# City of Grand Island

## Tuesday, July 21, 2009
## Study Session

# Item -1

## Presentation of Lincoln Park Pool Study

**Staff Contact: Steve Paustian**

# Council Agenda Memo

**From:** Steve Paustian, Parks & Recreation Director

**Meeting:** July 21, 2009

**Subject:** Presentation of Lincoln Park Pool Study

**Item #'s:** 1

**Presenter(s):** Steve Paustian, Parks & Recreation Director

## Background

Lincoln Park Swimming Pool was built in 1975 and has served this community for 34 years. Over the past several years, with the water circulation system not functioning properly along with other issues, operating the pool has become more and more problematic. It has reached a point that it is no longer possible to guarantee day to day operation. This pool playes a key role in providing a place for swmimming lessons and recreational swimming for the neighborhood.

## Discussion

Attached is the study of Lincoln Park Pool. The study was developed by Olsson Associates at the request of the Parks and Recreation Department.

A formal analysis of the pool condition has been done to quantify the cost of options.

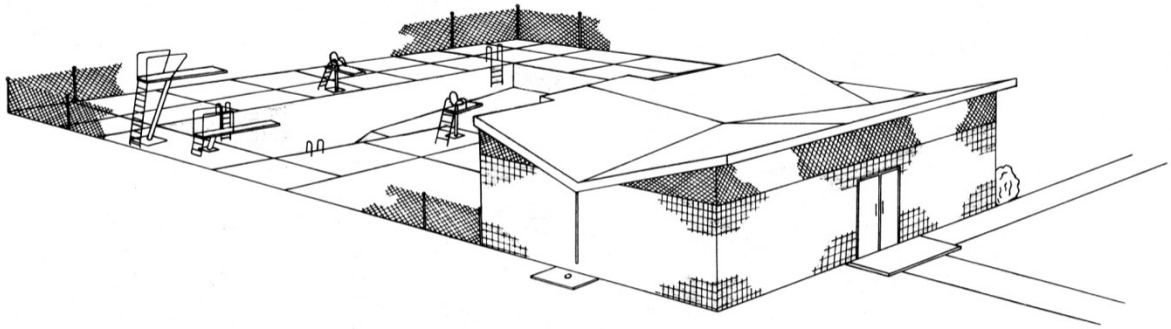
Continuing on with present operation is not an option.

## Conclusion

This item is presented to the City Council in a Study Session to allow for any questions to be answered and to create a greater understanding of the issue at hand.

# Lincoln Park

# Pool Facility Evaluation



**Facility Evaluation and Recommendations**

**for the City of Grand Island**

**June 2009**

# PURPOSE AND SCOPE

This report is prepared by Olsson Associates who investigated the existing Lincoln Park Pool constructed in 1975. This report includes:

- An assessment of the existing facilities related to physical condition, current codes and design trends.
- A cost analysis to remodel existing facilities.
- A conceptual design for a replacement pool at Lincoln Park, and a new Pool Facility at Lions Club Park.
- A cost analysis for a replacement pool.

## LINCOLN PARK POOL

Lincoln Park Pool is located at 716 North Lambert St. within the Lincoln Park. Also located at the Lincoln Park are a playground, a splash pool, restrooms, picnic tables, and tennis courts. Lincoln Park Pool has approximately 11,500 square feet within the fenced-in area, of which 3,625 square feet are the pool. The pool has a capacity of 155,800 gallons with a maximum depth of 12 feet and a minimum depth of 2 feet.

The analysis of the existing pool identifies any deficiencies and design issues with the Filter System, Recirculation System, Chemical Treatment System, Deck Area, Pool, Bathhouse, and Site Improvements. Deficiencies were identified using Nebraska Health and Human Services, Title 178, NAC 4 standards.

### A. Analysis of Existing Facilities

1. Filter System – the pool currently has two horizontal high rate sand filters in a stacked configuration. The filters were installed within the last 10 years and appear to be in good condition. Each filter has a capacity of 394 gpm (gallons per minute) for a maximum flow rate of 788 gpm. This meets the current standard for a 6 hour turnover rate of 433 gpm.

2. Recirculation System – the pool currently utilizes one main drain and six surface skimmers for pool circulation. Current regulations do not allow surface skimmers on a pool wider than 30 feet. Lincoln Park Pool is 35 feet wide. Current regulations require a perimeter overflow system. The pool now utilizes a direct suction pumping system. Current design standards require a gravity type main drain with a wet well. The present flow rate of 325 gpm at the existing circulation pump does not meet the current regulation for a 6 hour turnover rate.

3. Chemical Treatment - the existing building does not meet current standards for housing chlorine equipment. Chemical treatment for the pool is automated and meets the current regulations. Water quality is a major problem with the existing pool facility.

4. Deck Area - the existing pool deck appears to be in fair condition with deck widths ranging from 4 to 10 feet around the pool. The deck currently drains directly towards the pool; current regulations require all deck drainage to be directed away from the pool and into a drainage system. Hose bibs are not provided for deck washing in accordance with the current standards.

5. Pool - the concrete of the pool basin is in good condition, concrete tests on the pool basin yielded strengths greater than 5000 psi. The diving well meets the depth criteria for a one meter board. Handicap access consists of a chair lift and requires staff to assist ADA patrons at the existing facility. Current design trends include a zero depth entrance for ADA access.

6. Slide and Water Features –The existing slide is in poor condition due to the existing steel structure and slide deterioration. The current suction outlet device for the slide does not meet current standards. The pool does not have any other interactive water features.

7. Bathhouse - The existing bathhouse does not meet handicap accessible requirements. The bathhouse does not have the required ventilation, and the guard and first aid area does not meet the current standards. The entrance office is not of sufficient size to handle the required personnel and does not have adequate storage or basket storage on site. Current regulations require ventilation (not direct draft as is present) and proper storage of the first aid equipment. There is no storage on site except in the pump room.

8. Site Improvements – Off street parking is in place and sidewalk access is provided from all directions.

## B. Proposed Improvements and Opinion of Costs

The following are opinions of cost for the proposed improvements. The proposed improvements presented are such that the costs may be combined into various improvement programs for project comparisons.

1. Filter System and Chemical Treatment (Exhibit 1)

It is proposed to build a new filter house and filtration system which includes a wet well, new pumps, utilize existing filters, new piping and valves, relocated pool heater, new chemical treatment equipment and accessories. Chemical treatment equipment will be located adjacent to the new filter system in a separate secure area for safety.

| | | |
|---|---|---|
| Opinion of Construction Costs | | $203,000.00 |
| Add For: | Legal Bond Issue, Engineering, Construction, Administration and Construction Contingencies (Overhead) | $51,000.00 |
| | **Total** | **$254,000.00** |

2. Circulation System, Deck Area, Pool, Slide, & Water Features

a. New Circulation System & Renovate Pool Deck (Exhibit 2)

The proposed recirculation system is to be accomplished with a stainless steel perimeter overflow system, thus eliminating all buried perimeter piping. The main drain will be checked and reconstructed, as necessary. A proper hydraulic balance will be designed into the new recirculation system. It is proposed to remove and replace the deck area around the pool and provide adequate deck drains, deck washing system, and new deck equipment. The existing pool basin will need some repair and new paint.

| | | |
|---|---|---|
| Opinion of Construction Costs | | $388,000.00 |
| Overhead | | $97,000.00 |
| | **Total** | **$485,000.00** |

a. Zero Depth Swimming Addition (Exhibit 3)

An -extension to the existing pool on the east side could be incorporated to provide a zero depth swimming area, which would provide handicap entrance. This addition would require the relocation of existing utilities and sidewalks.

| | |
|---|---|
| Opinion of Construction Costs | $122,000.00 |
| Overhead | $31,000.00 |
| **Total** | **$153,000.00** |

b. New Pool (Exhibit 4)

A proposed layout for a new pool would take into account the current design trends for swimming pools. This pool would incorporate the diving well, a slide area, a play area, and a zero depth entrance. The proposed pool includes a one and three meter diving board, new filtration and circulation system, stainless steel gutters, optimum deck widths with drains, a sunbathing area and deck equipment.

| | |
|---|---|
| Opinion of Construction Costs | $1,119,000.00 |
| Overhead | $280,000.00 |
| **Total** | **$1,399,000.00** |

c. Slide & Water Features

A new slide with regulation suction outlet and additional water features recommended to add recreation value and meet current design trends.

| | |
|---|---|
| **Slide Feature (similar to existing)** | |
| Opinion of Construction Costs | $210,000.00 |
| Overhead | $53,000.00 |
| **Total** | **$263,000.00** |
| **Water Feature (water sculptures)** | |
| Opinion of Construction Costs | $15,000.00 |
| Overhead | $4,000.00 |
| **Total** | **$19,000.00** |
| **Water Tower w/ Bridges** | |
| Opinion of Construction Costs | $115,000.00 |
| Overhead | $29,000.00 |
| **Total** | **$144,000.00** |
| **Water Cannons** | |
| Opinion of Construction Costs | $36,000.00 |
| Overhead | $9,000.00 |
| **Total** | **$45,000.00** |

3. Bathhouse Options & Site Improvements

a. Remodel Existing Bathhouse (Exhibit 5)

Remodeling the existing bathhouse facility would require the construction of the new filter and chemical treatment facility. Remodeling the bathhouse would provide handicap accessibility, new water efficient fixtures, additional office space and new basket storage for the pool, removing and replacing the roof which would include providing adequate ventilation and heating, and provide additional sitting within the changing rooms.

| | |
|---|---|
| Opinion of Construction Costs | $170,000.00 |
| Overhead | $43,000.00 |
| **Total** | **$213,000.00** |

b. New Bathhouse (Exhibit 6)

A new bathhouse facility should be erected to provide a modern and efficient facility which will meet today's standards. The building will provide improved patron circulation, a family changing room, checking control, operation and office space, first aid room, clothing storage and handicap access. Construction will include razing and grading of the existing bathhouses.

| | |
|---|---|
| Opinion of Construction Costs | $414,000.00 |
| Overhead | $104,000.00 |
| **Total** | **$518,000.00** |

c. Site Work and Demolition

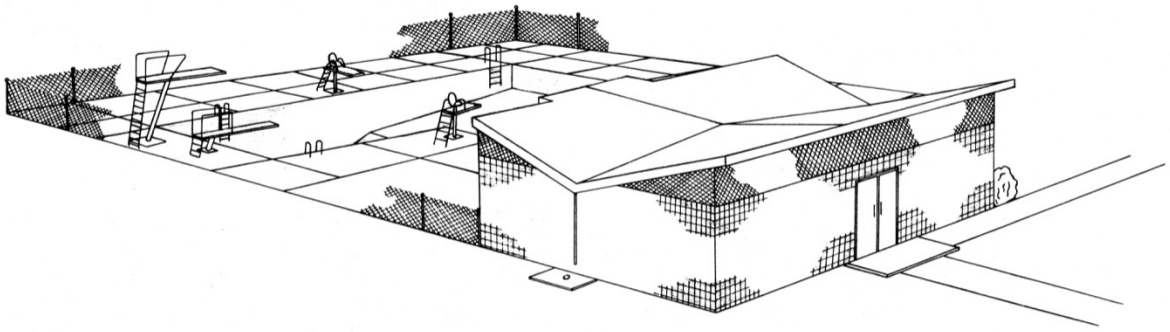
Building a new pool will require the removal of the existing basin and backfill of the site. Building a new bathhouse will require the demolition of the existing bathhouse and the relocation and/or removal of the existing utilities.

| | |
|---|---|
| Site Work/Demolition of Existing Basin | $46,000.00 |
| Site Work/Demolition of Existing Bathhouse | $25,000.00 |

d. Site Improvements (Lions Club Park)

Patron access will be provided along the north side of the pool to allow access from East 6th Street. Proposed off-street parking will accommodate approximately 18 vehicles.

| | |
|---|---|
| Opinion of Construction Costs | $55,000.00 |
| Overhead | $14,000.00 |
| **Total** | **$69,000.00** |



## C. Options and Recommendation

a. Renovate Existing Pool & Bathhouse Option (Exhibit 7)

The following items would be required to renovate and remodel the existing pool facility to operate properly and meet the current regulations.

| Item | Opinion of Cost |
|---|---|
| New Filter and Chemical Treatment Facility | $254,000.00 |
| New Circulation System and Renovate Deck Area | $485,000.00 |
| New Zero Depth Entrance | $153,000.00 |
| Remodel Bathhouse | $213,000.00 |
| New Slide | $263,000.00 |
| **Total Opinion of Costs** | **$1,368,000.00** |

b. Lincoln Park Pool Renovation with New Bathhouse Recommendation (Exhibit 8)

Should it be decided to rehabilitate the existing facilities, it is recommended that the City of Grand pursue the following construction program.

| Item | Opinion of Cost |
|---|---|
| New Filter and Chemical Treatment Facility | $254,000.00 |
| New Circulation System and Renovate Deck Area | $485,000.00 |
| New Zero Depth Entrance | $153,000.00 |
| New Bathhouse | $518,000.00 |
| New Slide | $263,000.00 |
| Site Work | $25,000.00 |
| **Total Opinion of Costs** | **$1,698,000.00** |

c. New Lincoln Park Pool & Bathhouse Option (Exhibit 9)

The following items would be required to remove the existing pool and bathhouse and replace with a new pool and bathhouse.

| Item | Opinion of Cost |
|---|---|
| New Pool | $1,399,000.00 |
| New Bathhouse | $518,000.00 |
| New Slide | $263,000.00 |
| Site Work | $71,000.00 |
| **Total Opinion of Costs** | **$2,251,000.00** |

d. Lincoln Park Wading Pool Integration Option (Exhibit 10)

The following items would be required to remove the existing pool and bathhouse and build a new pool and bathhouse next to the existing wading pool.

| Item | Opinion of Cost |
|---|---|
| New Pool | $1,399,000.00 |
| New Bathhouse | $518,000.00 |
| New Slide | $263,000.00 |
| Site Work | $71,000.00 |
| **Total Opinion of Costs** | **$2,251,000.00** |

e. New Lions Club Pool & Bathhouse Option (Exhibit 11)

The following items would be required to remove the existing pool and bathhouse and replace with a new pool and bathhouse.

| Item | Opinion of Cost |
|---|---|
| New Pool | $1,399,000.00 |
| New Bathhouse | $518,000.00 |
| New Slide | $263,000.00 |
| Lincoln Park Site Work | 71,000.00 |
| Lions Club Park Site Work | $69,000.00 |
| **Total Opinion of Costs** | **$2,320,000.00** |