POOL ASSESSMENT

MEMORIAL PARK OUTDOOR POOL YANKTON, SD

MARCH 8, 2001

BY: ASSOCIATED POOL BUILDERS, INC. BISMARCK, ND



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MEMORIAL PARK - OUTDOOR POOL YANKTON, SD

March 8, 2001

To:

City of Yankton

410-416 Walnut

P.O. Box 176

Yankton, SD 57078

Attn: Roger Pierce, Director of Parks & Recreation

On behalf of Associated Pool Builders, Inc., we would like to express our appreciation for the opportunity to provide the following assessment/recommendations for Memorial Park pool.

Memorial Park pool was built in 1947, consisting of 75' x 165' (approximately 12,375 SF) concrete competition pool with 12' deep diving well. Although the pool is approximately 55 years old, renovation took place in 1977 with installation of a new stainless steel recirculation system, sand filtration, and new concrete floor over the existing. During renovation or thereafter, the underwater lights were filled in and finished over eliminating any further need for lighting maintenance. The main pool with renovation and good maintenance has lasted beyond what is considered normal life in the pool industry.

The intent of the assessment was prompted primarily due to the water loss of approximately 14,000-15,000 gallons per day, of which approximately 7,500 gallons of that is due to normal loss through evaporation and splash out. Therefore, the Parks and Recreation Department staff requested a study to identify potential structural, mechanical, and any other age related deficiencies of the pool, which do not meet current pool, ADA and health department standards and to provide an estimate of the costs associated with bringing the pool into compliance. We will also provide costs associated with building a new pool versus renovation of existing.

Memorial Park Pool Data:

Dimensions:

75' x 165'

Depth:

3'-5'-12'

Perimeter:

480 LF

Surface Area:

12,375

Volume:

+ 500,000 gallons

Patron Load:

<u>+</u> 630

Turnover Rate:

7 hours

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A. RENOVATION OF EXISTING POOL

Based upon our visual inspection (September 27, 2000) we provide the following as they relate to the concerns of the pool:

1. Pool Structure

Because of the pool's age, high water table and unknown condition of the soil base, the pool has developed concrete deterioration, serious cracking, heaving and settling. These of daily loss. The current poor condition of the pool structure does not allow for long term repairs or major modifications.

Recommendation: Remove existing concrete structure and replace with a new shotcrete

structure, new underdrain system, main drain and PVC piping connections to existing mechanical room. New shotcrete structure to

have a painted finish.

Replacement Estimate (Budget) = \$550,000.00

2. Stainless Steel Recirculation System

The current system was replaced in 1977 (25 years ago) and still works well. Because of age and likely damage during demolition, re-use would be limited and not cost effective.

Recommendation Remove existing recirculation system and replace with a new stainless

steel recirculation system. Provide new PVC piping from pool to existing mechanical room. Also replace existing deck equipment.

Note: The existing stainless steel gutter can be sold for salvage value or

resale to a smaller community with a smaller pool.

Replacement Estimate (Budget) = \$\frac{\$250,000.00}{}\$

3. Mechanical System

A major concern is the age (25+ years) of the filter, pumps, valves and piping. Existing underground is original cast iron piping with a good possibility of leaking. Flow is also restricted in cast iron piping, due to build up of chemical and water residue. Existing filters are corroding from the inside out and turnover rates do not meet current health code standards

Recommendation: Remove existing filter and pool mechanical equipment (sanitizing

equipment, recirculation pump, face and underground piping, valves) and replace with new pool mechanical equipment. Provide new pool

heater.

Replacement Estimate (Budget) = \$\frac{\$425,000.00}{}\$

B. REPLACEMENT OF EXISTING POOL

Summary of work included and excluded if the community of Yankton were to replace the existing 12,375 square foot competition pool. Schedule of items is detailed below based upon the above recommendations.

Inclusions:

- Layout pool with benchmark.
- Excavation.
- Forming required for pool structure.
- Subbase under pool structure.
- Underdrain system under pool structure.
- Specified reinforcing for pool structure.
- Gunite concrete pool structure.
- Stainless steel recirculation system.
- Filtration equipment.
- Pool mechanical system.
- Pool sanitizing equipment.
- Chemical feed and water level controllers.
- Pool recirculating piping, including perimeter piping and filter room piping.
- Pool heater.
- Painted pool finish with waterline tile.
- Pool deck, diving stands and accessory equipment.
- Pool testing, cleaning, and safety equipment.
- Deck anchor for competitive equipment.
- Portable handicap lift.
- Startup and instruction and coordination.
- Warranties as specified.

Exclusions:

- Pool design.
- Demolition.
- Site access for heavy equipment.
- Cold weather protection.
- Engineered fill, backfill around pool and under decks.
- Disposal of bulk excavation.
- Soil correction.
- Dewatering system.
- All general, mechanical and electrical construction (decks, fencing, landscaping, bathhouse, mechanical room, parking, utilities, etc.)
- Site construction utilities.
- Fresh water connection and waste water connection.

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Exclusions (cont):

- Electrical for pool equipment.
- Gas piping to and venting of pool heater.
- Competitive equipment.
- Waterslide and Play Feature.
- Bonds.
- Local and State Sales Tax.
- Building permits.

Budget Estimate = \$1,225,000.00

Note: Outside of pool concerns, your existing facility has the following issues: Deteriorating bleacher area and decks, high water table, unknown soil conditions. Existing pool design limits revenue, while consuming high operating costs.

Costs associated with the above exclusions are estimated to be between 1.2 million and 1.5 million. This estimated cost is over and above the pool budgets (inclusions). A complete new facility cost will be \$2,725,000.00 based on recent comparisons and construction estimates. There are many variables to be considered when estimating general construction, architectural, mechanical, electrical and structural design. Associated Pool Builders, Inc. could not qualify our estimates without further review by appropriate consultants.

C. COMPARISON OF EXISTING POOL TO A NEW LEISURE POOL

7,500

If you were to replace your existing competitive pool with a 11,000 SF Leisure pool of similar occupancy (bather load), consisting of a lap area, (five-foot maximum depth) waterslide plunge area, zero depth entry and Lazy River, waterslide and play features, you can anticipate the following budget with similar inclusions and exclusions listed above.

Comparison Only:

7,500 SF Leisure Pool (outdoor	r)	=	\$ 675,000.00
Two waterslides - Same tower 240'		=	\$ 230,000.00
Play Feature allowance		=	<u>\$ 125,000.00</u>
•	Budget	=	\$1,030,000.00
Alternate: 500' x 7' wide of Lazy River (3,	500 SF)	==	\$ 250,000.00

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Note: Leisure pool concept provides for a smaller, more shallow pool containing less water volume to be treated; thus, reducing operating costs, while increasing attendance and revenue.

Family oriented leisure pools are the current trend because they address the needs of all age groups (seniors, adults, teens, toddlers) and those with special needs. Your current wading pool, although functional, appears inadequate to today's standards because it only serves a very young age group. Within the very near future, either modifications, renovation, or replacement to the wading pool need to be considered.

D. COMBINATION LAP AND LEISURE POOL

A lap and leisure pool combination provides for competitive and leisure components. This pool would consist of a 50-meter lap pool, 3'-6" to 12'-6" deep; leisure/activity pool consisting of plunge area for waterslide (240'); zero depth area with play features 0' to 3'-6".

Lap Area (12,375 SF) Plunge Area (750 SF) Activity & Zero Depth Area (4,500 Waterslides (240') Feature Allowance	= = = = = = = = = = = = = = = = = = =	\$ \$ \$ \$	1,225,000.00 67,500.00 440,000.00 230,000.00 125,000.00
Total Budget	===	<u>\$ 2</u>	2,087,500.00

In conclusion, your existing pool has lived longer than expected and needs replacement. It usually takes approximately three years minimum to go through the process of replacing a facility of this size. You will need to expend funds annually to keep the pool up and running, but we would advise not to do any major renovation to your existing facility.

When considering replacement of your existing facility, one key issue would be the philosophical mind set that every pool needs regulation lap and diving areas. Today's trends and economics, force many Parks and Recreation decision makers to develop and design seasonal (water park style) facilities that reduce operating costs, while enhancing revenue. With that in mind, researching the leisure pool concept would help alleviate the issues and traditions of competitive pools versus leisure pools.

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Finally, we would like to thank you and your staff for their assistance and patience while providing input and data for this report. Hopefully, we have provided enough information so an educated decision can be made on the future of Memorial Park Pool.

After reviewing this report, our office will be available to visit and answer any questions you may have or provide additional information if necessary. Feel free to contact:

DOUG JAEGER

ASSOCIATED POOL BUILDERS, INC. 819 BOX AVENUE DICKINSON, ND 58601 PHONE: 701-225-5304 CELL: 701-290-5304

FAX: 701-225-1868

Thank you.

DJ:vjk yankton.wpd