City of Jersey Village
Clark Henry Pool Study
June 12, 2024

Project Overview

Project Overview

The City of Jersey Village, Texas commissioned Counsilman-Hunsaker to conduct a conditions assessment of the existing outdoor swimming pool that consists of a main pool with 6, 25-yard lanes, along with a shallow area and a deep-water area that contains a diving board, climbing wall and drop slide, as well as a 200 square foot children's pool. The outdoor pool opened in 1975 and is currently utilized for a variety of aquatic activities and programs during the summer including, recreation swim, summer swim team, water fitness classes and swimming lessons.

The purpose of the swimming pool assessment is to identify items that are substandard in the pools, identify items not to current industry swimming pool design standards, or equipment not operating as designed, and to assist in defining a course of action regarding the future of both pools. As pools age, they tend to require more regular care to remain open. Due to restricted budgets, pool operators are often required to keep their facility operational with small to medium repairs over the course of several years. For this reason, the City is conducting this assessment to better understand the existing deficiencies with the pools and the necessary repairs and associated costs to keep them operational.

Counsilman-Hunsaker typically estimates the average lifespan of an outdoor aquatic facility to be approximately 30 to 40 depending on a variety of factors including quality of construction, the presence of a preventative maintenance plan, climate, amount of usage, etc. Both pools have reached this lifespan, but the renovation that took place in 2008 to address the pool surfaces and pool mechanical systems has extended the life of the main pool past this range. This assessment report will help the City determine the existing condition and expected lifespan for the swimming pools and the development of cost estimates to extend the life of the pools as a comparison for the cost to build a new outdoor swimming pool for the City.

Review Existing Information	Facility Drawings
	Prior Studies/Reports
	Observations/Goals of City
Conduct On-Site Audit of Facility	Pools and All Equipment
	Support Facilities
	Code Compliance including ADA Review
Review Findings with City	Recommendations for Physical Issue Corrections
	Recommendations for Addressing Functional Issues
	Cost Implications of Identified Action Plan
	Forecasting Remaining Life of Systems
	Identification of "fatal flaws" or Major Concerns

Project Overview

- Counsilman-Hunsaker would put the lifespan of an outdoor aquatic facility in the range of 30 to 40 years, depending on a variety of factors including:
  - Quality of construction
  - Presence of a preventative maintenance plan
  - Climate
  - Amount of usage
- It's common for an aquatic facility to undergo a mechanical renovation and facility upgrades about halfway through this lifespan.
  - The swimming pool had a mechanical renovation in 2008.
- Physical versus Functional Condition is another consideration to take into account when evaluating an aging outdoor pool.
  - Physical: condition of pool, equipment, natatorium, mechanical systems
  - Functional: Do the pools meet the expectation of user groups and the Jersey Village community? Does the pool support the primary aquatic programs and activities?

Applicable Codes

Texas Administrative Code
Title 25: Health Services
Part 1: Department of State Health Services
Chapter 265: General Sanitation
Subchapter 1: Public Swimming Pools and Spa

Applicable Federal Code Section
Virginia Graeme Baker Pool and Spa Safety Act (VGB)
ASME/ANSI A112.19.81
Signed into Law on December 19, 2007
CPSC Staff Interpretation of Section 1404 issued on June 18, 2008
Successor standard ANSI/APSP/ICC-16 2017 currently adopted

Americans with Disabilities Act (ADA)
U.S.C. 12101 et seq.
Signed into Law on July 26, 1990
Revisions published September 15, 2010
https://www.ada.gov/2010ADAstandards_index.htm

Jersey Village Swimming Pool

Conditions Assessment Summary

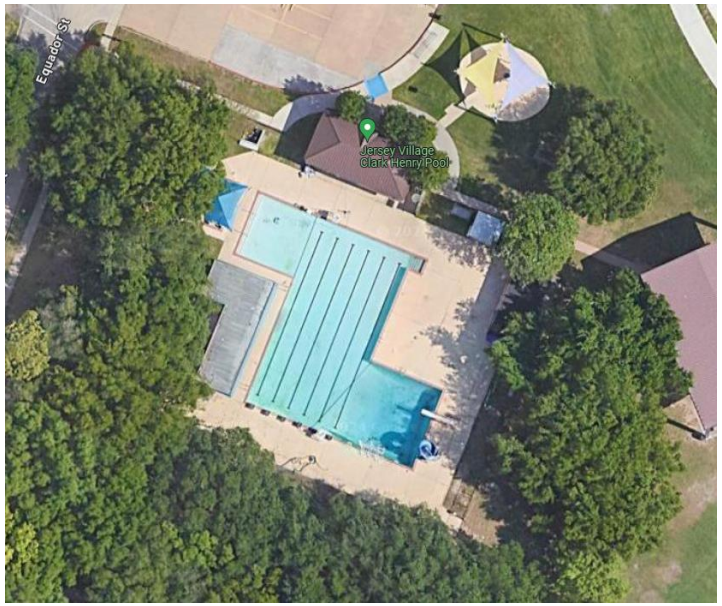
Swimming Pools Overview

- Main Pool
  - Pool size: 5,400 SF
  - Gallons: 240,000
  - Water depth: 2’6” to 12’0”
  - Turnover: 13 hours (300 GPM)

- Children’s Pool
  - Pool size: 200 SF
  - Gallons: 2,250
  - Water depth: 1’6”
  - Turnover: Unknown

Summary

- **Inspection and Findings:**
- Outdoor community pool, built in 1975.
- The swimming pool has exceeded the standard lifespan of an outdoor pool (30-40 years)
- The existing mechanical system is nearing the end of its lifespan (15-20 years) as is the plaster surface (7-10 years).
- The inspection revealed several issues including cracks in the pool structure, deck, and coping stone.
- The plaster surface is beyond its lifespan and needs replacement.
- The pool deck was replaced in 2021 but has already developed cracks throughout.
- The current turnover rate (over 13 hours) is significantly slower than the code requirement (6 hours). Upgrading the pool to meet the code would require replacing the entire piping system due to its insufficient size for a higher flow rate.
- The pool mechanical room has significant corrosion and needs to be replaced.
- The separate children's pool does not meet current ADA compliance standards, and requires an entry ramp which significantly reduces its usable space. The pool also needs safety upgrades including a functional Safety Vacuum Release System (SVRS) and a secondary sanitation system.
- **Renovation vs. Replacement:**
- One option involves lining the pool with stainless steel panels and a PVC liner, essentially creating new pool walls and surface. This would come with a new gutter system, potentially a deck-level one for better water flow during lap swimming.
- Expanding the shallow end into a zero-depth entry by combining it with the children's pool is also a possibility.
- Renovation would save the existing concrete layout but still require a new mechanical system, piping, and pool deck.



Lap Pool

Lap Pool

Pool Structure

- The swimming pool has a concrete structure with a plaster finish. There were areas of etching and delaminating plaster at several areas in the pool. A large crack is visible throughout the surface of the pool spanning from the shallow end by the starting blocks to the deep end. Staff report the crack has been in the pool since at least 2021. The crack is close to an inch wide and has been filled by maintenance staff to prevent water loss. The corners of the pool were in poor condition with missing plaster, cracking, missing tile and exposed concrete. While not uncommon for a pool of this age, it does indicate signs of structural movement and cracking in the pool shell. When structural cracking in a pool occurs, it can be created by many factors. Structural failure will continue until the issue is addressed. Furthermore, structural cracking allows water (pool or hydrostatic ground water) to penetrate the concrete and reach the embedded rebar. The result is corroded and eventual failed rebar which can further weaken the pool structure.

- Staff report that the pool was losing upwards of 3 inches per day of water which could have been a combination of leaks in the recirculation system and leaks within the pool structure. Repairs have been performed, though the pool still loses up to 1 inch per day.

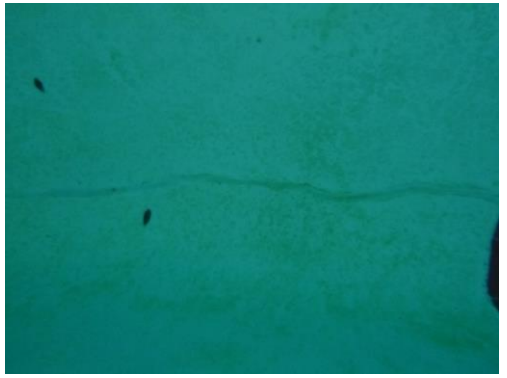


Figure 1.1, Crack in pool structure

Figure 1.2, Area of large crack

Figure 1.3, Crack in pool structure

Figure 1.4, Plaster surface etching/delamination

Figure 1.5, Underwater light not in place

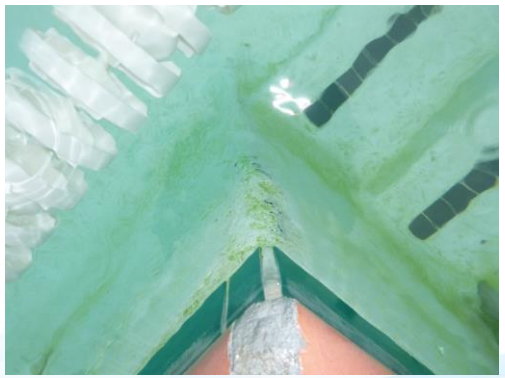


Figure 1.6, Cracking, delamination on corner

Lap Pool

Coping Stone

- Cracking was also observed in the pool's perimeter precast coping stone and gaps exist between the perimeter pool tile and coping stone. Staff have repaired and patched these areas with concrete though some of the patches need repairing. In two separate areas the coping stone was able to be pulled up as it was not attached to the top of the concrete wall. Areas specific to the corners of the pool also had issues with the condition of the coping stone and large gaps and cracking. When gaps exist in the pool's coping stone it allows water to penetrate behind and in between the stone. When water gets behind the coping stone it can create movement in the stone. These areas should be secured, patched and filled before the start of the 2024 pool season.

Figure 1.7, Coping stone loose and cracking

Figure 1.8, Area of corner wall repair

Figure 1.9, Area of corner wall repair

Figure 1.10, Cracked, shifting skimmer basket

Figure 1.11, Loose/unsecured coping stone

Figure 1.12, Uneven/shifting concrete deck and pool

Lap Pool

Pool Deck

- The concrete pool deck shows signs of cracking around the perimeter of the pool and has areas that are uneven or where concrete is missing in several locations. The top coating is also delaminating in numerous locations. The main issues with the pool deck are the areas of missing concrete that can cause safety hazards for guests walking around without their shoes. Staff have patched areas that have cracked and delaminated to ensure the safety of pool users, but a few areas still need to be addressed. There is also significant shifting the pool deck as evidenced by the fact that the pool deck was replaced 3 years ago and there is already cracking, heaving and swelling of the deck. A key location this has occurred is on the north side of the deep end where the deck and coping stone are wavy.
- One of two approaches can be taken regarding the deck slabs, depending on the level of renovation undertaken.
  - The current maintenance approach can be continued. If this approach is continued, this will certainly be an ongoing maintenance issue for the life of the facility.
  - An alternative approach would be to replace all of the pool deck, or major sections of the deck in their entirety, enabling proper placement and compaction of fill materials and a robustly designed deck slab to eliminate issues for the replaced areas – rather than continuing to replace or repair the deck in small sections.

  Staff should continue to monitor the condition of the pool deck and repair areas as needed. A complete replacement of the pool deck is not recommended at this time though repairs should be made to areas of concern.

Figure 1.13, Coping stone cracking

Figure 1.14, Pool deck delamination

Figure 1.15, Sunken skimmer basket cover

Figure 1.16, Pool deck delamination

Figure 1.17, Pool deck cracking

Figure 1.18, Pool deck corrosion

Lap Pool

Americans with Disabilities Act (ADA)

- In 2010, the Department of Justice implemented the Americans with Disabilities Act (ADA) requiring compliant accessibility to all pools, including those in operation at the time the law was enacted. The ADA requires that a swimming pool with a perimeter that is more than 300' to have at least two accessible means of entry, provided that the primary accessible means of entry is an ADA compliant swimming pool lift or ADA compliant swimming pool ramp with handrails, while the secondary means of access can be either a ramp, lift or compliant stair entry.
    - The pool contains a lift but it was not functional during the site visit. The ladders and stair entry do not qualify for a compliant entry. To meet the ADA standards the pool should have two compliant lifts installed, or a single lift and convert the smaller stair entry on the east side of the pool to a compliant stair entry with handrails.
    - Another option would be to install a new ADA lift along with an ADA compliant portable stair entry system similar to https://www.recreonics.com/product/aqua-step-4-step/.
    - The children's pool's size necessitates one means of entry which would require the construction of a new entry ramp as the pool is too shallow for a pool lift.

Figure 1.19, Pool deck cracking

Figure 1.20, ADA pool lift

Figure 1.21, Deep water area

Figure 1.22, Pool bathhouse

Figure 1.23, Pool mechanical building

Figure 1.24, Chemical storage room

Lap Pool

Starting blocks

- The pool consists of 6 starting blocks that meets the current standard for 28”x32” with the inclusion of an angular wedge. The wedge is contained within acetal tracks mounted on both sides of the platform, which allow it to slide to the desired distance or to be stowed underneath the platform. Safety covers should be placed on the existing starting blocks when not in use for competitive swimming per the Texas Administrative Code.

Main drains

- The pool contains 2 suction outlets in pool’s deep end that are each 24”x24” with stainless-steel VBGA covers and located in the deepest portion of the swimming pool. All main drains / suction outlets with dimensions 18” x 23” or smaller are classified as “blockable” and must have a Virginia Graeme Baker Pool and Spa Safety Act (VGB), ASME/ANSI A112.19.81 stamped and certified “unblockable” grate cover with tamper proof screws.
- The federal regulations of VGB were passed by Congress in 2008 (after the construction of the swimming pool) and are designed to reduce the potential for suction and hair entrapment in commercial swimming pools at all suction outlets (e.g. main drains, skimmer equalizer lines, etc.). The Consumer Product Safety Commission (CPSC) is tasked with federally enforcing all VGB regulations, but due to the vast number of commercial swimming pools in the United States, enforcement most commonly is the responsibility of the local governing agencies (e.g. public health departments, building departments, etc.). VGBA covers have expiration dates on them based on their expected lifespan.
- The pool contains VGBA raised grates but the expiration dates on them are unknown. Staff should confirm the expiration date and replace as needed.

Figure 1.25, Pool mechanical system

Figure 1.26, Mechanical room wall deterioration


Figure 1.27, Piping bolt corrosion


Figure 1.28, Piping support corrosion | area of filter leak


Figure 1.29, Wall/door deterioration


Figure 1.30, Mechanical room ceiling damage

Lap Pool

Pool filtration

- The pool contains a two Waterco 55” high-rate sand fiberglass filters that were installed in 2008. Staff report that new sand and laterals were recently installed. Staff also report that the pool water gets hazy during the afternoons in the summer time when bather loads are high which can usually be attributed to poor filtration or poor turnover rates. Based on the existing flow rate of 300 GPM, the filters are rated to accommodate the flow rate, though the flow rate needs to be 700 GPM to achieve the minimum turnover rate to meet the existing Texas Administrative Code requirement.

Pool piping

- The visible, above ground recirculation piping for the pool’s gutter system and main drain in the pool mechanical room are Schedule 80 PVC that was installed during the 2008 renovation. Several of the pipe supports show signs of corrosion. Overall, the piping for the pool is in good condition. The 6” recirculation piping is adequate for the 300 GPM flow rate, but it is not rated for a 700 GPM flow rate which is necessary to meet the code requirement of a 6-hour turnover. In order to achieve the required turnover rate a complete renovation of the recirculation system is required including all new piping in the mechanical room and to the swimming pool. This would require a complete demolition and reinstallation of the existing pool deck to reach all of the subgrade piping.

Pool Sanitation

- The pool has an Accutab chlorinator that utilizes calcium hypochlorite (tablet chlorine) for the pool’s sanitizer. Muriatic acid is used for the pH buffer and is stored in an adjacent room. The feed line for the acid comes through the wall into the main mechanical room which allow fumes to get into this space which has caused some level of corrosion on most of the equipment. There is minimal ventilation in this area and corrosion was observed on pipe supports, piping bolt connections, and electrical components. A separate dedicated and ventilated chemical storage room for both the sanitizer and pH buffer is recommended and is the current industry standard. These spaces are strongly recommended to be exhausted independently to the exterior, typically at rates around 15-20 air changes per hour, depending on specific code requirements. A plan for dedicated spaces for chemical storage in a future renovation should be developed.

Figure 1.31, Pool mechanical system

Figure 1.32, Mechanical room wall deterioration

Figure 1.33, Piping bolt corrosion

Figure 1.34, Piping support corrosion | area of filter leak

Figure 1.35, Wall/door deterioration

Figure 1.36, Mechanical room ceiling damage

Main Pool

- A Chemtrol chemical controller is installed on the system. The chemical controller automatically calls for feed of the sanitizer and the pH buffer as necessary minimizing the peaks and valleys common when the chemical feed is controlled manually. A chemical controller is current industry standard and is within current industry standards for this type of swimming pool.
- The recirculation system does not contain a flow meter as required by code.
- Counsilman-Hunsaker typically assigns a lifespan of 15-20 years for a pool's mechanical system. The outdoor pool mechanical system falls within that window and the City will need to plan for a mechanical renovation if the pool continues in operation for the foreseeable future.

Figure 1.37, Pool mechanical system

Figure 1.38, Mechanical room wall deterioration

Figure 1.39, Piping bolt corrosion

Figure 1.40, Piping support corrosion | area of filter leak

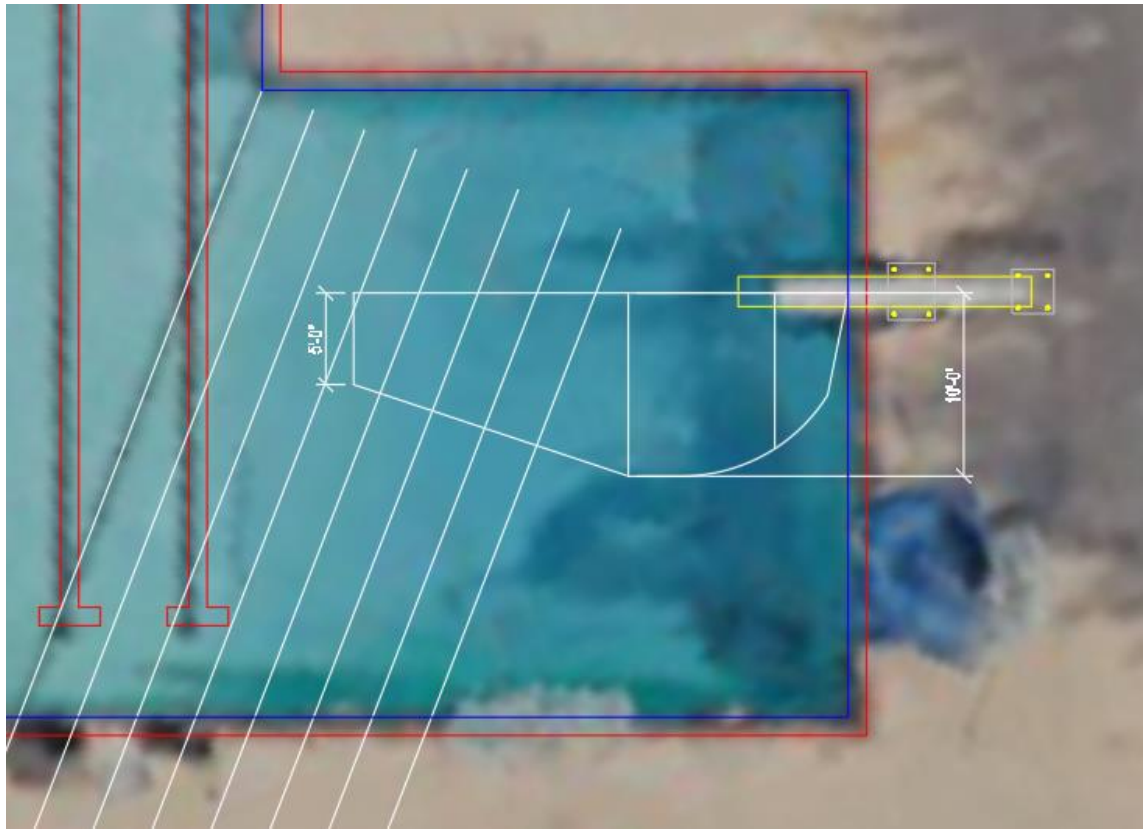
Figure 1.41, Wall/door deterioration

Figure 1.42 Mechanical room ceiling damage

Lap Pool

Diving Board

- The State of Texas has recently adopted the International Swimming Pool and Spa Code (ISPSC) which allows for Class B and C pools (non-competitive pools) different “types” of diving boards that have different water depth requirements. Since the diving board at the swimming pool is not a competitive diving springboard (it is more rigid), then the standard for the slope and depth is not as stringent. The graphic to the right shows the existing swimming pool shell for an S.R. Smith diving board. Based on the assumptions made on the slope and depth of the diving area, the board meets the current standard. Staff should confirm the type of diving board to ensure compliance with the ISPSC and the manufacturer’s recommendations.



Summary - Lap Pool

- Structural cracking in the pool is a major concern for the integrity of the pool structure
- Plaster surface has exceeded normal lifespan by 6 years and has signs of staining, etching and delamination
- Coping stone is cracking and loose in several areas around the pool's perimeter
- Pool deck has significant cracking around the entire pool perimeter
    - Previous repairs in 2015 and new pool deck in 2021
- Pool necessitates two compliant means of accessible entry to be ADA compliant
- Corners of pool walls have required significant repairs and are in poor condition with cracking, etching and exposed concrete
- Pool's recirculation rate is 2x longer than the current State of Texas Administrative Code (TAC) requirement
    - Recirculation rate is 5 hours longer than the pre-1999 pool requirement
    - Primary cause of hazy/cloudy water during summer swim season
    - Pool recirculation rate needs to increase 230% to meet the current TAC requirement
    - Requires increased and new pump size, piping, recirculation, suction outlets, return inlets
    - Lack of functioning flow meter makes it difficult to pinpoint exact flow rate
- Rust and corrosion of pool mechanical system elements is prevalent due to chemical storage
- Pool mechanical building is in poor condition with lack of ventilation and isolation for pool chemicals
- Pool filtration is nearing the end of its expected lifespan and has had leaks in recent years

Children’s Pool

Children’s Pool

In the State of Texas, the children’s pool is considered a Public Interactive Water Feature (PIWF). The following applies to PIWFs:
Signs for PIWFs. Warning and notification signs shall be posted at the entrance of all PIWFs, or where the signs are clearly visible to users entering the PIWF area before contact with PIWF water occurs, when the PIWF is open or in use.
Signs shall be securely mounted, clearly visible, and easily read with letters in a contrasting color to the background.

The required signage can be combined into a single sign. The signage shall provide the following notifications and warnings in letters at least 2 inches in height:

(1) "Non-Service Animals Prohibited;“
(2) "Changing Diapers Within 6 Feet Of The Water Feature is Prohibited;“
(3) "Use Of The Water Feature If Ill With A Contagious Disease is Prohibited;“
(4) "Do Not Drink Water From The Water Feature;" and
(5) "Use Of The Water Feature When Ill With Diarrhea is Prohibited.

In addition to maintaining sanitizer, cyanuric acid, and pH levels as required, PIWFs shall be equipped with a supplemental water treatment system that will protect the public against infection by the parasite, Cryptosporidium. (A) UV light disinfection installed after filtration; (B) ozone; (C) a NSF/ANSI-50 product, combination of products, or process to control Cryptosporidium; (D) weekly hyperchlorination following the Center for Disease Control's Recommendations for Aquatics Operators of Treated Venues "Hyperchlorination to Kill Cryptosporidium" available on the CDC's website: www.cdc.gov/healthyswimming/; or (E) an equivalent product, process, or system approved by the department.

Children’s pool

Children’s pool SVRS

Children’s pool mechanical system

Main drain

Deck/skimmer cracking

Children’s pool

Summary - Children's Pool

- Non-ADA compliant entry
  - Necessitates the construction of a ramp entry (1:12 slope) with ADA compliant handrails down to the depth of 1'6"
- Single main drain requires Safety Vacuum Release System (SVRS)
  - SVRS installed on the mechanical system but is not currently operating
- Children's pools are considered a Public Interactive Water Feature (PIWF) in the State of Texas
  - Necessitates secondary sanitation system (Ultraviolet Treatment System) to kill harmful bacteria associated with Recreational Water Illnesses
- Lack of chemical automation installed on the mechanical system to control chlorine and muriatic acid feeding.
- Cracking in the perimeter deck and coping stone was observed
- Lack of modern-day interactive aquatic amenities for children

Cost Estimates

Repair Option

- New plaster surface
- Concrete deck repairs
- Decommissioning of children's pool
- Addition of 2 ADA lifts
- Pool structure repairs
- No repairs or renovations to mechanical system

- Approximate lifespan: 5 to 7 years barring any unforeseen critical failure of mechanical equipment or significant water loss

Counsilman · Hunsaker
AQUATICS FOR LIFE

Jersey Village
***PRELIMINARY Opinion of Probable Construction Cost** — **6/12/2024**

ITEM		COST	
Lap Pool		$507,482.32	
Deck Equipment		$32,111.11	
Pool deck		$37,500.00	
Pool structure repairs		$100,000.00	
	Pool Subtotal		$677,093.43
Children's pool		$0.00	
	Pool Subtotal		$0.00
Mechanical Enclosure		$0.00	
	Pool Subtotal		$0.00
TOTAL AQUATICS COST ESTIMATE			**$677,093.43**
Contingency	20%		$812,512.12
TOTAL AQUATICS COST ESTIMATE			**$813,000.00**

The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable cost are representative only of the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.

Renovation Option

- 5,400 sf renovation
  - New gutter system
  - New recirculation piping
  - Mechanical system renovation
  - Addition of 2 ADA lifts
- Pool deck demolition and replacement
- Removal of existing children's pool
- Addition of new children's pool – 665 sf
- Retain same functionality and layout as current pool
- Approximate lifespan: Additional 10-15 years barring any unforeseen critical failure of pool structure that leads to significant water loss

Renovation Option

Counsilman · Hunsaker
AQUATICS FOR LIFE

Jersey Village
***PRELIMINARY Opinion of Probable Construction Cost** **6/12/2024**

ITEM		COST	
Lap Pool		$1,220,736.70	
Deck Equipment		$32,111.11	
Pool deck		$135,000.00	
Pool structure repairs		$250,000.00	
	Pool Subtotal		$1,637,847.81
Children's pool		$401,705.66	
	Pool Subtotal		$401,705.66
Mechanical Enclosure		$450,000.00	
	Pool Subtotal		$450,000.00
TOTAL AQUATICS COST ESTIMATE			$2,489,553.47
Contingency	15%		$2,862,986.49
TOTAL AQUATICS COST ESTIMATE			$2,863,000.00

The Consultant has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable cost are representative only of the Consultant's judgment as a design professional familiar with the construction industry. The Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.

Project Feedback

Community Meeting

- Steps in shallow end are nice feature for teaching swimming lessons
- Pool design should have good sight lines for parents with multiple children at the pool
- Park setting is important to users
- Incorporate the personality of Jersey Village into the pool design (community-feel)
- Preference for a single body of water
- Include waterslides for multiple age groups and a specific area for young children
- Explore the possibility of an 8-lane lap pool
- Deep water and diving board are popular amenities at the current pool
- Ensure plenty of shade areas exist for pool users when not in the water
- Zero-depth entry with shallow water can easily accommodate young children

Swimming Pool Concepts

Concept 1

- 4,572 sf lap | recreation pool
  - 6, 25-yard lanes
  - Zero-depth entry with children's play feature
  - Water depths: 0'0" to 6'0"
  - Open water recreation | program area
  - Available area to have 8 lanes instead of 6 lanes

- 597 sf deep pool
  - Shallow sun ledge
  - Climbing wall
  - Drop slide
  - Water depth: 9'0"

Concept 1

Concept 1

CHART AQUATIC RESEARCH TOOL	OPINION OF PROJECT COST: Option 1		
Description	Unit	Amount	Opinion of Cost
Support Spaces		4,073	$2,011,874
Front Desk	Sq. Ft.	400	
Offices (Lifeguard + Admin)	Sq. Ft.	400	
Locker Rooms	Sq. Ft.	1,000	
Family Changing Rooms	Sq. Ft.	320	
Outdoor Pool Mechanical Room	Sq. Ft.	1,038	
Building Mechanical / Electrical / Janitor	Sq. Ft.	100	
Circulation and Walls (25%)	Sq. Ft.	815	
Outdoor Aquatic Center		15,515	$3,393,320
Outdoor Dive Pool	Sq. Ft.	597	
Outdoor Leisure Pool	Sq. Ft.	4,572	
Children's Play Structure	Allowance	1	
Play Structure Mechanical	Allowance	1	
Drop Slide	Allowance	1	
Climbing Wall	Allowance	1	
Shade Structures	Qty.	3	
Shade Pavillion	Qty.	1	
Outdoor Deck	Sq. Ft.	10,338	
Overhead Lighting	Sq. Ft.	15,515	
Fencing	Linear Ft.	500	
Unit		Sq. Ft.	Opinion of Cost
Total Building Construction Costs			**5,405,194**
Site Construction Allowance (parking, landscaping, utilities, walks - assuming normal si			$979,402
Furniture, Fixtures, Equipment			$118,000
Subtotal		19,588	$6,502,596
Escalation Allowance (1 year)	5.0%		$325,130
Contingency (Design / Construction)	10.0%		$682,773
Design Fees, Surveys, Permitting	12.0%		$901,260
Opinion of Probable Cost			**$8,411,758**
Total Estimated Project Costs:			**$8,500,000**
Estimate Current as of:		**6/13/2024**	
Source: Counsilman-Hunsaker			

Concept 2

- 3,229 sf lap pool
  - 6, 25-yard lap lanes
  - Waterslide tower
  - Water depths: 3’6” to 6’0”
  - Open water recreation | program area

- 1,369 sf shallow water recreation pool
  - Step down entry
  - Spray features
  - Bench seating
  - Water depths: 1’0” to 3’6”

Concept 2

Concept 2

CHART AQUATIC RESEARCH TOOL	OPINION OF PROJECT COST: Option 2		
Description	Unit	Amount	Opinion of Cost
Support Spaces		4,471	$2,153,250
Front Desk	Sq. Ft.	400	
Offices (Lifeguard + Admin)	Sq. Ft.	400	
Locker Rooms	Sq. Ft.	1,000	
Family Changing Rooms	Sq. Ft.	320	
Outdoor Pool Mechanical Room	Sq. Ft.	957	
Building Mechanical / Electrical / Janitor	Sq. Ft.	100	
Storage (Building / Pool)	Sq. Ft.	400	
Circulation and Walls (25%)	Sq. Ft.	894	
Outdoor Aquatic Center		13,805	$3,049,888
Outdoor Lap Pool	Sq. Ft.	3,229	
Outdoor Leisure Pool	Sq. Ft.	1,369	
Spray Features	Allowance	2	
Waterslide Tower	Allowance	1	
Waterslide Mechanical	Allowance	1	
Shade Structures	Qty.	4	
Shade Pavillion	Qty.	1	
Outdoor Deck	Sq. Ft.	9,198	
Overhead Lighting	Sq. Ft.	13,805	
Fencing	Linear Ft.	500	
Unit		Sq. Ft.	Opinion of Cost
Total Building Construction Costs			**5,203,138**
Site Construction Allowance (parking, landscaping, utilities, walks - assuming normal s			$913,804
Furniture, Fixtures, Equipment			$110,000
Subtotal		18,276	$6,226,941
Escalation Allowance (1 year)	5.0%		$311,347
Contingency (Design / Construction)	10.0%		$653,829
Design Fees, Surveys, Permitting	12.0%		$863,054
Opinion of Probable Cost			**$8,055,171**
Total Estimated Project Costs:			**$8,100,000**
Estimate Current as of:		**6/13/2024**	
Source: Counsilman-Hunsaker			

Concept 3

- 3,229 sf lap pool
  - 6, 25-yard lap lanes
  - Water depths: 3’6” to 6’0”
  - Open water recreation | program area
  - Possible to expand to 8 lanes instead of 6 lanes

- 3,078 sf recreation pool
  - Shallow zero-depth area
  - Play/spray features
  - Open water recreation | program area
  - Waterslide tower

Concept 3

Concept 3

6/23/2024

CHART AQUATIC RESEARCH TOOL	OPINION OF PROJECT COST: Option 3		
Description	Unit	Amount	Opinion of Cost
Support Spaces		4,776	$2,261,644
Front Desk	Sq. Ft.	400	
Offices (Lifeguard + Admin)	Sq. Ft.	400	
Locker Rooms	Sq. Ft.	1,000	
Family Changing Rooms	Sq. Ft.	320	
Outdoor Pool Mechanical Room	Sq. Ft.	1,201	
Building Mechanical / Electrical / Janitor	Sq. Ft.	100	
Storage (Building / Pool)	Sq. Ft.	400	
Circulation and Walls (25%)	Sq. Ft.	955	
Outdoor Aquatic Center		18,932	$4,164,674
Outdoor Lap Pool	Sq. Ft.	3,229	
Outdoor Leisure Pool	Sq. Ft.	3,078	
Spray Features	Allowance	2	
Waterslide Tower	Allowance	1	
Waterslide Mechanical	Allowance	1	
Shade Structures	Qty.	4	
Shade Pavillion	Qty.	1	
Outdoor Deck	Sq. Ft.	12,616	
Overhead Lighting	Sq. Ft.	18,932	
Fencing	Linear Ft.	600	
Unit		Sq. Ft.	Opinion of Cost
Total Building Construction Costs			**6,426,318**
Site Construction Allowance (parking, landscaping, utilities, walks - assuming normal sit			$1,185,413
Furniture, Fixtures, Equipment			$143,000
Subtotal		23,708	$7,754,730
Escalation Allowance (1 year)	5.0%		$387,737
Contingency (Design / Construction)	10.0%		$814,247
Design Fees, Surveys, Permitting	12.0%		$1,074,806
Opinion of Probable Cost			**$10,031,519**
Total Estimated Project Costs:			**$10,100,000**
Estimate Current as of:		**6/13/2024**	
Source: Counsilman-Hunsaker			

New Pool – Existing Layout

- New 5,400 SF swimming pool
- Same layout and functionality as existing pool
- New entry building | locker rooms
- New pool mechanical building

New Pool – Existing Size

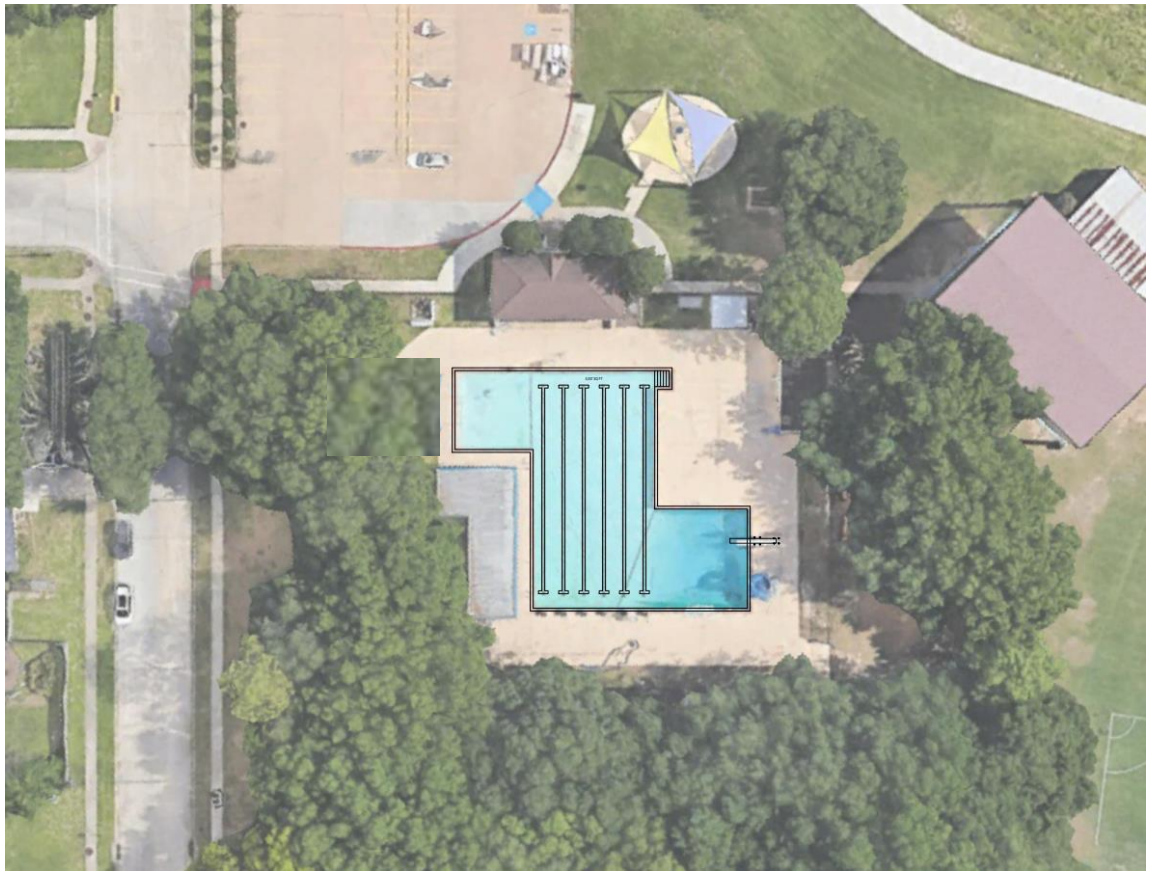


CHART AQUATIC RESEARCH TOOL	OPINION OF PROJECT COST: Rebuild Jersey Village Pool			
	Description	Unit	Amount	Opinion of Cost
Support Spaces			3,639	$1,784,014
	Front Desk	Sq. Ft.	200	
	Offices (Lifeguard + Admin)	Sq. Ft.	200	
	Locker Rooms	Sq. Ft.	1,000	
	Family Changing Rooms	Sq. Ft.	240	
	Outdoor Pool Mechanical Room	Sq. Ft.	771	
	Building Mechanical / Electrical / J	Sq. Ft.	100	
	Storage (Building / Pool)	Sq. Ft.	400	
	Circulation and Walls (25%)	Sq. Ft.	728	
Outdoor Aquatic Center			16,209	$3,178,312
	Outdoor Lap Pool	Sq. Ft.	5,400	
	1M Diving	Qty.	1	
	Waterslide Tower	Allowance	1	
	Shade Structures	Qty.	4	
	Shade Pavillion	Qty.	1	
	Outdoor Deck	Sq. Ft.	10,802	
	Overhead Lighting	Sq. Ft.	16,209	
	Fencing	Linear Ft.	600	
Unit			Sq. Ft.	Opinion of Cost
Total Building Construction Costs				**4,962,326**
Site Construction Allowance (demolition, landscaping, utilities, walks - assuming normal site co				$810,450
Furniture, Fixtures, Equipment				$98,000
Subtotal			16,209	$5,870,776
Escalation Allowance (1 year)		5.0%		$293,539
Contingency (Design / Construction)		10.0%		$616,431
Design Fees, Surveys, Permitting		12.0%		$813,690
Opinion of Probable Cost				**$7,594,435**
Total Estimated Project Costs:				**$7,600,000**
Estimate Current as of:			**6/24/2024**	
Source: Counsilman-Hunsaker				

New Pool – Expanded Layout

- New 6,000 SF swimming pool
- Same layout and functionality – 8 lanes instead of 6
- New entry building | locker rooms
- New pool mechanical building

New Pool – Expanded Layout

CHART AQUATIC RESEARCH TOOL	OPINION OF PROJECT COST: Expanded Jersey Village Pool			
	Description	Unit	Amount	Opinion of Cost
Support Spaces			3,854	$1,860,124
	Front Desk	Sq. Ft.	200	
	Offices (Lifeguard + Admin)	Sq. Ft.	200	
	Locker Rooms	Sq. Ft.	1,000	
	Family Changing Rooms	Sq. Ft.	240	
	Outdoor Pool Mechanical Room	Sq. Ft.	943	
	Building Mechanical / Electrical / J	Sq. Ft.	100	
	Storage (Building / Pool)	Sq. Ft.	400	
	Circulation and Walls (25%)	Sq. Ft.	771	
Outdoor Aquatic Center			19,809	$3,859,612
	Outdoor Lap Pool	Sq. Ft.	6,000	
	1M Diving	Qty.	1	
	Waterslide Tower	Allowance	1	
	Tot Pool	Sq. Ft.	600	
	Shade Structures	Qty.	4	
	Shade Pavillion	Qty.	1	
	Outdoor Deck	Sq. Ft.	13,202	
	Overhead Lighting	Sq. Ft.	19,809	
	Fencing	Linear Ft.	600	
Unit			Sq. Ft.	Opinion of Cost
Total Building Construction Costs				**5,719,736**
Site Construction Allowance (demolition, landscaping, utilities, walks - assuming normal site co				$990,450
Furniture, Fixtures, Equipment				$119,000
Subtotal			19,809	$6,829,186
Escalation Allowance (1 year)		5.0%		$341,459
Contingency (Design / Construction)		10.0%		$717,065
Design Fees, Surveys, Permitting		12.0%		$946,525
Opinion of Probable Cost				**$8,834,235**
Total Estimated Project Costs:				**$8,900,000**
Estimate Current as of:			**6/24/2024**	
Source: Counsilman-Hunsaker				

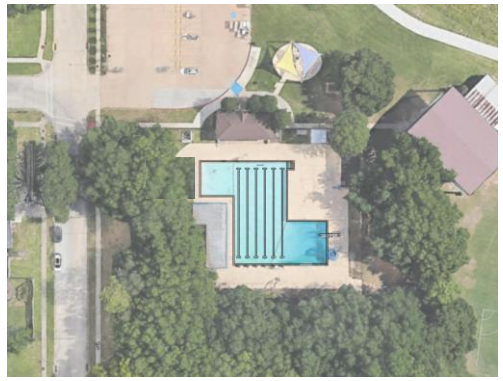
Concept Summary

- Recreation | lap pool (6 lanes)
- Dive pool
- Possible expansion to 8 lanes
- Total water surface: 5,000 SF
- Construction cost: $6.5M
- Project cost: $8.4M

- Lap pool (6 lanes)
- Recreation pool
- Total water surface: 4,600 SF
- Construction cost: $6.2M
- Project cost: $8.0M

- Lap pool (6 lanes)
- Recreation pool
- Total water surface: 6,200 SF
- Construction cost: $7.7M
- Project cost: $10.0M

- Lap pool (6 lanes)
- Total water surface: 5,400 SF
- Construction cost: $5.8M
- Project cost: $7.6M



- Lap pool (8 lanes)
- Total water surface: 6,000 SF
- Construction cost: $6.8M
- Project cost: $8.9M

General Limiting Conditions

This report is based on information that was current as of May 2024. The opinion of probable costs estimates are based upon a protocol in which a general contractor or swimming pool contractor executes all of the tasks with its own labor and that of qualified subcontractors. It is recognized that the Consultant or Owner have no control over the cost of labor, materials or equipment, over the Contractor's methods of determining bid prices, or over competitive bidding, market or negotiating conditions. Accordingly, the Consultant cannot, and does not, warrant or represent that bids or negotiated prices will not vary from the Owner's project budget.

City of Jersey Village
Clark Henry Pool Study
Bond Committee Meeting
June 12, 2024