

**DRAFT MINUTES  
AQUATICS BOARD  
Tuesday, November 19, 2019  
City & Borough of Juneau – Room 224, City Hall**

Statement of Philosophy:  
*Create Community through People, Pools and Effective Swim Programs*

- A. **Meeting Convened at 5:00pm** by Chair Muldoon.
- B. **All Members Present:** Kristin Bartlett, Don Beard, Corry Isabell (by phone), Molly McCormick (by phone), Lena Merrell, Tracy Morrison, Will Muldoon, Tom Rutecki, Pat Watt  
**Ex Officio:** George Schaaf, Parks & Rec Director  
**Liaison Absent:** Carole Triem – CBJ Assembly  
**Staff Present:** Kollin Monahan, Aquatics Manager
- C. **Agenda Changes** – No changes. Ms. Watt requested that, going forward, the Update on ABP Renovation be moved to be a Standing Agenda Item rather than part of the Aquatics Manager’s Report.
- D. **Approval of Minutes** – Minutes of the October Retreat were reviewed. Ms. Merrell moved approval with correction. No objection.
- E. **Public Participation on Non-Agenda Items** – None
- F. **Augustus Brown Renovation**  
Ross Stevens from CBJ’s Engineering Department is co-project manager along with Steve Tada. Mr. Tada has significant familiarity with Augustus Brown from some previous work. We have received the 35% Schematic Design document from the Contractor, Architects Alaska, and anticipate the 65% document in January. The project goals are to bring everything in the 47-year old building up to code, meet ADA requirements, and replace items at the end of – or past - their useful life. Cost-saving options for various items are being evaluated so as to maximize the benefit of available funds. Mr. Stevens summarized the anticipated project costs by type of work. He noted that the swimming tank is in good shape, but because some of the rebar is rusting through the repair will result in a reduction in pool depth of about 3 inches.
- The project budget will be firmer after the 65% design document is received, albeit recognizing the need for contingencies – especially related to abatement of hazardous material once the oil tank is removed. Because its extent is unknown, abatement work will necessarily be on a time and materials basis. It is anticipated that the construction contract will be awarded in late May or early June. The facility will thus be temporarily closed beginning approximately July 1, 2020, for a 6-9 month construction period. The contract will include a liquidated damage clause for delays. The construction community is aware that this project is in the pipeline and, due to both its budget and the amount of labor required, the engineers think it will be a competitive project.
- G. **Aquatics Manager’s Report**
- **Ms. Wilkinson’s Retirement: Mabelle Wilkinson, who has served as the Administrative Assistant for the pools since 2001, will be retiring at the end of 2019.** She has played a key role in helping the Pools reach our current capacity and will be badly missed. Her position will be posted this week and interviews will be conducted right after the New Year. A retirement party is being planned for her for

December 2<sup>nd</sup> from 11:30am -1:00pm at Augustus Brown Pool. Board members are welcome to attend.

- **Swim Lessons:** Registration for Session III opened on November 18<sup>th</sup>. There will be four group classes at Augustus Brown and nine at Dimond Park, accommodating 5-7 students in each group. Classes run from December 3-19 and cost \$48 for the lesson series.
- **Lifeguarding Training:** The final training course of 2019 will be held at Dimond Park this coming weekend, November 23-24 from 8:30am – 5:00pm each day. Participants must have completed the required online study material prior to completing the hands-on pool training. This hybrid training approach, part online and part hands-on, seems to be successful. 7 participants are anticipated. Applications for Lifeguard positions at the pools are always kept open, to ensure enough staff are available to meet pool user demand at all times.
- **Swim Meet:** Glacier Swim Club is hosting its Holiday Invite event on December 7-8 at Dimond Park. The pool will not be open to the public after noon on December 7<sup>th</sup> through the end of the day on the 8<sup>th</sup>.
- **Parks & Recreation Holiday Party:** The Department will be hosting a holiday party for all staff and their families at the Treadwell Arena on December 8<sup>th</sup> from 4:30pm – 6:30pm. Board members are invited to attend.

#### H. Old Business – Commercial Use of Aquatics Facilities

Mr. Schaff presented a short Power Point reviewing the legal requirements governing commercial use of Parks & Recreation property. Section 67.01.090 of the Code of Ordinances governs such activities and requires a Commercial Use Permit for all commercial activity. (Power Point is attached). Commercial users are required to carry liability insurance in amounts, and for risks, sufficient to protect CBJ from liability. An affordable insurance provider is available. The Aquatics Board is authorized to adopt regulations and establish fees for the use of the Pools.

Draft regulations prepared by staff, as requested by the Board in September, were reviewed. Once the Board feels the regulations are ready for adoption, then a public notice period will be scheduled to receive comments. The Board considered as to how – or whether - to address fees and pool admission costs in the regulations. Also, how – and whether - permitting requirements applies to public use situations beyond individual private lessons such as use by community organizations. After much discussion on these and other points, feedback was provided to staff for production of a second draft. The Board recognizes that it is important to get the regulations right before adoption, since they then have the effect of law. Once the regulations are drafted, policy with implementing details will have to be developed.

Mr. Monahan has been trying to keep the private swim teachers informed – he thinks there are about 9 individuals who offer private lessons. Some teachers are much more involved with this than others. The Board wants to ensure that interested community members have the opportunity for input prior to adopting these regulations.

Board members will continue reviewing the regulations and will email suggested changes and/or language to Mr. Monahan and Mr. Schaaf.

#### I. New Business:

- **Fees and Charges Policy.** The Aquatics Board adopted a Fees and Charges Policy at its November 4, 2015, meeting. The policy was reviewed in 2017 and should be reviewed again by the Finance Committee in light of recent experience. (Attached)

- **Proposed Fee Schedule.** Mr. Monahan presented a proposed fee schedule for the coming budget year. This does not have any cost increases, but:
  - Continues the 5-month Summer Pass that was tested in 2019 to address needs of summer workers.
  - Adds a new 5-month Winter Pass to accommodate legislators and addresses the situation of Augustus Brown users in anticipation of the temporary closure for renovations
  - Adds swim class packages to offer private lessons through Aquatics as an alternative to finding community teachers.

Ms. Watt moved adoption of the Fee Schedule (attached). Without objection, the schedule was approved.

- **Removal of ABP Family Changing Room Toilet.** The family changing room was added to the building as an afterthought and the design for its toilet plumbing works poorly for solid waste. This unfortunately results in repeated backups of raw sewage through the pool deck drains onto the deck. This is a recurring health issue and eats up the maintenance budget with so many calls to clear the blockage. To address this, the toilet was removed on November 12<sup>th</sup>. The space along with the shower and is still operational. Mr. Monahan discussed the problem with CBJ’s compliance officers who noted that the building remains in compliance with ADA requirements for handicapped accessible stalls since there are handicapped accessible stalls in both locker rooms as well as one in each lobby bathroom (four total excluding family changing room). The inconvenience is recognized but is short term since the problem will be permanently resolved during the renovation of the pool building.
- **Adding Adult Changing Station at DPAC and AGB Remodel.** Ms. McCormick had requested this item be added to the agenda, but had to leave the meeting before we got to it.

**J. Board Comments**

- Mr. Rutecki stated that the Programs and Outreach Committee will meet on Tuesday, December 17<sup>th</sup> at 5pm in City Hall. Staff will be sharing their thinking about managing demand during the ABP temporary closure.
- Mr. Rutecki requested that at its January meeting the Board consider increasing weekend lap swims, especially Saturdays.
- Mr. Muldoon and Ms. Isabel are scheduling the Budget/Finance and Board Development Committees to meet in December.

**K. Adjournment:** the meeting was adjourned at 7:15pm.

**L. Next Board Meeting:** Tuesday, January 7<sup>th</sup>, 5:00pm, in City Hall.

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Meeting Follow-ups:

Board members: Continue reviewing the regulations and email suggested changes and/or language to Mr. Monahan and Mr. Schaaf.

Mr. Muldoon and Ms. Isabel: Schedule December meetings of their Committees

Mr. Muldoon: Schedule a review of Fees and Charges policy by Budget/Finance Committee

Mr. Schaaf and Mr. Monahan: Prepare 2<sup>nd</sup> Draft of Commercial Use of Aquatics Facilities regulations

**Attachments:** PowerPoint Presentation, Fee Schedule, Augustus Brown 35% Schematic Design.

**AQUATICS - FEE SCHEDULE**

FY21 BUDGET

SALES TAX NOT INCLUDED IN FEES

AQUATICS							
Activity	Previous Fee	Current Fee	Last Updated	Proposed Fee Change/Addition	Date of Proposed Change	Percent Increase	Comments
<b>Lessons:</b>							
<b>NEW Private Swim Lessons, Package of 4</b>	NA	NA	NA	22.56	1/1/20	0.00%	w/ Tax = 23.75 per class totaling \$95 for package of 4 lessons
<b>NEW Private Swim Lessons , Package of 6</b>	NA	NA	NA	19.79	1/1/20	0.00%	w/ Tax = 20.84 per class totaling \$125 for package of 6 lessons
Pre-School/Youth swim lessons	6.67	7.60	1/9/19	7.60	7/1/20	0.00%	w/ Tax = \$8.00 2019 rate is based on \$8.00 rate per 30 min class. 2018 rate is based on rate per 30 min class. \$7.00/30-45 min class (including tax). 2017 rate is based on \$6.00/30 min class (including tax). Sessions vary from 6-10 classes/session.
Parent/Child Swim Classes	6.67	7.60	1/9/19	7.60	7/1/20	0.00%	w/Tax = \$8.00 2019 rate is based on \$8.00 ate per 30 min class 2018 rate is based on rate per 45 min class. \$7.00/45 min class (including tax). 2016 rate based on 8 week session. Sessions vary from 6-10 classes/session.
Adult 1-Day Drop in swim clinic (45 minute class)	14.29	21.85	1/9/19	21.85	7/1/20	0.00%	w/Tax=\$23.00 2019 rate is based on \$23.00/45 minutes class 2018 rate is based on \$15.00/45 min class (including tax).
Parent/Child 1-Day Drop in clinic (45 minute class)	14.29	21.85	1/9/19	21.85	7/1/20	0.00%	w/Tax=\$23.00 2019 rate is based on \$23.00/45 minutes class 2018 rate is based on \$15.00/45 min class (including tax).
American Red Cross CPR/AED & First Aid		71.25	1/9/19	71.25	7/1/20	0.00%	w/ Tax = \$75
American Red Cross Lifeguard Full Certification	50.00	118.75	1/9/19	118.75	7/1/20	0.00%	w/Tax = \$125
American Red Cross Water Safety Instructor	71.43	71.25	1/9/19	71.25	7/1/20	0.00%	w/Tax = \$75
American Red Cross Lifeguard Instructor Training	66.67	118.75	1/9/19	118.75	7/1/20	0.00%	w/Tax = \$125 2019 rate is increased to match our LG training
<b>Passes:</b>							
<i>(good for use at either pool)</i>							
Child 10 visit punch card (age 2 - 7yrs)	18.10	19.00	1/9/19	19.00	7/1/20	0.00%	w/ Tax = \$20 (buy 9 - get one free) Per Aquatic Board November 2016
Youth 10 visit punch card (age 8 - 17yrs)	46.67	49.40	1/9/19	49.40	7/1/20	0.00%	w/ Tax = \$52 (buy 9 - get one free) Per Aquatic Board November 2016
Adult 10 visit punch card (age 18+ yrs)	65.71	68.40	1/9/19	68.40	7/1/20	0.00%	w/ Tax = \$72 (buy 9 - get one free) Per Aquatic Board November 2016
Senior 10 visit punch card (age 65+ yrs)	46.67	49.40	1/9/19	49.40	7/1/20	0.00%	w/ Tax = \$52( buy 9 - get one free) Per Aquatic Board November 2016
Child monthly pass (age 2 - 7 yrs)	14.29	16.15	1/9/19	16.15	7/1/20	0.00%	w/ Tax=\$17
Youth monthly pass (age 8 - 17 yrs)	37.14	40.85	1/9/19	40.85	7/1/20	0.00%	w/ Tax= \$43
Adult monthly pass	46.67	50.35	1/9/19	50.35	7/1/20	0.00%	w/ Tax= \$53
Senior monthly pass (65 +)	37.14	40.85	1/9/19	40.85	7/1/20	0.00%	w/ Tax= \$43
Accessibility monthly pass (ADA/Handicap)	37.14	40.85	1/9/19	40.85	7/1/20	0.00%	w/ Tax= \$43
Child annual pass (age 2 - 7 yrs)	94.29	102.60	1/9/19	102.60	7/1/20	0.00%	w/ Tax=\$108
Youth annual pass (age 8 - 17 yrs)	189.52	205.20	1/9/19	205.20	7/1/20	0.00%	w/ Tax= \$216
Adult annual pass (age 18+)	284.76	308.75	1/9/19	308.75	7/1/20	0.00%	w/ Tax= \$325
Senior annual pass (65 +)	189.52	205.20	1/9/19	205.20	7/1/20	0.00%	w/ Tax= \$216
Accessibility annual pass (ADA/Handicap)	189.52	205.20	1/9/19	205.20	7/1/20	0.00%	w/ Tax= \$216
Replacement Card Fee	5.00	5.00	1/9/19	5.00	7/1/20	0.00%	
Child daily fee (age 2-7 yrs)	2.14	2.85	1/9/19	2.85	7/1/20	0.00%	Per Aquatic Board November 2016
Youth daily fee (age 8 - 17 yrs)	5.00	5.70	1/9/19	5.70	7/1/20	0.00%	Per Aquatic Board November 2016
Adult daily fee (age 18 +)	7.38	7.60	1/9/19	7.60	7/1/20	0.00%	Per Aquatic Board November 2016
Senior daily fee (age 65 +)	5.00	5.70	1/9/19	5.70	7/1/20	0.00%	Per Aquatic Board November 2016
Accessibility daily fee (ADA/Handicap)	5.00	5.70	1/9/19	5.70	7/1/20	0.00%	Per Aquatic Board November 2016
<b>Specials:</b>							
Summer Pass	NA	144.53	1/9/19	141.60	7/1/20		w/ Tax = \$149 Pass is \$28.32 per month (May-September)
<b>NEW Winter Pass</b>	NA	144.53	1/9/19	141.60	7/1/20		w/ Tax = \$149 Pass is \$28.32 per month (January-May)
<b>Rentals:</b>							
DPAC Lane Rentals (\$/Lane Hour)	NA	33.95	1/9/19	33.95	7/1/20	0.00%	w/ Tax = \$35
DPAC Event Room Rental (\$/Room Hour)	NA	34.92	1/9/19	34.92	7/1/20	0.00%	w/ Tax = \$36
AGB Lane Rentals (\$/Lane Hour)	NA	24.25	1/9/19	24.25	7/1/20	0.00%	w/ Tax = \$25
AGB Private Facility Rental	NA	145.50	1/9/19	145.50	7/1/20	0.00%	w/ Tax = \$150
<b>Lockers:</b>							
Lockers (small)		0.25	7/1/91	0.25	7/1/19	0.00%	
Lockers (large)		0.50	7/1/91	0.50	7/1/19	0.00%	
<b>Sponsored Open Swims:</b>							
1.5 Hour Sponsored Open Swim	437.50	712.50	8/18/14	712.50	7/1/19	0.00%	w/ Tax= \$750 Allows maximum capacity of 200 and has a 20% "large group" discount built in. Based on expected attendance of 24% child, 45% youth and 30% adults.

# Commercial Use of Aquatics Facilities

CBJ Aquatics Board  
November 19, 2019



# Ordinance

- Legislation
- Created and passed by the Assembly
- What you can/can't do

# Regulation

- Administrative
- Developed by staff & adopted by Assembly or Board

# Policy

- Administrative
- Highest level of detail / guidance



# Ordinance

## **CBJ 67.01.090 - Prohibited uses.**

(i) *Permit required for sales and commercial use of recreation facilities.* The permit is issued pursuant to regulations adopted in [section 67.01.045](#). A person shall not expose or offer for sale any merchandise or solicit or advertise for the sale of any merchandise or service within the limits of a recreation area or adjacent loading zone:

- (1) If that person is not in possession of a valid permit issued for that purpose by the manager or the manager's designee; or
- (2) Other than in compliance with all conditions of a permit issued for that purpose by the manager or the manager's designee.

(Douglas Ord. 6-1, § 6-109, 1969; Serial No. 79-39, § 2, 1979; Serial No. 81-18, § 2, 1981; Serial No. 82-42, § 3, 1982; Serial No. 83-15, § 2, 1983; Serial No. 92-32, § 2, 1992; Serial No. 94-10, § 2, 1994; Serial No. 2005-05d, § 4, 4-25-2005)



# Ordinance

## **CBJ 67.01.080 – Use; liability insurance.**

Persons using park or recreation facilities for commercial purposes with a permit shall carry premises and products liability insurance in amounts and for risks determined by the manager as sufficient to protect the City and Borough from liability. The insurance shall be issued by an insurance company licensed to do business in the state.

(Douglas Ord. 6-1, § 6-108, 1969; Serial No. 82-42, §§ 2, 3, 1982; Serial No. 85-31, § 2, 1985)

# Ordinance

## **CBJ 67.10.020 - General powers.**

The aquatics board:

- (2) Shall prescribe the terms under which persons and groups may use the aquatics facilities under the board's management and establish and enforce standards of operation.
- (3) May adopt regulations pursuant to CBJ 01.60 necessary for the administration of the aquatics facilities under the board's management.
- (4) Shall facilitate and receive citizen input on the management and operations of the aquatics program.

(Douglas Ord. 6-1, § 6-108, 1969; Serial No. 82-42, §§ 2, 3, 1982; Serial No. 85-31, § 2, 1985)

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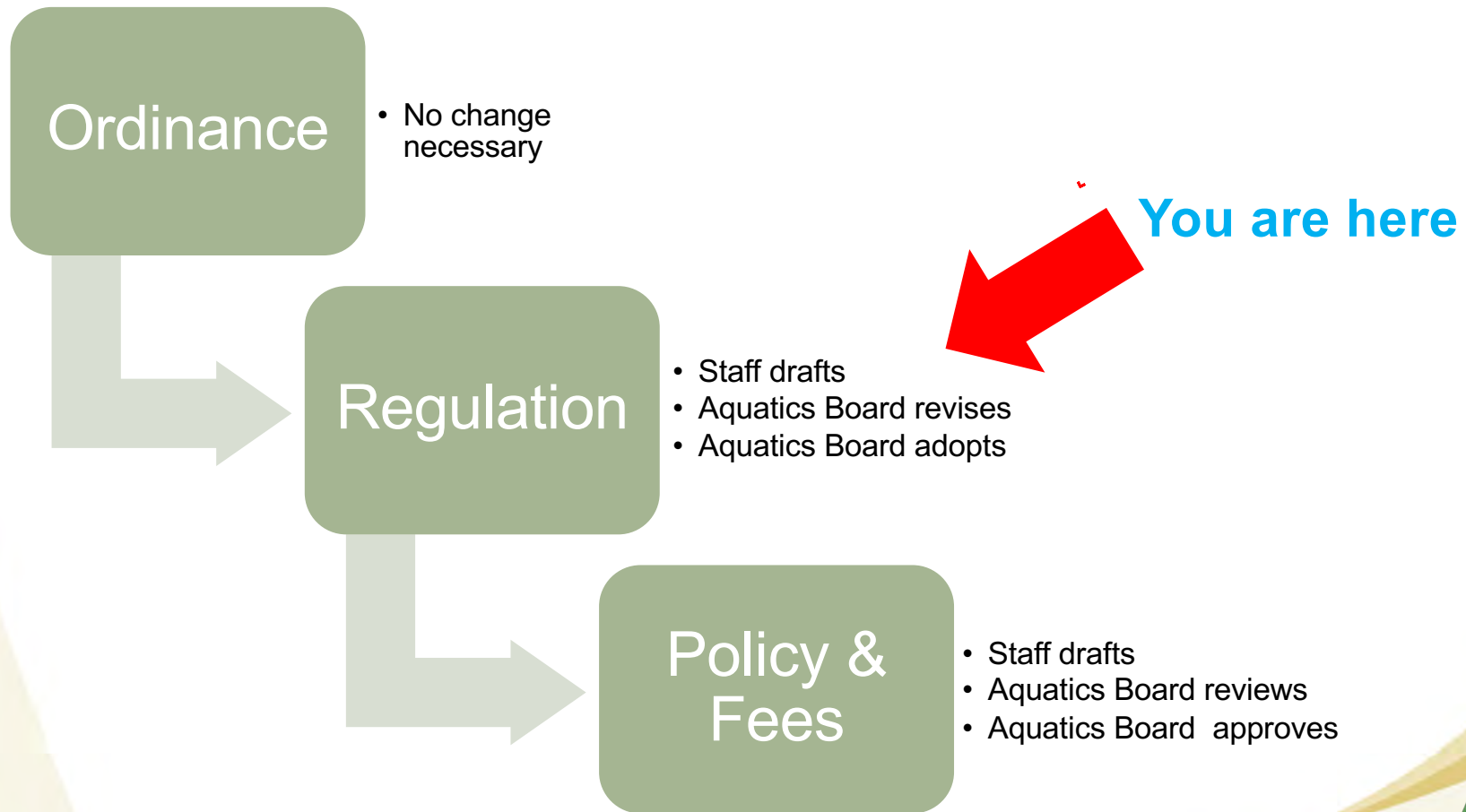
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# What Next?





**AUGUSTUS BROWN POOL  
35% SCHEMATIC DESIGN NARRATIVE**

11/08/19



Prepared by



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## EXECUTIVE SUMMARY

Constructed more than forty-five years ago, the Augustus Brown municipal pool has been an important part of life in Juneau for decades. Unfortunately, many of the pool's main systems are now at or past their useful life and need to be replaced.

The City and Borough of Juneau (CBJ) is looking to upgrade the building to serve the community for many more years into the future. In order to make the best possible use of available resources, CBJ has retained Architects Alaska and its team of sub consultants to review the facility's condition and make recommendations on which renovation items should have the highest priority.

Members of the design team visited the building during the period of June 5<sup>th</sup> - 7<sup>th</sup> 2019 to conduct inspections. The team's objectives were to review the condition of existing spaces, and identify renovation work needed to:

1. address code deficiencies,
2. resolve life safety issues,
3. protect the building structure,
4. improve energy efficiency, and
5. improve the functionality of the building.

The team prepared for their inspections by reviewing the previous condition surveys of the pool building carried out in 2004 and 2014. A secondary purpose of the inspections was to confirm whether specific problems or issues noted in the previous surveys still remained to be addressed. The information collected during the team's visit was documented in a condition survey report dated July 26, 2019.

Using the findings from the condition survey report, the design team has prepared a 35% schematic design package for review by CBJ. The following narrative supplements the schematic design drawings with a description of the proposed remodel work being done in the pool building.



## AUGUSTUS BROWN MUNICIPAL POOL

### SCHEMATIC DESIGN NARRATIVE - CIVIL

#### A. APPLICABLE CONSTRUCTION CODES

The following is a listing of specific codes related to correction of deficiencies described in the July 2019 conditions survey.

1. ADA Standards, 106 Definitions. Definition of a Ramp.
2. CBJ Zoning District Map. Confirming Pool Zoning District, D-5.
3. CBJ Code of Ordinances 49.25.430, Yard Setbacks, Building Definition. AST greater than 660 gallons are considered a Building for Yard Setback Requirements.
4. CBJ Code of Ordinances 49.25.400, Table of Dimensional Standards. Yard Setbacks.
5. IBC Section 1013 Guards, 1013.2. Where Guards are Needed.
6. IBC Section 1010 Ramps, 1010.9. Definition of a Ramp.
7. NFPA 30, Chapter 22.4. Tank Location.

#### B. CONDITIONS SURVEY REVIEW

Civil engineering tasks for Pool renovation described in the July 2019 conditions survey fall into 2 categories, pedestrian access to the main entrance and utilities. Utility tasks are heating oil storage tank and water service replacement. In addition tracing dye testing of the Pool's sewer service laterals and roof drain collection system was identified in the conditions survey as a renovation discovery task. Tracing dye testing is used for determining location of the sewer service outfall and, if the roof drain and sewer services are combined. A site specific dye testing plan has been prepared but, not implemented. The testing plan is included with the Design Narrative. Renovation work in the July conditions report were assigned priorities. Priority 1 being the highest and 4 being the lowest.

The following is a list of Action Items discovered while preparing the Schematic Design Narrative. Each item is discussed in the Civil Narrative.

1. Determine if railing along the Accessible Route, north of the Main Entrance, is to be retained.
2. Type of slope surface finish. Turf or gravel.
3. Pool Entrance Plaza, grind down curb edge or replace curb and gutter.
4. What is the capped, 4" PVC riser located below the roof overhang, east corner of the building?
5. Determine if the School District has insight regarding several record plan water service routes.
6. Review several options to meet CBJ Yard Setbacks for the new heating oil AST and, snow removal stockpiling along Glacier Avenue sidewalk, adjacent to the AST location.

#### C. CONDITIONS SURVEY REVIEW - PEDESTRIAN ACCESS TO THE MAIN ENTRANCE

Three specific tasks at the main entrance were identified in the conditions survey. All of these tasks have a Priority 1. The following is a listing of main entrance tasks and deficiencies.

1. Main Entrance Ramps - What is described as ramp in the conditions survey along the ADA accessible route is actually a sidewalk because the slope, in the direction of travel or running slope, is less than 5.0%. ADA defines a ramp as a walking surface with slope steeper than 5.0%. Deficiencies from the conditions report are the following
  - a. ADA route sidewalk, 44'-6" section north of the entrance, parallel with the exterior wall, has uneven walking surface at the joints. Along approximately 25 feet of the sidewalk edge facing the parking lot, soil has slid away exposing the underside of the sidewalk.
  - b. The south ramp, 26' long with an 8% running slope, is truly a ramp as defined under ADA and International Building Code (IBC). The sidewalk north of the entrance is considered the accessible route and, therefore, the south ramp is required to meet only IBC standards. Similar to the north walkway, the walking surface is uneven at joints and, approximately 8' of walkway edge has been exposed because of sliding soil.
  - c. Code Evaluation Not in the Conditions Survey - The International Building Code (IBC) applies to both walkways flanking the north and south sides of the main entrance.
    - i. Guard rails are needed where there is 30" or more of vertical drop within 36" of the walkway edge (Ref: IBC Section 1013 Guards, 1013.2).
      1. From topographic survey elevations, the main entrance landing is at 30.4 ft and 28.3 ft at the stairway's bottom landing. Because the vertical drop is 2.1 feet or 25 inches over a distance of 4 feet, guard rail is not required under IBC for both walkways flanking the main entrance.
      - ii. Because the stairway west of the main entrance and north accessible route sidewalk provide IBC means of egress, the south ramp can have a running slope of up to 12.5% (Ref: IBC Section 1013 Guards, 1010.3). The south ramp running slope is less than 12.5% and, slope is not a violation.
    - iii. IBC Section 1010 Ramps, 1010.9, requires handrails each side of a ramp with a rise greater than 6 inches. The south walkway rise is greater than 6 inches and currently has handrail along only the east side of the walkway.
      1. The south ramp needs a handrail meeting IBC 1012 along the west edge.
      2. The first 6" of rise from back of curb does not require a handrail. Handrail begins parallel with the Pool's building corner and, existing handrail attached to the building wall. Location of the new handrail is shown in scope of work details, civil sheet C301.
2. Main Entrance Stairway – From the 1971 record plans and existence of a continuous crack at the bottom stair landing, the stairway concrete was field cast separately from the pool entrance plaza. Furthermore existing conditions photos and record plans document that the flanking stairway was added sometime after original, 1971 construction. Concrete landing at top of the stairway is in good condition. There is no construction joint in the stairway top landing that would be a convenient demolition limit for stairway removal and replacement.

From the conditions survey deficiencies are minor cracking, joint separation at the top stair riser, and random chipping / spalling of stair nosing. Joint separation at the top stair is limited to both flanking stairways. Stairway under the entrance canopy as expected has far

less weathering than the 5 foot wide, flanking stairway located outside the canopy, each side of canopy columns.

3. Pool Entrance Plaza – The concrete pavement plaza extends from the bottom stair of the Pool’s main entrance stairway to the driveway curb and gutter west of the entrance. West of the driveway and Pool plaza is a stairway leading to the School’s main entrance. The southwest corner of the plaza also has a bike rack. This rack is a galvanized steel pipe wave style with 7 loops and base plate bolted to the plaza pavement, and is in good condition. A 7 loop rack is designed to park 9 bikes.

1971 record plans show 6” gravel over existing subgrade for the plaza earthwork. Test Borings 3 and 4, along the west side of the Pool, northern and southern ends, record a gravel fill for the upper 4’ of subgrade. Also plaza concrete is 4” thick with welded wire fabric reinforcement and, its concrete was cast separately from the main entrance stairway.

- a. Plaza deficiencies include moderately weathered walking surface, random cracking, and concrete gap at back of the driveway curb. Likely mechanism for the concrete gap is concrete erosion from melt water laden with deicing salt locally pooling at the back of curb joint. Along the west side of the plaza, beyond the entrance canopy, the south corner has a conspicuous diagonal crack. Record plans indicate a good gravel subgrade soil in these areas. Suspect that soil compaction during construction did not reach at least 95% maximum density and there was some localized settlement.
- b. The curb and gutter along the plaza west edge, where it joins the driveway asphalt concrete pavement is ½ to ¾ inches above the pavement edge creating a tripping hazard.

#### D. CONDITIONS SURVEY REVIEW - UTILITIES

Underground heating oil storage tank and water service utility deficiencies, are described in the Mechanical – Plumbing section of the July 2019 conditions survey.

1. Domestic Water Supply – Based on the age and condition of pipe at the interior service entrance, the 1971 water service should be replaced. The current 4” ductile iron pipe diameter at the mechanical room water service entrance corresponds with the 4” diameter water service in record plans. In 1998 improvements along Glacier Avenue included a new 6” CBJ water service to the School District property line and connection with the Pool’s 4” service. Ductile iron pipe in a non-corrosive soil can have a life expectancy of 75 to 100 years. Age of the Pool’s 4” ductile iron pipe service is approaching 50 years or at least 50% of its service life.

For reference only, the Pool’s water service entrance location variance using 1971 and 1998 record plans is shown on 35% Submittal plan set Sheet C301, Detail 6. The water service route from the 2002 High School renovation project fits best with field survey information, and will be used.

2. Heating Oil Storage Tank – The heating oil tank, installed during 1971 Pool construction, is single wall, steel, and buried. Deficiency is that this tank is approaching 50 years old and has

exceeded its service life. Steel tanks without specialized coating or cathode protection have a typical service life of 20 years. If corrosion protection was installed, in 1970 a plastic wrap was most common. Dielectric coating, galvanic anodes, and electrical isolation for underground fuel tanks was unveiled by the Steel Tank Institute (STI) in 1969. STI designed and installed tanks have a service life of at least 40 years.

a. CORRECTION OF DEFICIENCIES

The following is a list and description of proposed corrections to address deficiencies identified in the July 2019 conditions survey. Also included are action items discovered during preparation of the 35% Design Submittal. Our 35% Submittal drawing set is comprised of a site plan and details showing scope of work. The narrative and drawings provide detail for cost estimating and, confirming design tasks to proceed with.

1. Main Entrance Ramps – From the July 2019 conditions survey this is the walkway to the left and right of the main entrance.
  - a. North Walkway (Not a Ramp), ADA Accessible Route
    - i. Remove handrail along west edge of the walkway and rail post base bolts to allow grinding vertical offset at walkway joint. Otherwise leave bolts in place and cut flush with the pavement surface.
      1. Action Item – Determine if handrail along the west side of the ADA accessible route is to be salvaged and reinstalled. Running slope of the walkway is less than 5.0% and does not require a handrail. Advantage of the handrail is to discourage walking on the slope between parking area curb and walkway. Salvage requires cutting off the stair handrail at the south end of the handrail and, adding a new end post. New post would be set on the surface sloped by grinding.
    - ii. Uniformly grind concrete south of the joint to eliminate vertical offset / uneven walking surface. Grind a V notch in the walkway between the Pool wall and corner of the new stairway to provide a grinding boundary.
    - iii. Patch localized concrete damage with a non-shrink concrete patching material. Sikarepair 224 is a typical product.
    - iv. Reconstruct eroded embankment along the west edge of the walkway with compacted D-1 type gravel. Where soil has eroded from under the walkway edge, pack the void under the walkway pavement with a low slump concrete; finish vertical face of concrete flush with walkway edge. Provide a horizontal surface for compacting embankment soil using a stepped excavation. Slope compacted surface to final grade.
      1. Action Item – If slope is to be grass, need to determine whether topsoil and seed or turf will be used.
  - b. South Walkway, IBC Ramp
    - i. Install a handrail along the west edge of the walkway. Per IBC the first 6" of rise from back of curb does not need a handrail. Handrail begins at the Pool's building west corner and parallels existing handrail attached to the building wall.
    - ii. For the void under the walkway, remove loose soil to top of subgrade and, pack void with low slump concrete. Finish vertical face of concrete flush with walkway edge. Provide a horizontal surface for compacting

- embankment soil using a stepped excavation. Slope compacted surface to final grade. To match established grass area south of the Pool Entrance Plaza, provide a grass finished surface.
- iii. At the north end of the ramp, uniformly grind concrete north of the joint to eliminate vertical offset. Grind a V notch in the walkway between the Pool wall and corner of the new stairway to provide a grinding boundary.
2. Main Entrance Stairway – Remove concrete stairway and handrails and replace with new stairway and handrails. Existing stairway is approximately 25 feet long and 4'-6" wide. The new stairway will occupy the same location. To allow reconstruction of eroded slope west of the main entrance, the new stairway will have end walls. These walls are needed to keep reconstructed slope soil from sliding onto the stairway.
  3. Pool Entrance Plaza – Remove and replace the existing 450 square foot, 4" thick concrete, and approximately 52 feet of CBJ Type 1 curb and gutter. At ends of new curb and gutter adjust dimensions to merge with existing curb and gutter style. Saw cut pavement 24" from existing gutter edge, remove and replace with new pavement, graded between new curb and gutter and pavement cut. From 1971 record plans, asphalt pavement depth is 3". Salvage and reinstall wave style bike race at the southwest area of the plaza. Remove and salvage top 6" of base course under the plaza; mechanically compact exposed subgrade to at least 95% maximum density. Use salvaged base course material to construct compacted base course for the new plaza pavement.
    - a. Materials – Use CBJ fiber mesh concrete and Type I, Class B asphalt pavement.
    - b. To avoid the random cracking in the existing plaza pavement because control joints were not used, the plans will show a control joint pattern.
    - c. Action Item – An alternative to removing and replacing curb and gutter is to grind a slope along the gutter edge where gutter concrete extends more than 1/8" above the adjacent AC pavement.
      - i. Retain curb and gutter; thicken edge of plaza pavement and install pre-molded joint filler along back of curb. By retaining curb and gutter it keeps most of the parking area curb and gutter at the same age and condition for future replacement of all the parking lot curb and gutter. Pre-molded joint filler and thickened edge allow future removal of curb without damage to plaza's pavement edge.
      - ii. Existing curb and gutter is in good condition.
  4. Domestic Water Supply – As shown on Detail 6, Sheet C301, the new water line, 38 feet of 6 inch ductile iron pipe, will connect with CBJ's 6 inch water line extended to the property line along the south side of Glacier Avenue.
    - a. For future maintenance the water service is routed around the east end of the AST concrete slab.
    - b. Soil distance between the pipe and surfaces of the AST slab and wall will be evaluated with regard to seasonal frost depth. Board insulation will be installed if needed to protect the water service from freezing.
    - c. Action Item – Determine what the 4", capped, PVC riser south of the UST is used for. See Detail 6, Sheet C301.

- d. Action Item – See if the School District has any insight regarding the multiple record plans routes identified in Detail 6, Sheet C301. PDC considers the 2002 high school renovation water service route reliable.
5. Heating Oil Storage Tank – Remove an existing 3,000 gallon underground storage tank (UST) and, replace it with a 2,000 gallon above ground storage tank at the UST location. For 35% cost estimating new civil site work consists of an 18'-6" by 9'-4", 8" thick concrete pad with an integral 8" retaining wall on 3 sides. Total surface area of the wall is 172 square feet. Finished grade of the slab will match existing ground surface at the Pool's roof line.
- a. The Pool is located in a CBJ D5 zoning district.
    - i. ASTs larger than 660 gallons are considered a building for setback determination.
    - ii. Side yard minimum setback from property line is 5 feet.
    - iii. Minimum street side setback from property line is 13 feet.
    - iv. Setback are measured from right of way (ROW) line. For the Pool site, ROW is the north property line.
  - b. National Fire Protection Association (NFPA) 30, Chapter 22.4 provides direction for location of heating oil tanks. From Table 22.4.1.(b), a 2,000 gallon tank must be placed at least 15 feet from a property line that can be built upon, 5 feet from the nearest public way, or building on same property. Glacier Avenue is the nearest property line and, it cannot be built upon.
    - i. Tank location shown on Sheet C201 provides a 17 foot clearance between the tank wall and property line to the east, 5 feet from the Pool's north property line along Glacier Avenue, and 11 feet from the Pool's north wall.
  - c. Considering construction of both the AST pad and water service, approximately 170 square feet of Glacier Avenue sidewalk will be removed and replaced for project earthwork.
  - d. To prevent surface water from overtopping the retaining wall, top of the wall will provide 6 inches of clearance above finished grade.
  - e. Final grading will maintain existing drainage patterns.
  - f. Approximately 29 feet of chain link fence installed along the Pool's roof line will be removed. This allows access for filling the tank. Approximately 40 feet of new fence is installed around the AST and ties into the existing chain link fence. This fence provides fall protection along the retaining wall perimeter and, prevents casual access to the AST.
  - g. The fence is offset 5 feet south of the Glacier Avenue sidewalk, and is located on School District property.
  - h. Action Items
    - i. Tank location north of the Pool shown on Sheet C201 will need a variance for installation within the 13 foot setback for Glacier Avenue ROW.
    - ii. Determine if one of the following alternatives is to be pursued for design development.
      1. Install the AST east of the Pool as shown on Sheet C201. This location avoids a ROW variance but, occupies land on 2 separate CBJ properties.
      2. Replace the existing UST with a new UST.
    - iii. For the tank location north of the Pool, there needs to be discussion about street snow removal operations possibly causing fence damage. Top of the

tank will be within a foot or so of the Glacier Avenue sidewalk elevation.  
Also, how much snow from the roof will occur below the eave? Center of  
the AST is about 6 feet from the eave.

F. CIVIL DRAWINGS

1. C101 – Notes and Legend
2. C201 – Site Plan
3. C301 – Scope of Work Details

## SCHEMATIC DESIGN NARRATIVE - ARCHITECTURE

### A. APPLICABLE CONSTRUCTION CODES

The following is a listing of specific codes related to correction of deficiencies described in the July 2019 conditions survey.

1. ADA Standards.
2. International Building Code, 2012 Edition.
3. International Fire Code, 2012 Edition.
4. International Existing Building Code, 2012 Edition.
5. International Energy Conservation Code, 2012 Edition.
6. Locally adopted CBJ amendments to the above codes.

### RENOVATION SCOPE OF WORK

### B. CODE ISSUES/ ADA ACCESSIBILITY

#### 1. BUILDING CODE DEFICIENCIES

##### *Fixture Count*

In the condition survey, a low plumbing fixture count was identified as one of the code deficiencies. Based on further calculation of fixture requirements for the revised floor layout, the total number of fixtures should now be adequate to meet code requirements.

A second family changing room will be added, increasing the number of fixtures by one sink, toilet and shower. Including those new fixtures, the building will have 8 lavatories, 9 toilets, 2 urinals and 14 showers. The total number of required fixtures calculated for the pool building is 7 lavatories, 8 toilets, 2 urinals and 6 showers.

#### 2. ADA/ACCESSIBILITY

##### *Main Entry Ramp*

The main entry ramp to the pool building will be modified to comply with ADA requirements. Please see the civil design narrative for more detailed information.

##### *Locker Room Restrooms*

The existing restrooms serving the locker areas will be reconfigured to meet ADA requirements. This will include providing the required 5 foot by 5 foot clear space around the toilet fixture. An additional vertical grab bar will be installed at each accessible stall.

##### *Accessory Restrooms*

Vertical grab bars will be added to the men's and women's accessory restrooms to bring them into full compliance with ADA requirements. The layout of these spaces will not otherwise be modified.

##### *Interior Ramp at Office*

The manager's office does not constitute a major functional space that needs to be accessed by the public. Given this situation, it does not make sense to invest the resources required



to provide an accessible ramp access to the space. The IBC allows some exceptions for spaces like this one.

Per Section 1103.2.3, work areas less than 300 SF in area located seven inches or more above finish floor are not required to be accessible if the change in elevation is essential to the function of the space. The twelve inch change in elevation for the manager's office is essential to its function because it provides the sight lines needed for observing activity in the pool area.

*Threshold at Sauna*

The sauna room will actually be relocated further to the east of the building to make room for a second family changing room and restroom. A new aluminum threshold will be installed to provide a more ADA compliant transition between the pool slab and the floor of the sauna space.

C. PROTECTION OF STRUCTURE

*Painting the Main Structural Wood Frame*

All areas of the wood roof decking and building structural frames exposed to the interior of the building will be painted with an epoxy based paint product. The paint will be a light, white or off-white color to assist with maintaining a high lighting level in the building.

*Removal of Existing Clerestory Windows*

Existing clerestory windows will be removed completely, and the openings infilled with wood studs and batt insulation. The entire gypsum wall board finish on the interior side of the exterior walls will be completely replaced with new 5/8" painted gypsum board. The exterior 1x6 wood siding at the clerestory level of the building will be completely removed and replaced with new, painted 1x6 wood siding.

*Replacement of Existing Curtain Wall at Pool/Lobby Area*

The metal framed curtain wall between the pool and the main entry will be complete replaced with new galvanized, painted metal curtain wall of the same dimensions and layout.

*Replacement of Existing Exterior/Interior Metal Doors*

Corroded or rusted exterior metal doors and frames will be replaced with corrosion-resistant fiberglass doors in galvanized frames. This will be typical of seven exterior door openings.

Corroded or rusted interior metal doors and frames will also be replaced with fiberglass doors in galvanized frames. This will be typical of nine interior door openings.

*Replacement of High Roof and Sloped Metal Roof*

The 'flat' upper roof and the sloped metal roof below will be replaced as part of this remodel. See the energy efficiency section below for more detail.

D. ENERGY EFFICIENCY UPGRADES

*Exterior Wall Assembly*

In order to increase the insulation value of the exterior wall assembly, the existing wood siding will be removed and new rigid insulation installed. The new wall assembly at the CMU sections of wall will be as follows (exterior to interior):

- Reinstalled 1 x 6 T&G wood siding
- New weather barrier
- New ½" plywood sheathing
- (2) layers of rigid insulation and 2 x 6 wood furring for minimum 3-1/2" total thickness
- New 6 mil polyethylene vapor barrier
- Existing 8 inch CMU wall

The new wall assembly at the wood stud framed sections will be as follows (exterior to interior):

- Reinstalled 1 x 6 T&G wood siding
- New weather barrier
- New 1/2" plywood sheathing
- (2) layers of rigid insulation and 2 x 6 wood furring for minimum 3-1/2" total thickness
- Existing 2 x 6 wood stud framed wall
- Existing polyethylene vapor barrier
- Existing 5/8" gypsum board finish

The total R-value of the remodeled wall assemblies will be minimum R- 20.5. Existing double glazed insulated window units on the main floor level will be replaced with new insulated windows. This will be typical of five window units measuring 2'-8" wide by 6'-8" high (rough opening).

*Roof Assembly – Sloped Roof*

The existing sloped metal panel roof will be removed down to the surface of the wood decking and replaced. The new roof assembly will be as follows (exterior to interior):

- Standing seam metal roof panels (1.5" high profile)
- Self-adhering membrane underlayment over the entire sloped roof
- ¾" plywood sheathing
- Sloped rigid insulation for drainage
- (2) layers rigid insulation (minimum 4 inch thickness) with 2x wood furring @ 16" o.c.
- 6 mil polyethylene vapor barrier
- Existing wood 'car' decking on wood roof joists

#### *Exterior Roof Soffits*

The exterior wood framed soffits will be insulated with six inches of fiberglass batt insulation for a minimum insulating value of R-20. Existing batt insulation will be removed from the exterior face of the CMU wall inside the soffit cavity. This should help to bring the drain pipes within the warm space of the building envelope and reduce the effects of freezing temperatures.

#### *Roof Assembly – Flat Roof*

The existing IRMA type roof assembly will be replaced down to the wood decking. The new EPDM roof assembly will be as follows (exterior to interior):

- 60 mil EPDM membrane
- ½" glass mat faced gypsum cover board
- (2) layers of 4 inch rigid insulation (R-40)
- 6 mil polyethylene vapor barrier
- Existing wood 'car' decking on wood roof joists

Replacement of the existing roof will also include the extension of the existing roof parapet by another foot in height. As part of the extension, the existing 1x6 wood siding will be removed and replaced by new, painted wood siding. New parapet coping flashing will be installed around the perimeter of the roof.

During the replacement process, the exposed wood deck will be inspected for rot and other moisture damage. Any damaged decking will be removed and replaced with new wood. Based on the condition of the decking exposed to the interior, we estimate that approximately ten percent of the existing decking may need to be replaced.

The four existing roof drains will be removed and replaced with new drain bowls, and two additional roof drains and supporting rain leader piping will be installed at the center of the high roof. See the new roof plan for proposed layout.

#### *Clerestory Level Mechanical Spaces*

The existing clerestory level mechanical spaces located at the extreme west and east ends of the building will receive new mechanical ducting and equipment as part of the remodel project. In addition, the exterior walls of these spaces will be insulated with fiberglass batt insulation in new wood framed furring walls. The furring wall assembly will be as follows (interior to exterior):

- 5/8" painted gypsum board
- 6 mil polyethylene vapor retarder
- 2 x 6 wood studs @ 16" o.c. with fiberglass batt insulation

#### *Floor Assembly*

No changes are anticipated to the existing concrete floor slab, with the exception of such modifications as are needed for replacement of the depth markers at the pool area and other work described under the Pool Systems and structural sections of the narrative.

## E. FUNCTIONAL UPGRADES

### *Enlarged Maintenance Access Door*

The single three foot wide by seven foot high access door located at Grids B and 3 next to the Shop room will be removed and replaced with a six foot wide by seven foot high double door opening with astragal. This new opening will allowed improved access to the pool for maintenance crews. This work will require installation of new steel angles at the enlarged opening in the masonry wall.

### *Privacy Shower Enclosures*

The existing shower areas adjacent to the locker rooms will be modified to move from two 'gang' style shower columns each to enclosed, individual showers with privacy partitions. Six privacy enclosures will be provided in the women's locker room area, and four in the men's area. Existing concrete curbs between the shower floor and the main locker areas will be removed.

### *Sound Isolation for Pool Manager's office*

A new three foot wide by seven foot high door with sound seals and frame will be installed at the mid-point stair landing on the stair leading up to Admin Office 200 (the pool supervisor's office.) This work will include installation of a new wood framed partition wall with 5/8" painted gypsum board on either side.

### *Tile at Entry Way*

The existing ceramic tile at the public lobby area is buckling in certain areas and will be removed completely down to the surface of the concrete slab below. The tile will be replaced with a durable epoxy floor finish that is long lasting and durable.

### *Replace Flooring at Locker/Restroom Area*

The existing epoxy flooring has failed at several locations. The epoxy finish will be removed down to the surface of the existing concrete floor slab. A new epoxy floor finish will be installed in its place.

### *Create New Family Changing Room/Restroom*

A new family changing room/restroom space will be created next to the existing family changing room. The footprint of the space will be roughly ten foot six inches square, and the room will include a wall-mounted sink, toilet and shower. The interior finish for the room will be painted gypsum board, with a painted gypsum board hard lid ceiling at eight feet above finished floor.

The construction of this space will require relocation of the existing sauna room approximately eleven feet toward the east of the building. The work will also require demolition of an existing wood stud framed partition wall and cutting of the existing concrete floor slab to extend plumbing lines to the new fixtures in the changing room.

*Remodel of Existing Staff Lounge*

The existing Staff Lounge Room 102 will be modified to become a training/teaching space. The existing storage closet immediately to the west of the room at Grids F and 3 will be removed, and the footprint of the new training room expanded to include that area.

*Removal and Replacement of Existing Lay-in Ceilings and Hard Lid Gypsum Soffits*

Based on the scope of the mechanical renovation work on the first and second floors, the architectural scope will include nearly complete replacement of all existing lay-in acoustical ceiling tile and grid on the main floor level. The gypsum board hard-lid soffit over the upstairs office areas will also be removed and replaced with new gypsum board as a result of the mechanical work to add ventilation in these spaces.

## SCHEMATIC DESIGN NARRATIVE - POOL SYSTEMS

### A. SECTION 1: SWIMMING POOL EXECUTIVE SUMMARY

The Augustus Brown Pool Project will feature a renovated indoor lap pool and renovated recreation pool as described in Section 2. The lap pool will have a new cast-in-place concrete floor layer and replacement sections of the existing fully recessed gutter system. The interior of both pools will be replaced with an aggregate plaster finish. A tile band will be added around the perimeter of both pools. Deck equipment and their respective anchors will be deep cleaned or replaced as required by the applicable health department regulations and the requirements of the USAS and NFSHS i.e., ladders, grab rails, anchors, stanchions, starting blocks, springboards, etc. Cylolac recessed step inserts and recirculation fittings will be replaced within the pool walls and floor. Existing recirculation pumps, strainers, motors, gauges, and flow meters will be replaced in the mechanical room.

### B. SECTION 2: SWIMMING POOL PROGRAM

#### Lap Pool

The existing indoor lap pool has dimensions of 75'-½" x 45' with a new minimum depth of 3'-8 1/4" and a new maximum depth of 12'-11 ¼" following the placement of the new 3 3/4" topping layer of pool floor material. Contrasting nosing tile will be replaced and re-grouted as needed at the existing stair entry. Damaged or stained sections of the existing fully recessed gutter system will be removed and replaced around the perimeter of the pool. Waterline and deck tile bands will be placed along the perimeter of the pool. Equipment to be replaced will include: starting blocks, springboards, dive stands, aquatic climbing walls, select rail goods, and a handicap lift.

#### Recreation Pool

The existing indoor recreation pool is approximately 1,575 Sq Ft with dimensions of 35' x 45'. The pool utilizes a skimmer system for recirculation of pool water. New VGB compliant fittings and skimmer parts will be provided. A new waterline and deck tile band will be installed around the perimeter of the recreation pool. Contrasting nosing tile will be replaced and re-grouted as needed on the existing stair entry.

Equipment to be provided will include grab rails or stair rails that require replacement in addition to permanent placement of a handicap lift.



### C. SECTION 3: SWIMMING POOL SYSTEMS AND EQUIPMENT

#### POOL CONSTRUCTION

The new lap pool floor layer will consist of cast-in-place or pneumatically applied concrete. The concrete application method will depend on construction staging, cost, and site access. Different swimming pool contractors use different methods of concrete pool structure construction.

#### POOL FINISH

The new interior finish for both pools will be Diamond Brite with a perimeter deck/waterline tile band. Specialty tile will be provided for the perimeter tile band, depth markings, warning signs, and any various tile re-grout or replacement.

#### DECK SIGNAGE

Depth markings and warning signs for the pool deck are required by code in contrasting ceramic tile. These markings and warning signs will be placed within the perimeter tile bands of both pools. Depth markings will be shown in standard measurements. "NO DIVING" signs will be provided at all pool areas with a depth of water 5'-0" or less. Depth markers will be provided per code at not more than 25 ft intervals.

#### OVERFLOW RECIRCULATION SYSTEMS

Select sections of the lap pool perimeter overflow gutter that show signs of aging or corrosion will be removed and replaced. Cast-in-place concrete and required structural rebar will be provided for these sections. There are approximately 10 locations where gutter sections will need replacement. 6 locations are at the deck level portion of the gutter and 4 locations are at the water level portion of the gutter. Refer to PDC Structural Narrative for more details.

The recreation pool currently utilizes a skimmer system. All existing skimmer weirs and equalizer fittings will be replaced.

#### RECIRCULATION FITTINGS

The pools utilize a combination of floor and wall inlets. All inlets will be replaced. Existing main drain grating will be removed and replaced with VGB compliant grating.

#### FILTRATION SYSTEMS

The existing filters are high rate pressure sand filters operating at a max flow rate of 15 GPM per square foot of filter area. At the current flowrates, the entirety of the lap pool water is turned over every 6 hours, the recreation pool water every 4 hours. Aging and corroded filter hardware will be replaced.

The filters backwash at an approximate maximum flow rate of 270 GPM. A retention tank will be erected to ensure that a single filter can backwash for 5-7 minutes without causing any backup. A 6" air gap will be provided for the backwash piping in order to meet administrative code and current industry standard.

#### PUMPING EQUIPMENT

The existing recirculation pumps will be replaced with horizontally mounted centrifugal pumps. The new pumps will be certified by the National Sanitation Foundation (NSF) and

bear the certification mark. Pump casing will be cast iron fitted with a replaceable bronze case wear ring. Pump impeller will be enclosed type of cast bronze, statically and dynamically balanced, and trimmed for the specified design conditions. A hair and lint strainer will be provided, for each pump, constructed of fiberglass or epoxy coated stainless steel construction with a clear observation top. Pressure gauges will be installed on the discharge of the pumps and compound gauges will be provided at the intake port of the pumps, after the hair and lint strainer.

In addition to influent and effluent pump gauges, all other corroded/inaccurate flow meters and gauges present within either pool recirculation system will be replaced.

#### PIPING SYSTEMS & VALVES

Any corroded valves will be replaced, and all valves shall be labeled in the mechanical room. Valves will be described as to their function and referenced in the operating instruction manual and wall mounted piping diagram, prepared and provided by the Contractor.

#### CHEMICAL TREATMENT SYSTEMS

The existing system utilizes muriatic acid for pH buffering. The system includes two (2) fifteen (15) gallon acid drums. Corrosion within the acid room will be eliminated and proper ventilation will be supplied to the room. Vent check valves shall be furnished for acid drums in order to prevent excessive fumes. Any sanitizing chemicals located in the same room as muriatic acid will be relocated.

**(ALTERNATE #1)** The existing primary sanitation system for the pools, an on-site chlorine generation system, will be replaced with calcium hypochlorite erosion feeders. The halogen requirement of the pools will be automatically monitored and controlled by a chemical controller capable of monitoring 0 to 6 parts per million of chemical and showing Oxidation Reduction Potential (ORP) in addition to the traditional readings of sanitizer and pH.

**(ALTERNATE #2)** An Ultraviolet Dechloramination and Disinfection System will be provided for each body of water so that both pools will be monitored and treated by UV sterilization in the range of 220nm to 400nm to kill bacteria, viruses, molds and their spores and to continuously remove chloramines. The concentration of free chlorine residual will always meet the requirements of the Health Department authority having jurisdiction over the swimming pool. Any proposed UV system must have a UL listing on the complete system and be listed under NSF Standard 50.

#### INSERTS AND ANCHOR SOCKETS

- A. Anchors for grab rails, stair railings, and stanchions will be deeply cleaned.
- B. All existing cup anchors and starting block anchors will be deeply cleaned.
- C. Anchors for starting blocks will be provided.
- D. Anchors for dive stands will be replaced per dive stand manufacturer instructions.
- E. Anchor for aquatic climbing wall will be replaced per wall manufacturer instructions.
- F. Two ADA lift anchors will be provided, one as a permanent solution to the existing portable ADA lift, and one as a new installation for an additional ADA lift.



- A. Stainless steel Grab rails and stair rails for the pool will be deeply cleaned or replaced as required.
- B. All escutcheons on the pool deck will be replaced.
- C. Backstroke stanchions will be deeply cleaned or replaced as required.
- D. Both 1-meter and 3-meter springboards will be either refurbished or replaced as needed. 1- meter and 3-meter dive stands will be replaced.
- E. Replacement 24" x 32" track start starting platforms will be provided for the pool. These may be removed from the deck when not in use. Diving from the starting platforms should be restricted to supervised practice or competition of athletic teams.
- F. An aquatic climbing wall will be provided.
- G. Existing recessed step inserts will be removed, and new inserts will be installed.
- H. An additional handicap lift will be provided to meet ADA guidelines.

SAFETY EQUIPMENT

- A. A safety eye wash station will be a self-contained system in which eyewash bottles are securely positioned in a portable holder. Eyewash bottles will be 32 ounces and easily removable from case, and will contain a sterile, saline solution with the ability to neutralize a varying quantity acids orcaustics.
- B. All proper signage will be provided for all pool mechanical, chemical, and buffer rooms in accordance with administrative code.

## SCHEMATIC DESIGN NARRATIVE – HAZARDOUS MATERIALS

### A. HAZARDOUS MATERIALS RECOMMENDATIONS

All asbestos and other hazardous materials scheduled to be disturbed or removed should be removed and properly disposed of by trained workers under controlled conditions and in accordance with all applicable regulations. The asbestos-containing materials are varying conditions; some need to be replaced as soon as possible, and others are not a hazard unless disturbed or damaged.

### B. HAZARDOUS MATERIALS REMOVAL SUMMARY

The following hazardous materials will be impacted by this project:

### C. ASBESTOS-CONTAINING MATERIALS

Original materials containing asbestos include:

- vinyl floor tile (stair landing, manager's office, walkway);
- thermal system insulation on domestic water system fittings;
- thermal system insulation on heating piping system fittings; and
- paper duct tape on smaller-diameter HVAC branches.

#### Vinyl Asbestos Floor Tile (VAT) and Associated Black Mastic

All known asbestos-containing vinyl floor tile was abated as part of a flooring replacement project in 2017. No known areas of this material remain in the facility. If hidden areas of this material are discovered during construction, they will be removed and disposed of as hazardous materials.

#### Thermal System Insulation (TSI) on Pipe Fittings on Domestic Water and Heating Piping

Over time, a variety of small projects have taken place that required the abatement of portions of the domestic and heating system TSI. These materials still exist in some locations, generally in the locker and shower room areas and in associated ceilings and walls. The aging fitting TSI is in marginal condition and should be replaced soon before it becomes a friable asbestos hazard.

#### Paper Duct Tape on HVAC Ducting

Original duct tape still exists on smaller-diameter ducts in the upper mechanical room above the lobby and in the above-ceiling space of the cashier area. Duct tape in the upper mechanical room is encapsulated by newer duct tape; tape in the above-ceiling areas is not encapsulated. The encapsulated duct tape can be managed in place until a duct replacement is scheduled, or removed in identified areas as part of this project. Un-encapsulated areas of duct tape should be wrapped with modern foil duct tape and labeled in accordance with current EPA and OSHA standards if they are scheduled to remain in place.

### MATERIALS CONTAINING LEAD

A full lead survey was performed on the facility in 2014. The following items were found to contain lead or to have lead coatings:

- Hand-decorated tiles in the locker room areas;
- Beige glazed tiles at the top edge/side of the leisure pool;

- Blue glazed tiles at the top edge/side of the competition pool;
- A single enameled metal slop sink in the Janitor Closet;
- Angle-iron pipe supports in Mech 25 painted black over orange; and
- Red valve wheels in Pool Systems 26.

#### Ceramic Tile with Lead-Containing Glazes

The glazed tiles around the top side of the pool contain lead, and the hand painted glazed tiles in the Men's and Women's shower rooms contain lead. The tiles are in intact condition and are not a lead hazard for daily use. These tiles are likely to be replaced as part of this project. The enameled slop sink in the janitor closet in a location with restricted access and can continue to be used unless it is experiencing chipping or peeling of finishes.

#### Mechanical Components with Lead-Containing Coatings

The coatings on the pipe supports and valve wheels identified on this list are in a deteriorated condition and are considered a lead hazard. These items are located in mechanical rooms with limited access, so they are not a hazard to the general public. These items should be repaired or replaced as part of the next renovation project.

#### LAMPS AND BALLASTS

Original fluorescent ballasts that are still present are likely to have PCB-containing ballasts. All fluorescent lamps present a mercury hazard.

#### Fluorescent Ballasts

Most of the fixtures in the administrative and support areas were replaced in the 1989 renovation. The fluorescent fixtures in the natatorium were replaced in 2002. Fixtures of these vintages should have ballasts marked as non-PCB or electronic (electronic ballasts have never contained PCBs). All ballasts should be checked when being replaced as part of the regular maintenance activities, and any that are not marked as PCB-free or electronic should be labeled and monitored for any leakage. If unmarked ballasts are removed, they must be disposed of as hazardous waste.

#### Fluorescent Lamps

All fluorescent lamps present a mercury hazard. Lamps that are being replaced need to be disposed of at a hazardous waste facility as part of regular maintenance activities.

#### Exit Signs

Most exit signs contain batteries with a potential lead or other heavy metal hazard.

#### FUEL STORAGE TANK

The original 3,000-gallon single-wall steel underground fuel storage tank is well past its expected life span and poses a fuel contamination hazard. The associated distribution piping is also aging, and neither the tank nor the piping has any type of secondary containment or leak-detection system. The tank will be removed and replaced as part of this project.

#### FUEL-CONTAMINATED SOILS

Fuel-contaminated soils may exist in association with the original underground fuel storage tank. These will be removed and replaced as needed during this project.

D. ADDITIONAL SAMPLING RECOMMENDATIONS

Additional sampling may be necessary once the full extent of the renovation of interior is understood.

E. REGULATORY COMPLIANCE AND WASTE DISPOSAL

All work waste transportation and disposal activities must be conducted in accordance with the applicable federal, state, and municipal regulations and standards. The local landfill is privately owned and can only receive non-regulated asbestos-containing materials (non-RACM). Non-RACM is received on a special permit basis only. Friable asbestos may be disposed of at the local municipal hazardous waste center or may be shipped out of town if a more favorable disposal rate is negotiated elsewhere.

F. SUMMARY

The goal of this project is to renovate the pool facility. To the greatest extent possible, the design will include the full removal of each type of hazardous material present so that facility management will become simpler and more streamlined. However, some unknown materials may remain present after the project is complete, such as unidentified abandoned pipe fitting insulation in walls or above gypsum ceilings. The owner needs to remain aware that such materials were present in the original construction, and if encountered during later projects, they should be tested before they are disturbed.

## SCHEMATIC DESIGN NARRATIVE - STRUCTURAL

### A. APPLICABLE CONSTRUCTION CODES

The project will be required to comply with the following construction codes as adopted and amended by the State of Alaska and the City and Borough of Juneau:

1. 2012 International Building Code (IBC)
2. 2012 International Existing Building Code (IEBC)
3. CBJ Title 19 and State of Alaska Code Modifications
4. ACI Building Code Requirements for Structural Concrete (ACI 318-11)

### B. SCOPE OF WORK

1. Repair and/or replacement of moisture damaged roofing members. See Section C.1.
  - a. 10% of roof sheathing.
  - b. Approximately 200 combined lineal feet of 4"x4" nailers and decking.
2. Specifications for the addition of concrete topping layer on pool floor. See Section C.2.
3. Crack repair for pool deck in six (6) locations. See Section C.3.
4. Crack repair for gutter/pool separation wall in four (4) locations. See Section C.4.

### C. TASK NOTES

#### 1. Roof Repair

The roof of the structure may have experienced water entry and decay since its construction and subsequent roof renovations. We recommend an on-site inspection, during the demolition phase of construction, to assess any existing damage to the roofing members of the structure which rest beneath any weatherproofing systems. If damage is present, the structural team will be responsible for specifying the replacement of any load transferring members including sheathing and structural framing. We also recommend that any proposed alterations to the roof system remain within the confinements of the IEBC to ensure that an analysis of the supporting members below does not become necessary; however, if the confinements of the IEBC are not met then the structural scope will necessarily expand to include any requisite analyses that are incurred.

For the purposes of estimation, we anticipate approximately 10% of the existing roof sheathing will need to be replaced. We also estimate 200 combined lineal feet of the 4"x4" roof nailers and decking will need to be replaced.

#### 2. Pool Floor Resurfacing

The existing pool floor is presenting signs of reinforcement decay beneath the existing plaster topping layer. The signs of decay are in the form of rust spots atop the plaster layer and indicate water entry into the concrete slab below and the resultant decay of reinforcing steel within the concrete slab. The City and Borough of Juneau has shown an interest in remedying the situation beyond their current method of periodically patching the existing plaster layer. Consequently, the structural team has been tasked with the addition of a new

concrete topping resting on the existing concrete slab. This task will include the following steps:

- 1) Remove the existing plaster layer covering the existing concrete pool slab.
- 2) Remove any damaged concrete found.
- 3) Scarify the top of the existing concrete.
- 4) Wash with an acid bath and clean any remaining debris.
- 5) Install new galvanized rebar mat, centered in new topping slab. Ground to existing concrete slab mat at four corners of new slab by removing small sections of concrete to expose existing mat and use 8 AWG copper wire as grounding path.
- 6) Apply new 3-3/4" reinforced concrete topping layer and bond to existing concrete by means of a bonding agent.
- 7) Apply a new plaster topping layer to match existing.

3. Pool Deck Crack Repair

The existing pool deck has multiple cracks present. While some of these cracks are hairline cracks, others are more developed. Many of the hairline cracks show efflorescence on the surface of the concrete which may indicate the current or future development of subflorescence, the recrystallization of salts within concrete which can develop structurally harmful stresses. Additionally, the entry of water inside of the concrete indicates the possible decay of reinforcing bar underneath. The recommended remediation for the more severe cracks includes the following steps:

- 1) Sawcut and remove all concrete and reinforcing bar within approximately one foot of the crack or as far as is feasible.
- 2) Install galvanized reinforcing bar in a similar layout to existing using prescribed epoxy embedment practices.
- 3) Replace the damaged concrete with freshly batched concrete.

4. Gutter Wall Crack Repair

The existing gutter wall separating the lap pool gutter system from the pool itself also has several cracks present. These cracks are problematic for the same reasons outlined for the pool deck. Recommended remediation of the gutter wall would be similar to the pool deck; however, exceptional cases notwithstanding, sawcuts should terminate at a level line flush with the bottom of the gutter cavity. Also, replaced reinforcement should also include the addition of reinforcing bar angled to match the inside face of the gutter separation wall.

END OF STRUCTURAL NARRATIVE

## SCHEMATIC DESIGN NARRATIVE – MECHANICAL

### A. APPLICABLE CONSTRUCTION CODES

The project will be required to comply with the following construction codes as adopted and amended by the State of Alaska and the City and Borough of Juneau

1. 2012 International Building Code (IBC)
2. 2012 International Mechanical Code (IMC)
3. 2012 International Fire Code (IFC)
4. 2015 Uniform Plumbing Code (UPC)
5. CBJ Title 19 and State of Alaska Code Modifications
6. National Fire Protection Association (NFPA)
7. ASHRAE - American Society of Heating, Refrigeration, and Air-conditioning Engineers

### B. DESIGN PARAMETERS

1. Lobby Inside Air Temperature: 72F
2. Locker/Shower Room Temperature: 78F
3. Natatorium Air Temperature: 85F
4. Lap Pool Water Temperature: 82F
5. Leisure Pool Water Temperature: 88F
6. Outside Air Temperature: 5F
7. Outside air per ASHRAE 62.1-2016 Ventilation Rate Procedure, Chapter 6.2

### C. MECHANICAL – GENERAL SCOPE OF WORK

1. The scope of mechanical work includes the replacement of the mechanical systems as indicated below in the Mechanical Scope of Work Task Notes, including heating plant replacement, plumbing fixture and domestic piping system replacement, replacement of air handlers serving the locker rooms and lobby, and locker room and lobby ventilation and exhaust system duct replacement. Control systems will be retained where possible, however, modifications will be required due to installation of new equipment and systems. Energy efficiency improvements include the installation of new variable speed drives for air handlers and pumps and the installation of heat recovery coils to transfer heating energy from the exhaust air stream to the incoming outdoor air stream.
2. The Contractor shall provide submittal data, operating and maintenance data, as-built drawings, and training of the mechanical systems.
3. Commissioning of Mechanical Systems will be provided.

### D. MECHANICAL SCOPE OF WORK TASK NOTES: The scope of mechanical work includes the following Tasks. Task note numbering below correspond to those indicated on the 35% Mechanical Drawings.

1. Shower Fixture Replacement: Remove and replace locker room shower stations, shower valves, and heads per architectural layout. Revise plumbing piping as required.
2. Locker Room Plumbing Fixture Replacement: Replace plumbing fixtures. Replace the Locker room water closet and urinal chair carriers, located within CMU walls, with new. Install new domestic cold and hot water piping, and waste and vent piping in plumbing wall.
3. Lobby Drinking Fountain Replacement: Replace single stainless steel water cooler in Lobby with ADA dual high/low type.

4. Natatorium Drinking Fountain Replacement: Replace single vitreous china drinking fountain in Natatorium (installed on CMU) with two drinking fountains, one installed high and one low to meet ADA requirements.
5. Clogged Waste Piping: Replace underground waste piping serving natatorium ADA toilet room and staff shower rooms at low point underneath women's locker room, adjacent the women's showers. Sawcut concrete floor in Women's locker room to allow for repair/re-slope 3-inch underground waste piping from the ADA changing room.
6. Domestic Hot Water Heating System: Replace hot water storage tank, tempering valve, and domestic hot water pump and related piping.
7. Fuel Tank Replacement: Excavate and replace existing 3000 gallon single wall underground fuel tank with new aboveground double wall 2000 gallon capacity tank with leak detection and monitoring system. Provide disposal for contaminated soil if required. Installation of new aboveground tank in existing sloped landscape will require a short concrete retaining wall and reinforced concrete slab to allow room for new tank and support structure. Due to tank proximity to adjacent building, tank will need to be concrete filled, fire-rated type. Replace fuel distribution piping with secondary containment piping and leak detection alarm system. See Civil narrative for additional information.
8. Water Service Replacement: Replace existing 4-inch water service with new 6-inch water main from street service connection located immediately inside property line. Replace water header, meter, valving, and related equipment. Insulate cold water main piping, valves, and equipment inside the building. See Civil narrative for additional information.
9. Domestic Water Piping Replacement: Replace domestic cold, hot, and hot water recirculating piping throughout the building. Requires removal of CMU walls, gyp ceilings, and hazardous materials abatement in order to replace piping. Insulate all piping
10. Piping above Electrical Panels: Remove domestic cold, hot, and hot water recirculating piping located above electrical panels during domestic water replacement work (see above). Route piping to avoid location of new electrical panels and electrical distribution system.
11. Boiler Heating Plant: Install new dual fuel heating plant (oil-fired – electric), primary/secondary pumping system, and revised boiler room piping in an injection type piping configuration for boiler shock protection and greater system efficiency. Recommend two smaller oil-fired boilers and re-use of existing electric boiler for diversity and redundancy.
12. Boiler Room Piping and Related Equipment: Replace all heating piping, equipment, and trim in the Boiler room when boilers/heating plant is replaced.
13. Air Handler Pumps: Remove pumps located remotely at AHU-3 and AHU-4. Remove 3-way control valves and replace with 2-way control valves.
14. Air Handlers AHU-1 through AHU-4: Replace air handlers AHU-1 through AHU-4 in fan room mezzanines with (2) new air handlers and route new ductwork for new distribution system.
15. Heat Recovery Ventilator HRU (Natatorium Heating and Ventilation Unit): Replace HRU exhaust fan base and motor mounts, including vibration isolators. Replace exhaust fan blower, motor, shaft, bearings, and pulleys.
16. Small Fan Units: Replace small fan units, GEF-4 through GEF-8 with larger units to meet proper exhaust requirements.
17. Toilet Exhaust Fans: Replace TEF-2 serving the lobby toilet rooms, offices, and Janitors with larger unit to meet proper exhaust requirements.
18. Locker Room Ductwork: Replace ductwork, grilles, booster coils, dampers, and diffusers serving locker room, showers, and locker toilet rooms. Modify ductwork routing for new



- heating, ventilation, and exhaust system layout. Insulate ductwork downstream of booster coils.
19. Lobby Ductwork: Replace ductwork, grilles, booster coils, dampers, and diffusers serving lobby and offices Modify ductwork routing for new heating, ventilation, and exhaust system layout. Insulate ductwork downstream of booster coils.
  20. Outdoor Air Plenum: Eliminate use of above ceiling area for outdoor air plenum. Revise installation with outdoor air ducted directly from intake hood to air handling units. Insulate outdoor air ductwork. Remove capped outdoor air plenum at abandoned louvers and install insulated metal covering.
  21. Terminal Heating Units: Replace damaged heating units (3 Finned Pipe units at 5 feet). Prep and paint remaining finned pipe heating units and cabinet unit heaters. Clean fins and fan coils.
  22. Modify automatic control DDC system, graphics, and programming as needed to accommodate any modifications to the mechanical equipment and systems.
  23. Test and Balance modified heating and ventilation systems as needed to accommodate new work.

#### E. HEATING SYSTEMS

The heating plant will consist of new oil fired boilers in place of the original fire-tube cast-iron boiler, installation of a primary/secondary pumping system and pumps, new expansion tank, and new piping and appurtenances within the boiler room. Heating piping will be connected to existing piping where exiting the boiler room.

Each oil fired boiler will be sized for 50% of design load. In addition, an existing electric boiler will be retained to allow for diversity and redundancy.

Preliminary size of the new boilers:

1. Boiler B-1: 1,400 MBH oil fired. Weil-McLain 788.
2. Boiler B-2: 1,400 MBH oil fired. Weil-McLain 788.

The heating plant piping in the boiler room will be modified to allow for the new primary-secondary pumping configuration which will eliminate heating water circulation flow through boilers when not needed, allowing for increased boiler shock protection and greater system efficiency. Pumps P-1 (Boiler B-1), P-2 (Boiler B-2), and P-3 (existing Electric Boiler B-3) will be installed to inject heat from the respective boiler into the building heating loop when required. Pumps P-4A and P-4B will operate in a lead/backup operation to circulate heating water to air handling unit coils, booster coils, lap and leisure pool heat exchangers, domestic water heater, and terminal heating units. The building's heating water circulation system will be modified to allow for variable speed pumping, thus 3-way control valves at existing heating units will be replaced with 2-way modulating type control valves.

The existing 3000 gallon underground fuel tank will be replaced with a new 2000 gallon aboveground fuel tank located near the Northeast corner of the building. Installation of the new aboveground tank will require revisions to the sloped landscape as well as installation of a short retaining wall and concrete slab. Fuel piping will be installed in secondary containment piping. Tank leak detection monitoring will be included. A concrete filled fire-rated tank will be specified

to allow for reduced clearance to the building. See Civil narrative and drawings for additional information.

The existing lap pool heat exchanger and leisure pool heat exchanger were replaced recently and are in good condition. The existing heat exchanger piping will be connected to the new heating piping distribution piping system located in the adjacent boiler room.

#### F. HEATING PIPING

Existing heating piping in the mechanical room will be modified as needed for installation of boiler pumps and modification of the existing piping system to a primary/secondary piping configuration. Each heating source (Electric Boiler, Boiler B-1, and Boiler B-2) will have its own pump which will inject heating water into the building's circulation loop when required.

Heating Water Piping: Heating piping mains and branch piping shall be Schedule 40 black steel to match existing piping system material. Heating piping will be insulated with mineral fiber pipe insulation, 1-1/2 inch thick.

Heating water valves are to be bronze body, two piece, quarter turn full port ball valves, rated for 400 psig. Valves will be installed accessibly to individually shut off heating water piping to each terminal heating unit.

#### G. PLUMBING SYSTEM

The existing domestic hot water, cold water, and hot water recirculating piping will be replaced throughout the building. Installation of new domestic piping within plumbing walls will require demolition and replacement of existing CMU and sheet rock walls.

Domestic Water Service: A 6 inch water main will route from the street valve located just inside the property line to the lower mechanical space of the pool equipment room. New isolation valves, strainer, water meter, pressure reducing valve, and other appurtenances will be installed and domestic water piping routed to existing pool system fill and to new domestic water service for the building. All domestic hot and cold water piping will be insulated.

New plumbing fixtures will be installed in the locker room restrooms and shower rooms to replace existing. Commercial grade plumbing fixtures will be used in the toilet and shower rooms. Toilet room fixtures will be vitreous china and utilize low-flow technology. Water closets will be 1.28 gallons per flush, wall mounted siphon-jet type units with battery-powered infra-red flush valves. Urinals will be 0.5 gallons per flush with battery-powered infra-red flush valves. Lavatories will be wall or counter mounted with 0.5 GPM manual faucets and shall have integral ASSE-1070 compliant tempering valves for scald protection. The existing multi-station shower fixtures will be replaced with new stainless steel showers per new architectural layout. Shower heads will be metering type with manual temperature adjustment. A wall mounted, dual-level drinking fountain with bottle filler will be provided in the lobby, and a set of high and low vitreous china drinking fountains will be installed in the Natatorium.

ADA plumbing fixtures will be used where required. Sinks will be stainless steel with electronic gooseneck faucet.

Domestic hot, cold, and hot water recirculating piping will be replaced throughout the building. The domestic piping material shall be hard-drawn copper tubing, ASTM B 88, Type L with 95-5 solder fittings or equivalent. The waste and vent piping material shall be cast-iron, no-hub above grade, and cast-iron hub and spigot below grade. Concrete sawcutting will be required for all underground piping installation for new lower floor plumbing fixtures.

Domestic water valves are to be lead free, bronze body, quarter turn full port ball valves, rated for 400 psig. Valves will be installed accessibly to individually shut off domestic water piping to each room or group of plumbing fixtures. Pipe Insulation for domestic cold, hot, and re-circulating hot water piping will be insulated with sectional pipe covering, mineral fiber, 1-inch thick with vapor retardant jacket.

Disinfection: All domestic piping shall be disinfected as required by the Uniform Plumbing Code and the City and Borough of Juneau.

#### H. DOMESTIC HOT WATER

The existing domestic water heater tube bundle type storage tank will be replaced with new. The expansion tank, domestic hot water recirculating pump, tempering valve, and domestic piping will also be replaced. Domestic hot water will be stored at 140F and tempered down to 115F at the master mixing valve in the boiler room for distribution to plumbing fixtures. ASSE 1070 tempering valves will also be installed at each lavatory or group of lavatories as required by code. Anti-scald valves will be provided at all showers.

Preliminary size of the electric water heater:

1. One 700 gallon AO Smith storage tank (horizontal) with 600 MBH tube bundle.

#### I. VENTILATION AND EXHAUST AIR SYSTEMS

Existing ventilation systems for the Natatorium will be re-used, although modifications to the existing HRU heat recovery ventilator will be completed to extend the service life of that unit. The following revisions are planned for the Natatorium HRU. Replacement will be completed by a certified fan technician.

- HRU Exhaust fan blower replacement
- HRU Exhaust fan motor, shaft, bearings, and pulley replacement
- HRU Exhaust fan base and motor mount replacement, including the vibration isolators
- Epoxy coating of the exhaust section interior

The current AHU-1 and AHU-2 air handlers in the fan room mezzanine that provide additional dehumidification and heating for the Natatorium (in addition to HRU) will be replaced with a single air handler. The new AHU-1 unit will have a mixing box, filters, heating coil, and single fan section. The air handler will have aluminum interior and all fan parts will be coated with epoxy for corrosion resistance.

The current AHU-3 (lobby) and AHU-4 unit (lockers) will be replaced with a new air handler, AHU-2 that will provide heating and ventilation air to the lobby, office, locker rooms, and showers. The new AHU-2 unit will have a mixing box, filters, heating coil, and supply fan section. The air handler will have aluminum interior and all fan parts will be coated with epoxy for corrosion resistance. A return fan will provide return airflow from the lobby area to the AHU-2 supply fan and mixing box.

A new exhaust fan, EF-1, will be installed to provide exhaust air for the toilet rooms, showers, and janitors room.

To increase energy efficiency, a heat recovery coil will be installed in the exhaust airstream to recover energy from the exhaust air and transfer that to the incoming outdoor air for AHU-2. A preheat coil will be installed in the outdoor air ductwork. Pre-filters will be required in the ductwork upstream of the AHU-2 preheat coil and the EF-1 heat recovery coil.

Preliminary size of the new fan units:

2. AHU-1 SF: 7500 CFM at 1.00" ESP. 2 hp motor. 208V/3 phase.
3. AHU-2 SF: 5000 CFM at 2.50" ESP. 3 hp motor. 208V/3 phase.
4. AHU-2 RF: 2000 CFM at 1.125" TSP. 1.5 hp motor. 208V/3 phase.
5. EF-1: 3000 CFM at 1.5" TSP. 2 hp motor. 208V/3 phase.

Fan motors will be premium efficiency type.

Booster coils will provide heating for the majority of the lobby and locker room spaces. New ductwork, diffusers, grilles, and booster coils will be installed with diffuser and grille locations revised to optimize proper airflow for the lockers and shower rooms. Supply air ductwork will be insulated downstream of the booster coils.

The existing attic above the office mezzanine is being used as an outdoor air plenum, however, it is not designed or constructed for this application. Thus new outdoor air ductwork will be installed and connected to the intake gooseneck. Outdoor air ductwork will be routed to the new AHU-1 and AHU-2 fan units. Outdoor air and exhaust air ducts will be insulated to the air handler.

Small exhaust fans located in remote portions of the building will be replaced. Corrosion resistant coatings will be applied to fan units where exhausting corrosive air.

Preliminary size of the new fan units:

1. GEF-4 (Chemical Storage Room Exhaust): 100 CFM
2. GEF-5 (Equipment Storage Room Exhaust): 200 CFM
3. GEF-6 (Pool Equipment Room Exhaust): 200 CFM
4. GEF-7 (Pool Filtration Exhaust): 100 CFM
5. GEF-8 (Boiler Room Exhaust): 150 CFM
6. SF-2 (Pool Filtration Room Supply): 120 CFM

## J. CONTROLS REPLACEMENT

The existing control system was installed in 2015 and is in good condition. Modification to the existing Automated Logic DDC (Direct Digital Controls) control system provided by Meridian Controls will need to occur where necessary due to the installation or replacement of existing mechanical equipment and systems.

Approximately 50-60 control points will be required for the new/modified DDC controls installation.

K. MECHANICAL DRAWINGS

1. M0.1 – Mechanical Symbol Legend & Abbreviations
2. M0.2 – Mechanical Schedules & Task Notes
3. M1.1 – First Floor Plan – Piping
4. M2.1 – First Floor Plan – Ductwork
5. M4.1 – Enlarged Plans – HRV & Mechanical Room
6. M4.2 – Enlarged Plan – Mezzanine

**A. SCOPE OF WORK**

Electrical design consists of the following major elements:

1. Replace all interior and exterior lighting with LED.
2. All new lighting controls.
3. Replace main service switchboard.
4. Mechanical support, including MCC replacement.
5. New boiler shutoff pushbutton
6. Arc Flash Study
7. Replace PA system
8. New security system

**B. POOL LIGHTING**

The lighting in the pool area will be a combination of indirect and direct lighting. The intent is to illuminate the entire space, including the ceiling, for a more welcoming and inviting space. Initial calculations indicate that the split will likely be close to 75% indirect and 25% direct lighting. This will depend on final wall and ceiling colors chosen since darker colors will require more direct lighting.

Actual lighting levels will follow IESNA v10 recommendations.

<b>Space</b>	<b>Target Light Level</b>
Pool Surface	30 FC
Pool Deck	20 FC
Pool start/stop race lane area	50 FC

**C. GENERAL LIGHTING**

All remaining building lighting will generally be a one for one replacement of existing fixtures. The new fixtures will be LED and will be calculated to deliver the correct lighting output for the space. Majority of spaces will be provided with new lighting controls that will automatically turn the lights on and off along with providing full dimming. There will be a substantial energy savings by converting to LED and automatic lighting controls.

All demolished fluorescent fixtures will be disposed of in an approved manner.

**D. POWER**

The existing main service switchboard is at the end of it's useful life and has several code violations and will be replaced. The replacement panel will be a Square D I-Line or similar. This new service panel will be approximately 42" wide, significantly smaller footprint than the existing service board. A new utility meter and CT can will be provided and will either be located within the existing room, or on the outside of the building.

The MCC in the 1<sup>st</sup> floor mechanical room will be replaced with a new Square D type NQ panelboard. Other electrical design work will include providing new circuits to upgraded mechanical equipment, new motor controllers and power calculations.

A new boiler pushbutton will be installed in boiler room per code requirements. This button will simultaneously shutdown both the fuel boiler and the electric boiler. Boiler pushbutton will be red and installed behind a clear Lexan cover with labeling.

An arc flash hazard study will be performed. This is required to be performed at or near the completion of construction to verify exact products used.

#### E. PUBLIC ADDRESS SYSTEM

The existing PA system will be replaced to provide better acoustics throughout the space. A new PA headend will be provided, using the BiAmp Nexia platform or similar for integration of speakers and microphones.

Microphone station locations will be coordinated with the owner after 35% design. Multiple inputs can be provided in any location desired by the owner.

Speaker coverage in a pool space can be challenging, as large bodies of water distort audio, reducing volume and creating dull sounds. To overcome this, a mixture of ceiling mount and wall mount speakers will be provided in the pool area. Speakers in the non-pool spaces will be ceiling mounted, as this provides the greatest coverage with the fewest speakers.

#### F. SECURITY SYSTEM

A new electronic security system will be provided, giving the owner greater flexibility with access to the building. The new security headend will be a Lenel OnGuard system or similar, as this is a cost effective solution for this size of facility.

The security requirements of each door will be coordinated with the owner after 35% design, however it is anticipated the following doors will get electronic security –

- Exterior front entry double doors
- Exterior back of house single-door
- Exterior staff lounge door
- Interior manager's office door
- Interior storage room door
- Interior staff lounge door

A card reader, door contact, and electronic strike will be provided at every secure door. This will enable the user to open the door using only their card reader, and will also give the owner a log of every time the door is opened, as well as which access card was used to open it.

**APPENDIX A – COST ESTIMATE**



35% DESIGN SUBMITTAL  
CONSTRUCTION COST ESTIMATE

AUGUSTUS BROWN POOL RENOVATIONS  
1619 GLACIER AVENUE - JUNEAU, ALASKA

PREPARED FOR:

Architects Alaska  
900 West 5th Avenue, Suite 403  
Anchorage, Alaska 99501

November 8, 2019



HMS Project No.: 19075

## NOTES REGARDING THE PREPARATION OF THIS ESTIMATE

### DRAWINGS AND DOCUMENTS

*Level of Documents:* (45) 35% design drawings and specifications  
*Date:* October 31, 2019  
*Provided By:* Architects Alaska of Anchorage, Alaska and their subconsultants of Juneau, Alaska

### RATES

Pricing is based on current material, equipment and freight costs.

*Labor Rates:* A.S. Title 36 working 60 hours per week  
*Premium Time:* 16.70%

### BIDDING ASSUMPTIONS

*Contract:* Standard construction contract without restrictive bidding clauses  
*Bidding Situation:* Competitive bids assumed  
*Bid Date:* March 2020  
*Start of Construction:* May 2020  
*Contract Time:* (8) months, including material procurement, submittals, as-builts, etc.  
*Construction Time:* Within (6) months completion

### EXCLUDED COSTS

1. A/E design fees
2. Administrative and management costs
3. Owner furnished equipment and furnishings

**NOTES REGARDING THE PREPARATION OF THIS ESTIMATE (Continued)**

**GENERAL**

When included in HMS Inc.'s scope of services, opinions or estimates of probable construction costs are prepared on the basis of HMS Inc.'s experience and qualifications and represent HMS Inc.'s judgment as a professional generally familiar with the industry. However, since HMS Inc. has no control over the cost of labor, materials, equipment or services furnished by others, over contractor's methods of determining prices, or over competitive bidding or market conditions, HMS Inc. cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from HMS Inc.'s opinions or estimates of probable construction cost.

This estimate assumes normal escalation based on the current economic climate. HMS Inc. will continue to monitor this, as well as other international, domestic and local events, and the resulting construction climate, and will adjust costs and contingencies as deemed appropriate.

**GROSS FLOOR AREA**

Main Floor Renovations	15,410 SF
Second Floor and Mechanical Mezzanine	<u>1,208 SF</u>
<b>TOTAL GROSS FLOOR AREA:</b>	<b><u><u>16,618 SF</u></u></b>

HMS Project No.: 19075

**35% DESIGN GENERAL COST SUMMARY**

	<b>Total</b>	<b>Unit Rate</b>	<b>Area</b>
BASE BID	\$ 4,657,042	\$ 280 /SF	16,618 SF
<b>ADD ALTERNATES</b>			
1. Energy Efficiency Upgrades to First Floor Exterior Walls and Windows	128,255	30 /SF	4,288 SF
2. Provide New Calcium Hypochlorite Sanitation Systems for Both Pools	74,865	15 /SF	4,950 SF
3. Provide New UV Secondary Sanitation Systems for Both Pools	134,033	27 /SF	4,950 SF
<b>TOTAL ESTIMATED CONSTRUCTION COST (BID MARCH 2020):</b>	<b>\$ 4,994,195</b>	<b>\$ 301 /SF</b>	<b>16,618 SF</b>

HMS Project No.: 19075

**35% DESIGN COST SUMMARY**

	<b>Material</b>	<b>Labor</b>	<b>Total</b>
01 - SITE WORK	\$ 145,949	\$ 210,638	\$ 356,587
02 - SUBSTRUCTURE	3,438	6,526	9,964
03 - SUPERSTRUCTURE	8,205	15,868	24,073
04 - EXTERIOR CLOSURE	60,925	59,012	119,937
05 - ROOF SYSTEMS	280,378	217,457	497,835
06 - INTERIOR CONSTRUCTION	169,706	184,419	354,125
07 - CONVEYING SYSTEMS	0	0	0
08 - MECHANICAL	491,908	447,340	939,248
09 - ELECTRICAL	199,168	173,568	372,736
10 - EQUIPMENT	0	0	0
11 - SPECIAL CONSTRUCTION	432,220	9,523	441,743
<b>SUBTOTAL:</b>	<b>\$ 1,791,897</b>	<b>\$ 1,324,351</b>	<b>\$ 3,116,248</b>
12 - GENERAL REQUIREMENTS			708,775
<b>SUBTOTAL:</b>			<b>\$ 3,825,023</b>
13 - CONTINGENCIES			832,019
<b>TOTAL ESTIMATED CONSTRUCTION COST (BID MARCH 2020):</b>			<b>\$ 4,657,042</b>
<b>COST PER SQUARE FOOT:</b>			<b>\$ 280.24 /SF</b>
<b>GROSS FLOOR AREA:</b>			<b>16,618 SF</b>

**ELEMENTAL SUMMARY**

<i>Element</i>	<i>Material</i>	<i>Labor</i>	<i>Material/Labor</i>	<i>Total</i>	<i>Total Cost</i>	<i>Cost per SF</i>
<b>01 - SITE WORK</b>					\$ 356,587	\$ 21.46
011 - Hazmat Abatement	\$ 52,216	\$ 43,342	\$ 95,558			5.75
012 - Non-Hazmat Selective Demolition	19,317	100,662	119,979			7.22
013 - Site Demolition	7,150	18,053	25,203			1.52
014 - Site Improvements	23,460	28,565	52,025			3.13
015 - Site Mechanical	43,806	20,016	63,822			3.84
016 - Site Electrical	0	0	0			0.00
<b>02 - SUBSTRUCTURE</b>					\$ 9,964	\$ 0.60
021 - Standard Foundations	\$ 0	\$ 0	\$ 0			0.00
022 - Slab on Grade	3,438	6,526	9,964			0.60
023 - Basement	0	0	0			0.00
024 - Special Foundations	0	0	0			0.00
<b>03 - SUPERSTRUCTURE</b>					\$ 24,073	\$ 1.45
031 - Floor Construction	\$ 0	\$ 0	\$ 0			0.00
032 - Roof Construction	8,205	15,868	24,073			1.45
033 - Stair Construction	0	0	0			0.00
<b>04 - EXTERIOR CLOSURE</b>					\$ 119,937	\$ 7.22
041 - Exterior Walls	\$ 23,099	\$ 45,024	\$ 68,123			4.10
042 - Exterior Doors and Windows	37,826	13,988	51,814			3.12
<b>05 - ROOF SYSTEMS</b>					\$ 497,835	\$ 29.96
051 - Roofing	\$ 280,378	\$ 217,457	\$ 497,835			29.96
052 - Skylights	0	0	0			0.00
<b>06 - INTERIOR CONSTRUCTION</b>					\$ 354,125	\$ 21.31
061 - Partitions and Doors	\$ 70,048	\$ 27,904	\$ 97,952			5.89
062 - Interior Finishes	61,231	141,148	202,379			12.18
063 - Specialties	38,427	15,367	53,794			3.24

**ELEMENTAL SUMMARY**

<i>Element</i>	<i>Material</i>	<i>Labor</i>	<i>Material/Labor</i>	<i>Total</i>	<i>Total Cost</i>	<i>Cost per SF</i>
<b>07 - CONVEYING SYSTEMS</b>	\$ 0	\$ 0			\$ 0	\$ 0.00
<b>08 - MECHANICAL</b>					\$ 939,248	\$ 56.52
081 - Demolition	\$ 2,520	\$ 61,302	\$ 63,822			3.84
082 - Plumbing	121,832	118,212	240,044			14.44
083 - HVAC	341,592	245,252	586,844			35.31
084 - Fire Protection	7,200	12,463	19,663			1.18
085 - Special Mechanical Systems	18,764	10,111	28,875			1.74
<b>09 - ELECTRICAL</b>					\$ 372,736	\$ 22.43
091 - Demolition	\$ 600	\$ 23,002	\$ 23,602			1.42
092 - Service and Distribution	53,946	32,459	86,405			5.20
093 - Lighting and Power	97,564	66,512	164,076			9.87
094 - Special Electrical Systems	47,058	51,595	98,653			5.94
<b>10 - EQUIPMENT</b>					\$ 0	\$ 0.00
101 - Fixed and Movable Equipment	\$ 0	\$ 0	\$ 0			0.00
102 - Furnishings	0	0	0			0.00
<b>11 - SPECIAL CONSTRUCTION</b>	\$ 432,220	\$ 9,523			\$ 441,743	\$ 26.58
<b>SUBTOTAL DIRECT WORK:</b>	<b>\$ 1,791,897</b>	<b>\$ 1,324,351</b>			<b>\$ 3,116,248</b>	
<b>12 - GENERAL REQUIREMENTS</b>					\$ 708,775	\$ 42.65
121 - Mobilization			\$ 22,950			1.38
122 - Operation Costs			392,073			23.59
123 - Profit			293,752			17.68
<b>13 - CONTINGENCIES</b>					\$ 832,019	\$ 50.07
131 - Estimator's Contingency	20.00%		\$ 765,005			46.03
132 - Escalation Contingency	1.46%		67,014			4.03
<b>TOTAL ESTIMATED CONSTRUCTION COST:</b>					<b>\$ 4,657,042</b>	<b>\$280.24 /SF</b>
<b>GROSS FLOOR AREA:</b>						<b>16,618 SF</b>

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>011 - Hazmat Abatement</b>								
Note: All quantities assumed. No quantities have been provided by the designer.								
Mobilization-demobilization	1	LOT	750.00	750	1250.00	1,250	2000.00	2,000
Abatement equipment, clothing, HEPA filter and air monitors, etc.	1	LOT	2500.00	2,500			2500.00	2,500
Equipment and personnel decontamination station	1	EA	350.00	350	550.00	550	900.00	900
PCM tests	12	EA						By Hygienist
Air monitoring	20	EA						By Hygienist
Hygienist	7	MD	100.00	700	550.00	3,850	650.00	4,550
TCLP test	1	EA	1500.00	1,500			1500.00	1,500
Containerize and ship contaminated soil and liner to Anchorage for disposal (allowance)	30	CY	500.00	15,000		Included	500.00	15,000
Remove mercury lamps	380	EA			2.50	950	2.50	950
Remove PCB ballasts	95	EA			42.00	3,990	42.00	3,990
Remove exit signs	6	EA			75.00	450	75.00	450



HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>011 - Hazmat Abatement</b>								
Allowance for additional lead and hazardous material removal and disposal (no details or quantities)	16,618	SF	0.15	2,493	0.60	9,971	0.75	12,464
Dispose mercury lamps, exit signs, and PCB ballasts in drums shipped out of state	6	EA	778.00	4,668		Included	778.00	4,668
Load hazmat materials in 8'0"x8'0"x20'0" shipping container and ship to Roosevelt landfill in Washington and dispose debris, including landfill fee	1	EA	6500.00	6,500	3500.00	3,500	10000.00	10,000
<b>SUBTOTAL:</b>				<b>\$ 34,461</b>		<b>\$ 24,511</b>		<b>\$ 58,972</b>
Labor Premium Time	16.70%					4,093		4,093
<b>SUBTOTAL:</b>				<b>\$ 34,461</b>		<b>\$ 28,604</b>		<b>\$ 63,065</b>
Subcontractor's Overhead and Profit on Material and Labor	22.00%		7,581	6,293				13,874
Bonds and Insurance	3.50%		1,471	1,221				2,692
Contingency	20.00%		8,703	7,224				15,927
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 52,216</b>		<b>\$ 43,342</b>		<b>\$ 95,558</b>

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>012 - Non-Hazmat Selective Demolition</b>								

Note: All pool demolition included with pool quotes in Element 11 - Special Construction.

STRUCTURAL DEMOLITION

Excavate and core drill 6" diameter hole in existing foundation wall for new water supply line	1	EA	100.00	100	430.00	430	530.00	530
<u>Concrete Slabs, Etc.</u>								
Saw cut concrete slabs for plumbing trenches	336	LF	1.60	538	8.75	2,940	10.35	3,478
Break up and remove concrete for plumbing, etc.	480	SF			3.50	1,680	3.50	1,680
Cut and remove CMU and concrete walls for new openings (2)	80	SF	1.00	80	6.50	520	7.50	600
Cut and remove concrete curbs (2)	24	SF	1.00	24	10.70	257	11.70	281
Cut and remove existing 4"x4" roof nailers	200	LF			4.00	800	4.00	800
Cut and remove existing roof sheathing (10% of 19,213 SF)	1,922	SF			1.50	2,883	1.50	2,883

ARCHITECTURAL DEMOLITION

Exterior Demolition

Remove single door assemblies	7	EA			85.00	595	85.00	595
Remove double door assemblies	4	EA			125.00	500	125.00	500

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

**012 - Non-Hazmat Selective Demolition**

ARCHITECTURAL DEMOLITION (Continued)

Exterior Demolition (Continued)

Remove clerestory windows and trims (balance with Alternate 1)

50 EA 60.00 3,000 60.00 3,000

Roofing Demolition

Temporary fall protection railings

1,100 LF 3.50 3,850 2.70 2,970 6.20 6,820

Demolish wall side louvers (3)

75 SF 3.00 225 3.00 225 3.00 225

Remove parapet metal cap flashings and sealants

357 LF 1.75 625 1.75 625 1.75 625

Remove roof to wall flashings

357 LF 1.85 660 1.85 660 1.85 660

Remove eave flashings

742 LF 1.95 1,447 1.95 1,447 1.95 1,447

Remove VTR and conduit flashings (assumed)

8 EA 30.00 240 30.00 240 30.00 240

Remove roof drain flashings

4 EA 37.00 148 37.00 148 37.00 148

Remove curb flashings

20 LF 4.50 90 4.50 90 4.50 90

Remove gutters and downspouts

897 LF 0.90 807 0.90 807 0.90 807

Demolish parapet upper wall siding/fascia and trims

1,828 SF 2.50 4,570 2.50 4,570 2.50 4,570

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>012 - Non-Hazmat Selective Demolition</b>								
<u>ARCHITECTURAL DEMOLITION (Continued)</u>								
<u>Roofing Demolition (Continued)</u>								
Demolish IRMA roofing assembly to deck	4,980	SF			2.30	11,454	2.30	11,454
Demolish metal roofing assembly to deck	14,234	SF			1.20	17,081	1.20	17,081
Thoroughly clean exposed roof decks	19,213	SF	0.02	384	0.08	1,537	0.10	1,921
Daily cover exposed roof areas for working in sections	19,213	SF	0.10	1,921	0.15	2,882	0.25	4,803
<u>Interior Demolition</u>								
Demolish double door assembly	1	PR			125.00	125	125.00	125
Remove standard toilet partitions	5	EA			70.00	350	70.00	350
Remove toilet accessories at large rooms	2	RMS			260.00	520	260.00	520
Remove baby changing stations	2	EA			30.00	60	30.00	60
Remove floor mounted locker benches (6)	60	LF			5.50	330	5.50	330
Remove wall mounted vanity counters	2	EA			65.00	130	65.00	130
Remove miscellaneous specialties	1	LOT			1000.00	1,000	1000.00	1,000
Miscellaneous unidentified demolition	1	LOT			2500.00	2,500	2500.00	2,500

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>012 - Non-Hazmat Selective Demolition</b>								

ARCHITECTURAL DEMOLITION (Continued)

Interior Demolition (Continued)

Demolish partitions	680	SF			1.60	1,088	1.60	1,088
Cut and demolish partitions for access to mechanical rooms for new AHUs (2)	160	SF			2.00	320	2.00	320
Demolish gypboard at clerestory	560	SF			0.70	392	0.70	392
Demolish floor finishes	3,010	SF			1.40	4,214	1.40	4,214
Demolish ceiling finishes	3,356	SF			1.10	3,692	1.10	3,692
Remove lockers	16	EA			32.50	520	32.50	520
Remove interior curtain wall	440	SF			6.00	2,640	6.00	2,640
Remove sauna and sauna finishes, salvage for reuse (floor area)	110	SF		220	8.50	935	10.50	1,155
<u>MISCELLANEOUS</u>								
4'0"x7'0" temporary access door assembly	1	EA	750.00	750	350.00	350	1100.00	1,100
Protect existing structures, finishes, etc. where required	1	LOT	250.00	250	750.00	750	1000.00	1,000

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>012 - Non-Hazmat Selective Demolition</b>								
<u>MISCELLANEOUS (Continued)</u>								
Load, haul and dispose debris	32	LDS	350.00	11,200	250.00	8,000	600.00	19,200
<b>SUBTOTAL:</b>				<u>\$ 19,317</u>		<u>\$ 86,257</u>		<u>\$ 105,574</u>
Labor Premium Time	16.70%					14,405		14,405

**TOTAL ESTIMATED COST: \$ 19,317 \$ 100,662 \$ 119,979**

AUGUSTUS BROWN SWIMMING POOL RENOVATIONS  
 1619 GLACIER AVENUE - JUNEAU, ALASKA  
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

HMS Project No.: 19075

	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>01 - SITE WORK</b>								
<b>013 - Site Demolition</b>								
Saw cut concrete sidewalks/entry and curb	55	LF	2.00	110	8.50	468	10.50	578
Saw cut asphalt pavement	60	LF	1.00	60	4.80	288	5.80	348
Demolish asphalt pavement	120	SF			1.50	180	1.50	180
Demolish existing concrete sidewalks/entry	620	SF			3.50	2,170	3.50	2,170
Demolish existing concrete steps	125	SF			5.30	663	5.30	663
Demolish existing concrete curb and gutter	52	LF			6.00	312	6.00	312
Demolish existing chainlink fence	30	LF			5.50	165	5.50	165
Remove metal handrails (4)	73	LF			4.00	292	4.00	292
Remove bike rack and salvage for reuse	1	EA			95.00	95	95.00	95
Grind existing concrete offsets at joints (3)	18	LF	3.00	54	22.00	396	25.00	450
Dispose debris	1	LD	350.00	350	250.00	250	600.00	600
<u>REMOVE UNDERGROUND FUEL OIL TANKS</u>								
Pump out fuel from 3,000 gallon tank and store in temporary storage/tank	1	LOT	500.00	500	300.00	300	800.00	800
Membrane liners for stockpiling contaminated soils	800	SF	1.50	1,200	0.70	560	2.20	1,760

HMS Project No.: 19075

01 - SITE WORK 013 - Site Demolition	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

REMOVE UNDERGROUND FUEL OIL TANKS (Continued)

Excavate to expose 3,000 gallon tank and piping, and stockpile on liner (assume 30 CY are contaminated)

60 CY 15.50 930 15.50 930

Disconnect and remove piping

1 LOT 160.00 160 160.00 160

Remove 3,000 gallon tank

1 EA 800.00 800 800.00 800

Cut tank in pieces for disposal

1 EA 300.00 300 1200.00 1,200 1500.00 1,500

Bundle up tanks and piping cut pieces and dispose off-site

3 TONS 100.00 300 750.00 2,250 850.00 2,550

Fill and compact holes and trenches

72 CY 22.00 1,584 8.50 612 30.50 2,196

Equipment for tank removal and disposal

1 WK 1500.00 1,500 800.00 800 2300.00 2,300

**SUBTOTAL:**

\$ 5,958 \$ 12,891 \$ 18,849

Labor Premium Time

16.70% 2,153 2,153

**SUBTOTAL:**

\$ 5,958 \$ 15,044 \$ 21,002

Subcontractor's Overhead and Profit on Material and Labor

20.00% 1,192 3,009 4,201

**TOTAL ESTIMATED COST:**

**\$ 7,150 \$ 18,053 \$ 25,203**



HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

**014 - Site Improvements**

NEW CONCRETE ENTRY LANDING, STEPS, AND SIDEWALK

Excavate subbase and add 24" fill for new concrete tank pad and concrete steps

300 SF 3.10 930 8.00 2,400 11.10 3,330

New curb and gutter

52 LF 31.00 1,612 26.00 1,352 57.00 2,964

4" thick mesh reinforced concrete slab at landing/entry with 8" thickened slab at back of curb

450 SF 4.30 1,935 4.80 2,160 9.10 4,095

4" thick mesh reinforced concrete sidewalks

170 SF 4.10 697 4.30 731 8.40 1,428

8" thick bar reinforced tank pad with integral 8" retaining walls on three sides

172 SF 9.80 1,686 12.50 2,150 22.30 3,836

8" thick concrete entry steps and end walls

125 SF 14.20 1,775 18.70 2,338 32.90 4,113

Cure and finish

917 SF 0.30 275 1.50 1,376 1.80 1,651

2" diameter (2) pipe guardrails (5)

94 LF 72.00 6,768 35.00 3,290 107.00 10,058

Paint multi-pipe guardrails

94 LF 2.20 207 6.50 611 8.70 818

4 1/2" diameter x 36" wide x 42" high 'U' shaped yellow pipe bollards at low vertical clearance

4 EA 255.00 1,020 200.00 800 455.00 1,820

4" crushed aggregate surface course at new asphalt, compacted

120 SF 1.00 120 3.00 360 4.00 480

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

**014 - Site Improvements**

NEW CONCRETE ENTRY LANDING, STEPS, AND SIDEWALK (Continued)

New 3" asphalt paving at bollards and curb	120	SF	3.50	420	5.50	660	9.00	1,080
Tack coat at existing asphalt edge	60	LF	1.00	60	2.00	120	3.00	180

MISCELLANEOUS

Reinstall salvaged bike rack	1	EA	50.00	50	180.00	180	230.00	230
Revegetate and slope to back of existing curb	250	SF	1.00	250	2.00	500	3.00	750
Pack voids with low slump concrete at walkway	25	LF	5.00	125	12.00	300	17.00	425
Remove broken concrete and patch with non-shrink grout	2	SF	40.00	80	185.00	370	225.00	450
New 7'0" high chainlink fence	40	LF	38.50	1,540	17.50	700	56.00	2,240

**SUBTOTAL:** \$ 19,550      \$ 20,398      \$ 39,948

Labor Premium Time 16.70%      3,406      3,406

**SUBTOTAL:** \$ 19,550      \$ 23,804      \$ 43,354

Subcontractor's Overhead and Profit on Material and Labor 20.00%      3,910      4,761      8,671

**TOTAL ESTIMATED COST:** \$ 23,460      \$ 28,565      \$ 52,025

AUGUSTUS BROWN SWIMMING POOL RENOVATIONS  
 1619 GLACIER AVENUE - JUNEAU, ALASKA  
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

HMS Project No.: 19075

01 - SITE WORK 015 - Site Mechanical	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>WATER</u>								
6" diameter corrosion resistant DIP water line	38	LF	32.00	1,216	22.20	844	54.20	2,060
6" gate valve	1	EA	875.00	875	335.00	335	1210.00	1,210
12"x6"x12" tee	1	EA	285.00	285	180.00	180	465.00	465
6" bends with restraint joints	2	EA	225.00	450	170.00	340	395.00	790
6" couplings/joints	3	EA	225.00	675	170.00	510	395.00	1,185
6" building connection and sleeve	1	EA	195.00	195	220.00	220	415.00	415
6" live tap at existing including fee	1	EA	2000.00	2,000	500.00	500	2500.00	2,500
Cap 4" diameter water pipe	1	EA	150.00	150	350.00	350	500.00	500
Concrete thrust blocks	2	EA	160.00	320	120.00	240	280.00	560
Test and disinfect piping	1	LOT	50.00	50	250.00	250	300.00	300
Excavate, trench and stockpile (10'0" deep)	140	CY			7.00	980	7.00	980
Bedding material	7	CY	45.00	315	8.50	60	53.50	375
30" deep NFS fill, compacted	46	CY	32.00	1,472	8.00	368	40.00	1,840
Stockpiled backfill, compacted	117	CY			8.00	936	8.00	936

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>015 - Site Mechanical</b>								
<u>WATER (Continued)</u>								
Dispose surplus off site	25	CY			8.50	213	8.50	213
6" PVC marker tape	38	LF	0.52	20	0.33	13	0.85	33
Allowance for shoring (50% of trenching)	20	LF	9.75	195	6.00	120	15.75	315
Dewatering allowance (10% of excavation)	14	CY	7.30	102	3.50	49	10.80	151
2,000 gallon above grade double wall fuel tank with gauges and accessories	1	EA	18500.00	18,500	3700.00	3,700	22200.00	22,200
Leak detection and monitoring panel	1	EA	5000.00	5,000	2500.00	2,500	7500.00	7,500
Fuel for testing	300	GALS	4.15	1,245			4.15	1,245
Note: Tank to be filled by owner.								
3/4" to 1" diameter fuel piping in double containment pipe from tank to building	20	LF	30.00	600	22.00	440	52.00	1,040
3/4" to 1" safety valves with flexible connections	2	EA	85.00	170	110.00	220	195.00	390
Tank caution and warning labels	1	LOT	75.00	75	50.00	50	125.00	125
Leak detection system	1	LOT	2500.00	2,500	750.00	750	3250.00	3,250
Building connection and sleeve	1	EA	95.00	95	125.00	125	220.00	220
<b>SUBTOTAL:</b>				<b>\$ 36,505</b>		<b>\$ 14,293</b>		<b>\$ 50,798</b>

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

Labor Premium Time 16.70% 2,387 2,387

**SUBTOTAL:** \$ 36,505 \$ 16,680 \$ 53,185

Subcontractor's Overhead and Profit on Material and Labor 20.00% 7,301 3,336 10,637

**TOTAL ESTIMATED COST:** \$ 43,806 \$ 20,016 \$ 63,822

AUGUSTUS BROWN SWIMMING POOL RENOVATIONS  
 1619 GLACIER AVENUE - JUNEAU, ALASKA  
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

DATE: 11/8/2019

HMS Project No.: 19075

01 - SITE WORK	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
016 - Site Electrical								

Note: No work.

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**TOTAL ESTIMATED COST:**

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HMS Project No.: 19075

03 - SUPERSTRUCTURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
032 - Roof Construction								
Install new 4"x4" T&G roof decking where removed	200	LF	6.50	1,300	6.00	1,200	12.50	2,500
Install new roof sheathing where removed (10% of 19,213 SF)	1,922	SF	1.10	2,114	2.20	4,228	3.30	6,342
New 2"x pressure treated stud and plates at 12" parapet extension	1,074	LF	1.10	1,181	2.00	2,148	3.10	3,329
Batt insulation at 12" parapet extension	358	SF	0.70	251	0.65	233	1.35	484
1/2" pressure treated plywood at 12" parapet extension, both sides	716	SF	1.20	859	1.10	788	2.30	1,647
Allowance for roof structural upgrades for new mechanical work, equipment, etc.	1	LOT	2500.00	2,500	5000.00	5,000	7500.00	7,500
<b>SUBTOTAL:</b>				<b>\$ 8,205</b>		<b>\$ 13,597</b>		<b>\$ 21,802</b>
Labor Premium Time	16.70%					2,271		2,271

<b>TOTAL ESTIMATED COST:</b>	<b>\$ 8,205</b>	<b>\$ 15,868</b>	<b>\$ 24,073</b>
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HMS Project No.: 19075

04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$	
<b>041 - Exterior Walls</b>							
<u>EXISTING WALLS</u>							
2"x6" plates at clerestory infills, 16" o/c	1,200	LF	1.10	1,320	1.60	1,920	3,240
2"x6" studs and plates at mechanical rooms furring	1,074	LF	1.10	1,181	1.40	1,504	2,685
7/16" OSB sheathing at clerestory	840	SF	0.80	672	0.70	588	1,260
1"x6" T&G bevel cedar wood siding at clerestory and parapets/fascia	1,860	SF	4.60	8,556	2.55	4,743	13,299
VaproShield air barrier	1,860	SF	0.80	1,488	0.70	1,302	2,790
6" R-21 batt insulation at infills	800	SF	0.82	656	0.60	480	1,136
6" R-21 batt insulation at mechanical furring	1,024	SF	0.82	840	0.50	512	1,352
6 mil vapor barrier	2,416	SF	0.08	193	0.12	290	483
5/8" Type X gypboard to inner face at clerestory	1,392	SF	0.64	891	1.50	2,088	2,979
5/8" Type X gypboard to inner face at mechanical furring	1,024	SF	0.64	655	1.50	1,536	2,191
<u>SOFFITS</u>							
Add 6" R-21 batt insulation to existing soffits	3,692	SF	0.82	3,027	0.85	3,138	6,165
Pressure wash existing soffits	3,692	SF	0.08	295	0.35	1,292	1,587



HMS Project No.: 19075

04 - EXTERIOR CLOSURE	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>042 - Exterior Doors and Windows</b>								
<u>EXTERIOR DOORS</u>								
6'0"x7'0" galvanized insulated hollow metal door frames	4	EA	270.00	1,080	115.00	460	385.00	1,540
3'0"x7'0" galvanized insulated hollow metal door frames	7	EA	190.00	1,330	85.00	595	275.00	1,925
6'0"x7'0" insulated fiberglass double doors with safety glazed vision panel	3	PRS	1480.00	4,440	160.00	480	1640.00	4,920
6'0"x7'0" insulated fiberglass double doors	1	PR	1200.00	1,200	160.00	160	1360.00	1,360
3'0"x7'0" insulated fiberglass single doors	4	EA	600.00	2,400	80.00	320	680.00	2,720
3'0"x7'0" insulated fiberglass single doors with safety glazed vision panel	3	EA	740.00	2,220	80.00	240	820.00	2,460
Double door hardware set	1	EA	1150.00	1,150	600.00	600	1750.00	1,750
Double door hardware sets with panic bars	3	EA	2480.00	7,440	1100.00	3,300	3580.00	10,740
Single door hardware sets	4	EA	650.00	2,600	300.00	1,200	950.00	3,800
Single door hardware sets with panic bars	3	EA	1350.00	4,050	650.00	1,950	2000.00	6,000
Automatic ADA double door openers	2	EA	4800.00	9,600	750.00	1,500	5550.00	11,100

WINDOWS

With Alternate 1

HMS Project No.: 19075

04 - EXTERIOR CLOSURE 042 - Exterior Doors and Windows	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>MISCELLANEOUS</u>								
Drip edge head flashing	50	LF	2.50	125	2.00	100	4.50	225
Caulking and sealants at doors	636	LF	0.30	191	1.70	1,081	2.00	1,272
<b>SUBTOTAL:</b>				<b>\$ 37,826</b>		<b>\$ 11,986</b>		<b>\$ 49,812</b>
Labor Premium Time	16.70%					2,002		2,002
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 37,826</b>		<b>\$ 13,988</b>		<b>\$ 51,814</b>

HMS Project No.: 19075

05 - ROOF SYSTEMS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$	
<b>051 - Roofing</b>							
<u>EPDM ROOFING</u>							
60 mil fully adhered EPDM roofing	4,980	SF	2.10	10,458	2.10	10,458	20,916
1/2" fiberglass substrate board	4,980	SF	0.90	4,482	0.80	3,984	8,466
6 mil vapor retarder	4,980	SF	0.08	398	0.10	498	896
(2) layers R-38, 4" flat board rigid insulation	4,980	SF	3.70	18,426	1.80	8,964	27,390
Average 1 1/2" tapered staggered joints rigid insulation	4,980	SF	0.95	4,731	0.65	3,237	7,968
Extra for crickets slopes	1,075	SF	2.50	2,688	0.40	430	3,118
<u>MISCELLANEOUS</u>							
60 mil fully adhered EPDM roofing up walls and over parapets and curbs at all roofs	716	SF	2.10	1,504	2.20	1,575	3,079
1/2" thick walkway rubber pads adhered to roofing	400	SF	3.90	1,560	1.55	620	2,180
<u>PARAPETS, ROOF DRAINS, CURBS, AND VTR</u>							
8" girth prefinished metal parapet cap flashings and sealants	360	LF	6.80	2,448	3.30	1,188	3,636
Equipment curb, flashings and sealants	20	LF	8.50	170	4.70	94	264



HMS Project No.: 19075

05 - ROOF SYSTEMS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
051 - Roofing								

Subcontractor's Overhead and Profit on Material and Labor

20.00% 46,730 36,243 82,973

**TOTAL ESTIMATED COST: \$ 280,378 \$ 217,457 \$ 497,835**

HMS Project No.: 19075

06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>061 - Partitions and Doors</b>								
<u>PARTITIONS</u>								
6" metal stud, 16" o/c	720	SF	1.30	936	1.50	1,080	2.80	2,016
6" metal stud infills at mechanical rooms for AHU access, 16" o/c	160	SF	1.30	208	1.75	280	3.05	488
5/8" Type X gypboard	1,440	SF	0.64	922	1.50	2,160	2.14	3,082
5/8" Type X gypboard at infills	320	SF	0.64	205	1.75	560	2.39	765
5/8" cementitious tile backer board	1,800	SF	1.35	2,430	1.65	2,970	3.00	5,400
Add for moisture resistant gypboard	1,440	SF	0.20	288			0.20	288
Sound batt insulation	720	SF	0.60	432	0.55	396	1.15	828
<u>DOORS</u>								
3'0"x7'0" galvanized hollow metal single door frames	11	EA	175.00	1,925	85.00	935	260.00	2,860
6'0"x7'0" galvanized hollow metal double door frames	2	EA	250.00	500	115.00	230	365.00	730
3'0"x7'0" fiberglass single doors	8	EA	600.00	4,800	70.00	560	670.00	5,360
3'0"x7'0" fiberglass single doors with safety glazed vision panels	3	EA	740.00	2,220	80.00	240	820.00	2,460



HMS Project No.: 19075

06 - INTERIOR CONSTRUCTION 061 - Partitions and Doors	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>DOORS (Continued)</u>								
3'0"x7'0" fiberglass double doors	2	PRS	1200.00	2,400	140.00	280	1340.00	2,680
24"x24" access panel assemblies	4	EA	279.00	1,116	110.00	440	389.00	1,556
12"x12" access panel assemblies	4	EA	129.00	516	80.00	320	209.00	836
Single door hardware sets	8	EA	630.00	5,040	320.00	2,560	950.00	7,600
Single door hardware sets with panic bars	3	EA	1350.00	4,050	650.00	1,950	2000.00	6,000
Double door hardware sets	2	EA	1150.00	2,300	600.00	1,200	1750.00	3,500
<u>WINDOWS</u>								
Galvanized metal curtain wall assembly	440	SF	74.00	32,560	15.00	6,600	89.00	39,160
<u>MISCELLANEOUS</u>								
Automatic ADA double door opener	1	EA	4800.00	4,800	750.00	750	5550.00	5,550
Automatic ADA single door opener	1	EA	2400.00	2,400	400.00	400	2800.00	2,800
<b>SUBTOTAL:</b>				<b>\$ 70,048</b>		<b>\$ 23,911</b>		<b>\$ 93,959</b>
Labor Premium Time	16.70%					3,993		3,993
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 70,048</b>		<b>\$ 27,904</b>		<b>\$ 97,952</b>

HMS Project No.: 19075

06 - INTERIOR CONSTRUCTION 062 - Interior Finishes	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>FLOOR FINISHES</u>								
Prep floors for new epoxy finish	3,500	SF	0.20	700	0.85	2,975	1.05	3,675
Epoxy floor over concrete	3,500	SF	1.20	4,200	2.00	7,000	3.20	11,200
Walk-off carpet	110	SF	4.10	451	1.20	132	5.30	583
Rubber base	1,500	LF	1.25	1,875	1.45	2,175	2.70	4,050
Tile base	500	LF	6.20	3,100	7.50	3,750	13.70	6,850
<u>CEILING FINISHES</u>								
2'0"x2'0" suspended acoustical ceiling with seismic bracing	2,105	SF	2.85	5,999	2.60	5,473	5.45	11,472
Gypboard ceiling and framing	1,535	SF	1.80	2,763	3.00	4,605	4.80	7,368
Paint existing ceilings with epoxy paint	11,770	SF	0.45	5,297	1.90	22,363	2.35	27,660
Paint new gypboard ceilings	1,535	SF	0.25	384	1.65	2,533	1.90	2,917
<u>WALL FINISHES</u>								
Patch and paint existing walls (allowance)	7,500	SF	0.35	2,625	1.75	13,125	2.10	15,750
Paint new gypboard walls	4,176	SF	0.25	1,044	1.50	6,264	1.75	7,308
New ceramic wall tile (assumed)	1,800	SF	9.50	17,100	8.50	15,300	18.00	32,400

HMS Project No.: 19075

06 - INTERIOR CONSTRUCTION 062 - Interior Finishes	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>WALL FINISHES (Continued)</u>								
FRP wall coverings and trims (assumed)	800	SF	3.00	2,400	2.80	2,240	5.80	4,640
<u>MISCELLANEOUS</u>								
Paint exposed ductwork, etc. with epoxy paint	1	LOT	1000.00	1,000	4000.00	4,000	5000.00	5,000
Paint new doors and frames	1,680	SF	0.35	588	1.70	2,856	2.05	3,444
Miscellaneous painting	1	LOT	500.00	500	2000.00	2,000	2500.00	2,500
Miscellaneous patching, repainting, or replacing existing finishes	1	LOT	1000.00	1,000	4000.00	4,000	5000.00	5,000
<b>SUBTOTAL:</b>				<b>\$ 51,026</b>		<b>\$ 100,791</b>		<b>\$ 151,817</b>
Labor Premium Time	16.70%					16,832		16,832
<b>SUBTOTAL:</b>				<b>\$ 51,026</b>		<b>\$ 117,623</b>		<b>\$ 168,649</b>
Subcontractor's Overhead and Profit on Material and Labor	20.00%			10,205		23,525		33,730
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 61,231</b>		<b>\$ 141,148</b>		<b>\$ 202,379</b>

HMS Project No.: 19075

06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>063 - Specialties</b>								
<u>TOILET ACCESSORIES</u>								
Toilet paper holders	7	EA	35.00	245	28.00	196	63.00	441
Coat hooks	7	EA	18.00	126	14.00	98	32.00	224
Towel hooks	20	EA	18.00	360	14.00	280	32.00	640
Towel dispensers and waste receptacle	6	EA	180.00	1,080	85.00	510	265.00	1,590
Soap dispensers	6	EA	36.00	216	33.00	198	69.00	414
Urinal screen	1	EA	120.00	120	60.00	60	180.00	180
Toilet partitions	3	EA	710.00	2,130	160.00	480	870.00	2,610
Toilet partitions, ADA	2	EA	820.00	1,640	190.00	380	1010.00	2,020
Standard privacy shower enclosures	9	EA	620.00	5,580	150.00	1,350	770.00	6,930
ADA privacy shower enclosures	3	EA	780.00	2,340	180.00	540	960.00	2,880
Grab bar sets at toilets	4	SETS	135.00	540	110.00	440	245.00	980
Grab bar sets at showers	4	SETS	120.00	480	100.00	400	220.00	880
Folding shower seats	4	EA	268.00	1,072	105.00	420	373.00	1,492
Baby changing stations	2	EA	289.00	578	80.00	160	369.00	738

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06 - INTERIOR CONSTRUCTION 063 - Specialties	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>TOILET ACCESSORIES (Continued)</u>								
24"x30" tempered mirrors	6	EA	140.00	840	50.00	300	190.00	1,140
Sanitary napkin disposals	4	EA	39.00	156	25.00	100	64.00	256
Sanitary napkin dispensers	2	EA	319.00	638	60.00	120	379.00	758
New hand/hair dryers (assumed)	8	EA	495.00	3,960	130.00	1,040	625.00	5,000
Stainless steel shower rods and curtains	12	EA	130.00	1,560	80.00	960	210.00	2,520
Lavatory drain pipe guards	6	EA	30.00	180	35.00	210	65.00	390
Janitor mop shelf	1	EA	89.00	89	35.00	35	124.00	124
<u>SIGNAGE</u>								
Sign and room numbers	12	EA	43.50	522	18.00	216	61.50	738
Miscellaneous signage and graphics	1	LOT	750.00	750	250.00	250	1000.00	1,000
<u>CASEWORK</u>								
12" deep mounted hard wood benches on powder coated steel floor supports (6)	60	LF	34.00	2,040	20.00	1,200	54.00	3,240
12" wide x 12" deep x 72" phenolic lockers	16	EA	285.00	4,560	55.00	880	340.00	5,440
Stainless steel corner guards	10	EA	109.00	1,090	35.00	350	144.00	1,440

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06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

**063 - Specialties**

CASEWORK (Continued)

24" deep solid surface vanity countertop, wall mounted (2)

11 LF 185.00 2,035 45.00 495 230.00 2,530

MISCELLANEOUS

Miscellaneous unidentified specialties and casework allowance

1 LOT 3500.00 3,500 1500.00 1,500 5000.00 5,000

**SUBTOTAL:**

\$ 38,427 \$ 13,168 \$ 51,595

Labor Premium Time

16.70% 2,199 2,199

**TOTAL ESTIMATED COST:**

**\$ 38,427** **\$ 15,367** **\$ 53,794**

AUGUSTUS BROWN SWIMMING POOL RENOVATIONS  
 1619 GLACIER AVENUE - JUNEAU, ALASKA  
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

HMS Project No.: 19075

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>081 - Demolition</b>								
Demolish fuel oil fired water heater	1	EA			420.00	420	420.00	420
Demolish flue	15	LF			10.00	150	10.00	150
Demolish hot water circulation pump	1	EA			110.00	110	110.00	110
Demolish expansion tank	1	EA			75.00	75	75.00	75
Demolish tempering valve	1	EA			75.00	75	75.00	75
Demolish plumbing fixtures and fixture carriers	16	EA			85.00	1,360	85.00	1,360
Demolish shower head and mixing valve	1	EA			75.00	75	75.00	75
Demolish gang showers	4	EA			150.00	600	150.00	600
Demolish floor drains	4	EA			75.00	300	75.00	300
Remove roof drains	4	EA			125.00	500	125.00	500
Demolish waste and vent piping	500	LF			8.00	4,000	8.00	4,000
Demolish hot and cold water piping	1,500	LF			6.00	9,000	6.00	9,000
Demolish dual fuel heating plant and all associated appurtenances (oil fired and electric)	1	EA			1950.00	1,950	1950.00	1,950
Demolish chimney	15	LF			15.00	225	15.00	225

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08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>081 - Demolition</b>								
Demolish hydronic pumps, controls, associated appurtenances	6	EA			550.00	3,300	550.00	3,300
Demolish floor mounted vertical glycol tank, piping, and all associated appurtenances (assumed)	1	EA			210.00	210	210.00	210
Demolish air separator (assumed)	1	EA			250.00	250	250.00	250
Demolish (3) finned pipe heating units	5	LF			20.00	100	20.00	100
Demolish hydronic piping and valves	300	LF			9.00	2,700	9.00	2,700
Demolish valves	50	EA			20.00	1,000	20.00	1,000
Demolish air handling units AHU-1-4	4	EA			850.00	3,400	850.00	3,400
Demolish exhaust/relief fans and all associated appurtenances	9	EA			175.00	1,575	175.00	1,575
Demolish ductwork and supports	800	LF			10.00	8,000	10.00	8,000
Demolish diffusers and grilles	41	EA			40.00	1,640	40.00	1,640
Demolish dampers	4	EA			75.00	300	75.00	300
Demolish fuel oil piping	70	LF			8.00	560	8.00	560
Demolish thermostats and wiring (assumed)	10	EA			40.00	400	40.00	400



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08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

Load and dispose debris at local landfill, including fee

6	LDS	350.00	2,100	250.00	1,500	600.00	3,600
			\$ 2,100	\$ 43,775		\$ 45,875	

**SUBTOTAL:**

Labor Premium Time

16.70%			7,310				7,310
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**SUBTOTAL:**

			\$ 2,100		\$ 51,085		\$ 53,185
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Subcontractor's Overhead and Profit on Material and Labor

20.00%			420		10,217		10,637
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<b>TOTAL ESTIMATED COST:</b>							<b>\$ 2,520</b>	<b>\$ 61,302</b>	<b>\$ 63,822</b>
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HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

FIXTURES

Wall mounted water closet with battery powered infrared flush valve, ADA	4	EA	950.00	3,800	310.00	1,240	1260.00	5,040
Wall mounted water closet with battery powered infrared flush valve	3	EA	890.00	2,670	295.00	885	1185.00	3,555
Wall mounted urinal	1	EA	995.00	995	210.00	210	1205.00	1,205
Wall mounted lavatory and faucet	2	EA	520.00	1,040	210.00	420	730.00	1,460
Counter mounted lavatory and faucet	4	EA	470.00	1,880	200.00	800	670.00	2,680
Double height drinking fountain with bottle fill	2	EA	1350.00	2,700	275.00	550	1625.00	3,250
Counter mounted single compartment, stainless steel sink and electronic gooseneck faucet	1	EA	710.00	710	275.00	275	985.00	985
Metering type shower head and mixing valve, ADA	3	EA	650.00	1,950	250.00	750	900.00	2,700
Metering type shower head and mixing valve	9	EA	350.00	3,150	170.00	1,530	520.00	4,680
2" diameter floor drain	12	EA	112.00	1,344	120.00	1,440	232.00	2,784
Modify waste, vent, hot, and cold water pipe, and connect to existing plumbing fixtures throughout facility (allowance)	1	LOT	1250.00	1,250	2000.00	2,000	3250.00	3,250

HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

EQUIPMENT

A.O. Smith 700 gallon storage tank with 600 MBH tube bundle fuel oil fired water heater	1	EA	10500.00	10,500	2200.00	2,200	12700.00	12,700
4" diameter flue	15	LF	10.00	150	15.00	225	25.00	375
7 GPM, 30'0" head, fractional HP hot water circulation pump	1	EA	275.00	275	75.00	75	350.00	350
5 gallon expansion tank	1	EA	350.00	350	75.00	75	425.00	425

UNDER FLOOR PIPING

Waste and Vent

4" diameter cast iron waste and vent pipe	150	LF	37.00	5,550	22.00	3,300	59.00	8,850
3" diameter cast iron waste and vent pipe	50	LF	24.00	1,200	19.70	985	43.70	2,185
2" diameter cast iron waste and vent pipe	30	LF	21.00	630	18.75	563	39.75	1,193
1 1/2" diameter cast iron waste and vent pipe	60	LF	16.00	960	14.10	846	30.10	1,806
Connect new waste and vent pipe to existing	10	EA	35.00	350	65.00	650	100.00	1,000
Cap existing waste and vent pipe	5	EA	35.00	175	65.00	325	100.00	500
4" diameter cast iron fittings	19	EA	55.00	1,045	90.00	1,710	145.00	2,755

HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

UNDER FLOOR PIPING (Continued)

Waste and Vent (Continued)

3" diameter cast iron fittings	7	EA	40.00	280	80.00	560	120.00	840
2" diameter cast iron fittings	4	EA	30.00	120	65.00	260	95.00	380
1 1/2" diameter cast iron fittings	6	EA	22.50	135	50.00	300	72.50	435
4" diameter floor cleanouts	3	EA	166.00	498	76.00	228	242.00	726
3" diameter floor cleanouts	3	EA	140.00	420	70.00	210	210.00	630
1/2" diameter hot and cold water PEX tubing	50	LF	1.05	53	1.95	98	3.00	151
Trenching and backfill	230	LF	3.20	736	5.25	1,208	8.45	1,944
Camera investigation effort (allowance)	1	LOT	1000.00	1,000	2500.00	2,500	3500.00	3,500

ABOVE FLOOR PIPING

Waste and Vent

4" diameter cast iron waste and vent pipe	50	LF	37.00	1,850	22.00	1,100	59.00	2,950
3" diameter cast iron waste and vent pipe	50	LF	24.00	1,200	19.70	985	43.70	2,185
2" diameter cast iron waste and vent pipe	500	LF	21.00	10,500	18.75	9,375	39.75	19,875

HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

ABOVE FLOOR PIPING (Continued)

Waste and Vent (Continued)

1 1/2" diameter DWV waste and vent pipe	260	LF	4.40	1,144	12.10	3,146	16.50	4,290
Connect new waste and vent pipe to existing	1	EA	35.00	35	65.00	65	100.00	100
4" diameter cast iron fittings	6	EA	55.00	330	90.00	540	145.00	870
3" diameter cast iron fittings	6	EA	40.00	240	80.00	480	120.00	720
2" diameter cast iron fittings	63	EA	30.00	1,890	65.00	4,095	95.00	5,985
1 1/2" diameter DWV fittings	33	EA	10.00	330	45.00	1,485	55.00	1,815
2" diameter wall cleanouts	16	EA	45.00	720	60.00	960	105.00	1,680
4" diameter VTR	2	EA	105.00	210	150.00	300	255.00	510
3" diameter VTR	3	EA	92.00	276	140.00	420	232.00	696
1" thick insulation with vapor barrier	50	LF	6.10	305	6.50	325	12.60	630

Roof Drains

Install new 3" diameter roof drains at existing location with rain leader pipe extension as required	4	EA	500.00	2,000	300.00	1,200	800.00	3,200
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HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

ABOVE FLOOR PIPING (Continued)

Roof Drains (Continued)

Install new 3" diameter roof drains at new location with rain leader pipe extension as required

Hot and Cold Water

3" diameter hot and cold water copper pipe	100	LF	39.31	3,931	20.70	2,070	60.01	6,001
2 1/2" diameter hot and cold water copper pipe	80	LF	29.28	2,342	18.20	1,456	47.48	3,798
2" diameter hot and cold water copper pipe	150	LF	22.00	3,300	14.60	2,190	36.60	5,490
1 1/2" diameter hot and cold water copper pipe	150	LF	16.00	2,400	11.70	1,755	27.70	4,155
1 1/4" diameter hot and cold water copper pipe	30	LF	15.00	450	11.00	330	26.00	780
1" diameter hot and cold water copper pipe	30	LF	10.20	306	8.75	263	18.95	569
3/4" diameter hot and cold water copper pipe	600	LF	5.70	3,420	7.50	4,500	13.20	7,920
1/2" diameter hot and cold water copper pipe	350	LF	3.70	1,295	4.50	1,575	8.20	2,870
Connect new hot and cold water pipe to existing	8	EA	25.00	200	50.00	400	75.00	600
3" diameter copper fittings	13	EA	68.50	891	92.00	1,196	160.50	2,087
2 1/2" diameter copper fittings	10	EA	46.00	460	78.00	780	124.00	1,240

HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

ABOVE FLOOR PIPING (Continued)

Hot and Cold Water (Continued)

2" diameter copper fittings	19	EA	21.50	409	52.00	988	73.50	1,397
1 1/2" to 1" diameter copper fittings	27	EA	9.00	243	43.00	1,161	52.00	1,404
3/4" to 1/2" diameter copper fittings	119	EA	3.20	381	31.00	3,689	34.20	4,070
Trap primers	2	EA	87.00	174	45.00	90	132.00	264
Trap primers with distribution box	2	EA	260.00	520	120.00	240	380.00	760
TV-1: 2" diameter tempering valve	1	EA	2200.00	2,200	330.00	330	2530.00	2,530
Pressure relief valve to water generator	1	EA	155.00	155	55.00	55	210.00	210
Water hammer arrestors	6	EA	32.00	192	55.00	330	87.00	522
2" diameter balance valves, bronze body	2	EA	277.00	554	62.00	124	339.00	678
3/4" diameter balance valves, bronze body	4	EA	86.00	344	31.00	124	117.00	468
2" diameter check valve, bronze body	1	EA	375.00	375	56.00	56	431.00	431
3/4" diameter check valves, bronze body	2	EA	106.00	212	31.00	62	137.00	274
3" diameter gate valve, iron body	1	EA	860.00	860	280.00	280	1140.00	1,140

HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>ABOVE FLOOR PIPING (Continued)</u>								
<u>Hot and Cold Water (Continued)</u>								
2" diameter gate valves, bronze body	3	EA	199.00	597	57.00	171	256.00	768
1 1/2" diameter gate valve, bronze body	1	EA	155.00	155	48.00	48	203.00	203
3/4" diameter gate valves, bronze body	10	EA	67.00	670	31.00	310	98.00	980
1/2" diameter gate valves, bronze body	8	EA	57.00	456	26.00	208	83.00	664
3/4" diameter drain valve	1	EA	32.00	32	26.00	26	58.00	58
Solar thermometer	2	EA	99.00	198	46.00	92	145.00	290
2" insulation to hot and cold water pipe, 3" diameter pipe	100	LF	6.60	660	6.00	600	12.60	1,260
2" insulation to hot and cold water pipe, 2 1/2" diameter pipe	80	LF	6.00	480	5.50	440	11.50	920
1" insulation to hot and cold water pipe, 2" diameter pipe	150	LF	5.50	825	5.10	765	10.60	1,590
1" insulation to hot and cold water pipe, 1 1/2" diameter pipe	150	LF	3.40	510	4.35	653	7.75	1,163
1" insulation to hot and cold water pipe, 1 1/4" diameter pipe	30	LF	3.00	90	3.40	102	6.40	192



HMS Project No.: 19075

08 - MECHANICAL 082 - Plumbing	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>ABOVE FLOOR PIPING (Continued)</u>								
<u>Hot and Cold Water (Continued)</u>								
1" insulation to hot and cold water pipe, 1" diameter pipe	30	LF	2.30	69	3.15	95	5.45	164
1" insulation to hot and cold water pipe, 3/4" diameter pipe	600	LF	2.10	1,260	2.95	1,770	5.05	3,030
1" insulation to hot and cold water pipe, 1/2" diameter pipe	350	LF	1.90	665	2.70	945	4.60	1,610
<u>MISCELLANEOUS</u>								
Disinfect and test systems	1	LOT	300.00	300	1000.00	1,000	1300.00	1,300
Pipe guides, labels, etc.	1	LOT	500.00	500	1250.00	1,250	1750.00	1,750
<b>SUBTOTAL:</b>				<b>\$ 101,527</b>		<b>\$ 84,413</b>		<b>\$ 185,940</b>
Labor Premium Time	16.70%					14,097		14,097
<b>SUBTOTAL:</b>				<b>\$ 101,527</b>		<b>\$ 98,510</b>		<b>\$ 200,037</b>
Subcontractor's Overhead and Profit on Material and Labor	20.00%			20,305		19,702		40,007
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 121,832</b>		<b>\$ 118,212</b>		<b>\$ 240,044</b>

HMS Project No.: 19075

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
083 - HVAC								
<u>HEATING</u>								
B-1: 1,478 MBH Weil McLain 788 gas fired boiler, complete package	2	EA	17500.00	35,000	8500.00	17,000	26000.00	52,000
8" diameter stainless steel double wall insulated flue	30	LF	27.50	825	30.00	900	57.50	1,725
Flue caps	2	EA	145.00	290	110.00	220	255.00	510
P-1 and 2: 85 GPM, 150" head, 1/2 HP hydronic pumps	2	EA	650.00	1,300	210.00	420	860.00	1,720
P-3: 25 GPM, 100" head, 1/6 HP hydronic pump	1	EA	350.00	350	110.00	110	460.00	460
P-4A and 4B: 200 GPM, 40'0" head, 3 HP hydronic pumps with VFDs	2	EA	4200.00	8,400	2000.00	4,000	6200.00	12,400
50 gallon expansion tank (size assumed)	1	EA	1150.00	1,150	375.00	375	1525.00	1,525
50 gallon glycol tank and pump (size assumed)	1	EA	950.00	950	250.00	250	1200.00	1,200
Glycol media	250	GALS	13.50	3,375	2.50	625	16.00	4,000
4" air separator (assumed)	1	EA	3750.00	3,750	517.00	517	4267.00	4,267
Prep and paint remaining finned pipe heating units and cabinet unit heaters, clean fins and fan coils throughout facility (allowance)	1	LOT	1000.00	1,000	2500.00	2,500	3500.00	3,500

HMS Project No.: 19075

08 - MECHANICAL 083 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

HEATING (Continued)

CN-1: 10 GPH condensing neutralizer units	2	EA	150.00	300	110.00	220	260.00	520
Additional neutralizing agent	10	LBS	20.00	200			20.00	200
<u>Hydronic Piping</u>								
4" diameter black steel pipe	80	LF	29.35	2,348	31.50	2,520	60.85	4,868
3" diameter hydronic copper pipe	30	LF	39.31	1,179	20.70	621	60.01	1,800
2 1/2" diameter hydronic copper pipe	10	LF	29.28	293	18.20	182	47.48	475
2" diameter hydronic copper pipe	100	LF	22.00	2,200	14.60	1,460	36.60	3,660
1" diameter hydronic copper pipe	100	LF	10.20	1,020	8.75	875	18.95	1,895
3/4" diameter hydronic copper pipe	300	LF	5.70	1,710	7.50	2,250	13.20	3,960
Connect new hydronic copper pipes to existing	10	EA	35.00	350	65.00	650	100.00	1,000
4" diameter black steel fitting	10	EA	98.00	980	163.00	1,630	261.00	2,610
3" diameter copper fittings	4	EA	68.50	274	92.00	368	160.50	642
2 1/2" diameter copper fittings	2	EA	46.00	92	78.00	156	124.00	248
2" diameter copper fittings	13	EA	21.50	280	52.00	676	73.50	956

HMS Project No.: 19075

08 - MECHANICAL 083 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

HEATING (Continued)

Hydronic Piping (Continued)

1 1/2" to 1" diameter copper fitting	13	EA	9.00	117	43.00	559	52.00	676
3/4" diameter copper fittings	38	EA	3.20	122	31.00	1,178	34.20	1,300
Pipe anchors	6	EA	48.00	288	65.00	390	113.00	678
Pipe guides	12	EA	39.00	468	50.00	600	89.00	1,068
4" diameter gate valve, iron body	7	EA	1225.00	8,575	420.00	2,940	1645.00	11,515
3" diameter gate valves, iron body	8	EA	860.00	6,880	280.00	2,240	1140.00	9,120
2 1/2" diameter gate valves, iron body	4	EA	770.00	3,080	251.00	1,004	1021.00	4,084
2" diameter gate valves, bronze body	8	EA	199.00	1,592	57.00	456	256.00	2,048
1" diameter gate valves, bronze body	8	EA	82.00	656	33.00	264	115.00	920
3/4" diameter gate valves, bronze body	20	EA	67.00	1,340	31.00	620	98.00	1,960
3" diameter check valves, iron body	2	EA	430.00	860	280.00	560	710.00	1,420
2 1/2" diameter check valves, iron body	2	EA	400.00	800	251.00	502	651.00	1,302
4" diameter balance valves, iron body	2	EA	1325.00	2,650	420.00	840	1745.00	3,490

HMS Project No.: 19075

08 - MECHANICAL 083 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>HEATING (Continued)</u>								
<u>Hydronic Piping (Continued)</u>								
3" diameter balance valve, iron body	1	EA	880.00	880	315.00	315	1195.00	1,195
2 1/2" diameter balance valve, iron body	1	EA	625.00	625	260.00	260	885.00	885
2" diameter balance valve, bronze body	4	EA	277.00	1,108	62.00	248	339.00	1,356
1" diameter balance valve, bronze body	2	EA	112.00	224	35.00	70	147.00	294
3/4" diameter balance valves, bronze body	10	EA	86.00	860	31.00	310	117.00	1,170
2" diameter three-way motor operated control valve, iron body	4	EA	770.00	3,080	150.00	600	920.00	3,680
1" diameter two-way motor operated control valve, iron body	4	EA	405.00	1,620	70.00	280	475.00	1,900
3/4" diameter two-way motor operated control valves, bronze body	10	EA	350.00	3,500	45.00	450	395.00	3,950
3/4" diameter drain valves	24	EA	32.00	768	26.00	624	58.00	1,392
Pressure relief valves to boiler and pipe header	2	EA	320.00	640	70.00	140	390.00	780
Auto air vent with isolation valves	20	EA	72.50	1,450	39.00	780	111.50	2,230
3/4" strainers	2	EA	325.00	650	45.00	90	370.00	740

HMS Project No.: 19075

08 - MECHANICAL 083 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

HEATING (Continued)

Hydronic Piping (Continued)

Solar thermometers	6	EA	99.00	594	46.00	276	145.00	870
Pressure gauges with (2) gate valves	8	EA	110.00	880	85.00	680	195.00	1,560
Pressure gauge with gate valve	1	EA	72.00	72	45.00	45	117.00	117
Temperature sensors	4	EA	85.00	340	40.00	160	125.00	500
Pressure sensor	1	EA	85.00	85	40.00	40	125.00	125
Flow metering station	1	EA	350.00	350	75.00	75	425.00	425
Float type low water cut off	2	EA	250.00	500	75.00	150	325.00	650
Temperature and pressure test plugs	20	EA	23.00	460	20.00	400	43.00	860
2" insulation to hydronic pipe, 4" diameter	80	LF	9.15	732	6.68	534	15.83	1,266
2" insulation to hydronic pipe, 3" diameter	30	LF	6.60	198	6.00	180	12.60	378
2" insulation to hydronic pipe, 2 1/2" diameter	10	LF	6.00	60	5.50	55	11.50	115
2" insulation to hydronic pipe, 2" diameter	100	LF	5.25	525	4.80	480	10.05	1,005
2" insulation to hydronic pipe, 1" diameter	100	LF	2.68	268	4.05	405	6.73	673

HMS Project No.: 19075

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
083 - HVAC								
<u>HEATING (Continued)</u>								
<u>Hydronic Piping (Continued)</u>								
2" insulation to hydronic pipe, 3/4" diameter	300	LF	2.40	720	3.70	1,110	6.10	1,830
<u>VENTILATION</u>								
Remove and replace exhaust fan blower, fan motor, shaft, bearings, pulley, fan base, motor mount, vibration isolators, and epoxy coating of the exhaust section interior to existing heat recovery ventilator of the natatorium (allowance)	1	EA	20000.00	20,000	10000.00	10,000	30000.00	30,000
AHU-1: Air handling unit with 750 CFM, 2 HP fan, filters, mixing box, 500 MBH heating coil, corrosion resistant coating, and VFD	1	EA	28500.00	28,500	6000.00	6,000	34500.00	34,500
AHU-2: Air handling unit with 5,000 CFM, 3 HP supply fan, 2,000 CFM, 1 1/2 HP return fan, filters, mixing box, 70 MBH preheat coil, 300 MBH heating coil, and VFDs	1	EA	31500.00	31,500	7500.00	7,500	39000.00	39,000
EF-1: 3,000 CFM, 1 HP exhaust fan with 700 MBH preheat coil	1	EA	5500.00	5,500	1050.00	1,050	6550.00	6,550
RF-1: 2,000 CFM, 3/4 HP return fan	1	EA	3000.00	3,000	650.00	650	3650.00	3,650
SF-1: 120 CFM, fractional HP supply fan, wall mounted	1	EA	350.00	350	110.00	110	460.00	460

HMS Project No.: 19075

08 - MECHANICAL 083 - HVAC	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$	

VENTILATION (Continued)

100 CFM exhaust fans, wall mounted	2	EA	250.00	500	75.00	150	325.00	650
150 CFM exhaust fan, wall mounted	1	EA	310.00	310	110.00	110	420.00	420
200 CFM exhaust fans, wall mounted	2	EA	350.00	700	150.00	300	500.00	1,000
VAV boxes with heating coils	10	EA	650.00	6,500	210.00	2,100	860.00	8,600
24"x24" supply air diffusers, ceiling mounted	30	EA	85.00	2,550	60.00	1,800	145.00	4,350
24"x24" return air grilles, ceiling mounted	10	EA	65.00	650	45.00	450	110.00	1,100
12"x12" exhaust air grille, ceiling mounted	10	EA	40.00	400	35.00	350	75.00	750
Volume dampers	30	EA	37.00	1,110	25.00	750	62.00	1,860
6" to 14" diameter flexible duct	120	LF	10.50	1,260	13.50	1,620	24.00	2,880
Sheetmetal ductwork and hangers	7,500	LBS	3.78	28,350	4.15	31,125	7.93	59,475
2" duct insulation	200	SF	2.40	480	2.55	510	4.95	990
2" duct lining	100	SF	1.95	195	2.10	210	4.05	405
Test, balance and commission system	100	HRS			165.00	16,500	165.00	16,500
Modify existing direct digital control system	30	PTS	400.00	12,000	350.00	10,500	750.00	22,500



HMS Project No.: 19075

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

VENTILATION (Continued)

New existing direct digital controls for new equipment	30	PTS	700.00	21,000	500.00	15,000	1200.00	36,000
Thermostats	10	EA	87.00	870	60.00	600	147.00	1,470
Thermostats with locking cover	4	EA	113.00	452	65.00	260	178.00	712
Labels and tags	1	LOT	250.00	250	550.00	550	800.00	800

MISCELLANEOUS

Mechanical mobilization/demobilization, submittals, etc.	1	LOT	1500.00	1,500	5000.00	5,000	6500.00	6,500
Manuals and operations training	1	LOT	500.00	500	2500.00	2,500	3000.00	3,000

**SUBTOTAL:** \$ 284,660

Labor Premium Time 16.70% 29,247

**SUBTOTAL:** \$ 284,660 \$ 204,377 \$ 489,037

Subcontractor's Overhead and Profit on Material and Labor 20.00% 40,875 97,807

**TOTAL ESTIMATED COST:** \$ 341,592 \$ 245,252 \$ 586,844

HMS Project No.: 19075

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>084 - Fire Protection</b>								
Double check valve backflow preventer valve assembly	1	EA						Existing
Wet pipe sprinkler valve riser	1	EA						Existing
Reconfigure existing sprinkler system at ceiling remodel area only	4,800	SF	1.00	4,800	1.75	8,400	2.75	13,200
Fire department connection	1	EA						Existing
Design fee	1	LOT	1000.00	1,000			1000.00	1,000
Test and certify system	1	LOT	200.00	200	500.00	500	700.00	700
<b>SUBTOTAL:</b>				<b>\$ 6,000</b>		<b>\$ 8,900</b>		<b>\$ 14,900</b>
Labor Premium Time	16.70%					1,486		1,486
<b>SUBTOTAL:</b>				<b>\$ 6,000</b>		<b>\$ 10,386</b>		<b>\$ 16,386</b>
Subcontractor's Overhead and Profit on Material and Labor	20.00%			1,200		2,077		3,277
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 7,200</b>		<b>\$ 12,463</b>		<b>\$ 19,663</b>

HMS Project No.: 19075

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>085 - Special Mechanical Systems</b>								
<u>FUEL OIL SYSTEM</u>								
DT-1: 50 gallon fuel oil day tank with remote duplex pumps in weatherproof enclosure and controls (quote by Simplex Inc., 210-483-1600 ext. 185)								
	1	EA	10500.00	10,500	2350.00	2,350	12850.00	12,850
	1	EA	780.00	780	550.00	550	1330.00	1,330
	3	EA	250.00	750	35.00	105	285.00	855
	20	LF	20.00	400	24.00	480	44.00	880
	20	LF	8.00	160	12.00	240	20.00	400
	60	LF	5.50	330	11.00	660	16.50	990
	30	LF	3.50	105	9.50	285	13.00	390
	3	EA	8.25	25	40.00	120	48.25	145
	8	EA	5.35	43	37.00	296	42.35	339
	4	EA	3.75	15	33.00	132	36.75	147
	2	EA	70.00	140	38.00	76	108.00	216
	1	EA	37.00	37	25.00	25	62.00	62

HMS Project No.: 19075

08 - MECHANICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>085 - Special Mechanical Systems</b>								
<u>FUEL OIL SYSTEM (Continued)</u>								
Fuel filters	3	EA	47.00	141	35.00	105	82.00	246
3/4" fuel/water filter separators	3	EA	420.00	1,260	110.00	330	530.00	1,590
3/4" diameter fusible shut-off valves	2	EA	60.00	120	60.00	120	120.00	240
1/2" diameter fusible shut-off valves	1	EA	40.00	40	40.00	40	80.00	80
3/4" diameter oil safety valves	2	EA	105.00	210	70.00	140	175.00	350
1/2" diameter oil safety valve	1	EA	65.00	65	45.00	45	110.00	110
3/4" diameter ball valves	2	EA	25.00	50	37.00	74	62.00	124
1/2" diameter ball valve	1	EA	47.00	47	26.00	26	73.00	73
3/4" diameter drain valves	2	EA	32.00	64	28.00	56	60.00	120
Tiger loop equipment connections	3	EA	85.00	255	155.00	465	240.00	720
Test and certify system	1	LOT	100.00	100	500.00	500	600.00	600
<b>SUBTOTAL:</b>				<b>\$ 15,637</b>		<b>\$ 7,220</b>		<b>\$ 22,857</b>
Labor Premium Time	16.70%					1,206		1,206
<b>SUBTOTAL:</b>				<b>\$ 15,637</b>		<b>\$ 8,426</b>		<b>\$ 24,063</b>



AUGUSTUS BROWN SWIMMING POOL RENOVATIONS  
 1619 GLACIER AVENUE - JUNEAU, ALASKA  
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

HMS Project No.: 19075

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
091 - Demolition								
Remove electrical panels including feeders	3	EA			1150.00	3,450	1150.00	3,450
Remove meter/service breaker cans	2	EA			500.00	1,000	500.00	1,000
Remove motor control center	1	EA			750.00	750	750.00	750
Remove interior light fixtures	95	EA			55.00	5,225	55.00	5,225
Remove exterior light fixtures	30	EA			65.00	1,950	65.00	1,950
Disconnect motors and equipment	10	EA			85.00	850	85.00	850
Remove conduit and wiring (allowance)	1,000	LF			2.50	2,500	2.50	2,500
Dispose debris	2	LDS	250.00	500	350.00	700	600.00	1,200
Note: PCB ballast and exit sign remediation with Hazmat.								
<b>SUBTOTAL:</b>			\$ 500	\$ 16,425		\$ 16,425		\$ 16,925
Labor Premium Time						2,743		2,743
<b>SUBTOTAL:</b>			\$ 500	\$ 19,168		\$ 19,168		\$ 19,668
Subcontractor's Overhead and Profit on Material and Labor				100		3,834		3,934
<b>TOTAL ESTIMATED COST:</b>			\$ 600	\$ 23,002		\$ 23,002		\$ 23,602

HMS Project No.: 19075

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
092 - Service and Distribution								
400 amp, 480/277 volt, 12 circuit, 3 phase main distribution panel	1	EA	12900.00	12,900	3450.00	3,450	16350.00	16,350
225 amp, 208/120 volt, 3 phase distribution panel	1	EA	5250.00	5,250	2750.00	2,750	8000.00	8,000
400 amp, 208/120 volt motor control center	1	EA	11500.00	11,500	3200.00	3,200	14700.00	14,700
400 amp CT can with meter base, weatherproof	2	EA	1600.00	3,200	650.00	1,300	2250.00	4,500
4" diameter rigid steel conduit	20	LF	36.00	720	35.00	700	71.00	1,420
3" diameter rigid steel conduit	40	LF	24.50	980	26.50	1,060	51.00	2,040
2" diameter rigid steel conduit	80	LF	10.60	848	14.70	1,176	25.30	2,024
1" diameter IM conduit	300	LF	5.25	1,575	10.70	3,210	15.95	4,785
#600 KCMIL XHHW copper conductor	120	LF	16.54	1,985	7.34	881	23.88	2,866
#3/0 XHHW copper conductor	180	LF	4.99	898	3.00	540	7.99	1,438
#2/0 XHHW copper conductor	270	LF	4.10	1,107	2.65	716	6.75	1,823
#1/0 XHHW copper conductor	930	LF	3.19	2,967	2.27	2,111	5.46	5,078
#1/0 bare copper ground	25	LF	2.77	69	2.00	50	4.77	119
#2 bare copper ground	45	LF	1.95	88	1.32	59	3.27	147

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09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
#6 ground	395	LF	0.75	296	1.10	435	1.85	731
Grounding connections	4	EA	18.00	72	85.00	340	103.00	412
Test and tag service	1	LOT	500.00	500	1200.00	1,200	1700.00	1,700
<b>SUBTOTAL:</b>				<b>\$ 44,955</b>		<b>\$ 23,178</b>		<b>\$ 68,133</b>
Labor Premium Time	16.70%					3,871		3,871
<b>SUBTOTAL:</b>				<b>\$ 44,955</b>		<b>\$ 27,049</b>		<b>\$ 72,004</b>
Subcontractor's Overhead and Profit on Material and Labor	20.00%			8,991		5,410		14,401
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 53,946</b>		<b>\$ 32,459</b>		<b>\$ 86,405</b>



HMS Project No.: 19075

09 - ELECTRICAL 093 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>FIXTURES</b>								
Type P1: 75/25 suspended LED light fixtures	19	EA	1450.00	27,550	290.00	5,510	1740.00	33,060
Type P2: 85/15 suspended LED light fixtures	5	EA	1860.00	9,300	290.00	1,450	2150.00	10,750
Surface mounted LED vanity light fixtures	10	EA	160.00	1,600	100.00	1,000	260.00	2,600
2'0"x4'0" recessed ceiling mounted LED light fixtures package (assumed)	85	EA	250.00	21,250	150.00	12,750	400.00	34,000
Exterior recessed can lights (assumed)	20	EA	300.00	6,000	130.00	2,600	430.00	8,600
Exterior two-head security lights (assumed)	10	EA	275.00	2,750	110.00	1,100	385.00	3,850
Exit signs	6	EA	120.00	720	90.00	540	210.00	1,260
Single pole switches	6	EA	13.00	78	45.00	270	58.00	348
Three-way switches	4	EA	27.00	108	55.00	220	82.00	328
Dimmer switches	6	EA	26.00	156	48.00	288	74.00	444
Occupancy sensor switches	6	EA	70.00	420	50.00	300	120.00	720
Three-way occupancy sensor switches	4	EA	110.00	440	75.00	300	185.00	740
Occupancy sensor switches with dimming	20	EA	100.00	2,000	65.00	1,300	165.00	3,300
Occupancy sensors	10	EA	111.00	1,110	80.00	800	191.00	1,910

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09 - ELECTRICAL 093 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>FIXTURES (Continued)</u>								
Emergency light connections	20	EA	15.00	300	45.00	900	60.00	1,200
<u>POWER</u>								
Duplex receptacles, GFCI	10	EA	28.00	280	60.00	600	88.00	880
Fractional single phase motor connections	7	EA	50.00	350	75.00	525	125.00	875
3 HP, three phase motor connections	3	EA	120.00	360	190.00	570	310.00	930
2 HP, three phase motor connection	1	EA	105.00	105	175.00	175	280.00	280
Emergency shutdown push button switch to boiler, LED illuminated with Lexan cover	1	EA	350.00	350	200.00	200	550.00	550
Hand dryer connections	6	EA	25.00	150	50.00	300	75.00	450
<u>CONDUIT AND WIRING</u>								
1" diameter IM conduit	180	LF	2.93	527	9.27	1,669	12.20	2,196
3/4" diameter IM conduit	405	LF	2.05	830	8.65	3,503	10.70	4,333
1/2" diameter IM conduit	315	LF	1.82	573	6.43	2,025	8.25	2,598
#8 XHHW copper conductor	900	LF	0.82	738	1.05	945	1.87	1,683
#10 XHHW copper conductor	1,575	LF	0.52	819	0.85	1,339	1.37	2,158

HMS Project No.: 19075

09 - ELECTRICAL 093 - Lighting and Power	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>CONDUIT AND WIRING (Continued)</u>								
#12 XHHW copper conductor	2,025	LF	0.34	689	0.65	1,316	0.99	2,005
<u>MISCELLANEOUS</u>								
Test and tag lighting and power	1	LOT	250.00	250	1000.00	1,000	1250.00	1,250
Electrical mobilization/demobilization, submittals, meetings, etc.	1	LOT	1500.00	1,500	4000.00	4,000	5500.00	5,500
<b>SUBTOTAL:</b>				<b>\$ 81,303</b>		<b>\$ 47,495</b>		<b>\$ 128,798</b>
Labor Premium Time	16.70%					7,932		7,932
<b>SUBTOTAL:</b>				<b>\$ 81,303</b>		<b>\$ 55,427</b>		<b>\$ 136,730</b>
Subcontractor's Overhead and Profit on Material and Labor	20.00%			16,261		11,085		27,346
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 97,564</b>		<b>\$ 66,512</b>		<b>\$ 164,076</b>

HMS Project No.: 19075

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<b>094 - Special Electrical Systems</b>								
<u>SECURITY SYSTEM</u>								
Security headend equipment, computer, license, and support	1	EA	9625.00	9,625	950.00	950	10575.00	10,575
Door contactors	6	EA	85.00	510	75.00	450	160.00	960
Electronic strikes	6	EA	375.00	2,250	125.00	750	500.00	3,000
Card readers	6	EA	385.00	2,310	125.00	750	510.00	3,060
3/4" diameter conduit	450	LF	2.10	945	8.65	3,893	10.75	4,838
Wiring	550	LF	0.50	275	1.00	550	1.50	825
<u>PA SYSTEM</u>								
Complete PA/sound system for pool, including wall mounted rack, equipment, speakers and wiring	1	LOT	22500.00	22,500	27000.00	27,000	49500.00	49,500
<u>MISCELLANEOUS</u>								
Arc flash study	1	EA	500.00	500	1500.00	1,500	2000.00	2,000
Test and certify systems	2	LOTS	150.00	300	500.00	1,000	650.00	1,300
<b>SUBTOTAL:</b>				<b>\$ 39,215</b>		<b>\$ 36,843</b>		<b>\$ 76,058</b>

HMS Project No.: 19075

09 - ELECTRICAL	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
094 - Special Electrical Systems								
Labor Premium Time	16.70%					6,153		6,153
<b>SUBTOTAL:</b>				<b>\$ 39,215</b>		<b>\$ 42,996</b>		<b>\$ 82,211</b>
Subcontractor's Overhead and Profit on Material and Labor	20.00%			7,843		8,599		16,442
<b>TOTAL ESTIMATED COST:</b>				<b>\$ 47,058</b>		<b>\$ 51,595</b>		<b>\$ 98,653</b>

HMS Project No.: 19075

11 - SPECIAL CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>LAP AND LEISURE POOLS</u>								
Note: 35% design budgetary pool renovation quote provided by Cole Henry with Counsilman Hunsaker, 303-323-8529.								
Concrete cast in place floor for lap pool	1	LOT	50000.00	50,000	Included	50000.00	50,000	
Parapet gutter section replacements for lap pool	1	LOT	20000.00	20,000	Included	20000.00	20,000	
Aggregate pool finish for lap pool	1	LOT	90000.00	90,000	Included	90000.00	90,000	
Aggregate pool finish for leisure pool	1	LOT	34500.00	34,500	Included	34500.00	34,500	
Water line and deck tile band, including depth markers for lap pool	1	LOT	42500.00	42,500	Included	42500.00	42,500	
Water line and deck tile band, including depth markers for leisure pool	1	LOT	28000.00	28,000	Included	28000.00	28,000	
ADA handicap lift and anchoring	1	LOT	12000.00	12,000	Included	12000.00	12,000	
Mechanical room gauges and flow meters	1	LOT	4500.00	4,500	Included	4500.00	4,500	
Replacement fittings, recessed step cyclolac inserts, and skimmer weirs for both pools	1	LOT	5000.00	5,000	Included	5000.00	5,000	
Backwash air gap and holding tank	1	LOT	8000.00	8,000	Included	8000.00	8,000	
Repair chemical storage room, signage, vent check valves, and portable eye wash	1	LOT	4000.00	4,000	Included	4000.00	4,000	

HMS Project No.: 19075

11 - SPECIAL CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>LAP AND LEISURE POOLS (Continued)</u>								
Required tile regrout for both pools	1	LOT	4000.00	4,000	Included		4000.00	4,000
Pump and strainer replacement for both pools	1	LOT	27000.00	27,000	Included		27000.00	27,000
Deck equipment for lap pool (starting blocks, dive stands, climbing wall, grab rails)	1	LOT	85000.00	85,000	Included		85000.00	85,000
Deck equipment for leisure pool (grab rails, custom stair rails)	1	LOT	14000.00	14,000	Included		14000.00	14,000
<b>SUBTOTAL LAP AND LEISURE POOLS:</b>			<b>\$ 428,500</b>				<b>\$ 428,500</b>	
<u>ADDITIONAL WORK FOR CRACK REPAIRS AT POOLS</u>								
Crack repairs at pool deck	6	EA	250.00	1,500	3,600	600.00	850.00	5,100
Crack repairs at pool gutters	4	EA	400.00	1,600	3,200	800.00	1200.00	4,800
<b>SUBTOTAL:</b>			<b>\$ 3,100</b>		<b>\$ 6,800</b>		<b>\$ 9,900</b>	
Labor Premium Time	16.70%				1,136			1,136
<b>SUBTOTAL:</b>			<b>\$ 3,100</b>		<b>\$ 7,936</b>		<b>\$ 11,036</b>	

HMS Project No.: 19075

11 - SPECIAL CONSTRUCTION	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
Subcontractor's Overhead and Profit on Material and Labor	20.00%			620		1,587		2,207
<b>SUBTOTAL ADDITIONAL WORK:</b>				<b>\$ 3,720</b>		<b>\$ 9,523</b>		<b>\$ 13,243</b>

**TOTAL ESTIMATED COST: \$ 432,220 \$ 9,523 \$ 441,743**



AUGUSTUS BROWN SWIMMING POOL RENOVATIONS  
 1619 GLACIER AVENUE - JUNEAU, ALASKA  
 35% DESIGN SUBMITTAL CONSTRUCTION COST ESTIMATE

HMS Project No.: 19075

12 - GENERAL REQUIREMENTS	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
Mobilization and demobilization	1	LS	2000.00	2,000	4500.00	4,500	6500.00	6,500
Staging areas, signs, etc.	1	LOT	1200.00	1,200	1500.00	1,500	2700.00	2,700
Incidental barge freight (rest with unit rates)	25	TONS	350.00	8,750	50.00	1,250	400.00	10,000
Miscellaneous air freight	2,500	LBS	1.25	3,125	0.25	625	1.50	3,750
Project manager (part-time)	180	HRS			115.00	20,700	115.00	20,700
Superintendent (full time)	7	MOS	200.00	1,400	13500.00	94,500	13700.00	95,900
Quality control (part-time)	6	MOS						By Superintendent
Site offices/trailer/equipment	6	MOS	1350.00	8,100	550.00	3,300	1900.00	11,400
Temporary barriers, fencing, dust control, etc.	6	MOS	500.00	3,000	700.00	4,200	1200.00	7,200
Temporary utilities	6	MOS	500.00	3,000	250.00	1,500	750.00	4,500
Communications	6	MOS	650.00	3,900			650.00	3,900
Construction equipment, vehicles, etc.	6	MOS	3750.00	22,500	750.00	4,500	4500.00	27,000
Power and hand tools	6	MOS	1250.00	7,500	150.00	900	1400.00	8,400
Porta cans and maintenance (2)	6	MOS	220.00	1,320	75.00	450	295.00	1,770
Dumpster rental (1)	6	MOS	450.00	2,700			450.00	2,700

HMS Project No.: 19075

12 - GENERAL REQUIREMENTS		QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
				RATE \$	TOTAL \$	RATE \$	TOTAL \$		
Consumables: cleaning products, safety equipment etc.		6	MOS	500.00	3,000	150.00	900	650.00	3,900
Fuel, oil and gas for equipment (300 gallons per month)		6	MOS	1200.00	7,200			1200.00	7,200
Plan check fees		1	LOT						With Design Fee
Construction permits fee		1	LOT						With Design Fee
Submittals, as-builts, schedules, etc.		1	LOT	1000.00	1,000	3000.00	3,000	4000.00	4,000
Regular clean-up		6	MOS	100.00	600	500.00	3,000	600.00	3,600
Final clean-up punch list		16,618	SF	0.12	1,994	0.18	2,991	0.30	4,985
Daily loading and unloading		6	MOS	150.00	900	500.00	3,000	650.00	3,900
Alaska Dept. of Labor certified payroll fee		1	LOT	5000.00	5,000			5000.00	5,000
<b>SUBTOTAL:</b>					<b>\$ 88,189</b>		<b>\$ 150,816</b>		<b>\$ 239,005</b>
Home Office		3.00%							100,658
Overhead and Profit		8.50%							293,752
Bonds		0.85%							31,872
Insurances		1.15%							43,488
<b>TOTAL ESTIMATED COST:</b>									<b>\$ 708,775</b>

HMS Project No.: 19075

13 - CONTINGENCIES	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

131 - ESTIMATOR'S CONTINGENCY

The estimator's allowance for architectural and engineering requirements that are not apparent at this level of design documentation (addenda, etc.)

20.00%

\$ 765,005

132 - ESCALATION CONTINGENCY

The allowance for escalation from the date of estimate to the proposed bid date of March 2020 at the rate of 3.50% per annum (5 months)

1.46%

\$ 67,014

**TOTAL ESTIMATED COST: \$ 832,019**

HMS Project No.: 19075

ADD ALTERNATES 1. Energy Efficiency Upgrades to First Floor Exterior Walls and Windows	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>OMIT</u>								
Pressure wash existing siding at first floor only	-4,288	SF	0.08	-343	0.30	-1,286	0.38	-1,629
Prep and paint existing siding at first floor only	-4,288	SF	0.35	-1,501	1.80	-7,718	2.15	-9,219
<u>ADD</u>								
Remove windows and trims	5	EA			105.00	525	105.00	525
Remove existing 1"x6" T&G siding and weather barrier at first floor	4,288	SF			1.50	6,432	1.50	6,432
Dispose debris	3	LDS	350.00	1,050	250.00	750	600.00	1,800
New 2'8"x6'8" double pane insulated glazed fiberglass windows	5	EA	937.00	4,685	180.00	900	1117.00	5,585
Prefinished window and head trims	100	LF	3.00	300	2.00	200	5.00	500
New 1"x6" T&G bevel cedar wood siding	4,288	SF	4.60	19,725	2.30	9,862	6.90	29,587
New weather barrier	4,288	SF	0.40	1,715	0.45	1,930	0.85	3,645
New 1/2" plywood sheathing	4,288	SF	1.05	4,502	0.95	4,074	2.00	8,576
(2) layers 1" rigid insulation	4,288	SF	1.20	5,146	0.80	3,430	2.00	8,576
2"x6" flat furring, 24" o/c	4,288	SF	1.10	4,717	1.20	5,146	2.30	9,863

HMS Project No.: 19075

<b>ADD ALTERNATES</b>		QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
<b>1. Energy Efficiency Upgrades to First Floor Exterior Walls and Windows</b>				RATE \$	TOTAL \$	RATE \$	TOTAL \$		
<u>ADD (Continued)</u>									
	6 mil vapor barrier	2,896	SF	0.06	174	0.12	348	0.18	522
	Caulk paint new cedar siding	4,288	SF	0.25	1,072	1.50	6,432	1.75	7,504
	<b>SUBTOTAL:</b>				<u>\$ 41,242</u>		<u>\$ 31,025</u>		<u>\$ 72,267</u>
	Labor Premium Time	16.70%					5,181		5,181
	<b>SUBTOTAL:</b>								<u>\$ 77,448</u>
	Subcontractor's Mark-Ups	20.00%							15,490
	Prime's Mark-Ups	15.00%							13,941
	Contingencies	20.00%							21,376
<b>TOTAL ESTIMATED COST:</b>									<u><u>\$ 128,255</u></u>

HMS Project No.: 19075

ADD ALTERNATES	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

Calcium hypo sanitation system to both pools  
 (4,950 SF)

1	LOT	62000.00	62,000	Included	62000.00	62,000
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Note: Quote provided by Cole Henry with  
 Counsilman Hunsaker, 303-323-8529.

**SUBTOTAL:** \$ 62,000 \$ 62,000

Labor Premium Time	16.70%	Included
Subcontractor's Mark-Ups	20.00%	Included
Prime's Mark-Ups	15.00%	9,300
Contingencies	5.00%	3,565

**TOTAL ESTIMATED COST:** \$ 74,865

HMS Project No.: 19075

ADD ALTERNATES	QUANTITY	UNIT	MATERIAL		LABOR		TOTAL UNIT RATE \$	TOTAL MATERIAL/LABOR \$
			RATE \$	TOTAL \$	RATE \$	TOTAL \$		

Install new UV secondary sanitation system to both pools (4,950 SF)

1	LOT	111000.00	111,000	Included	111000.00	111,000
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Note: Quote provided by Cole Henry with Councilman Hunsaker, 303-323-8529.

**SUBTOTAL:** \$ 111,000 \$ 111,000

Labor Premium Time	16.70%	Included
Subcontractor's Mark-Ups	20.00%	Included
Prime's Mark-Ups	15.00%	16,650
Contingencies	5.00%	6,383

**TOTAL ESTIMATED COST:** \$ 134,033

## **FEES AND CHARGES POLICY**

### **Aquatics Facilities of the City and Borough of Juneau**

#### **PURPOSE**

The Juneau aquatics facilities adopts sound and consistent policies that serve as tools for evaluating services and establishing appropriate fees and charges. The imposition of fees makes possible expanded aquatics programs and can be justified on the basis that such programs would not otherwise be possible. The goal of this fees and charges policy is to establish a written operating philosophy and consistent policy.

#### **AUTHORITY**

Juneau Aquatics Board Resolution.

#### **STATEMENT OF PHILOSOPHY**

##### *Create Community through People, Pools and Effective Swim Programs*

The underlying principle of the Aquatic's Boards fiscal program is to efficiently offer the most diversified aquatics services possible, ensuring that all citizens of Juneau have equal opportunity and choice in participation by adhering to the following standards:

1. Provide and maintain safe and clean aquatics facilities.
2. Provide the opportunity for individuals to participate in aquatics activities for safety, recreation, fitness and competition programs.
3. Maximize the accessibility of Juneau's aquatics facilities and not discourage, restrict or exclude any user.
4. Establish user fees that are based on established criteria outlined in this policy.
5. Establish a fees structure that is as transparent and easily understood as possible.
6. To provide an objective planning and management tool for assessing the true costs of operating aquatics activities, while still providing opportunities for economically disadvantaged participants.
7. The level of the user fee cost recovery should be sensitive to the "market" for similar services.
8. The Aquatics Board will adopt, publicize, and periodically revise a Fee Schedule in accordance with this policy.

#### **PHILOSOPHIES INFLUENCING RECOVERY RATES**

1. User fees to provide cost recovery should consider the CBJ Assembly's budgetary goals and priorities, and address community needs and Aquatics Board objectives. Fees can significantly affect the demand and subsequent level of services provided. Too high levels of cost recovery will negatively impact the delivery of services to



- lower income groups, working against public policy.
2. The use of general governmental revenue to offset user fees is appropriate to support operational needs and provide access to economically disadvantaged and certain age groups.
  3. While a high level of cost recovery may be appropriate for certain services, it may also be impractical or too costly to establish a system to identify and charge separately for such services. Accordingly, the methodology of assessing and collecting fees should be reasonably simple. To the extent feasible, therefore, management will collect user data to assess the effectiveness of rates in meeting the Aquatics Board's fee policies.

### **SPECIFIC PHILOSOPHIES INFLUENCING PROGRAMS AND FEES**

1. Direct Cost recovery for adult programs shall be relatively high.
2. Direct Cost recovery for programs for youth programs, seniors and individuals with disabilities, shall be relatively lower.
3. Where the service/product provides a community benefit and/or encourages certain community goals or functions (such as, but not limited to high school swim team use of the pools), cost recovery levels may be lower or zero.
4. Fees will be set such that repeat usage is rewarded through discounts for the loyal use of the facilities through discounts for multi-visit, monthly or annual passes.
5. There will be a single rate structure for use of Juneau's two pools.
6. Proprietary or commercial group use of aquatics facilities for financial gain or profit shall not be permitted except as approved by Aquatics Director and may be charged commercial, facility rental and permit fees in accordance with this Policy and the Aquatics Fee Schedule.
7. Charitable, non-profit, community-serving organizations, who conduct an event in the aquatics facilities for the purpose of raising funds not sponsored by the aquatics facilities, will be charged facility rental and permit fees in accordance with the Aquatics Fee Policy. Fundraising for aquatics activities or projects will not be required to pay a fee.
  - a. Insurance is required for all community events. The applicant shall provide a certificate of insurance naming CBJ as additional insured and indemnifying the CBJ from claims arising from the event in conformity with the CBJ's existing risk management policies.
  - b. Fees collected by aquatics facilities from these activities will be reflected as revenues of the aquatics facilities.
8. Fees may be reduced or subsidized in order to provide scholarships that advance physical, educational and recreational opportunities for residents - youth before adults - who could not otherwise afford to participate in CBJ-operated aquatics programs.
9. The Aquatics Director has the authority to provide promotional coupons to promote new aquatics programs or resurrect existing ones.

### **COMPARABILITY WITH BUSINESSES AND OTHER COMMUNITIES**

In setting user fees, the Aquatics Board will consider fees charged by other private businesses, communities and government agencies in accordance with the following criteria:

1. Fees reflect the market for similar activities.
2. Fees serve as a benchmark for the cost-effectiveness of the CBJ Aquatics Facilities.
3. Raising revenue shall never be the primary criteria in setting fees.

## **COST DEFINITIONS**

Direct Costs – Pool Facility costs which relate directly to operations and providing aquatics services. Examples include pool facilities personnel and benefits, utilities, minor repair, contractual services, minor equipment and supplies, chemicals and other necessary recurring expenses related to facility operations.

Facilities Maintenance Costs – Pool Facilities costs incurred by the CBJ's building maintenance function that are directly attributable to the aquatics facilities.

Indirect Costs - Costs that are incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular program or service. Examples include executive management, financial services, human resources, treasury, or information technology. This includes debt service to cover the cost of capital improvements funded by borrowing.

## **COST RECOVERY GOALS**

These categories and programs are based on philosophical guidelines of the Aquatics Board. Cost recovery goals should be based on the total direct cost of delivering the service. Although excluded from rate recovery, the board and management will work to improve efficiency of facilities maintenance costs to the extent practical. Where feasible, direct costs of operating individual aquatics programs will be allocated to those programs to determine cost recovery levels.

Program rates of recovery will be evaluated at their category level rather than as specific targets for each class or service.

### **Full Direct Cost Recovery 80-100%**

1. Adult Classes and Programs
2. Adult Team Sports
3. Facility and Event Room Rentals

### **Mid-Range Direct Cost Recovery 40-79%**

1. Private Swim Teams
2. Youth Classes and Aquatics Programs
3. Senior Services and Aquatics Programs

### **Low-Range Direct Cost Recovery 0-39%**

1. Outreach and Programs geared towards the economically disadvantaged.
2. Accessibility and Aquatics Adaptive Services

3. Aquatics Safety and Education Classes
4. School Swim Teams Use
5. Direction from the CBJ Assembly and other CBJ objectives (i.e. - serving youth and youth in need, addressing community gaps in service in geographic areas of need)

## **EVALUATION OF POLICY AND FEES AND CHARGES SCHEDULE**

The Aquatics Fee Schedule shall be as concise and easily understood as possible and shall be published on the Aquatics website and at each aquatics facility. The number and variety of fee types shall be minimized so that administration and collection of fees is not impractical or burdensome.

The Aquatics Director shall review annually the Aquatics Fee Schedule and recommend appropriate adjustments to be adopted by the Aquatics Board. The Aquatics Fee Schedule shall be reviewed by staff during the spring for implementation at the beginning of the fiscal year - July first..

Documents to reference for developing the Aquatics Fee Schedule include:

1. This Fees and Charges Policy
2. The current CBJ biennial budget.

The Fees and Charges Policy will be reviewed at least once every five years to ensure cost recovery goals are aligned with the CBJ Assembly's and Aquatics Boards' goals.

Adjustment of fees may occasionally be required to conform to adopted state or CBJ code, policy and/or regulation; staff may make such adjustments to ensure that aquatics fees align with these requirements. Staff will make every attempt to implement such fee changes within 30 days.

November 4, 2015