City and Borough of Wrangell
SPECIAL Borough Assembly Meeting & Work Session
AGENDA

Thursday, March 11, 2021 Location: Borough Assembly Chambers
Special Assembly Meeting 6:00 PM / Work Session 6:30 PM

Emergency Resolution No. 02-21-1564 allows for a modified plan for in-person meetings. Please contact the Borough Clerk to obtain a copy of the Resolution and Mitigation Plan. Public Members are highly encouraged to attend the meeting by Zoom Teleconference.

Below are the key points to attending the in-person meeting:

- **No more than SIX members of the Public will be permitted into City Hall during ANY public meeting.**
- **For PERSONS TO BE HEARD**: Kim Lane, Borough Clerk will maintain a Persons to be Heard Sign-up Sheet for person who are In-Person or attending by Zoom Teleconference. If you would like to speak In-Person or by Zoom Teleconference at the meeting, **please contact Kim Lane, Borough Clerk at 907-874-2381 or email clerk@wrangell.com** no later than 4:00 PM, on the day of the meeting so that you can be added to the list of Persons to be Heard.
- Written correspondence received for this meeting will be emailed to the Borough Assembly immediately and added to the next Regular Borough Assembly meeting's packet under Persons to be Heard/ Public Comments.
- When attending an Assembly or any other City Board or Commission Meeting, Face Coverings or Face Shields are REQUIRED by all Assembly Members, Staff, and the General Public – NO EXCEPTIONS! Face Coverings or Face Shields will be available for those who need one.

To Join by Computer:

https://zoom.us/j/9078742381?pwd=MTNqSEdncjRyakh2UCtMVUNxMndYUT09

And Enter the Meeting ID: 907 874 2381

Then Enter Password: 99929

1. **CALL TO ORDER**
2. **ROLL CALL**
3. **PERSONS TO BE HEARD / PUBLIC COMMENTS**
4. **AMENDMENTS TO THE AGENDA**
5. **CONFLICT OF INTEREST**

6. ITEM(S) OF BUSINESS

a. **RESOLUTION NO. 03-21-1570** OF THE ASSEMBLY OF THE CITY AND BOROUGH OF WRANGELL, ALASKA AUTHORIZING THE BOROUGH TO APPLY FOR AND ACCEPT COVID-19 GRANT FUNDS IN THE AMOUNT OF $125,000 FROM THE STATE OF ALASKA DEPARTMENT OF HEALTH AND SOCIAL SERVICES FOR COVID-19 TESTING AND VACCINE ADMINISTRATION COSTS

7. WORK SESSION

a. Public Safety Building Condition Assessment Report Review and Administrative Recommendation

8. ADJOURNMENT

CITY & BOROUGH OF WRANGELL, ALASKA
BOROUGH ASSEMBLY AGENDA STATEMENT

AGENDA ITEM TITLE:	DATE:	March 11, 2021
	Agenda Section	**13**

RESOLUTION NO. 03-21-1570 OF THE ASSEMBLY OF THE CITY AND BOROUGH OF WRANGELL, ALASKA AUTHORIZING THE BOROUGH TO APPLY FOR AND ACCEPT COVID-19 GRANT FUNDS IN THE AMOUNT OF $125,000 FROM THE STATE OF ALASKA DEPARTMENT OF HEALTH AND SOCIAL SERVICES FOR COVID-19 TESTING AND VACCINE ADMINISTRATION COSTS

SUBMITTED BY:
Lisa Von Bargen, Borough Manager; Captain Dorianne Sprehe, EOC Manager; Jamie Roberts, Deputy EOC Manager

Reviews/Approvals/Recommendations	
☐	Commission, Board or Committee
Name(s)	
Name(s)	
☐	Attorney
☐	Insurance

FISCAL NOTE:		
Expenditure Required: $		
FY 20:	FY 21: $	FY22:
Amount Budgeted:		
	$0	
Account Number(s):		
Account Name(s):		
Unencumbered Balance(s) (prior to expenditure):		

ATTACHMENTS: 1. Resolution No. 03-21-1570

RECOMMENDATION MOTION:
Move to approve Resolution No. 03-21-1570.

SUMMARY STATEMENT:

Federal funding is being made available to local governments through the State of Alaska, Department of Health & Social Services for COVID-19 testing and vaccination enhancement. The funding amount available for Wrangell is $125,000. The purpose statement of the grant is as follows:

"The State of Alaska, Department of Health and Social Services, Division of Public Health will provide funding to Alaskan local governments and Tribal entities to help with the following activities:

- Improve efforts and increase access to COVID testing in the community
- Build capacity to increase access to COVID vaccine in the community
- Implement strategies that decrease health inequities"

The Borough does not have a fully fleshed out plan, but the deadline to apply for the funding is March 15, 2021. Staff has begun to have conversations with our community partners. Partners include, but are certainly not limited to, SEARHC, Wrangell Public Schools and WCA.

Initial ideas for use of the funding includes, but again is not limited to:
Expanded Community Testing: Through careful coordination with SEARHC and other community partners, we can target a large portion of our residents and incoming visitors.

- Provide testing for special populations/high risk groups.
    - Costs associated for mail out of tests or costs for SEARHC processing samples.
- Transportation to the test facilities (via local cab) for persons entering the community via all ports.
- Outreach and Marketing Materials regarding testing and vaccination.
- Vaccination for remote residents (including transportation for medical personnel to administer vaccination, or transportation from remote area to WMC for vaccination).

Administration will report back to the Assembly as plans with partners become more solidified. The attached resolution 1) authorizes the application for the grant; 2) authorizes acceptance of the grant; and 3) authorizes the Borough to enter into MOUs as appropriate with community partners to help facilitate access to testing and vaccination.

CITY AND BOROUGH OF WRANGELL, ALASKA

RESOLUTION NO. 03-21-1570

A RESOLUTION OF THE ASSEMBLY OF THE CITY AND BOROUGH OF WRANGELL, ALASKA AUTHORIZING THE BOROUGH TO APPLY FOR AND ACCEPT COVID-19 GRANT FUNDS IN THE AMOUNT OF $125,000 FROM THE STATE OF ALASKA DEPARTMENT OF HEALTH AND SOCIAL SERVICES FOR COVID-19 TESTING AND VACCINE ADMINISTRATION COSTS

WHEREAS, federal funds are available to local ggovernmentsk through the State of Alaska, Department of Health & Social Services, to assist cities and boroughs in addressing the substantial and on-going costs for COVID-19 testing and vaccine administration; and

WHEREAS, the amount of $125,000 is currently available to the City & Borough of Wrangell to improve efforts and access to testing and vaccinations; and

WHEREAS, the Borough has identified community gaps in testing and vaccination distribution this funding may be able to help close.

NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF WRANGELL, ALASKA, that:

Section 1: The Borough Administration is authoirized to apply for and receive grant funding from the State of Alaska, in the anticipated amount of $125,000, for use in COVID-19 testing and vaccination efforts.

Section 2: The Borough Manager is authorized to execute the grant agreement with the State of Alaska, Deprtment of Health & Social services.

Section 3: The Borough is authorized to enter into Memorandums of Agreement (MOAs) with community organizations for administration of referenced COVID-19 efforts.

PASSED AND APPROVED BY THE ASSEMBLY OF THE CITY AND BOROUGH OF WRANGELL, ALASKA this 11th Day of March 2021.

CITY & BOROUGH OF WRANGELL, ALASKA

_____
Stephen Prysunka, Mayor

ATTEST: _____
Kim Lane, Borough Clerk

MEMORANDUM

TO: Honorable Mayor and Members of the Assembly
City and Borough of Wrangell

FROM: Amber Al-Haddad, Capital Facilities Director and
Lisa Von Bargen, Borough Manager

SUBJECT: Public Safety Building Condition Assessment Report Review and Administrative Recommendation

DATE: March 8, 2021

BACKGROUND

Wrangell's Public Safety Building houses the Police Department, Indoor Shooting Range, Fire Department, Jail, Department of Motor Vehicles, Customs and Border Patrol, and an area leased to the State of Alaska Court System for their Magistrate's office and Court House. The building has been in operation for thirty-four years and now requires major renovation work.

- In 2002 moisture issues were first noted at exterior walls. The City hired architects in 2003 to perform a condition assessment of this southern wall, which determined that there was substantial rot in the south wall. In 2004 a siding replacement project was designed and constructed to correct deficiencies from water damage in the exterior south wall.
- By 2010, visual deterioration of the siding was observed throughout other portions of the building and exterior painting, along with HVAC system upgrades were identified as the primary building needs and the project was included in the Capital Improvement Plan (CIP).
- By 2015 no further improvements had been made to the building and more moisture was noted around windows, primarily in the Court's leased area. The moisture was presumed to be from poor siding and trim work surrounding the windows.
- In 2017, with the incoming new administrator, a planned approach was developed toward a building repair solution which began with a building envelop assessment and resulted in the design of a project to replace the three sections of flat roofs, two exterior wall sections below parapets (including their structural components), and the north wall with internal gutter replacement.
- In 2019 that exterior wall and roof replacement project went to construction bidding and the Borough received one bid at approximately $1,000,000 for this work. A lack of funding stopped the project.
- In 2020 the Borough elected to perform a full building condition assessment to determine the full extent of deficiencies throughout the Public Safety Building and consider the option of renovations to the existing building or construction a new building.

INTRODUCTION

The CBW hired AMC Engineers to perform a full building condition assessment of the PSB. AMC Engineers and their interdisciplinary team of engineers/surveyors performed assessments in September 2020 related to structural, electrical, mechanical, architectural, civil, and environmental services, with the following primary goals:

1. Determine the overall building condition and the condition of the primary systems.
2. Identify building deficiencies and recommend corrective actions for the deficiencies.
3. Provide probable cost estimates for the corrective actions considering potential work phasing. Provide an estimate of each primary system and its additional life expectancy after corrections to deficiencies are made.
4. Provide probable cost estimates for constructing a new, in-kind building with the same square footage as the existing PSB with no significant changes to tenant operations.

Prior to the field survey, as much pertinent data as is available, including engineered building drawings, renovation history, and evaluation and inspection reports, was provided to the assessment team. The CBW maintenance staff worked directly with the team while on site to discuss problems previously encountered throughout the building.

The draft report was received in November 2020 and the final report in February 2021. A copy of the executive summary, the summary of conditions from each building discipline, and the cost estimates are attached hereto. The entire 383-page document has been made available on the Borough website at: https://www.wrangell.com/capital-facilities/public-safety-building-improvements. Information additional to what has been provided as attached, are the survey photos, drawings, and the environmental survey sampling and testing reports for both the Public Safety Building and the Wrangell Medical Center.

This Memorandum provides an outline for the public work session scheduled with the Borough Assembly on March 11, 2021, 6:30-8:00 p.m. It also offers an administrative recommendation and suggested future action. Due to the short time available to review the project, the assessment report will not be reviewed in detail at the work session, but rather an overview of the survey findings will be highlighted, to leave time for Q&A and discussion. AMC Engineers and their interdisciplinary assessment team will also attend the work session.

MARCH 11, 2021 WORK SESSION DISCUSSION OUTLINE

A. Introductions of AMC Engineers and their assessment team
B. AMC Engineers and Team Members overview (5-minute summary by each discipline)
C. Administrative Recommendation
D. Phased Projects
E. Project Costs
F. Project Schedule
G. Next Steps

ADMINISTRATIVE RECOMMENDATION. The two construction options developed by the engineers and estimating contractor are:

A. The estimate for renovating, to correct deficiencies of the existing building, is $11,487,449. . Borough staff has made additions (as described below) to the estimate bringing the total to **$12,874,618**.
B. The estimates for constructing new at either the existing Public Safety Building location or the former Wrangell Medical Center location, both including demolition of the respective existing buildings, is approximately $30,534,000.

Considering these project alternatives, with our current and projected future financial environment, Wrangell is not able to consider the option to construct new. Administration's recommendation is to identify the renovations to the existing building as the selected alternative.

PHASED SINGLE PROJECTS VS. PHASED MULTI PROJECTS

A. Phased Single Project
    - Single solicitation and procurement process for the Owner
    - Benefits from accountability from a single Contractor
    - Benefits from overlap between phases offering some flexibility
    - Limits potential bidders to those with bonding capacity for full scope of project
    - Single consolidated mobilization, likely a cost savings

B. Phased Multi Project
    - Multiple solicitation and procurement, more time and cost to the Owner
    - Multiple, small contracts allow room for participation of multiple bidders, perhaps Contractors with lessor bonding capacity
    - Phased multiple projects can be completed with smaller amounts of funding, as funding becomes available
    - The coordination of moves with completion of phases may require more time to get each project to 100% completion prior to starting a new phase with a separate contractor
    - Conflicts that arise at the overlap between phases may be more challenging to resolve with the potential to have different contractors for each project. Potential to create unclear accountability.

C. Cost Impacts of Phased Projects
    - Phased single projects have the benefit from consolidated overhead
    - Phased multiple projects cost will be the conglomerate of all contracts in the time frame in which they bid, each with separate mobilization and other ancillary coast associated with separated contracts. Procurement costs are increased by the number of contracts.

PROJECT COSTS. The total cost of the building renovations recommended to correct deficiencies identified in the building assessment is $11,487,449. Borough staff has made additions (as described below) to the estimate bringing the total to **$12,874,618**.

Staff have reviewed the estimate development with the engineer and have adjusted certain project cost components based on additional information about the need to replace the elevator and based on CBW experience with design and construction inspection costs for this type of renovation project. The cost accounts for one construction project, expected to occur in phases over two years' time due to ongoing building operation requirements (i.e. egress, mechanical and electrical systems, etc.) and tenant relocation constraints. Accordingly, staff-adjusted the estimate for a total design and construction cost of $12,874,618, as reflected below. Additional Owner costs, outside of the construction project costs, are costs anticipated to accommodate tenant relocations.

Project Cost Component	Cost
Subtotal Construction Cost (includes CBW added $250,000 for elevator replacement)	$ 7,379,696
10% Phasing Allowance	$ 737,970
Subtotal Estimated Construction Cost	$ 8,117,666
15% Estimating Contingency	$ 1,217,650
Escalation for Inflation (3.5% * 2 years or 7%)	$ 568,237
Total Estimated Construction Cost	$ 9,903,552
10% Design	$ 990,355
10% Contract Administration and Construction Inspection	$ 990,355
10% Construction Contingency	$ 990,355
Total Estimated Project Costs with Project Contingency	$ 12,874,618
Owner costs for tenant relocation	Unknown at this time

Project costs would be paid through a combination of Wrangell General Fund Reserves, loans, grants, or a General Obligation Bond.

PROJECT DESIGN & CONSTRUCTION SCHEDULE. See attached document for a suggested schedule.

NEXT STEPS

- Administration evaluates phasing options (single project or multi-phased project). Cost estimates included
- Assembly reviews phasing options
- Assembly chooses option
- Design RFQ Released
- Award of A&E Design Contract

ATTACHMENT

Wrangell Public Safety Building Assessment, Final Report, February 23, 2021, authored by AMC Engineers (partial report attached)

Attachment to March 8, 2021
Public Safety Building Condition Assessment Report Review
and Administrative Recommendation
PROJECT DESIGN & CONSTRUCTION SCHEDULE (SUGGESTED TIMELINE)

Assuming the preferred alternative for the project is established as renovations to the existing building, a plausible design and construction schedule is as follows.

Project Concept Development – (6 weeks)
Administration evaluates phasing options (single project or multi-phased project)
Assembly reviews phasing options
Assembly chooses option

A&E Advertising & Selection (12 weeks)
RFQ Preparation, weeks 1-3
RFQ Advertising, weeks 4-6
Proposals Opening, Proposals Evaluation, and Rank Firms, weeks 7-9
PSA Award and Issue Notice to Proceed (NTP), weeks 10-12

> *(Note: If the Assembly choses to pursue an architectural and engineering team without competitive solicitation, the RFQ time could be saved)*

35% design & cost estimate (8 weeks)
35% Document submittal
Review with Owner comments
NTP to 65% Design Document

65% design & cost estimate (10 weeks)
65% Document review
Review with Owner comments
NTP to 95% Design Documents

95% design & cost estimate (10 weeks)
95% review
NTP to 100% Construction Documents

100% Construction Bid Document (4 weeks)
Bid package approval
Owner bid solicitation package development
Construction Bid advertisement
Construction Bid solicitation
Bid Opening
Bid award

Single project with phased construction (24 months)
Construction Project

This schedule assumes that project construction funding would be acquired prior to the start of Construction Bidding.

Wrangell Public Safety Building Assessment

Final Report

23 February 2021

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AMC Project 20813

Table of Contents

Executive Summary

Assessment Survey Scope and Team

Assessment services and estimate of probable construction costs is based upon AMC's Engineer's 25 August 2020 proposal. Services for the Public Safety Building included building architectural, structural, mechanical, electrical, hazardous materials survey assessment, and estimate of probable construction cost for building repairs. Services for the existing Wrangell Medical Center critical access hospital included an estimate of probable construction cost to demolish the Wrangell Medical Center hospital and construct a new Public Safety Building in the old hospital's location on Bennett Street. The new Public Safety Building would be based upon a replacement of the existing building's size, configuration, and use.

Site assessment of the Wrangell Public Safety Building and hazardous materials survey of the Wrangell Medical Center occurred during the week of 14 September 2020. Survey team consisted of:

1. Northwind for architectural services.
2. PND for structural services.
3. AMC Engineers for mechanical and electrical services.
4. EHS – Alaska Inc. for hazardous materials and mold services.
5. Estimations Inc. for estimation of probable construction costs.

Public Safety Building

The Wrangell Public Safety Building is a two-story wood framed building constructed over a concrete and steel framed basement level, totaling 34,500 gross square feet in area constructed in the mid-1980's. A flat roofed mechanical mezzanine over the second floor is at the apex of two broad sloping roof areas and contains all facility ventilation equipment. Heating plant, generator, and electrical equipment are in the basement. The three levels are served by an elevator and multiple stairways. The building is constructed on a hillside, and the basement area is open grade level covered parking, situated directly below the fire station equipment bay.

There are 7 primary program elements:

1. Fire/Emergency Services Station (Floors 1 and 2).
2. Police Station and Jail (Floor 1).
3. Dispatch Center (Floor 1).
4. Courthouse and Public records (Floor 2).
5. Department of Motor Vehicles (Floor 2).
6. Customs Office (Floor 2).
7. Indoor firing range (basement)

This report provides individual discipline assessment reports and a cost estimate of repairs and also for demolition and construction of a new building at the site excluding cost for temporary relocation of the tenants.

- The estimate of probable construction cost for repairs to the public safety building in 2022 is $9,264,100 with a total project cost estimate of $11,487,500.
- The estimate of probable construction cost for demolition of the public safety building and to provide a replacement public safety building at the site in 2022 is $24,291,800 with a total project cost estimate of $30,121,800.

During the site assessment survey, it was determined that immediate structural repairs were needed. The structural engineer and architect work directly with the Wrangell City and Borough to develop plans and documents for these repairs independent of this assessment report.

If the option of making phased repairs to the public safety building is chosen, consideration of the following items is recommended.

1. Developing a programming document for each building area and tenant for their unique needs with operating and environmental criteria. This document would identify materials and equipment which would be owner furnished and contractor installed, as well as tenant space and access requirements. Confirm funding source(s) for special tenant requirements and equipment.
2. After programming guide is completed development of a concept floor plan to confirm with owner and tenants their requirements will be satisfied within the available floor space and project funds. Producing room data sheets along with the concept floor plan with tenant sign-off is recommended.
3. Tenant and construction phasing plan based upon concept floor plan and project construction schedule. Phasing plan would consider logistics, and seasonal tourist and available construction trades impacts.
4. Identify temporary off-site relocations with operational and space requirements for tenants during phased construction.
5. Concept estimates of probable construction costs and total project costs including, professional services, tenant relocations, and phasing that would be applicable to the Wrangell City and Borough.
6. Determine the method of project contract: design-bid-build, design-build, contractor design assist, construction manager / general contractor (CM/GC), or other methods acceptable to WCB.
7. Reduce risk and unknowns from the project when possible with smaller and cost effective contracts. Example would be removal of the underground fuel oil storage tank. This allows reduction of risk for finding contaminated soils during construction and impacting funds and schedule.
8. Confirm funding sources for project total costs.

9. Develop an Owner's Performance Requirements (OPR) and Request for Proposal (RFP) documents based upon the type of project contract desired and programing guide.

Wrangell Medical Center

The Wrangell Medical Center hospital was originally constructed in many different phases with many different renovations through the years totaling approximately 29,630 gross square feet. The original portion was built in 1967 and includes much of the medical service functions of the building. The original portion had a dirt floored crawl space with concrete foundation walls that were supported on what appeared to be driven steel piles. The original building was mainly of wood framed construction, with a pitched, built-up roofing that contained asbestos.

The 1974 era consists of the current long-term care wing, with a lower level that mainly had storage, laundry, mortuary, and other service functions. The lower level had a slab-on grade foundation with truss joist framing supporting a slightly sloped built-up roofing that contained asbestos.

A large addition and renovation were constructed in 1988 that was mostly of a modular construction that wrapped around the original core of the building and included renovations to areas of the original construction and 1974 wing. The 1988 addition had a dirt floored crawl space with concrete perimeter foundation walls and glue- laminated beams, supported by creosote piles, in a similar fashion to the original construction.

A maintenance and storage addition that was constructed sometime between 1992 and 1995. The addition was a pre-engineered metal building supported on concrete pads supported by piers, with a metal skirting around the perimeter of the building.

There were a couple of "infill" or "addition" rooms that were installed at an unknown date.

The Building is built on a site that slopes down to the south, and is reported to be built on "muskeg" which has resulted in soil settling in several locations, most notable at the perimeter of the original construction and at the 1992 addition, and underneath the concrete piling caps in the building crawl spaces.

This report provides hazardous materials survey report and a cost estimate of repairs. The estimate of probable construction cost for demolition of the medical center and to provide a replacement public safety building at the site in 2022 is $24,624,000 with a total project cost estimate of $30,533,800.

Architectural Condition Summary:

The Wrangell Public Safety Facility is a two-story wood framed building constructed over a concrete and steel framed basement level, totaling 34,500 gross square feet in area. A flat roofed mechanical mezzanine over the second floor is at the apex of two broad sloping roof areas and contains all facility ventilation equipment. Heating plant, generator and electrical equipment are in the basement. The three levels are served by an elevator and multiple stairways. The building is constructed on a hillside, and the basement area is open grade level covered parking, situated directly below the fire station equipment bay.

The primary program elements are:

- Fire/Emergency Services Station (Floors 1 and 2).
- Police Station and Jail (Floor 1).
- Dispatch Center (Floor 1).
- Courthouse and Public records (Floor 2).
- Department of Motor Vehicles (Floor 2).
- Customs Office (Floor 2).
- Indoor firing range (basement)

The facility was constructed in the mid-1980's (date on the As-builts drawing set is 11/3/1987), and designed under provisions of the prevailing codes of the day:

- 1982 Uniform Building code,
- 1980 ANSI 117.1 Specifications for Accessibility,
- 1976 NFPA101 Life Safety Code
- 1984 National Electrical Code
- 1982 Uniform Mechanical code.

The building is construction Type V-1 hour, requiring all interior and exterior walls, partitions, shafts, floor, and roof assemblies to be 1-hour fire protected assemblies.

Building occupancy types include A1 (court room), B1 (police vehicle sallyport) B2 (offices, fire station, police station, firing range), B3 (vehicular parking), I3 (detention/jail). Required fire separations between these occupancies appear to have been provided for and maintained to date.

- A3 to B2 = Fire separation not required.
- B2 to B3 = 1 hr w/ 45min doors
- B2 to I3 = 2 hr w/ 90 min doors
- B1 to I3 = 4-hour w/ 120 min doors

The building envelope is comprised of sloped metal roofing areas with 12" fiberglass batt (R-38) insulation in rafter cavities, Flat Protected Membrane Roof (PMR) with approximately 6" of rigid insulation (R-40) above the roof deck, and cedar siding installed directly over tarpaper, gypsum board and structural sheathing with 6" fiberglass batt insulation in stud cavities (R-19). The original foundation was designed to receive 2" rigid insulation (R-13). Sheetmetal wall panels were installed at the south wall as a part of 2008 repairs. Painted water-resistant gypsum board soffits occur at the basement garage, over them main entry on the east side, and over the outdoor recreation area on the east side of the building. These are provided with 10" batt insulation (R-30). Typically wall and sloped roof assemblies are provided with a 6mil plastic vapor retarder.

Interior finishes are commercial quality and like those seen in similar 35-year-old public buildings in Alaska. These include painted and vinyl-covered gypsum wall board, 2'x2' Acoustic Ceiling Tile (ACT) and grid, low-pile glue-down commercial carpet flooring at offices, hallways and assembly spaces, Vinyl Composition Tile (VCT) flooring at institutional spaces, and sheet vinyl flooring at bathrooms. Unique in this facility:

- 6x6 quarry tile floors and stairs in the first-floor lobby area and main stair to second floor.
- Wood slat celling system at both first and second floor lobby.
- Wall carpeting in the courthouse spaces.
- Painted acoustical metal pan deck ceilings, filled, and painted Concrete Masonry Unit walls, and sealed concrete floors at the Jail.
- 8' tall painted plywood wainscot and painted concrete floors at the Fire Station equipment bay.

More recent renovations have updated partition configurations, painted wall finishes, and bathrooms as these spaces aged and specific uses changed in approximately 7% of the floor plan.

Exterior windows are typically vinyl clad wood thermal units, both fixed and operable. A small number of exterior windows have been replaced with all-vinyl units. Exterior doors are typically insulated hollow metal, except for the front door which is a commercial aluminum glazed pair. Interior doors are typically labeled (fire rated) solid core wood in hollow metal frames. Interior relights are likewise typically labeled hollow metal with wire glass. Door hardware is typically good quality, UL labeled fur use in rated openings, and configured to meet accessibility requirements. Almost all doors have mortice locksets, 5-knuckle ball bearing hinges, protection plating and door closers.

The Jail is appropriately equipped with secure wall and ceiling enclosure, and with detention hollow metal doors, frames, access panels with detention grade hardware. Detention glazing is typically glass-clad polycarbonate. Plumbing fixtures are penal combination stainless steel sink/toilet units, and there is a common stainless-steel detention shower unit with anti-ligature features. Detention furnishings are penal grade wall and floor mounted welded steel. Cells are equipped with call buttons and key areas of the jail are under video surveillance. Electrified door hardware was not apparent, which may present issues with compliance with current ACA Core Jail standards.

Architectural Observations

Observations of architectural conditions and deficiencies are carefully detailed, with areas, quantities, and recommendations in the following Exhibits:

Exhibit A	Condition Assessment Building Summary and Exterior – 12 pages
Exhibit B	Condition Assessment Interior Rooms – 52 Pages
Exhibit C	Condition Assessment Openings, Hardware, Specialties – 12 pages
Exhibit D	Wrangle Public Safety Building Reference Plans with Notes - 5 11x17 pages

Architectural Recommendations

Key Architectural recommendations include but are not limited to:

A) Flat roof, parapet and coping and flashing assemblies have surpassed serviceable life and should be replaced. Failure of the coping installation assembly has caused significant water infiltration and resulted in extensive rot and insect infestation of building structure, and severe deterioration of parapets and siding. Insulating values are below current standards for energy conservation. The roof has no provisions for fall prevention. Remove existing PMR assembly and drain assemblies. Complete all necessary structural repairs in accordance with the structural engineers' recommendations. Install new parapet to a height meeting OSHA compliance for maintenance worker safety so regular maintenance at the roof level can occur. Install new vapor retarder, tapered rigid insulation assembly meeting current thermal standards for energy conservation, cover board, single-ply membrane roofing assembly that will extend full height and over top parapets. Install new roof drains, overflow drains, upper roof access ladder that meets OSHA requirements, and sheet metal copings and flashing.

B) Sloped roof, flashing and gutters present several problems that are detrimental to building longevity. Original (north elevation) and replacement (south elevation) gutters have failed, resulting in leakage into the wall assembly at the south wall, ang precarious attachment of the eave assembly at the north wall. The metal roofing panels are nearing the end of their serviceable life, with corrosion staring to form at bends in the metal. Remove all meal roofing and associated flashings and gutters. Repair eave projections. Install new underlayment. Install new marine-coated sheet metal roofing flashing, metal headwall siding panels, gutters, and downspouts. Provide anchor points for fall protection equipment.

C) The stained cedar tongue and groove siding has suffered severe deterioration through prolonged water infiltration on all building elevations. This has resulted in compromised substrate material including thermal protection panels and structural sheathing and framing at approximately 20% of the building exterior. This includes the south building elevation that was reclad with sheet metal panels in 2008. Remove all siding and underlayment for the full extent of exterior walls at the first and second floors, and at the mechanical penthouse level. Coordinate with structural engineer's report and complete all structural repairs. Install new thermal barrier where removed. Install robust weather barrier, properly sealed, and flashed at openings and transitions. Install 1.5 inches of new extruded polystyrene insulation to improve envelope thermal values to current standards. Install new marine-coated commercial sheet metal siding panels in vented rainscreen configuration, properly flashed and sealed into openings and transitions. Provide bug and bird screening at all rainscreen vent openings. As a part of the work, repair all soffit areas and install sheet metal soffit panels at soffit above Jail recreation yard and front entry. Repair, seal, and paint gypsum board ceiling in basement parking area.

D) Exterior windows and personnel doors at this facility are aging beyond their functional use and do not meet thermal performance criteria for new construction. Remove all exterior windows and doors and replace with commercial quality high performance fiberglass units. Provide new daylight control roller blinds at 50% of openings. Install an egress window at each of the two-bedroom units provided for the fire station.

E) Exterior recreation yard for the jail is required to meet current ACA Core Jail standards. Provide new security closure for recreation yard, with protections at exterior windows and a secure gate.

F) Interior finishes are near or beyond serviceable life. Carpet (except for the newer carpet tile installed in the Courts spaces), sheet vinyl VCT and LVT finishes to be replaced. All vinyl wall coverings to be replaced. 80% of the painted gypsum board interior walls and soffits display extensive "Alligatoring" (see photo on reference line 74 in *"Attachment B Condition Assessment Interior Rooms"),* and must be carefully stripped, repaired, and repainted. Strip and paint floor in Fire Station equipment bay.

G) Life-Safety Renovations:

   a. Repair all compromised fire rated wall and floor-ceiling assemblies.
   b. Repair automatic fire shutters at elevator doors, all three levels.
   c. Install egress windows at the two fire station apartment bedrooms.
   d. Provide magnetic holders coordinated with fire alarm system at doors in fire rated separation walls, six locations.
   e. Provide Seismic bracing at all acoustic ceiling tile grid assemblies.
   f. Replace broken anti-ligature robe hook at detention shower.
   g. Replace device covers in the five secure cells with covers meeting anti-ligature standards (5 total).

H) Accessibility Renovations:

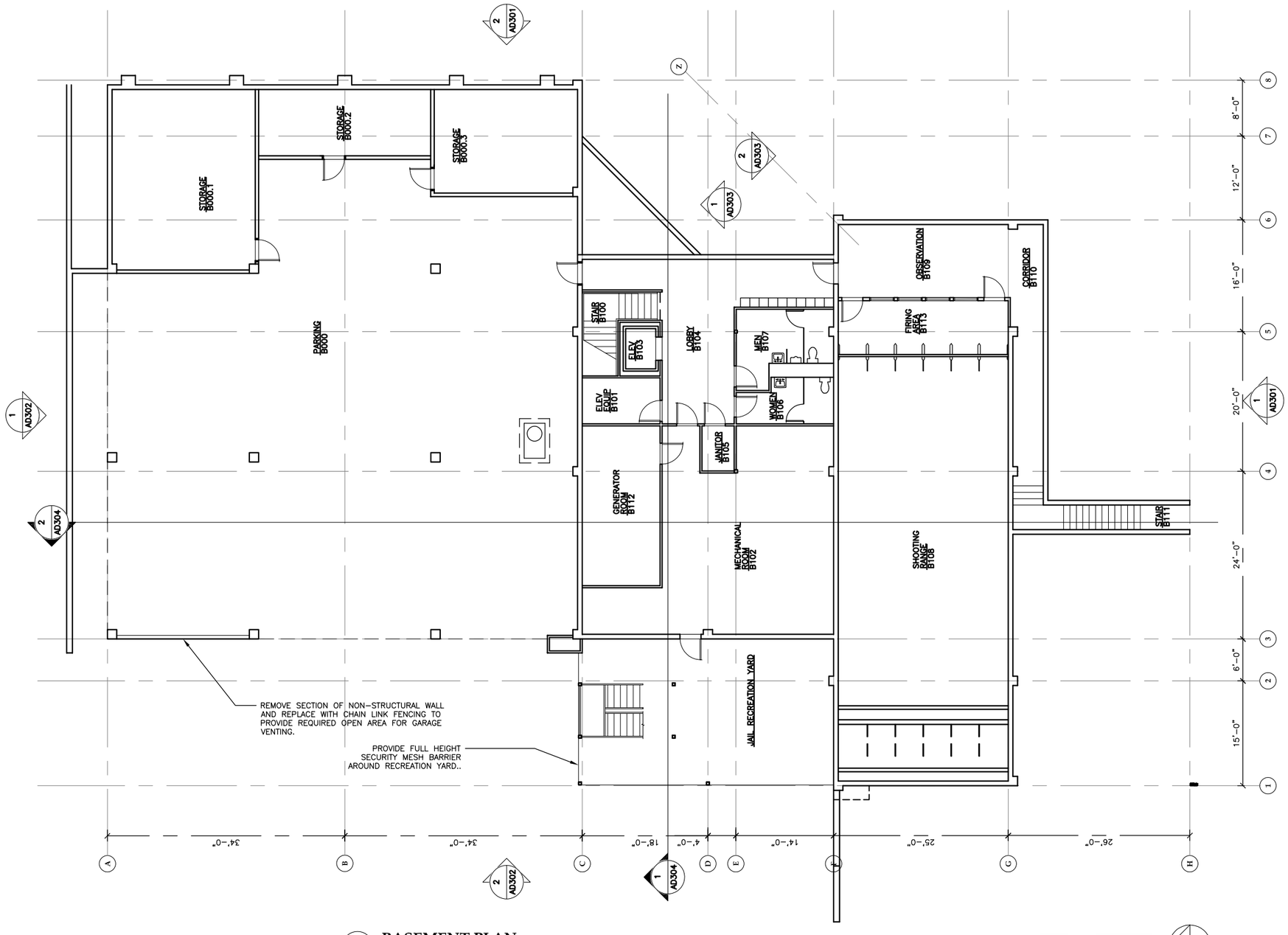
   a. Renovate a total of four public access bathrooms, (two on each level 1 and 2, stacked) to meet accessibility clearance requirements for entry.
   b. Renovate one of the two bathrooms provided in the Jury room to meet accessibility requirements.
   c. Renovate the Courtroom entry (two sets paired doors) to meet accessibility requirements.
   d. Provide motor operator at exterior door of main entry vestibule and interior door to main lobby.
   e. Renovate elevator cab and call controls to meet accessibility standards.
   f. Renovate detention shower to meet accessibility standards.
   g. Relace drinking fountain at basement and first floor with accessibility compliant unit.
   h. Renovate Courtroom configuration to provide wheelchair accessible seating at the jury box, the judge's bench and in the gallery.
   i. Provide accessibility compliant motor operators and controls at doors that do not meet clearance requirements for access/egress on the second floor. Three conditions.
   j. Modify casework to comply with accessibility requirements in 5 locations. This will affect approximately 25 lineal feet of plastic laminate counter and casework.

Architectural Life Expectancy

The life expectancy numbers in this report are based industry standard guidelines such as Building Owners and Managers Association (BOMA) International and the Architects experience with these materials and systems. In general, the lifespan of a commercial or institutional building is approximately 50-60 years between substantial renovations if regularly maintained in a moderate environment. A building in a small coastal community located in Southeast Alaska is subjected to more severe weather conditions and greater logistical challenges related to assessing and performing required maintenance and replacing critical components or systems with shorter lifespans. This results in a shorter building lifespan. The component or system life expectancies noted below are nominal numbers, and with proper care and maintenance, all components can be expected to function as expected beyond its normal life expectancy. If each is replaced and upgraded within its median life span, a building will typically exceed its expected lifespan.

Maintenance Finish or System	**Median Years**
Single Ply Membrane roof (protected EPDM)	20 to 30
Metal Roofing (coated steel, marine environment)	25 to 35
T&G Cedar Siding	30
Paint or stain on Cedar Siding	7 to 10
Metal cladding (steel, marine environment)	30
Clad wood windows	30
Aluminum Entrance doors	20
Insulated Hollow Metal doors and frames	20
Insulated Overhead Doors and Operating Hardware	20
Interior solid core wood doors	25
Door hardware	7 to 10
Gypsum Board Assemblies	30-40
Interior finish: Paint	5 to 10
Interior finish: Vinyl Wall Covering	10
Interior finish: Floor Carpet (traffic and grade variable)	5 to 15
Interior finish: Vinyl Composition Tile (VCT)	15 to 20
Interior finish: Luxury Vinyl Tile (LVT) Plank	10 to 15
Interior finish: Concrete floors (uncoated)	50
Interior finish: Acoustic Ceiling Tile (ACT)	25
Elevator Lift Equipment and Doors	20 to 30
Elevator Cab and controls	10 to 15
Detention/Secure Hardware	25
Plastic Laminate faced architectural casework	20
Residential Appliances	6 to 8
Structure (concrete, wood steel)	Life of Building

RE-CLAD WHOLE BUILDING, REPAIRING ALL DETERIORATED FRAMING SHEATHING AND THERMAL BARRIER.



1 **BASEMENT PLAN**

SCALE: 0 4' 8' 16'

NOTE:
THESE DRAWINGS ARE BASED ON A LIMITED AMOUNT OF INFORMATION ABOUT AN EXISTING BUILDING. THE CONTRACTOR MUST FIELD VERIFY ALL INFORMATION SHOWN AND NOTIFY THE ARCHITECT OF ANY DISCREPANCY PRIOR TO MODIFICATION

City and Borough of Wrangell
Public Safety Building
Condition Assessment Exhibit D
Wrangell, Alaska

FIELD

SHEET TITLE
BASEMENT PLAN

DATE: 10/15/2020
FILE: XXX

A201

RE-CLAD WHOLE BUILDING, REPAIRING ALL DETERIORATED FRAMING SHEATHING AND THERMAL BARRIER.

RECONSTRUCT EAVE ASSEMBLY, FULL LENGTH

REMOVE ALL METAL SIDING, RE-CONSTRUCT AND RE-SIDE APPROX. 50 LF WALL. RECONSTRUCT SOFFIT AND GUTTER ASSEMBLY, FULL LENGTH

PROVIDE FULL HEIGHT SECURITY MESH BARRIER AROUND RECREATION YARD..

APPARATUS BAY 100
LOBBY 112
STAIRS 110
ELEV 111
VESTIBULE 113
OFFICE 127
CORR 126
SQUAD ROOM 128
GARAGE 149
MEN 114
WOMAN 115
EVID. PROP. STORAGE 125
BOOKING 129
LICENSE 108
ARMORY 124
SALLY PORT 130
HOLDING 148
TOILET 116
JNTDYWL 123
CORRIDOR 133
JAN 132
STOR 131
STAIR 147
CORR 122
TECH ROOM 107
DISPATCH 118
OFFICE 119
OFFICE 121
KITCHEN 144
STOR 135
LINEN 137
CIRCULATION 145
DAY ROOM 146
HOSE LOCKER 101
EXT REEL 102
AIR COMP 104
T.R. 104
STAIR 105
OFFICE 106
CIV. TOILET 139
PRIS. TOILET 138
CORR 114
PROPERTY STORAGE 120
CELL 140
CELL 141
CELL 142
CELL 143

8'-0" 12'-0" 16'-0" 20'-0" 24'-0" 6'-0" 15'-0"

34'-0" 34'-0" 18'-0" 4'-0" 14'-0" 25'-0" 26'-0"

A B C D E F G H

1 2 3 4 5 6 7 8

1 **FIRST FLOOR PLAN**

SCALE: 0 4' 8' 16'

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City and Borough of Wragell
Public Safety Building
Condition Assessment Exhibit D
Wrangell, Alaska

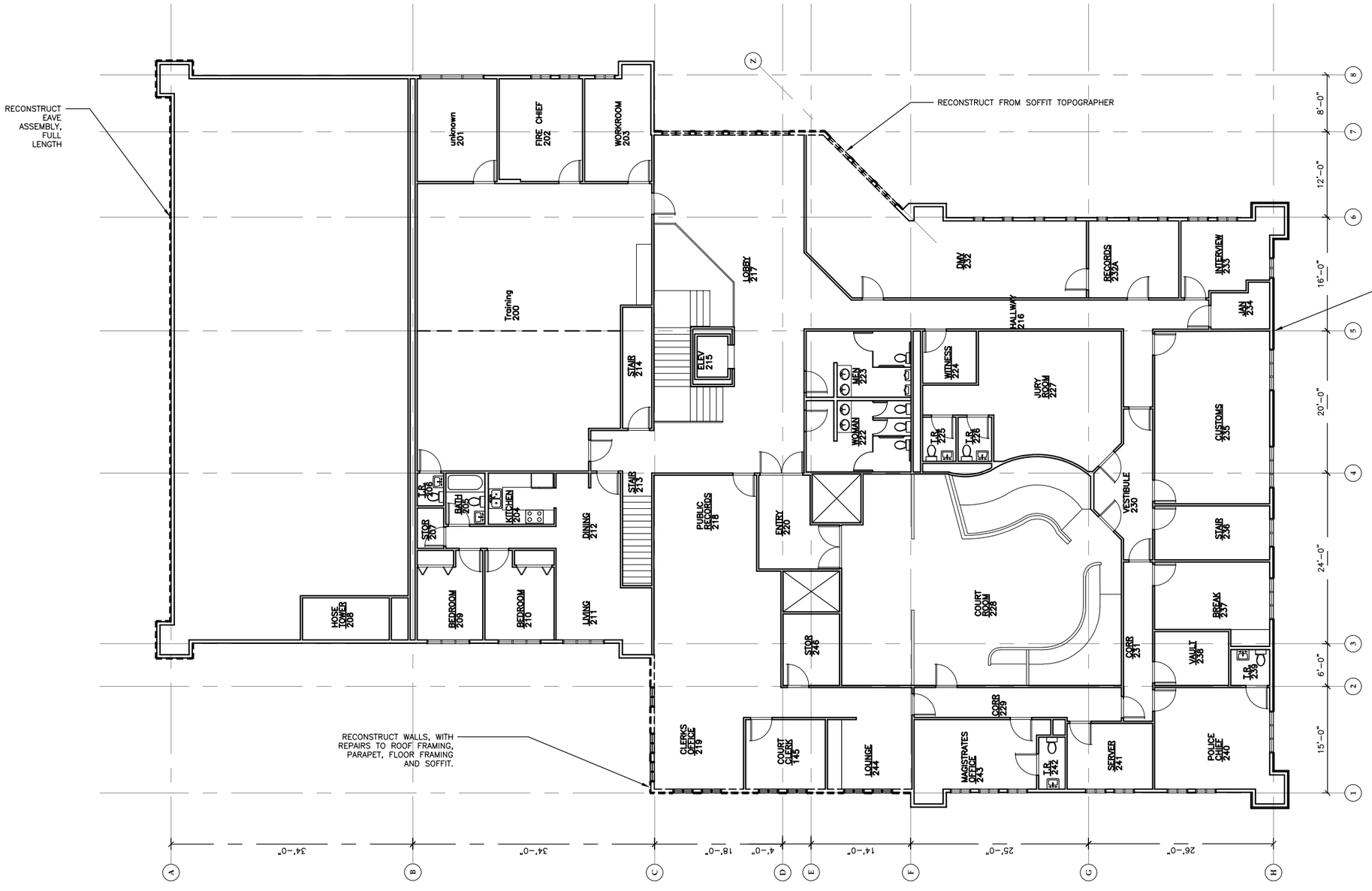
FIELD

SHEET TITLE
FIRST FLOOR PLAN

DATE: 10/15/2020
FILE: XXX

A202

RE–CLAD WHOLE BUILDING, REPAIRING ALL DETERIORATED FRAMING SHEATHING AND THERMAL BARRIER.



1 SECOND FLOOR PLAN

SCALE: 0 4' 8' 16'

NOTE:
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City and Borough of Wrangell
Public Safety Building
Condition Assessment Exhibit D
Wrangell, Alaska

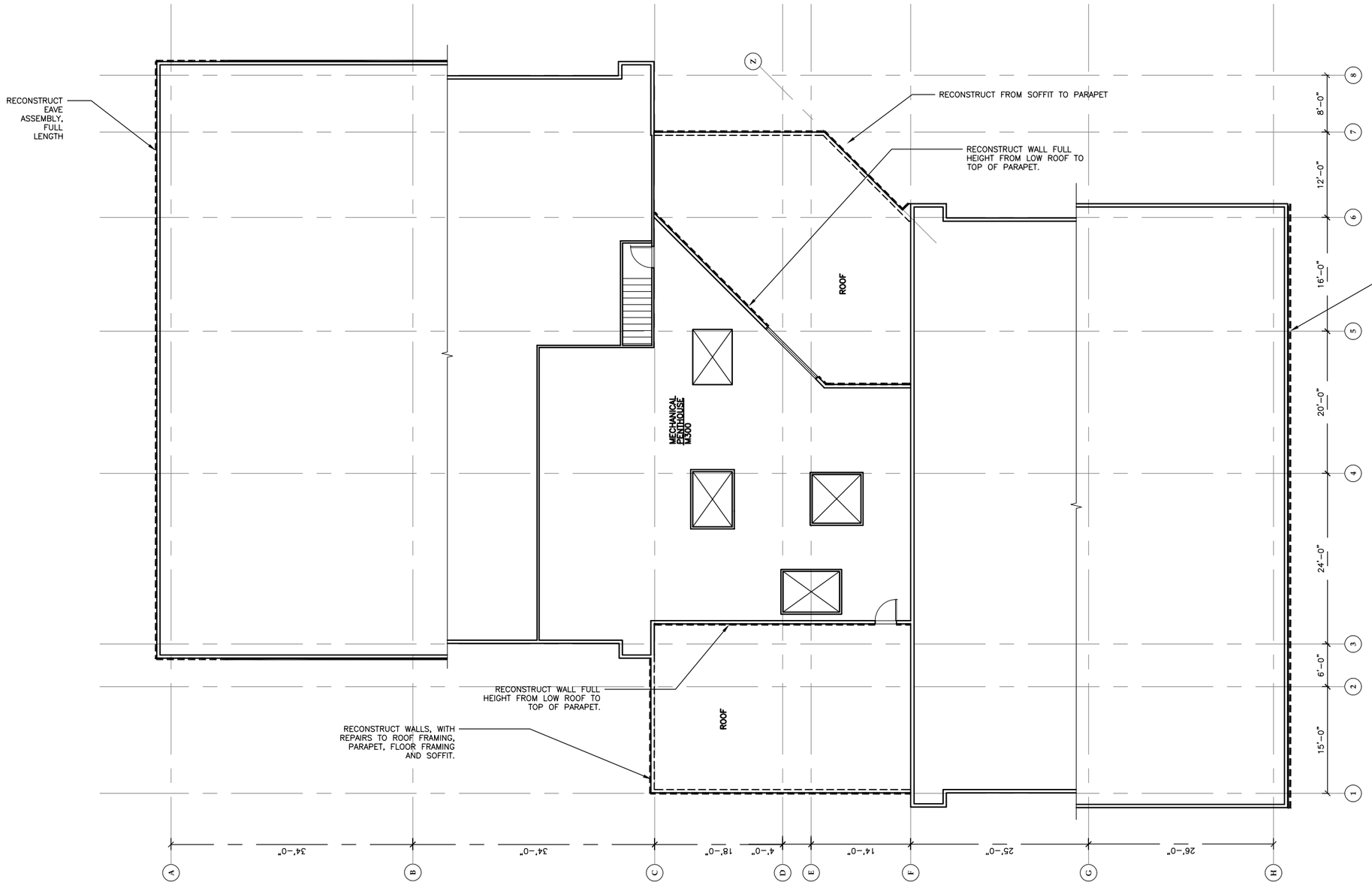
FIELD

SHEET TITLE
SECOND FLOOR PLAN

DATE: 10/15/2020
FILE: XXX

A203

RE-CLAD WHOLE BUILDING, REPAIRING ALL DETERIORATED FRAMING SHEATHING AND THERMAL BARRIER.



1 MECHANICAL LEVEL FLOOR PLAN

SCALE: 0 4' 8' 16'

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City and Borough of Wragell
Public Safety Building
Condition Assessment Exhibit D
Wrangell, Alaska

FIELD

SHEET TITLE
MECHANICAL LEVEL FLOOR PLAN

DATE: 10/15/2020
FILE: XXX

A204

RE-CLAD WHOLE BUILDING, REPAIRING ALL DETERIORATED FRAMING SHEATHING AND THERMAL BARRIER.

1 ROOF PLAN

SCALE: 0 4' 8' 16'

NOTE:
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City and Borough of Wrangell
Public Safety Building
Condition Assessment Exhibit D
Wrangell, Alaska

FIELD

SHEET TITLE

ROOF PLAN

DATE: 10/15/2020
FILE: XXX

A205

Structural Condition Summary

The structural framing ranged from poor to good condition. The structure under the two gable roofs was generally in good condition, while the structure under the flat roofs was in poor condition due to water damage resulting in rot. The structure under the west low flat roof is compromised and is a life safety issue. This area shall be vacated until the floor and roof can be shored. It appears that poor roofing installation at the parapets at the edges of the low flat roofs was the primary cause of water damage. The south exterior wall also in poor condition. It is not clear the cause of the water damage at this wall, but it may be due to poor installation of siding in 2004.

The original structural drawings detail the seismic load resisting system (SLRS) which consists of timber shear walls and diaphragms. A lateral load analysis was not performed on the structure, but based upon inspection of the original structural drawings there do not appear to be any obvious design flaws in the SLRS.

Structural Observations

The following is a list of observations made while onsite. The locations of each observation are referenced in the Structural Exhibit.

Basement

1. Observed Level 1 structural steel floor framing from an existing opening in the ceiling. The fireproofing on the steel beams and steel floor decking all appeared to be intact and there were no signs of water damage or corrosion of the steel.

Level 1

1. A hole was cut in the siding and gypsum sheathing at the base of the wall. The gypsum sheathing was dry. The wall sheathing was in great condition and did not show any signs of water damage.

2. Observed siding and gypsum sheathing (about 3’-0” above base of wall) were fairly dry and solid.

3. A hole was cut in the siding and gypsum sheathing at the base of the wall. The gypsum sheathing was dry. The wall sheathing was in good condition and did not show any signs of water damage.

4. Observed wall framing at base of wall. Wall GWB had previously been removed due to a broken sprinkler line. The wall sheathing and wall studs within 12-18" of the base of the wall were dry rotted and there was carpenter ant damage.

5. Existing wall core infill was removed. The plywood was slightly damp, but not deteriorated.

Level 2

1. Two holes were cut in the siding, gypsum sheathing, and wall sheathing at the Level 2 floor. The wall sheathing was dry rotted. The wall studs, bottom plate, and floor sheathing were slightly soft. The glu-lam beams were slightly moist, but did not appear to be deteriorated. The end of the truss top chords (on top of the glu-lam beams) were solid and in good condition.

2. Observed elevated Level 2 floor framing though hole in soffit. Floor sheathing was soft and had water stains and mold on the underside of it. The glu-lam beams (interior face) and floor joists did not exhibit any signs of deterioration.

3. Attempted to view roof glu-lam beam, but ductwork was in the way. Wall sheathing appeared fairly dry.

4. Observed partition wall framing where there is an ongoing roof leak. There were water stains on the wall GWB. There was no signs of deterioration of the partition wall top plate.

5. Wall and roof framing was observed through existing holes in the ceiling and wall GWB. Ceiling and wall demo was performed due to a broken sprinkler line. Roof joists were dry. There was some surface mold on one wall stud.

6. Observed wall framing where GWB had previously been removed. Wall sheathing, wall studs, and wall bottom plate had significant dry rot and carpenter ants were present.

7. A hole was cut in the soffit below Level 2. Observed Level 2 floor and soffit framing. The soffit framing and sheathing were dry rotted. The glu-lam beam (interior face) and floor joists did not exhibit any signs of deterioration. There were water stains on the floor sheathing, but it did not appear to be compromised.

8. A hole was cut in the siding, gypsum sheathing, and wall sheathing at the Level 2 floor. The wall sheathing, floor sheathing, and wall bottom plate were very wet and punky. The end of a truss top chord (on top of the glu-lam beam) was soft. A

screwdriver could be inserted into the truss top chord, glu-lam beam, floor sheathing, and wall bottom plate at least 1” without much effort.

9. Siding was removed at Level 2 floor. Siding was dry and the tar paper was still intact. The gypsum sheathing was solid and dry.

Mechanical Penthouse/Attic/Low Roofs

1. A hole was cut in the siding, gypsum sheathing, and wall sheathing at the roof level. The wall sheathing, roof sheathing, and parapet bottom plate were rotten. The glu-lam beam was soft and punky. A screwdriver could be inserted into the glu-lam beam over an 1” without much effort.

2. Roof parapet cap was removed. Parapet top plate, studs, and bottom plate were completely rotted through.

3. Ballast and insulation were removed, and roofing was peeled back. Insulation was wet, but not waterlogged. Wall and roof sheathing were damp and soft.

4. Observed wall framing at base of wall through an existing hole in the GWB. Bottom plate and studs did not show any signs of deterioration. Wall sheathing was soft.

5. A tarp had previously been installed on the wall below the parapet in item 31. Maintenance was not sure when the tarp was installed or for what reason the tarp was installed.

6. Woodpeckers had made two holes in the wall, including one that went all the way through the wall cavity.

7. The parapet top plate was very flexible when pushed on. The parapet plywood on the roof side was extremely soft and gave way when pushed on.

8. Siding and wall sheathing were removed at a previous opening in the wall at the roof level. The wall sheathing was rotten. The floor sheathing and glu-lam beam were very wet and completely rotten. A screwdriver could be inserted into the sheathing all the way to the handle.

9. Siding was removed at the base of the wall. Gypsum sheathing and plywood were damp.

10. Siding was removed at midheight of the wall. Gypsum sheathing and plywood were damp.

11. A hole was cut in the GWB ceiling to view the built-up structural steel top chord of the roof truss in observation 29. The WF beam top chord did not display any signs of deterioration or overstress. The beveled timber plates on top of top chord did not have a consistent top elevation, which could result in differential deflection of the roof sheathing.

12. A hole was cut in the GWB ceiling to view the built-up structural steel top chord of the roof truss in observation 29. The WF beam top chord did not display any signs of deterioration or overstress.

High Roofs

1. A metal panel was removed from the concealed gutter enclosure. All the gutter framing visible was dry and there were no signs of water damage. The main wall sheathing was also dry. The main wall studs were not visible.

   The gutter assembly was visibly deflecting to the north. Straps that had been installed to restrain the gutter were damaged in numerous locations. Lag screws anchoring the straps at the roof had pulled out of the roof and the straps were bent from sliding snow and ice.

   Two existing wall core infills below the gutter assembly were removed. In both locations, the gypsum sheathing and plywood were slightly damp, but not deteriorated.

2. The metal roof appears to be deflecting considerably near Grid B (at built-up structural steel roof truss). The deflection has resulted in the metal roofing vertical ribs to buckle.

3. Maintenance has reported a recent leak in the roof just south of the existing drain. The roof was observed to be very bouncy. The roof framing (glu-lam beam, joists, and roof sheathing) in this area was observed in three places by removing the ceiling below. There were water stains and some mold on the joists and sheathing, but there was no deterioration.

4. Roof parapet cap was removed. A moisture meter was used to measure 40% moisture in the top plate of the parapet.

Structural Recommendations

1. Demolish and replace existing exterior walls, parapets, Level 2 floor framing, and roof framing at west low flat roof (between Grids 1 and 3 and between Grids C and F). Existing glu-lam beams along Grids 3 and F can remain. Existing tube steel columns along Grids 1, 3, and F can also remain.

2. Demolish and replace existing glu-lam floor beams, glu-lam roof beams, exterior wall, and parapets at the east edge of the east low flat roof (along Grids 7 and Z and between Grids C and F). Existing Level 2 floor and roof joists west of these beams will need to be shored during this work. Existing tube steel columns at Grids 6-F and 7-Z can remain.

3. Inspect existing Level 2 floor joists and floor sheathing under the east low flat roof (between Grids 4.5 and 7 and between Grids C and F) for moisture damage and replace or treat as required. We recommend budgeting the replacement of the floor sheathing within 24” of the exterior wall.

4. Demolish and replace existing roof sheathing at the high flat roof and the east low flat roof (between Grids 3 and 7 and between Grids C and F). Existing roof joists shall be inspected for moisture damage and replaced or treated as required.

5. Demolish and replace existing exterior walls and parapets between the lower and upper flat roofs (walls between Grids C and F and along Grids 3.2, Grid 4.6, and diagonal wall from Grids E.2-4.6 to Grids C-6). Existing roof joists north of the diagonal wall will need to be shored during this work.

6. Demolish and replace existing exterior wall sheathing at exterior walls between gable roofs and flat roofs (along Grids C and F). Existing wall studs shall be inspected for moisture damage and replaced or treated as required.

7. Inspect existing exterior wall along Grid H for moisture damage. Wall sheathing and studs shall be replaced where rotten. We recommend budgeting the replacement of all of the exterior wall sheathing within 24” of the base of the wall. We also recommend budgeting for all the wall studs to be sintered with a 12’ stud and then have the bottom 24” removed.

8. Inspect existing exterior wall sheathing and exterior wall studs at the remaining exterior walls for moisture damage and replace or treat as required. We recommend budgeting the replacement of 50% of the exterior wall sheathing and 10% of the exterior wall studs at these walls.

9. Demolish and replace framing at the concealed gutter system at the north side of the building. The new framing shall enclose the existing gutter depression. New gutters shall be attached to the face of soffit framing.

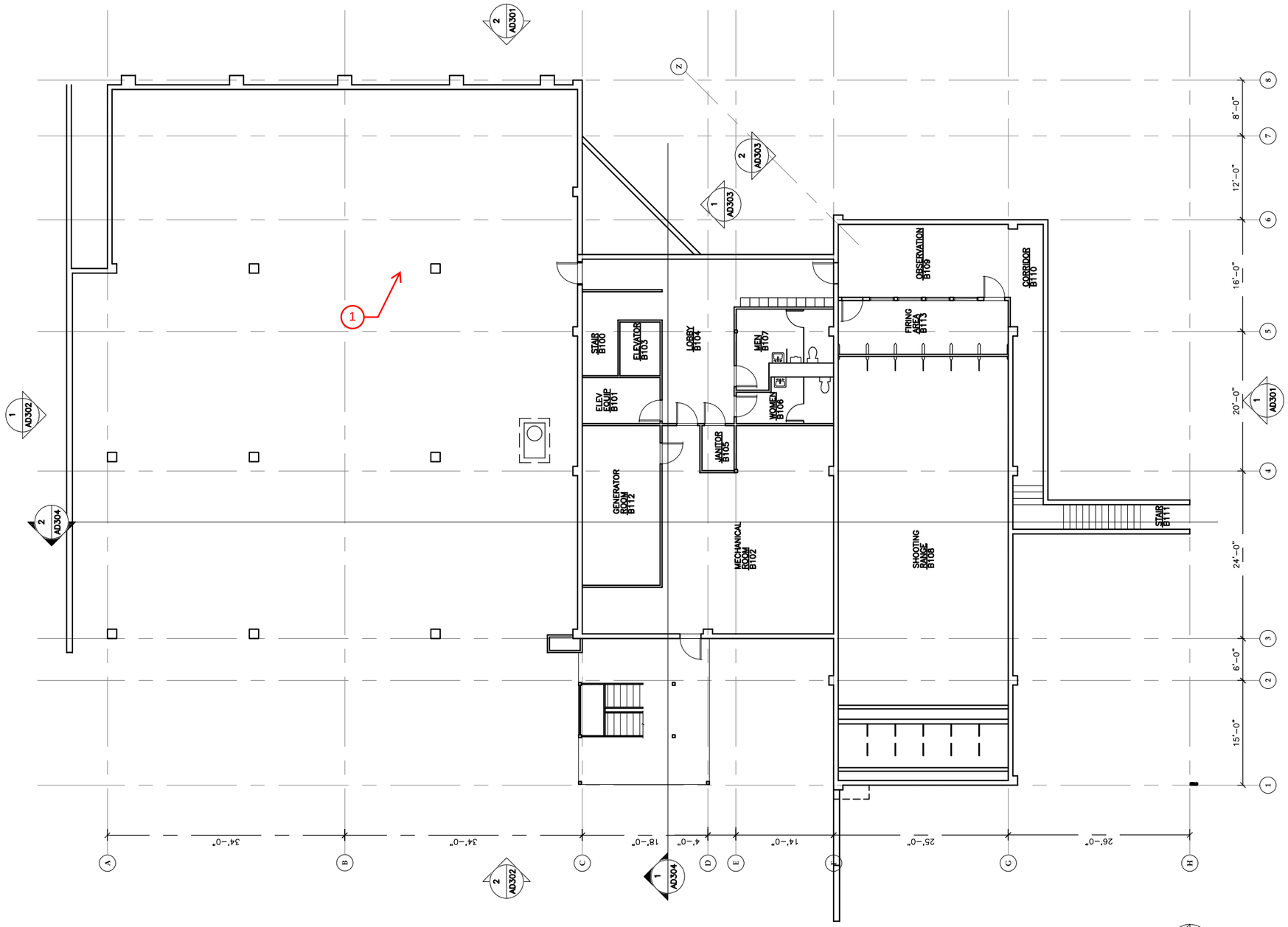
10. Inspect existing roof sheathing at the gable roofs for moisture damage and replace or treat as required. We recommend budgeting the replacement of 20% of the roof sheathing at these roofs.

11. Paint the exterior one-story structural steel framed stairs at the west side of the building with exterior paint. Steel surface shall be prepped per the paint manufacturers recommendations.

12. A seismic upgrade of the structure is not required by the International Existing Building Code unless modifications are made to the occupancy of the structure, the seismic weight of the structure, or the existing seismic load resisting system (SLRS). Modifications to the seismic weight of the structure would include replacing mechanical/electrical equipment with new equipment weighing significantly more or replacing roofing/siding with a product that is significantly heavier. Modifications to the SLRS would include removing shear walls or diaphragms or cutting large openings in shear walls or diaphragms.

    These modifications are not currently part of the scope of the renovation. Therefore, a seismic upgrade is not required and is not part of the scope of work of the renovation. If any of these modifications become part of the renovation, a seismic upgrade may become necessary. There are minor inexpensive upgrades to the SLRS that would be prudent to include in the renovation. These upgrades include verifying shear wall/diaphragm nailing and add nailing where required (when siding and roofing is replaced) and adding hold-downs in shear walls without substantial dead load.

13. Once the renovation is complete, the life expectancy of the structural framing (neglecting the seismic system) will be that of a new structure which is typically designed for a minimum 50-year lifespan. This assumes the exterior envelope is properly maintained. If the exterior envelope is not properly maintained, the life expectancy of the structural framing could be less than 50 years.



1 BASEMENT PLAN

SCALE: 0 4' 8' 16'

NOTE:
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City and Borough of Wragell
Public Safety Building
Wrangell, Alaska

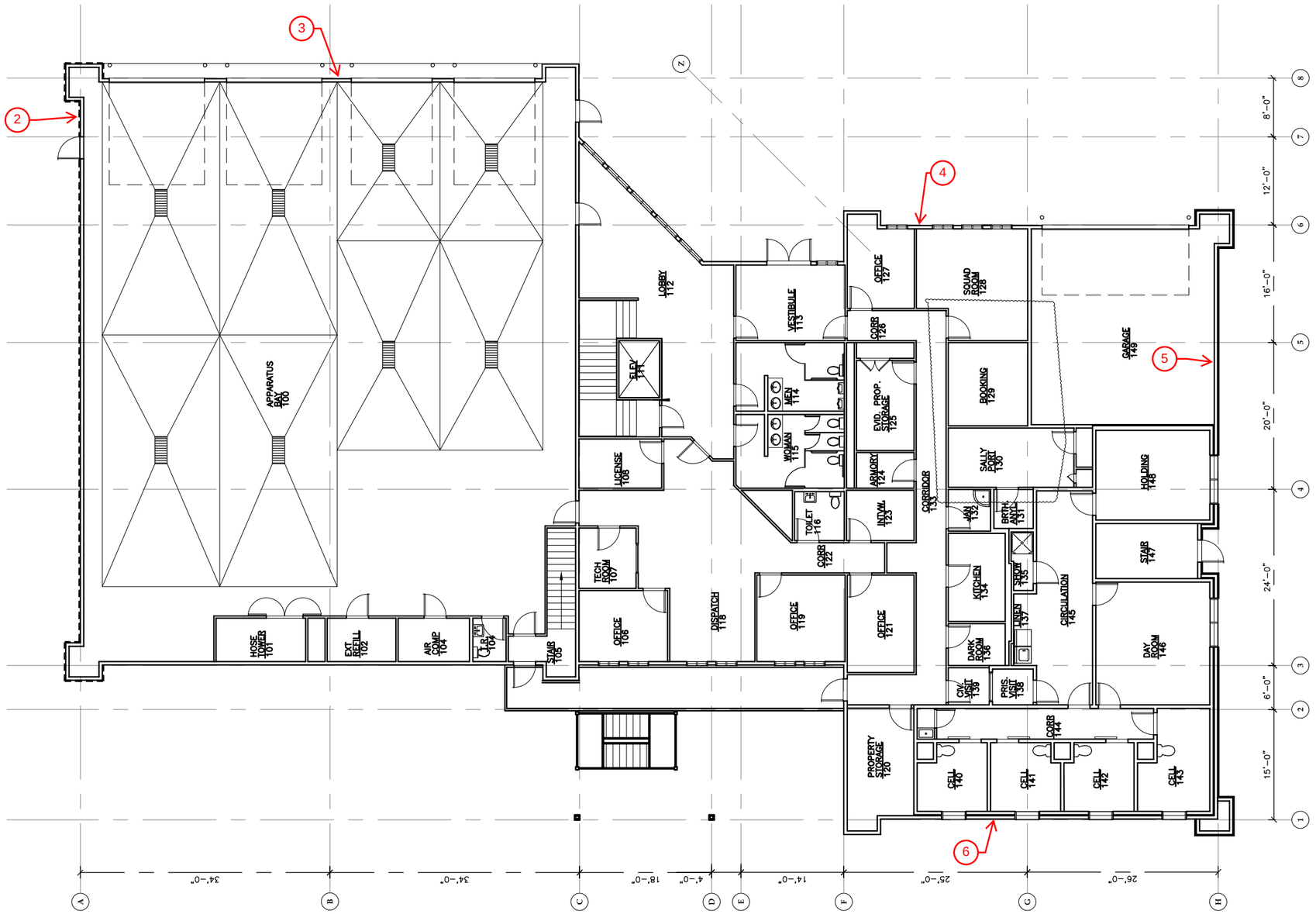
FIELD

REVISIONS
1 .
2 .
3 .

SHEET TITLE
BASEMENT PLAN

DATE: 9/16/2020
FILE: XXX

A201



1 FIRST FLOOR PLAN

SCALE: 0 4' 8' 16'

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Public Safety Building

Wrangell, Alaska

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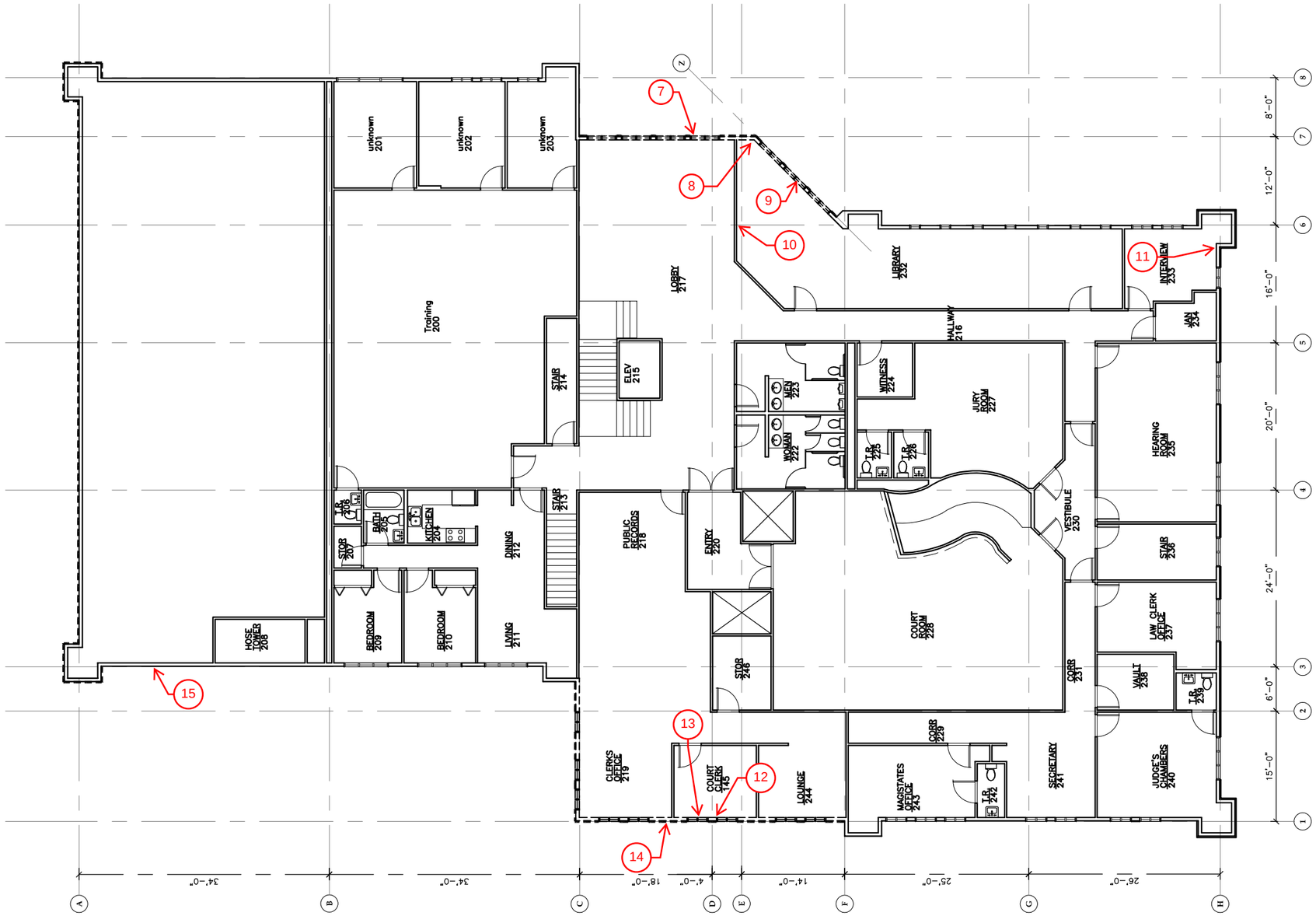
SHEET TITLE
FIRST FLOOR PLAN

DATE: 9/16/2020
FILE: XXX

A202



1 **SECOND FLOOR PLAN**

SCALE: 0 4' 8' 16'

NOTE:
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City and Borough of Wragell
Public Safety Building
Wrangell, Alaska

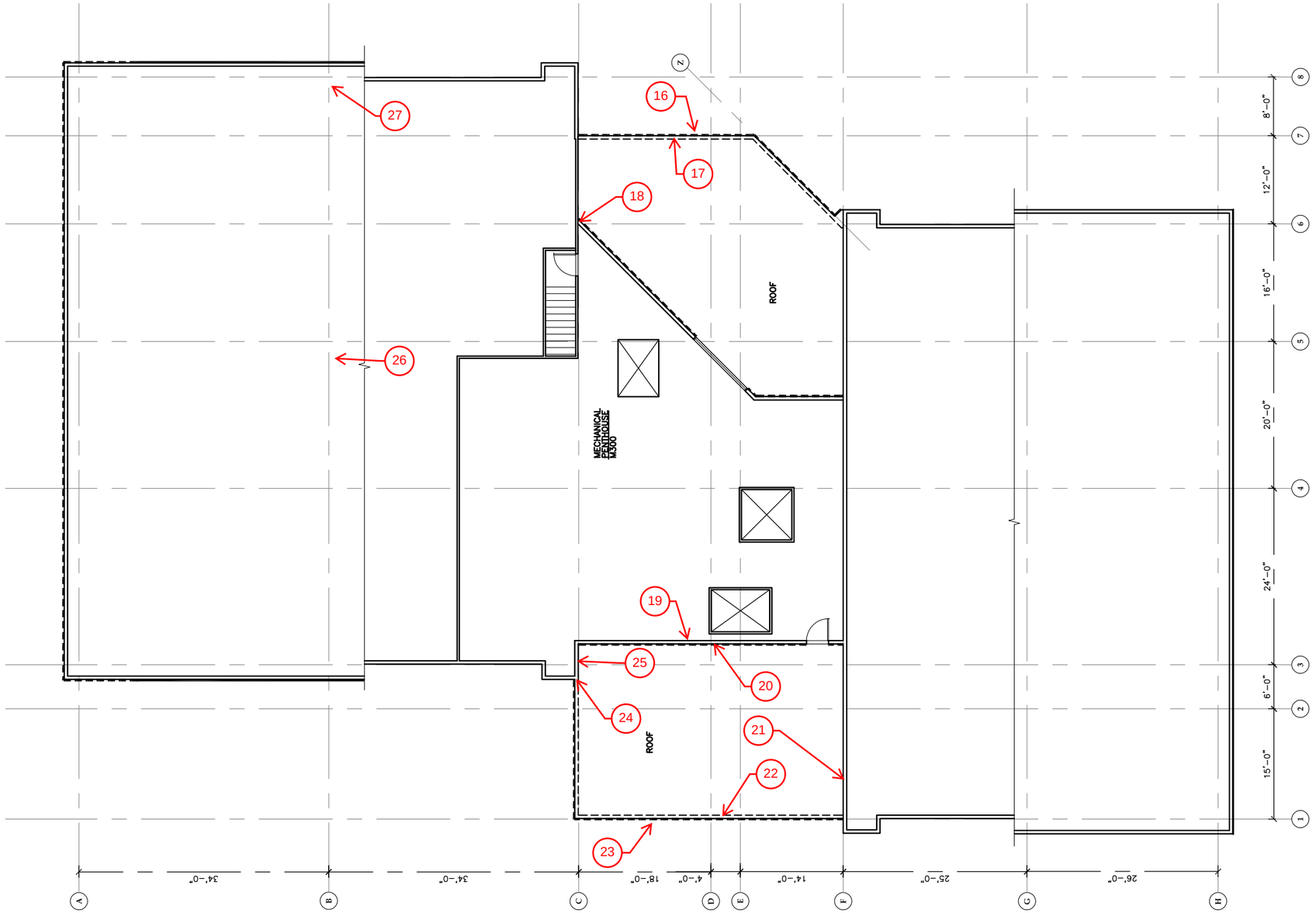
FIELD

REVISIONS

SHEET TITLE
SECOND FLOOR PLAN

DATE: 9/16/2020
FILE: XXX

A203



1 MECHANICAL LEVEL FLOOR PLAN

SCALE: 0 4' 8' 16'

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City and Borough of Wragell
Public Safety Building
Wrangell, Alaska

FIELD

REVISIONS
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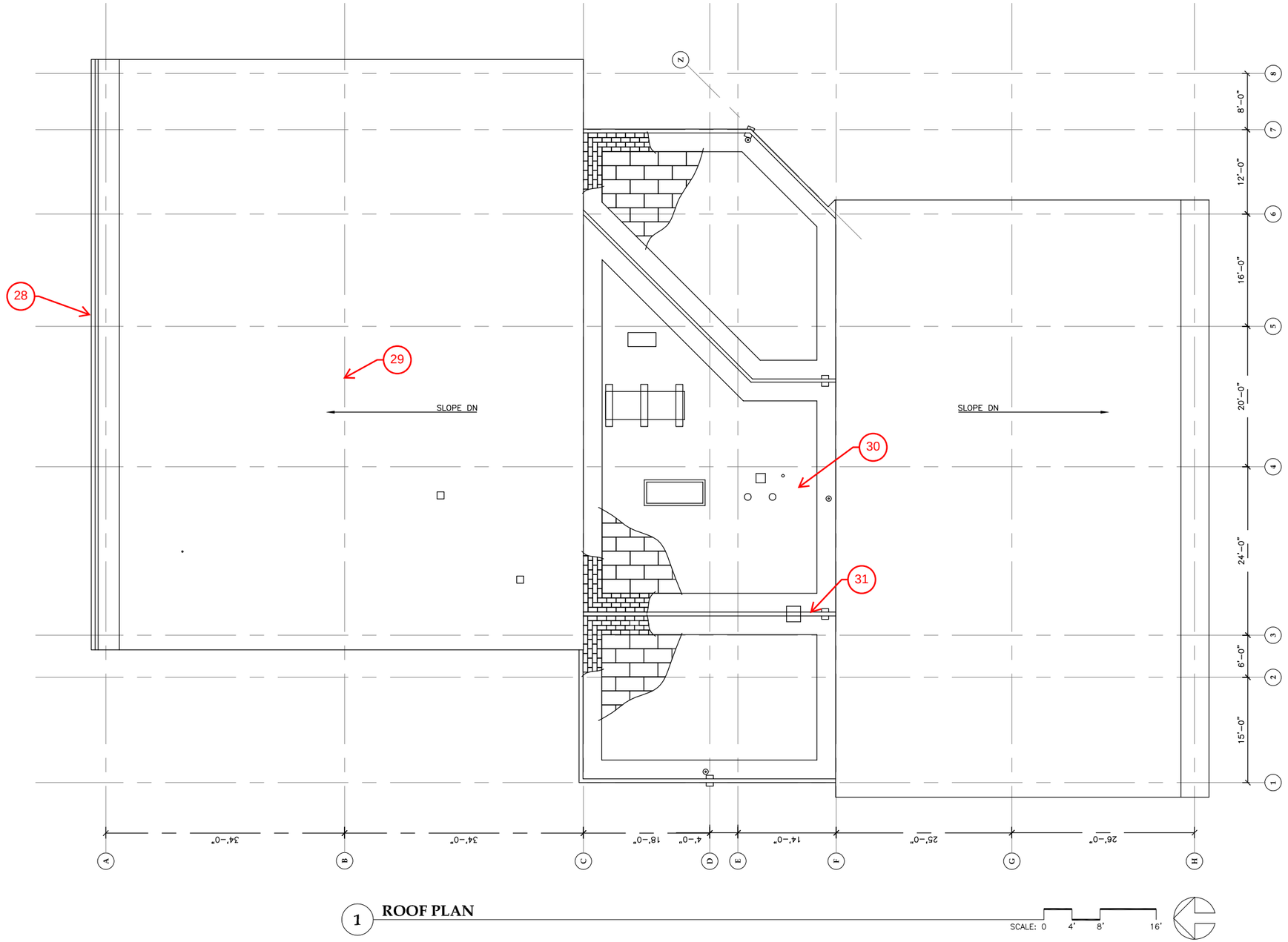
SHEET TITLE
MECHANICAL LEVEL
FLOOR PLAN

DATE: 9/16/2020
FILE: XXX

A204



1 ROOF PLAN

SCALE: 0 4' 8' 16'

NOTE:
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City and Borough of Wrangell
Public Safety Building
Wrangell, Alaska

FIELD

REVISIONS
1 .
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SHEET TITLE
ROOF PLAN

DATE: 9/16/2020
FILE: XXX

A205

Mechanical Condition Summary

Several of the mechanical systems within the facility are original and are operating as designed, with the exception of the building controls, but are nearing the end of their useful life expectancy. Mechanical systems observed include plumbing, fuel oil, fire protection, heating, cooling, ventilation, and HVAC system controls.

The mechanical systems throughout the building are interconnected. Temporary heating and ventilation may be necessary to incorporate phased construction in order to keep portions of the building operational while work is being performed.

Equipment throughout the building does not appear to be seismically restrained. Mechanical equipment and systems will need to be analyzed to determine appropriate seismic restraints to be provided for this essential facility.

Life Expectancy: The Life Expectancy numbers in this report are based on ASHRAE guidelines, industry standards (RS Means) and AMC Engineer's experience with these types of systems and equipment. The life expectancies noted are nominal numbers and equipment, if properly maintained, can be expected to continue to function beyond its nominal life expectancy, although it may no longer function as originally intended and may require excessive or constant maintenance to maintain functionality. Numbers below are equipment items from the ASHRAE Service Life Estimates guidelines:

Equipment Item	**Median Years**
Boilers Steel (Fire-Tube)	25
Boiler Burners	21
Unit Heater (Hot Water)	20
Diffusers, Grilles, and Registers	27
Ductwork	40
Fans (Centrifugal)	25
Fans (Axial)	20
Fans (Roof-Mounted)	20
Pumps (Pipe Mounted)	10
Glycol Heating Solution	20
Piping	40

Existing Condition: The following definitions are used in the narrative for describing the conditions of the individual elements and systems assessed. Additional notes may be offered to explain various characteristics observed during the inspection.

EXCELLENT Condition	Near New Condition. Not requiring capital expenditures at this time.
GOOD Condition	Reasonable Condition. Not requiring capital expenditures or replacement at this time.
FAIR Condition:	Deteriorating Condition. Nearing the end of its useful life or requires immediate maintenance. Likely to deteriorate to Poor Condition if not addressed.
POOR Condition:	Observable deterioration and/or operational problems. Has reached the end of its useful life and requires immediate replacement or maintenance.
UNKNOWN condition	Unable to observe condition due to lack of accessibility.

Suitability for Existing Use: This report includes statements on whether equipment is suitable for its current existing use. This assessment is based on limited observation and is intended to convey whether the equipment, as installed, is in at least Fair Condition and is fulfilling its original intended function. For example, a light fixture is suitable for its intended use if it is operable and provides light. There may be other issues such as are lighting levels appropriate in the area the fixture is lighting that are not addressed by this assessment.

Compliant with Existing Standards: The report indicates whether equipment is compliant with existing standards. This means that it appears to be operating as designed and appears to be in compliance with current codes and standards. Equipment that is suitable for its existing use but does not meet the expected standard for performance is considered noncompliant. Note that these assessments are based on limited investigations and there may non-compliant items that were not observed or reported.

Observations:

Plumbing: The facility receives its domestic cold water supply from the city's potable water distribution system. The 3-inch domestic water main contains a pressure reducing valve and the pressure read by a gauge downstream of the valve at the time of the site visit was approximately 80 PSI. No issues were reported with the building's domestic cold water service and the available pressure and water main size appears adequate to provide domestic, potable, water for this building.

Domestic hot water is generated and stored in a single 116-gallon Rheem electric water heater installed in 2010. The water heater appears in good condition, but may need to be replaced in the next 5-10 years based on expected useful life on an electric water heater. The domestic hot

water system has no central tempering valve, point-of-use tempering valves, or thermometer to determine distributed water temperature to the building. A single domestic water recirculation pump returns hot water back to the water heater.

Domestic wastewater from fixtures flows by gravity to below the basement slab on grade to the city's central wastewater drainage system. An interceptor pit is installed in the basement parking garage. No issues with the building's sanitary waste drainage were reported during the site visit.

Rain water is collected by roof drains on the central, flat roof area and collected below the basement level slab and routed to the city's storm water collection system. Gutters collect storm water on the sloped roofs and discharge to the city's storm water collection system below grade. The flat roof is a built-up roof system with pavers with significant moss and vegetation growth. Roof drain bowls uncovered while on site were dirty and filled with moss and vegetation. Roof drainage overflow is accomplished through wall scuppers.

Plumbing fixtures throughout the facility are generally commercial grade with penal fixtures in the corrections area holding cells. The bubblers on two of the penal fixtures were inoperable during the site visit. The building plumbing fixtures show a significant amount of wear including chrome pitting on flush valves. However, the fixtures were still operational except for the penal fixtures noted.

Fuel Oil: The facility is supplied fuel oil by an exterior below ground fuel oil storage tank located on the west side of the building near the basement level Boiler Room. The underground storage tank has a sight gauge fuel level indicator located in the basement Boiler Room, but was reported as being faulty and unreliable.

Fuel oil is routed underground to an interior day tank serving the generator and the fuel-oil fired boiler. Fuel oil overflow from the day tank and return from the boiler is routed back to the underground fuel oil storage tank via gravity. I

ADEC records show the original 1984 4,000 gallon underground heating fuel oil tank is a non regulated cathodically protected steel tank with galvanized steel pipes. The tank and piping do not have secondary containment. No reports of a fuel oil spill were found on the ADEC site. The tank is past its expected life and does not meet current standards.

Fire Protection: The facility is served by a single wet pipe riser and a single dry pipe riser located in the basement Boiler Room. The wet pipe system is broken into five zones with dedicated flow switches and serves a majority of the building. The dry pipe system serves the canopies, second floor roof, and parking garage. The dry pipe system is served by the same air compressor serving the building controls. The system had undergone service January 2020 and had received a new dry valve in January 2019 per service tags located on the risers. The only issues noted on the 2020 fire sprinkler report were some sprinkler heads with visible signs corrosion and some pipes/fittings with leaks.

The sprinkler system appears to be original to the building and will need to be analyzed by an engineer or licensed fire protection contractor to verify it meets current life safety codes based on current building occupancy. Original sprinkler shop drawings or hydraulic calculations are not available.

Hydronic Heating: No Hydronic testing, adjusting, and balancing, TAB, reports were available to document hydronic system performance.

Heat generation is provided by a fuel-oil fired Weil McLain 688 hydronic boiler with Power Flame burner that was ordered in 2015 and installed in 2019. An electric Precision PCW2 boiler was installed in 2010. The boilers appear to be in good condition and should last another 20 years based on expected useful life. Each boiler has a dedicated primary loop circulation pump to maintain flow through the boiler.

Heat distribution is accomplished in a primary-secondary loop configuration. The secondary loop has two sets of constant volume, primary/standby circulation pumps to distribute the hydronic heating fluid through the building. One set of pumps (P-2 & P-3) distributes heating fluid to the ventilation unit heating and pre-heating coils. The other set of pumps (P-4 & P-5) distributes heating fluid to the building's terminal heating units. The building circulation pumps appear to be original to the 1985 expansion project, but are operating as originally designed. The pumps will likely need to be replaced in the next 5-10 years based on expected useful life and are being run at constant volume, which can lead to increased energy usage.

The loop to the terminal heating units goes through a three-way valve that allows the fluid delivered to the building to be tempered. The building utilizes perimeter finned tube for exterior spaces and unit heaters for mechanical spaces, garage, and apparatus bay.

Several areas throughout the building, mostly at terminal heating units, were noisy due to air within the hydronic heating piping. This indicates that, despite having a coalescing air separator in the boiler room, the system is experiencing issues with air entrainment.

Cooling: Space comfort cooling is provided by the air distribution systems. The ventilation unit serving the court area (SF-2) has a direct expansion cooling coil installed to provide mechanical cooling. The other two ventilation units (SF-1 and SF-3) rely on the ambient outdoor air temperature to provide cooling to the building.

Telecom and Electrical Room Cooling: There are currently no dedicated telecom rooms located within the building. Telecom racks located in the building are located in spaces utilized for other purposes like storage and do not have enough heat producing equipment to require a dedicated split system air-conditioning unit.

Ventilation: No Ventilation testing, adjusting, and balancing, TAB, reports were available to document the current supply and return air volumes.

Ventilation to facility levels 1 and 2 are provided by three central, constant volume supply fan units located in the level 3 mechanical room. The units include outside air preheat coils, filters, and hydronic heating coils. The supply fans are Pace units that were installed during the 1985 expansion. The air handlers utilize a hot deck/cold deck system to supply tempered air to individual building zones. The fans appear to be operating as designed and no issues were reported by maintenance personnel, however, these fans are nearing the end of their expected useful life and may need to be replaced in the next 5-10 years.

Three return fans, matched to each supply fan, provide ducted return air from the various areas of the building back to the fan room to either be recirculated or relieved to the exterior of the building. The return fans are Pace units that appear to have been installed during the 1985 expansion. The fans appear to be operating as designed, but are nearing the end of their expected useful life and may need to be replaced in the next 5-10 years.

General building exhaust is provided by multiple exhaust fans that discharge through a wall louver or roof hoods. The exhaust fans are Pace units that appear to have been installed during the

1985 expansion. The fans appear to be operating as designed, but are nearing the end of their expected useful life and may need to be replaced in the next 5-10 years.

The basement level, which consists primarily of the shooting range, is served by a dedicated supply and return fan located in the basement boiler room. The shooting range unit is operated by a manual wall switch located in the firing range. This unit and ventilation system appears to be original to the building construction to serve the firing range. Code requirements serving firing ranges have changed considerably since the original building construction and needs to be analyzed to verify it meets current codes.

The ducting and duct insulation viewed while on site appeared to be in good condition. The ductwork looks to be original to the building construction and 1985 expansion and has likely not been cleaned. It is recommended the ductwork throughout the building be cleaned internally to remove dust, debris, and any mold or mold spores.

Humidity Control: The building has no active humidification or dehumidification equipment. Maintenance personnel indicated the building frequently experiences issues with humidity and condensation forming on interior surfaces.

Building Controls: The building mechanical systems control is accomplished primarily by a pneumatic control system which consists of a central air compressor, air drier, pneumatic control panels, pneumatic valves, and pneumatic damper operators. The pneumatic control system is currently inoperable, and several pneumatic operators have had their pneumatic tubing removed or the actuator removed from the damper linkage. The air handler hot deck/cold deck outside air and return air dampers are manually adjusted by maintenance personnel to maintain zone temperature comfort.

Perimeter finned tube elements have been retrofitted with dedicated control valves with integral space thermal bulb and user adjustable thermostat.

The central boiler system has a Honeywell direct digital control (DDC) system to control and monitor the boilers.

Summary of Current Conditions:

System	Condition Status
Domestic Water	GOOD condition, suitable for existing use, and compliant with existing standards.
Domestic Hot Water	Water Heater: GOOD condition, suitable for existing use, and compliant with existing standards. Hot water distribution system: GOOD condition, suitable for existing use, and compliant with existing standards (except as noted in “Recommendations” section).

Domestic Wastewater	GOOD condition, suitable for existing use, and compliant with existing standards.
Rain Water	Roof Drains: POOR condition and not suitable for existing use. See additional details in “Recommendations” section. Rain water distribution piping: GOOD condition, suitable for existing use, and compliant with existing standards.
Plumbing Fixtures	FAIR condition, suitable for existing use, and compliant with existing standards.
Fuel Oil	Tank: UNKNOWN condition and suitable for existing use. NOT compliant with existing standards. Piping: GOOD condition and suitable for existing use. NOT compliant with existing standards.
Fire Protection	GOOD condition and suitable for existing use. Analysis is required to verify if fire protection system is meeting existing codes per current building usage and code cycles.
Central Boilers	EXCELLENT condition, suitable for existing use, and compliant with existing standards.
Hydronic Pumps	GOOD condition, suitable for existing use, and compliant with existing standards.
Hydronic Distribution	GOOD condition, suitable for existing use, and compliant with existing standards.
Chiller	FAIR condition and suitable for existing use, and compliant with existing standards.
Building Supply Fans	FAIR condition and suitable for existing use. Analysis is required to verify if the supply air system is providing code required outside air ventilation.
Building Return Fans	FAIR condition, suitable for existing use, and compliant with existing standards.
Building Exhaust Fans	FAIR condition and suitable for existing use. Analysis is required to verify if the exhaust air system is providing code required exhaust ventilation.
Firing Range Ventilation System	FAIR condition, NOT suitable for existing use, and NOT compliant with existing standards.

Building Controls	POOR condition and NOT suitable for existing use.

Recommendations:

Observations of mechanical conditions and deficiencies are detailed, with areas, quantities, and recommendations in the following Exhibit and in the subsequent pages:

Exhibit E Mechanical Condition Assessment – 13 Pages

Key mechanical recommendations include but are not limited to:

Plumbing:

1. **Observation/Deficiency:** Domestic hot water system does not meet current code for limiting water temperature at hand wash sinks to prevent scalding.
   a. **Correction:** Provide a single, central tempering valve for building-wide temperature control and ASSE 1070 thermostatic mixing valves at handwash sinks (approximately 17 locations).
2. **Observation/Deficiency:** Two penal fixtures have bubblers that are non-operational.
   a. **Correction:** Replace two penal fixtures with new.
3. **Observation/Deficiency:** Roof drains observed were filled with moss and vegetation and had broken strainers. This could lead to blocked drains and poor drainage off the flat room sections.
   a. **Correction:** Replace roof drains with new (three roof drains total).

Fuel Oil:

1. **Observation/Deficiency:** The underground, single wall fuel oil storage tank is past its expected life and does not meet current standards.
   a. **Correction:** Replace the underground storage tank with a nominal 1,500 gallon Type I double-wall fuel oil above ground storage tank. Provide one 3/4-inch fuel oil supply pipe routed above grade to serve the fuel oil boiler burner with appurtenances and interior “tiger loop”. Provide new 50-gallon day tank with supply and overflow return pumps to serve the generator. Provide 3/4-inch supply and 1-inch return routed above grade from the above ground storage tank to the day tank. Pipe to be welded black steel.

Fire Protection:

1. **Observation/Deficiency:** Fire sprinkler dry pipe system is served by the air compressor also providing air to the inoperable pneumatic control system. Potential future leaks in the pneumatic control system could result in the compressor unable to adequately supply the dry pipe sprinkler system.
   a. **Correction**: Provide dedicated, UL 3/4 Hp dedicated air compressor to serve the dry pipe system.

2. **Observation/Deficiency:** The fire sprinkler system appears to be original to the building and may not meet current life-safety code requirements for the current usage and code cycle.
    a. **Correction:** Obtain the services of a registered Architect to develop an updated life-safety plan for the current building use. Obtain the services of a certified fire protection system designer or licensed fire protection contractor to analyze the existing fire sprinkler system based on the updated life-safety plan to verify any modifications needed to the sprinkler system.

Hydronic Heating:

1. **Observation/Deficiency:** Several areas of the building are experiencing air in the hydronic system which can cause inefficient heating and premature piping failure.
    a. **Correction:** Replace existing expansion tank in the level 3 fan room with appropriately sized diaphragm or bladder type expansion tank in the basement boiler room and refill the hydronic system to purge air.
2. **Observation/Deficiency:** The building circulation pumps (P-2 thru 5) appear to be original to the 1985 building expansion and are also operated at constant volume.
    a. **Correction:** Replace building circulation pumps with primary/standby pumps with integral variable speed drives and provide new control valves for supply fan heating coils and building terminal heating units. Approximately 35 new control valves, two 130 GPM circulation pumps with integral variable speed drives, and two 50 GPM circulation pumps with integral variable speed drives.

Cooling: Existing ventilation units have spaces reserved for direct expansion cooling coils to be installed, however, no complaints were reported regarding the building or occupants overheating.

Telecom and Electrical Room Cooling: No observations or deficiencies requiring any corrections.

Ventilation:

1. **Observation/Deficiency:** Supply fan (SF-3) is currently providing a constant volume of 6,200 CFM (primarily recirculated) to the Apparatus Bay which equates to approximately 1.24 CFM/SF. This is a lot of air to be continuously providing for this type of space and could potentially be reduced for a majority of the year at times to save energy costs. It is also only receiving approximately 600 CFM of exhaust air, which does not meet code requirements for an enclosed parking garage.
    a. **Correction:** Obtain the services of a registered mechanical engineer to analyze the existing space for heating and cooling loads and design a ventilation system to adequately heat, cool, and ventilate the space. Estimate 250 CFM dedicated, constant volume exhaust fan, 3,750 CFM dedicated purge exhaust fan to be operated upon high levels of carbon monoxide or nitrogen dioxide, and new 5,000 CFM variable volume ventilation unit with heating coil to provide make-up, heating, and cooling air.
2. **Observation/Deficiency:** Ductwork appears to be original the building construction and 1985 expansion and has likely never been cleaned.

a. **Correction:** Hire the services of a duct cleaning contractor to clean the internal surfaces of the ducting throughout the building.

3. **Observation/Deficiency:** It is unclear whether the building is receiving adequate outside air for indoor air quality based on the number of occupants in the building and the lack of control over the outside air/return air control dampers.

   a. **Correction:** Obtain the services of a registered mechanical engineer to analyze the existing ventilation systems and building occupancy and provide a recommendation for outside air volumes required. Obtain the services of a NEBB certified testing, adjusting, and balancing agency to balance the ventilation systems to the designed airflows.

4. **Observation/Deficiency:** Supply, return, and exhaust fans are nearing the end of their expected useful life and are operating at constant volume which leads to increased energy usage.

   a. **Correction:** Replace the ventilation system supply and return fans with two variable volume air handler units (approximately 1.2 CFM/SF) and variable air volume boxes with reheat coils (approximately 15 zones) for better zone control and increased energy efficiency.

5. **Observation/Deficiency:** The firing range ventilation system appears to be original to the building construction.

   a. **Correction:** Obtain the services of a professional mechanical engineer to analyze the firing range ventilation system and verify whether it meets current code requirements and industry standards.

Humidity Control:

1. **Observation/Deficiency:** Maintenance personnel indicated the building experiences high humidity levels which condense on interior surfaces causing water damage, mold, and degradation of equipment.

   a. **Correction:** Provide direct expansion cooling coils to supply fans (SF-1 and SF-3) to cool incoming air below dewpoint and assist in removing moisture from the outside air.

Building Controls:

1. **Observation/Deficiency:** The building mechanical systems are primarily controlled by an inoperable pneumatic control system. Except for the boilers, the building does not have any monitoring or alarming capabilities currently functional. Mechanical system valves and dampers are manually adjusted by maintenance personnel to satisfy occupant comfort.

   a. **Correction:** Replace existing building pneumatic controls with direct digital controls and building automation system (BAS).

General:

1. **Observation/Deficiency:** Building mechanical equipment is not seismically restrained.
    a. **Correction**: Hire the services of a professional structural engineer to design seismic restraints for the equipment throughout the essential building.

New Life Expectancy: Replacing or otherwise addressing the existing mechanical and plumbing equipment as outlined above can be expected to extend the life of the addressed systems to a life expectancy approaching (if not equally) the life expectancy of said systems as if they were installed new in a “new” building. There is one caveat to this statement - the quality of the installation and the general maintenance of said systems after they are installed have a great deal to do with the expected life of each respective system.

Electrical Condition Summary

The facility is a two-story structure with basement (Level 0) and penthouse (Level 3) fan room comprising some 34,500 square feet. The building was constructed in 1985. Electrical systems within the facility are mostly original and are functioning adequately with the exception of the fire alarm system. Ongoing maintenance is being provided with some replacement of failed equipment reported and some minor equipment added since the original construction was completed. Electrical systems observed include lighting, power distribution, telecommunications, fire alarm, and video surveillance.

Equipment throughout the building does not appear to be seismically restrained. Electrical equipment and systems will need to be analyzed to determine appropriate seismic restraints to be provided for this essential facility.

Life Expectancy: The Life Expectancy numbers in this report are based on ASHRAE guidelines, industry standards (RS Means) and AMC Engineer's experience with these types of systems and equipment. The life expectancies noted are nominal numbers and equipment, if properly maintained, can be expected to continue to function beyond its nominal life expectancy, although it may no longer function as originally intended and may require excessive or constant maintenance to maintain functionality.

The following major categories of equipment have nominal Life Expectancies as noted below:

1. Lighting Equipment: Lighting equipment typically has an expected life of 15 years.
2. Power Distribution Equipment: Power Distribution equipment and its associated conduit pathways and feeder/branch circuit wiring has a nominal life expectancy of 30 years.
3. Fire Alarm Equipment: Fire alarm equipment has a nominal life expectancy of 15 years.
4. Horizontal Telecom Distribution: Horizontal telecom distribution equipment has a nominal life expectancy of 15 years.
5. Backbone Telecom Distribution: Telecom rooms (including racks, cable support systems, patch panels, etc.) and fiber optic backbone cabling have a nominal life expectancy of 15 years. Copper backbone cabling and backbone conduit pathways and innerducts have a nominal life expectancy of 30 years.
6. Closed Circuit Television System Equipment: CCTV equipment has a nominal life expectancy of 15 years.

The above discussion regarding electrical and other specialty low voltage systems and life expectancy is easily conveniently summarized in the table below:

Equipment Item	**Median Life Expectancy years)**
Lighting Equipment	15
Power Distribution Equipment	30
Fire Alarm Equipment	15
Horizontal Telecom Distribution	15
Backbone Telecom Distribution	30
Closed Circuit Television System Equipment	15

Existing Condition: The following definitions are used in the narrative for describing the conditions of the individual elements and systems assessed. Additional notes may be offered to explain various characteristics observed during the inspection.

EXCELLENT Condition	Near New Condition. Not requiring capital expenditures at this time.
GOOD Condition	Reasonable Condition. Not requiring capital expenditures or replacement at this time.
FAIR Condition:	Deteriorating Condition. Nearing the end of its useful life or requires immediate maintenance. Likely to deteriorate to Poor Condition if not addressed.
POOR Condition:	Observable deterioration and/or operational problems. Has reached the end of its useful life and requires immediate replacement or maintenance.

Suitability for Existing Use: This report includes statements on whether equipment is suitable for its current existing use. This assessment is based on limited observation and is intended to

convey whether the equipment, as installed, is in at least Fair Condition and is fulfilling its original intended function. For example, a light fixture is suitable for its intended use if it is operable and provides light. There may be other issues such as are lighting levels appropriate in the area the fixture is lighting that are not addressed by this assessment.

Compliant with Existing Standards: The report indicates whether equipment is compliant with existing standards. This means that it appears to be operating as designed and appears to be in compliance with current codes and standards. Equipment that is suitable for its existing use but does not meet the expected standard for performance is considered noncompliant. Note that these assessments are based on limited investigations and there may non-compliant items that were not observed or reported.

Observations

Lighting: The building primarily utilizes linear fluorescent type fixtures with a mixture of 40W T12 and 32W T12 lamps, with compact fluorescent and incandescent down lights used in select areas. Interior space lighting is predominantly controlled by manual switches located at room entrances. Interior space lighting is predominantly controlled by low voltage (24V AC) relays which are in turn controlled by common area switches located in centralized locations. These low voltage relays (General Electric (GE) RR-7 and/or RR-9 relays) were somewhat typical for area switching during the 1980s and 1990s.

Select light fixtures appear to have had their lamps replaced with LEDs such as in the Fire Department's Apparatus Bay. Although typically not as effective as light fixtures that have been engineered from the start to function with LEDs, we estimate that some energy and maintenance savings have been realized as a result of the light fixture revisions. We estimate that approximately 10% - 15% of the light fixtures in the facility have been revised in such a manner.

Life Safety emergency lighting is provided by battery backed emergency lighting inverters. These inverters appear to date from the original building construction, although seemingly functional (and reportedly so), they should be replaced due their age and potential difficulty in obtaining parts.

Exit signs are internally illuminated type with a mixture of red and green backlit lettering and with battery back-up.

Building mounted site lighting consists of LED fixtures spaced around the perimeter of the building and recessed high pressure sodium downlights in covered exterior areas. Pole mounted site lighting consists of high intensity discharge (HID) fixtures around the parking surfaces and drive surfaces. Site lighting is controlled via a lighting contactor operated by a photocell.

The interior lighting system is in FAIR condition, is suitable for its existing use, and is compliant with existing standards. The exterior lighting system is in POOR condition, although it is suitable for its existing use, and it is compliant with existing standards.

The Life Safety emergency lighting system is in POOR condition, although suitable for its existing use, and compliant with existing standards, and should be replaced at the earliest convenience.

Although the existing interior lighting system will likely serve the building and building occupants adequately for some time, consideration should be given to a building wide light fixture

replacement with LED style light fixtures.

Power Distribution: The building is served by two (2) electrical services from two different utility transformers.

The first (secondary) electrical service is dedicated to serving the electric boiler located in the boiler room and is a 400 Amp, 480V/277V, 3 phase, 4 wire service.

The second (primary) electrical service is the actual building electrical service and is a 1,000 Amp, 208Y/120V, 3 phase, 4 wire service. The main distribution panel (MDP) for the building is a 1,000 Amp, 208Y/120 Volt, 3-phase, 4-wire switchboard with a 1,000 Amp main circuit breaker located in the MDP. The power distribution system includes branch circuit panels that are located throughout the building.

The building is backed up by a single, interior, 250KW, 208Y/120V, 3-phase, 4-wire, diesel fired engine/generator feeding a 1,000 Amp, 208Y/120 Volt, 3-phase, 4-wire automatic transfer switch (ATS) located within the building in the main electrical room on Level 0. The MDP main circuit breaker section feeds the normal power source input of the ATS. The alternate source input of the ATS is fed from the generator. In turn, the ATS feeds the distribution section of the MDP providing generator power to the entire building. The system is configured in accordance with NEC Article 702 for Optional Standby Systems for this essential facility.

The engine/generator appears to be in POOR condition. The ATS appears to be in POOR condition. Both are showing their age.

The MDP and the standby branch power distribution system appear to be relatively well maintained, but both have reached the end of their useful lives and should be replaced. Similar to the engine/generator, the MDP and the standby branch power distribution system are showing their age.

The MDP and the standby power distribution system are in FAIR condition, are suitable for their existing use, and are compliant with existing standards. The engine/generator and ATS are in POOR condition, although both are suitable for their existing uses, and are compliant with existing standards.

Telecommunications: The system is comprised of a non-uniform cabling plant with multi-port telephone/data outlets located throughout the facility. Telecom outlets appear to have been provided on as-needed basis, leading to what appears to be a haphazard (although functional) installation with no similar installation methods or parts. Cables are routed from each outlet to a local telecommunication room. The horizontal cabling terminates on rack mounted modular patch panels located in floor mounted telecommunication racks. Backbone cabling between telecom racks located in select areas is multi-mode fiber optic cabling.

There are currently no dedicated telecom rooms located within the building. Telecom racks located in the building are in spaces utilized for other purposes like storage. One such area is on Level 1 and looks to predominantly serve the Police Department. This area is in Room 125. The second area is one Level 2 and looks to predominantly serve the Court System. This area is in Room 248. Neither of these two locations are actively cooled, although neither location was observed to be overly warm.

The telecommunication system is in FAIR condition, is suitable for its existing use, although it is not compliant with most existing telecommunications standards (ANSI/TIA-568, 569, 606, and 607).

Given that the essential building serves such an important function for the City and Borough of Wrangell, we recommend installation of a premise wide telecom distribution system with at least one (1) centralized telecom room located on each floor with high bandwidth fiber optic backbone cable connecting the telecom rooms and a uniform horizontal cable plant. The telecom distribution system should be designed and installed in accordance with the latest ANSI/TIA-568, 569, 606, and 607 standards as well as in accordance with the BICSI Telecommunications Distribution Methods Manual.

Fire Alarm System: The system is comprised of a Simplex 2001 hardwired, zone based, conventional fire alarm system. Horn/strobes and strobes are located throughout the facility as generally required by the Code enforced at the time of construction. Smoke detectors are generally provided where required by Code and are generally provided in all rooms, spaces, corridors, and hallways comprising a comprehensive smoke detection system. There are a few locations where they have not been provided and where they are required by Code. These locations are:

1. Sleeping areas in the Fire Department EMT residence area.
2. Above the fire alarm control panel.

Notification appliances are generally provided where required by the Code enforced at the time of construction, although coverage is lacking per current Codes and the American with Disability Act Accessibility Guidelines (ADAAG) requirements.

Recent fire alarm system inspection reports (2017 test report) also indicate that some aspects of the existing fire alarm system are no longer functional. In addition, the existing fire alarm system is 30-35 years old making maintenance problematic as parts become more difficult to obtain. Finally, there have been reported issues with the fire alarm system. These reported issues with the existing fire alarm system are as follows:

1. Failure of fire alarm system backup batteries.
2. Trouble not reported properly when battery removed.
3. Ground fault indicator LED non-functional on lamp test.
4. System failed to operate on battery power.
5. All detectors need sensitivity test as they were slow to respond to smoke.
6. All heat detectors are 20 years beyond their useful life and need replacement.

The fire alarm system no longer meets Code requirements and is in POOR condition, is NOT suitable for its existing use, is NOT compliant with existing standards, and should be replaced at the earliest convenience.

Access Control System: The building does not utilize an electronic access control system. Doors requiring specific personnel access and limiting access to others is done with battery powered cipher locks.

Video Surveillance: The system is an IP based video surveillance system. CCTV cameras have been provided in select areas of the building. Anecdotal reports by those who maintain, operate, and administer the system indicates that the system is operating well and is well

maintained.

The video surveillance system is in GOOD condition, is suitable for its existing use, and is compliant with existing standards.

Recommendations

Observations of electrical conditions and deficiencies are detailed, with areas, quantities, and recommendations in the following Exhibit and in the subsequent pages:

Exhibit F Electrical Condition Assessment – 13 pages

Key Electrical recommendations include but are not limited to:

Lighting:

1. **Observation/Deficiency:** Emergency lighting is provided by vintage emergency lighting inverters likely from the original building construction whose proper operation is suspect.
    a. **Correction:** Replace the three 1,200 VA emergency lighting inverters with new emergency lighting inverters that are UL Listed for the purpose. For the purposes of this report, assume replacement of the three (3) existing 1,200 VA inverters in a "like for like" exchange.
2. **Observation/Deficiency:** Emergency lighting not provided at building exits.
    a. **Correction:** Re-wire some of the exterior lights and connect them to the nearest available emergency lighting inverter circuit.
3. **Observation/Deficiency:** Fan room general purpose lighting is provided by light fixtures utilizing 40W, T12 fluorescent tubes.
    a. **Correction:** Replace the fan room lighting with nominal 1-foot x 4-foot LED fixtures.
4. **Observation/Deficiency:** Jail cell general purpose lighting is provided by penal style, surface mount light fixtures utilizing 40W, T12 fluorescent tubes. Many of these fixture's on/off switches were inoperative and/or faulty. Several of the light fixtures themselves appeared not to function.
    a. **Correction:** Replace jail cell general purpose light fixtures with penal style, surface wall mount LED fixtures.
5. **Observation/Deficiency:** Wiring devices such as light switches appear to date from the original construction. The devices are past their useful life and can be expected to fail at any time.
    a. **Correction:** Replace wiring devices such as light switches with new devices in a "like for like" exchange.

Power:

1. **Observation/Deficiency:** The electrical distribution system and related equipment in this facility are well beyond their RS Means listed useful lives, although they appear to be in fair condition. Due to their age and condition, these items may be expected to fail at any time and be difficult to obtain replacement parts for. This deficiency includes the building's 1,000 Amp Main Distribution Panel (MDP), twelve (12) electrical branch circuit panels and all associated feeders.

a. **Correction:** Replace electrical items and systems that have exceeded their remaining useful life with new, generally of similar size and/or type, including: Main Distribution Panel, one automatic transfer switch, and twelve (12) electrical branch circuit panels and all associated feeders.

2. **Observation/Deficiency**: The backup generator distribution system and related equipment in this facility are well beyond their RS Means listed useful lives and are in poor condition. Due to their age and condition, these items may be expected to fail at any time and be difficult to obtain replacement parts for. This deficiency includes the building's interior backup generator, one automatic transfer switch, and all associated feeders.

   a. **Correction:** Replace electrical items and systems that have exceeded their remaining useful life with new, generally of similar size and/or type, including: one (1) backup generator, one automatic transfer switch, and all associated feeders.

3. **Observation/Deficiency:** Building electrical panels are not labeled for arc flash hazard as required by Code. NFPA 70 (NEC) 110.16 & NFPA 70E.

   a. **Correction:** Perform a short circuit analysis and arc flash hazard study and label electrical panels for their respective arc flash hazard present.

4. **Observation/Deficiency:** No exterior fused service disconnect has been provided for either of the two electrical services.

   a. **Correction:** Provide an exterior fused service disconnect for each of the two electrical services. Provide signage for exterior service disconnects in accordance with the NEC.

5. **Observation/Deficiency:** No signage at service entrance identifying location of stand-by power source.

   a. **Correction:** Provide signage at service entrance identifying location of stand-by power source in accordance with the NEC.

6. **Observation/Deficiency:** Wiring devices such as receptacles appear to date from the original construction. The devices are past their useful life and can be expected to fail at any time.

   a. **Correction:** Replace wiring devices such as receptacles with new devices in a “like for like” exchange.

Special Systems

1. **Observation/Deficiency:** The existing fire alarm system does not function correctly, parts of it are inoperative, aspects of the installation no longer meet Code requirements, the system is obsolete, and maintenance parts are or will become increasingly difficult to obtain.

   a. **Correction:** Replace the existing fire alarm system in its entirety including initiating devices, indicating devices, fire alarm control panel, fire alarm annunciators, etc.

2. **Observation/Deficiency:** The existing telecommunications distribution system does not adhere to any current standards and probably does not adequately serve the building.

a. **Correction:** Provide a telecom distribution system designed and installed in accordance with the latest ANSI/TIA-568, 569, 606, and 607 standards and with the BICSI Telecommunications Distribution Methods Manual.

New Life Expectancy: Replacing or otherwise addressing the existing electrical and other specialty low voltage equipment as outlined above can be expected to extend the life of the addressed systems to a life expectancy approaching (if not equally) the life expectancy of said systems as if they were installed new in a “new” building. There is one caveat to this statement - the quality of the installation and the general maintenance of said systems after they are installed have a great deal to do with the expected life of each respective system.

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Documents

Draft Condition Assessment Report	15-Oct-20
Misc Asbuilt Drawings	

Notes and Assumptions

1 Based on 2022 procurement/2022 construction.
2 Labor rates based on Davis Bacon, 60 hours/week.
3 Assumes open competitive bid procurement.
4 Materials storage area will be designated near the building.
5 SE Alaska contractor.
6 All cost includes general conditions, overhead and profit for subcontractors and geneal contractor. Assumes 40% local hire.

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Description	Estimated Cost	Div.
Architectural	**$3,789,202**	
A-A Roofing, Flat	$192,100	
A-B Sloped Roof	$558,464	
A-C Exterior Siding	$1,136,214	
A-D Exterior Windows and Doors	$328,622	
A-E Exterior Recreation Yard	$25,365	
A-F Interior Finishes	$1,069,752	
A-G Life Safety	$182,820	
A-H Accessibility	$295,865	
Electrical	**$1,155,509**	
E-L1 Emergency Lighting	$52,817	
E-L2 Emergency Lighting	$5,618	
E-L3 Fan Room Lighting	$9,999	
E-L4 Jail Cell General Lighting	$27,277	
E-L5 Replace Receptalces and Switches - See Power	$0	
E-P1 Replace Electrical Equipment	$153,021	
E-P2 Replace Generator Distribution System	$376,221	
E-P3 Short Circuit Analysis, Arc Flash Study	$16,006	
E-P4 Exterior Fused Service Disconnects	$25,631	
E-P5 Signage at Service Entrance	$155	
E-P6 Replace Receptacles and Light Switches	$20,264	
E-SS1 Replace Fire Alarm System	$204,904	
E-SS2 Upgrade Telecommunication Distribution	$263,596	
Hazmat	**$277,257**	
H-F Hazardous Material Recommendations	$277,257	

Wrangell Public Safety Building
Renovation of Existing PSB Building
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Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Description	Estimated Cost	Div.
Mechanical	**$1,416,592**	
M-P1 Domestic Hot Water Tempering Valve	$12,473	
M-P2 Replace Penal Fixtures	$20,012	
M-P3 Replace Roof Drains	$6,160	
M-FO1 Replace Underground Fuel Tank	$119,694	
M-FP1 New Air Compressor	$5,759	
M-FP2 New Life Safety Plan and Fire Sprinkler Update	$149,670	
M-H1 Expansion Tank	$5,003	
M-H2 Repace Circulation Pumps and Control Valves	$64,221	
M-V1 Engineering Study - SF-3	$3,920	
M-V2 Duct Cleaning	$26,136	
M-V3 Engineering Study - Outside Air	$6,534	
M-V4 Ventilation Fans	$387,065	
M-V5 Engineering Study - Firing Range	$6,534	
M-HC1 Add Cooling Coils	$257,638	
M-BC1 Replace Control System with BAS	$318,739	
M-G1 Seismic Restraints	$27,034	

Wrangell Public Safety Building
Renovation of Existing PSB Building
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Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Description				Estimated Cost	Div.
Structural				**$491,136**	
S-1 Replace Framing				$140,381	
S-2 Replace Glulam Beams				$81,584	
S-3 Level 2 Floor Framing and Sheathing				$56,419	
S-4 Roof Sheathing				$23,172	
S-5 Exterior Wall				$13,585	
S-6 Exterior Wall Grids C/F Gable Roof to Flat Roof				$25,573	
S-7 Exterior Wall Grid H				$61,432	
S-8 Exterior Wall				$56,486	
S-9 Gutter/Soffit at North				$9,103	
S-10 Roof Sheathing				$23,401	
Subtotal:				**$7,129,696**	
Phasing Allowance			10.0%	$712,970	
Subtotal:				**$7,650,566**	
Estimating Contingency:			15.0%	$1,147,585	
Escalation For Inflation: (2022)	18 Mths	@ 3.5%	5.3%	$465,921	
Total Estimated Construction Cost:				**$9,264,072**	
Design & Construction Administration	14.0%	percent of Construction		$1,296,970	
Construction Contingency	10.0%	percent of Construction		$926,407	
Total Estimated Project Cost:				**$11,487,449**	

Wrangell Public Safety Building
Renovation of Existing PSB Building
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Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
1	**A-A Roofing, Flat**	**3,300**	**SF**								
2	**Replace Roofing, EPDM**	**3,300**	**SF**								
3	Demo Roof Insulation and Ballasted	3,300	SF	$0.19	$627	0.034	112.2	$12,809		$13,436	$21,070
4	Remove Roof as needed for Structural	1,650	SF			0.029	47.9	$5,468		$5,468	$8,575
5	Patch EPDM Roofing	1,650	SF	$1.80	$2,970	0.043	71.0	$8,106		$11,076	$17,369
6	R50 Avg Tapered EPS Insulation	36,667	BF	$0.60	$22,000	0.003	110.0	$12,558		$34,558	$54,192
7	EPDM 80 Mil	3,300	SF	$1.80	$5,940	0.036	118.8	$13,563		$19,503	$30,584
8	Replace Roof Drains	2	EA	$700.00	$1,400	6.000	12.0	$1,370		$2,770	$4,344
9	Demo Parapet	180	LF	$1.00	$180	0.100	18.0	$2,055		$2,235	$3,505
10	New Parapet 42"tall total	630	SF	$17.00	$10,710	0.229	144.3	$16,474		$27,184	$42,629
11	Coping	180	LF	$25.00	$4,500	0.086	15.5	$1,770		$6,270	$9,832
12											
13											
14	**Subtotal: A-A Roofing, Flat**				$48,327		649.7	$74,173		$122,500	**$192,100**
15											
16											
17											
18	**A-B Sloped Roof**	**13,010**	**SF**								
19											
20	**Metal Roofing**	**13,010**	**SF**								
21	Demo Roofing	13,010	SF	$0.25	$3,253	0.034	442.3	$50,494		$53,747	$84,284
22	Metal Roofing	13,010	SF	$9.00	$117,090	0.086	1,118.9	$127,737		$244,827	$383,928
23	Flashing	590	LF	$5.00	$2,950	0.086	50.7	$5,788		$8,738	$13,703
24	Snow Guards	680	LF	$10.00	$6,800	0.100	68.0	$7,973		$14,773	$19,305
25	Gutters - replace with walls										
26	Underlayment - SAM	13,010	SF	$0.95	$12,360	0.009	117.1	$13,368		$25,728	$40,346
27	Ridge Assembly	168	LF	$25.00	$4,200	0.343	57.6	$6,576		$10,776	$16,898
28											
29											
30	**Subtotal: A-B Sloped Roof**				$146,653		1,854.6	$211,936		$358,589	**$558,464**
31											
32											
33											
34											
35											
36											
37											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
38											
39	**A-C Exterior Siding**										
40	**Exterior South**	**2,073**	**SF**								
41	Demolition, GWB	2,073	SF	$0.19	$394	0.010	20.7	$2,427		$2,821	$3,686
42	Demo Metal Siding	2,073	SF	$0.22	$456	0.029	60.1	$7,047		$7,503	$9,805
43	Metal Siding, Kynar Finish	2,073	SF	$12.00	$24,876	0.086	178.3	$22,735		$47,611	$74,662
44	Furring	1,037	LF	$4.00	$4,146	0.043	44.6	$5,229		$9,375	$12,251
45	Rigid Insulation, 1.5" EPS	3,110	BF	$0.50	$1,555	0.006	18.7	$2,193		$3,748	$4,898
46	Weather Barrier	2,073	SF	$1.30	$2,695	0.009	18.7	$2,193		$4,888	$6,388
47	GWB	2,073	SF	$0.60	$1,244	0.034	70.5	$8,266		$9,510	$12,428
48											
49	**Exterior South**	**1,014**	**SF**								
50	Demolition, GWB	1,014	SF	$0.19	$193	0.010	10.1	$1,184		$1,377	$1,799
51	Demo Wood Siding	1,014	SF	$0.13	$132	0.019	19.3	$2,263		$2,395	$3,130
52	Metal Siding, Kynar Finish	1,014	SF	$12.00	$12,168	0.086	87.2	$11,119		$23,287	$36,518
53	Furring	507	LF	$4.00	$2,028	0.043	21.8	$2,556		$4,584	$5,990
54	Rigid Insulation, 1.5" EPS	1,521	BF	$0.50	$761	0.006	9.1	$1,067		$1,828	$2,389
55	Weather Barrier	1,014	SF	$1.30	$1,318	0.009	9.1	$1,067		$2,385	$3,117
56	GWB	1,014	SF	$0.60	$608	0.034	34.5	$4,045		$4,653	$6,081
57											
58	**Exterior South Insect Infestation**	**60**	**LF**								
59	Demolition, GWB	60	LF	$0.19	$11	0.571	34.3	$4,022		$4,033	$5,270
60	Demo Metal Siding	1,200	SF	$0.22	$264	0.029	34.8	$4,080		$4,344	$5,677
61	Metal Siding, Kynar Finish	1,200	SF	$12.00	$14,400	0.086	103.2	$13,159		$27,559	$43,217
62	Furring	600	LF	$4.00	$2,400	0.043	25.8	$3,025		$5,425	$7,089
63	Rigid Insulation, 1.5" EPS	1,800	BF	$0.50	$900	0.006	10.8	$1,266		$2,166	$2,831
64	Weather Barrier	1,200	SF	$1.30	$1,560	0.009	10.8	$1,266		$2,826	$3,693
65	GWB	1,200	SF	$0.60	$720	0.034	40.8	$4,784		$5,504	$7,193
66											
67	**Exterior South Gutters/Roof Edge**	**85**	**LF**								
68	Rmv Gutter	45	LF	$0.25	$11	0.029	1.3	$152		$163	$213
69	Demo Roof Edge Flashing	45	LF	$0.25	$11	0.057	2.6	$305		$316	$413
70	Metal Roofing	45	SF	$7.00	$315	0.171	7.7	$982		$1,297	$2,034
71	Flashing	45	LF	$4.00	$180	0.057	2.6	$332		$512	$803
72	Gutter	45	LF	$24.00	$1,080	0.200	9.0	$1,148		$2,228	$3,494
73											
74											

Wrangell Public Safety Building
Renovation of Existing PSB Building
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Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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75											
76	**Exterior North**	**3,307**	**SF**								
77	Demo Wood Siding	3,307	SF			0.019	62.8	$7,363		$7,363	$9,622
78	Metal Siding, Kynar Finish	3,307	SF	$12.00	$39,684	0.086	284.4	$36,264		$75,948	$119,099
79	Furring	1,654	LF	$4.00	$6,614	0.043	71.1	$8,336		$14,950	$19,537
80	Rigid Insulation, 1.5" EPS	4,961	BF	$0.50	$2,480	0.006	29.8	$3,494		$5,974	$7,807
81	Weather Barrier	3,307	SF	$1.30	$4,299	0.009	29.8	$3,494		$7,793	$10,184
82											
83	Gutters/Soffit	**75**	**LF**								
84	Rmv Gutter	75	LF	$0.13	$10	0.029	2.2	$258		$268	$350
85	Metal Siding, Kynar Finish	488	SF	$12.00	$5,850	0.086	41.9	$5,343		$11,193	$17,552
86	Rigid Insulation, 1.5" EPS	731	BF	$0.50	$366	0.006	4.4	$516		$882	$1,153
87	Weather Barrier	488	SF	$1.30	$634	0.009	4.4	$516		$1,150	$1,503
88	Flashing	150	LF	$4.00	$600	0.057	8.6	$1,097		$1,697	$2,661
89	Gutter	75	LF	$24.00	$1,800	0.200	15.0	$1,913		$3,713	$5,823
90											
91	**Exterior East**	**4,980**	**SF**								
92	Demolition, GWB	4,980	SF	$0.19	$946	0.010	49.8	$5,839		$6,785	$8,867
93	Demo Wood Siding	4,980	SF	$0.13	$647	0.019	94.6	$11,092		$11,739	$15,341
94	Metal Siding, Kynar Finish	4,980	SF	$12.00	$59,760	0.086	428.3	$54,613		$114,373	$179,355
95	Furring	2,490	LF	$4.00	$9,960	0.043	107.1	$12,557		$22,517	$29,425
96	Rigid Insulation, 1.5" EPS	7,470	BF	$0.50	$3,735	0.006	44.8	$5,253		$8,988	$11,746
97	Weather Barrier	4,980	SF	$1.30	$6,474	0.009	44.8	$5,253		$11,727	$15,325
98	GWB	4,980	SF	$0.60	$2,988	0.034	169.3	$19,850		$22,838	$29,845
99											
100	**Exterior West**	**6,314**	**SF**								
101	Demo Wood Siding	6,314	SF	$0.13	$821	0.019	120.0	$14,070		$14,891	$19,460
102	Metal Siding, Kynar Finish	6,314	SF	$12.00	$75,768	0.086	543.0	$69,239		$145,007	$227,394
103	Furring	3,157	LF	$4.00	$12,628	0.043	135.8	$15,922		$28,550	$37,309
104	Rigid Insulation, 1.5" EPS	9,471	BF	$0.50	$4,736	0.006	56.8	$6,660		$11,396	$14,892
105	Weather Barrier	6,314	SF	$1.30	$8,208	0.009	56.8	$6,660		$14,868	$19,430
106	GWB	6,314	SF	$0.60	$3,788	0.034	214.7	$25,173		$28,961	$37,846
107											
108											
109											
110											
111											

Wrangell Public Safety Building
Renovation of Existing PSB Building
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Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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112											
113	**Insulate Basement Perimeter**	**186**	**LF**								
114	Excavation	165	CY			0.100	16.5	$1,903	$703	$2,606	$4,086
115	Backfill with Excavated Materials	165	CY			0.143	23.6	$2,722	$1,157	$3,879	$6,083
116	Surface Repairs	2,790	SF	$2.00	$5,580					$5,580	$8,750
117	Clean Foundation	744	SF			0.006	4.5	$528		$528	$690
118	Insulation Board, XPS 2" x 4'd	1,488	BF	$0.75	$1,116	0.004	6.0	$703		$1,819	$2,377
119	Protection Board	744	SF	$0.35	$260	0.007	5.2	$610		$870	$1,137
120	Flashing	186	LF	$15.00	$2,790	0.100	18.6	$2,181		$4,971	$6,496
121											
122											
123	**Subtotal: A-C Exterior Siding**				$336,968		3,581.0	$437,334	$1,860	$776,162	**$1,136,214**
124											
125											
126											
127	**A-D Exterior Windows and Doors**										
128	Replace Exterior Door, Frames, Hwe	8	EA	$1,600.00	$12,800	11.000	88.0	$10,318		$23,118	$30,211
129	Relocate Push Button	1	EA	$600.00	$600	4.000	4.0	$469		$1,069	$1,397
130	Repair/Replace Dented Panels	6	EA	$900.00	$5,400					$5,400	$7,057
131	Replace Wood Windows	68	EA	$2,100.00	$142,800	8.571	582.8	$68,333		$211,133	$275,909
132	Replace Detention Windows	6	EA	$1,440.00	$8,640	3.000	18.0	$2,110		$10,750	$14,048
133											
134											
135	**Subtotal: A-D Exterior Windows and Doors**				$170,240		692.8	$81,230		$251,470	**$328,622**
136											
137											
138											
139	**A-E Exterior Recreation Yard**	**45**	**LF**								
140	Demolition	45	LF			0.200	9.0	$1,148		$1,148	$1,800
141	Detention Fencing 24'H	45	LF	$150.00	$6,750	0.400	18.0	$2,295		$9,045	$14,184
142	Concrete at Base	45	LF	$29.63	$1,333	0.370	16.7	$2,129		$3,462	$5,429
143	Manual High Security Gate	1	EA	$1,500.00	$1,500	8.000	8.0	$1,020		$2,520	$3,952
144											
145											
146	**Subtotal: A-E Exterior Recreation Yard**				$9,583		51.7	$6,592		$16,175	**$25,365**
147											
148											

Wrangell Public Safety Building
Renovation of Existing PSB Building
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Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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149											
150	**A-F Interior Finishes**										
151											
152	**Parking**	**20**	**LF**								
153	Demo Framed Partition	20	LF			0.571	11.4	$1,337		$1,337	$1,747
154	Repair Soffit	250	SF	$1.00	$250	0.057	14.3	$1,677		$1,927	$2,518
155	Paint Soffit/ceiling	4,589	SF	$0.20	$918	0.021	96.4	$10,534		$11,452	$17,959
156											
157	**Storage B000.1**	**523**	**SF**								
158	GWB, Fire Taped	523	SF	$0.60	$314	0.034	17.8	$2,098		$2,412	$3,782
159											
160	**Storage B000.2**	**234**	**SF**								
161	GWB, Fire Taped	234	SF	$0.60	$140	0.034	8.0	$943		$1,083	$1,698
162											
163	**Storage B000.3**	**302**	**SF**								
164	GWB, Fire Taped	302	SF	$0.60	$181	0.034	10.3	$1,214		$1,395	$2,188
165											
166	**Mechanical Room B102**										
167	Replace Lockset	1	EA	$380.00	$380	1.500	1.5	$176		$556	$727
168											
169	**Lobby Finishes**	**390**	**SF**								
170	Demo Flooring	390	SF			0.014	5.5	$513		$513	$804
171	Add for ACM	390	SF			0.057	22.2	$2,170		$2,170	$3,403
172	Flooring, Resilient	390	SF	$4.50	$1,755	0.029	11.3	$1,054		$2,809	$4,405
173	Resilient Base	120	LF	$0.75	$90	0.021	2.5	$233		$323	$507
174											
175	Janitor B105	**220**	**SF**								
176											
177	**Observation Finishes**	**259**	**SF**								
178	Recarpet	259	SF	$4.00	$1,036	0.043	11.1	$1,035		$2,071	$3,248
179	Paint Doors	2	EA	$5.00	$10	1.000	2.0	$219		$229	$359
180											
181	**Corridor Finishes**	**156**	**SF**								
182	Repaint Ceiling	156	SF	$0.20	$31	0.021	3.3	$361		$392	$615
183											
184	**Stair Finishes**	**111**	**SF**								
185	Repaint Ceiling	111	SF	$0.20	$22	0.021	2.3	$251		$273	$428

Wrangell Public Safety Building
Renovation of Existing PSB Building
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Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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186											
187	**Firing Area Finishes**	**188**	**SF**								
188	Recarpet	188	SF	$4.00	$752	0.043	8.1	$755		$1,507	$2,363
189	Paint Doors	2	EA	$5.00	$10	1.000	2.0	$219		$229	$359
190											
191	**Apparatus Bay Finishes**	**4,977**	**SF**								
192	Refinish Walls	6,040	SF	$0.20	$1,208	0.020	120.8	$13,200		$14,408	$22,594
193	Prep Floor for Paint	4,977	SF			0.021	104.5	$11,419		$11,419	$17,907
194	Paint Floors	4,977	SF	$2.00	$9,954	0.029	144.3	$15,768		$25,722	$40,336
195											
196	**Hose Tower Finishes**	**72**	**SF**								
197	Refinish Walls	900	SF	$0.20	$180	0.020	18.0	$1,967		$2,147	$3,367
198											
199	**Extinguisher Refill Room Finishes**	**55**	**SF**								
200	Refinish Walls	138	SF	$0.20	$28	0.020	2.8	$306		$334	$524
201	Paint Workbench	1	EA	$20.00	$20	2.000	2.0	$219		$239	$375
202											
203	**Air Compressor Room Finishes**	**57**	**SF**								
204	Refinish Walls	138	SF	$0.20	$28	0.020	2.8	$306		$334	$524
205											
206	**Toilet Room 104 Finishes**	**28**	**SF**								
207	Refinish Walls	210	SF	$0.20	$42	0.020	4.2	$459		$501	$786
208											
209	**Stair 105 Finishes**	**80**	**SF**								
210	Refinish Walls	480	SF	$0.20	$96	0.020	9.6	$1,049		$1,145	$1,796
211	Relocate Handrails	1	LS			8.000	8.0	$945		$945	$1,605
212	Wall Repairs			$50.00		2.000					
213											
214	**Stair 110 Finishes**	**1**	**LS**								
215	Replace VWC	240	SF	$5.00	$1,200	0.057	13.7	$1,497		$2,697	$4,229
216	Repaint Stair Railings	54	LF	$2.00	$108	0.143	7.7	$841		$949	$1,488
217											
218	**Lobby 112 Finishes**	**452**	**SF**								
219	Replace VWC	36	SF	$5.00	$180	0.057	2.1	$229		$409	$641
220	Repaint Door Frames	3	EA	$5.00	$15	0.500	1.5	$176		$191	$250
221	Replace Drinking Fountain	1	EA	$1,600.00	$1,600	6.000	6.0	$703		$2,303	$3,010
222											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
223	**Mens 114**	138	SF								
224	Renovate for Clearance	138	SF	$150.00	$20,700					$20,700	$27,051
225	Grab Bar	1	EA	$50.00	$50	1.000	1.0	$115		$165	$259
226											
227	**Women 115**	**148**	**SF**								
228	Renovate for Clearance	148	SF	$150.00	$22,200					$22,200	$29,011
229	Grab Bar	1	EA	$50.00	$50	1.000	1.0	$115		$165	$259
230											
231	**Bathroom 116**	**46**	**SF**								
232	Refinish Walls	280	SF	$0.20	$56	0.020	5.6	$612		$668	$1,048
233	Demo SV Flooring	46	SF			0.017	0.8	$75		$75	$118
234	Flooring, Resilient	46	SF	$6.00	$276	0.057	2.6	$242		$518	$812
235											
236	**Property Storage**										
237	Test Flooring	1	EA	$350.00	$350					$350	$457
238											
239	**Storage 123**	**63**	**SF**								
240	Test Flooring	1	EA	$350.00	$350					$350	$457
241											
242	**Armory**	**38**	**SF**								
243	Test Flooring	1	EA	$350.00	$350					$350	$457
244											
245	**Evidence Storage/Server**	**115**	**SF**								
246	Test Flooring	1	EA	$350.00	$350					$350	$457
247											
248	**Office 127**	107	SF								
249	Refinish Wood Caps	1	EA	$5.00	$5	2.000	2.0	$219		$224	$351
250	Refinish Wood Door	1	EA	$5.00	$5	1.000	1.0	$109		$114	$179
251	Repaint Metal Frames	2	EA	$5.00	$10	1.000	2.0	$219		$229	$359
252	Recarpet	107	SF	$4.00	$428	0.043	4.6	$429		$857	$1,344
253											
254	**Squad Room**	**211**	**SF**								
255	Refinish Wood Caps	1	EA	$10.00	$10	4.000	4.0	$437		$447	$701
256	Refinish Wood Door	1	EA	$5.00	$5	1.000	1.0	$109		$114	$179
257	Repaint Metal Frames	1	EA	$5.00	$5	1.000	1.0	$109		$114	$179
258	Recarpet	211	SF	$4.00	$844	0.043	9.1	$848		$1,692	$2,653
259											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
260	**Booking 129**	**122**	**SF**								
261	Test Flooring	1	EA	$350.00	$350					$350	$457
262											
263	**Sallyport 130**	**144**	**SF**								
264	Test Flooring	1	EA	$350.00	$350					$350	$457
265	Door Hold	1	EA	$200.00	$200	2.000	2.0	$242		$442	$751
266	Circuiting	1	EA	$100.00	$100	5.000	5.0	$606		$706	$1,199
267											
268	**Storage 131**	**28**	**SF**								
269	Test Flooring	1	EA	$350.00	$350					$350	$457
270	Replace Lockset	1	EA	$380.00	$380	1.500	1.5	$176		$556	$727
271											
272	**Jan 132**	**31**	**SF**								
273	Demo Wainscot	96	SF			0.017	1.6	$188		$188	$246
274	Demo Flooring	31	SF			0.017	0.5	$47		$47	$74
275	Wainscot	96	SF	$5.00	$480	0.043	4.1	$481		$961	$1,256
276	Flooring	31	SF	$6.00	$186	0.057	1.8	$168		$354	$555
277											
278	**Corridor 133**	**258**	**SF**								
279	Test Flooring	1	EA	$350.00	$350					$350	$457
280											
281	**Kitchen 134**	**141**	**SF**								
282	Demolition	1	EA			4.000	4.0	$483		$483	$821
283	Type 2 Hood & Vent System	1	EA	$2,500.00	$2,500	12.000	12.0	$1,450		$3,950	$6,710
284	Transition	1	EA	$50.00	$50	2.000	2.0	$234		$284	$371
285											
286	**Shower 135**	**22**	**SF**								
287	Replace Robe Hook - Anti-Ligature	1	EA	$126.00	$126	0.500	0.5	$59		$185	$242
288	Replace Access Panel	1	EA	$150.00	$150	2.000	2.0	$234		$384	$502
289											
290	**Linen 137**	**29**	**SF**								
291	Replace Washer Box	1	EA	$150.00	$150	3.000	3.0	$354		$504	$856
292	Repair Wall	1	EA	$50.00	$50	2.000	2.0	$236		$286	$448
293											
294	**Prisoner Visit 138**	**27**	**SF**								
295	Repaint HM Relight Frame	1	EA	$10.00	$10	2.000	2.0	$219		$229	$359
296											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
297	**Civilian Visit 139**	**28**	**SF**								
298	Test Flooring	1	EA	$350.00	$350					$350	$457
299											
300	**Secure Corridor 144**	124	SF								
301	Touchup Paint on Metal Frames and Doors	7	EA	$5.00	$35	0.500	3.5	$382		$417	$654
302											
303	**Secure Circulation 145**	**222**	**SF**								
304	Clean and Patch Concrete Floor	222	SF	$1.00	$222	0.043	9.5	$1,114		$1,336	$1,746
305											
306	**Stair 147**	**103**	**SF**								
307	Refinish Walls	400	SF	$0.20	$80	0.020	8.0	$874		$954	$1,496
308	Repair Window Trim	1	EA	$50.00	$50	2.000	2.0	$234		$284	$371
309											
310	**Holding 148**										
311	Replace Call Button	1	EA	$300.00	$300	2.000	2.0	$234		$534	$698
312	Replace Clg Equipment Cover	1	EA	$150.00	$150	1.000	1.0	$117		$267	$349
313											
314	**Garage 149**	**677**	**SF**								
315	Shoring	20	LF	$20.00	$400	0.400	8.0	$938		$1,338	$1,748
316	Demo Wall Framing	160	SF			0.057	9.1	$1,067		$1,067	$1,394
317	Wall Framing	160	SF	$2.00	$320	0.071	11.4	$1,337		$1,657	$2,165
318	GWB	160	SF	$0.60	$96	0.034	5.4	$636		$732	$1,148
319	Repair GWB at Ceiling	677	SF	$0.50	$339	0.034	23.0	$2,697		$3,036	$3,967
320											
321	**Training 200**	**1,200**	**SF**								
322	Upgrade Kitchenette	1	EA	$9,000.00	$9,000	40.000	40.0	$4,690		$13,690	$17,890
323	Replace Flooring	1,200	SF	$6.00	$7,200	0.046	55.2	$5,147		$12,347	$19,362
324	Replace VWC	584	SF	$5.00	$2,920	0.057	33.3	$3,904		$6,824	$8,918
325	Test Flooring	1	EA	$350.00	$350					$350	$457
326											
327	**Fire Chief Office 202**	**166**	**SF**								
328	Replace Carpet	166	SF	$4.50	$747	0.046	7.6	$709		$1,456	$2,283
329											
330	**Records Work 203**	**143**	**SF**								
331	Remove Cabinets	1	LS			8.000	8.0	$938		$938	$1,226
332	Refinish Walls	540	SF	$0.60	$324	0.034	18.4	$2,168		$2,492	$3,908
333	Replace Carpet	143	SF	$4.50	$644	0.046	6.6	$615		$1,259	$1,974

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
334											
335	**Kitchen 204**	**68**	**SF**								
336	Replace Countertops	20	LF	$165.00	$3,300	0.400	8.0	$938		$4,238	$5,538
337	Replace Range	1	EA	$700.00	$700	2.000	2.0	$242		$942	$1,600
338	Replace Refrigerator	1	EA	$1,600.00	$1,600	2.000	2.0	$234		$1,834	$2,397
339											
340	**Bath 205**	**39**	**SF**								
341	Replace Countertops	3	LF	$165.00	$495	0.400	1.2	$141		$636	$831
342											
343	**Toilet 206**	17	SF								
344	Refinish Ceiling	17	SF	$0.60	$10	0.057	1.0	$118		$128	$201
345	Replace Sheet Vinyl Flooring	17	SF	$6.00	$102	0.071	1.2	$112		$214	$336
346											
347	**Storage 207**	22	SF								
348	Replace Washer Dryer	1	EA	$1,400.00	$1,400	4.000	4.0	$469		$1,869	$2,442
349	Refinish Ceiling/Walls	202	SF	$0.60	$121	0.057	11.5	$1,355		$1,476	$2,315
350											
351	**Hose Tower 208**										
352	Refinish Ceiling/Walls	648	SF	$0.60	$389	0.057	36.9	$4,349		$4,738	$7,430
353											
354	**Bedroom 209**	**116**	**SF**								
355	Refinish Ceiling/Walls	460	SF	$0.60	$276	0.057	26.2	$3,088		$3,364	$5,275
356											
357	**Bedroom 210**	**122**	**SF**								
358	Refinish Ceiling/Walls	466	SF	$0.60	$280	0.057	26.6	$3,135		$3,415	$5,355
359											
360	**Living 211**	**157**	**SF**								
361	Refinish Ceiling/Walls	893	SF	$0.60	$536	0.057	50.9	$5,999		$6,535	$10,248
362											
363	**Dining 212**	96	SF								
364	Refinish Ceiling/Walls	608	SF	$0.60	$365	0.057	34.7	$4,089		$4,454	$6,985
365	Replace Bar	1	EA	$3,360.00	$3,360	4.800	4.8	$563		$3,923	$5,127
366											
367	**Stair 213**										
368	Refinish Walls	400	SF	$0.60	$240	0.057	22.8	$2,687		$2,927	$4,590
369											
370											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
371	**Stair 214**										
372	Refinish Walls	400	SF	$0.60	$240	0.057	22.8	$2,687		$2,927	$4,590
373											
374	**Hallway 216**	**300**	**SF**								
375	Refinish Walls	1,260	SF	$0.60	$756	0.057	71.8	$8,462		$9,218	$14,455
376	Replace Carpet	300	SF	$4.50	$1,350	0.046	13.8	$1,287		$2,637	$4,135
377	Replace Rubber Base	126	LF	$0.75	$95	0.021	2.6	$242		$337	$528
378											
379	**Lobby 217**	**816**	**SF**								
380	Modify Railing	26	LF	$150.00	$3,900					$3,900	$6,116
381	Replace GWB Walls	1,035	SF	$0.60	$621	0.057	59.0	$6,953		$7,574	$11,877
382	Replace Wood Slat Ceiling	816	SF	$35.00	$28,560	0.200	163.2	$21,111		$49,671	$64,910
383	Replace Carpet	816	SF	$4.50	$3,672	0.046	37.5	$3,496		$7,168	$11,241
384											
385	**Clerks Office 219**	**153**	**SF**								
386	Reconstruct Exterior Wall	396	SF	$6.50	$2,574	0.279	110.5	$12,956		$15,530	$20,295
387	Windows	5	EA	$1,400.00	$7,000	6.000	30.0	$3,517		$10,517	$13,744
388	Replace Flooring	153	SF	$6.00	$918	0.046	7.0	$653		$1,571	$2,464
389	Replace Ceilings	153	SF	$4.00	$612	0.043	6.6	$854		$1,466	$1,916
390											
391	**Entry 220**										
392	Add Door Operator	2	EA	$6,000.00	$12,000	16.000	32.0	$3,752		$15,752	$20,585
393											
394	**Toilet 225**	**30**	**SF**								
395	Refinish Walls	220	SF	$0.60	$132	0.057	12.5	$1,473		$1,605	$2,517
396	Replace Flooring, Coved	30	SF	$6.00	$180	0.071	2.1	$196		$376	$590
397											
398	**Toilet 226**	**30**	**SF**								
399	Refinish Walls	220	SF	$0.60	$132	0.057	12.5	$1,473		$1,605	$2,517
400	Replace Flooring, Coved	30	SF	$6.00	$180	0.071	2.1	$196		$376	$590
401											
402	**Court Room 228**	**1,136**	**SF**								
403	Refinish Walls/Ceilings	3,236	SF	$0.60	$1,942	0.057	184.5	$21,743		$23,685	$37,142
404											
405	**Corridor 229**										
406	Mag Door Holds & Circuiting	1	EA	$250.00	$250	4.000	4.0	$484		$734	$1,247
407	Refinish Walls	550	SF	$0.60	$330	0.057	31.4	$3,701		$4,031	$6,321

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
408											
409	**Vestibule 230**	**125**	**SF**								
410	Mag Door Holds & Circuiting	6	EA	$250.00	$1,500	4.000	24.0	$2,907		$4,407	$7,487
411	Refinish Walls	620	SF	$0.60	$372	0.057	35.3	$4,160		$4,532	$7,107
412	Replace Flooring	125	SF	$4.50	$563	0.046	5.8	$541		$1,104	$1,731
413	Replace Rubber Base	62	LF	$0.75	$47	0.021	1.3	$121		$168	$263
414											
415	**Corridor 231**	**79**	**SF**								
416	Refinish Walls	400	SF	$0.60	$240	0.057	22.8	$2,687		$2,927	$4,590
417	Replace Carpeting	79	SF	$4.50	$356	0.046	3.6	$336		$692	$1,085
418	Replace Rubber Base	40	LF	$0.75	$30	0.021	0.8	$75		$105	$165
419											
420	**DMV 232**	**521**	**SF**								
421	Replace Carpeting	521	SF	$4.50	$2,345	0.046	24.0	$2,238		$4,583	$7,187
422	Replace Ceiling Tile	4	SF	$2.00	$8	0.014	0.1	$12		$20	$26
423											
424	**Records 232A**	**137**	**SF**								
425	Replace Carpeting	137	SF	$4.50	$617	0.046	6.3	$587		$1,204	$1,888
426											
427	**Janitor 234**	**47**	**SF**								
428	Replace Flooring	47	SF	$6.00	$282	0.046	2.2	$205		$487	$764
429											
430	**Customs 235**	**390**	**SF**								
431	Replace Carpeting	390	SF	$4.50	$1,755	0.046	17.9	$1,669		$3,424	$5,369
432	Replace Baseboard Heating	24	LF	$65.00	$1,560	0.600	14.4	$1,701		$3,261	$5,540
433											
434	**Stair 236**										
435	Replace Door Latchset	1	EA	$350.00	$350	1.500	1.5	$176		$526	$687
436	Refinish Walls	380	SF	$0.60	$228	0.057	21.7	$2,557		$2,785	$4,367
437											
438	**Break 237**										
439	Replace Carpeting	166	SF	$4.50	$747	0.046	7.6	$709		$1,456	$2,283
440	Replace Baseboard Heating	12	LF	$65.00	$780	0.600	7.2	$851		$1,631	$2,771
441											
442	**Toilet 239**										
443	Refinish Walls	220	SF	$0.60	$132	0.057	12.5	$1,473		$1,605	$2,517
444											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
445	**Police Chief 240**										
446	Replace Carpeting	244	SF	$4.50	$1,098	0.046	11.2	$1,044		$2,142	$3,359
447	Replace Baseboard Heating	40	LF	$65.00	$2,600	0.600	24.0	$2,835		$5,435	$9,233
448											
449	**Server 241**	**153**	**SF**								
450	Replace Baseboard Heating	12	LF	$65.00	$780	0.600	7.2	$851		$1,631	$2,771
451											
452	**Toilet 242**	**27**	**SF**								
453	Refinish Walls	240	SF	$0.60	$144	0.057	13.7	$1,615		$1,759	$2,758
454	Replace Flooring, Coved	27	SF	$6.00	$162	0.071	1.9	$177		$339	$532
455											
456	**Magistrate's Office 243**	**182**	**SF**								
457	Replace Carpeting	182	SF	$4.50	$819	0.046	8.4	$783		$1,602	$2,512
458	Replace Baseboard Heating	21	LF	$65.00	$1,365	0.600	12.6	$1,488		$2,853	$4,847
459											
460	**Lounge 244**	**196**	**SF**								
461	Remove/Replace ACT	196	SF	$4.00	$784	0.051	10.0	$1,294		$2,078	$2,716
462	Remove/Replace GWB	440	SF	$0.60	$264	0.057	25.1	$2,958		$3,222	$5,053
463	Replace Flooring	196	SF	$4.50	$882	0.046	9.0	$839		$1,721	$2,699
464	Replace Sink	1	EA	$700.00	$700	6.000	6.0	$709		$1,409	$2,394
465	Reconstruct Exterior Wall	120	SF	$6.50	$780	0.279	33.5	$3,928		$4,708	$6,152
466											
467	**Court Clerk 245**	**109**	**SF**								
468	Remove/Replace ACT	109	SF	$4.00	$436	0.051	5.6	$724		$1,160	$1,516
469	Remove/Replace GWB	430	SF	$0.60	$258	0.057	24.5	$2,887		$3,145	$4,932
470	Replace Flooring	109	SF	$4.50	$491	0.046	5.0	$466		$957	$1,501
471	Reconstruct Exterior Wall	115	SF	$6.50	$748	0.279	32.1	$3,764		$4,512	$5,896
472											
473	Storage 246	**80**	**SF**								
474	Refinish Walls	360	SF	$0.60	$216	0.057	20.5	$2,416		$2,632	$4,127
475											
476	**Mechanical M300**										
477	Repair GWB	15	SF	$6.67	$100	0.533	8.0	$938		$1,038	$1,356
478											
479	**Interior Doors - Wood**	**82**	**EA**								
480	Paint/Seal Doors	82	EA	$15.00	$1,230	1.000	82.0	$8,960		$10,190	$15,980
481											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
482	**Overall Finishes**										
483	Paint Interior	54,350	SF	$0.25	$13,588	0.029	1,576.2	$184,808		$198,396	$259,264
484	Cover/Protect devices	34,844	SF	$0.20	$6,969	0.014	487.8	$57,194		$64,163	$83,848
485											
486											
487	**Subtotal: A-F Interior Finishes**				$220,845		4,662.7	$536,927		$757,772	**$1,069,752**
488											
489											
490											
491	**A-G Life Safety**										
492											
493	**Repair Fire Walls**	1	LS	$1,000.00	$1,000	80.000	80.0	$9,380		$10,380	$13,565
494											
495	**Elevator Shutters**										
496	Repair OH Fire Shutter	3	EA	$5,000.00	$15,000					$15,000	$19,602
497											
498	**Office 127**										
499	Shutter Assemble at Window	1	EA	$2,550.00	$2,550	40.000	40.0	$3,812		$6,362	$9,977
500											
501	**Egress Windows**										
502	Bedroom 209,210										
503	Install Egress Window	2	EA	$1,725.00	$3,450	6.000	12.0	$1,407		$4,857	$6,347
504											
505	**Mag Door Holds and Circuiting**	6	EA	$250.00	$1,500	6.000	36.0	$4,360		$5,860	$9,955
506											
507	**Seismic Brace Ceilings**	34,844	SF	$0.30	$10,453	0.020	696.9	$81,711		$92,164	$120,440
508											
509	**Replace Robe Hooks, Anti-Ligature**	5	EA	$56.00	$280	1.000	5.0	$586		$866	$1,132
510											
511	**Replace Cell Ceiling Device Covers**	5	EA	$100.00	$500	1.500	7.5	$879		$1,379	$1,802
512											
513											
514											
515	**Subtotal: A-G Life Safety**				$34,733		877.4	$102,135		$136,868	**$182,820**
516	Average Unit Price for this division is: $55.40 per SF based on 3,300 SF										
517											
518											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
519	**A-H Accessibility**										
520											
521	**Stair Handrails**										
522	Demo Handrails	24	LF			0.100	2.4	$281		$281	$367
523	New Handrails	26	LF	$35.00	$910	0.200	5.2	$610		$1,520	$1,986
524	Wall Repairs	26	SF			0.007	0.2	$24		$24	$38
525	Paint	260	SF	$0.20	$52	0.021	5.5	$601		$653	$1,024
526											
527	**Women's Room**	**82**	**SF**								
528	Renovate for Clearance	1	EA	$15,000.00	$15,000					$15,000	$19,602
529	Repaint Walls	410	SF	$0.20	$82	0.021	8.6	$940		$1,022	$1,603
530	Demo Flooring	82	SF			0.014	1.1	$103		$103	$162
531	Add for ACM	82	SF			0.057	4.7	$459		$459	$720
532	Flooring, Resilient	82	SF	$4.50	$369	0.029	2.4	$224		$593	$930
533	Resilient Base	41	LF	$0.75	$31	0.021	0.9	$84		$115	$180
534											
535	**Men's Room**	**120**	**SF**								
536	Renovate for Clearance	1	EA	$15,000.00	$15,000					$15,000	$19,602
537	Repaint Walls	510	SF	$0.20	$102	0.021	10.7	$1,169		$1,271	$1,993
538	Demo Flooring	120	SF			0.014	1.7	$158		$158	$248
539	Add for ACM	120	SF			0.057	6.8	$665		$665	$1,043
540	Flooring, Resilient	120	SF	$4.50	$540	0.029	3.5	$326		$866	$1,358
541	Resilient Base	51	LF	$0.75	$38	0.021	1.1	$103		$141	$221
542											
543	**Bathroom 116**	**46**	**SF**								
544	Replace Fixture Hardware	2	EA	$200.00	$400	2.000	4.0	$473		$873	$1,483
545	Add Grab Bars	1	SET	$150.00	$150	2.000	2.0	$234		$384	$502
546	Adjust Fixtures for ADA	2	EA	$200.00	$400	6.000	12.0	$1,418		$1,818	$3,088
547											
548	**Court Room 228**	**1,136**	**SF**								
549	Remodel for Accessibility	300	SF	$150.00	$45,000					$45,000	$58,806
550											
551	**Elevator**										
552	Repair Elevator Controls	3	EA	$5,000.00	$15,000					$15,000	$19,602
553											
554											
555											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
556	**Vestibule 113**										
557	Add Door Operator	1	EA	$6,000.00	$6,000					$6,000	$7,841
558	Renovate Service Counter	1	EA	$2,500.00	$2,500	16.000	16.0	$1,876		$4,376	$5,719
559											
560	**Public Records 218**										
561	Renovate Service Counter	1	EA	$2,500.00	$2,500	16.000	16.0	$1,876		$4,376	$5,719
562											
563	**Office 127**										
564	Shutter Assemble at Window	1	EA	$2,550.00	$2,550	40.000	40.0	$3,812		$6,362	$9,977
565	Renovate Counter for Accessibility	1	EA	$400.00	$400	4.000	4.0	$469		$869	$1,136
566											
567	**Women 222**	**148**	**SF**								
568	Renovate for Clearance	148	SF	$150.00	$22,200					$22,200	$29,011
569											
570	**Mens 223**	**137**	**SF**								
571	Renovate for Clearance	137	SF	$150.00	$20,550					$20,550	$26,855
572											
573	**Toilet 225**	**30**	**SF**								
574	Add Grab Bars	1	SET	$150.00	$150	2.000	2.0	$234		$384	$502
575	Add Mixing Valve	1	EA	$125.00	$125	1.000	1.0	$118		$243	$413
576											
577	**Jury Room 227**										
578	Add Accessible Bathroom	1	EA	$35,000.00	$35,000					$35,000	$45,738
579											
580	**Toilet 239**										
581	Grab Bars	1	SET	$150.00	$150	3.000	3.0	$352		$502	$656
582											
583	**Toilet 242**	**27**	**SF**								
584	Add Grab Bars	1	SET	$150.00	$150	2.000	2.0	$234		$384	$502
585	Add Mixing Valve	1	EA	$125.00	$125	1.000	1.0	$118		$243	$413
586											
587	**Replace Drinking Fountain**	1	EA	$1,600.00	$1,600	6.000	6.0	$709		$2,309	$3,923
588											
589	**Lounge 244**	**196**	**SF**								
590	Remove Casework/Replace	1	LS	$150.00	$150	18.000	18.0	$2,110		$2,260	$2,953
591											
592											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
593	**Court Clerk 245**	**109**	**SF**								
594	Remove Casework/Replace	1	LS	$400.00	$400	16.000	16.0	$1,876		$2,276	$2,974
595											
596	**Vestibule 220**										
597	Replace Pairs of Doors	2	EA	$4,150.00	$8,300	20.000	40.0	$4,690		$12,990	$16,975
598											
599											
600											
601	**Subtotal: A-H Accessibility**				$195,924		237.8	$26,346		$222,270	**$295,865**
602											
603											
604											
605	**E-L1 Emergency Lighting**										
606	Replace 1200 VA Lighting Inverters	3	EA	$10,000.00	$30,000	3.000	9.0	$1,090		$31,090	$52,817
607											
608											
609	**Subtotal: E-L1 Emergency Lighting**				$30,000		9.0	$1,090		$31,090	**$52,817**
610	Average Unit Price for this division is: $283.96 per LF based on 186 LF										
611											
612											
613	**E-L2 Emergency Lighting**										
614	Rewire Exterior Lights, connect to inverter	8	EA	$50.00	$400	3.000	24.0	$2,907		$3,307	$5,618
615											
616											
617	**Subtotal: E-L2 Emergency Lighting**				$400		24.0	$2,907		$3,307	**$5,618**
618											
619											
620											
621	**E-L3 Fan Room Lighting**										
622	Replace 1x4 LED Fixtures	15	EA	$180.00	$2,700	1.750	26.3	$3,186		$5,886	$9,999
623											
624											
625	**Subtotal: E-L3 Fan Room Lighting**				$2,700		26.3	$3,186		$5,886	**$9,999**
626											
627											
628											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
629	**E-L4 Jail Cell General Lighting**										
630	Replace with Penal Style Lights	25	EA	$400.00	$10,000	2.000	50.0	$6,056		$16,056	$27,277
631											
632											
633	**Subtotal: E-L4 Jail Cell General Lighting**				$10,000		50.0	$6,056		$16,056	**$27,277**
634											
635											
636											
637	**E-L5 Replace Receptalces and Switches - See Power**										
638											
639											
640	**Subtotal: E-L5 Replace Receptalces and Switches - See Power**										
641											
642											
643											
644	**E-P1 Replace Electrical Equipment**										
645	Replace GDP 400A	1	EA	$6,500.00	$6,500	56.000	56.0	$6,783		$13,283	$22,566
646	Replace MDP 1000A	1	EA	$15,000.00	$15,000	120.000	120.0	$14,535		$29,535	$50,175
647	Replace Panelboards 200A	12	EA	$2,000.00	$24,000	16.000	192.0	$23,256		$47,256	$80,280
648											
649											
650	**Subtotal: E-P1 Replace Electrical Equipment**				$45,500		368.0	$44,574		$90,074	**$153,021**
651											
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Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
666	**E-P2 Replace Generator Distribution System**										
667	Demo Feeders	100	LF			0.143	14.3	$1,732		$1,732	$2,942
668	Demo Generator	1				60.000	60.0	$7,267		$7,267	$12,345
669	Replace ATS 1000A	1	EA	$19,000.00	$19,000	30.000	30.0	$3,634		$22,634	$38,452
670	Genset 250 KW, Backup	1	EA	$145,000.00	$145,000	90.000	90.0	$10,901		$155,901	$264,851
671	Feeder 1000A	100	LF	$144.47	$14,447	1.608	160.8	$19,477		$33,924	$57,631
672											
673											
674	**Subtotal: E-P2 Replace Generator Distribution System**				$178,447		355.1	$43,011		$221,458	**$376,221**
675											
676											
677											
678	**E-P3 Short Circuit Analysis, Arc Flash Study**										
679	Arc Flash Study	1	LS	$7,000.00	$7,000	20.000	20.0	$2,422		$9,422	$16,006
680											
681											
682	**Subtotal: E-P3 Short Circuit Analysis, Arc Flash Study**				$7,000		20.0	$2,422		$9,422	**$16,006**
683											
684											
685											
686	**E-P4 Exterior Fused Service Disconnects**										
687	Add a 400A Service Disconnect	1	EA	$3,000.00	$3,000	14.000	14.0	$1,696		$4,696	$7,978
688	Add a 1000A Service Disconnect	1	EA	$7,000.00	$7,000	28.000	28.0	$3,391		$10,391	$17,653
689											
690											
691	**Subtotal: E-P4 Exterior Fused Service Disconnects**				$10,000		42.0	$5,087		$15,087	**$25,631**
692											
693											
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Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
703	**E-P5 Signage at Service Entrance**										
704	ID Signage	2	EA	$15.00	$30	0.250	0.5	$61		$91	$155
705											
706											
707	**Subtotal: E-P5 Signage at Service Entrance**				$30		0.5	$61		$91	**$155**
708											
709											
710											
711	**E-P6 Replace Receptacles and Light Switches**										
712	Replace Duplex Outlet	260	EA	$3.50	$910	0.250	65.0	$7,873		$8,783	$14,921
713	Replace Duplex Outlet GFCI	10	EA	$14.00	$140	0.250	2.5	$303		$443	$753
714	Replace Light Switches	80	EA	$3.50	$280	0.250	20.0	$2,422		$2,702	$4,590
715											
716											
717	**Subtotal: E-P6 Replace Receptacles and Light Switches**				$1,330		87.5	$10,598		$11,928	**$20,264**
718											
719											
720											
721	**E-SS1 Replace Fire Alarm System**										
722	Replace Fire Alarm - Estimated by SF	34,844	SF	$4.50	$156,798					$156,798	$204,904
723											
724											
725	**Subtotal: E-SS1 Replace Fire Alarm System**				$156,798					$156,798	**$204,904**
726											
727											
728											
729	**E-SS2 Upgrade Telecommunication Distribution**										
730	Telecom Room Equipment	3	EA	$7,500.00	$22,500	40.000	120.0	$14,535		$37,035	$62,917
731	Telecom Outlets and Cabling	120	EA	$161.56	$19,387	6.793	815.2	$98,740		$118,127	$200,679
732											
733											
734	**Subtotal: E-SS2 Upgrade Telecommunication Distribution**				$41,887		935.2	$113,275		$155,162	**$263,596**
735											
736											
737											
738											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
739	**H-F Hazardous Material Recommendations**										
740	No Quantities - Allowances										
741	Demo Sinks ACM	5	EA			1.000	5.0	$586		$586	$766
742	Demo Floor Tile - Allow 50%	17,422	SF	$3.50	$60,977					$60,977	$79,685
743	Replace Flooring	17,422	SF	$4.50	$78,399	0.029	505.2	$47,102		$125,501	$196,806
744	Ducts Assumed not Disturbed										
745											
746											
747	**Subtotal: H-F Hazardous Material Recommendations**				$139,376		510.2	$47,688		$187,064	**$277,257**
748											
749											
750											
751	**M-P1 Domestic Hot Water Tempering Valve**										
752	Add Tempering Valve 2"	1	EA	$2,500.00	$2,500	6.000	6.0	$709		$3,209	$5,452
753	Thermostatic Mixing Valves	17	EA	$125.00	$2,125	1.000	17.0	$2,008		$4,133	$7,021
754											
755											
756	**Subtotal: M-P1 Domestic Hot Water Tempering Valve**				$4,625		23.0	$2,717		$7,342	**$12,473**
757											
758											
759											
760	**M-P2 Replace Penal Fixtures**										
761	Replace Combi Fixtures	2	EA	$4,000.00	$8,000	16.000	32.0	$3,780		$11,780	$20,012
762											
763											
764	**Subtotal: M-P2 Replace Penal Fixtures**				$8,000		32.0	$3,780		$11,780	**$20,012**
765											
766											
767											
768	**M-P3 Replace Roof Drains**										
769	Replace Roof Drains	3	EA	$500.00	$1,500	6.000	18.0	$2,126		$3,626	$6,160
770											
771											
772	**Subtotal: M-P3 Replace Roof Drains**				$1,500		18.0	$2,126		$3,626	**$6,160**
773											
774											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
775											
776	**M-FO1 Replace Underground Fuel Tank**										
777	Remove Tank	1	EA			160.000	160.0	$18,900	$10,000	$28,900	$49,096
778	Disposal	1	EA	$2,000.00	$2,000					$2,000	$3,398
779	AST 1500 Gal	1	EA	$18,000.00	$18,000	40.000	40.0	$4,725		$22,725	$38,606
780	Day Tank	1	EA	$12,000.00	$12,000	8.000	8.0	$945		$12,945	$21,991
781	Tigerloops	3	EA	$150.00	$450	2.000	6.0	$709		$1,159	$1,969
782	Piping 3/4 and 1"	100	LF	$4.25	$425	0.195	19.5	$2,303		$2,728	$4,634
783											
784											
785	**Subtotal: M-FO1 Replace Underground Fuel Tank**				$32,875		233.5	$27,582	$10,000	$70,457	**$119,694**
786											
787											
788											
789	**M-FP1 New Air Compressor**										
790	3/4 HP Air Compressor and Dryer	1	EA	$1,500.00	$1,500	16.000	16.0	$1,890		$3,390	$5,759
791											
792											
793	**Subtotal: M-FP1 New Air Compressor**				$1,500		16.0	$1,890		$3,390	**$5,759**
794											
795											
796											
797	**M-FP2 New Life Safety Plan and Fire Sprinkler Update**										
798	Life Safety Plan	1	EA	$10,000.00	$10,000					$10,000	$13,068
799	Fire Alarm Upgrades	34,844	SF	$3.00	$104,532					$104,532	$136,602
800											
801											
802	**Subtotal: M-FP2 New Life Safety Plan and Fire Sprinkler Update**				$114,532					$114,532	**$149,670**
803											
804											
805											
806											
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Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
812											
813	**M-H1 Expansion Tank**										
814	Expansion Tank	1	EA	$2,000.00	$2,000	8.000	8.0	$945		$2,945	$5,003
815											
816											
817	**Subtotal: M-H1 Expansion Tank**				$2,000		8.0	$945		$2,945	**$5,003**
818											
819											
820											
821	**M-H2 Repace Circulation Pumps and Control Valves**										
822	Replace Pumps 130 GPM	2	EA	$3,400.00	$6,800	12.000	24.0	$2,835		$9,635	$16,368
823	Replace Pumps 50 GPM	2	EA	$3,000.00	$6,000	8.000	16.0	$1,890		$7,890	$13,404
824	Replace Control Valves	35	EA	$225.00	$7,875	3.000	105.0	$12,403		$20,278	$34,449
825											
826											
827	**Subtotal: M-H2 Repace Circulation Pumps and Control Valves**				$20,675		145.0	$17,128		$37,803	**$64,221**
828											
829											
830											
831	**M-V1 Engineering Study - SF-3**	1	LS	$3,000.00	$3,000					$3,000	$3,920
832											
833											
834	**Subtotal: M-V1 Engineering Study - SF-3**				$3,000					$3,000	**$3,920**
835	Average Unit Price for this division is: $3920.00 per LS based on 1 LS										
836											
837											
838	**M-V2 Duct Cleaning**										
839	Duct Cleaning	1	LS	$20,000.00	$20,000					$20,000	$26,136
840											
841											
842	**Subtotal: M-V2 Duct Cleaning**				$20,000					$20,000	**$26,136**
843											
844											
845											
846											
847											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
848	**M-V3 Engineering Study - Outside Air**										
849	Engineering Study	1	EA	$5,000.00	$5,000					$5,000	$6,534
850											
851											
852	**Subtotal: M-V3 Engineering Study - Outside Air**				$5,000					$5,000	**$6,534**
853											
854											
855											
856	**M-V4 Ventilation Fans**										
857	Demolition	1	LS								
858	AHU - SA/RA Fan	41,800	CFM	$3.50	$146,300	0.007	292.6	$35,345		$181,645	$308,586
859	VAV Boxes with Reheat	15	EA	$400.00	$6,000	4.000	60.0	$7,248		$13,248	$22,506
860	Hydronic Piping to Reheat Coils, Insulated	600	LF	$11.96	$7,176	0.266	159.6	$18,853		$26,029	$44,219
861	Valving at Reheat	15	EA	$225.00	$3,375	2.000	30.0	$3,544		$6,919	$11,754
862											
863											
864	**Subtotal: M-V4 Ventilation Fans**				$162,851		542.2	$64,990		$227,841	**$387,065**
865											
866											
867											
868	**M-V5 Engineering Study - Firing Range**	1	LS	$5,000.00	$5,000					$5,000	$6,534
869											
870											
871	**Subtotal: M-V5 Engineering Study - Firing Range**				$5,000					$5,000	**$6,534**
872	Average Unit Price for this division is: $6534.00 per LS based on 1 LS										
873											
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Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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885	**M-HC1 Add Cooling Coils**										
886	Cooling Coils and Valving	2	EA	$6,500.00	$13,000	40.000	80.0	$9,664		$22,664	$38,503
887	Condenser	60	TONS	$1,500.00	$90,000	4.000	240.0	$28,991		$118,991	$202,147
888	Refrigerant Piping	1	LS	$10,000.00	$10,000					$10,000	$16,988
889											
890											
891	**Subtotal: M-HC1 Add Cooling Coils**				$113,000		320.0	$38,655		$151,655	**$257,638**
892											
893											
894											
895	**M-BC1 Replace Control System with BAS**										
896											
897	BAS Control System - by SF	34,844	SF	$7.00	$243,908					$243,908	$318,739
898											
899											
900	**Subtotal: M-BC1 Replace Control System with BAS**				$243,908					$243,908	**$318,739**
901											
902											
903											
904	**M-G1 Seismic Restraints**										
905	Allow for Seismic Restraints - Equipment	10	EA	$200.00	$2,000	4.000	40.0	$4,725		$6,725	$11,425
906	Allow for Seismic Restraints - Pipe	30	EA	$70.00	$2,100	2.000	60.0	$7,088		$9,188	$15,609
907											
908											
909	**Subtotal: M-G1 Seismic Restraints**				$4,100		100.0	$11,813		$15,913	**$27,034**
910											
911											
912											
913	**S-1 Replace Framing**										
914	**Exterior Walls & Parapets**	**1,400**	**SF**								
915	Shoring	1,400	SF			0.043	60.2	$7,058	$1,400	$8,458	$11,053
916	Demolition	1,400	SF	$0.25	$350	0.034	47.6	$5,581		$5,931	$7,751
917	Framing	1,400	SF	$1.80	$2,520	0.034	47.6	$5,581		$8,101	$10,586
918	Sheathing	1,400	SF	$1.20	$1,680	0.017	23.8	$2,791		$4,471	$5,843
919											
920											
921											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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922	**Level 2 Floor Framing Grid 1/3-C/F**	**874**	**SF**								
923	Demolition	874	SF	$0.25	$219	0.100	87.4	$10,248		$10,467	$13,678
924	Framing	874	SF	$9.00	$7,866	0.100	87.4	$10,248		$18,114	$23,671
925	Sheathing	874	SF	$2.00	$1,748	0.021	18.4	$2,157		$3,905	$5,103
926											
927	**Roof Framing Grid 1/3-C/F**	**874**	**SF**								
928	Demolition	874	SF	$0.25	$219	0.100	87.4	$10,248		$10,467	$13,678
929	Framing including GLBs	874	SF	$15.00	$13,110	0.200	174.8	$20,495		$33,605	$43,915
930	Sheathing	874	SF	$2.00	$1,748	0.021	18.4	$2,157		$3,905	$5,103
931											
932											
933	**Subtotal: S-1 Replace Framing**				$29,460		653.0	$76,564	$1,400	$107,424	**$140,381**
934											
935											
936											
937	**S-2 Replace Glulam Beams**										
938	Shoring	88	LF			0.643	56.6	$6,636	$1,320	$7,956	$10,397
939	GLB Demo	88	LF	$2.25	$198	0.171	15.0	$1,759		$1,957	$2,557
940	GLB New	88	LF	$45.00	$3,960	0.600	52.8	$6,191		$10,151	$13,265
941											
942	**Exterior Walls**	**2,200**	**SF**								
943	Shoring	2,200	SF			0.043	94.6	$11,092	$2,200	$13,292	$17,370
944	Demolition	2,200	SF	$0.25	$550	0.034	74.8	$8,770		$9,320	$12,179
945	Framing	2,200	SF	$1.80	$3,960	0.034	74.8	$8,770		$12,730	$16,636
946	Sheathing	2,200	SF	$1.20	$2,640	0.017	37.4	$4,385		$7,025	$9,180
947											
948											
949	**Subtotal: S-2 Replace Glulam Beams**				$11,308		406.0	$47,603	$3,520	$62,431	**$81,584**
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Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

Line No.	Description	Qty	UNITS	Material Costs Unit	Material Costs Total	Labor Hours Units	Labor Hours Totals	Labor Cost	Equip Cost	Total Cost	Total Cost w/ OH & P
959	**S-3 Level 2 Floor Framing and Sheathing**										
960	Replace Sheathing at perimeter, 24"w	1,080	SF	$2.13	$2,300	0.040	43.2	$5,065		$7,365	$9,625
961	Replace Sheathing at Grid 4.5/7-C/F	1,300	SF	$2.13	$2,769	0.040	52.0	$6,097		$8,866	$11,586
962	Replace Framing at Grid 4.5/7-C/F	1,300	SF	$9.00	$11,700	0.100	130.0	$15,242		$26,942	$35,208
963											
964											
965	**Subtotal: S-3 Level 2 Floor Framing and Sheathing**				$16,769		225.2	$26,404		$43,173	**$56,419**
966											
967											
968											
969	**S-4 Roof Sheathing**										
970	Replace Sheathing at Grid 3/7-C/F	2,600	SF	$2.13	$5,538	0.040	104.0	$12,194		$17,732	$23,172
971											
972											
973	**Subtotal: S-4 Roof Sheathing**				$5,538		104.0	$12,194		$17,732	**$23,172**
974											
975											
976											
977	**S-5 Exterior Wall**										
978	**Exterior Walls & Parapets**	**540**	**SF**								
979	Shoring	36	LF			0.643	23.1	$2,708	$540	$3,248	$4,244
980	Demolition	540	SF	$0.25	$135	0.034	18.4	$2,157		$2,292	$2,995
981	Framing	540	SF	$1.80	$972	0.034	18.4	$2,157		$3,129	$4,089
982	Sheathing	540	SF	$1.20	$648	0.017	9.2	$1,079		$1,727	$2,257
983											
984											
985	**Subtotal: S-5 Exterior Wall**				$1,755		69.1	$8,101	$540	$10,396	**$13,585**
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Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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996	**S-6 Exterior Wall Grids C/F Gable Roof to Flat Roof**										
997	**Exterior Walls & Parapets**	**625**	**SF**								
998	Shoring	125	LF			0.643	80.4	$9,427	$1,875	$11,302	$14,769
999	Demolition	625	SF	$0.25	$156	0.034	21.3	$2,497		$2,653	$3,467
1,000	Framing	625	SF	$1.80	$1,125	0.034	21.3	$2,497		$3,622	$4,733
1,001	Sheathing	625	SF	$1.20	$750	0.017	10.6	$1,243		$1,993	$2,604
1,002											
1,003											
1,004	**Subtotal: S-6 Exterior Wall Grids C/F Gable Roof to Flat Roof**				$2,031		133.6	$15,664	$1,875	$19,570	**$25,573**
1,005											
1,006											
1,007											
1,008	**S-7 Exterior Wall Grid H**										
1,009	**Exterior Walls & Parapets**	**3,087**	**SF**								
1,010	Shoring	3,087	SF			0.043	132.7	$15,559	$3,087	$18,646	$24,367
1,011	Demolition	3,087	SF	$0.15	$463	0.017	52.5	$6,156		$6,619	$8,650
1,012	Framing, Sister Studs	792	BF	$1.80	$1,426	0.071	56.2	$6,589		$8,015	$10,474
1,013	Remove 24" of bottom of original Studs	66	EA			0.500	33.0	$3,869		$3,869	$5,056
1,014	Sheathing	3,087	SF	$1.20	$3,704	0.017	52.5	$6,156		$9,860	$12,885
1,015											
1,016											
1,017	**Subtotal: S-7 Exterior Wall Grid H**				$5,593		326.9	$38,329	$3,087	$47,009	**$61,432**
1,018											
1,019											
1,020											
1,021	**S-8 Exterior Wall**										
1,022	**Exterior Walls & Parapets**	**8,100**	**SF**								
1,023	Demolition	8,100	SF	$0.15	$1,215	0.017	137.7	$16,145		$17,360	$22,686
1,024	Sheathing	8,100	SF	$1.20	$9,720	0.017	137.7	$16,145		$25,865	$33,800
1,025											
1,026											
1,027	**Subtotal: S-8 Exterior Wall**				$10,935		275.4	$32,290		$43,225	**$56,486**
1,028											
1,029											
1,030											
1,031											
1,032											

Wrangell Public Safety Building
Renovation of Existing PSB Building
Prepared for AMC Engineers by Estimations

Construction Cost Estimate
Condition Survey Submittal
January 29, 2021

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1,033	**S-9 Gutter/Soffit at North**										
1,034	Gutters/Soffit	**75**	**LF**								
1,035	Demo Soffit & Framing	488	SF	$0.25	$122	0.043	21.0	$2,462		$2,584	$3,377
1,036	Framing	488	SF	$1.80	$878	0.034	16.6	$1,946		$2,824	$3,690
1,037	Sheathing	488	SF	$1.20	$585	0.017	8.3	$973		$1,558	$2,036
1,038											
1,039											
1,040	**Subtotal: S-9 Gutter/Soffit at North**				$1,585		45.9	$5,381		$6,966	**$9,103**
1,041											
1,042											
1,043											
1,044	**S-10 Roof Sheathing**										
1,045											
1,046	Demo Sheathing	2,000	SF	$0.25	$500	0.043	86.0	$10,083		$10,583	$13,830
1,047	Sheathing	2,000	SF	$1.20	$2,400	0.021	42.0	$4,924		$7,324	$9,571
1,048											
1,049											
1,050	**Subtotal: S-10 Roof Sheathing**				$2,900		128.0	$15,007		$17,907	**$23,401**
1,051											
1,052											