City of Cordova
Multi-Building Condition Assessment:
Chamber of Commerce

Prepared For:

Prepared By:

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# TABLE OF CONTENTS

1. Introduction ......................................................................................................................... 1
2. Executive Summary ............................................................................................................. 1
3. Chamber of Commerce Building ......................................................................................... 2
   3.1. Description and Summary ........................................................................................... 2
   3.2. Building Component Assessments ............................................................................... 2
       3.2.1. Architectural ...................................................................................................... 2
       3.2.2. Structural ......................................................................................................... 5
       3.2.3. Civil .................................................................................................................. 6
       3.2.4. Mechanical ....................................................................................................... 7
       3.2.5. Plumbing ........................................................................................................... 8
       3.2.6. Fire Protection .................................................................................................. 9
       3.2.7. Electrical .......................................................................................................... 9
       3.2.8. Deficiencies and Recommendations ...................................................................11
       3.2.9. Life Safety Recommendations .........................................................................11
       3.2.10. Phase 1 ............................................................................................................11
       3.2.11. Phase 2 ............................................................................................................11

Appendix A – Equipment Condition and Life Expectancy ............................................................
Appendix B – Routine Maintenance Tasks ...................................................................................
Appendix C – Cost Estimate ........................................................................................................
Appendix D – FAN DETAIL .........................................................................................................
1. INTRODUCTION

The City of Cordova engaged Coffman Engineers and Burkhart Croft Architects to assess and report on the condition of City-owned buildings and structures to establish a baseline of their current assets, and better forecast future needs.

The team performed a multi-discipline condition assessment of thirteen facilities including:

1. Bob Korn Memorial Swimming Pool
2. Bidarki Recreation Center
3. Eyak Skaters Cabin
4. Cordova Jr/Sr High School
5. Odiak Pond Gazebo and Boardwalk
6. Odiak Camper Park Restroom
7. Parks and Recreation Maintenance Shop
8. City Maintenance Shop
9. Ballfield Restroom / Concession Stand
10. Cordova Chamber of Commerce
11. Hollis Heinrichs Park Restroom
12. Flemming Spit Restroom
13. Fire Department Sub Station

The team also visited the Prince William Sound Science Center and evaluated the feasibility of relocating the building to a new site.

The team consisted of an architect, civil, structural, mechanical, electrical engineers, and a cost estimator.

Due to the amount of information and quantity of sites, a separate report has been developed for each facility. This condition assessment report is for the Cordova Chamber of Commerce.

2. EXECUTIVE SUMMARY

The Chamber of Commerce building was evaluated by the team on November 18, 2022. This report provides:

► A description and assessment of the various building components.
► A list of deficiencies, ordered by urgency for repair or correction.
► Rough order of magnitude cost estimate for the listed deficiencies, as well as building replacement.
► A routine and preventative maintenance plan.

The Chamber of Commerce building is in fair condition and requires little work to continue functioning for the next 20 years. The main recommendation is to replace the boiler. Other recommendations center around Americans with Disabilities Act (ADA) access and a lighting upgrade.
3. CHAMBER OF COMMERCE BUILDING

3.1. Description and Summary

The Cordova Chamber of Commerce building was built in 1991. It contains an open space with a conference table and desks. There is a combined restroom, and a storage room which originally was a second restroom.

3.2. Building Component Assessments

3.2.1. Architectural

3.2.1.1. IBC Code Summary

Model Code Application

This facility was constructed under the Uniform Building Code in effect prior to 2000. Since 2000, the Uniform Building Code has been replaced by the International Building Code (IBC) family as the acting model building code in Alaska. Assessment below is based on the 2021 IBC (current version adopted by the State.

There were no issues with either building construction materials, use, or area found during the inspection. The building is wood framed which puts classification into Type V-B Construction, building area is well below allowable square footage.

Occupancy Groups

Office Area: All portions of this facility are designated as a “B” Business Occupancy. The Storage Room is accessory uses to the main occupancy.

Egress System

The existing egress system is adequate in terms of number of exit points, exiting logic, and egress width. There is a single exit which meets current facilities with a single exit requirements.

3.2.1.2. Sprinkler System Protection

General

Fire Protection addresses overall description and condition of the fire suppression systems installed in the building.

3.2.1.3. Sprinkler System Requirements

No Fire Suppression system is installed in this facility, and there are no requirements for one either.
3.2.1.4. Accessibility / ADA / ANSI A117 Compliance

General

All major phases of construction for this facility were completed prior to enactment of the Americans with Disabilities Act (ADA) in 1990, or subsequent inclusion of accessibility requirements into building codes. The IBC now references ANSI A117 as the recognized design standard for accessibility concerns.

Existing buildings are exempt from current requirements, so long as owners conduct simple and prudent improvements. Full compliance is directly tied to the size and scope of the proposed projects. The IEBC International Existing Building Code drives this level of compliance. For example, the facility can be painted, and flooring replaced without making the toilet facilities accessible. But if there was a building addition, or major renovation of the facility then the facility would be required to comply. In existing facilities, enforcement of ADA deficiencies is punitive, and if complaints or claims are made against the facility, the City of Cordova might be required to make a Reasonable Accommodation to correct the deficiency for the public requiring accessibility improvements.

3.2.1.5. Existing Conditions

The building currently has accommodations for accessibility. A path from the existing sidewalk to the entry door provides a barrier free entrance from a public way. Deficiencies in this path still exist, they are as follows:

- **The slope of the concrete walkway to the building qualifies it as a ramp.** Ramps are to have handrail and guardrail protection on both sides. In this case the existing grade would only require handrails to be installed. A painted 1 ½-inch tube steel handrail at 34-inches would be the correction.

- **The concrete stairs off the main porch had neither guardrails nor handrails installed.** Both guardrails and handrails are required on both sides of the stairs. Guardrails are to be 42-inches from stair nosing, handrails are to be at 34-inches from stair nosing.

3.2.1.6. Building Exterior

The building is clad with a vinyl siding throughout, and is in very good condition, no deficiencies were noted.

The roofing is a standing seal, exposed fastener roof. While no exterior visual deficiencies were noted, Cordova staff members reported some roof leaks on the interior of the building, and at one at the eave. The crawl space was then inspected, deficiencies noted below:

- **The interior roof leaks appear to be coming from interior condensation in the bathroom fans.** No moisture was present outside of the metal fan enclosure, which was heavily rusted. Recommendations for repair have already been forwarded to City of Cordova Staff to be executed as a maintenance item.

- **There was a small portion of water damage observed at the far eave of the building from the interior.** It was not extensive, and most likely was caused by wind driven rain. Install a secondary counterflashing to this area. It would be mechanically fastened to the existing fascia and adhered to the underside of the existing roof with bituminous sealant.
3.2.1.7. Building Interior

General

The building interior is in very good condition overall. The building was once equipped with two restrooms. One has been removed and the current restroom is used as a uni-sex restroom. Given the low occupant load this is allowed by code. Configuration is atypical since there are two toilets located in the space, but removal or revision to a single toilet fixture is not required. What was not confirmed is the presence of a privacy lock at this restroom. If one is not present, one is required.

► Install privacy lock is not currently installed.

In the far corner of the restroom there is a newly painted section of wall. What was reported to the inspection team was there was some surface mold at this location. While this is not a current action item, redevelopment of mold in this area, or development is other areas is a sign of moisture in the wall assembly, or deficiencies in the vapor retarder. If it reoccurs in the same area, gypsum wall board removal is required in this area to inspect and repair any deficiencies is the plastic vapor barrier. If it appears in other locations of the facility, overall exterior waterproofing should be considered.

Fig. 1. Missing Handrail at Entry

Fig. 2. Missing hand & Guardrails at Stair
3.2.2. Structural

The Chamber of Commerce Building is a one-story gable roof wood frame structure. The building exterior dimensions are 27-feet x 3-inches in the north-south direction and 32-feet x 3-inches in the east-west direction. The roof extends an additional 5-feet x 6-inches on the west end over a 4-feet x 6-inches front entrance slab. The roof consists of plywood sheathing on pre-engineered wood trusses spanning between exterior walls. The building is founded on a concrete stem wall foundation around the perimeter and post and beams along the interior. The crawlspace is vented at the southwest and southeast corners but is lacking a vapor barrier over the ground. Floor framing consists of 14-inches I-joists at 16-inches on centers spanning continuously in the north-south direction over 4x10 beams spanning between 4x6 posts bearing on 24-inches square concrete footings.

Structural recommendations for the Commerce Building are:

- *Install a continuous 6-mil vapor barrier in the crawlspace.*
- *Install metal tie connections between I-joists and center beam.*
- *Install solid blocking between floor I-joists over center beam.*
3.2.3. Civil

The Chamber of Commerce building is located on a parcel owned by the City of Cordova, at 404 First Street. The site consists of a gravel and landscaped area surrounding the building, with dense vegetation to the north.

The Owner stated that the Chamber of Commerce building is on City water and sewer service and reported there have been issues in the past with both utilities. Exterior utilities were not observed as part of this inspection.

A sidewalk connects the front of the facility to the pedestrian sidewalk along First Street and appears to be ADA compliant, however there is no ADA accessible parking onsite. The sidewalk and front concrete apron appear to be in adequate condition. See Figure 7.

Drainage on the west and south side flows overland away from the building, however, slopes on the north and east sides convey runoff towards the building. No issues with the foundation have been reported.

A fuel tank is located to the east side of the building to provide fuel for heating. The tank is founded and secured to wooden timbers in the ground, approximately 10 feet away from the building.
3.2.4. Mechanical

The Chamber of Commerce building is heated by a cast iron boiler that is served by an above ground fuel oil tank that are believed to be original from 1991. The fuel oil supply from the tank is in good condition and includes a filter and tiger loop.

The boiler flue has a booster fan. It is unclear why this was needed as the boiler is located against an exterior wall on a single-story building and the flue’s length is minimal. The boiler is in relatively poor condition and due for replacement.

The combustion air opening for the boiler was partially blocked and should be inspected and kept clear. It was noted onsite that the boiler nearly caused a fire in the past and has been professionally maintained since. This was evident from the newer components on the system such as the expansion tank and fuel supply components.

The occupied space is heated with baseboards. There is no ventilation other than the bathroom exhaust fans.

There are two bathroom exhaust fans located in the attic space. One of them serves the combined bathroom, the other serves a storage room that was originally intended to be second bathroom. The fan serving the functional bathroom drips water, which appears to develop from condensation of the warm humid air against the cold fan assembly and uninsulated ductwork in the attic. The fan was corroded and in poor condition. Both fans should be replaced, the fan assembly should be insulated from the cold attic space, and the ductwork should be insulated. This recommendation with the fan was sent to the City of Cordova on December 1, 2022 and may have been implemented since.

The building does not have mechanical ventilation other than the two bathroom exhaust fans. There are two operable windows in the administrative area, which combined account for over 4%
of the occupied area and can be considered to meet the natural ventilation criteria of the International Mechanical Code. Additional ventilation is not required by code, and the infiltration induced by the exhaust fans helps ventilate the building.

Fig. 8. Boiler.

Fig. 9. Fuel tank and boiler exhaust on left side of back wall

Fig. 10. Partial blockage of combustion air opening

Fig. 11. Finned tube element to heat crawlspace

3.2.5. Plumbing

Plumbing in the building includes a single restroom with a lavatory, a urinal, and two toilets. There is a utility sink in the adjacent storage room. It is assumed there is an electric water heater that serves the bathroom, likely located in the storage room adjacent to the bathroom. It was not located during the site walk but there is no other fuel burning appliance other than the boiler. Plumbing fixtures appeared to be in good condition.
3.2.6. Fire Protection

Per Section 903 of the 2021 International Building Code, a fire suppression system is not required. Per Section 907.2.2 of the 2021 International Building Code, a fire alarm system is not required.

3.2.7. Electrical

The facility is served by a 240/120V, single phase, 3-wire, 200A electrical service provided by Cordova Electric Co-Op. The incoming utility service equipment, including current transformer
(CT) cabinet, disconnect switch, and meter socket are wall mounted on the rear exterior of the building.

Distribution for the building is provided via a single 200A, 240/120V single phase panelboard located in the storage room. The panel is in good condition and has a lot of space for additional breakers.

There are no arc flash labels on the electrical panels and equipment. It is recommended that an Arc Flash Risk Assessment be performed on power systems for employee safety and compliance with OSHA regulations. The Occupational Safety and Health Administration (OSHA) requires that employers provide a place of employment which is free from recognized hazards that are likely to cause death or serious physical harm to employees. OSHA also requires that employers employ safety-related work practices to prevent electrical shock or other injuries resulting from direct or indirect electrical contact.

Receptacles are located throughout the office area and are located to serve the desired function of the facility.

Lighting within the building is from fluorescent lights mounted to the ceiling that have been retrofit with TLED lamps. Lighting levels are adequate, and the light fixtures are in good condition.

Exterior lighting is provided by twin head incandescent fixtures mounted adjacent the main entry door and adjacent to the boiler room door. The exterior lighting is functional but could be improved with replacement LED light fixtures.

Overall, the electrical systems for this facility are in good operational condition.

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Fig. 16. Electrical service disconnect and meter.  
Fig. 17. Typical interior light fixture with TLED lamps.
3.2.8. Deficiencies and Recommendations

The following list of deficiencies and items requiring maintenance are grouped into four categories: Life Safety, Structural, Code Compliance, and Maintenance or Facility Improvements. A rough order of magnitude cost is included but does not factor into the order in this list. See Appendix C for detailed cost estimate information.

Total building replacement, including demolition of the existing facility is estimated to cost $1,004,233. The total cost of all recommendations below is $50,399.

3.2.9. Life Safety Recommendations

Some of the recommendations below relate to life safety, however, there are no specific deficiencies warranting immediate action.

3.2.10. Phase 1

1. **Replace boiler.** Demolish and replace the existing residential oil-fired boiler and flue.
   
   Estimated Cost: $31,596

3.2.11. Phase 2

2. **ADA Accessibility.** The slope of the concrete walkway to the building qualifies it as a ramp. Ramps are to have handrail and guardrail protection on both sides. In this case the existing grade would only require handrails to be installed. A painted 1 ½-inch tube steel handrail at 34-inches would be the correction.

   Estimated Cost: $6,665

3. **ADA Accessibility.** The concrete stairs off the main porch had neither guardrails nor handrails installed. Both handrails and guardrails are required on both sides of the stairs. Guardrails are to be 42-inches from the stair nosing, handrails are to be at 34-inches from the stair nosing.
Estimated Cost: $4,957

4. **Exterior lighting upgrade.** Replace two exterior rated lights adjacent to the exterior doors with an LED fixture with full cutoff optics and integrated photocells for automatic dusk to dawn operation. This would improve lighting by reducing the glare and reduce energy consumption and reduce maintenance.

   Estimated Cost: $3,508

5. **Facility Maintenance.** Restroom: Install privacy lock if not currently installed.

   Estimated Cost: $858

6. **Arc Flash Risk Assessment.** It is recommend that an Arc Flash Risk Assessment is performed on power systems for employee safety and compliance with OSHA regulations. Install arc flash hazard labels to all panels and equipment per NEC 110.16.

   Estimated Cost: $2,815

**Total Cost Phase 2: $18,800**
<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
<th>Age (yrs)</th>
<th>Life Expectancy (yrs)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil fired boiler</td>
<td>Weil-McLain, model unknown</td>
<td>Unknown</td>
<td>20</td>
<td>The boiler is in poor condition, and both the flue and boiler itself are showing signs of severe corrosion and possible leakage. Piping below hydronic air vent also shows signs of corrosion.</td>
</tr>
<tr>
<td>Main building heating circ pump</td>
<td>Grundfos, model UPS 15-58 FC</td>
<td>Unknown</td>
<td>10</td>
<td>Pump is in fair condition.</td>
</tr>
</tbody>
</table>

1. Life expectancy is based on the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) 2019 Applications Handbook, Chapter 38, Table 4: Comparison of Service Life Estimates. These values are based on historical survey data, and are heavily dependent on maintenance, usage, cycling, and application, but form a basis to accompany site observation notes.
### Boiler Maintenance

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Inspection Task</th>
<th>Maintenance Task</th>
<th>Frequency</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Visually inspect fuel filter.</td>
<td>Clean and verify proper operation.</td>
<td>Monthly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>b</td>
<td>Perform chemical testing of system water.</td>
<td>Verify water treatment target levels are being maintained.</td>
<td>Monthly</td>
<td>Repair equipment and treat water to proper water chemistry.</td>
</tr>
<tr>
<td>c</td>
<td>Check fuel pump for proper operation.</td>
<td>Clean and verify proper operation.</td>
<td>Quarterly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>d</td>
<td>Inspect blowdown or drain valve.</td>
<td>Clean and verify proper operation.</td>
<td>Quarterly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>e</td>
<td>Check for evidence of leakage of fuel supply, heat transfer fluid, and flue gas.</td>
<td>Record location of identified leaks.</td>
<td>Quarterly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>f</td>
<td>Check control system and devices for evidence of improper operation.</td>
<td>Clean and verify proper operation.</td>
<td>Semiannually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>g</td>
<td>Check control box for dirt, debris, and/or loose terminations.</td>
<td>Clean, lubricate, and verify proper operation.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>h</td>
<td>Check motor contactor for pitting or other signs of damage.</td>
<td>Clean and tighten electrical connections as needed.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>i</td>
<td>Check for evidence of buildup or fouling, corrosion, or degradation on heat exchange surfaces.</td>
<td>Clean and tighten electrical connections as needed.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>j</td>
<td>Check for proper damper operation.</td>
<td>Clean and restore as needed to ensure acceptable condition.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>k</td>
<td>Check combustion chamber, burner, and flue for deterioration, moisture problems, condensation, and combustion products.</td>
<td>Clean and adjust combustion process for operation.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>l</td>
<td>Inspect refractory for damage or wear.</td>
<td>Clean combustion side. Record location of damage and wear.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>m</td>
<td>Observe burner flame at high load for correct clearance from refractory</td>
<td>Clean and adjust.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>n</td>
<td>Verify proper operation of safety devices per manufacturer’s recommendations.</td>
<td>Clean, lubricate, and adjust.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
</tbody>
</table>

### Pumps Maintenance

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Inspection Task</th>
<th>Maintenance Task</th>
<th>Frequency</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Check variable frequency drive, if present.</td>
<td>Correct as needed. Clean housing, and tighten connection as needed. Clean or replace air filter.</td>
<td>Semiannually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>b</td>
<td>Inspect pump and electrical components.</td>
<td>Clean and verify proper operation.</td>
<td>Semiannually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>c</td>
<td>Check control system and devices for evidence of improper operation.</td>
<td>Clean, lubricate, adjust.</td>
<td>Semiannually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>d</td>
<td>Check motor contractor for signs of damage.</td>
<td>Clean and tighten electrical connections as needed.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>e</td>
<td>Check pump drive for wear or problems based on alignment or bearing seating.</td>
<td>Lubricate and adjust and record evidence of wear.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>f</td>
<td>Check proper fluid flow.</td>
<td>Clean, adjust, as needed to restore proper flow.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>g</td>
<td>Assess field serviceable bearings.</td>
<td>Lubricate as necessary.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>h</td>
<td>Check insulation, vibration isolators, and flexible connections for integrity.</td>
<td>Clean as necessary. Record location of damage.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
</tbody>
</table>
### Water Heater Maintenance

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Inspection Task</th>
<th>Maintenance Task</th>
<th>Frequency</th>
<th>Recommended Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Check water pressure.</td>
<td>Verify and adjust for proper pressure.</td>
<td>Monthly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>b</td>
<td>Check control water pressure.</td>
<td>Verify and adjust for proper pressure.</td>
<td>Monthly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>c</td>
<td>Check thermal expansion tank.</td>
<td>Verify tank is working correctly, pressurized, and no damage.</td>
<td>Monthly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>d</td>
<td>Inspect T&amp;P relief valve.</td>
<td>Inspect and verify that valve is functioning properly.</td>
<td>Quarterly</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>e</td>
<td>Drain and flush tank.</td>
<td>Drain tank and verify water is clean. If milky, drain entire tank and refill.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
<tr>
<td>f</td>
<td>Check anode rod.</td>
<td>Inspect and verify that anode rod is function and doesn’t have significant damage/wear.</td>
<td>Annually</td>
<td>Repair or replace.</td>
</tr>
</tbody>
</table>

### Electrical Equipment Maintenance

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Inspection Task</th>
<th>Maintenance Task</th>
<th>Frequency</th>
<th>Recommended Action</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Panelboard enclosure inspection</td>
<td>Visual inspection</td>
<td>Semiannually</td>
<td>Clean and verify proper operation. Repair or replace.</td>
<td>NFPA 70B: 10.2.6 thru 15.2.6</td>
</tr>
<tr>
<td>b</td>
<td>Molded case circuit breaker inspection</td>
<td>Visual inspection</td>
<td>every 3 years</td>
<td>Repair or replace.</td>
<td>NFPA 70B: 17.7 thru 17.11</td>
</tr>
<tr>
<td>c</td>
<td>Molded case circuit breaker inspection</td>
<td>Electrical test</td>
<td>3-5 years</td>
<td>Repair or replace.</td>
<td>NFPA 70B: 11.10.5</td>
</tr>
<tr>
<td>d</td>
<td>Rotating equipment</td>
<td>Visual mechanical and electrical inspection, cleaning and testing</td>
<td>Annually</td>
<td>Repair or replace.</td>
<td>NFPA 70B: 26.7, 8.7, 25.3, 25.4, 26.6</td>
</tr>
<tr>
<td>e</td>
<td>Wiring devices, receptacles, snap switches, attachment plugs, connector bodies</td>
<td>Inspection, operational check</td>
<td>monthly and when used</td>
<td>Repair or replace.</td>
<td>NFPA 70B: 24.2.1 thru 24.6, 24.3.1, 24.3.2</td>
</tr>
<tr>
<td>f</td>
<td>Power cables, inspection</td>
<td>Visual inspection</td>
<td>Annually</td>
<td>Repair or replace.</td>
<td>NFPA 70B: 19.2</td>
</tr>
<tr>
<td>g</td>
<td>Power cables, testing</td>
<td>Electrical testing</td>
<td>every 3 years</td>
<td>Repair or replace.</td>
<td>NFPA 70B: 19.5, 11.9.2.4</td>
</tr>
<tr>
<td>h</td>
<td>Light fixtures, inspection and cleaning</td>
<td>Cleaning, inspection, testing</td>
<td>Annually</td>
<td>Clean fixture lenses, test lamps and ballasts, relamp</td>
<td>NFPA 70B: 23</td>
</tr>
<tr>
<td>i</td>
<td>Emergency lighting monthly test and inspection</td>
<td>Test lighting, inspection, repair</td>
<td>monthly</td>
<td>30 second test emergency lighting every 30 days for required illumination, repair or replace. Maintain records of testing</td>
<td>NFPA 101</td>
</tr>
<tr>
<td>j</td>
<td>Emergency lighting yearly test and inspection</td>
<td>Test lighting, inspection, repair</td>
<td>Annually</td>
<td>10 minute test emergency lighting annually for required illumination to simulate long term emergency, repair or replace. Maintain records</td>
<td>NFPA 101</td>
</tr>
</tbody>
</table>
MULTI-BUILDING CONDITION ASSESSMENTS
CONSTRUCTION COST ESTIMATE

CITY OF CORDOVA
CHAMBER OF COMMERCE BUILDING
CORDOVA, ALASKA

PREPARED FOR:
Coffman Engineering
800 F Street
Anchorage, Alaska 99501

February 8, 2023
NOTES REGARDING THE PREPARATION OF THIS ESTIMATE

DRAWINGS AND DOCUMENTS

Level of Documents: (17) condition assessment document, record drawings, and narratives
Date: Undated
Provided By: Coffman Engineers of Anchorage, 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% (included with unit rates)
Subcontractor Mark-Up: 35.00%
Estimator's Contingency: 30.00%
Unique Market Risk: 5.00%
General Conditions, Overhead, and Profit: 45.00%
Escalation to Summer 2024 at 7.91% per Annum (16 Months): 10.55%
A/E Design Fee: 12.00%

BIDDING ASSUMPTIONS

Contract: Standard construction contract without restrictive bidding clauses
Bidding Situation: Competitive bid assumed
Start of Construction: Summer 2024
Note: Quantities, qualities, and conditions are assumed when not directly provided in narrative.

EXCLUDED COSTS

1. Administrative and management costs
2. Furniture, furnishings and equipment (except those specifically included)
3. Remediation of contaminated soils or abatement of any hazardous materials
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 escalation based on a 12-month rolling average of the U.S. Consumer Price Index. 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.

Due to the lingering effects of the COVID-19 pandemic on the global supply chain and labor market, as well as ongoing geopolitical impacts to energy prices, HMS Inc. has included an additional contingency titled ‘Unique Market Risk’. This amount provided for in the estimate will be adjusted as the situation continues to change and the effect on construction pricing becomes better understood.

GROSS FLOOR AREA

Chamber of Commerce Building 879 SF
## CONDITION ASSESSMENT GENERAL COST SUMMARY

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL BUILDING REPLACEMENT</td>
<td>$1,004,233</td>
</tr>
<tr>
<td>DEFICIENCIES</td>
<td>50,399</td>
</tr>
<tr>
<td>TOTAL BUILDING REPLACEMENT</td>
<td>QUANTITY</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td><strong>DEMOLITION</strong></td>
<td></td>
</tr>
<tr>
<td>Demolish existing structure</td>
<td>9,669</td>
</tr>
<tr>
<td>Remove substructure</td>
<td>879</td>
</tr>
<tr>
<td>Disconnect and safe electrical service</td>
<td>1</td>
</tr>
<tr>
<td>Load, haul, and dispose of debris</td>
<td>15</td>
</tr>
<tr>
<td><strong>NEW CONSTRUCTION</strong></td>
<td></td>
</tr>
<tr>
<td>New substructure</td>
<td>879</td>
</tr>
<tr>
<td>Floor structure assembly</td>
<td>879</td>
</tr>
<tr>
<td>12&quot; batt insulation at floor structure</td>
<td>879</td>
</tr>
<tr>
<td>Roof structure assembly</td>
<td>1,208</td>
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<tr>
<td>Allowance for exterior stairs and railings</td>
<td>1</td>
</tr>
<tr>
<td>Wood framed exterior closure assembly</td>
<td>1,400</td>
</tr>
<tr>
<td>Soffit assembly</td>
<td>320</td>
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<tr>
<td>3’0”x7’0” exterior door assembly</td>
<td>2</td>
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<tr>
<td>Window allowance</td>
<td>150</td>
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<tr>
<td>Metal roofing</td>
<td>1,208</td>
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<tr>
<td>6&quot; rigid insulation</td>
<td>1,208</td>
</tr>
<tr>
<td>Cover board</td>
<td>1,208</td>
</tr>
<tr>
<td>Ice/water shield</td>
<td>1,208</td>
</tr>
<tr>
<td>Edge flashing</td>
<td>140</td>
</tr>
<tr>
<td>Interior construction</td>
<td>879</td>
</tr>
<tr>
<td>Plumbing fixture with rough-in</td>
<td>5</td>
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</tbody>
</table>
## TOTAL BUILDING REPLACEMENT

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>UNIT</th>
<th>UNIT RATE</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>879</td>
<td>SF</td>
<td>28.00</td>
<td>24,612</td>
</tr>
<tr>
<td>200</td>
<td>AMP</td>
<td>80.00</td>
<td>16,000</td>
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<tr>
<td>879</td>
<td>SF</td>
<td>22.00</td>
<td>19,338</td>
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</table>

**SUBTOTAL:** $303,545

Subcontractor's Overhead and Profit on Material and Labor 35.00% 106,241

**SUBTOTAL:** $409,786

General Requirements, Overhead, and Profit 45.00% 184,404

Estimator's Contingency 30.00% 178,257

Unique Market Risk 5.00% 38,622

Escalation to Summer 2024 at 7.91% per Annum (16 Months) 10.55% 85,568

A/E Design Fee 12.00% 107,596

**TOTAL ESTIMATED COST:** $1,004,233
### CONDITION ASSESSMENT COST SUMMARY

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficiency 1 - Replace Boiler</td>
<td>$31,596</td>
</tr>
<tr>
<td>Deficiency 2 - ADA Accessibility</td>
<td>6,665</td>
</tr>
<tr>
<td>Deficiency 3 - ADA Accessibility</td>
<td>4,957</td>
</tr>
<tr>
<td>Deficiency 4 - Exterior Lighting</td>
<td>3,508</td>
</tr>
<tr>
<td>Deficiency 5 - Facility Maintenance</td>
<td>858</td>
</tr>
<tr>
<td>Deficiency 6 - Arc Flash Assessment</td>
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</table>

**TOTAL ESTIMATED CONSTRUCTION COST:** $50,399
<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>UNIT</th>
<th>UNIT RATE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolish existing boiler</td>
<td>1</td>
<td>EA</td>
<td>650.00</td>
</tr>
<tr>
<td>Demolish boiler flue and associated booster fan</td>
<td>10</td>
<td>LF</td>
<td>6.00</td>
</tr>
<tr>
<td>New ___ MBH dual fuel boiler</td>
<td>1</td>
<td>EA</td>
<td>7500.00</td>
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<tr>
<td>New dual wall flue piping</td>
<td>1</td>
<td>EA</td>
<td>350.00</td>
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<tr>
<td>New wall cap</td>
<td>1</td>
<td>EA</td>
<td>90.00</td>
</tr>
<tr>
<td>Miscellaneous valves, fittings, and devices</td>
<td>1</td>
<td>LOT</td>
<td>500.00</td>
</tr>
<tr>
<td>Connect fuel piping</td>
<td>1</td>
<td>LOT</td>
<td>150.00</td>
</tr>
<tr>
<td>Test and commission</td>
<td>1</td>
<td>LOT</td>
<td>250.00</td>
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</table>

**SUBTOTAL:** $9,550

- **Subcontractor's Overhead and Profit on Material and Labor:** 35.00% $3,343

**SUBTOTAL:** $12,893

- **General Requirements, Overhead, and Profit:** 45.00% $5,802
- **Estimator's Contingency:** 30.00% $5,609
- **Unique Market Risk:** 5.00% $1,215
- **Escalation to Summer 2024 at 7.91% per Annum (16 Months):** 10.55% $2,692
- **A/E Design Fee:** 12.00% $3,385

**TOTAL ESTIMATED COST:** $31,596
### PHASE 1

**Deficiency 2 - ADA Accessibility**

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>UNIT</th>
<th>UNIT RATE $</th>
<th>TOTAL $</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>LF</td>
<td>65.00</td>
<td>2,600</td>
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<tr>
<td>40</td>
<td>LF</td>
<td>3.00</td>
<td>120</td>
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</tbody>
</table>

**SUBTOTAL:** $ 2,720

General Requirements, Overhead, and Profit 45.00% 1,224

Estimator's Contingency 30.00% 1,183

Unique Market Risk 5.00% 256

Escalation to Summer 2024 at 7.91% per Annum (16 Months) 10.55% 568

A/E Design Fee 12.00% 714

**TOTAL ESTIMATED COST:** $ 6,665
### PHASE 1

**Deficiency 3 - ADA Accessibility**

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>UNIT</th>
<th>UNIT RATE $</th>
<th>TOTAL $</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>LF</td>
<td>140.00</td>
<td>1,960</td>
</tr>
<tr>
<td>14</td>
<td>LF</td>
<td>4.50</td>
<td>63</td>
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</tbody>
</table>

**SUBTOTAL:** $2,023

- General Requirements, Overhead, and Profit 45.00% 910
- Estimator's Contingency 30.00% 880
- Unique Market Risk 5.00% 191
- Escalation to Summer 2024 at 7.91% per Annum (16 Months) 10.55% 422
- A/E Design Fee 12.00% 531

**TOTAL ESTIMATED COST:** $4,957
### PHASE 1

**Deficiency 4 - Exterior Lighting**

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>UNIT</th>
<th>UNIT RATE $</th>
<th>TOTAL $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove exterior light</td>
<td>2</td>
<td>EA</td>
<td>60.00</td>
</tr>
<tr>
<td>New exterior LED light with integral photocell</td>
<td>2</td>
<td>EA</td>
<td>470.00</td>
</tr>
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</table>

**SUBTOTAL:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
<th>Rate</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Remove exterior light</td>
<td>2</td>
<td>60.00</td>
<td>120</td>
</tr>
<tr>
<td>New exterior LED light with integral photocell</td>
<td>2</td>
<td>470.00</td>
<td>940</td>
</tr>
<tr>
<td><strong>SUBTOTAL:</strong></td>
<td></td>
<td></td>
<td><strong>$ 1,060</strong></td>
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</tbody>
</table>

- **Subcontractor's Overhead and Profit on Material and Labor:** 35.00%, 371
- **General Requirements, Overhead, and Profit:** 45.00%, 644
- **Estimator's Contingency:** 30.00%, 623
- **Unique Market Risk:** 5.00%, 135
- **Escalation to Summer 2024 at 7.91% per Annum (16 Months):** 10.55%, 299
- **A/E Design Fee:** 12.00%, 376

**TOTAL ESTIMATED COST:** $ 3,508
### PHASE 1

**Deficiency 5 - Facility Maintenance**

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>UNIT</th>
<th>UNIT RATE $</th>
<th>TOTAL $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EA</td>
<td>350.00</td>
<td>350</td>
</tr>
</tbody>
</table>

**SUBTOTAL:**

- General Requirements, Overhead, and Profit: 45.00% - 158
- Estimator's Contingency: 30.00% - 152
- Unique Market Risk: 5.00% - 33
- Escalation to Summer 2024 at 7.91% per Annum (16 Months): 10.55% - 73
- A/E Design Fee: 12.00% - 92

**TOTAL ESTIMATED COST:** $858
### PHASE 1

**Deficiency 6 - Arc Flash Assessment**

<table>
<thead>
<tr>
<th>QUANTITY</th>
<th>UNIT</th>
<th>UNIT RATE $</th>
<th>TOTAL $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LOT</td>
<td>750.00</td>
<td>750</td>
</tr>
<tr>
<td>2</td>
<td>EA</td>
<td>50.00</td>
<td>100</td>
</tr>
</tbody>
</table>

**SUBTOTAL:** $850

**Subcontractor's Overhead and Profit on Material and Labor**

35.00%  $298

**SUBTOTAL:** $1,148

**General Requirements, Overhead, and Profit**

45.00%  $517

**Estimator's Contingency**

30.00%  $500

**Unique Market Risk**

5.00%  $108

**Escalation to Summer 2024 at 7.91% per Annum (16 Months)**

10.55%  $240

**A/E Design Fee**

12.00%  $302

---

**TOTAL ESTIMATED COST:** $2,815
APPROX. 2” NEW EXHAUST FAN AND COVER

2-INCH RIGID INSULATION BOX, TAPE ALL CORNERS, FILL ALL Voids WITH EXPANDING FOAM

EXISTING BATT INSULATION, CUT BACK AS REQUIRED SO THAT NEW RIGID BOX CAN BE SEALED TO EXISTING VAPOR BARRIER, DO NOT CUT PLASTIC VAPOR RETARDER BELOW.

CORE FOAM AROUND PIPING, FILL Voids WITH SPRAY INSULATION

2-INCH RIGID INSULATION BOX, TAPE ALL CORNERS, FILL ALL Voids WITH EXPANDING FOAM

EXISTING BATT INSULATION

NEW EXHAUST FAN AND COVER

COPE FOAM AROUND PIPING, FILL Voids WITH SPRAY INSULATION

EITHER REPLACE EXISTING VENT PIPING WITH INSULATED VERSION, OR PLACE BATT INSULATION IN AN OVERLAPPING FASHION OVER ALL EXPOSED VENT PIPING

THIS EXPOSED VENT PIPING NEEDS TO BE INSULATED. EITHER REPLACE WITH INSULATED PIPING, OR COVER WITH ADDITIONAL BATT INSULATION

SEALANT AROUND ENTIRE PERIMETER OF NEW FAN

NEW EXHAUST FAN AND COVER

EXHAUST FAN PLAN

Scale: 3” = 1’-0”

EXHAUST PLAN SECTION

Scale: 3” = 1’-0”