) AND ANY OTHER BUILDING SERVICES.

ABBREVIATIONS AND NOTATIONS	
AC	ABOVE COUNTER - VERIFY HEIGHT
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
AWG	AMERICAN WIRE GAGE
BFG	BELOW FINISHED GRADE
CB	CIRCUIT BREAKER
CCT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EM	EMERGENCY
EMC	ELECTRIC WATER COOLER
FLA	FULL LOAD AMPS
G	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
GFI	GROUND FAULT INTERRUPTER
HP	HORSEPOWER
IDF	INTERMEDIATE DISTRIBUTION FACILITY
IG	ISOLATED GROUND
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FACILITY
MGB	MAIN GROUNDING BUSBAR
MLO	MAIN LUGS ONLY
MTTB	MAIN TELECOMMUNICATIONS TERMINAL BACKBOARD
N	NEUTRAL
NC	NORMALLY CLOSED
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OCF	OVERCURRENT PROTECTION
OL	OVERLOAD
PV	PHOTOVOLTAIC
SC	SHORT CIRCUIT
TR	TAMPER RESISTANT
TGB	TELECOMMUNICATIONS GROUNDING BUSBAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TTTB	TELECOMMUNICATIONS TERMINAL BACKBOARD
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VFD	VARIABLE FREQUENCY DRIVE
W/G	WIREGUARD
WP	WEATHERPROOF
WPIU	WEATHERPROOF IN-USE
XFMR	TRANSFORMER
(E)	EXISTING TO REMAIN
(ER)	EXISTING TO BE REMOVED
(N)	NEW DEVICE
(R)	EXISTING TO BE RELOCATED
(RL)	RELOCATED LOCATION
	KITCHEN EQUIPMENT SCHEDULE NOTATION
	ELECTRICAL EQUIPMENT SCHEDULE NOTATION
	MECHANICAL EQUIPMENT SCHEDULE NOTATION
	POOL EQUIPMENT SCHEDULE NOTATION
	DETAIL NOTE
	DELTA REVISION NOTE
	ELECTRICAL FEEDER SIZE

SCHEMATIC WIRING SYMBOLS	
	GROUND
	CURRENT TRANSFORMER
	CIRCUIT BREAKER, MOLDED-CASE, THERMAL-MAGNETIC
	FUSED DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER, MOLDED-CASE, THERMAL-MAGNETIC
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN CONTACT
	MOTOR
	GENERATOR
	METER
	SHUNT TRIP

POWER	
	DUPLEX RECEPTACLE
	FOUR PLEX RECEPTACLE
	SINGLE RECEPTACLE
	COMBO RECEPTACLE/SWITCH
	SWITCHED DUPLEX RECEPTACLE
	SPLIT-WIRED RECEPTACLE
	CEILING RECEPTACLE (DUPLEX, FOURPLEX)
	SPECIAL PURPOSE RECEPTACLE
	FLOOR MOUNTED SPECIAL PURPOSE RECEPTACLE
	FLOOR RECEPTACLE (DUPLEX, FOURPLEX)
	FLOOR MOUNTED COMBINATION OUTLET BOX
	WIREMOLD SURFACE RACEWAY
	PLUGMOLD SURFACE RACEWAY
	CLOCK RECEPTACLE
	JUNCTION BOX
	WALL MOUNTED J-BOX
	FLOOR MOUNTED JUNCTION BOX
	ENCLOSED CIRCUIT BREAKER
	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MAGNETIC CONTROLLER (STARTER)
	COMBINATION STARTER/DISCONNECT SWITCH
	MOTOR CONNECTION
	POWER POLE

SYSTEMS	
	MTTB, TTB, MDF OR IDF
	TELECOMMUNICATION OUTLET
	TELECOMMUNICATION OUTLET - EXISTING
	TELEPHONE OUTLET
	DEDICATED FIRE ALARM SYSTEM PHONE LINE.
	DEDICATED EM PHONE LINE
	WALL MOUNTED TELEPHONE OUTLET
	DATA OUTLET
	FLOOR MOUNTED OUTLET (DATA, TELECOMMUNICATIONS, TELEPHONE)
	TELEVISION OUTLET
	SPEAKER - PAGING AND OR SOUND SYSTEM
	MICROPHONE OUTLET
	VOLUME CONTROL
	DOOR BELL OR BUZZER
	DOME LIGHT
	INTERCOM STATION
	LADDER CABLE TRAY

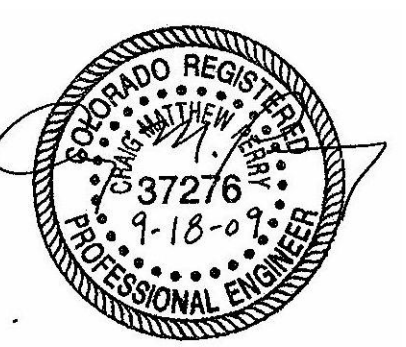
SWITCHING AND CONTROLS	
	SINGLE POLE SWITCH
	3-WAY SWITCH
	4-WAY SWITCH
	DIMMER SWITCH
	KEY OPERATED SWITCH
	SWITCH WITH PILOT LIGHT
	THERMAL OVERLOAD SWITCH
	THERMOSTAT
	RELAY
	TIME CLOCK
	PHOTOCELL
	PUSH BUTTON
	DIGITAL SWITCH
	WALL MOUNTED MOTION SENSOR
	CEILING MOUNTED MOTION SENSOR
	DUAL LEVEL SWITCHES

LUMINAIRES	
	LUMINAIRE TYPE, REFERENCING LUMINAIRE SCHEDULE, TYPICAL ALL FIXTURES. SUBSCRIPT, IF SHOWN, REFERENCES WALL SWITCH (A) = ALL TYPE "A" LUMINAIRES IN ROOM OR AREA UON.
	WALL MOUNTED LUMINAIRE
	SURFACE MOUNTED LUMINAIRE
	RECESSED LUMINAIRE
	DOWNLIGHT
	SURFACE CEILING FIXTURE
	SMALL PENDANT LUMINAIRE
	LARGE PENDANT LUMINAIRE
	WALLWASH LUMINAIRE
	ACCENT LUMINAIRE
	STEP LUMINAIRE
	STRIP LIGHT FIXTURE
	SURFACE OR PENDANT LIGHTING TRACK
	EXIT LIGHT - SHADED INDICATES FACE/ DIRECTIONAL ARROWS AS SHOWN
	BATTERY PACK EMERGENCY LIGHT
	EMERGENCY FIXTURE - SHADED
	PORCELAIN LAMP HOLDER
	EXTERIOR AREA LIGHT
	POST TOP FIXTURE. ARROW INDICATES AIMING OF OPTICS.
	EXTERIOR WALL PACK
	POOL LUMINAIRE

FIRE ALARM	
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR/GRAPHIC MAP
	FIRE ALARM REMOTE POWER SUPPLY
	CONTROL MODULE
	MONITOR MODULE
	HEAVY DUTY RELAY
	MANUAL PULL STATION
	WALL MOUNTED ADA STROBE
	WALL MOUNTED ADA STROBE WITH HORN
	WALL MOUNTED ADA STROBE WITH SPEAKER
	WALL MOUNTED HORN
	WALL MOUNTED SPEAKER
	CEILING MOUNTED SPEAKER
	AMPLIFIER
	ELECTROMAGNETIC DOOR HOLD OPEN
	SPRINKLER FLOW SWITCH
	SPRINKLER TAMPER SWITCH
	THERMAL DETECTOR
	PHOTOELECTRIC SMOKE DETECTOR
	DUCT SMOKE DETECTOR
	SINGLE STATION SMOKE DETECTOR
	REMOTE INDICATING LIGHT
	REMOTE INDICATING LIGHT WITH TEST SWITCH
	120V. MOTORIZED SMOKE DAMPER
	RESCUE ASSISTANCE PHONE
	FIRE FIGHTERS PHONE JACK

DISTRIBUTION AND RACEWAY	
	SURFACE MOUNTED PANELBOARD
	RECESSED PANELBOARD
	TRANSFORMER
	BRANCH CIRCUIT HOMERUN
	CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
	CONDUIT EXPOSED OR CONCEALED IN WALL OR CEILING
	RACEWAY UP
	RACEWAY DOWN
	CAPPED CONDUIT

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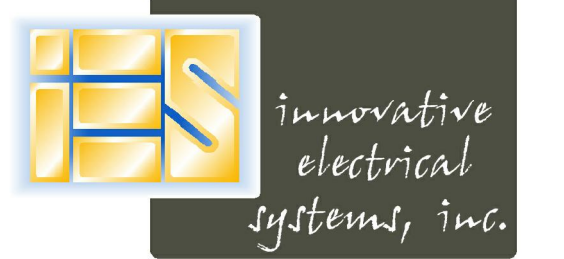
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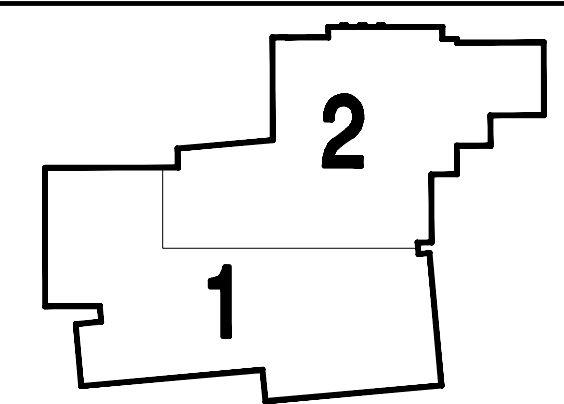
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KEY PLAN



Issues/Revisions:	Date:
SCHEMATIC DESIGN	04-13-04
DESIGN DEVELOPMENT	07-10-04
90% CDS	04-07-04
CONSTRUCTION DOCUMENTS	04-22-04

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ELECTRICAL COVER SHEET

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