

**Bobby Jindal**  
GOVERNOR



**Kathy H. Kliebert**  
SECRETARY

**State of Louisiana**  
Department of Health and Hospitals  
OFFICE OF PUBLIC HEALTH

May 21, 2015

Brian Mistich  
Engineer  
554 Old Spanish Trail  
Slidell, LA 70458

RE: Lake Wood Manor Apartment Pool Renovation  
Jefferson Parish

Dear Mr. Mistich,

Plans and specifications for the above named project have been reviewed. The plans are DISAPPROVED pending resolution of the following items which appear to be in conflict with applicable provisions of the State Sanitary Code, or upon which further information is needed.

1. Plans swimming pool data indicates that the pool finish will be plaster and tile. Please clarify the color of the pools finish and the Munsell scale rating of the finish. LAC.51:XXIV.301.B, "The floor of all pools shall be white, light colored, or light colored patterns in order to facilitate the identification of any objects within the pool. The color, patterns, or finishes of the pool interior shall not be such as to obscure the existence or presence of objects or surfaces within the pool."
2. Major modification was shown on plans including modifying the walls of the existing pool. Please provide a typical detail of the walls angle from plumb. Also please provide typical details showing the radius of where the pool walls meet the floor. Please reference LAC.51:XXIV.305.A and 309.A for more information.
3. Please provide a float line at 1 to 2 feet before the 4.5 ft depth elevation across the pool. Also please provide contrasting floor tile where the 4.5 ft depth meets the shallow section. LAC.51:XXIV.311.C. In part, "The transition point of the pool from the beginners' area to the shallow area and from the shallow area to the deep area shall be visually set apart with a rope and float line, depth markers, and a 4 inches minimum width row of floor tile, painted line, or by similar means of a color contrasting with the bottom." LAC.51:XXIV.701.A.10, "A rope and float line shall be provided between 1 foot and 2 feet on the shallow side of the break in grade between the shallow and deep



portions of the swimming pool, with its position marked with visible floats at not greater than seven feet intervals.”

4. Please clarify the new deck area that will be constructed. This will be used to verify occupancy loadings. Please refer to LAC.51:XXIV.319.A for more information on loading criteria.
5. Please clarify the following information regarding the pools deck: LAC.51:XXIV.
  - a. Slip resistance, 323.B
  - b. Deck slope, 323.G and H
  - c. Radius on decks, 323.N
  - d. Direction of deck slopes. 323.P
6. Please clarify the testing procedures that will be performed on the pools circulation system. LAC.51:XXIV.323.Q, “Circulation system piping, other than that integrally included in the manufacture of the pool, shall be subject to an induced static hydraulic pressure test (sealed system) at 25 pounds per square inch (psi) for 30 minutes. This test shall be performed before the deck is poured, and the pressure shall be maintained through the deck pour.”
7. Please show where the hose bib with vacuum breaker will be placed on plans. LAC.51:XXIV.323.S, “A hose bib and a vacuum breaker shall be provided for washing down the entire deck area.”
8. Please clarify if the hand rails on the deep end of the pool will be used with recessed treads or a ladder. For recessed treads please supply details which show compliance for LAC.51:XXIV.331.A For ladders please supply details which show compliance for LAC.51:XXIV.329.
9. Please provide clarification that all of the pool equipment, pool materials, disinfection equipment, and chemical feeders are compliant with NSF50. LAC.51:XXIV.501.D and 901.A, “Where equipment sizing falls within the scope of National Sanitation Foundation (NSF) testing, materials and equipment used in the circulation system shall comply with the appropriate requirements of NSF Standard 50.” And, “Disinfectant equipment and chemical feeders, hereinafter referred to jointly as “equipment,” shall comply with the requirements of NSF Standard 50. The disinfection equipment shall be capable of precisely introducing a sufficient quantity of an approved disinfecting agent to maintain the appropriate recommended guidelines required concentrations as per §§903 and 905.”



10. Provide calculations showing the inlet and suction velocity into and from the pool at all points of entry and exit. LAC.51:XXIV.503.A. In part, "The water velocity in the pool piping shall not exceed 10 feet per second for discharge piping, (except for copper pipe where the velocity should not exceed 8 feet per second), and 6 feet per second for suction piping, unless summary calculations are provided to show that the greater flow is possible with the pump and piping provided. Pool piping shall be sized to permit the rated flows for filtering and cleaning without exceeding the maximum head of the pump."
11. Pressure or vacuum gauges were not called out on the plans. Please show where these items will be placed on plans. LAC.51:XXIV.503.C, "A pressure or vacuum gauge or other means of indicating system condition shall be provided in the circulation system in an easily readable location."
12. Please include the location of the pools flow meter on plans. LAC.51:XXIV.503.C.1, "Class A, Class B, and Class C public pools shall be provided with an indicator measuring the rate of flow through the filter system with an appropriate range readable in gallons per minute and accurate within 10 percent actual flow."
13. Please provide calculations detailing that the pump is sized correctly. Calculations should include, but not limited to the follow: pipe friction loss, pressure loss across pool equipment, pump capacities (TDH), and limiting factors of pool equipment such as flow rates and max operating pressure. LAC.51:XXIV.507.A, "A pump motor shall be provided for circulation of the pool water. Performance of all pumps shall meet or exceed the conditions of flow required for filtering and cleaning (if applicable) the filters against the total dynamic head developed by the complete system."
14. Please clarify how return water inlets will be adjustable. LAC.51:XXIV.511.A, "Return water inlets shall be adjustable so that water can be distributed evenly."
15. Please clarify if the main drain cover will be provided with a dark colored circle around the grating. LAC.51:XXIV.511.C.3, "The grating of the main drain outlet shall be easily visible. Drains not constructed of shiny metal shall be marked with a dark colored circle."
16. Please provide maximum depth tile markers in conformance with code. Depth tile markers were not found indicating the deepest part of the pool. LAC.51:XXIV.701.A.5, "Depth markers shall be installed at the maximum and minimum water depth and at all points of slope change."



17. Please provide manufacturer or other information on the main drain covers to show that they are VGBA, ANSI/APSP 16-2011 compliant.
18. Please clarify if the pool will be operated at night. Also clarify if the pool area has existing lighting, and if that lighting is to be modified. Please reference LAC.51:XXIV.715 for further guidance on required illumination levels.
19. Please verify that the pool chemical area, equipment, and storage rooms have proper mechanical ventilation or is directly open to the outside atmosphere. No description on ventilation was provided.
20. Please clarify what type of test kit will be used by the pools staff. Also disinfectant residual monitoring must be measured using a DPD testing method.  
LAC.51:XXIV.901.C. In part, "All pools shall be supplied with chemical test kits for the determination of pH, chlorine or bromide residuals, cyanuric acid (if used), total alkalinity, and calcium hardness. The test kit shall be capable of at least measuring pH and disinfectant residual ranges, as required."
21. Please clarify how the pH will be controlled in the pool. LAC.51:XXIV.905.B.1, "Swimming Pools and Wading Pools. The pH shall be maintained in an alkaline condition as indicated by a pH of not less than 7.2 nor greater than 7.8 at any time the facility is in use." Also, LAC.51:XXIV.901.B.3. In part, "Hand batch feeding of any pH chemical into the pool is expressly prohibited."
22. Plans page PL-1.2 shows that the tanning shelf surface is approximately 15 inches from the deck. Please clarify this distance. Letter of Intent from the State Health Officer Concerning Tanning Shelves. #5, "A deck surface constructed in compliance with Part XXIV of the Louisiana State Sanitary Code (LAC 51:XIV) shall completely surround the sunning or tanning shelf except for the sunning or tanning shelf's edge where it meets the minimum 3 feet deep shallow end of the pool. The distance from the surface of the deck to any point on the surface of the sunning or tanning shelf shall be a maximum of twelve inches (12")."
23. Currently there are two surface skimmers in the pool which satisfies LAC.51:XXIV. The Letter of Intern from the State Health Officer for Tanning Shelves requires one skimmer per 200 square feet of tanning shelf area. Please provide engineering justification for not having an additional surface skimmer for the new surface areas that are to be added by the tanning shelves. Letter of Intent from the State Health Officer Concerning Tanning Shelves. #9, "A minimum of one skimmer per 200 square feet or any fraction thereof, of



the sunning or tanning shelf surface area, shall be properly located, installed and connected with the pool's circulation system."

24. Please clarify the slope of the tanning shelf and on the wet ledge entry. Letter of Intent from the State Health Officer Concerning Tanning Shelves. #10, "The surface of all sunning or tanning shelves shall be fully self-draining with a maximum slope of one foot vertical per twelve feet horizontal, and shall comply with all other pool surface requirements of LAC Title 51 Part XXIV (Swimming Pools)."
25. Plans show that the tanning shelf is to be installed into the section of the pool with water depth greater than 4 ft. Please adjust accordingly. Letter of Intent from the State Health Officer Concerning Tanning Shelves. #11, "All sunning or tanning shelves shall be installed at the most shallow portion of the pool but shall, in no case connect with or be adjacent to water depths greater than 4 feet."
26. Underwater benches were found in conjunction with stairs on two sides of the pool. One underwater bench has a handrail where the other does not. Please provide both underwater benches with a handrail per variance criteria. Underwater Bench Variance Criteria, #8, "If the underwater seat bench is constructed in conjunction with pool steps then a handrail must be installed in compliance with such requirements as required in the LAC Title 51 Part XXIV (Swimming Pools)."
27. Please provide a variance request to the State Health Officer Dr. Jimmy Guidry regarding the two underwater seat benches. In the request please reference that the attached criteria will be met.

Sincerely,



Brandon Comeaux, E.I.  
Region 1 Engineer Intern  
OPH – District I

## UNDERWATER SEAT BENCH

### Variance Criteria

1. Underwater seat benches shall only be allowed areas of the pool that are less than five feet deep.
2. Underwater seats shall not project into swim lanes.
3. The minimum and maximum water depth over the bench seat shall be 6 inches and 20 inches respectively.
4. Underwater seat benches shall have a seat depth of 14 to 18 inches projecting from the pool wall to the front edge of the seat or may be recessed from the main body of the pool a maximum of 36 inches. If recessed, the seat bench shall be a maximum of 18 inches wide with the remaining space for leg room.
5. A permanent colored band of dark, contrasting and slip-resistant tile shall be installed at the front edge of the seat extending two inches on the horizontal and vertical surface. The stripe shall be plainly visible to persons on the pool deck. Vinyl liner, stainless steel, and fiberglass pools may use other material for the bench edge marking provided the material is permanently secured, dark in color, non-fading, and slip resistant.
6. The underwater seat bench's front edge shall be rounded and have a minimum radius of one inch.
7. Underwater seats and benches shall not be used as the required entry/exit access unless they are in conjunction with pool steps.
8. If the underwater seat bench is constructed in conjunction with pool steps then a handrail must be installed in compliance with such requirements as required in the LAC Title 51 Part XXIV (Swimming Pools).