

NEEDS ASSESSMENT STUDY:
ALBANY HIGH SCHOOL
SWIMMING POOL

15 AUGUST 2007

Submitted By:

Aquatic Design Group, Inc.
1950 Kellogg Avenue
Carlsbad, CA 92008
760.438.8400
www.aquaticdesigngroup.com

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I. SCOPE

I visited the Albany High School campus swimming pool in Albany, California to perform a Needs Assessment Study. The Swimming Pool was open for use during my visit. The Albany Union High School campus swimming pool is an indoor swimming pool. The pool is managed by City of Albany staff.

The following report is a summary of the existing conditions, code violations, deficiencies and proposed improvements for rehabilitation of these campus swimming pools. The scope of this report includes the swimming pool, pool deck area, and pool mechanical spaces, but excludes the structural integrity of the pool shells, mechanical spaces and handicap accessibility in path of travel to the pool. The architecture of the pool area buildings is not included in the scope of this report.

This report identifies any violations of codes that were found. Some of these violations may currently be operating on a grandfathered exemption. It is important to note that though some grandfatherable exemptions by the County Environmental Health Services department may allow the pool to legally operate in non-compliance of current Title 24 standards, but that the liability of any health and safety risks to the public may still remain. We therefore recommend that these issues should be reviewed on an individual basis for determination of disposition and possible remedy for each violation.

Certain violations of the State Administrative Code may be due to deterioration and material failures in which the code requires that these violations be rectified immediately or the facility is to be shut down. Other violations may be due to modifications to the code over the years. Providing that the violation is not deemed an immediate health or safety risk the Environmental Health Department may allow the violation to exist as a “grandfatherable condition”. These grandfathered conditions are normally allowed to exist until such time as when the facility is having work done in which the scope of the work will allow for the violation to be remedied. If such work were going to take place then the Environmental Health Department would demand that the violation be brought into compliance.

In addition to the code violations being of concern to the Environmental Health Department they can also be of concern to the school district’s Risk Manager as well. If a facility is in violation of the current State Code the liability exposure alone may warrant the remedy of the violation. Given the subjective nature of the interpretation of the code, violations that may be deemed a grandfatherable violation at one point may not be allowed at another time or by a different inspector.

Not included in the scope of this report but an important area to be reviewed is the requirement for the facilities to meet the American Disabilities Act (ADA). This includes access to the facilities, restrooms, and the swimming pools. To comply, every swimming pool must have a means of handicap access to the pool. This can include a wheelchair ramp into the pool or a handicap lift to allow access to the pool. The scope of this report is for the swimming pools only. Therefore, access from the campus to the pool area and the bathhouse facilities are not covered in this report. Access into the pool at the pool area is reviewed in this report.

The estimated opinion of costs identified in the itemized sections for each school of this report includes materials and labor for the repair, but they do not include any

architectural or engineering costs that may occur. Structural analysis of the pool structures, pool mechanical spaces, or other spaces would require destructive testing which is not included in the scope of this report.



II. CODES

The Albany High School swimming pool was originally built in 1947 based upon original plans. The facilities have been renovated several times though we do not have any plans or documentation as to what extent. There are a set of plans dated 1972 in which a permanent bulkhead was to be added to the pool. The existing pool does not show any signs that this work was ever done. The existing pool has a stainless steel gutter that is not shown on any of the as-built pool plans. The codes that are enforce are the codes in use at the time of construction. There are no building or health department approved plans available to determine what codes were used for their respective scopes and therefore what codes currently apply to these facilities. For the purpose of this report the facilities' compliance with current codes will be examined. The current codes that apply are:

- 2000 Uniform Building code
- 2001 California Building Code
- 2001 California Electric Code – Article 680
- 2000 Uniform Fire Code – Article 80
- 2001 California Fire Code – Article 80
- 2000 Uniform Mechanical Code
- 2001 California Mechanical Code
- Title 24 of the California Administrative Code
- Title 22 of the California Health and Safety Code

Article 680 of the CEC is the electric code that pertains to swimming pools. Article 80 of the UFC & CFC is the article that pertains to hazardous material storage and use. Title 24 of the CA Administrative code, chapter 31B provides the regulations for the design and operation of public swimming pools. Title 22 of the CA Health and Safety Code provides health and safety regulations for swimming pools.

III. FACILITY DATA

The Albany High School pool facility is an indoor pool with bathroom and pool mechanical room spaces included. The data and estimates made for this report are derived from the plans provided, notes and observations from our site visits, and from input provided by District staff. Destructive testing has not been conducted to confirm the workmanship and conditions of the pools, decks, and other structures. The assumptions and conclusions in this report are based solely on the visual evidence found during our site visit, as-built plans provided by the staff, and comments provided by the staff. The Albany High School Aquatic center consists of a single pool. The pool is 100-feet long by 40-feet wide. The pool has undergone several renovations. A set of plans dated 1972 proposed installing a permanent bulkhead to divide the pool into two sections and allow for a 25-yard racing course. This condition if it was ever installed does not exist now. The original pool single main drain has been replaced with two main drains for which we do not have any as-built plans. The original pool gutter has been replaced with a stainless steel gutter. The original pool diving boards have been eliminated. The original pool filters have also been replaced. There were no plans available for review of any of these renovations to the pool. The original plans show the swimming pool water depths ranging from 3'-6" to 12'-0". The existing deck depth markers indicate that the current pool depths range from 3'-6" to 10'-0". The pool and natatorium have not been surveyed to confirm the dimensions and elevations of the as-built conditions and are not included in the scope of this report. The pool has a continuous perimeter stainless steel gutter for surface water collection. This gutter also serves as the pool return inlets through a channel in the bottom of the gutter. The pool utilizes two main drain sumps to recirculate pool water from the bottom of the pool. The pool deck is a natural color broom finish concrete deck. It has a slot drain system. The swimming pool has a plaster and tile finish. The pool has six lanes that are 100-feet long.

The original plans show the entire building including the natatorium was heated with a combination floor radiant heat system and heated ventilation air. The staff reports that the current building does not have either of these systems working. The locker room bathrooms appear to be the original configuration and do not provide ADA complaint access within the facility. None of the toilets, urinals, lavatories or showers are ADA accessible. The original plans show the bathroom and locker room floors and coves to be Terrazzo finish. The existing finish is concrete in the locker rooms and tile in the bathrooms. Circle grooves have been installed in the locker room concrete floor due to slip and fall issues. The pool mechanical equipment is located in the same building in a room adjacent to the pool natatorium. The pool mechanical space is a single room that houses the pool mechanical equipment, boiler equipment and chemical equipment. The mechanical equipment found during our site inspection is different than the equipment noted on the original drawings so we can assume that the mechanical equipment has been renovated at least once. The original pool pump pit has been reconfigured to serve as a surge pit. The staff reports that they are not aware of any water leaks of the swimming pool, but they do have a water leak of the surge pit concrete tank. The pool recirculation pump is located on the mechanical room floor outside the surge pit. The mechanical room floor is 3.5-feet lower than the pool deck in the natatorium.

IV. POOL DATA

A. Albany High School Swimming Pool Data:

- **Perimeter:** 280 feet
- **Pool Depth:** 3'-6" to 10'-0"
- **Pool Surface Area:** 4,000 square feet
- **Pool Volume:** 172,863 gallons
- **Surface Water Collection:** Perimeter stainless steel gutter
- **Bottom Water Collection:** Two (2) 18" x 18" Frames and grates
- **Pool Water Inlets:** Gutter slot
- **Pool Ingress/Egress:** Three (3) In-pool ladders, One (1) Portable fiberglass walk-in stair and a disabled access ramp
- **Design Turnover Rate:** Unknown (Code requirement 6 hours or less)
- **Design Flow Rate:** Unknown (Code requirement 480 gpm or greater)
- **Actual Turnover Rate:** 8.2 Hours (Based upon flow meter reading)
- **Actual Flow Rate:** 350 GPM per flow meter readout
- **Circulation Pump:** One (1) 15-HP Berkeley centrifugal pump
- **Filtration:** One (1) Miami Tank high rate sand filter with two 21 square foot tanks for a total of 42 square feet of filter media surface area
- **Filter Flow Rate Capacity:** 840 GPM
- **Sanitation:** Pulsar tablet chlorine (calcium hypochlorite 65%) Two (2) P-III feeders with a combined capacity of 124 pounds of tablets and a maximum feed rate of 120 pounds of chlorine equivalency per 24 hours
- **pH Feed:** Carbon dioxide (carbonic acid) fed from a Strantrol CO₂-9 and stored outside the mechanical room in a 600 pound cryogenic tank
- **Chemical Control:** Chemtrol
- **Heater:** One (1) Raypak atmospheric natural gas heater

V. PROGRAMMING

I met with staff to identify the current and desired programs offered at the Albany High School swimming pool and the levels of service available. The pools have two defined programs one is for specific school use and the second is for community use. We had a site review to determine the physical capabilities of the facility pursuant to the programs. The swimming pool has an irregular length of 100-feet, which does not meet the requirements for any competitive rules. Therefore the pool uses for the high school are limited. The following is a list provided by the facility staff of the current programs that the facility is expected to serve

The identified desired programs from this meeting, in no particular order, are:

- High school swim team training
- Blue Dolphin swim team training
- Physical education (3 week lessons)
- Adult education swim lesson classes
- Mommy and Me classes (2 levels)
- Adult fitness programs (Back)
- Adult fitness programs (Arthritis)
- Water aerobics
- Physical therapy (5 times per week)
- Pool rentals
- Lap swimming
- Recreation swimming
- Family swim
- Birthday parties
- Movie night
- Lifeguard WSI classes
- Boy Scout swim test
- CPR classes
- Staff in-service training
- Private lessons

VI. OPERATIONAL ISSUES

I met with staff to determine the current means of operation of the facility and to target issues and desired changes to the operations of the Albany High School swimming pool facilities. In general I found the facility to be in reasonably good shape for a facility of its age and nature. The staff is most concerned with potential means to provide better services in the most reliable and economical way. Issues identified in the operation of the facility are:

- Surge pit leaks
- Natatorium humidity and condensation
- Window corrosion
- Disabled access door
- Bathroom plumbing
- Entry windows and doors
- Women's locker room floor
- Radiant heat not working
- No building heat
- Office humidity prevents use of computer
- Summer heat is oppressive
- Labor required and labor expense
- Utility usage and expense
- Sustainable features that are reliable for constant operation
- Ways to increase the safety of the operations



VII. CODE VIOLATIONS:

The following six items are noted as not complying with current code standards. A description of the condition is given along with a reference to the code that applies. An opinion of probable cost is given for each individual item. These itemized estimates do not include general condition costs that are typically added to any construction project. At the end of this report the itemized costs are totaled and a pro-forma construction estimate is given.

ITEM	DESCRIPTION
1.1	POOL DECKING
1.2	NO 4'-6" SAFETY FLOOR MARKINGS
1.3	8-HOUR TURNOVER RATE
1.4	POOL INLETS
1.5	CHANGING ROOM / TOILET FACILITIES
1.6	CHEMTROL NOT BONDED

- 1.1 The pool decking is cracked in numerous places. The deck does not have proper drainage. It has areas of standing water behind the pool gutter and elsewhere where pathogens can grow and creating slip trip and fall hazards in violation of Title 24, Chapter 31B:

3113B.1 General. A minimum continuous and unobstructed 4-foot-wide (1,219 mm) slip resistant nonabrasive deck area of concrete or like material shall be provided flush with the top of the pool shell wall extending completely around the pool and the deck area shall further extend 4 feet (1,219 mm) on both sides and rear of any diving board or slide and their appurtenances. The deck width shall be measured from the poolside edge of the coping lip.

311B.2 Deck Drainage. The pool deck surface shall be sloped a minimum of ¼ inch (6.4 mm) per foot to deck drains or other approved surface water disposal areas. The pool deck surface shall not drain into the pool, its perimeter overflow channel, into adjoining spa or other pool, or be connected to the recirculation system.

All decking should be replaced with a medium broom finish concrete, directed to approved drainage devices. Cost includes demo of existing deck, new broom finish concrete decks, and new deck anchors. The required deck safety markings and deck drainage that are missing at the existing pool should be added at this time.

(Estimated Cost: \$310,000.00)

- 1.2 The swimming pool lacks a marking line on the pool floor and walls to denote the 4'6" water depth area in violation of Title 24, Chapter 31B:

3109B.2 Depth Marking Line. There shall be installed a straight line of slip-resistant tile, 4-inches (102 mm) wide, of contrasting color across the bottom of the pool where the water depth is 4-1/2' (1372 mm).

The code required 4-1/2' safety marking line should be installed with ceramic tile. Corresponding rope anchors should also be installed for a floating safety line installation.

(Estimated Cost \$4,000.00)



Exhibit 10: Pool Deck Standing Water

- 1.3 The swimming pool recirculation system is operating with an 8.2 hour turnover rate in violation of Title 24, Chapter 31B:

3124B Turnover Time: The recirculation and purification system shall have sufficient capacity to provide a complete turnover of pool water in:

- 1. One-half hour or less for a spa pool.*
- 2. One hour or less for a wading pool.*
- 3. Two hours or less for a temporary training pool.*
- 4. Six hours or less for all other types of public pools.*

The existing underground pool piping is not large enough to accommodate a six hour turnover rate. All of the underground pool piping will have to be replaced to allow for such a flow rate. The existing filter system will support a six hour turnover flow rate. The recirculation pump will have to be replaced to achieve the required flow rate. The following is an estimate to replace all pipes and appurtenances to achieve a six hour turnover rate. The pool deck will have to be removed and replaced to allow for access to these pipes. The pool finish will likely be damaged during this process and have to be replaced. The following estimate does not include the cost for the pool deck or pool finish.

(Estimated Cost \$85,000.00)

- I.4 The recirculated pool water is introduced into the pool via a slot on the bottom of the pool gutter. The existing pool is 40-feet wide so floor inlets are not required for it. This slot is a few inches below the surface of the pool water in violation of Title 24, Chapter 31B:

3134B.5.2 Location. Inlet fittings shall be located greater than 18 inches below the water line, except for a spa pool or wading pool. One floor inlet shall be provided for each 10,000 gallons of pool capacity for a pool which exceeds 40 feet in width. Inlet fittings shall be separated by at least 10 feet and shall be located to ensure uniform circulation.

Wall inlets should be provided for the pool to provide even distribution of the chlorinated pool water. The pool finish will likely be damaged during this renovation and will need to be replaced. The pool decks will have to be removed to allow access for this scope of work. The following estimate does not include the cost of a new pool finish or the removal and replacement of the pool deck.

(Expected Cost Equalizer Fittings \$20,000.00)

- I.5 The pool locker rooms and toilet facilities do not provide ADA accessibility. The floor to wall transition lacks a coving. Portions of the flooring is reported by the staff to have a slip trip and fall condition. All of these conditions are in violation of Title 24, Chapter 31B:

3104B Accessibility to the physically handicapped person. Swimming pools and their appurtenances shall be in compliance with the requirements of the state architect for access to public accommodations by physically handicapped persons.

3115B.1 Shower and dressing facilities shall be provided for users of a pool. Exception:

- 1. Shower and dressing facilities may not be required when bathers have access to such facilities in adjacent living quarters.*
- 2. Public toilet facilities may be omitted when bathers have access to toilet facilities either in living quarters located not more than 300 feet in travel distance from the pool, or in an adjacent building such as a recreational facility, clubhouse, or cabana.*

3115B.3.1 Floors. Floors shall have a hard nonabsorbent surface, such as portland cement concrete, ceramic tile or other approved material, which extends upwards onto the wall at least 5 inches with a coved base. Floors which may be walked on by a wet bather shall be slip-resistant. Floors shall be sloped not less than ¼ inch per foot to floor drains or other approved surface water disposal areas. Carpeting and other similar artificial floor covering shall not be permitted on shower and toilet room floors.

The following is a matrix outlining the existing number of toilet fixtures as compared to the minimum required by code.

TOILET ROOM FIXTURE REQUIREMENTS

NO.	DESCRIPTION	CODE	
		MINIMUM	EXISTING
1.0	Bather Load Calculation:	QTY	QTY
1.2	Total Water Surface Area	4,000	
1.3	Bather Load at 1 Bather / 15 SF of Water Surface Area	267	
1.4	Male Bathers at 50% of Total	133	
1.5	Female Bathers at 50% of Total	133	
2.0	Minimum Women's Toilet Fixtures Required:		
2.1	Toilets (1:60)	2.2	2
2.2	Lavatories (1:80)	1.7	1
2.3	Showers (1:50)	2.7	12
3.0	Minimum Women's Toilet Fixtures Required:		
3.1	Toilets (1:75)	1.8	1
3.2	Urinal (1:75)	1.8	2
3.3	Lavatories (1:80)	1.7	1
3.4	Showers (1:50)	2.7	11
4.0	Minimum Drinking Fountains Required:		
4.1	Drinking Fountains (1: first 250 bathers and 1:200 thereafter)	2.0	1
<u>Notes:</u>			
(1)	Toilet fixture counts as required by Section 3115B of Calif. Building Code.		
(2)	Drinking fountain count as required by Section 3116B of Calif. Building Code.		

The following is an estimate to fully renovate the changing room and toilet room facilities. It assumes that the toilet fixtures are relocated to provide ADA accessibility and the floor and wall finishes renovated to comply with code. The following estimate assumes a renovation cost of \$175 per square foot for such a renovation.

(Estimated Cost \$658,000.00)

1.6 The Chemtrol chemical feed controller installed in the mechanical room is not electrically bonded in violation of California Electric Code, Article 680:

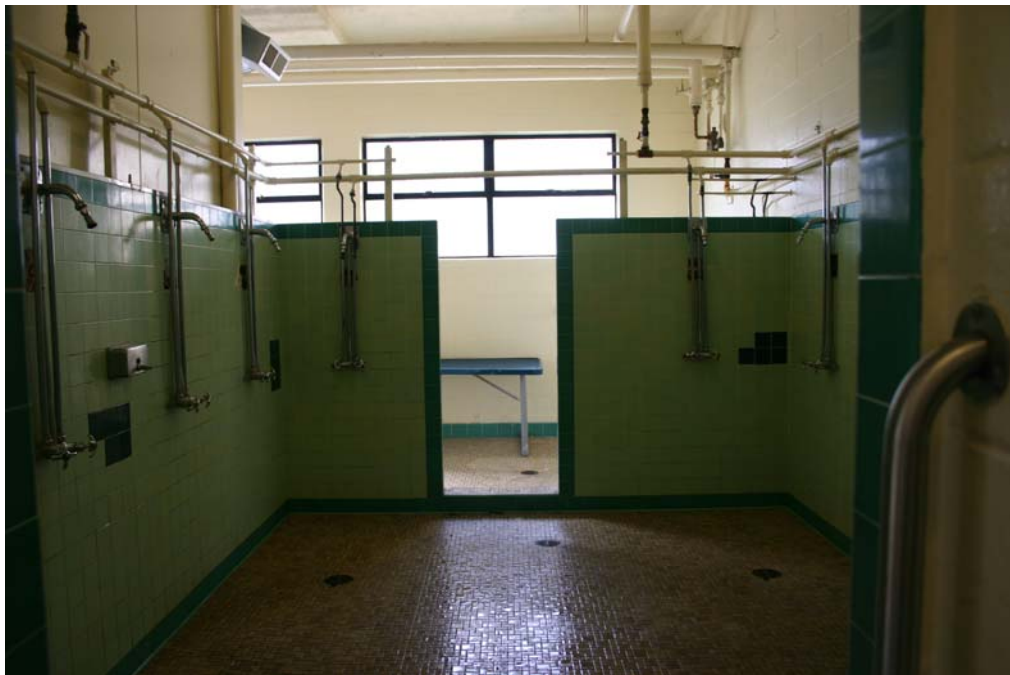
680-22 Bonded Parts. The following parts shall be bonded together:

(4) Metal parts of electric equipment associated with the pool water circulating system, including pump motors.

Proper electrical bonding should be provided to the Chemtrol.
(Estimated Cost \$500.00)



Existing Changing Area



Existing Showers

VIII. MAINTENANCE AND OPERATIONS:

The following seven items are noted maintenance or operation issues found at the Albany High pool. An opinion of probable cost is given for each individual item. These itemized estimates do not include general condition costs that are typically added to any construction project. At the end of this report the itemized costs are totaled and a pro-forma construction estimate is given.

ITEM	DESCRIPTION
2.1	NATATORIUM DEHUMIDIFICATION & HEATING SYSTEM
2.2	MECHANICAL ROOM GAS PIPING
2.3	SURGE PIT WATER LEAKS
2.4	CHEMICAL STORAGE AREA
2.5	STAINLESS STEEL GUTTER
2.6	NATATORIUM MATERIALS AND FINISHES
2.7	NEW POOL PLASTER AND TILE FINISH
2.8	NATATORIUM ROOF REPLACEMENT

- 2.1 The staff reports that the natatorium ventilation system has not worked in years. During our site visit I found a high humidity feel in this space. I also observed dripping condensate water from the ceiling of this space. Surfaces of the natatorium building are showing signs of corrosion. A new heating, ventilation and air conditioning system should be added to the building. To further improve the air quality in the natatorium a dehumidification system can be added also to fully control the humidity of the natatorium and extend the building life

(Estimated Cost New HVAC System \$756,000.00)

(Estimated Cost New Dehumidification System Add-On \$150,000.00)

- 2.2 The pool heater gas supply piping is routed through a broken window of the mechanical room to its source outside of the building. This pipe should be re-routed through an appropriate wall penetration.

(Estimated Cost \$6,500.00)



Gas Pipe Through Broken Window

- 2.3 A water proof finish should be added to the interior of the surge pit to stop the water leaks. The following estimate is to apply two coats of Thoro-seal to the interior finish of the surge pit.

(Estimated Cost \$8,000.00)



Existing Surge Pit Leaking

- 2.4 The existing swimming pool chemicals are stored in the pool mechanical room. The amount of chemicals currently stored in this space exceeds the fire code maximum exempt amount. For this volume of chemicals in the room this space would need to be an "H" hazardous occupancy. This space is not rated for this. In addition the chemicals in the mechanical room can have a negative impact on the mechanical equipment including boilers and such. Adjacent to this room is an outdoor storage area. A new chemical room could be created in this space to move the chlorine system.

(Estimated Cost \$60,000.00)



Existing Chemical Feed Equipment

- 2.5 The existing swimming pool stainless steel gutter is corroding and showing signs of failure. This gutter can be an on-going maintenance problem as it continues to degrade causing water quality problems and perhaps safety concerns for the pool. The following estimate is to remove and replace the gutter with a traditional concrete and tile gutter. This estimate assumes that the pool deck and pool finish are replaced at the same time under a separate estimate.

(Estimated Cost \$112,000.00)



Existing Stainless Steel Gutter

- 2.6 The staff identified several conditions of the building and natatorium that are in need of repair or replacement. These included; window corrosion, entry windows and doors, overall building heating and air conditioning, paint finishes, and structural members. These items are outside the scope of this report and will be addressed by the project architect.

(Estimated Cost \$0)

- 2.7 Numerous repairs and items noted above will likely result in the existing pool finish being damaged. The following is an estimate to remove and replace the pool's plaster and tile finish.

(Estimated Cost \$180,000.00)

- 2.8 The natatorium building roof is in need of replacement. The following estimate is for the replacement of the existing building roof as provided by RDS Architects.

(Estimated Cost \$1,000,000.00)

IX. ENHANCEMENTS:

The following six items are noted enhancements that could be provided to the Albany High Swimming Pool. These enhancements are based upon industry standards, staff comments and our observations. An opinion of probable cost is given for each individual item. These itemized estimates do not include general condition costs that are typically added to any construction project. At the end of this report the itemized costs are totaled and a pro-forma construction estimate is given.

ITEM	DESCRIPTION
3.1	DIVIDE EXISTING POOL INTO TWO POOLS
3.2	NEW 75' BY 45' POOL
3.3	NEW 20' BY 40' TEACHING POOL
3.4	NEW 20' BY 40' WADING POOL
3.5	NEW 20' BY 40' INETERACTIVE WET PLAY AREA
3.6	ULTRA VIOLET WATER TREATMENT SYSTEM
3.7	NEW OUTDOOR POOL FACILITY

3.1 The existing pool is an irregular size that does not support most high school programming. The pool will not support high school competitive swim, water polo or diving. The pool can be divided into two independent pools creating a 75' long by 40' wide pool and a small teaching pool of approximately 20' by 40'. This option will make the pool much more functional for programming. It assumes that the pool structure is fully intact and a viable structure for the next 30 years. Without destructive testing we cannot be certain that this is an accurate assumption.

(Estimated Cost \$813,500.00)

3.2 The existing pool can be replaced with a new 75' by 45' swimming pool that will meet the basic needs for high school programming. A 75' by 45' pool is the minimum size to host a high school swim meet. This six lane pool can support competitive swimming, lap swimming, competitive diving, as well as recreational programs. (SEE EXHIBIT I6)

(Estimated Cost \$15,000.00)

3.3 In addition to a new 75' by 45' pool and new wading pool could be added to provide more recreational services as the pool. The existing space can support up to an approximate 20' by 40' wading pool in addition to the 75' by 45' new swimming pool. The wading pool can incorporate some interactive play devices to provide more recreational draw and assist in the facilities revenue draw and ultimate operating cost recovery percentages. The estimate for this option assumes that a new pool and pool deck are being done at the same time under a separate estimate.

(Estimated Cost \$250,00.00)

3.4 In lieu of a new wading pool a new 20' by 40' instructional/therapy pool could be added to a renovation project with a new 75' by 45' swimming pool. This all shallow pool would likely operate at a warmer temperature than the swimming pool and support additional programs.

(Estimated Cost \$300,000.00)

- 3.5 Another option for additional water to a new 75' by 45' swimming pool is an interactive wet play area. This interactive wet play provides recreational programs without any standing water. The water for this type of facility is typically recirculated like a swimming pool.

(Estimated Cost \$200,000.00)

- 3.6 To control some of the chlorine smell in the natatorium and ultraviolet system could be added to the existing pool. The ultra violet system is used in conjunction with the chlorine system. It allows for a higher rate of inactivation of certain pathogens as well as reducing chlorine by-products that can cause the chlorine smell.

(Estimated Cost \$60,000.00)

- 3.7 Outdoor swimming pools are common to Northern California high schools. An outdoor swimming pool allows many schools to achieve a maximum program at the most economical cost. A minimum size swimming pool to achieve all high school programming is a 30-meter long by 25-yard wide swimming pool. A pool this size will accommodate high school swim meets, a 25-yard floating water polo course, high school 1-meter diving and a shallow end for physical education and other non-swimmer programs. The following spreadsheet is a breakdown for the cost of a new outdoor swimming pool and support facility. It does not include the cost of land or an estimate to demolish the existing pool and pool building.

(Estimated Cost \$4,279,640.00)

**Proforma New 30-Meter by 25-Yard Pool
Outdoor Swimming Pool & Bathhouse
Opinion of Probable Cost**

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSIONS
1.0	<u>CONSTRUCTION COSTS</u>				
1.1	Site Preparation/Mobilization	1	LS	\$ 20,000.00	\$ 20,000.00
1.2	Utility Allowance	1	LS	\$ 20,000.00	\$ 20,000.00
1.3	Swimming Pool	7,400	SF	\$ 185.00	\$ 1,369,000.00
1.8	Pool Decks (1)	8,560	SF	\$ 15.00	\$ 128,400.00
1.9	Fencing	500	LS	\$ 120.00	\$ 60,000.00
1.10	Overhead Lighting	1	LF	\$ 85,000.00	\$ 85,000.00
1.11	Shade Structures	1	LS	\$ 50,000.00	\$ 50,000.00
1.12	Pool Building	2,500	SF	\$ 400.00	\$ 1,000,000.00
1.12	Landscaping	1	LS	\$ 50,000.00	\$ 50,000.00
1.13	TOTAL CONSTRUCTION COSTS				\$ 2,782,400.00
2.0	<u>EQUIPMENT COSTS (FF&E)</u>				
2.1	Competitive Equipment / Timing	1	LS	\$ 114,600.00	\$ 114,600.00
2.2	Deck Equipment	1	LS	\$ 45,000.00	\$ 45,000.00
2.4	TOTAL EQUIPMENT COSTS				\$ 159,600.00
3.0	<u>SOFT COSTS</u>				
3.1	General Contractor Mark-Up/Overhead	15%			\$ 441,300.00
3.2	Contingency Costs	15%			\$ 441,300.00
3.3	Architecture & Engineering	12%			\$ 353,040.00
3.4	Permits and DSA Construction	LS			\$ 95,000.00
3.5	DSA Fees	LS			\$ 7,000.00
3.6	TOTAL SOFT COSTS				\$ 1,337,640.00
4.0	TOTAL ESTIMATED PROJECT CONSTRUCTION COST				\$ 4,279,640.00

(1) Pool deck estimate assumes a 20' band of concrete around the entire perimeter of the pool.

X. SUMMARY

SECTIONS ITEMIZED SUMMARY

1.0	CODE VIOLATIONS			
1.1	Pool Decking	Lump Sum	\$ 310,000.00	\$ 310,000.00
1.2	No 4'-6" Safety Line	Lump Sum	\$ 4,000.00	\$ 4,000.00
1.3	8-Hour Turnover Rate	Lump Sum	\$ 85,000.00	\$ 85,000.00
1.4	Pool Inlets	Lump Sum	\$ 20,000.00	\$ 20,000.00
1.5	Changing Room/Toilet Facilities	Lump Sum	\$ 658,000.00	\$ 658,000.00
1.6	Chemtrol Bonding	Lump Sum	\$ 500.00	\$ 500.00
1.7	TOTAL CODE VIOLATIONS			\$ 1,077,500.00
2.0 MAINTENANCE & OPERATIONS				
2.1	HVAC & Dehumidification System	Lump Sum	\$ 906,000.00	\$ 906,000.00
2.2	Mechanical Room Gas Piping	Lump Sum	\$ 6,500.00	\$ 6,500.00
2.3	Surge Pit Leaks	Lump Sum	\$ 8,000.00	\$ 8,000.00
2.4	Chemical Storage Area	Lump Sum	\$ 60,000.00	\$ 60,000.00
2.5	Stainless Steel Gutter	Lump Sum	\$ 112,000.00	\$ 112,000.00
2.6	Natatorium Materials & Finishes	Lump Sum	\$ -	\$ -
2.7	New Pool Plaster and Tile Finish	Lump Sum	\$ 180,000.00	\$ 180,000.00
2.8	New Roof for Existing Natatorium	Lump Sum	\$ 1,000,000.00	\$ 1,000,000.00
2.9	TOTAL MAINTENANCE AND OPERATIONS			\$ 2,272,500.00
3.0 ENHANCEMENTS				
3.1	Divide Existing Pool	Lump Sum	\$ 813,500.00	Not Incd.
3.2	New 75' by 45' Pool	Lump Sum	\$ 985,000.00	Not Incd.
3.3	New 20' by 40' Teaching Pool	Lump Sum	\$ 300,000.00	Not Incd.
3.4	New 20' by 40' Wading Pool	Lump Sum	\$ 250,000.00	Not Incd.
3.5	New 20' by 40' Wet Play Area	Lump Sum	\$ 200,000.00	Not Incd.
3.6	Ultra Violet Water Treatment System	Lump Sum	\$ 60,000.00	\$ 60,000.00
3.7	New Outdoor Pool Complex	Lump Sum	\$ 4,279,640.00	Not Incd.

The following is a pro-forma project budget opinion of probable cost if all of the items in the code violation, maintenance and operations, and 3.6 of the enhancements listed above are to be included in the project.

PRO-FORMA PROJECT BUDGET ESTIMATE

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>QTY</u>	<u>UNIT COST</u>	<u>ESTIMATE</u>
1.0	<u>CODE VIOLATIONS</u>			
1.1	Pool Decking	Lump Sum	\$ 310,000.00	\$ 310,000.00
1.2	No 4'-6" Safety Line	Lump Sum	\$ 4,000.00	\$ 4,000.00
1.3	8-Hour Turnover Rate	Lump Sum	\$ 85,000.00	\$ 85,000.00
1.4	Pool Inlets	Lump Sum	\$ 20,000.00	\$ 20,000.00
1.5	Changing Room/Toilet Facilities	Lump Sum	\$ 658,000.00	\$ 658,000.00
1.6	Chemtrol Bonding	Lump Sum	\$ 500.00	\$ 500.00
1.7	TOTAL CODE VIOLATIONS			\$ 1,077,500.00
2.0	<u>MAINTENANCE & OPERATIONS</u>			
2.1	HVAC & Dehumidification System	Lump Sum	\$ 906,000.00	\$ 906,000.00
2.2	Mechanical Room Gas Piping	Lump Sum	\$ 6,500.00	\$ 6,500.00
2.3	Surge Pit Leaks	Lump Sum	\$ 8,000.00	\$ 8,000.00
2.4	Chemical Storage Area	Lump Sum	\$ 60,000.00	\$ 60,000.00
2.5	Stainless Steel Gutter	Lump Sum	\$ 112,000.00	\$ 112,000.00
2.6	Natatorium Materials & Finishes	Lump Sum	\$ -	\$ -
2.7	New Pool Plaster and Tile Finish	Lump Sum	\$ 180,000.00	\$ 180,000.00
2.8	New Natatorium Roof	Lump Sum	\$1,000,000.00	\$ 1,000,000.00
2.9	TOTAL MAINTENANCE AND OPERATIONS			\$ 2,272,500.00
3.0	<u>ENHANCEMENTS</u>			
3.1	Divide Existing Pool	Lump Sum	\$ 813,500.00	Not Includ.
3.2	New 75' by 45' Pool	Lump Sum	\$ 985,000.00	Not Includ.
3.3	New 20' by 40' Teaching Pool	Lump Sum	\$ 300,000.00	Not Includ.
3.4	New 20' by 40' Wading Pool	Lump Sum	\$ 250,000.00	Not Includ.
3.5	New 20' by 40' Wet Play Area	Lump Sum	\$ 200,000.00	Not Includ.
3.6	Ultra Violet Water Treatment System	Lump Sum	\$ 60,000.00	\$ 60,000.00
3.7	TOTAL ENHANCEMENTS			\$ 60,000.00
4.0	<u>SOFT COSTS</u>			
4.1	General Contractor Mark-up	15%		\$ 511,500.00
4.2	Contingency	15%		\$ 511,500.00
4.3	Architectural & Engineering	12%		\$ 409,200.00
4.4	Permits and (DSA) Inspections	Lump Sum		\$ 78,000.00
4.5	DSA Fees	Lump Sum		\$ 5,000.00
4.6	TOTAL SOFT COSTS			\$ 1,515,200.00
5.0	TOTAL PROJECT COST			\$ 4,925,200.00

The swimming pool has provided the school district and the community with many years of service. Certain areas are worn and tired and in need of renovation. The pool structures are assumed to be sound as noted previously in this report. With the correction of code violations and the suggested improvements the pools will and can be restored to their original condition. The suggested enhancements can bring the pools to current standards. It must be kept in mind that even though the pool components meet current standards the comparative cost to repair versus replace the pools and the risk associated with renovation work should be evaluated. As such, a decision must be made as to whether the capital expenditure provides an acceptable return in a cost benefit analysis.

Sincerely,

AQUATIC DESIGN GROUP, INC.