Wesley Bradley Park

707 39th Ave SE

Puyallup, WA 98374

SHEET INDEX:

Aquatics Engineer Information	
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Project Owner/Developer Information	
Company	Wesley Homes Bradley Park LLC
Address	815 S 216th Street Des Moines, WA 98198

CODES AND STANDARDS:

ALL WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING CODES:

- STATE BUILDING CODE
- COUNTY/STATE/FEDERAL SWIMMING POOL/SPA CODE
- STATE/LOCAL PLUMBING CODE
- UNDERWRITER'S LABORATORY (UL)
- NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) PUBLICATION 70 "NATIONAL ELECTRIC CODE"
- ANSI/ADA
  - ANSI/APSP-1 "STANDARD FOR PUBLIC SWIMMING POOLS"
  - ANSI/APSP-7 "AMERICAN STANDARD FOR SUCTION ENTRAPMENT AVOIDANCE IN SWIMMING POOLS, WADING POOLS, SPAS, HOT TUBS, AND CATCH BASIN"
  - ANSI/APSP-11 "STANDARDS FOR WATER QUALITY IN PUBLIC POOLS AND SPAS"
- ISPSC 2021
- APSP
- ASTM
  - A615 "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT"
  - C33 "STANDARD SPECIFICATION FOR CONCRETE AGGREGATES"
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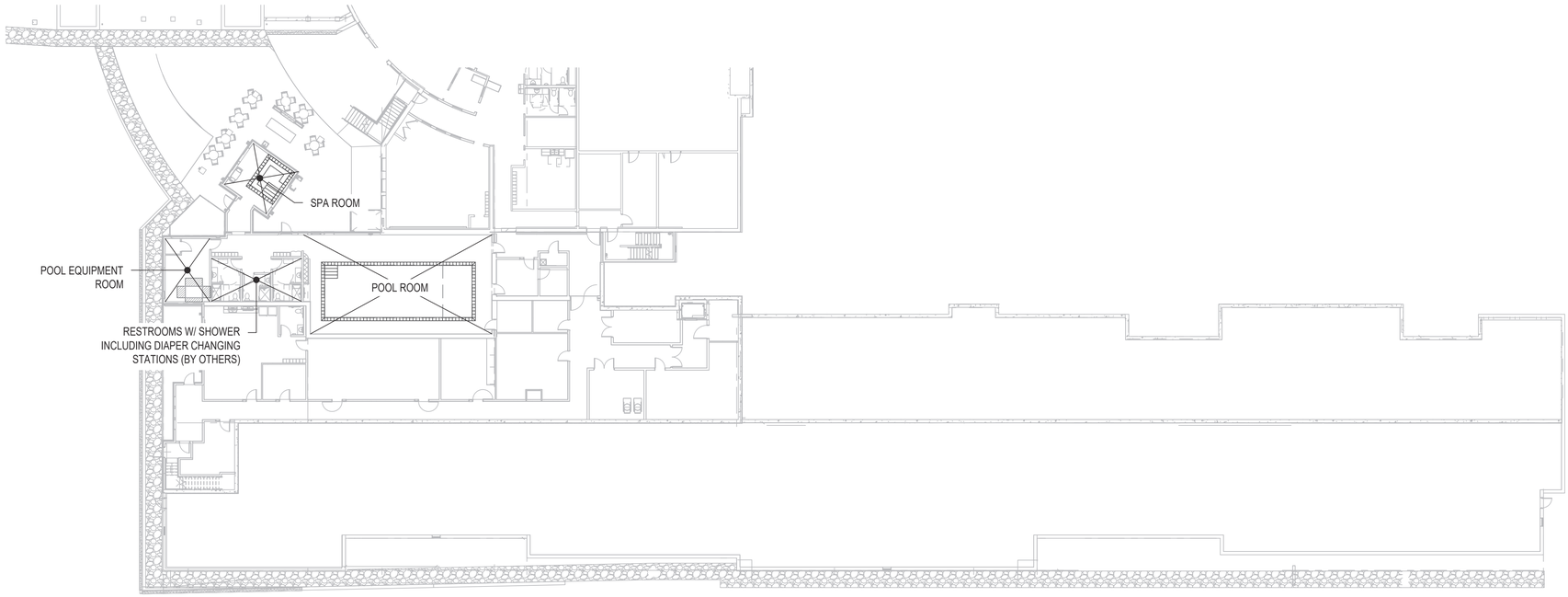
- NSF SEAL OF APPROVAL PROGRAM
- GCA G-84 "GUNITE AND SHOTCRETE"
- ASME PUBLICATION "CODING AND LABELING"
- TILE COUNCIL OF AMERICA, INC. PUBLICATION "HANDBOOK FOR CERAMIC TILE INSTALLATION"ACI 117, "STANDARD TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS"
- ACI
  - ACI301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
  - ACI 305R, "HOT WEATHER CONCRETING"
  - ACI 306R, "COLD WEATHER CONCRETING"
  - ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
  - ACI 347, "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"
  - ACI 506R, "GUIDE TO SHOTCRETE"
  - ACI 506.2, "SPECIFICATIONS FOR MATERIALS, PROPORTIONING AND APPLICATION OF SHOTCRETE" (REVISED 1983)



VICINITY PLAN
SCALE: 1" = 20'

NORTH

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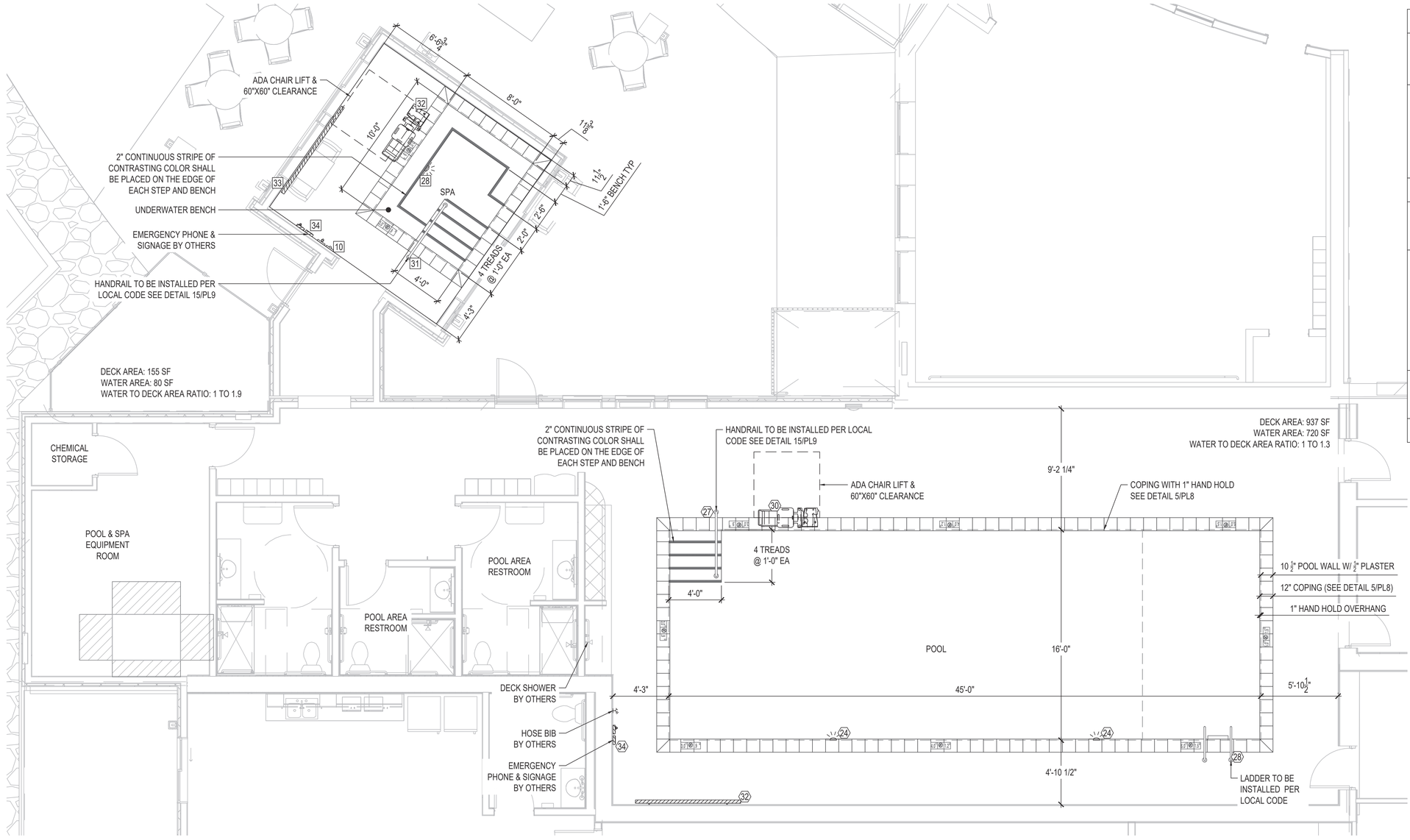
VICINITY PLAN

COVER

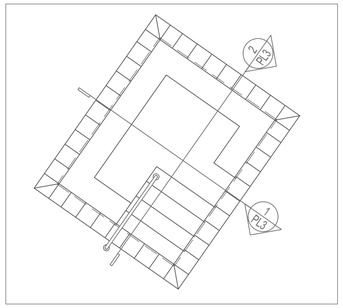


POOL & SPA AREA LAYOUT PLAN

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

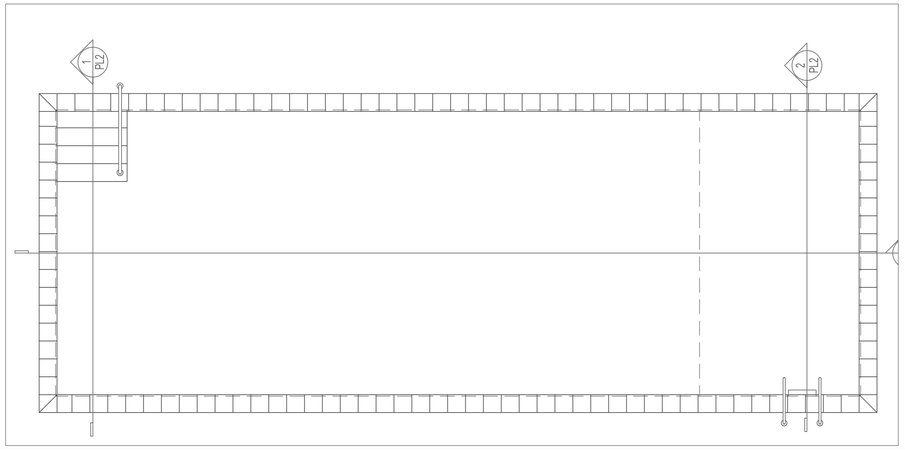
SHEET NOTES:

1. ALL DOORS AND WINDOWS TO POOL ROOM SHALL BE SELF-CLOSING AND SELF-LATCHING (BY OTHERS).
2. LATCHES SHALL BE OF ONE OF THE FOLLOWING TYPES:
   - 2.1. CONTINUOUSLY LOCKED
   - 2.2. CODED
   - 2.3. OR RAISED 60 IN. OR MORE IN HEIGHT
3. DOORS SHALL HAVE A SEPARATE LOCKING METHOD TO LOCK DOORS WHEN POOL IS CLOSED.
4. HAND ACTIVATED DOOR OPENING HARDWARE HEIGHT SHALL BE AT A MIN. HEIGHT OF 42 IN. AND MAX. HEIGHT OF 44 IN.
5. IF WINDOWS ARE CAPABLE OF OPENING AND ARE LESS THAN 42 IN. FROM FLOOR, MAX. OPENING SHALL BE 4 IN.
6. POOL ROOM DECK (INSTALLED BY OTHERS) SHALL BE IMPERVIOUS TO WATER, CLEANABLE, WATER-SEALED, AND SLIP RESISTANT.
7. DECKING SHALL BE SLOPED AT A MIN. OF ¼ IN. PER FT. AND A MAX. OF ½ IN. PER FT. AWAY FROM THE POOL AND WALLS TO ENSURE POSITIVE DRAINAGE TO DECK DRAINS.
8. POOL WALLS AND FLOORS MUST BE WHITE OR LIGHT PASTEL PLASTER.
9. ALL STEPS AND POOL SURFACES SHALL HAVE A NON-SLIP SURFACE.
10. CONTRASTING STRIPE
    - 10.1. ALL EDGES OF STEPS AND/OR BENCHES SHALL HAVE A 2 IN. STRIPE OF CONTRASTING COLOR ON THE HORIZONTAL FACE.
    - 10.2. ALL EDGES OF LEISURE DECKS SHALL HAVE A 2 IN. STRIPE OF CONTRASTING COLOR ON BOTH THE HORIZONTAL AND VERTICAL FACE.
    - 10.3. 4 IN. STRIPE OF CONTRASTING COLOR ON POOL WALLS AND FLOOR AT ANY GRADE BREAK GREATER THAN 1:12.
11. HOSE BIBBS WITH BACK FLOW PREVENTION SHALL BE INSTALLED SO THAT ALL AREAS OF THE DECK CAN BE REACHED BY A 50 FT. HOSE.



CROSS SECTION LEGEND

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



NORTH

LEGEND:

	UNDERWATER LIGHT	24, 28
	ACCESSIBLE LIFT AND AREA	30, 32
3.0' .9	DEPTH MARKER	
	EMERGENCY PHONE WITH SIGN STATING SITE ADDRESS AND PHONE NUMBER; FIRST AID KIT (BY OTHERS)	33, 34
	APPROX. LOCATION OF BACKBOARD, BUOY RING, REACHING POLE, SHEPHERD'S HOOK, AND BLANKET. VERIFY WITH ARCHITECTURAL (BY OTHERS)	32, 33
	HOSE BIBB WITH VACUUM BREAKER; VERIFY LOCATION WITH ARCHITECTURAL PLANS (BY OTHERS)	
	EMERGENCY SHUTOFF	10

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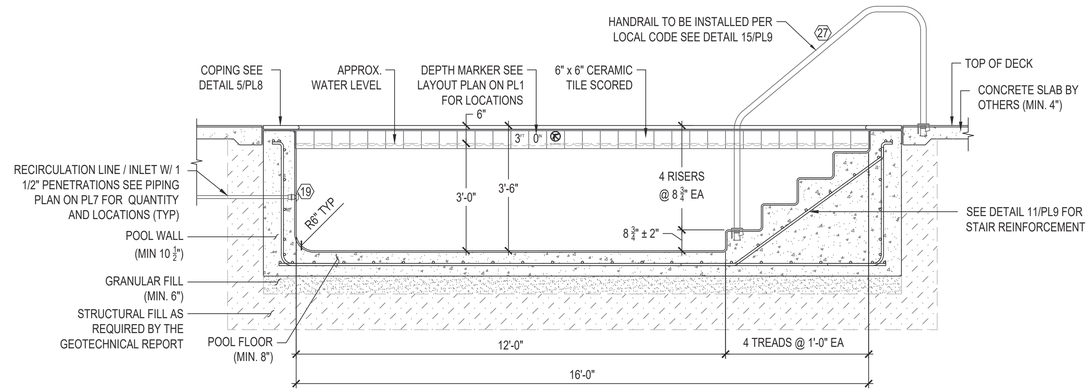
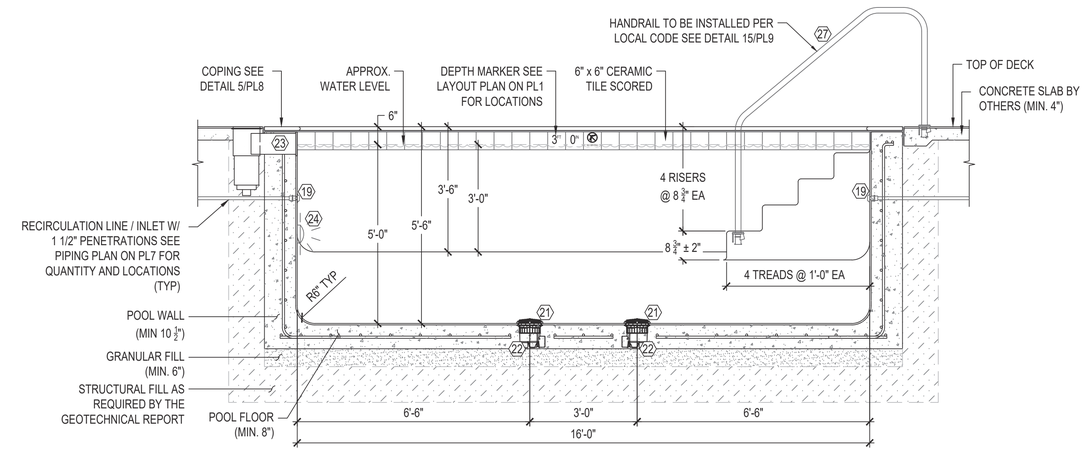
POOL ROOM LAYOUT, CROSS SECTION LEGEND

PL1



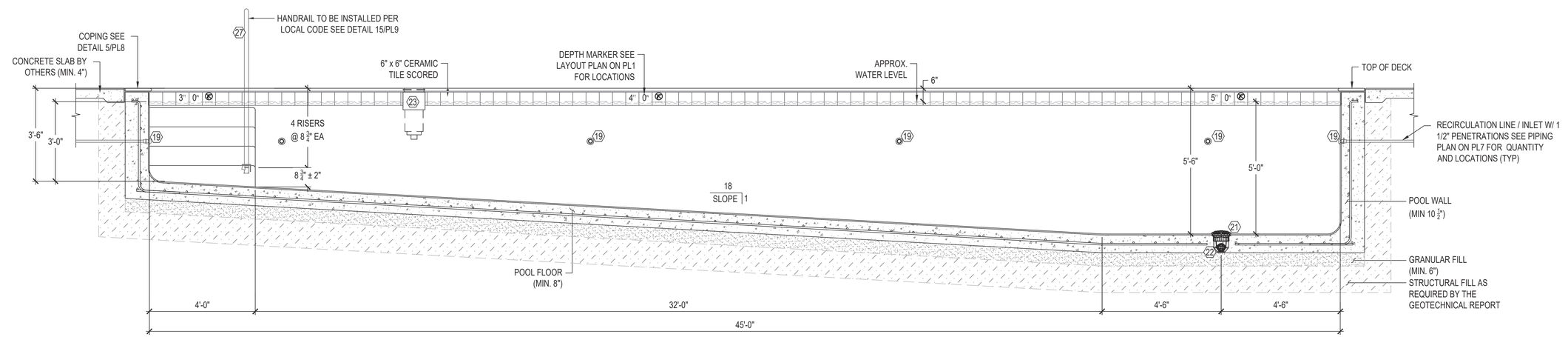
1 PL2 POOL TRANSVERSE SECTION

1/2" = 1'-0"



2 PL2 POOL TRANSVERSE SECTION

1/2" = 1'-0"



3 PL2 POOL LONGITUDINAL SECTION

1/2" = 1'-0"

NOTES:

1. SLOPE FLOOR ¼ IN. PER FT. TO MAIN DRAINS.
2. FOR REBAR AROUND MAIN DRAINS SEE DETAIL 13/PL9.
3. FOR ALL REINFORCEMENT SEE SCHEDULE IN DETAIL 10/PL9.
4. SEE PIPING PLAN ON PL7 FOR LOCATIONS OF RECIRCULATION INLETS.
5. SEE LAYOUT PLAN ON PL1 FOR UNDERWATER LIGHT LOCATIONS.
6. DRAIN TILE IS NOT SHOWN. CONSULT WITH CIVIL OR GEOTECH ENGINEER IF DRAIN TILE IS REQUIRED.

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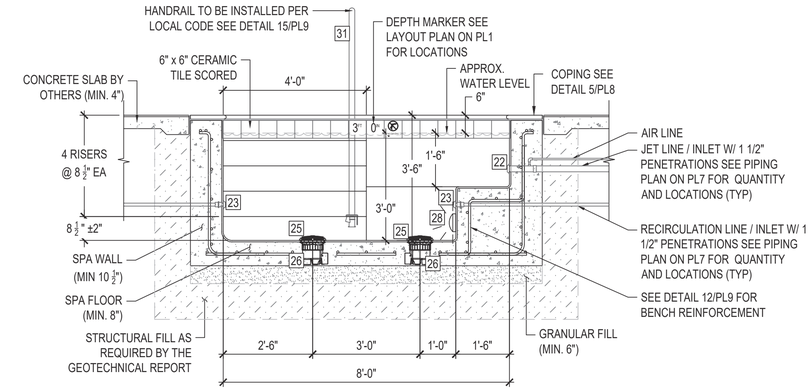
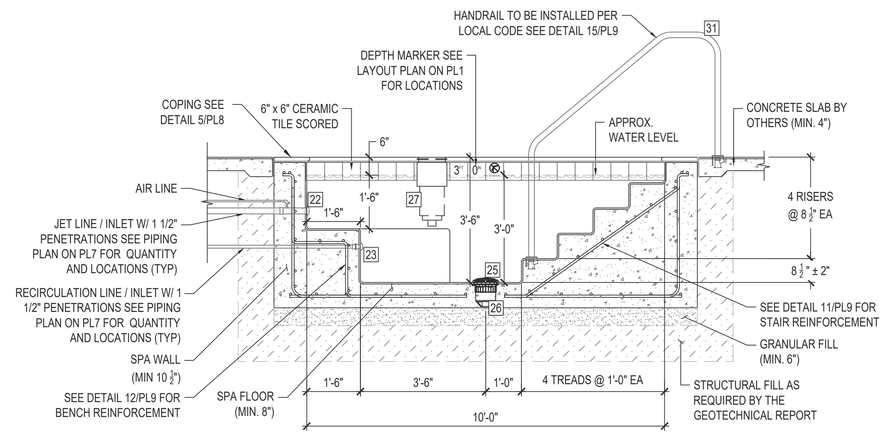
POOL CROSS SECTIONS

PL2



1/PL3 SPA TRANSVERSE SECTION

1/2" = 1'-0"



2/PL3 SPA LONGITUDINAL SECTION

1/2" = 1'-0"

NOTES:

1. SLOPE FLOOR ¼ IN. PER FT. TO MAIN DRAINS.
2. FOR REBAR AROUND MAIN DRAINS SEE DETAIL 13/PL9.
3. FOR ALL REINFORCEMENT SEE SCHEDULE IN DETAIL 10/PL9.
4. SEE PIPING PLAN ON PL7 FOR LOCATIONS OF RECIRCULATION INLETS.
5. SEE LAYOUT PLAN ON PL1 FOR UNDERWATER LIGHT LOCATIONS.
6. DRAIN TILE IS NOT SHOWN. CONSULT WITH CIVIL OR GEOTECH ENGINEER IF DRAIN TILE IS REQUIRED.

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SPA CROSS SECTIONS

PL3

DEFINITIONS:

1. "GENERAL CONTRACTOR" REFERS TO THE OWNERS REPRESENTATIVE ONSITE AND/OR THE PRIME CONTRACTOR.

2. "POOL CONTRACTOR" REFERS TO THE CONTRACTOR PERFORMING THE CONSTRUCTION OF ANY SWIMMING POOL, SPA, OR OTHER WATER APPARATUS.

3. "POOL OPERATOR" REFERS TO THE OWNER'S REPRESENTATIVE WHO SHALL BE LICENSED AND RESPONSIBLE FOR THE DAY TO DAY OPERATION OF ANY ONSITE SWIMMING POOL, SPA, OR OTHER WATER APPARATUS.

4. "STRUCTURE" AND/OR "BASIN" REFERS TO ANY POOL/SPA OR OTHER BODY OF WATER.

WORK AND/OR MATERIALS TO BE PERFORMED BY POOL CONTRACTOR:

1. CONSTRUCT ALL WORK DESCRIBED ON PLANS AND ADDITIONAL SPECIFICATIONS.

2. PROVIDE AND INSTALL ALL MATERIALS FOR LAYOUT AND FORMING AS REQUIRED.

3. PROVIDE AND INSTALL SPECIFIED REINFORCING STEEL FOR STRUCTURE.

4. PROVIDE MATERIAL, LABOR, TOOLS AND EQUIPMENT TO CONSTRUCT COMPLETE STRUCTURE.

5. PAINT STEPS AND APPLY NON-SLIP FINISH OR WATER/CHLORINE PROOF STRIP.

6. PROVIDE MATERIAL, LABOR, TOOLS AND EQUIPMENT TO INSTALL ALL NECESSARY PIPING AND RELATED APPURTENANCES TO CONSTRUCT THE COMPLETE HYDRAULIC AQUATIC SYSTEM.

7. PROVIDE AND INSTALL COMPLETE SKIMMER SYSTEM AS SPECIFIED.

8. PROVIDE AND INSTALL PLASTER FINISH WITH TILE BORDER ACCENTS.

9. PROVIDE, INSTALL AND TEST COMPLETE PUMPING SYSTEM TO INCLUDE STRAINERS, PUMPS, MOTORS, VALVES AND ALL OTHER RELATED APPURTENANCES REQUIRED FOR PROPER HYDRAULIC OPERATION.

10. SUPPLY AND INSTALL AN APPROVED DISINFECTION SYSTEM INCLUDING CHLORINATION, PH ADJUSTMENT AND CONTROL OF THE SAME.

11. SUPPLY SAFETY EQUIPMENT AS AGREED TO WITH OWNER PER CONTRACT. SPECIFIC SAFETY EQUIPMENT TO BE PROVIDED BY THE POOL CONTRACTOR INCLUDES: RING BUOY AND SHEPARD'S HOOK, IF NOT ALREADY EXISTING.

12. PROVIDE AND INSTALL ALL EQUIPMENT AND RELATED APPURTENANCES AS STATED IN THE EQUIPMENT LIST, ON THE DRAWINGS AND IN THE SPECIFICATIONS AS REQUIRED FOR THE PROPER OPERATION OF THE WATER BODY.

13. PROVIDE BYPASS VALVE FOR HEATER IF REQUIRED.

14. PROVIDE START-UP UPON COMPLETION OF THE PROJECT, AS DESCRIBED IN THESE NOTES.

15. PROVIDE 3/4" SUPPLY PIPE FROM AUTO-FILL TO MECHANICAL ROOM.

16. SUPPLY SPARE HAIR AND LINT BASKET.

17. PROVIDE LABOR AND MATERIAL FOR EXCAVATION AS REQUIRED FOR STRUCTURE, PIPE TRENCHES AND ALL RELATED/NECESSARY EXCAVATIONS FOR PROPER CONSTRUCTION OF THE BASIN.

WORK AND/OR MATERIALS BY OTHERS:

1. PROVIDE LABOR AND MATERIAL FOR EXCAVATION AS REQUIRED FOR STRUCTURE, PIPE TRENCHES AND ALL RELATED/NECESSARY EXCAVATIONS FOR PROPER CONSTRUCTION OF THE STRUCTURE.

2. OWNER OR OWNER'S REPRESENTATIVE TO SUPPLY GRANULAR FILL AS REQUIRED UNDER AND AROUND STRUCTURES. GRANULAR BEDDING MATERIAL SHALL CONFORM TO ASTM 3149.2F GRANULAR BEDDING OR EQUIVALENT STATE SPECIFICATION.

3. POOL ENGINEER AND/OR POOL CONTRACTOR ARE NOT RESPONSIBLE FOR STRUCTURAL ISSUES RELATED TO THE SOIL AND BASIN SUPPORT DESIGN. THE ENGINEER WILL PROVIDE THE OWNER/GENERAL CONTRACTOR/STRUCTURAL ENGINEER WITH LOAD REQUIREMENTS IF NEEDED. A STRUCTURAL ENGINEER SHALL DESIGN SUPPORT FOR THE BASIN INCLUDING, BUT NOT LIMITED TO BACKFILL, SUB-BASE, PIERS OR VAULTS AS WELL AS DECKING AND SUPPORT FOR THE DECKING.

4. DECK CONSTRUCTION, FINISHES, EXPANSION JOINTS, ETC.

5. BONDING AND GROUNDING OF STRUCTURE AND EQUIPMENT. BONDING DIAGRAMS WILL BE PROVIDED BY OWNER/GENERAL CONTRACTOR IF REQUIRED BY REVIEWING AGENCIES OR AUTHORITIES OF JURISDICTION.

6. PROVIDE VENTILATION OF AQUATIC ROOM MEETING ASHRAE STANDARDS INCLUDING MAINTAINING NEGATIVE AIR PRESSURE IN AQUATIC AREA.

7. PROVIDE ELECTRICAL LOW-VOLTAGE CONNECTIONS REQUIRED FOR COMPLETE INSTALLATION OF EQUIPMENT AND CONTROLS.

8. HIGH-VOLTAGE ELECTRICAL CONNECTIONS REQUIRED FOR MECHANICAL EQUIPMENT.

9. POTABLE WATER SUPPLY (WITH BACKFLOW PREVENTER OR OTHER ACCEPTABLE PREVENTION) AND SANITARY WASTE TO EQUIPMENT ROOM.

10. ELECTRICAL CONNECTION FOR HEATERS. GAS AND VENTING FOR HEATERS.

11. PROVIDE VENTING FOR EQUIPMENT MECHANICAL ROOM AND CHEMICAL STORAGE ROOM PER MANUFACTURER REQUIREMENTS AND LOCAL JURISDICTION REQUIREMENTS.

12. MECHANICAL ROOM, VENTED, WITH NON-SLIP FLOOR SLOPED AT A MIN OF ¼" PER FOOT TO A FLOOR DRAIN OR SUMP.

13. CHEMICAL STORAGE ROOM WITH LIGHT INTENSITY OF 20-FOOT CANDLES.

14. SIGNAGE AS REQUIRED BY THE AHJ.

15. GENERAL, MECHANICAL, AND ELECTRICAL CONSTRUCTION WORK NOT CALLED OUT IN PLANS.

16. DECK DRAIN, SUPPLIED BY POOL CONTRACTOR, SHALL BE INSTALLED BY CONCRETE (DECKING) CONTRACTOR AT TIME OF DECK CONSTRUCTION.

17. SUMP PIT FOR DECK DRAIN COLLECTION AND/OR BACKWASH TO BE PROVIDED FOR AND INSTALLED BY OTHERS. POOL CONTRACTOR NOT RESPONSIBLE FOR THE SUMP PIT.

18. SUMP PUMP, IF REQUIRED, IN EQUIPMENT MECHANICAL ROOM SUMP PIT TO BE PROVIDED AND INSTALLED BY OTHERS. POOL CONTRACTOR IS NOT RESPONSIBLE FOR THE SUMP PUMP.

19. RESTROOMS, SHOWERS AND RELATED PLUMBING FIXTURES AS SHOWN ON THE PLANS.
    - 19.1. HOT AND COLD OR TEMPERED WATER TO BE DELIVERED THROUGH A MIXING FAUCET WITH A MAX. TEMP. OF 120° FAHRENHEIT, WITH MIN. RUNNING WATER CYCLE OF AT LEAST 10 SECONDS IF FAUCETS ARE SELF-CLOSING.
    - 19.2. PROVIDE SINGLE SERVICE NON-GLASS SOAP DISPENSER AT BOTH THE SINKS AND IN THE SHOWER.
    - 19.3. PROVIDE SINGLE SERVICE TOWELS OR ELECTRIC HAND DRYER.
    - 19.4. SHOWER ENCLOSURE MUST CONFINE WATER TO SHOWER AREA.
    - 19.5. NON-SLIP, IMPERVIOUS FLOOR AND WALL SURFACE SHALL BE INSTALLED TO SHOWER HEAD HEIGHT.
    - 19.6. SHOWER FLOOR SHALL SLOPE TO SUFFICIENT FLOOR DRAIN TO PREVENT WATER FROM STANDING WITHIN THE SHOWER AREAS.
    - 19.7. A CURTAIN SHALL BE PROVIDED TO ALLOW SHOWERING IN THE NUDE.
    - 19.8. SHOWER WATER TEMP SHALL BE DELIVERED BETWEEN 90° AND 120° FAHRENHEIT.

20. ACQUIRING ALL NECESSARY PERMITS, TESTS, APPROVALS AND ASSOCIATED FEES RELATED TO THE COMPLETE CONSTRUCTION.

21. GENERAL CONTRACTOR SHALL PAY ALL NECESSARY SALES TAX AS RELATED TO THE CONSTRUCTION AS SHOWN ON THESE PLANS.

22. GENERAL CONTRACTOR SHALL OBTAIN CERTIFICATIONS OF INSPECTIONS AS REQUIRED.

23. GENERAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES.

CODES AND STANDARDS:

1. ALL WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING CODES:
   - STATE BUILDING CODE
   - COUNTY/STATE/FEDERAL SWIMMING POOL/SPA CODE
   - STATE/LOCAL PLUMBING CODE
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   - TILE COUNCIL OF AMERICA, INC. PUBLICATION "HANDBOOK FOR CERAMIC TILE INSTALLATION"

POOL CONTRACTOR RESPONSIBILITIES:

1. SUBMIT SPECIFICATIONS OR CUT SHEETS FOR EQUIPMENT TO ENGINEER OR AUTHORITY OF JURISDICTION UPON REQUEST AND PRIOR TO COMPLETION OF DESIGN AND/OR APPROVAL AS APPLICABLE.

2. INSTALL EQUIPMENT WITH BEST CONSTRUCTION PRACTICES AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

3. TESTS:
   - PIPING SHALL PROVE ABSOLUTELY TIGHT UNDER REQUIRED TESTS. TESTS SHALL BE PERFORMED BEFORE PIPE IS COVERED OR CONNECTED TO EQUIPMENT.
   - POOL CONTRACTOR MUST REMEDY DEFECTS FOUND AS A RESULT OF TESTING, THEN REPEAT TESTS AS NECESSARY UNTIL THE RESULTS ARE ACCEPTABLE.
   - PIPING SHALL BE TESTED AND PROVED TIGHT UNDER A STATIC WATER OR AIR PRESSURE TEST OF AT LEAST 35 PSI FOR 15 MINUTES AND SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
   - IF PIPING PASSES TEST, POOL CONTRACTOR IS NOT RELEASED OF THEIR RESPONSIBILITY TO GUARANTEE PIPING AGAINST MATERIALS AND WORKMANSHIP.

4. PIPING MUST BE LABELED AND MARKED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND LOCAL AND STATE CODES. PIPING MUST BE MARKED BY LABEL, COLOR CODE, TAG OR OTHER DISTINGUISHING MARK (PERMANENT MARKER NOT ALLOWED). BOTH DIRECTION OF FLOW AND AQUATIC FEATURE SERVED SHALL BE MARKED.

5. POOL CONTRACTOR MUST HYDRAULICALLY BALANCE FILTER SUCTION LINES AND HAVE ONE MAINLINE WITH GATEVALVE CONNECTED TO THE MANIFOLD.

6. SUBMIT TWO (2) BOUND COPIES OF ALL OPERATION AND MAINTENANCE INSTRUCTION MANUALS FOR EQUIPMENT AND INSTRUCT OWNER'S REPRESENTATIVE ON PROPER USE AND MAINTENANCE OF THE SYSTEM AND EQUIPMENT.

7. POOL CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIALS AGAINST DEFECTS FOR AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE.

8. START-UP:
   - POOL CONTRACTOR IS RESPONSIBLE FOR SYSTEM START-UP AND BALANCING OF FLOW RATE.
   - CHLORINE AND PH WATER CHEMISTRY TO BE INITIALLY BALANCED BY POOL CONTRACTOR WITH CHEMICALS PROVIDED BY OWNER AS RECOMMENDED BY ENGINEER AND/OR POOL CONTRACTOR.
   - POOL CONTRACTOR IS ONLY RESPONSIBLE FOR INITIAL WATER CHEMISTRY BALANCE IN REGARDS TO CHLORINE AND PH FOR A PERIOD OF SEVEN DAYS, AFTER THAT TIME IT IS THE RESPONSIBILITY OF THE OWNER'S REPRESENTATIVE, WHO SHALL BE A LICENSED POOL OPERATOR, TO BALANCE THE CHLORINE AND PH.
   - THE OWNER'S REPRESENTATIVE, WHO SHALL BE A LICENSED POOL OPERATOR, SHALL BE RESPONSIBLE FOR INITIAL AND ONGOING BALANCE OF ALL OTHER WATER CHEMICALS INCLUDING, BUT NOT LIMITED TO: SATURATION INDEX, CALCIUM HARDNESS, ALKALINITY, AND ALL REQUIRED LEVELS AS DICTATED BY CODE.

EXCAVATION AND BACKFILL:

1. BASIN EXCAVATION AND GRADING:
   - MACHINE EXCAVATION AND TRIM SHALL BE CARRIED ON AS ONE OPERATION TO AID IN ELIMINATING OVER EXCAVATION. IN ORDER TO OBTAIN AN EVEN WALL LINE, RADIUS TEMPLATES SHALL BE USED. FLOOR AREA SHALL BE FINE GRADED BY PLACING OF SCREENS AT INTERVALS.
   - MINOR VOIDS, WHICH MAY OCCUR DUE TO AN OVER EXCAVATION OR FROM BOULDERS REMOVED SHALL BE FILLED IN WITH A LEAN MIXTURE OF GUNITE OR CONCRETE. MAJOR DEFORMATIONS IN EXCAVATION CAUSED BY REMOVAL OF LARGE BOULDERS, COLLAPSE OF EARTH OF INADEQUATE BEARING CAPACITY OR CAVE-INS CAUSED BY SUBSURFACE WATER CONDITIONS SHALL BE REPAIRED, AS REQUIRED, AND FILLED WITH BANK RUN GRAVEL, CRUSHED STONE OR A LEAN MIX OF GUNITE BY THE GENERAL CONTRACTOR.
   - BEFORE COMPLETION OF EXCAVATION, THE FOOTING AT THE BASIN FLOOR TO WALL TRANSITION, WHICH IS A MONOLITHIC PORTION OF STRUCTURE SHELL, SHALL BE FORMED TO DIMENSIONS AS SHOWN ON DRAWINGS. A HEADER SHALL BE INSTALLED COMPLETELY AROUND THE BASIN, THE INSIDE FACE OF WHICH SHALL BE PROPERLY ANCHORED IN PLACE. A TAUT CUTTING WIRE SHALL BE ANCHORED TO ENSURE DIMENSIONAL INTEGRITY OF STRUCTURE. CUTTING WIRES SHALL BE PLACED AT INTERSECTIONS OF VERTICAL WALLS AND ON FLOOR ELEVATION PINS TO ENSURE DIMENSIONAL ACCURACY OF STRUCTURE.
   - COMPACT GRANULAR BASE MATERIAL TO 98% OF MAXIMUM MODIFIED PROCTER DRY DENSITY.

2. TRENCH EXCAVATION FOR PIPING:
   - GENERAL CONTRACTOR SHALL DIG A SUFFICIENTLY STRAIGHT TRENCH TO PERMIT PIPE TO BE LAID TRUE IN APPROXIMATE LOCATION SHOWN ON DRAWINGS AND AS COORDINATED IN THE FIELD.
   - GENERAL CONTRACTOR SHALL EXCAVATE, BRACE, SHEET AND DRAIN TRENCH SO THAT WORKMEN MAY WORK SAFELY AND EFFICIENTLY.

3. PREPARATION OF TRENCH BOTTOM:
   - TRENCH SHALL NOT HAVE STANDING WATER WHEN TRENCH BOTTOM IS PREPARED OR WHEN PIPE IS LAID.
   - EXCAVATE BELL OR FLANGE HOLES IF SO REQUIRED, SO THAT AFTER PLACEMENT ONLY THE BARREL OF THE PIPE RECEIVES BEARING PRESSURE FROM TRENCH BOTTOM, AND PIPE IS TRUE TO LINE AND GRADE.

4. PIPE LAYING:
   - PIPE SHALL BE CAREFULLY LOWERED INTO TRENCH PIECE BY PIECE IN A MANNER AS TO PREVENT DAMAGE TO MATERIALS AND PROTECTIVE COATINGS.
   - BEFORE LOWERING AND WHILE SUSPENDED, INSPECT PIPE FOR DEFECTS AND COATING DAMAGE. DEFECTIVE, DAMAGED OR UNSOUND PIPE SHALL BE REJECTED AND REMOVED FROM SITE.
   - REMOVE FOREIGN MATTER OR DIRT FROM INSIDE OF PIPE BEFORE IT IS LOWERED INTO ITS POSITION IN TRENCH, AND KEEP PIPE CLEAN BY APPROVED MEANS DURING AND AFTER LAYING.
   - BED PIPE UNIFORMLY THROUGHOUT ITS ENTIRE LENGTH.

5. BACKFILL AT PIPE ZONE:
   - PLACE GRANULAR BEDDING MATERIAL IN TRENCH SIMULTANEOUSLY ON BOTH SIDES OF PIPE FOR FULL WIDTH OF TRENCH IN SIX (6) INCH LIFTS TO A POINT ONE HALF PIPE DIAMETER ABOVE INVERT.
   - PLACE GRANULAR BACKFILL MATERIAL IN TRENCH FROM MID HEIGHT OF PIPE TO A POINT 12" ABOVE PIPE.
   - COMPACT BEDDING AND BACKFILL MATERIALS TO A DENSITY EQUAL TO OR GREATER THAN 95% OF MAXIMUM DENSITY, MODIFIED PROCTOR TEST.
   - PIPE ZONE EXTENDS FROM BOTTOM OF TRENCH TO A POINT 12 INCHES ABOVE TOP OF PIPE.
   - FIELD ENGINEER OR CONSTRUCTION MANAGER MAY REQUIRE BACKFILL IN PIPE ZONE TO BE PLACED BY HAND IF PIPE IS DISTURBED BY BACKFILL OPERATIONS OR IF BACKFILL MATERIAL IS NOT PROPERLY COMPACTED.

6. TRENCH BACKFILL:
   - BACKFILL TRENCH ABOVE PIPE ZONE WITH TRENCH EXCAVATED MATERIAL. BACKFILL SHALL BE PLACED IN LIFTS, NOT TO EXCEED ONE FOOT IN COMPACTION THICKNESS. COMPACT EACH LIFT USING VIBRATING OR OTHER MECHANICAL EQUIPMENT SUITABLE FOR SOILS ENCOUNTERED, TO DENSITY EQUAL TO OR GREATER THAN 95% OF MAXIMUM DENSITY AS MEASURED BY STANDARD PROCTOR TEST ASTM DESIGNATION D-698.
   - TESTS TO DETERMINE COMPACTED DENSITY OF BACKFILL MAY BE ORDERED BY FIELD ENGINEER OR CONSTRUCTION MANAGER IF, IN THE FIELD ENGINEER'S OPINION, COMPACTION IS NOT ADEQUATE.
   - EXCESS MATERIAL SHALL BE HAULED BY GENERAL CONTRACTOR TO A DISPOSAL AREA AS DIRECTED BY CONSTRUCTION MANAGER.

7. SUBGRADE COMPACTION:
   - TESTING LABORATORY MUST VERIFY THAT SPECIFIED COMPACTION IS ACHIEVED IN ACCORDANCE WITH THE FOLLOWING: COMPACT USING VIBRATING OR OTHER MECHANICAL EQUIPMENT SUITABLE FOR SOILS ENCOUNTERED, TO DENSITY EQUAL OR GREATER THAN 98%, OR AS STATED BELOW, OF MAXIMUM DENSITY AS MEASURED BY STANDARD PROCTOR TEST ASTM DESIGNATION D-698. GENERAL CONTRACTOR IS RESPONSIBLE FOR TESTING COSTS.
   - TEST FILL MATERIALS WITH ONE MECHANICAL ANALYSIS, ASTM D422, PER 1000 TONS OR PER 850 CUBIC YARDS OF EACH SOIL TYPE USED FOR FILL. MATERIALS NOT CONFORMING WITH APPROVED MATERIALS QUALIFICATION TESTS WILL BE REJECTED. COMPACTION TESTING SCHEDULE TO BE TO FOLLOWING MINIMUMS:

MIN. % MODIFIED DESCRIPTION	MINIMUM TESTS PROCTOR UNIT	AREA/LIFT
FILL UNDER PAVED & CONCRETE AREAS	98%	1/250 SQ YDS
CLASS 5 MATERIAL UNDER SLABS	98%	1/100 SQ YDS

   - CONFORM TO THE FOLLOWING STANDARDS: ACI-347-68: "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK" AND ACI-301-89: "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"

SHOTCRETE:

1. WORK IN THIS SECTION INCLUDES PROVIDING ALL SUPERVISION, MATERIALS, LABOR EQUIPMENT AND RELATED SERVICES NECESSARY TO PROVIDE AND INSTALL SHOTCRETE MATERIAL INDICATED ON DRAWINGS.

2. WORK SHALL CONFORM TO LATEST EDITIONS OF THE FOLLOWING STANDARDS/SPECIFICATIONS UNLESS OTHERWISE NOTED:
   - ACI 117, "STANDARD TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS"
   - ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
   - ACI 305R, "HOT WEATHER CONCRETING"
   - ACI 306R, "COLD WEATHER CONCRETING"
   - ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
   - ACI 347, "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"
   - ACI 506R, "GUIDE TO SHOTCRETE"
   - ACI 506.2, "SPECIFICATIONS FOR MATERIALS, PROPORTIONING AND APPLICATION OF SHOTCRETE" (REVISED 1983)

3. SUBMITTALS: IF REQUIRED BY GENERAL CONTRACTOR, POOL CONTRACTOR SHALL PROVIDE, AT HIS OWN EXPENSE, A MIX DESIGN TO ENGINEER 2 WEEKS PRIOR TO PLACING SHOTCRETE. MIX DESIGN SHALL INCLUDE THE FOLLOWING INFORMATION:
   - PROPORTIONS AND TYPES OF MATERIALS.
   - FINE AND COARSE AGGREGATE GRADATIONS PER ASTM C33.
   - METHOD OF DETERMINING THE MIX DESIGN PROPORTIONS.
   - WATER/CEMENT RATIO AND SLUMP.
   - AIR CONTENT OF BOTH PLASTIC AND HARDENED CONCRETE.

4. OWNER OR OWNER'S REPRESENTATIVE MUST NOTIFY THE POOL CONTRACTOR 14 DAYS PRIOR TO PLACEMENT OF SHOTCRETE IF COMPRESSIVE STRENGTH TESTING IS REQUIRED. IF THE OWNER REQUIRES THE TEST, THE STRENGTH SHALL BE MEASURED AT 7 AND 28 DAYS PER ASTM C39. IF THE TEST FAILS, THE POOL CONTRACTOR SHALL PAY FOR THE TEST. IF THE TEST PASSES, THE OWNER SHALL PAY FOR THE TEST.

5. MATERIALS:
   - PORTLAND CEMENT: TYPE 1, ASTM C 150 (NON AIR-ENTRAINED).
   - AGGREGATE: FINE AGGREGATE SHALL CONFORM TO ASTM C 33, #4 MAXIMUM SIZE, CLASS 4S. A COMBINED GRADING OF FINE AND COARSE AGGREGATE SHOULD CONFORM TO ONE OF GRADINGS OF TABLE 202B OF ACI 506.
   - WATER: MIXING WATER SHALL CONFORM TO ASTM C94.
   - IF ADMIXTURE IS INCLUDED AS PART OF THE DESIGN SUBMITTAL, A WRITTEN EXPLANATION OF REASON FOR ADMIXTURE MUST BE INCLUDED WITH SUBMITTAL.
   - NO CHLORIDE, CHLORIDE COMPOUNDS OR MATERIALS CONTAINING A CHLORIDE WILL BE PERMITTED.

6. PHYSICAL PROPERTIES REQUIREMENTS:
   - SHOTCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS AS MEASURED BY ASTM C39 PROCEDURES.
   - MAXIMUM WATER/CEMENT RATIO SHALL BE BETWEEN 0.35 AND 0.50.
   - AIR CONTENT OF HARDENED SHOTCRETE SHALL BE 5 PLUS OR MINUS 1% WHEN MEASURED IN ACCORDANCE WITH ASTM C231.
   - SHOTCRETE SHALL HAVE A SLUMP NO GREATER THAN THREE INCHES (3").

7. MIX PROPORTIONS SHALL BE CONTROLLED VOLUMETRIC OR WEIGHT BATCHING IN ACCORDANCE WITH ASTM C685.

8. ADEQUATE GROUND WIRES, BOTH VERTICAL AND HORIZONTAL, SHALL BE INSTALLED TO ESTABLISH THICKNESS AND SURFACE PLANES OF SHOTCRETE BUILD-UP TO CLEARLY ESTABLISH FORM WORK (AT EXTERIOR CORNERS OF WALLS, COLUMN OR BEAM CORNERS, AND OTHER LOCATIONS). THEY MAY ALSO BE USED AS SCREED GUIDES.

9. WHERE SHOTCRETE IS TO BE PLACED AGAINST LARGE SURFACES, THE SURFACE SHALL FIRST BE THOROUGHLY COMPACTED AND TRIMMED TO LINE AND GRADE. SHOTCRETE SHALL NOT BE PLACED ON A SURFACE WHICH IS FROZEN, SPONGY, OR WHEREVER THERE IS FREE WATER. SURFACE SHALL BE KEPT DAMP FOR SEVERAL HOURS BEFORE APPLYING SHOTCRETE.

10. CONCRETE FORM WORK SHALL BE CONSTRUCTED TO CONFORM TO SHAPES, LINES, AND DIMENSIONS OF CONCRETE CONSTRUCTION, AS DETAILED AND SHALL BE OF SUFFICIENT STRENGTH AND RIGIDITY THAT, WHEN PROPERLY SUPPORTED, WILL NOT DEFLECT UNDER THE WEIGHT OR PRESSURE OF WET CONCRETE, HEAVY FREQUENCY VIBRATION OR OTHER INCIDENTAL LOADS. BUILD FORMS SUFFICIENTLY TIGHT TO PREVENT LEAKAGE. DEFLECTION IN FORM WORK SHALL NOT EXCEED 1/360 OF EACH COMPONENT SPAN. HORIZONTAL FORM JOINTS WILL NOT BE PERMITTED IN BEAMS.

11. CONSTRUCTION JOINTS ARE TO BE TAPERED TO A THIN EDGE, OVER A WIDTH OF ABOUT ONE (1) FOOT. SQUARE CONSTRUCTION JOINTS ALLOWED ONLY WHERE THE JOINT WILL BE SUBJECTED TO COMPRESSIVE STRESS. THE ENTIRE JOINT SHALL BE THOROUGHLY CLEANED AND WETTED PRIOR TO APPLICATION OF ADDITIONAL SHOTCRETE.

12. WHERE A LAYER OF SHOTCRETE IS TO BE COVERED BY A SUCCEEDING LAYER, IT SHALL FIRST BE ALLOWED TO TAKE ITS INITIAL SET. ALL REBOUND SHALL BE REMOVED BY BROOMING. ANY LAITANCE WHICH HAS BEEN ALLOWED TO TAKE FINAL SET SHALL BE REMOVED BY SAND BLASTING AND THE SURFACE CLEANED WITH AN AIR-WATER JET. IN ADDITION, SURFACE SHALL BE THOROUGHLY SOUNDED WITH HAMMER FOR DRUMMY AREAS RESULTING FROM REBOUND POCKETS OR LACK OF BOND. DRUMMY AREA, SAGS OR OTHER DEFECTS SHALL BE CAREFULLY CUT OUT AND REPLACED WITH SUCCEEDING LAYER. SURFACES TO BE SHOT MUST BE DAMP.

13. SURFACES WHICH DO NOT RECEIVE SHOTCRETE SHALL BE PROTECTED BY ADEQUATE MEANS FROM DUST AND REBOUND.

14. PLACING SHOTCRETE:
   - DO NOT PLACE SHOTCRETE IF TEMPERATURE OF ADJACENT CONCRETE IS BELOW 40 DEG. F. OR ABOVE 85 DEG. F.
   - CONTROL APPLICATION THICKNESS, AIR PRESSURE AND/OR WATER CONTENT OF SHOTCRETE TO PREVENT SAGGING AND/OR DEBONDING OF SUCCESSIVE LAYERS.
   - APPLICATION NOZZLE SHALL BE HELD AS AT SUCH A DISTANCE AND ANGLE TO FACILITATE PLACEMENT OF THE SHOTCRETE BEHIND REINFORCEMENT PRIOR TO ACCUMULATION ON FACE OF REINFORCEMENT.

16. WALL AND FLOOR SURFACES SHALL RECEIVE FINISH AS FOLLOWS: WOOD FLOAT; STEEL TROWEL; THEN A LIGHT BROOM FINISH. POOL FLOOR SHALL BE WOOD FLOATED AFTER CONCRETE IS PLACED, SHAPED AND SMOOTHED UP BEFORE THE INITIAL "SET" HAS DEVELOPED. PRIOR TO FINAL INSPECTION CONTRACTOR SHALL EXAMINE THE ENTIRE SURFACE FOR ABNORMAL ROUGHNESS AND SHALL ENSURE A CLEAN SURFACE.

AFTER CURING SEVEN (7) DAYS, CONCRETE SURFACE SHALL BE ACID CLEANED TO REMOVED GRIT, LAITANCE AND OTHER CONCRETE COMPONETS. ACID MUST BE HOSED OFF UNDER PRESSURE. EXAMINE THE ENTIRE SURFACE FOR ABNORMAL ROUGHNESS.

17. POOL CONTRACTOR SHALL PROVIDE BEST MIX DESIGN, PLACEMENT AND CURING TECHNIQUES TO MINIMIZE SHRINKAGE CRACKING.

18. CURING AND COLD WEATHER PROTECTION: IT IS REQUIRED THAT SURFACES BE KEPT CONTINUOUSLY WET FOR AT LEAST SEVEN (7) DAYS. CURING BY SPRAYING APPLIED MEMBRANES WILL NOT BE PERMITTED. AIR IN CONTACT WITH SHOTCRETE SURFACES SHALL BE MAINTAINED AT TEMPERATURES ABOVE FREEZING FOR A MINIMUM OF SEVEN (7) DAYS. MORE DETAILED RECOMMENDATIONS ON WINTER PROTECTION MAY BE FOUND IN ACI 306R.

REINFORCEMENT:

1. BEFORE PLACING, THOROUGHLY CLEAN REINFORCEMENT OF ANY COATING, WHICH WOULD REDUCE BONDING. DO NOT HEAT, CUT OR BEND BARS WITHOUT APPROVAL. BARS SHALL BE BENT COLD.

2. METAL REINFORCEMENT SHALL BE ACCURATELY POSITIONED AND SECURED AGAINST DISPLACEMENT BY USING ANNEALED IRON WIRE TIES OR SUITABLE CLIPS AT INTERSECTIONS. VERTICAL REINFORCEMENT IN CONCRETE WALLS SHALL BE SPACED TO ITS PROPER DISTANCE FROM FACE OF FORMS BY MEANS OF APPROVED PRE-CAST MORTAR OR CONCRETE BLOCKS. THE SIZE OF THE SURFACE OF BLOCKS TO BE PLACED ADJACENT TO FORMS SHALL NOT EXCEED 2 1/2" SQUARE AND BLOCKS SHALL BE ACCURATELY CAST TO THE THICKNESS REQUIRED.

3. REINFORCING BARS SHALL MEET ASTM A615 GRADE 40.

4. REINFORCING BARS SHALL BE FABRICATED TO DIMENSIONS SHOWN ON PLANS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONCRETE REINFORCING STEEL INSTITUTE.

5. MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE NOT LESS THAN 1-1/2 TIMES BAR DIAMETER OR LESS THAN 1-1/3 TIMES THE NORMAL SIZE OF THE COARSE AGGREGATE, OR LESS THAN 1". CONTACT LAP SPLICES ARE ALLOWED.

6. NO SPLICES OF REINFORCEMENT, ALL REINFORCING BARS SHALL LAP ACCORDING TO THE REBAR SCHEDULE PROVIDED IN THE DETAILS.

7. REINFORCING SHALL BE PROTECTED BY THICKNESS OF CONCRETE INDICATED ON PLANS. WHERE NOT OTHERWISE SHOWN, CONCRETE COVERAGE OVER REINFORCEMENT ON FORMED SURFACES EXPOSED TO GROUND WATER OR WEATHERING SHALL BE 2".

MATERIALS AND EQUIPMENT:

1. POOL/SPA PLASTER:
   - PLASTER SHALL BE STANDARD PLASTER, WHITE IN COLOR, AND SHALL MEET THE STATE REQUIREMENTS OF 70% LIGHT REFLECTANCE.
   - SURFACES MUST BE THOROUGHLY CLEANED OF DUST, OIL, PAINT AND OTHER LOOSE OR FOREIGN MATTER BEFORE APPLICATION.
   - PLASTER SHALL BE PLACED AT A THICKNESS OF 3/8" TO 1/2" AND SHALL BE TROWELED TO A SMOOTH, DENSE, IMPERVIOUS SURFACE EXERCISING EXTREME CARE TO AVOID STAINS.

2. TILE MATERIALS:
   - TILE PRODUCT TO BE PURCHASED BY POOL CONTRACTOR AS SPECIFIED BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
   - TILE SHALL BE A STANDARD GRADE UNGLAZED CERAMIC FLOOR TILE MEETING ANSI 137.1.
   - BOND COAT SHALL BE LATEX PORTLAND CEMENT MORTAR IN COMPLIANCE WITH ANSI 108.5.
   - GROUTING MATERIAL SHALL BE PRE-MIXED, SANDED, COLORED, TILE GROUT IN COMPLIANCE WITH ANSI A108.10.
   - PRODUCT TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AS WELL AS IN COMPLIANCE WITH ANSI 108.1

3. PUMPS:
   - POOL CONTRACTOR SHALL PROVIDE MATERIALS, EQUIPMENT AND LABOR TO INSTALL AND TEST PUMPING SYSTEMS COMPLETE WITH PUMPS, MOTORS, MOUNTING BASES, PIPING, VALVES, AND APPURTENANCES AS INDICATED IN PLANS AND SPECIFICATIONS.
   - PUMPS SHALL BE HORIZONTAL, CLOSE-COUPLED, END SUCTION, CENTRIFUGAL PUMPS WITH INTEGRAL HAIR AND LINT STRAINER.
   - PUMPS SHALL BE MODEL SPECIFIED IN EQUIPMENT LIST UNLESS AN EQUAL IS APPROVED BY THE ENGINEER.

4. VALVES:
   - POOL CONTRACTOR SHALL PROVIDE MATERIALS, EQUIPMENT AND LABOR TO INSTALL AND TEST VALVES AS PART OF THE HYDRAULIC PIPING SYSTEM AS SHOWN ON PLANS AND DESCRIBED IN SPECIFICATIONS.
   - VALVES SHALL

POOL EQUIPMENT LIST

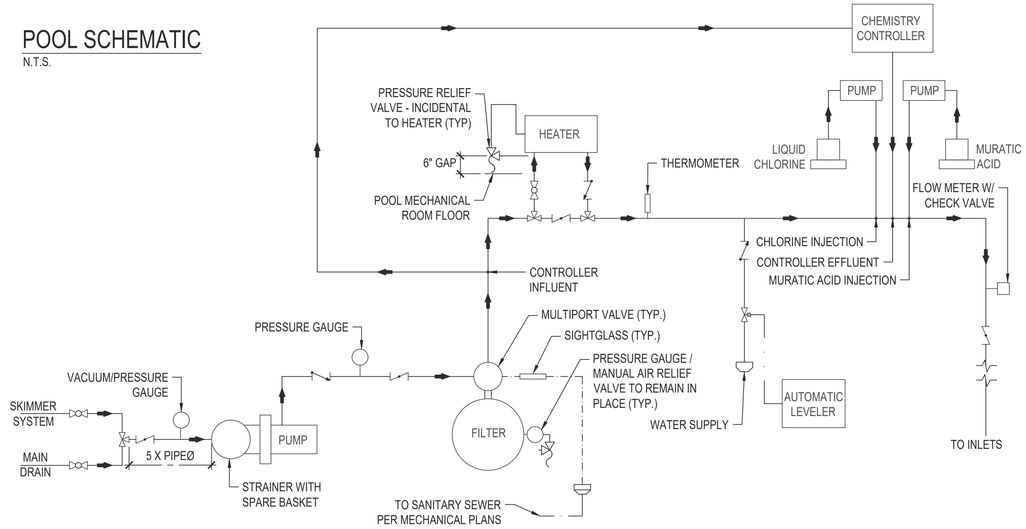
MARK	EQUIPMENT	QTY	DESCRIPTION	MEP LOADS
1	PUMP (RECIRCULATION)	1	JANDY EPUMP VARIABLE-SPEED PUMP, MFG#:VSSHP270DV2A(S), 2.70 THP,	230/115VAC, 10.5/15.0A, 50/60HZ
2	FILTER	1	JANDY 30" SFSM SAND FILTER WITH JANDY UNION CONNECTION, MFG#:SFSM-100, DESIGN FLOW RATE: 20GPM/SQFT, FILTER AREA: 5.0SQFT, MAX FLOW RATE: 100GPM	-
3	HEATER	1	JANDY JXI POOL HEATER, ASME CERTIFIED, NATURAL GAS, 399K BTU, MAX FLOW RATE: 100GPM, MIN FLOW RATE: 30GPM, MFG#:JXI400NC	240V, 60HZ
4	CHEMICAL CONTROLLER	1	IPS-M820 AUTOMATED PH AND ORP CONTROLLER. PH SET LEVEL 7.0- 8.0.	110/230 VAC
5	DISINFECTION	1	LIQUID CHLORINE FED THROUGH ROLA-CHEM PERISTALTIC FEED PUMP, MFG#:543702, MODEL#:RC103SC, ADJ 30PSI, 0.34 - 38 GPD; FEEDER PUMP INTERLOCKED WITH RECIRCULATION PUMP TO PREVENT OPERATING ON OFF CYCLE	120V, 2.5A
6	DISINFECTION STORAGE	1	LIQUID CHLORINE STORED IN 15 GAL CARBOY, ON TRAY WITH 1IN LIP, RATED FOR CONTAINMENT OF HAZARDOUS	-
7	PH BALANCE	1	MURIATIC ACID FED THROUGH ROLA-CHEM PERISTALTIC FEED PUMP, MFG#:543702, MODEL#:RC103SC, ADJ 30PSI, 0.34 - 38 GPD; FEEDER PUMP INTERLOCKED WITH RECIRCULATION PUMP TO PREVENT OPERATING ON OFF CYCLE	120V, 2.5A
8	ACID STORAGE	1	MURIATIC ACID STORED IN 15 GAL CARBOY, ON TRAY WITH 1IN LIP, RATED FOR CONTAINMENT OF HAZARDOUS	-
9	FLOW METER W/ CHECK VALVE	1	FLOWVIS FLOW METER, MFG#: FV-2, OPERATING RANGE: 70-110 GPM. PRESSURE RATING: 50 PSI.	
10	THERMOMETER	1	SL1DW INLINE THERMOMETER FOR POOLS	
11	VACUUM / PRESSURE GAUGE	1	2" DIA. COMBINATION VACUUM/PRESSURE GAUGE - CONTRACTOR TO SUPPLY	
12	PRESSURE GAUGE	1	2" DIA. PRESSURE GAUGE - CONTRACTOR TO SUPPLY	
13	BALL VALVE	±3	PROVIDED AND INSTALLED BY POOL CONTRACTOR	
14	BUTTERFLY VALVE	±4	PROVIDED AND INSTALLED BY POOL CONTRACTOR	
15	CHECK VALVE	±3	PROVIDED AND INSTALLED BY POOL CONTRACTOR	
18	SOLENOID VALVE	1	PROVIDED AND INSTALLED BY POOL CONTRACTOR	
19	WALL INLETS	10	HAYWARD 1.5" MIP HYDROSTREAM FITTING, 1" OPENING, DIRECTIONAL FLOW, MFG#:SP1419E	
20	POOL FILL WALL INLET	1	HAYWARD 1.5" MIP HYDROSTREAM FITTING, 1" OPENING, DIRECTIONAL FLOW, MFG#:SP1419E	
21	MAIN DRAINS	2	AQUASTAR 14" SQUARE ANTI-ENTRAPMENT OUTLET COVER WITH PREFABRICATED SUMP, MFG#:914101SSB, OPEN AREA: 84 SQ.IN.	
22	HYDROSTATIC RELIEF VALVE	2	AQUASTAR SELF-CONTAINED HYDROSTATIC VALVE ASSEMBLY , MFG#HVC101 WITH PLUG, MFG#HV101	
23	SKIMMERS	2	AQUASTAR WHITE FLOW STAR WATER BONDED SKIMMER W/ WATERSTOP FACE, MFG#:SKR15101	
24	LIGHTS	2	JANDY LARGE DAYLIGHT WHITE LED LIGHT, 100FT CORD, MFG#:WPHV5LS100, LIGHT NICHE MFG#:PLNICLRG	120V, 65W, 0.5A
25	LIGHT TRANSFORMER	1	HAYWARD UCL WALL MOUNT TRANSFORMER, MFG#:LTBUY11300	120V INPUT,12-14V OUTPUT 300W
26	AUTOMATIC LEVELER	1	JANDY K2300CKC ELECTRONIC WATER LEVELOR	110/220VAC50/50HZ, 0.5A
27	HANDRAILS	1	S. R. SMITH, THREE-BEND HANDRAILS, MFG#:3HR-5.5-049-1; STAINLESS STEEL TUBE WITH MIRROR FINISH; WITH (QTY:2) PERMA ANCHOR SOCKETS PER HANDRAIL, MFG:PS-4019-BC, 4" BRASS AND (2) PERMA STAINLESS ESCUTCHEONS PER HANDRAIL, MODEL NO PE-0019-S; INSTALLED PER LOCAL CODE	
28	LADDER	1	S.R. SMITH 24" COMMERCIAL LADDER, MODEL NO LF-24-3B, WITH (2) PERMA ANCHOR SOCKETS , MODEL NO. PS-4019-B, 4" BRASS AND (2) PERMA STAINLESS ESCUTCHEONS, MODEL NO PE-0019-S	
29	TEST KIT	1	TAYLOR K-2006 - CHLORINE FAS-DPD KIT	
30	HANDICAPPED LIFT	1	AQUACREEK F-RNGR 2 LIFT W/O ANCHOR WHICH PLASTICS	
31	CLEANING SYSTEM	1	PENTAIR VACUUM R201276 PROVAC #214 W/ #152 HANDLE & # 175 WHEELS AND HOSE OREQ MODEL NO. VH3245 MASTER FLEX 1-1/2"X45'; PENTAIR POLE MODEL NO R191306, 8' TO 15.5 '. PENTAIR BRUSH #92	
32	SAFETY EQUIPMENT	1	BUOY (CAL GW-24 RING BUOY USCG APVD, 24 DIAM, WHITE), SAFETY HOOK AND POLE (PENTAIR #153, MODEL NO. R221026; PENTAIR #818, MODEL NO. R191104 - 16' FIBERGLASS STR)	
33	FIRST AID KIT & SIGNAGE	2	16-UNIT FIRST AID KIT AND SIGNAGE AS REQUIRED BY THE STATE OF WASHINGTON WAC	

NOTE:

EQUIPMENT SHALL BE USED AS LISTED OR AN EQUAL APPROVED BY THE ENGINEER. ALL RECIRCULATION EQUIPMENT USED SHALL BE NSF/ANSI STANDARD 50 CERTIFIED OR APPROVED BY AN ORGANIZATION ACCREDITED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE.

POOL SCHEMATIC

N.T.S.

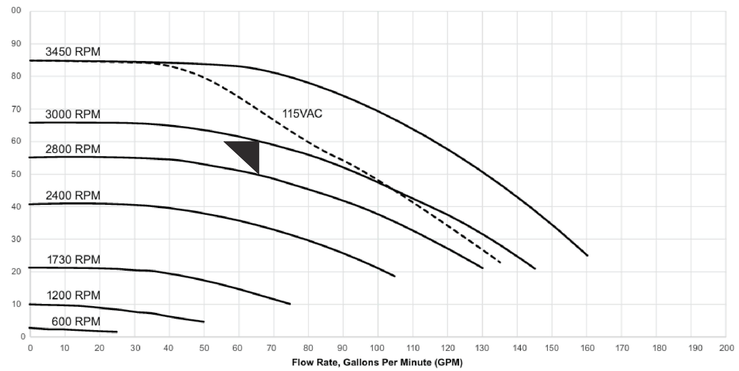


SCHEMATIC NOTES:

1. EQUIPMENT ROOM SCHEMATICS ARE FOR ILLUSTRATIVE PURPOSES ONLY. SEE LAYOUT ON THE PIPING PLAN FOR EQUIPMENT LOCATIONS.
2. FLOW METER SHALL BE LOCATED AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. FLOW METER MUST HAVE MEASUREMENT CAPACITY OF AT LEAST 1.5 TIMES DESIGN RECIRCULATION FLOW RATE. FLOW METER MUST BE ACCURATE WITHIN 10% OF ACTUAL GPM. LOCATE IN AREA ACCESSIBLE FOR READING.
3. VERIFY PIPE SIZES WITH PIPING PLANS ON PL7.
4. ALL PIPING SHALL BE PERMANENTLY MARKED AND DIRECTION OF FLOW INDICATED PER LOCAL CODE.
5. PROVIDE CPVC PIPING 5 FEET UPSTREAM & DOWNSTREAM AT BYPASS OF POOL HEATER.
6. DESIGN OF THE WATER HEATING SYSTEM SHALL PREVENT THE INTRODUCTION OF WATER IN EXCESS OF 115 DEGREES F TO THE POOL.
7. A PRESSURE RELIEF VALVE WITH A MAXIMUM PRESSURE RATING OF 75 POUNDS PER SQUARE INCH AND HAVING A THERMAL CAPACITY OF AT LEAST EQUAL TO THE HEAT INPUT RATING OF THE HEATER SHALL BE PROVIDED WITH THE DISCHARGED PIPE TO WITHIN SIX INCHES OF THE FLOOR.
8. ALL CHEMICAL FEED PUMPS SHALL BE INTERLOCKED WITH THE RE-CIRCULATION PUMP.
9. CHEMICAL CONTAINERS IN MECHANICAL ROOM MUST BE PROPERLY LABELED, MSDS DATA SHEETS PROVIDED, AND A WARNING SIGN STATING, "AUTHORIZED PERSONNEL ONLY" ON DOOR TO CHEMICAL STORAGE ROOM.
10. POOL, MECHANICAL & ELECTRICAL CONTRACTORS SHALL COORDINATE & VERIFY ALL LOCATIONS & CLEARANCES OF ALL POOL EQUIPMENT.

SCHEMATIC LEGEND:

	BUTTERFLY VALVE
	BALL VALVE
	CHECK VALVE
	FLOW DIRECTION



POOL RECIRCULATION PUMP CURVE

Aquatic Engineering Consultants
PO Box 10836 ~ Fargo, ND 58106
Phone: 701.730.6370

WESLEY BRADLEY PARK

707 39TH AVE SE
PUYALLUP, WA 98374

#	Date:	Description:
1	11/8/25	DOH REV COMM
2		
3		
4		
5		

Date:	June 17, 2025
Project Number:	25028WBP
Scale:	SEE PLAN SHEET
Drawn/Designed By:	AMS/NH
Checked By:	MAZ

POOL EQUIPMENT LIST, SCHEMATIC, PUMP CURVE

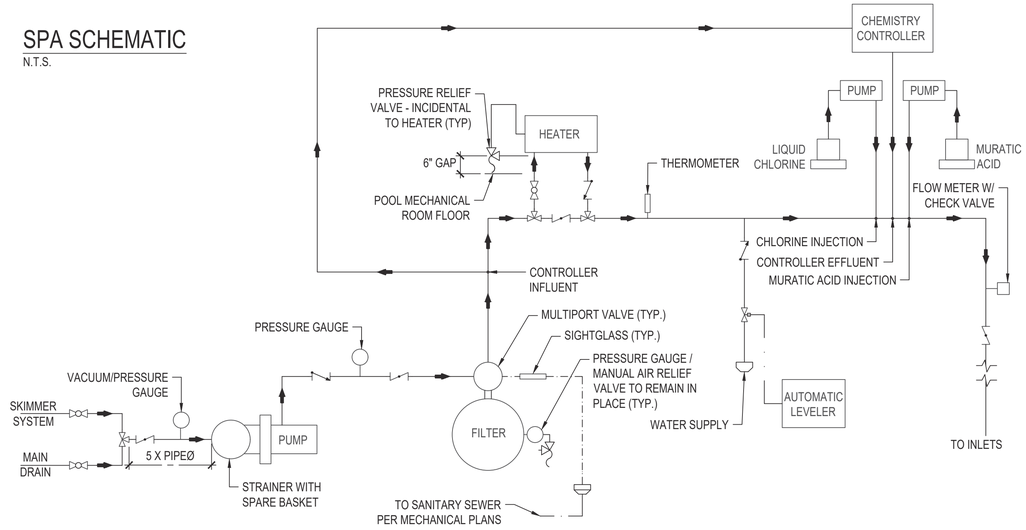
PL5

SPA EQUIPMENT LIST

MARK	EQUIPMENT	QTY	DESCRIPTION	MEP LOADS
1	PUMP (RECIRCULATION)	1	JANDY EPUMP VARIABLE-SPEED PUMP, MFG#:VSSHP270DV2A(S), 2.70 THP,	230/115VAC, 10.5/15.0A, 50/60HZ
2	PUMP (SPA AGITATION)	1	JANDY EPUMP VARIABLE-SPEED PUMP, MFG#:VSSHP270DV2A(S), 2.70 THP,	230/115VAC, 10.5/15.0A, 50/60HZ
3	FILTER	1	JANDY 30" SFSM SAND FILTER WITH JANDY UNION CONNECTION, MFG#:SFSM-100, DESIGN FLOW RATE: 20GPM/SQFT, FILTER AREA: 5.0SQFT, MAX FLOW RATE: 100GPM	-
4	HEATER	1	JANDY JXI POOL HEATER, ASME CERTIFIED, NATURAL GAS, 399K BTU, MAX FLOW RATE: 100GPM, MIN FLOW RATE: 30GPM, MFG#:JXI400NC	240V, 60HZ
5	CHEMICAL CONTROLLER	1	IPS-M820 AUTOMATED PH AND ORP CONTROLLER. PH SET LEVEL 7.0- 8.0.	110/230 VAC
6	DISINFECTION	1	LIQUID CHLORINE FED THROUGH ROLA-CHEM PERISTALTIC FEED PUMP, MFG#:543702, MODEL#:RC103SC, ADJ 30PSI, 0.34 - 38 GPD; FEEDER PUMP INTERLOCKED WITH RECIRCULATION PUMP TO PREVENT OPERATING ON OFF CYCLE	120V, 2.5A
7	DISINFECTION STORAGE	1	LIQUID CHLORINE STORED IN 15 GAL CARBOY, ON TRAY WITH 1IN LIP, RATED FOR CONTAINMENT OF HAZARDOUS	-
8	PH BALANCE	1	MURIATIC ACID FED THROUGH ROLA-CHEM PERISTALTIC FEED PUMP, MFG#:543702, MODEL#:RC103SC, ADJ 30PSI, 0.34 - 38 GPD; FEEDER PUMP INTERLOCKED WITH RECIRCULATION PUMP TO PREVENT OPERATING ON OFF CYCLE	120V, 2.5A
9	ACID STORAGE	1	MURIATIC ACID STORED IN 15 GAL CARBOY, ON TRAY WITH 1IN LIP, RATED FOR CONTAINMENT OF HAZARDOUS	-
10	EMERGENCY SHUTOFF	1	PROVIDED AND INSTALLED BY POOL CONTRACTOR	-
11	TIMER	1	15 INTERVAL MINUTE TIMER PROVIDED AND INSTALLED BY POOL CONTRACTOR	-
12	FLOW METER W/ CHECK VALVE	2	FLOWVIS FLOW METER, MFG#: FV-2, OPERATING RANGE: 70-110 GPM. PRESSURE RATING: 50 PSI.	-
13	THERMOMETER	1	SL1DW INLINE THERMOMETER FOR POOLS	-
14	VACUUM / PRESSURE GAUGE	1	2" DIA. COMBINATION VACUUM/PRESSURE GAUGE - CONTRACTOR TO SUPPLY	-
15	PRESSURE GAUGE	1	2" DIA. PRESSURE GAUGE - CONTRACTOR TO SUPPLY	-
16	BALL VALVE	±3	PROVIDED AND INSTALLED BY POOL CONTRACTOR	-
17	BUTTERFLY VALVE	±4	PROVIDED AND INSTALLED BY POOL CONTRACTOR	-
18	CHECK VALVE	±3	PROVIDED AND INSTALLED BY POOL CONTRACTOR	-
19	SOLENOID VALVE	1	PROVIDED AND INSTALLED BY POOL CONTRACTOR	-
22	JET INLETS	7	SPG-85-0023 (23308-100-000 VENTURI TEE GUNITE)	
23	WALL INLETS	4	HAYWARD 1.5" MIP HYDROSTREAM FITTING, 1" OPENING, DIRECTIONAL FLOW, MFG#:SP1419E	-
24	SPA FILL WALL INLET	1	HAYWARD 1.5" MIP HYDROSTREAM FITTING, 1" OPENING, DIRECTIONAL FLOW, MFG#:SP1419E	-
25	MAIN DRAINS	2	AQUASTAR 14" SQUARE ANTI-ENTRAPMENT OUTLET COVER WITH PREFABRICATED SUMP, MFG#:914101SSB, OPEN AREA: 84 SQ.IN.	-
26	HYDROSTATIC RELIEF VALVE	2	AQUASTAR SELF-CONTAINED HYDROSTATIC VALVE ASSEMBLY , MFG#HVC101 WITH PLUG, MFG#HV101	-
27	SKIMMERS	1	AQUASTAR WHITE FLOW STAR WATER BONDED SKIMMER W/ WATERSTOP FACE, MFG#:SKR15101	-
28	LIGHTS	1	JANDY LARGE DAYLIGHT WHITE LED LIGHT, 100FT CORD, MFG#:WPHV5LS100, LIGHT NICHE MFG#:PLNICLRG	120V, 65W, 0.5A
29	LIGHT TRANSFORMER	1	HAYWARD UCL WALL MOUNT TRANSFORMER, MFG#:LTBUY11300	120V INPUT,12-14V OUTPUT 300W
30	AUTOMATIC LEVELER	-	SHARED WITH POOL	-
31	HANDRAILS	1	S. R. SMITH, THREE-BEND HANDRAILS, MFG#:3HR-5.5-049-1; STAINLESS STEEL TUBE WITH MIRROR FINISH; WITH (QTY:2) PERMA ANCHOR SOCKETS PER HANDRAIL, MFG:PS-4019-BC, 4" BRASS AND (2) PERMA STAINLESS ESCUTCHEONS PER HANDRAIL, MODEL NO PE-0019-S; INSTALLED PER LOCAL CODE	-
32	HANDICAPPED LIFT	1	AQUACREEK F-RNGR 2 LIFT W/O ANCHOR WHICH PLASTICS	-

SPA SCHEMATIC

N.T.S.

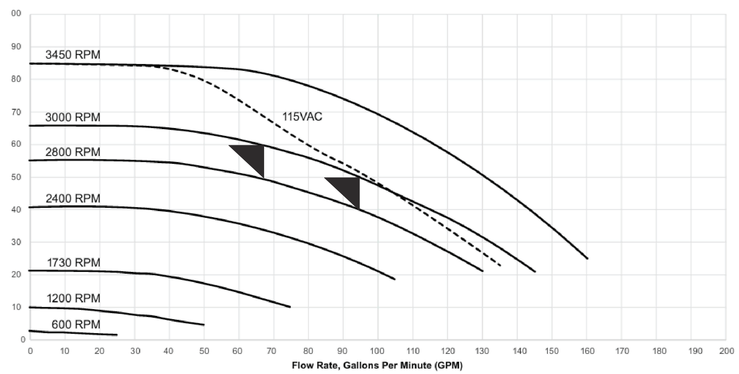


SCHEMATIC NOTES:

1. EQUIPMENT ROOM SCHEMATICS ARE FOR ILLUSTRATIVE PURPOSES ONLY. SEE LAYOUT ON THE PIPING PLAN FOR EQUIPMENT LOCATIONS.
2. FLOW METER SHALL BE LOCATED AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS. FLOW METER MUST HAVE MEASUREMENT CAPACITY OF AT LEAST 1.5 TIMES DESIGN RECIRCULATION FLOW RATE. FLOW METER MUST BE ACCURATE WITHIN 10% OF ACTUAL GPM. LOCATE IN AREA ACCESSIBLE FOR READING.
3. VERIFY PIPE SIZES WITH PIPING PLANS ON PL7.
4. ALL PIPING SHALL BE PERMANENTLY MARKED AND DIRECTION OF FLOW INDICATED PER LOCAL CODE.
5. PROVIDE CPVC PIPING 5 FEET UPSTREAM & DOWNSTREAM AT BYPASS OF POOL HEATER.
6. DESIGN OF THE WATER HEATING SYSTEM SHALL PREVENT THE INTRODUCTION OF WATER IN EXCESS OF 115 DEGREES F TO THE POOL.
7. A PRESSURE RELIEF VALVE WITH A MAXIMUM PRESSURE RATING OF 75 POUNDS PER SQUARE INCH AND HAVING A THERMAL CAPACITY OF AT LEAST EQUAL TO THE HEAT INPUT RATING OF THE HEATER SHALL BE PROVIDED WITH THE DISCHARGED PIPE TO WITHIN SIX INCHES OF THE FLOOR.
8. ALL CHEMICAL FEED PUMPS SHALL BE INTERLOCKED WITH THE RE-CIRCULATION PUMP.
9. CHEMICAL CONTAINERS IN MECHANICAL ROOM MUST BE PROPERLY LABELED, MSDS DATA SHEETS PROVIDED, AND A WARNING SIGN STATING, "AUTHORIZED PERSONNEL ONLY" ON DOOR TO CHEMICAL STORAGE ROOM.
10. POOL, MECHANICAL & ELECTRICAL CONTRACTORS SHALL COORDINATE & VERIFY ALL LOCATIONS & CLEARANCES OF ALL POOL EQUIPMENT.

SCHEMATIC LEGEND:

	BUTTERFLY VALVE
	BALL VALVE
	CHECK VALVE
	FLOW DIRECTION



POOL RECIRCULATION PUMP CURVE

NOTE:

EQUIPMENT SHALL BE USED AS LISTED OR AN EQUAL APPROVED BY THE ENGINEER. ALL RECIRCULATION EQUIPMENT USED SHALL BE NSF/ANSI STANDARD 50 CERTIFIED OR APPROVED BY AN ORGANIZATION ACCREDITED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE.

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WESLEY BRADLEY PARK

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2		
3		
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5		

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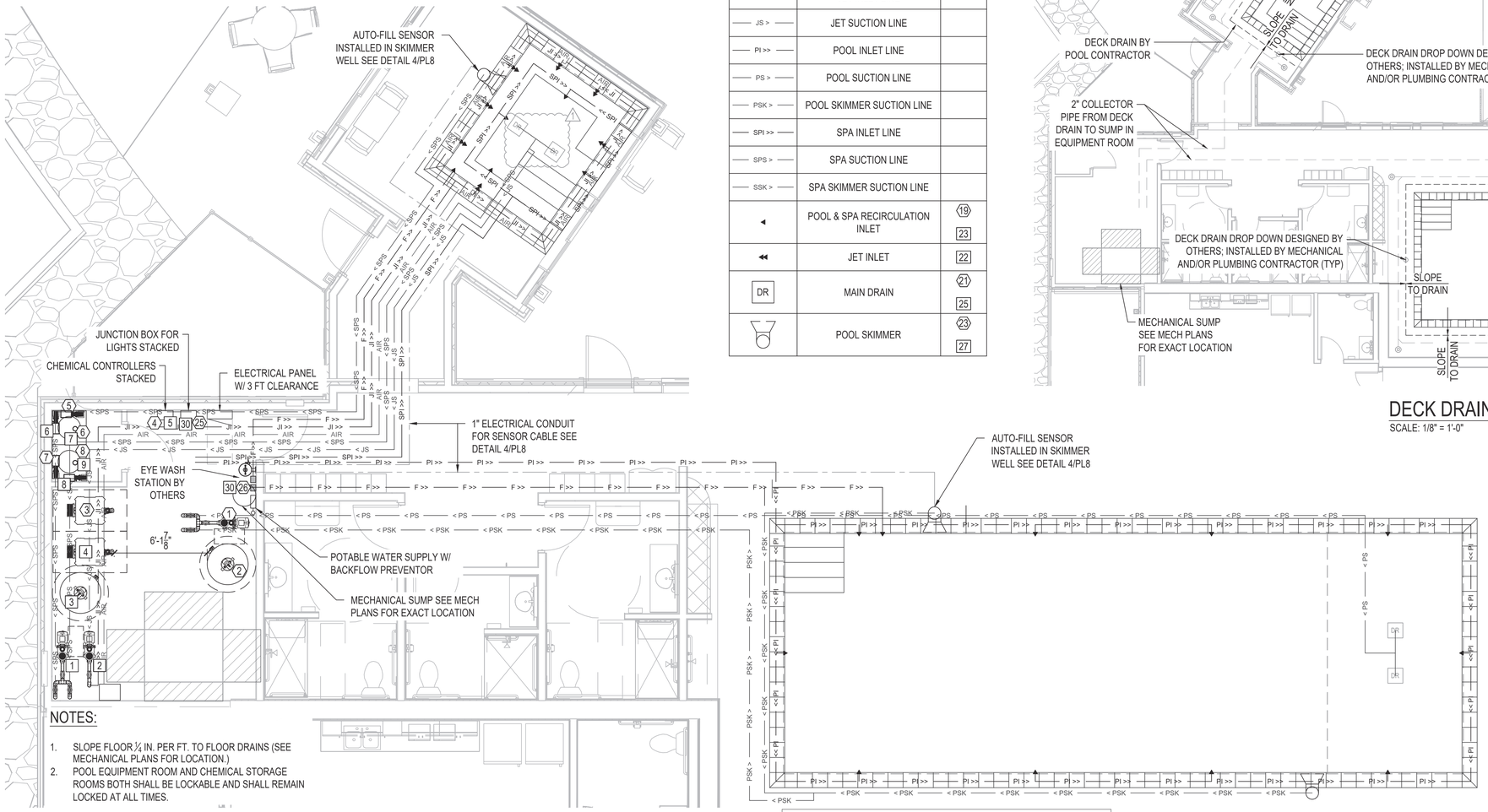
Drawn/Designed By:	AMS/NH
Checked By:	MAZ

SPA EQUIPMENT LIST, SCHEMATIC, PUMP CURVE

PL6



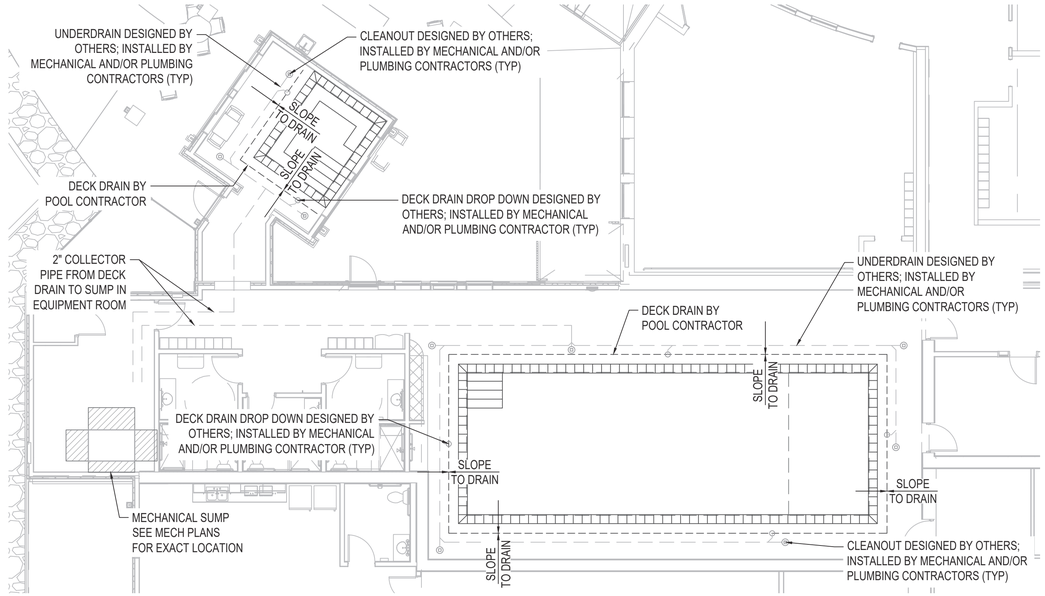
NOTES:

1. SLOPE FLOOR ¼ IN. PER FT. TO FLOOR DRAINS (SEE MECHANICAL PLANS FOR LOCATION.)
2. POOL EQUIPMENT ROOM AND CHEMICAL STORAGE ROOMS BOTH SHALL BE LOCKABLE AND SHALL REMAIN LOCKED AT ALL TIMES.

PIPING PLAN

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

LEGEND:		
AIR	AIR SUPPLY LINE	
F >>	FILL INLET LINE	
JI >>	JET INLET LINE	
JS >	JET SUCTION LINE	
PI >>	POOL INLET LINE	
PS >	POOL SUCTION LINE	
PSK >	POOL SKIMMER SUCTION LINE	
SPI >>	SPA INLET LINE	
SPS >	SPA SUCTION LINE	
SSK >	SPA SKIMMER SUCTION LINE	
◂	POOL & SPA RECIRCULATION INLET	19, 23
◂◂	JET INLET	22
DR	MAIN DRAIN	21, 25
	POOL SKIMMER	23, 27



DECK DRAIN PLAN

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

POOL CALCULATIONS

AREA	720 SF	
PERIMETER	122 LF	
VOLUME	22264 GAL	
CHLORINE EQUIVALENCY	5.57 LBS/DAY	
	SIZE	DESIGN FLOW
RECIRCULATION FLOW RATE	-	65 GPM
RECIRCULATION TDH	-	60 FT
MAIN DRAIN	84 SI EA	0.25FPS
RECIRCULATION SUCTION PIPE SIZE/FLOW - TRUNK LINE	3"	2.95 FPS
RECIRCULATION SUCTION PIPE SIZE/FLOW - TRUNK LINE	2.5"	4.25 FPS
SKIMMER WEIR	8.5" EA	3.44 FPS
SKIMMER SUCTION PIPE SIZE/FLOW - TRUNK LINE	2.5"	4.25 FPS
SKIMMER SUCTION SIZE/FLOW - BRANCH LINE	2"	3.32 FPS
RECIRCULATION RETURN PIPE SIZE/FLOW - TRUNK LINE	2.5"	4.25 FPS
RECIRCULATION RETURN PIPE SIZE/FLOW - LOOP LINE	2"	3.32 FPS
FILTER FLOW RATE	5 SF	13 GPM/SF
TURN OVER TIME	-	5.71 HR
FILL LINE PIPE SIZE	2"	

NOTES:

1. POOL: MAIN DRAIN AND MAIN DRAIN TRUNK SIZE/FLOW DESIGNED FOR 100% OF MAX. SYSTEM DESIGN FLOW; ACTUAL FLOW THROUGH MAIN DRAIN AND MAIN DRAIN TRUNK LINE WILL BE 10% OF SYSTEM DESIGN FLOW.
2. POOL: SKIMMER TRUNK PIPING BASED ON 100% OF SYSTEM DESIGN FLOW; SKIMMER WEIR FLOW BASED ON 90% OF SYSTEM DESIGN FLOW; ACTUAL FLOW THROUGH SKIMMER AND SKIMMER TRUNK LINE WILL BE 90% OF SYSTEM DESIGN FLOW.
3. SPA: MAIN DRAIN AND MAIN DRAIN TRUNK SIZE/FLOW DESIGNED FOR 100% OF MAX. SYSTEM DESIGN FLOW; ACTUAL FLOW THROUGH MAIN DRAIN AND MAIN DRAIN TRUNK LINE WILL BE 40% OF SYSTEM DESIGN FLOW.
4. SPA: SKIMMER TRUNK PIPING BASED ON 100% OF SYSTEM DESIGN FLOW; SKIMMER WEIR FLOW BASED ON 60% OF SYSTEM DESIGN FLOW; ACTUAL FLOW THROUGH SKIMMER AND SKIMMER TRUNK LINE WILL BE 60% OF SYSTEM DESIGN FLOW.

SPA CALCULATIONS

AREA	80 SF	
PERIMETER	36 LF	
VOLUME	1226 GAL	
CHLORINE EQUIVALENCY	0 LBS/DAY	
	SIZE	DESIGN FLOW
RECIRCULATION FLOW RATE	-	65 GPM
RECIRCULATION TDH	-	60 FT
JET - FLOW RATE	-	94 GPM
JET TDH	-	50 FT
MAIN DRAIN	84 SI EA	0.61FPS
MAIN DRAIN MANIFOLD PIPE	4"	4.06 FPS
RECIRCULATION SUCTION PIPE SIZE/FLOW - RECIRCULATION TRUNK LINE	2.5"	4.25 FPS
JET SUCTION PIPE SIZE/FLOW - TRUNK LINE	3"	4.27 FPS
SKIMMER WEIR	8.5" EA	4.59 FPS
SKIMMER SUCTION PIPE SIZE/FLOW - TRUNK LINE	3"	2.95 FPS
SKIMMER SUCTION PIPE SIZE/FLOW - BRANCH LINE	2"	3.32 FPS
RECIRCULATION RETURN PIPE SIZE/FLOW - TRUNK LINE	2.5"	4.25 FPS
RECIRCULATION RETURNPIPE SIZE/FLOW - LOOP LINE	2"	3.32 FPS
JET RETURN PIPE SIZE/FLOW - TRUNK LINE	3"	4.27 FPS
JET RETURN PIPE SIZE/FLOW - LOOP LINE	2"	4.8 FPS
FILTER FLOW RATE	5 SF	13 GPM/SF
TURN OVER TIME	-	18.86 MIN
FILL LINE PIPE SIZE	2"	SOURCE FLOW
PATRON LOAD	5	

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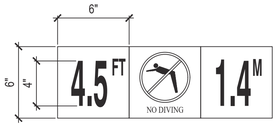
Drawn/Designed By: AMS/NH
Checked By: MAZ

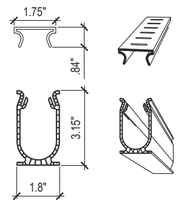
PIPING PLAN, DECK DRAIN PLAN, POOL DATA, PIPE FITTING SCHEDULE

PL7



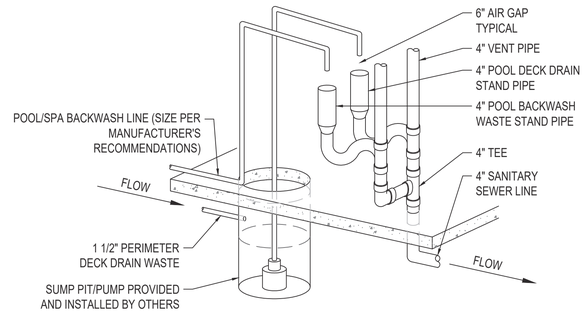
NOTE:
6"x6" CERAMIC TILE OF CONTRASTING COLOR WITH 4" LETERS. LETTERS SHALL BE SKID RESISTANT ON DECK AND SMOOTH AT WATER LINE ON POOL WALL.

1 | DEPTH MARKER | SCALE: NTS

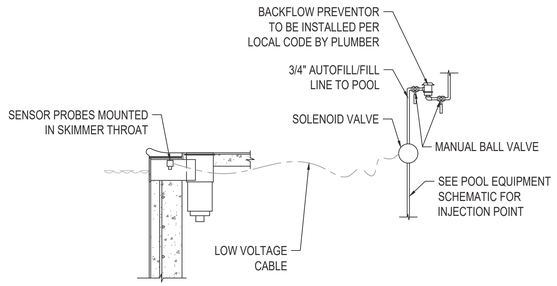


NOTE:
THERE SHALL BE NO GAP BETWEEN SECTIONS AND/OR THE DRAIN AND DECK GREATER THAN 1/2".

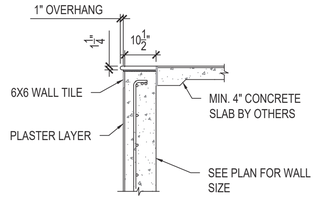
2 | DECK DRAIN | SCALE: NTS



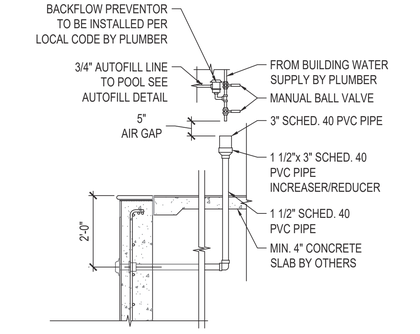
3 | POOL/SPA BACKWASH / SUMP | SCALE: NTS



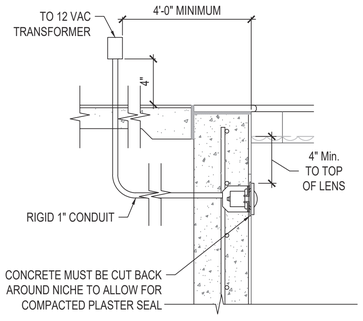
4 | POOL & SPA AUTOFILL | SCALE: NTS



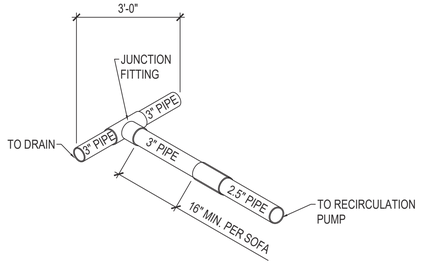
5 | TYPICAL COPING | SCALE: NTS



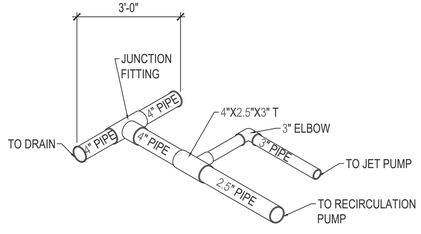
6 | POOL & SPA FILL | SCALE: NTS



7 | POOL & SPA LIGHT | SCALE: NTS



8 | POOL MAIN DRAIN MANIFOLD | SCALE: NTS



9 | SPA MAIN DRAIN MANIFOLD | SCALE: NTS

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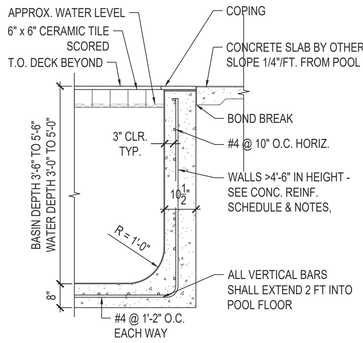
Checked By:	MAZ

DETAILS

PL8



CONCRETE REINFORCING SCHEDULE ASTM A615 GRADE 40 SOIL UP TO 65 PCF EFP				
WALL HEIGHT	WATER HEIGHT	WALL THICKNESS	HORIZ. STEEL	VERT. STEEL
< 4'-6"	< 4'-0"	10"	10" O.C.	1'-2"
> 4'-6"	> 4'-0"	10"	10" O.C.	7" O.C. *

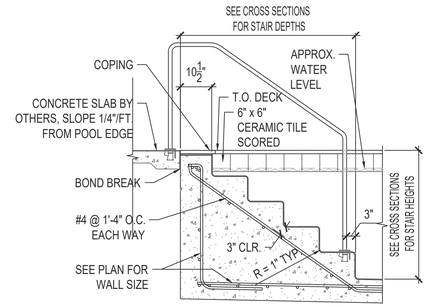
TABLE NOTES

*VERTICAL STEEL CALLED OUT IN SCHEDULE REPRESENTS TOTAL STEEL REQUIREMENT AT WALL DEPTHS GREATER THAN 4'-6".

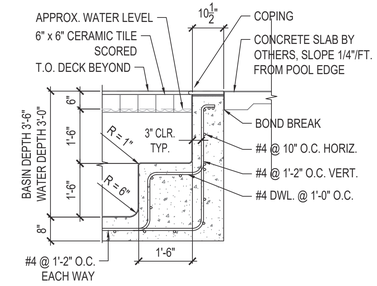
1. ALTERNATE STEEL REFERS TO EACH VERTICAL REBAR ADDED TO EACH 14" GRID.
2. ALTERNATE BARS SHALL BE PLACED @ 7" O.C. WITHIN EACH 14" GRID.
3. ALTERNATE BARS MAY TERMINATE @ 2-1/2 FT FROM BELOW TOP OF WALL.

CONC. REINFORCING BAR LAP SPLICE SCHEDULE		
BAR SIZE	F'C = 4000 PSI.	F'C = 5000 PSI.
#3	16"	14"
#4	20"	18"

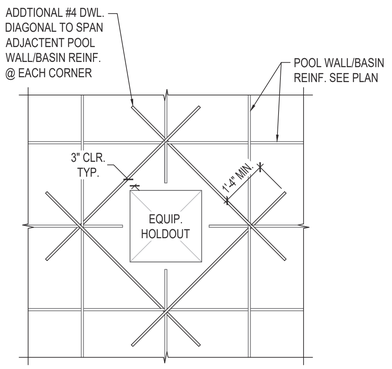
10 POOL REINFORCEMENT SCALE: NTS



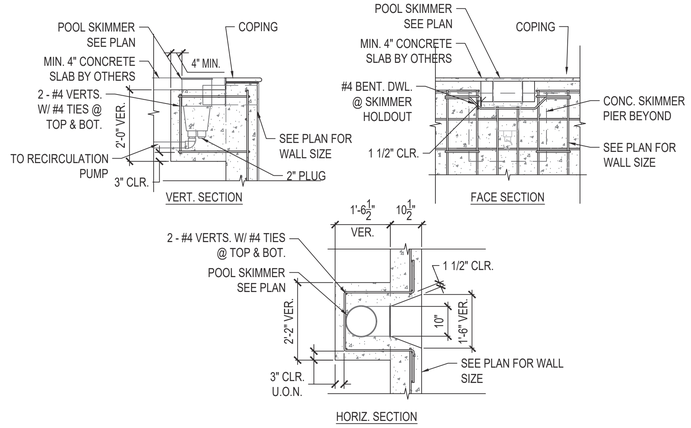
11 POOL & SPA STAIR REINFORCEMENT SCALE: NTS



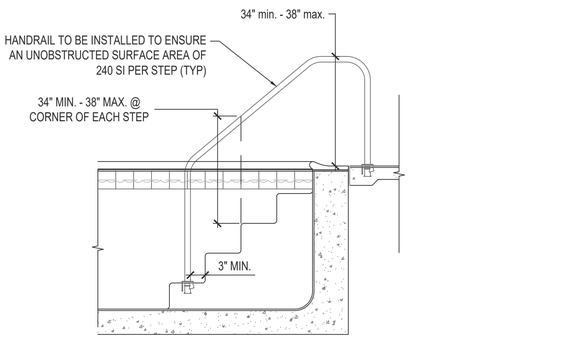
12 BENCH & WALL REINFORCEMENT SCALE: NTS



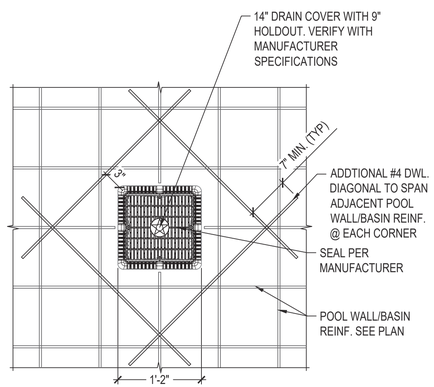
13 ADDTL. REINF. @ EQUIP. HOLDOUT SCALE: NTS



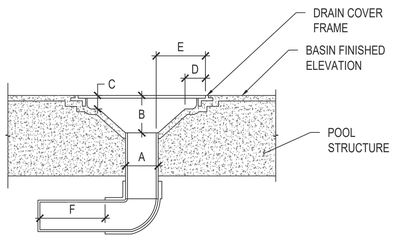
14 POOL SKIMMER REINFORCEMENT SCALE: NTS



15 HANDRAIL INSTALLATION DETAIL SCALE: NTS



16 POOL/SPA DRAIN PLAN VIEW SCALE: NTS



SPA

914 SUMP P/N 9-3SB
- A. 4" (SIDE) SPECIFIED PIPE SIZE
- B. 5.6" SUMP DEPTH
- C. 1.6" MINIMUM LEDGE DEPTH
- D. 0.5" MAXIMUM LEDGE WIDTH
- E. 1.7" MINIMUM PIPE OFFSET
- F. 16" MINIMUM LENGTH BEFORE REDUCTION

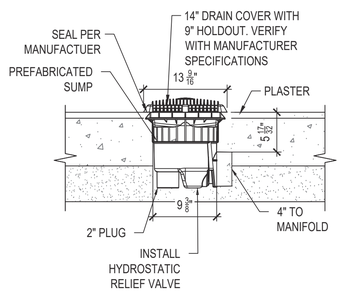
FLOW RATING: 300 GPM
OPEN AREA: 84 IN

POOL

914 SUMP P/N 9-3SB
- A. 3" (BOTTOM) SPECIFIED PIPE SIZE
- B. 5.6" SUMP DEPTH
- C. 1.6" MINIMUM LEDGE DEPTH
- D. .5" MAXIMUM LEDGE WIDTH
- E. 1.7" MINIMUM PIPE OFFSET
- F. 16" MINIMUM LENGTH BEFORE REDUCTION

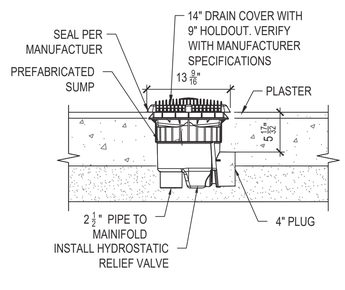
FLOW RATING: 275 GPM
OPEN AREA: 84 IN

17 SOFA SPECIFICATIONS SCALE: NTS



SPA DRAIN SECTION

NOTE: INSTALL PER MANUFACTURER INSTRUCTIONS



POOL DRAIN SECTION

18 POOL/SPA DRAIN SECTION VIEW SCALE: NTS

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PL9