

City and Borough of Wrangell, Alaska



REQUEST FOR QUALIFICATIONS

Wrangell Public Schools Condition Survey

March 2023

**CITY AND BOROUGH OF WRANGELL
REQUEST FOR QUALIFICATIONS**

**Wrangell Public Schools
Condition Survey**

SCOPE OF SERVICES: The City and Borough of Wrangell, Alaska (“CBW” and “Borough”) hereby invites qualified firms (“Firm” or “Consultant”) to submit their Statements of Qualifications (Proposals), for architectural and engineering services for the Wrangell Public Schools Condition Survey project. The services will include, but will not necessarily be limited to, schematic level condition assessments and reports consistent with the Alaska Department of Education and Early Development’s *Guide for School Facility Condition Surveys (2020 Edition)*, along with schematic designs and a schematic level cost estimate.

This RFQ does not commit the Borough to award a contract, nor to pay any of the costs incurred in the preparation and submission of Proposals in anticipation of a contract. The Borough reserves the right to waive irregularities, at its sole discretion, and to accept or reject any or all Proposals for any reason.

QUESTIONS REGARDING THIS RFQ: All questions must be directed to the Capital Facilities Director, Amber Al Haddad, by phone at (907) 874-3902, or by email at aal-haddad@wrangell.com. The Capital Facilities Director is the sole point of contact for all concerns pertaining to this procurement.

DEADLINE FOR PROPOSALS: All Proposals must be sealed and delivered in person, by courier, by U.S. Mail postage paid, or by email, according to Section 1.3 Proposal Development and Submittal, to the Borough Clerk at the address below. Proposals must be received by the Borough Clerk prior to **2:00 p.m. Alaska Time on March 28, 2023**, or such later time as may be announced by addendum any time prior to the submittal date. Proposals will be time-stamped by the Borough Clerk to establish the official time of receipt of each Proposal. Late Proposals are not to be accepted and shall be returned unopened. Faxed Proposals are not to be accepted and will be discarded, unread.

Acknowledgement of addenda may be delivered by fax or email, and confirmation of receipt of any submitted documents is the sole responsibility of the Proposer.

Proposal documents delivered in person or by US Postal or Courier Services must be delivered to:

In by Courier or In-Person Delivery:

Borough Clerk
City and Borough Wrangell
205 Brueger Street
Wrangell, AK 99929

If by U.S. Postal Service:

Borough Clerk
City and Borough of Wrangell
PO Box 531
Wrangell, AK 99929

If by Email:

clerk@wrangell.com

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1.0 GENERAL TERMS AND CONDITIONS

1.1 Pre-Proposal

Proposers should carefully examine this entire RFQ, its addenda, and all related materials and data referenced herein. Proposers shall be fully aware of the nature of the work and the conditions likely to be encountered in performing the work. This duty of full preparation falls to each Proposer. It shall be presumed that each proposer has fulfilled this duty.

1.2 Proposal Format

Proposals are to be prepared in such a way as to provide a straightforward and concise delineation of the Proposer's capability to satisfy the requirements of this RFQ.

1.3 Proposal Development and Submittal

Submit sealed response, including one original, three copies, and one single PDF file on a flash drive, of the complete Statement of Qualifications, serving as the Proposal package, to the City and Borough of Wrangell. Proposals shall be completely sealed in an envelope which is clearly marked with the company name.

Alternatively, the Statement of Qualifications response may be submitted electronically to the Wrangell Borough Clerk, at clerk@wrangell.com, as a password-protected document, with the following guideline:

- A. A Statements of Qualifications response, submitted electronically, shall be emailed under a password protected document. Following the submittal deadline, the firm(s) who elect to participate electronically will be contacted for their Statement of Qualifications document password. The person from whom the Statement of Qualifications password shall be verbally provided to the Borough Clerk shall be named, along with their phone number(s), in the body of the submittal email.

All Proposals submitted shall be binding upon the Consultant, if accepted by the Borough.

Please note that overnight delivery from the Lower 48 (Contiguous U.S.) states is generally not available to Wrangell. Proposers should anticipate a minimum of 7-10 days delivery time for express, priority or expedited delivery services. No allowance may be requested for miscalculation resulting in late delivery.

All materials submitted in response to this RFQ shall become the property of the City and Borough of Wrangell. One copy shall be retained for the official files of the Borough and shall become public record after award of the Contract.

Proposals are to be prepared in such a manner as to provide a straightforward, concise delineation of the Proposer's capabilities to satisfy the requirements of this RFQ. Emphasis should be concentrated on conformance to the RFQ instructions, responsiveness to the RFQ requirements, and on completeness and clarity of content.

This solicitation does not commit the Borough to select any Consultant for the requested services. All costs associated with the respondents' preparations, submission and oral presentations shall be the responsibility of the Proposer.

1.4 Signature Requirement

Proposals must be signed by any of the following:

- An officer or other agent of a corporate vendor, if authorized to sign contracts on its behalf; or
- A member of a partnership; or
- An owner of a privately-owned vendor; or
- Other agent, if properly authorized by a power of attorney or equivalent document. The name and title of the individual(s) signing the Proposal must be clearly shown immediately below the signature.

Such an acceptable signature shall be construed as binding the submitting party to the Proposal.

1.5 Questions

Questions must be submitted in writing no later than three days prior to the due date of the RFQ submittal.

1.6 Standard Contract Language

Attached to this RFQ is a sample contract between Owner and Consultant as the Professional Services Agreement for this project. This Agreement should be carefully reviewed by Proposers, as it is the form of Agreement into which the CBW shall require the selected Consultant to enter, in the event their Proposal is accepted.

1.7 Addenda

No oral change or interpretation of any provision contained in this RFQ is valid. Written addenda will be issued when changes, clarifications, or amendments to the RFQ document are deemed necessary by the Borough.

Proposers shall acknowledge receipt of each addendum in the space provided on the Proposal Form. Only a Proposal acknowledging receipt of all addenda may be considered responsive, unless the addendum, in the opinion of the Borough Manager, would have no material effect on the terms of the Proposal. No lobbying may be made of the Borough Manager.

1.8 Modifications of Proposals

Modifications to the Proposal, prior to the proposal receipt deadline, will be accepted by the Borough, and binding upon the responding firm, where the modification:

- a. Is received by the Borough Clerk prior to the deadline, either by fax to number 907-874-3952 or by email to clerk@wrangell.com, or is sealed in an envelope clearly stating "Statement of Qualifications for Wrangell Public Schools Condition Assessment" and the name of the responding firm.
- b. Is signed by the same individual who signed the original submittal.

Further, the modification document shall include a copy of each page of the original submittal, which the responding firm seeks to modify, and the respondent's signature clearly set out in ink on each page. Should there be more than one submittal modification from a responding firm, the last modification received prior to the deadline shall be opened and applied to the submittal. All earlier modifications shall be returned to the responding firm unopened.

Any modification which fails to meet any requirement of this section, shall be rejected and the submittal shall be considered as if no modification had been attempted.

1.9 Late Submissions

Proposals not received prior to the date and time specified in the RFQ, or otherwise modified by Addendum shall not be considered and will be returned unopened after recommendation of award.

1.10 Withdrawal of Proposals

At any time prior to the scheduled closing time for receipt of RFQ submittals, any responding firm may withdraw its submittal, either by appearing in person and requesting return of the Proposal or by written request, addressed to the Borough Clerk. However, a Proposal shall not be withdrawn after opening without the written consent of the Borough.

1.11 Proposal Acceptance Period

It is anticipated that an award will be announced within sixty (60) calendar days of the proposal submittal date; however. The CBW is under no obligation to accept a deficient proposal or to accept any proposal if none, or fewer than two, are found to be acceptable. All acceptances are subject to appropriation by the Borough Assembly and any applicable federal funding rules and regulations.

1.12 Right to Reject / Award

The Borough may reject any or all Proposals, if the Borough Manager determines that it is in the best interest of the Borough, and may waive irregularities, other than the requirements for timeliness and manual signature, if the irregularities do not affect the competitive advantage of any Proposer.

An award will be made to the most qualified Proposer, whose offer is deemed most advantageous to the Borough, all evaluation criteria considered. The Borough may choose to interview only the top-ranking firms based on proposal review and scores. Unsuccessful offerors will be notified.

1.13 Time is of the Essence

Time shall be of the essence in this contract.

1.14 Licenses and Certifications

Proposers shall include all business and professional licensing numbers associated with each firm and individual proposed to perform under the contract.

Before a Proposal is considered for award, a Proposer will be required to submit current documentation of the same as issued by, or under authority of, the State of Alaska. If documentation is from an outside jurisdiction, such documentation submitted must be of a form accepted as valid by the State of Alaska for performance in Alaska.

Such documentation shall include, but is not limited to, a current Alaska business license for the business to be conducted, applicable professional licenses, registrations, and all necessary certificates.

1.15 Invoicing and Payment

Unless otherwise agreed, the payment terms are net thirty (30) days following satisfactory acceptance of services provided and upon receipt of invoice, whichever is later. Original invoices are to be mailed to the Accounts Payable division of the City and Borough of Wrangell, with an emailed copy to the Project Manager. The Contract Number and Project Name must be stated on the invoice; otherwise, payment may be delayed.

1.16 Choice of Law and Jurisdiction

The laws of the State of Alaska shall govern this RFQ, and any legal action brought thereon shall be filed and adjudicated in the First Judicial District in Wrangell, Alaska.

The Borough reserves its right to litigate in all circumstances and will reject mandatory arbitration clauses.

1.17 Conflicts of Interest

No member of the governing body of the City and Borough of Wrangell or other officer, employee or agent of the Borough who exercises any functions or responsibilities in connection with the carrying out of the project shall have any personal interests, direct or indirect, in any ensuing contract as a result of this Request for Qualifications, without first disclosing his/her potential conflict of interest, by submitting a letter to the Clerk's Office establishing their "intent to do business with the Borough". The Consultant for itself and its principal employees, officers, agents, directors, and shareholders further covenants that neither the Consultant nor any of the listed classes of individuals has nor shall acquire any interest, direct or indirect, in the project, direct or indirect, to which the contract pertains which would conflict in any manner or degree with the performance of its work hereunder. The selected Proposer further covenants that in its performance of the contract no person having such interest shall be employed, without first disclosing his/her potential conflict.

1.18 Disclosure of Proposal Contents

The City and Borough of Wrangell, a municipal corporation and political subdivision of the State of Alaska, is subject to the Alaska Public Records Act codified at AS 40.25.100-220, and the public records provisions in the CBW Charter, section 4.5. The contents of Proposals submitted in response to this RFQ will be kept confidential until the top ranked Proposer is announced. Immediately following announcement, all Proposals become public information. Trade secrets and other proprietary data contained in a Proposal may be held confidential, to the extent allowed by law, by the Purchasing Officer, upon request in writing by a Proposer and proper marking in the proposal. Material considered confidential by the Proposer must be clearly identified and marked (page, section, etc.) by the Proposer, and the Proposer must include a brief

statement that sets out the reasons for confidentiality. Marking the entire Proposal confidential is not acceptable and may be considered cause for the Borough to reject your Proposal as non-responsive.

1.19 Freedom of Information Act

The City and Borough of Wrangell is responsible for meeting Freedom of Information Act (FOIA), Title 5 of the United States Code, Section 522 (5 U.S.C. §522) (Public Law 89-554), requirements regarding its records. The regulations governing the Federal Highway Administration recipients of funding must follow these regulations to make the requested material, information, and records publicly available. Unless prohibited by law and to the extent required under the FOIA, contents of applications and other information submitted by the Consultant may be released in response to a written request for federal records that cites FOIA.

2.0 SPECIAL CONDITIONS

2.1 Insurance Requirements

- A. Consultant shall maintain, in good-standing, the insurance described in subsection (B) of this section. Before entering into an Agreement, Consultant shall furnish Borough with a Certificate of Insurance showing proof of insurance in accordance with subsection (B) of this section in a form acceptable to Borough.
- B. Consultant shall provide the following types of insurance, listed at parts 1-4 of this section, the minimum limits of not less than those stated below. Borough shall be named as additional insured on all insurance policies except workers' compensation and professional liability contracts, and Consultant shall provide Borough with a Certificate of Insurance showing "The City and Borough of Wrangell, Alaska" as an additional insured.
 - 1. Workers' compensation and employer's liability coverage as required by Alaska law.
 - 2. Comprehensive general liability, including contractual, property damage, bodily injury, premises operations including explosion, collapse and underground; products and complete operations, broad form property damage and personal injury coverages in amounts no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.
 - 3. Comprehensive automobile liability, bodily injury and property damage, including all owned, hired and non-owned automobiles in amounts no less than \$1,000,000 each occurrence and \$2,000,000 aggregate.
 - 4. Architects or Engineers professional liability in the amount of \$1,000,000. The Consultant agrees to be responsible for any damages arising from any defects in design or negligence in the performance of the Resident Inspector. Liability insurance must also provide coverage for such damages.
- C. Each policy of insurance required by this section shall provide for no less than thirty (30) days' advance notice to Borough prior to cancellation.

2.2 Hold Harmless and Indemnity

To the fullest extent permitted by law, Consultant shall indemnify, defend, and hold harmless the Borough, its elected and appointed officials, employees, and volunteers, from and against any suit, action, claim, damages, or liability of any kind and of any nature, including death, arising out of any act, error or omission or any claim of, or liability for, negligent acts, errors, and omissions of the Consultant under this agreement. Pursuant to this section, the Consultant is not required to indemnify, defend, or hold harmless the Borough for a claim of, or liability for, the independent negligent acts, errors, and omissions of the Borough. If there is a claim of, or liability for, a joint negligent act, error, or omission of the Consultant and the Borough, the indemnification, defense, and hold harmless obligation of this section shall be apportioned on a comparative fault basis. In this section, "Consultant" and "Borough" include the employees, agents, and subconsultants who are directly responsible, respectively, to each. In this section, "independent negligent acts, errors, and omissions" means negligence other than in the Borough's selection, administration, monitoring, or controlling of the Consultant, or in approving or accepting the Consultant's work.

2.3 State Requirements

To enter into an Agreement for the project, the successful Consultant must assure, certify, and agree to comply with all applicable State of Alaska laws, regulations, policies, guidelines, and requirements applicable to the project.

2.4 Owner and Engineer Agreement

The Agreement between Owner and Consultant for Professional Services shall be the Professional Services Agreement of the City and Borough of Wrangell.

The Consultant shall be required to follow those standards:

- The fee for basic Architect and Engineer Services will be a lump sum or an agreed maximum, and no part of the fees for other services will be based on a cost-plus-a-percentage-of-cost or a cost using a multiplier.
- It is anticipated that the Agreement shall be a term contract in one-year increments renewable for up to five years.

3.0 INTRODUCTION AND SCOPE OF WORK

3.1 Purpose

The City and Borough of Wrangell, in partnership with the Wrangell School District, is soliciting proposals from qualified firms to conduct a detailed facility condition assessment and analysis of its school facilities (three buildings) and grounds. The detailed assessment should include identification of current facility condition deficiencies, recommended corrections for deficiencies and energy efficiency improvements, cost estimates for corrections, forecasting future capital renewal cost, and facility use optimization.

The Borough seeks to understand: 1) the general condition of all buildings, major building systems, and major equipment; and 2) the timing and cost of future building component maintenance and replacement.

3.2 Project Objectives

- A. To identify the existing inventory of building systems, equipment, and infrastructure assets; and
- B. To identify cost estimates for projects; and
- C. To rank and prioritize all projects by priority and anticipated life cycle; and
- D. To provide recommendations for improving facilities, include energy improvements that result in direct reduction to school energy costs, increased energy efficiency, and lead to improvements in teacher and student health, including indoor air quality, with the goal of five-year capital asset budgeting, establishing a facility condition baseline for goal setting, and progress tracking; and
- E. To seek expertise in facility renovations and the feasibility of potential or necessary upgrades to meet learning space requirements.

3.3 Scope of Work

The condition survey assessments will include one or more of the following buildings: Evergreen Elementary School (24,533 sq. ft.), Stikine Middle School (20,967 sq. ft.), and Wrangell High School (58,096 sq. ft.), excluding the swimming pool and its associated locker rooms in the lower level of the building.

Each condition assessment is to be comprehensive in scope involving civil, architectural, structural, mechanical, electrical, and environmental disciplines that identifies, describes, and estimates facility deficiencies and their necessary level of improvements. Each assessment shall include the site and all facility systems to serve as guidance to Wrangell Public Schools regarding potential renewal of the site and facility, or specific systems or components thereof, for another life cycle. The detailed scope of work for each condition assessment will be negotiated with the selected firm.

In addition to the condition survey, the Borough may, from time to time, request proposals from the selected firm to provide typical architectural and/or engineering services that may include, but not limited to, technical advice, engineering designs, specifications, contract documents, cost estimates, bidding, construction contract administration, and project management.

A. General Requirements

- 1. All survey assessments shall be performed based on current regulatory codes, specifically for school facilities, including but not limited to the IBC, NFPA 37, NFPA 70, and NFPA 110.
- 2. Survey_work shall begin immediately following an award, and the goal is to have final reports complete by July 7, 2023.

B. On-Site Survey Work

Conduct a detailed on-site condition assessment for each facility and infrastructure. The assessment should be structured and include all necessary information to assign an industry standard building system classification. The on-site assessment will include entering accessible crawl spaces and attic spaces. The on-site assessment will be performed using both component-level and system-level inspection methods. The assessment team will evaluate each asset to determine whether sufficient evidence is available to warrant complete replacement of the system, or to determine if repairing portions of the system is more cost effective. The life cycle costs of each component and system must be considered, so that timing of potential costs can be considered in the context of a financial plan.

The condition survey process has three basic elements: pre-inspection review, on-site condition assessment, and report preparation through which the following minimum assessments will be accomplished:

1. Assess real property such as buildings, structures, and utilities, and their integral components/systems. Copies of the building floorplans and maintenance history records will be made available to the Consultant.
2. Perform a thorough visual assessment of all architectural, civil/structural, mechanical, electrical, fire, plumbing, and sewer components/systems of each facility; and
3. Provide a basic description of existing systems including the components making up the system, their function, and their age; and
4. Identify the current condition of the systems based on function/operation, visual observation/ inspection, and testing; and
5. Identify all maintenance, repair, and replacement requirements including recommendations from an energy efficiency perspective to enhance operations.
6. Identify and report all civil, structural, roof, mechanical, and electrical deficiencies, as code deficiencies or otherwise, along with recommended upgrades and improvements.
7. Recommendations for corrective action related to all deficiencies described, including considering efficiency and environmental improvements.
8. Costs associated with each deficiency's corrective action; and
9. Identify and immediately report to the Borough any components or other deficiencies that are considered urgent (endangering life and property).
10. Supporting data such as cost/benefit analyses and life cycle cost analyses, special inspections, engineering calculations, photographs, and drawings related to any of the prior elements.
11. The facility condition survey will focus on the following property elements:
 - a. Site and Infrastructure: consists of Site Improvements (Roadways, parking lots, and sidewalks), Site Structures, Civil/Mechanical Utilities, Site Electrical, and Offsite Work.
 - b. Substructure: This section consists of Standard Foundations & Basements, Slabs on Grade, and Special Foundations.
 - c. Superstructure: This section consists of Floor Structure, Roof Structure, and Stair.
 - d. Exterior Enclosure: This section consists of Exterior Walls and Soffits, Exterior

Glazing, Exterior Doors, and Exterior Accessories.

- e. Roof Systems: This section consists of Pitched Roofs, Flat Roofs, and Roof Accessories.
- f. Interiors: This section consists of Interior Partitions, Special Partitions, Interior Openings, Interior Finishes, and Specialties.
- g. Conveying Equipment: This section consists of Passenger Conveyors, and Materials Handling Systems.
- h. Mechanical: This section consists of Plumbing, HVAC, Integrated Automation, and Fire Protection.
- i. Electrical: This section consists of Service and Distribution, Lighting, Power, Special Electrical, and Other Electrical.
- j. Equipment and Furnishings: This section consists, unsurprisingly, of Equipment and Furnishings.
- k. Special Construction: This section consists of Site Conditions and Special Construction.
- l. ADA requirements
- m. Security Systems
- n. Control Systems
- o. Communication systems

The condition survey template used by the Consultant shall meet the template provided under the State of Alaska - Department of Education & Early Development, Guide for School Facility Condition Surveys.

3.4 Deliverable Conditions

All documents for this project, including specifications, shall be in a format and on media approved by the Borough using the latest CAD and Microsoft Office Products. Upon completion, Owner shall be furnished with an electronic file of all documents in their original format and pdf format as well as one each 11" x 17" and 22" x 34" to-scale Schematic Drawings. All documents shall remain the property of the Borough, and the Borough shall be entitled to editable formats of all documents generated.

3.5 Proposed Timeline

- RFQ Public Advertisement Release.....March 6, 2023
- Proposals Due to Borough Clerk.....March 28, 2023
- Interview Consultants..... April 3 – April 7, 2023
- Finalize Negotiated Fee with Top Consultant.....April 17, 2023
- Assembly Approval of Award for Services.....April 25, 2023
- Intent to Award.....April 26, 2023
- Notice to Proceed.....May 3, 2023

- Site Surveys Complete.....June 15, 2023
- DRAFT Survey Report Complete.....June 29, 2023
- FINAL Survey Report Complete.....July 13, 2023

4.0 PROPOSAL AND SUBMISSION REQUIREMENTS

Forms submitting qualifications to perform the work noted will be evaluated based upon the firm’s experience, personnel knowledge and experience with similar projects, references, and responses to other criteria in the RFQ. Qualifications for subconsultants shall be included. To achieve a uniform review process and obtain the maximum degree of comparability, it is required that the Proposals be organized in the manner specified below.

4.1 Capacity to Perform and Relevant Experience of the Team

- The Proposal / Statement of Qualifications must be accompanied by a cover letter, signed by a corporate officer or other individual who has the authority to bind the firm. An unsigned proposal is grounds for rejection.
- The cover letter should include an introduction and history of the firm and a summary statement of professional qualifications, including areas of expertise.
- Include the address of office that will manage project, length of time in business, firm’s legal structure, firm’s commitment to provide necessary resources to perform and complete project in a timely manner.
- Provide a general statement describing the types of services offered by the firm, location of main and branch offices, number of years in business and number of employees in each department. Include licenses and certification numbers both for the firm and for each of the individuals proposed to perform the required services.
- Briefly state your firm's understanding of the services to be performed, the commitment to perform the work, and a statement why the firm believes itself to be best qualified to perform the services specified.
- List names of the persons who are authorized to make representations for your firm, their titles, address, and telephone numbers, and identify the primary contact person.
- Provide a list of public sector clients for whom you have performed similar services during the past five years that demonstrates experience with the type of project work described in this RFQ. Include a summary of the projects’ scope of work and deliverables, owner name, and the address, phone number and email of a reference for each project. The firm should also demonstrate how it interacts with municipal clients and provides and exchanges information relative to the requirements.

4.2 Qualifications of the team

- Identify the project manager who will be responsible for the day-to-day management of project tasks and will be the Owner’s primary point of contact.
- Identify key project staff, both with the Firm and with Subconsultants, with their roles within the project clearly identified, as well as those key staff for subconsultants expected to provide services on behalf of the firm.
- Provide a qualifications synopsis, resume, active professional license or registration, and other experience and qualifications that are relative to this project for each of the individuals referenced. Be specific about the proposed staff regarding their experience

and qualifications on projects of similar size and scope.

4.3 Project Understanding, Methodologies, and Approach

- Provide detailed information on the firm's understanding of the project scope and the methodologies and approach toward meeting the scope of work requirements provided for in this RFQ. Include a clear and complete draft scope of work. Information presented should consist of a detailed work plan indicating the tasks and technical issues to be accomplished, the resources that will be utilized, and the timeline for completion.

4.4 Prior Experience

- Describe prior experience providing architectural and engineering services for school facilities condition assessments.

4.5 Schedule and Availability

Provide a project schedule and consultant/subconsultant availability. The Proposal should discuss the current workload of the proposed staff and the organization's ability to perform the services within the established timeline.

5.0 PROPOSAL EVALUATION PROCESS

5.1 Evaluation Process

The Borough will form an Evaluation Committee, of no fewer than three people, to review and evaluate the Statements of Qualifications submitted in response to this RFQ. The Evaluation Committee will be responsible for evaluating all responses received according to the evaluation criteria outlined in this RFQ.

A responsive Proposal is one which follows the requirements of the RFQ, includes all documentation, is submitted in the format outlined in the RFQ, is of timely submission, and has the appropriate signatures, as required. Consultants must demonstrate in their proposal that they have a clear understanding of the RFQ requirements. Consultants should articulate in the proposal their experience with the scope of work of this project and how they will fulfill the services required under the RFQ. Each firm should submit the requested documents that evidence capability to provide the services required for the Committee's review for short-listing purposes.

The Borough may contact one or more references. The Borough may use references named or not named by the Proposer.

The Evaluation Committee will hold interviews with at least the top two highest ranking firms and request additional information resulting from the initial evaluation. Firms may be asked to make presentations covering their relevant experience, their understanding of the scope of work and their own approach to performing the job. Unsuccessful firms will be notified.

For each firm receiving evaluation, an individual rating sheet will be completed and signed by each Evaluation Committee member. A summary rating sheet will be used to determine the highest ranked firm, as averaged by the Committee.

The evaluation criteria used to evaluate Proposals, and their associated point values, are as

follows:

Capacity to Perform and Relevant Experience of the Team	20 Points
Qualifications of the team	20 Points
Project understanding, methodologies, and approach	30 Points
Prior Experience	20 Points
Schedule and Availability	<u>10 Points</u>
Total Points	100 Points

5.2 Qualitative Rating Factor

Firms will be ranked using the following qualitative rating factors for each RFQ criteria:

1.0 = Outstanding

.8 = Excellent

.6 = Good

.4 = Fair

.2 = Poor

0.0 = Unsatisfactory

The rating factor for each criteria category will be multiplied against the points available to determine the total points for that category.

6.0 SELECTION PROCESS

The Borough shall negotiate an agreement with the highest ranked firm for a lump sum fee that the Borough determines is a fair and reasonable price. If an agreement cannot be reached with the highest ranked firm, the Borough shall notify the firm and terminate negotiations.

In the event negotiations with the highest ranked firm are not successful, then the Borough may enter negotiations with the second highest ranked firm. The process will continue in this sequence until an agreement is finalized. If agreement negotiations with a selected firm are successful, the Borough Manager will make a recommendation to the Wrangell Borough Assembly for award of the agreement, and the Wrangell Borough Assembly will decide the award of the agreement.

The City and Borough of Wrangell reserves the right to make a final selection based on the results of the Evaluation Committee, as deemed most advantageous to the Borough. The Borough reserves the right to reject any or all Proposals submitted.

7.0 APPEAL PROCESS

Any aggrieved Proposer, within ten calendar days, after issue of a notice of intent to award, may appeal to the Borough Assembly for a hearing, with notice to interested parties, for redetermination in accordance with law.

8.0 AGREEMENT

The entire Agreement between the Borough and the Consultant for the work shall be comprised of the following sections incorporated by reference:

- A. Wrangell Public Schools Condition Survey RFQ
- B. Alaska Department of Education and Early Development's Guide for School Facility Condition Surveys (2020 Edition)
- C. City and Borough of Wrangell, Professional Services Agreement
- D. Consultant's Proposal Form
- E. Consultant's Statement of Qualifications
- F. Consultant's Negotiated Lump-Sum Fee
- G. Insurance Certificates
- H. Addenda Numbers _____ to _____, inclusive
- I. Change Orders which may be delivered or issued after the date of the Agreement

The fee for basic Architect and Engineer Services will be a lump sum or an agreed maximum, and no part of the fees for other services will be based on a cost-plus-a-percentage-of-cost or a cost using a multiplier.

9.0 SUPPLEMENTAL RFQ DOCUMENTS

- A. Agreement between Owner and Consultant for Professional Services
- B. Guide For School Facility Condition Surveys State of Alaska - Department of Education & Early Development Guide for School Facility Condition Surveys, 2020 Edition
- C. A&E Drawings of Schools

10.0 PROPOSAL FORM (to be submitted with Proposer’s Statement of Qualifications response)

In submitting this Proposal Form, along with Statement of Qualifications, the Proposer represents and agrees that:

- A. The Proposer has examined and carefully studies the RFQ documents, including the following Addenda, receipt of which is hereby acknowledged by the undersigned:

Addendum Number	Addendum Issue Date
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

- B. The Proposer has visited the site and become familiar with the general local and site conditions that may affect the work. (Optional)
- C. The Proposer is familiar with all applicable federal, state, and local laws and regulations that may affect performance of the work.
- D. The Proposer has carefully studied all data relating to the project, which has been furnished or made available by Owner and is aware of the nature of the work to be performed at the site that relates to the work for which this Proposal is submitted.
- E. The Proposer has given the Owner written notice of all conflicts, errors, ambiguities, and discrepancies that the Proposer has discovered in the RFQ Documents and the written resolution thereof by the Owner is acceptable to the Proposer, and the RFQ Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing the work for which this Proposal is submitted.

By executing this Proposal, I certify that I have the authority to bind the Consulting Firm who is submitting this Proposal.

Consultant Signature: _____

Printed Name and Title of Signatory: _____

Printed Name of Consulting Firm: _____

Date: _____

END OF PROPOSAL FORM

City and Borough of Wrangell Professional Services Agreement

Project:
Department/Facility:
Contractor:
Year:
Account Code:

THIS AGREEMENT FOR SERVICES is made and entered into this ____ day of the month of _____ in the year _____, by and between the City and Borough of Wrangell, Alaska, an Alaska unified home rule borough corporation, whose address is Post Office Box 531, Wrangell, Alaska 99929, hereinafter called "BOROUGH," and the professional services provider _____ licensed and qualified to do business within the State of Alaska, whose address is _____, hereinafter called "CONTRACTOR."

Recitals:

WHEREAS, BOROUGH desires the performance, provision, and accomplishment of the work, services and materials described and set forth in Section 1 and Exhibit "___;" and

WHEREAS, CONTRACTOR represents that it is ready, able, and qualified to perform and provide, and will perform and provide, in all respects, all of the work, services, and materials and otherwise perform all of the terms, covenants, conditions and provisions of the agreement in the manner, at the times, and for the consideration hereafter provided.

NOW, THEREFORE, for and in consideration of the terms, covenants, conditions, and provisions contained herein, and/or attached and incorporated herein and made a part hereof, and for other good and valuable consideration, the parties hereto agree as follows:

Section 1: Agreement to Perform.

BOROUGH hereby agrees to engage CONTRACTOR, and CONTRACTOR hereby agrees to perform, complete, provide and furnish, in a timely and proper manner, and pursuant to and in accordance with all of the terms, covenants, conditions and provisions of this agreement, all of the work, services, labor and materials required to

accomplish all of the following work for the project entitled: Project Name, as detailed in EXHIBIT “___.”

Section 2: Time for Completion of Work.

Upon receiving a written Notice to Proceed, CONTRACTOR shall perform the work called for in this agreement by ___ (Date) _____. Deviation from the prescribed timeframe shall constitute material breach of contract unless waived by the BOROUGH. CONTRACTOR shall reasonably seek waiver in advance for any anticipated deviation from the prescribed timeframe.

Section 3: Compensation and Payment.

(a) For and in consideration of the timely and proper performance of work authorized as provided herein, BOROUGH shall pay CONTRACTOR on the basis of _____, Not-to-Exceed \$ _____ (in words) _____, as described in EXHIBIT “___.”

(b) Failure to abide by this Not-to-Exceed amount, or the terms of EXHIBIT “A” shall constitute material breach of contract.

(c) CONTRACTOR shall invoice the BOROUGH, monthly, the amount of CONTRACTOR’S total Time & Expense earned to date. Payment will be rendered by the BOROUGH within 30 days of receipt of invoice.

Section 4: No Additional Work.

No claim for additional work, services or materials, not specifically and expressly requested and authorized as provided for in this agreement, or by a written amendment thereto signed by both parties, done or furnished by CONTRACTOR, will be allowed or paid by BOROUGH, and CONTRACTOR expressly waives any claim therefore.

Section 5: CONTRACTOR’S Warranty of Adequate Qualifications.

(a) CONTRACTOR expressly represents and warrants that it is now and shall continue to be at all times during the performance of this agreement, the holder of all required or necessary professional, business or other licenses or permits and is qualified and capable of performing all of the work covered or called for by this agreement and is presently ready, able, and willing to undertake and perform all of such work and services, and to supply all necessary materials and equipment, at the times, and in a non-negligent, professional and workmanlike manner, and pursuant to the terms, conditions and provisions, and for the compensation and payments as herein provided.

(b) CONTRACTOR further makes identical representation and warranties, as in Subsection 5(a), above, for all subcontractors under its direct or indirect control during involvement with the project.

Section 6: Independent CONTRACTOR.

(a) No Employment Relationship. The parties hereto expressly agree that CONTRACTOR shall be and is an “independent contractor,” as understood at law, and is not an employee or agent of BOROUGH, and is, therefore, entitled to no insurance coverage, whether worker's compensation or otherwise, and no other benefits accorded to BOROUGH'S employees. No withholding, FICA, or other taxes (whether income, sales or otherwise) or other amounts will be withheld from the payments due to CONTRACTOR, it being understood that CONTRACTOR is solely responsible therefor, provided BOROUGH shall be entitled to withhold such retainage or other amounts from any progress or other payments as have been provided for elsewhere in this agreement.

(b) No Partnership nor Authority to Bind BOROUGH. The parties agree that CONTRACTOR is an “independent contractor” and is not, and shall not be construed to be, a partner, joint venture, employee or agent of BOROUGH and shall not, and is not authorized to, enter into or make any contracts or agreements, or enter into any other understanding with any other person, corporation, partnership, joint venture, or other entity, in the name of or for the benefit of BOROUGH.

Section 7: Breach of Contract and Termination.

Without limiting the rights of the parties as provided elsewhere in this Agreement, this Agreement may be terminated for the reasons and in the manner as provided in this Section.

(a) Breach. In the event that CONTRACTOR is found to have materially breached this Agreement, such breach shall be remedied immediately, or the BOROUGH shall have the right to terminate pursuant to Section 7(c) “Termination for Cause” hereof.

(b) Termination for Cause. This agreement may be terminated in whole or in part in writing by BOROUGH in the event of failure by CONTRACTOR to fulfill any of the terms and conditions of this agreement upon the giving of not less than five (5) calendar days prior written notice of intent to terminate in the manner provided in Section 14 hereof.

(c) Termination for Convenience of BOROUGH. This agreement may be terminated in whole or in part in writing by BOROUGH for BOROUGH'S convenience

provided CONTRACTOR is given not less than Fourteen (14) calendar days prior written notice of intent to terminate in the manner provided in Section 14 hereof.

(d) In the event that termination is for the convenience of BOROUGH pursuant to subsection 7(d), herein, CONTRACTOR shall be paid for the services that have been actually performed in accordance with this Agreement prior to the effective time of such notice of intent to terminate and for which the CONTRACTOR has not been paid and for reimbursement of any reimbursable expenses allowable under this Agreement that were actually expended and not reimbursed prior to the effective time of such notice of intent to terminate, and BOROUGH shall not be liable or responsible for any loss of profits or any other consequential or special damages, amounts or payments, of any kind or any nature whatsoever to CONTRACTOR.

(e) Upon receipt of a termination notice, CONTRACTOR shall promptly discontinue all services and deliver or otherwise make available to BOROUGH all data, drawings, notes, specifications, reports, estimates, summaries, work in progress, and any and all other information and/or materials as may have been accumulated by CONTRACTOR in performing this agreement, whether completed or in process.

(f) LIMITATION ON DAMAGES. No other damages, whether for lost profits or otherwise, other than the amounts allowed and computed as provided for in this Section 7 shall be due or payable to CONTRACTOR in the event of termination. **THIS IS A BARGAINED FOR LIMITATION ON DAMAGES.**

Section 8: Conflict of Interest.

CONTRACTOR covenants, warrants, and represents that CONTRACTOR has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner with the subject matter or the performance of this agreement. CONTRACTOR further covenants, warrants, and represents that in the performance of this agreement, no person having any such interest shall be employed.

Section 9: Hold Harmless and Indemnity.

To the fullest extent permitted by law, CONTRACTOR shall indemnify, defend, and hold harmless the BOROUGH, its elected and appointed officials, employees, and volunteers, from and against any suit, action, claim, damages, or liability of any kind and of any nature, including death, arising out of any act, error or omission or any claim of, or liability for, negligent acts, errors, and omissions of the CONTRACTOR under this agreement. Pursuant to this section, the CONTRACTOR is not required to indemnify, defend, or hold harmless the BOROUGH for a claim of, or liability for, the independent negligent acts, errors, and omissions of the BOROUGH. If there is a claim of, or liability for, a joint negligent act, error, or omission of the CONTRACTOR and the BOROUGH,

the indemnification, defense, and hold harmless obligation of this section shall be apportioned on a comparative fault basis. In this section, "CONTRACTOR" and "BOROUGH" include the employees, agents, and subcontractors who are directly responsible, respectively, to each. In this section, "independent negligent acts, errors, and omissions" means negligence other than in the BOROUGH'S selection, administration, monitoring, or controlling of the CONTRACTOR, or in approving or accepting the CONTRACTOR'S work.

Section 10: Insurance.

(a) CONTRACTOR shall maintain in good standing the insurance described in subsection (b) of this section. Before rendering any services under this contract, CONTRACTOR shall furnish BOROUGH a Certificate of Insurance showing proof of insurance in accordance with subsection (b) of this section in a form acceptable to BOROUGH.

(b) CONTRACTOR shall provide the following types of insurance, listed at parts 1-4 of this subsection 10(b). BOROUGH shall be named as additional insured on all insurance policies except workers' compensation and professional liability contracts, and CONTRACTOR shall provide BOROUGH with a Certificate of Insurance showing "The City and Borough of Wrangell, Alaska" as an additional insured.

(1) Workers' compensation and employer's liability coverage as required by Alaska law.

(2) Comprehensive general liability, including contractual, property damage, bodily injury, premises operations including explosion, collapse and underground; products and complete operations, broad form property damage and personal injury coverages in amounts no less than \$1,000,000 per occurrence and \$2,000,000 aggregate.

(3) Comprehensive automobile liability, bodily injury and property damage, including all owned, hired and non-owned automobiles in amounts no less than \$1,000,000 each occurrence and \$2,000,000 aggregate.

(4) Architects' or engineers' professional liability, if applicable, in the amount of \$1,000,000.

(c) Each policy of insurance required by this section shall provide for no less than thirty (30) days' advance notice to BOROUGH prior to cancellation.

(d) The failure of the CONTRACTOR to provide the proof of insurance and the Certificate showing the BOROUGH as an additional insured within thirty days of the effective date of this Agreement shall constitute a material breach of Contract.

Section 11: Assignment and Subletting Prohibited.

(a) CONTRACTOR shall not assign, transfer, convey, pledge, hypothecate, sublet, subcontract or otherwise dispose of or encumber this agreement, or the rights thereunder, nor shall CONTRACTOR delegate any of its duties without the prior written consent of BOROUGH. Any such attempted assignment, transfer, conveyance, pledge, hypothecation, subletting or other disposition, or the attempted assignment, disposition or delegation of duties or rights, shall be null and void and of no force or affect and shall be grounds and cause for immediate termination of this agreement without liability by and at the option of BOROUGH.

(b) The BOROUGH shall not approve any assignment to an LLC unless the CONTRACTOR personally guarantees the performance of the LLC or the members of the LLC personally guarantee the performance of the LLC.

Section 12: Subject to Approval.

(a) This contract is subject to review and appropriation by the Borough Assembly.

(b) Dependent upon the project nature and origin(s) of its funding, CONTRACTOR acknowledges that payment may reasonably be contingent upon approval by other boards, bodies, or legal mechanisms pursuant to applicable law and contract.

Section 13: Equal Employment Opportunity.

(a) CONTRACTOR shall not discriminate against any employee, applicant for employment, or subcontractor because of race, color, religion, national origin, ancestry, age, or sex. CONTRACTOR will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, national origin, ancestry, age, or sex. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and, selection for training, including apprenticeship. CONTRACTOR agrees to post notices in conspicuous places available to employees and applicants for employment and to state in all solicitations for contract jobs the provisions of this nondiscrimination clause.

(b) CONTRACTOR agrees to fully cooperate with the office or agency of the State of Alaska which seeks to deal with the problem of unlawful or invidious discrimination and with all other State efforts to guarantee fair employment practices under this agreement, and CONTRACTOR will comply promptly with all request and directions from the State Commission of Human Rights or any of its officers or agents relating to prevention of discriminatory employment practices.

(c) Failure to perform any of the above agreements pertaining to equal employment opportunities shall be deemed a material breach of the contract and sufficient grounds for termination of this agreement for cause.

Section 14: Miscellaneous Provisions.

(a) Relationship of the Parties. Nothing herein contained shall be deemed or construed by the parties, nor by any third party, as creating the relationship of principal and agent or of partnership or of joint venture between the parties, it being understood and agreed that neither method of computation of payment nor any other provision contained herein, nor any acts of the parties, shall be deemed to create any relationship between the parties other than the relationship of BOROUGH and an independent contractor.

(b) Terminology. Whenever herein the singular number is used, the same shall include the plural, and vice versa. Likewise, the masculine gender shall include the feminine and neuter genders.

(i) Agreement means Contract. The term Agreement and Contract shall be construed as representing substantially the same meaning whenever used in this document or its attachments. Exhibits and Attachments incorporated by reference shall be construed as part of this agreement.

(ii) “Parties” or “parties,” when used in this agreement, means the BOROUGH and CONTRACTOR, unless context demands otherwise.

(c) Nonwaiver. No delay or omission of the right to exercise any power by either party shall impair any such right or power or be construed as a waiver or any default or as acquiescence therein. One or more waivers of any covenant, term, or condition of this agreement by either party shall not be construed by the other party as a waiver of a subsequent breach of the same covenant, term, or condition. The consent or approval by either party to any act by the other party of a nature requiring consent or approval shall not be deemed to waive or render unnecessary consent to or approval of any subsequent similar act.

(d) Law Applicable. The laws of the State of Alaska shall govern the construction, validity, performance, and enforcement of this agreement. The Superior

Court for the State of Alaska, First Judicial District at Wrangell, Alaska, shall be the exclusive jurisdiction and venue for any and all claims of any kind and any nature arising out of or related to this Agreement in any way.

(e) Paragraph Headings. The headings of the several sections and subsections contained herein are for convenience only and do not define, limit or construe the contents of such sections and subsections.

(f) Successors and Assigns. Except as otherwise provided herein, the covenants, agreements and obligations herein contained shall extend to bind and inure to the benefit not only of the parties but also to their respective personal representatives, heirs, successors, and assigns.

(g) Compliance with Laws and Regulations. CONTRACTOR shall, at CONTRACTOR'S sole cost and expense, comply with all of the requirements of all local, state or federal laws, ordinances or regulations now in force, or which may hereafter be in force, pertaining to this agreement or the project or work to be performed, and shall faithfully observe in the performance of this agreement all local, state and federal laws, ordinances and regulations now in force or which may hereafter be in force.

(h) Terms Construed as Covenants and Conditions. Every term and each provision of this agreement performable by CONTRACTOR shall be construed to be both a covenant and a condition.

(i) Time of the Essence. Time is of the essence as to each term, condition, covenant, and provision of this agreement.

(j) Entire Agreement. This agreement, and any schedules, appendices or exhibits attached hereto, sets forth all the covenants, promises, agreements, conditions and understandings between the parties, and there are no covenants, promises, agreements, conditions or understandings, either oral or written, between them other than as herein set forth. Except as expressly provided, no contemporaneous or subsequent agreement, understanding, alteration, amendment, change or addition to this agreement, or any schedule, appendix, exhibit or attachment thereto, shall be binding upon the parties unless reduced to writing and signed by both parties. CONTRACTOR agrees and understands that no employee, representative or consultant of the BOROUGH, nor the Mayor, nor any assembly member acting alone, has any authority to verbally modify or amend this Agreement. This agreement constitutes a final, complete, and exclusive statement of the agreement between the parties.

(k) Severability. In the event any provision of this agreement is adjudicated or held to be invalid or unenforceable, the remaining provisions shall remain in full force and effect to the greatest extent possible.

(l) Audits and Inspections. At any time during normal business hours and as often as the BOROUGH may deem necessary, there shall be made available for examination all of CONTRACTOR'S records with respect to all matters covered by this Agreement and CONTRACTOR will permit representatives of the BOROUGH to audit, examine, and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment, and other data relating the performance of this Agreement. Except in case of emergency, CONTRACTOR must make such records available upon five (5) days' notice. In case of emergency, CONTRACTOR must make such records available immediately upon request. In performing such audits and investigations, the BOROUGH and its representatives shall not unduly interfere with the ability of CONTRACTOR to perform his/her duties under this Agreement.

(m) Interpretation and Enforcement. This Agreement is the result of good faith, arms-length negotiations by the parties. The parties acknowledge that the parties and their counsel have reviewed and revised this Agreement and agree that the normal rule of construction – to the effect that any ambiguities are to be resolved against the drafting party – shall not be employed in the interpretation of this Agreement or any exhibits or amendments to this Agreement. The titles of sections in this Agreement are not to be construed as limitations or definitions but are for identification purposes only.

(n) Understanding. CONTRACTOR acknowledges that it has read and understands the terms of this Agreement and has had the opportunity to review the Agreement with counsel of his/her choice and is executing this Agreement of his/her own free will.

(o) No Third-Party Beneficiary. The provisions of this Agreement are and will be for the benefit of CONTRACTOR and BOROUGH only and are not for the benefit of any third party and accordingly, no third party shall have the right to enforce the provisions of this Agreement.

(p) Ownership of Documents. The BOROUGH shall retain ownership of all documents generated for this project, both editable and static forms, existing electronically, physically, or otherwise. This clause does not preclude the keeping of copies or incidental use by CONTRACTOR. This clause does require CONTRACTOR to surrender copies of all generated documents to the BOROUGH in formats reasonably requested by the BOROUGH upon request.

(q) Counterparts. This agreement may be executed in counterparts.

Section 15: Notices and Electronic Delivery.

Electronic Delivery of all documents, other than an original deed, is acceptable. All notices, demands, and requests, which may or are required to be given by either party to the other shall be in writing and given by registered or certified mail, postage prepaid, facsimile with confirmation receipt, email with read receipt enabled, or in person addressed to the other party at the respective addresses shown below, or at such other address as either party may from time to time designate in writing pursuant to this Section.

If notice is given by registered or certified mail, such notice shall be deemed to have been given or served on the third business day following the time same is deposited in the U.S. mail as aforesaid. If notice is given in person, such notice shall be deemed delivered upon personal delivery. If notice is given by facsimile or email, such notice shall be deemed to have been delivered upon confirmation of transmittal.

<u>If to the BOROUGH</u>	<u>If to the CONTRACTOR</u>
<p>Borough Clerk City and Borough of Wrangell, Alaska P.O. Box 531 Wrangell, AK 99929</p> <p>Email: clerk@wrangell.com</p> <p>Phone: (907) 874-2381</p> <p>Fax: (907) 874-3952</p>	

Section 16: Execution and Attestation.

WHEREFORE the parties have entered into this agreement the date and year first above written.

BOROUGH:
City and Borough of Wrangell

ATTEST:

By: _____
Jeff Good
Borough Manager

Kim Lane
Borough Clerk

CONTRACTOR:

By: _____
Title _____

Corporate Certificate

STATE OF ALASKA)
)ss.
FIRST JUDICIAL DISTRICT)

Notary Public for Alaska
Commission expires: _____

The foregoing instrument was acknowledged before me this ____ day of _____, 2023, by _____, _____ of _____, an Alaska Corporation, on behalf of the corporation.

EXHIBITS

Exhibit ___:

Exhibit ___:



Guide for School Facility Condition Surveys

PRIMARY CONTRIBUTOR

Tim Mearig, RA
Facilities Manager
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Juneau, Alaska

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Alaska Department of Education & Early Development

ACKNOWLEDGEMENTS

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This publication may not be reproduced for sale by individuals or entities other than the:

State of Alaska
Department of Education
Juneau, Alaska

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The Condition Survey

Background

Immediately after being constructed and put into use, school facilities begin to age. Their moving parts begin to wear. Their more static elements are impacted by loads and stresses, by environmental conditions, and by building users. In order to mitigate this degradation, facility owners implement maintenance and custodial measures. Eventually, inevitably, replacement or renewal becomes necessary. Capital renewal schedules can form the basis for identifying and forecasting this work, but they lack detail regarding specific conditions. The move from capital planning to capital projects—from general data on renewal schedules to actual assessments of conditions on site—is the realm of the condition survey.

A properly performed condition assessment is the initial step for any well-defined capital improvement project. The assessment can be expansive in scope to include an entire facility and all of its systems (i.e. civil, structural, architectural, mechanical, electrical, and hazardous-materials) or small and specifically directed (e.g., assessing the heating plant portion of the HVAC system). Department of Education & Early Development (DEED) documents describe the ends of these ranges with the nomenclature “Facility Condition Surveys” and “Component Condition Surveys”.

Regardless of the scope of a condition assessment, which is determined by the targeted needs of a capital renewal program, the facility/component survey is a comprehensive product that informs and supports the project. It documents the conditions justifying the project and should include the following elements based on need:

- A basic description of existing systems including the components making up the system, their function, and their age;
- The current condition of the system(s) based on function/operation, visual observation/inspection, and testing;
- A listing of the code deficiencies found, with citations;
- Recommendations for corrective action related to all deficiencies described;
- Costs associated with each deficiency’s corrective action; and
- Supporting data such as cost/benefit analyses and life cycle cost analyses, special inspections, engineering calculations, photographs, and drawings related to any of the prior elements.

Depending on the scope and complexity of the condition survey, and its intended audience, it is also common to provide executive summaries, tabulations, and other organizational elements as part of the overall product.

The Survey

The condition survey process has three basic elements: pre-inspection review, on-site condition assessment, and report preparation.

Pre-Inspection

Best practices in the pre-inspection phase include reviewing available record documents for both buildings and infrastructure (e.g., building information models (BIM), drawings, and operations and maintenance manuals) for an understanding of the existing systems, gathering available maintenance and operations data such as work order histories, and completing a code review. Much of the information gathering process will involve communication with district personnel. At a minimum this will involve conversations with district facilities personnel; at a most-robust level, surveys would be conducted with user groups and responses indexed for further review. One objective of the code review is to ground the survey in the realities of the codes in force at the time of construction. Code awareness helps inform the on-site assessment and report phases—especially when differentiating between code deficiencies and code upgrades. The pre-inspection phase is also the time when various logistical elements are considered and planned. When conducting facility condition surveys with a broad scope, many logistical elements are integrated with the consultant solicitation, proposal, and award process.

On-site Condition Assessment

Particulars of the on-site condition assessment phase are driven by the scope of the condition survey. For facility condition surveys it is anticipated that the on-site condition assessment will be accomplished by a team of professionals with the necessary expertise to inspect the various building systems being included. A common team makeup would include an architect as the team lead with representation from civil, structural, mechanical, and electrical engineering disciplines. One challenge for design professionals is suitable equipment and tools for accessing areas of the facility or to accomplish testing, whether non-destructive or destructive. Often, the most robust condition assessments include an appropriate collaboration of design professionals and tradespersons or owner facilities personnel. The team makeup for a component condition survey could be significantly different from that of a facility condition survey. At this scale, condition assessment is often handled by tradespersons, contractors, or facilities personnel. Regardless of the team composition and complexity, there are some key procedures that are followed in performing an efficient and effective on-site assessment. These include the use of:

- **Inspection Checklists:** Inspection checklists can be prepared for each building system in the template. Use of checklist increases both the efficiency and the effectiveness of the on-site assessment and can help guard against inadvertently missing critical components. Appendix B provides some basic sample checklists.
- **Condition Rating Scales:** The template provided suggests a primarily narrative style report. However, this does not mean that indexing conditions should not occur. A solid best-practice is to develop a simple, well-crafted rating scale for the conditions observed. Generally, a 5-point numeric rating scale is sufficient to differentiate between various conditions. Appendix C provides an example of typical rating scale.
- **Recording and Testing Equipment:** Essential equipment to enhance the recording of conditions beyond the checklists and rating scales include a digital camera and measuring devices. For the latter, each building system establishes its own needs. In addition, the scope and complexity of the survey help determine the need for specific test equipment. Appendix D provides a list of typical test equipment and each of their uses.

- Personal Protective Equipment (PPE): Safety is the procedure; PPE is the means to that end. Condition assessments can be hazardous. They often involve accessing areas of facilities and infrastructure that are not meant to be inhabited or exposed—even temporarily. On-site assessments are often required to be conducted in compressed time frames, sometimes resulting in long work hours. In addition to protective equipment, personal care cannot be overlooked. Proper hydration, nutrition, and breaks require conscious preparation and personal awareness. Appendix D provides a list of typical PPE and personal care items.

Report Preparation

After the on-site inspection is complete, a report—the condition survey product—is prepared. Key elements of this document were previously identified in the Background section as: Description of Existing Systems, Current Conditions, Code Deficiencies, Recommendations, and Estimates. The report sections describing the existing systems should draw from the pre-inspection review phase while those documenting current condition and code deficiencies will be based on the on-site assessment phase. Though the data in these three elements form the core of the condition survey report, the usefulness of the report depends on the information found in the recommendations and costing elements. The recommended corrective actions should be able to assist the school district in developing a cost-effective plan for restoration of the facility or component, or to establish the need for replacement. In addition to this content-related structure, it is important for the report as a whole to be organized in relation to the building systems that make up the school facility and its related infrastructure. Utilizing the *DEED Cost Format* or similar or equal building systems structure is highly recommended for all other forms of condition surveys for schools in Alaska. Finally, the survey should assist the district in communicating those needs to the public and government agencies. These stakeholders are often those being asked to provide support for corrective work in the way of funding.

When performing a condition survey, a wide spectrum of conditions will likely be observed. A correspondingly range of recommendations for corrective action will be needed in the report. An important factor to consider when producing condition surveys on school facility projects is a distinction that may be needed between corrective actions that require capital expenditures and those that should be part of normal maintenance and repairs. Both categories should be documented in the report.

DEED Provisions

Because of a condition survey's value in defining a project, the department's *Application for Funding Capital Improvement Project by Grant or State Aid for Debt Reimbursement* incentivizes completion of a survey by assigning points and making it a requirement in order for certain projects to receive points for planning and design.

Under the department's capital improvement project (CIP) application process, a facility condition survey is required for major rehabilitation projects to receive any planning and design points, including Phase 1 - Planning/Concept Design. A condition survey may also be required for other projects if determined to be necessary to adequately support the scope of the proposed work. Instances of this have included projects where capital forecasting tools such as Facility Condition

Index or Renewal & Replacement Schedule indicated a scheduled renewal need but no evidence of an on-site assessment was included. Also, project scopes that warrant identification of in-depth examination of deteriorated systems may require a scope-specific facility or component condition survey. For project scopes that are component or system renovations, a condition survey of the component or system is acceptable. Condition surveys should be clearly identified and establish a specific date or date range when the survey occurred or was produced.

The department does not consider submittal of a Spill Prevention, Control, and Countermeasures (SPCC) Plan as a condition survey for fuel tank or fuel facility projects. In addition, an energy audit, although useful and informative, does not meet criteria to be a condition survey if the project's scope warrants additional facility condition survey data. Similarly, a condition statement found in a project scope narrative of a CIP application would not constitute a facility/component condition survey. Always refer to the department's latest application information for the most current instructions in this area.

Life Safety/Code scoring in the CIP application will be assessed based on the severity of the conditions and upon the documentation provided to support the reported severity. Documentation, such as a condition survey, can provide quantitative information to support the building or component condition. The primary purpose of this documentation is to present objective, primary, specific, and verifiable data.

Generally, the department does not have specific guidelines on what entities can perform and produce condition surveys. Portions of the condition survey, such as that information pertaining to building codes and analysis of structural and engineered systems during on-site assessments may need to be completed by an architect, engineer, or specialists with documented expertise in a building system. Surveys of this type can easily surpass the \$50,000 threshold where competitive selection is required under DEED regulations. However, it might be possible for a district to complete the on-site investigation work and send the documentation to a corresponding professional to review for code issues. School district personnel, or their municipal counterparts, may also be able to produce in-house facility/component surveys depending on their particular expertise and knowledge.

Another area where special knowledge and skills may be needed is in the preparation of the cost estimate associated with proposed corrective actions. There are a variety of estimating tools available for use in this aspect of the condition survey process. Over the years, an increased level of detail for renovation work has been added to the DEED *Program Demand Cost Model for Alaskan Schools*. This enhances its use for estimating the cost of facility deficiencies in the context of condition surveys. However, this and other similar tools have their limitations, and often there is no substitute for a professional cost estimator.

The Template

Introduction

The condition survey template included in this publication is provided for convenience to establish a baseline recommendation for evaluating the condition of school facility systems and their components. The use of this template is not mandatory. Other forms and documents providing this information are acceptable. The template is available as a editable file from the department.

Template Structure

This condition survey template is designed to provide a basic, consistent structure to all phases of the condition survey process, and to all levels of condition survey scope. It accomplishes this by using a building system structure, and establishing within that structure a minimum level of detail. For the template provided in this publication, a building system structure conforming to the *DEED Cost Format* is used. When using the template, the first task is to norm the included sections to the scope of the survey. A full-scope facility condition survey would utilize every first-tier element and all applicable sub-elements. The smallest component condition survey could isolate any second-tier sub-element (e.g., Flat Roofs, or Dust Collection System). Within any of these scope elements, the five key process and product elements (description, existing condition, code deficiencies, recommendations, cost estimate) remain standardized. It should be noted that the format of any information presented in the five process elements can vary widely from straight narrative, to bulleted lists, to tables and can include photographs, figures, test results, and other supporting information. To illustrate, an example has been provided of a Mechanical System Condition Survey. While it is possible to embed supporting data within the main condition survey report, placement of supporting data, such as inspection checklist results, in respective appendices can also be helpful in organizing the report.

While there is great latitude in the means of presenting a condition survey, the building system/component structure should remain in place, as should the process of gathering and reporting the data in the five key elements. A condition survey without a description of existing systems or an estimated cost of recommendations would be incomplete.

Template Elements

Cover Page. The cover page is not limited to one page and should include: facility name and location, school district, dates of inspections, dates of building constructions and any additions including gross square footages, history of any renovations, and the survey team performing the survey. There should also be a discussion of the survey including its scope, purpose of the conditional survey, and some background on the facility. This is also where, if the condition survey is being performed by a non-licensed professional working within their expertise, the qualifications of the person performing the survey are provided.

Regulatory Data: Codes used for evaluating the facilities shall be referenced either in this section or in the relevant component sections. Any code discrepancies noted should be included in each component section and list the code references including title, edition, chapter, section, paragraph, and sub-paragraph. This section may also include code analysis of the facility for allowable area

and fire, life, and safety. Survey, reports, and other documentation such as ADA Surveys, AHERA Surveys, Fire Marshal Inspection Reports, and similar documentation shall be referenced under this section of the condition survey and attached as an appendix if available. Results of these surveys and studies shall be considered in the recommendations and cost summary.

Site and Infrastructure: This section consists of Site Improvements, Site Structures, Civil/Mechanical Utilities, Site Electrical, and Offsite Work. The subsystems under these categories provide for detailed assessments of general site conditions as well as utilities and equipment that supports athletics and play. The latter portion addresses the civil engineering and utility requirements of the building. Site issues not related to improvements and infrastructure are assessed and reported under Special Construction. Examples would be site drainage and remediation of hazards.

Substructure: This section consists of Standard Foundations & Basements, Slabs on Grade, and Special Foundations. The subsystems under these categories provide for detailed assessments of all types of building foundations and supporting elements such as waterproofing and drainage systems. Many of these systems are below grade or covered with finish materials and can be difficult to assess directly. Best practice in determining conditions in these components is to look for the impacts of compromise or failure in related and connected systems.

Superstructure: This section consists of Floor Structure, Roof Structure, and Stair. The subsystems under these categories provide for detailed assessments of the structural elements of the building; those carrying dead loads and live loads associated with building use. Similarly to Substructure, these systems are often obscured or covered with finish materials and can be difficult to assess directly. Best practice in determining conditions in these components is to look for the impacts of compromise or failure in related and connected systems. The decision on whether or not to include destructive testing in the scope of a condition survey is often tied to the conditions being observed in these ancillary systems.

Exterior Enclosure: This section consists of Exterior Walls and Soffits, Exterior Glazing, Exterior Doors, and Exterior Accessories. The subsystems under these categories provide for detailed assessments of building components that form the building envelope. In complex buildings, the building should be broken down into discrete areas (e.g. wings, etc.) and separate information obtained for each area. In addition, changes in materials or structural systems will require separate assessment in the report.

Roof Systems: This section consists of Pitched Roofs, Flat Roofs, and Roof Accessories. The subsystems under these categories provide for detailed assessments of the components associated with each roofing system including the roofing material, and collection and drainage features. Roof accessory components such as hatches and skylights, and curbs for mechanical equipment are also in this section. Roofs which also serve as walkable/usable decks and components associated with vegetative roofs would be assessed in this section.

Interiors: This section consists of Interior Partitions, Special Partitions, Interior Openings, Interior Finishes, and Specialties. It is intended to capture all interior information and can be

presented in a room-by-room format or on a system component basis. If reviewing room-by-room, it can be helpful to group rooms into basic types based on typical use and systems: 1) general spaces with standard amenities (e.g. classrooms, administrative offices, etc.), 2) spaces with additional plumbing elements (e.g. science labs, administrative offices, etc.), 3) individual spaces with special uses (Corridors, Kitchens, Shops, Locker Rooms/Restrooms, Gymnasiums). This area of the survey could also discuss functional considerations such as adequacy of space, passive and active security measures, acoustics—including mechanical system noise, lighting, and indoor air quality (IAQ). ADA deficiencies could also be referenced.

Conveying Equipment: This section consists of Passenger Conveyors, and Materials Handling Systems. The subsystems under these categories provide for detailed assessments of elevators, lifts, and building-mounted hoists. These are uncommon in most Alaskan schools and may require assessment by specialists in these types of devices.

Mechanical: This section consists of Plumbing, HVAC, Integrated Automation, and Fire Protection. The subsystems under these categories provide for detailed assessments of the mechanical systems found in various areas of a building, including heating, cooling, and ventilation as well as plumbing piping, plumbing fixtures, building controls, and sprinkler systems. For room-based assessment, a form for Mechanical Rooms to gather significant information on the heating, cooling, and ventilation systems supplying the building's spaces is recommended. As such, information gathered in Interiors will augment the information in this section. However, the basic principle is that Interiors is limited to the visual aspects of the appurtenances of the mechanical systems whereas Mechanical will address the functionality and support for the appurtenance. For example, if mechanical system noise was documented in Interiors, this section would examine the sources and solutions to that functional issue. This section also deals with some specific regulatory data that may not be part of a standard code analysis.

Electrical: This section consists of Service and Distribution, Lighting, Power, Special Electrical, and Other Electrical. The subsystems under these categories provide for detailed assessments of MDPs, transformers, lighting fixtures, lighting controls, distribution panels, power devices, and the host of special electrical systems that make up 21st century schools. This include fire alarms, data and communications, intercoms, and clocks. Power generation and special grounding systems are examples of Other Electrical components. Information gathered in Interiors will augment the information in this section. Again, the basic principle is that Interiors is limited to the visual aspects of the appurtenances of the electrical systems whereas Electrical will address the functionality and support for the appurtenance. This section also deals with some specific regulatory data that may not be part of a standard code analysis.

Equipment and Furnishings: This section consists, unsurprisingly, of Equipment and Furnishings. The subsystems under these categories provide for detailed assessments of career technology, art, athletic, and other built-in school equipment. In the furnishings area, only those furnishings that are affixed to the building would be assessed. Examples would be special entry and walk-off mats, and window coverings.

Special Construction: This section consists of Site Conditions and Special Construction. The subsystems under these categories provide for detailed assessments of site features such as grading, drainage, and site remediation. Special Construction subsystems sometimes associated with schools include, packaged utility modules (e.g., water treatment, biomass boilers, etc.), swimming pools and greenhouses.

Although the preceding template elements are designed to capture all types of building systems and components, some hybrid systems can be difficult to locate within the recommended structure. These instances can be described and noted in the report's introductory information. There are also some types of inspections and assessments that are unique to a specific law or certification and that touch on several building systems. Examples of these are ADA assessments, Indoor Air Quality testing, and certifications for overall building performance such as LEED. If these specialty surveys are included in the scope of a facility condition survey, there could also be the recommendation would be to include these as an appendix to the report.

Template Element Content

Description of Existing Systems: The description should include all components; for instance, in describing the heating system, the boilers, pumps, piping, valves and all terminal units. It should also discuss the original design intent of the system, any modifications made to the system, and any operational deviations that have made changes to the original design and operation. Age of the individual components will be listed, including whether each is an original or a replacement. Ascertaining the age may require research into original drawings, renovations, and component work orders. There can also be a discussion of the component condition that is observed during the inspection.

Existing Conditions: Documentation of the system should be noted in narrative or bulleted write-ups and should include photographs wherever possible. Photographs should depict overall condition, as well as, any specific issues that will be included in the deficiency section of the report. Deficiencies types can be a failure, near to failure, does not meet the requirements of the facility, or a code issue. When referring to age as a reason for deficiency there are some guidelines; using the term "at the end/near end of its useful life" is not meaningful unless information is provided on the age of the component as well as the minimum expected life for a properly maintained system or component. The description of the deficiency should also describe any operational or maintenance issues, backed up by work orders or comments from operators. Noting whether there were no reported issues is important. For components that have failed or are near failure, the survey should review preventive maintenance schedules and work orders to determine if failure is due to age or lack of proper maintenance. This would also be the place to evaluate deviations from original design intent and the possible benefit of retro- or re-commissioning the system.

Code Deficiencies: If there is a code violation, as mentioned above, a citation of the code must be included.

Recommendations: Upon completion of the condition survey, recommendations shall be provided for all discrepancies and upgrades described. Each recommendation should reference the corresponding item contained in the Condition Survey by section, paragraph, and sub-paragraph

designations. Recommendations can be a significant responsibility. Sometimes recommendations are obvious, such as those based on like-for-like replacement. At other times, recommendations can be a challenge. The best recommendations are made under a consideration of available options and an analysis that supports the option selected. Tools such as life-cycle cost analysis can assist in making well-supported recommendations. The survey team should include discussion of department-approved construction standards and how the standards may affect the design of any deficiencies and corrective actions. Consideration of district construction and building system standards is also appropriate.

Estimates: Cost associated with each discrepancy and upgrade shall be provided. The cost of corrections should be entered in this section and estimating details for each cost should be included in the appendix. Recommendations for developing costs have been covered in the Introduction section and include professional estimates, use of the *DEED Cost Model*, contractor quotes, and vendor quotes. A condition survey submitted without costs associated with each discrepancy is considered incomplete.

Executive Summary

This section could include a general review of the survey findings. It could also include possible project strategies to accomplish the needed repairs, including: suggested bundling of items into distinct projects for efficiency, small capital projects being performed by the district, maintenance and repair work, and possible long range planning for items that may need attention in the future.

Supplements and Appendices

Supplements may be included in an Appendix to the Condition Survey report. Appendices may include subjects such as special inspections, checklists, engineering calculations, photographs, drawings, estimate worksheets, etc. Floor plans, with building area designations, room identification and door numbers used in the survey should be included.

Example

An example School Condition Survey Mechanical system narrative excerpt is included on the following pages to show an example of how specific elements of the template can be selected to align with a survey scope, and how the five content areas are used to document the survey information.

ABC ELEMENTARY MECHANICAL CONDITION SURVEY

The site was visited on Friday, August 9th, 2019 to inspect the mechanical systems for the facility. The building was inspected for conformance of the following adopted codes and standards:

2013	International Building Code (IBC)
2012	International Fire Code (IFC)
2012	International Mechanical Code (IMC)
2015	Uniform Plumbing Code (UPC)
2012	International Fuel Gas Code (IFGC)
2012	International Energy Conservation Code (IECC)
2005	Americans with Disabilities Act Guidelines (ADA)
2016	ASHRAE 62.1-2016 Ventilation for Acceptable Indoor Air Quality
2016	ASHRAE 90.1-2016 Energy Standard for Buildings Except Low-rise Residential

Mechanical

Synopsis

The mechanical systems in the school varied in age and condition. The original school was constructed in 1981; there have been numerous renovation and addition projects since. Many of the mechanical systems are nearing the end of their useful life expectancy and should be scheduled for replacement. Ventilation to the school is not provided in accordance with ASHRAE 62.1-2010. The following is a summary of recommendations to address mechanical deficiencies in the school:

1. Replace plumbing fixtures and piping throughout the building.
2. Replace heating piping and heating equipment throughout the building.
3. Upgrade boiler system; replace existing boilers with high efficiency condensing boilers.
4. Replace heating pump system with variable speed pumping system.
5. Replace ventilation systems throughout the building.
6. Replace all pneumatic controls with DDC controls.

Plumbing Overview

Synopsis

Domestic water and sanitary sewer service is provided to the school by the municipal system. The storm drainage system is connected to the municipal system in the road right of way on the east side of the school.

Plumbing Fixtures

Description of Existing Systems

There are two toilet room groups, one each wing consisting of a male and female toilet rooms. Plumbing fixtures in these rooms are commercial quality, vitreous china and are configured for minimal ADA requirements following a project in 2002. Toilets are wall mounted; urinals are wall mounted; lavatories are counter-set, self-rimming with single-handle faucets. Toilets and urinals are provided with commercial quality manual flush valves. Three individual toilet rooms are also present. Rooms 134A & B off the staff work room and 102A in the kindergarten classroom. Individual toilet room fixtures include vitreous china floor mounted toilets and wall mounted sinks with standard valves and faucets. There is a residential quality double bowl stainless steel kitchen sink in room 135 with a single level faucet and a single bowl stainless steel sink in room 105 with a double handle gooseneck faucet. Additionally, there is single bowl stainless steel sink in room 138 with a two-handle faucet and an integral vacuum breaker. There is a floor sink and a wall mounted faucet with an integral vacuum breaker in Janitor room 111. Dual height drinking fountains are installed in two locations in the main corridor, along with a hand-held emergency eye wash that is plumbed in room 138.

Existing Conditions

The plumbing fixtures vary in condition from fair to poor. With the exceptions of the fixtures or valves that have been replaced in the 2002 project, the fixtures are from the original construction or additions to the school. The fixtures vary in age from 30 to 39 years old and are at the end of their useful life expectancy. ADA Accessibility is limited to gang restrooms. Additionally, the fixtures are not water conserving fixtures; water usage at the school could be significantly reduced with the replacement of the fixtures. The dual-fixture drinking fountains are marginally functioning. Water pressure is low indicating chemical buildup in piping. These should be replaced as scheduled.

Code Deficiencies

Fixtures at the staff workroom are not ADA compliant under Americans with Disabilities Act of 1990, 42 U.S.C.

Recommendations

Replace plumbing piping and fixtures building wide. Typical life expectancy for plumbing fixtures is 30 years; the fixtures have met or are near the end of their useful life. Install new water conserving plumbing fixtures and provide upgrades for ADA compliance. Some architectural modifications will be required to provide for more ADA compliant bathrooms. Inspect underground plumbing with camera and repair or replace piping as required. Plumbing piping and fixture replacement in the north wing would be the first priority as this is the oldest piping in the building. The floor sink and associated wall tile are heavily stained and probably cannot be restored. If visual condition is objection-able, these should be replaced.

Estimate

\$62,450 (see Appendix C for Cost Model)

Domestic Water Supply

Description of Existing Systems

The facility is provided with domestic cold water from two sources. A 2in underground water main enters the facility through the floor in Mechanical room 101 and feeds the entire facility. A second, 3/4in cold water line enters the building through the floor in Janitor room 111 and ties into the cold-

Mid-Alaska School District

School Facility Condition Survey

ABC Elementary

August 2019

water distribution system through an isolation valve to stop the flow for maintenance and safety purposes. Both lines are fed from the same underground 8” water main. The 3/4in line connects to the main at the south side of the building. There is no water meter or backflow protection device on either incoming cold water line. There are four exterior flush mounted key-type non-freeze hose bibbs with integral vacuum breakers distributed around the perimeter of the facility. Hot water is distributed via a 3/4in copper branch and 1/2in supply lines directly from the water heater. Hot water distribution piping has fiberglass pipe insulation. There is no hot water recirculation system.

Existing Conditions

Water distribution piping was not generally visible for inspection with the exception of short runs within the mechanical room. The exterior non-freeze hose bibbs were operated and found to be functioning with no issues. Domestic hot water is distributed directly from the water heater to the restrooms without an ASSE-1070 device to limit the maximum temperature to 120 degrees F. There is no hot water recirculation system. Lack of a hot water recirculation system will result in increased domestic water usage and may result in user complaints. The condition of the plumbing piping is fair to poor. The piping varies in age, it is our understanding that only small sections of the original piping have been replaced. Most of the piping has met or exceeded the typical life expectancy of the domestic water piping.

Code Deficiencies

There was no tempering valve provided on hot water equipment.

Recommendations

Install appropriate tempering valve on hot water generating equipment.

Estimates

\$400

Plumbing Equipment***Description of Existing Systems***

A 1/4hp circulation pumps is located in room 140 Mechanical and provides recirculation to approximately 65ft of domestic water line that runs in the interstitial floor space. Domestic hot water is generated in a single, 120 gallon atmospheric natural gas fuel-fired water heater located in Mechanical room 140.

Existing Conditions

All plumbing equipment was in good serviceable condition. The water heater was replaced in the 2002 project and is reaching its 20-year expected life.

Code Deficiencies

The water heater was not equipped with a pressure relief valve.

Recommendations

Replace water heater in the next five years. Install an PRV as summer maintenance.

Estimates

\$300 O&M costs;

\$3000 construction cost.

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Waste & Vent Piping

Description of Existing Systems

The facility is served by a gravity sanitary sewer system. Sanitary waste and vent piping within the building is copper DWV except for a 4in cast iron vent through roof (VTR) above Fan Room 201. A 4in sanitary sewer cast iron main exits the facility to the west. Vent piping collects from plumbing fixtures to a 4in VTR on the north roof slope in Fan Room 201. Separate 3in VTRs serves the science lab and the main outfall line. Floor drains are provided at wet areas and tie to 2in waste piping. VTRs are insulated to 3 ft. below the roof deck.

Existing Conditions

The sanitary waste piping and venting was not generally visible for inspection with the exception of short runs within the mechanical room. However, there was no ancillary evidence that the waste and vent piping was not performing adequately except as noted below. There are two plumbing vent through roof (VTR) extensions on the north sloped roof that have been bent over by sliding snow.



The waste piping is buried and was not available for inspection. The underground piping could be flushed and inspected with a camera to review the condition of the piping.

Code Deficiencies

None

Recommendations

Consider repair of VTRs as O&M work.

Estimates

Special Systems

Description of Existing Systems

Two inch acid resistant waste and vent piping (ARW) serves sinks and floor drains in rooms 135 Science.

Existing Conditions

The acid resistant waste and vent piping system was not visible for inspection with the exception a small portion under the sink area of room 135. However, there was no ancillary evidence that the waste and vent piping was not performing adequately as installed. Note; equipment and fixtures tied to this system

have been revised from original construction; only one sink remains in 135 and waste piping is now standard ABS.

Code Deficiencies

None noted.

Recommendations

None.

Estimates

HVAC Overview

Synopsis

The HVAC system consists of hot water boilers feeding a piped hydronic heat loop. Ventilation is provided by ducted supply system fed by air handling units to a majority of the school. A three-classroom addition is served by individual cabinet unit ventilators. A dedicated exhaust system feeds toilet rooms and science rooms.

Heating Equipment

Description of Existing Systems

There are two boiler systems in the school. One boiler system is located in the 1999 addition and serves the gymnasium, kitchen, MPR and 1985 classroom addition. The second boiler system is located in the original 1981 boiler room on the east side of the building near the IMC and serves the areas of the school.

The boiler system in the 1999 addition consists of two fuel-fired cast iron boilers. The boilers are Burnham PF-505 boilers rated at 786,000 BTU/hr gross output each. The boilers were installed in 1999 during the school addition. The boilers are in fair condition for their age but are nearing the end of their useful life expectancy. The boilers are directly piped to the primary heating system pumps, with a three-way valve on the supply header that operates to temper heating supply water to the building. The piping as configured does not provide for even flow to each boiler and does not provide minimum return water protection or minimum flow to the boilers. The piping configuration can lead to condensation of flue gases due low temperature, and uneven system heating as each boiler receives part of the flow regardless of boiler operation.

The boiler system in the 1981 boiler room consists of two fuel-fired cast iron boilers. The boilers are Burnham PF-510 boilers rated at 1,612,000 BTU/hr gross output each. Each boiler is independently vented through the north wall of Mechanical 140. Snow guards have been installed up-slope of the vent stacks. Hydronic heating system make-up water is fed into the system through a 3/4in reverse principle backflow preventer (RPBP).

Existing Conditions

The boilers are approximately 39 years old. The boilers are in fair condition for their age but are nearing the end of their useful life expectancy. Boiler circulation pumps were installed on the boilers in 2003 to provide minimum flow through the boilers.

Both of the boiler systems utilize compression tanks for the heating system that do not have external bladders. These tanks have a tendency to become water logged and do not provide as good of expansion compensation as current bladder style tanks.

Code Deficiencies

None

Recommendations

Both of the boiler systems, main system heating pumps and associated piping should be scheduled for replacement. The boilers are nearing the end of their typical life expectancy. The boilers should be scheduled for replacement with high efficiency boilers as they are near the end of their useful life expectancy. The boilers should be consolidated to a single location with only one boiler room and two boilers, to reduce maintenance requirements. Upgrading the boilers to high efficiency condensing boilers with variable speed pumping system would provide significant energy savings over the existing boiler system. Additionally, the existing boiler systems are prone to thermal shock issues, high efficient boilers are designed to operate with low water temperatures eliminating concerns with thermal shock.

Estimates

\$457,950 (see Appendix C for Cost Model)

Heating Distribution Systems

Description of Existing Systems

The hydronic piping in the building consists of steel and copper piping. The piping in the 1999 additions had signs of leakage but appeared to be in fair condition.

Heating for the school is provided by a combination of in-floor heating, cabinet unit ventilators, perimeter fin tube and heating coils in the air handling units. Miscellaneous unit heaters and cabinet unit heaters are located throughout the school to provide heating to utility areas and vestibules. Hydronic hot water heating fluid (100% water) is circulated to terminal units throughout the facility via copper piping. There are two inline constant volume supply pumps located downstream of the boilers in Mechanical room 140.

Existing Conditions

The distribution piping in the 1981 areas of the school have exceeded its useful life expectancy. The piping insulation in the fan rooms has been damaged and should be repaired/replaced.

Code Deficiencies

The heating system equipment and piping is not seismically restrained in accordance with the IBC. Seismic restraint requirements have increased since the installation of the heating system.

Recommendations

The heating system pumps, air separator and compression tanks should be replaced with the boilers as they are also near the end of their life expectancy of 30 years.

The heating piping and terminal heating equipment has exceeded its typical life expectancy and should be replaced. The distribution piping and terminal units are approximately 28 years old.

Seismic restraint for the heating piping and equipment throughout the building should be installed in accordance with the 2009 edition of the IBC. Repair or replace the damaged piping insulation in the fan rooms.

Estimates

See above.

Ventilation Equipment***Description of Existing Systems***

Ventilation for the school is provided by air handling units and cabinet unit ventilators. The ventilation systems in the school are not capable of providing the current ASHRAE 62.1-2007 ventilation rates. The classroom and office areas in the 1981 areas are ventilated by a central air handling unit located in a fan room adjacent to the boiler room. The air handling unit is a constant volume, built up unit with mixing box and filters. The unit has exceeded its useful life expectancy and does not meet current building codes. The classrooms in the 1999 addition are ventilated by cabinet unit ventilators. The ventilators draw fresh outside air in low to the ground. The multi-purpose room and gymnasium are ventilated by constant volume air handling units. The air handling units that serves the MPR is from the 1999 addition. Two air handling units serve the gym, the units were installed in the 1981 building.

Ventilation for bathrooms is provided by a combination of central and local exhaust fans. The kitchen in the elementary wing does not have a hood above the convection oven. The kitchen is ventilated by a roof mounted exhaust fan.

Existing Conditions

The air handling unit utilizes the corridor as a return air path which is no longer allowed by the IMC. The MPR unit has exceeded its useful life expectancy. The gymnasium air handling units are nearing the end of their useful life expectancy and should be scheduled for replacement. The intakes for the CUH are subject to blockage from snow, and there is the potential for intake of fumes from vehicles in the parking lots depending on wind direction. The path for the relief/exhaust air for classrooms is through the corridor to central relief air fans. Utilizing the corridor as the relief air path is a code violation. The unit ventilators are in fair to poor condition and have exceeded their useful life expectancy.

Code Deficiencies

The ventilation system equipment and ductwork is not seismically restrained in accordance with the 2009 edition of the IBC. Seismic restraint requirements have increased since the installation of the ventilation systems. The exhaust airflow rates for the bathrooms are below current code requirements. Most of the exhaust fans have met or are exceeding their useful life expectancy. The kitchen ventilation system does not comply with ventilation codes. The combustion air systems for the boilers are engineered systems with boiler room ventilation fans and relief air/combustion air opening.

Recommendations

The insulation tape on the ductwork insulation in the fan rooms is failing off and should be replaced.

Estimates

\$8,000 (accessible portions could be O&M)

Ventilation Distribution Systems

Description of Existing Systems

Supply air ductwork is routed above the ceilings to ceiling diffusers in the MPR and gym. The MPR return air is by ceiling return air plenum open to the fan room. The gym return air is ducted back to the two air handling units. Air returns back to the AHU through light fixture perimeter slots to a plenum above the ceiling where it is transferred to the mezzanine level fan room through a bank of silencers. Local exhausts are provided through three exhaust fans and galvanized steel ducting. EF-1 serves the toilet rooms. EF-2 serves the science lab. EF-3 serves the office areas. All exhausts terminate at exterior wall louvers with automatic shutoff dampers on the north side of the facility.

Existing Conditions***Code Deficiencies***

The ventilation system equipment and ductwork is not seismically restrained in accordance with the 2009 edition of the IBC. Seismic restraint requirements have increased since the installation of the ventilation systems.

Recommendations

Perform a building wide ventilation upgrade to replace ventilation equipment that is at or beyond its useful life expectancy. Install new ventilation equipment to comply with ASHRAE 62.1-2007. Install new Type 2 hood for the kitchen with exhaust fan sized for the equipment served. Install seismic restraint for the ventilation equipment and ductwork in accordance with the 2006 edition of the IBC.

Estimate

\$988,950 (see Appendix C for Cost Model)

Cooling Equipment

Description of Existing Systems

There is no refrigerant based mechanical space cooling system. Economizer-only space cooling is provided by the single 20,500 CFM air handling unit (AHU) located in Fan Room 201. All of the equipment associated with the computer room cooling system shown on the original construction plans has been removed.

Existing Conditions

N/A

Code Deficiencies

N/A

Recommendations

None.

Estimates

Cooling Distribution Systems

Description of Existing Systems

N/A

Integrated Automation Overview

Synopsis

See below.

Control Systems

Description of Existing Systems

HVAC control is provided by a Siebe pneumatic control panel in Mechanical Room 130, and a control panel in Fan Room 201, and pneumatic control sensors located throughout the facility. Fin tube control valves are also pneumatic. There is a control air compressor storage tank in Mechanical room 140 but the compressor has been removed.

Existing Conditions

Mechanical controls installed in the original construction (a pneumatic system) are in disrepair, all are non-functional due to the absence of head end equipment (i.e., the compressor). The operating system and main controllers of this system are suspect even if the system was charged and pressurized and should be replaced or upgraded. In addition, approximately 40% of the room temperature sensors on the west side of the facility are missing. The remaining room temperature sensors indicated a reasonably accurate room temperature. The control air compressor storage tank in Mechanical room was not in working condition; only the tank remains.



Code Deficiencies

Recommendations

Remove all elements of the non-functioning pneumatic control system and install a DDC control system.

Estimates

\$165,888 (see Appendix C for Cost Model)

Fire Protection Overview

Synopsis

Originally, fire protection is provided via portable fire extinguishers. Extinguishers are placed in recessed wall cabinets throughout the interior. The current fire protection system is a wet sprinkler system installed during the summer of 2009.

Sprinklers & Piping

Description of Existing Systems

Black iron schedule 40 pipe with threaded fittings. Standard 180 degree heads.

Existing Conditions

The system is in good condition.

Code Deficiencies

None.

Recommendations

No fire protection upgrades are recommended at this time. Routine testing and inspections in accordance with NFPA 25 should be performed to ensure reliable operation of the sprinkler system.

Estimate

\$500/yr in O&M

Special Mechanical Systems Overview

Synopsis

Fuel Supply (Gas & Oil)

Description of Existing Systems

There is a 3000 gallon above ground fuel oil storage tank secured to a concrete pad located behind a concrete retaining wall approximately 35 feet from the northwest corner of the facility. A 3/4in threaded steel pipe delivers fuel oil to Mechanical Room 140 where it is distributed directly to the four heating boilers; there is no day tank. A 3/4in threaded steel pipe returns fuel oil from the boilers to the exterior storage tank. Both pipes run above ground from the storage tank to the north wall of Mechanical room 140.

Existing Conditions

The 3000gal above-ground storage tank is in good condition according to its approximate 20-year age. Piping has minor corrosion typical of steel piping. Tank fixtures and appurtenances appeared to be functioning. Tank finish was in good condition; tank was free of significant corrosion. Fuel distribution and return piping was in good serviceable condition. No evidence of leaks was observed.

Appendix A – Condition Survey Template

Facility Overview

School District:	
Facility:	
Inspection Date(s):	

Dates of Construction and Additions

	Date	GSF
Original Construction:		
Addition:		
Addition:		
Addition:		
	Total:	

*Confirm dates and GSF with DEED Facility Database

Renovations and System Replacement

Date	Description (including renovations as part of above additions)

Survey Team

Name	Firm

Notes

Inventory and Condition Survey Template

Regulatory Data

Codes Utilized

Code Analysis

Site and Infrastructure

Synopsis

Site Improvements Overview

Synopsis

Vehicular Surfaces

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Pedestrian Surfaces

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Elevated Decks, Stairs & Ramps

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Inventory and Condition Survey Template

Site Walls

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Landscaping & Irrigation

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Fencing and Gates

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Site Furnishing & Equipment

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Inventory and Condition Survey Template

Playgrounds

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Other Site Improvements

Description of Existing Systems

Existing Conditions

Code Deficiencies

Recommendations

Estimates

Site Structures Overview

Synopsis

Freestanding Shelters

[Note: For brevity, the five-part narrative categories is not repeated at each subsystem throughout the remaining listing of the template structure.]

Attached Shelters

Support Buildings

Civil/Mechanical Utilities Overview

Synopsis

Inventory and Condition Survey Template

Water System

Sanitary Sewer

Storm Water

Fuel Systems

Heating/Cooling Piping & Utilidors

Site Electrical Overview

Synopsis

Supply & Distribution

Data/Comm Service & Distribution

Lighting & Equipment

Security Systems

Offsite Work Overview

Synopsis

Offsite Improvements

Offsite Utilities

Other Offsite Work

Substructure

Synopsis

Standard Foundations & Basements Overview

Synopsis

Continuous & Column Footings

Foundation Walls & Treatment

Foundation Drainage

Slab on Grade Overview

Synopsis

Structural & Non-structural Slabs

Trench, Pit, and Pad

Underslab Elements

Special Foundations Overview

Synopsis

Piling & Pile Cap

Caissons

Inventory and Condition Survey Template

Grade Beams

Arctic Foundation Systems

Other Special Foundations

Inventory and Condition Survey Template

Superstructure

Synopsis

Floor Structure Overview

Synopsis

Lower & Main Floors

Upper Floors

Ramps

Special Floors

Roof Structure Overview

Synopsis

Pitched Roofs

Flat Roofs

Special Roofs

Stairs Overview

Synopsis

Stair Structure

Inventory and Condition Survey Template

Stair Railings

Ladders and Steps

Inventory and Condition Survey Template

Exterior Enclosure

Synopsis

Exterior Walls & Soffits Overview

Synopsis

Exterior Walls

Fascias & Soffits

Curtainwalls & Non-bearing Walls

Exterior Glazing Overview

Synopsis

Windows

Storefronts

Structural Window Walls

Translucent Panels

Exterior Doors Overview

Synopsis

Personnel Doors

Inventory and Condition Survey Template

Special Doors

Exterior Accessories Overview

Synopsis

Louvers, Screens & Shading Devices

Balcony Elements

Other Exterior Accessories

Roof Systems

Synopsis

Pitched Roof Overview

Synopsis

Pitched Roofing

Gutters & Downspouts

Flat Roof Overview

Synopsis

Flat Roofing

Roof Drains & Piping

Roof Accessories Overview

Synopsis

Skylights

Roof Hatches

Roof Decks, Walls & Railings

Other Roof Accessories

Inventory and Condition Survey Template

Interiors

Synopsis

Partitions/Soffits Overview

Synopsis

Fixed Partitions

Soffits & Ceilings

Special Partitions Overview

Synopsis

Operable Partitions

Demountable Partitions

Glazed Partitions

Railings & Screens

Interior Openings Overview

Synopsis

Personnel Doors

Special Doors

Inventory and Condition Survey Template

Windows & Sidelites

Interior Finishes Overview

Synopsis

Floor Finishes

Wall Finishes

Ceiling Finishes

Other Finishes

Specialties Overview

Synopsis

Interior Specialties

Casework/Millwork

Seating

Window Coverings

Inventory and Condition Survey Template

Conveying Systems

Synopsis

Passenger Conveyors Overview

Synopsis

Passenger Elevators

Lifts & Other Conveyors

Material Handling Systems Overview

Synopsis

Elevators & Lifts

Hoists & Cranes

Other Systems

Inventory and Condition Survey Template

Mechanical

Synopsis

Plumbing Overview

Synopsis

Plumbing Fixtures

Plumbing Piping

Plumbing Equipment

Waste & Vent Piping

Special Systems

HVAC Overview

Synopsis

Heating Equipment

Heating Distribution Systems

Ventilation Equipment

Ventilation Distribution Systems

Inventory and Condition Survey Template

Cooling Equipment

Cooling Distribution Systems

Heat Recovery System

Integrated Automation Overview

Synopsis

Control Systems

Other Automation

Fire Protection Overview

Synopsis

Riser & Equipment

Sprinklers & Piping

Special Suppression Systems

Special Mechanical Systems Overview

Synopsis

Fuel Supply (Gas & Oil)

Inventory and Condition Survey Template

Dust Collection Systems

Compressed Air & Vacuum Systems

Other Special Mechanical Systems

Inventory and Condition Survey Template

Electrical

Synopsis

Service & Distribution Overview

Synopsis

Main Distribution Panels & Switchgear

Panels & Motor Control Centers

Transformers

Conduit & Feeders

Lighting Overview

Synopsis

Light Fixtures

Lighting Controls

Conduit & Wiring

Power Overview

Synopsis

Devices & Connections

Inventory and Condition Survey Template

Conduit & Wiring

Special Systems Overview

Synopsis

Fire Alarm

Data & Communications

Security Systems

Clock Systems

Intercom Systems

Other Special Systems

Other Electrical Systems Overview

Synopsis

Power Generation & Distribution

Electrical Heating Systems

Grounding Systems

Inventory and Condition Survey Template

Equipment and Furnishings

Synopsis

Equipment Overview

Synopsis

Food Service & Kitchen Equipment

Athletic Equipment

Career & Technology Equipment

Science Equipment

Library Equipment

Theater Equipment

Art Equipment

Loading Dock Equipment

Other Equipment

Furnishings Overview

Synopsis

Inventory and Condition Survey Template

Fixed Furnishings

Mats

Other Furnishings

Inventory and Condition Survey Template

Special Conditions

Synopsis

Special Construction Overview

Synopsis

Packaged Utility Modules

Swimming Pool

Greenhouse

Special Demolition

Synopsis

Structural Demolition

Building Selective Demolition

Site and Utility Demolition

Hazardous Material Removal

Building Relocation

Inventory and Condition Survey Template

Special Site Conditions

Synopsis

Site Shoring & Dewatering

Site Earthwork

Site Remediation

Appendix B – Sample Inspection Checklists

See the below example checklists for an example of how to structure a component inspection checklist. Additional checklists may be available from the department.

Site Structures – Inspection Checklist

Description of Existing Systems

[enter basic description from building system data]

Existing Conditions

Subsystem – Freestanding Shelters

Component(s)	Checklist	Photos	Condition
Foundation	Inspect for: <ul style="list-style-type: none"> • Proper drainage • Corrosion • Deterioration • Plumb/Level 		
Superstructure	Inspect for: <ul style="list-style-type: none"> • Deformation • Cracks/Damage • Plumb/Level 		
Enclosure	Inspect for: <ul style="list-style-type: none"> • Siding integrity • Roof integrity • Opening integrity • Sealant/caulk 		
Accessories	Inspect for: <ul style="list-style-type: none"> • Damage • Corrosion • Missing pieces • Excessive wear 		
Lighting	Inspect for: <ul style="list-style-type: none"> • Function • Corrosion • Damage • Excessive wear 		

Subsystem – Attached Shelters

Component(s)	Checklist	Photos	Condition
Foundation	Inspect for: <ul style="list-style-type: none"> • Proper drainage • Corrosion • Deterioration • Plumb/Level 		

Superstructure	Inspect for: <ul style="list-style-type: none"> • Deformation • Cracks/Damage • Plumb/Level 		
Enclosure	Inspect for: <ul style="list-style-type: none"> • Siding integrity • Roof integrity • Opening integrity • Sealant/caulk 		
Accessories	Inspect for: <ul style="list-style-type: none"> • Damage • Corrosion • Missing pieces • Excessive wear 		
Lighting	Inspect for: <ul style="list-style-type: none"> • Function • Corrosion • Damage • Excessive wear 		

Subsystem – Support Buildings

Component(s)	Checklist	Photos	Condition
Foundation	Inspect for: <ul style="list-style-type: none"> • Proper drainage • Corrosion • Deterioration • Plumb/Level 		
Superstructure	Inspect for: <ul style="list-style-type: none"> • Deformation • Cracks/Damage • Plumb/Level 		
Enclosure	Inspect for: <ul style="list-style-type: none"> • Siding integrity • Roof integrity • Opening integrity • Sealant/caulk 		
Accessories	Inspect for: <ul style="list-style-type: none"> • Damage • Corrosion • Missing pieces • Excessive wear 		

Component(s)	Checklist	Photos	Condition
Plumbing	Inspect for: <ul style="list-style-type: none"> • Function • Leaks • Corrosion • Damage • Excessive wear 		
HVAC	Inspect for: <ul style="list-style-type: none"> • Function • Leaks • Corrosion • Damage • Excessive wear 		
Power	Inspect for: <ul style="list-style-type: none"> • Function • Corrosion • Damage 		
Lighting	Inspect for: <ul style="list-style-type: none"> • Light levels • Corrosion • Damage • Excessive wear 		

Code Deficiencies

[Citations are from the IBC (unless noted otherwise) – check with the AJH for amendments or for other applicable codes]

Code Section	Subsection	Potential/Observed Issue
Section 1607 Structural Design	(1607.12 Awnings and canopies)	
Section 3105 Awnings and Canopies	(3105.5 Special construction, loads)	
Chapters 1 - 12, 14 - 28, and 30 - 35	(Elements related buildings, and structures)	
NFPA 70, National Electrical Code	(Elements related to electrical systems)	
IAMPO Uniform Plumbing Code	(Elements related to plumbing systems)	
International Mechanical Code	(Elements related to non-plumbing mechanical systems)	

Flat Roofing – Inspection Checklist

Description of Existing Systems

[enter basic description from building system data]

Existing Conditions

Subsystem - Roofing

Component(s)	Checklist	Photos	Condition
Membranes	Inspect for: <ul style="list-style-type: none"> • Proper drainage • Seam separation • Hole/tears • Plant growth 		
Insulation	Inspect for: <ul style="list-style-type: none"> • Water intrusion • [consider IR imaging] 		
Flashings/ Copings	Inspect for: <ul style="list-style-type: none"> • Damage • Seam separation • Corrosion • Missing sections • Excessive wear 		

Subsystem – Roof Drains & Piping

Component(s)	Checklist	Photos	Condition
Roof Drains	Inspect for: <ul style="list-style-type: none"> • Loose pieces • Corrosion • Dirt/debris 		
Piping	Inspect for: <ul style="list-style-type: none"> • Leaks • Corrosion • Insulation cond. • [consider video-scoping] 		
Heat Trace	Inspect for: <ul style="list-style-type: none"> • Operation • Wear/damage • Attachment 		

Code Deficiencies

[Citations are from the IBC (unless noted otherwise) – check with the AJH for amendments or for other applicable codes]

Code Section	Subsection	Potential/Observed Issue
Section 720 Thermal- And Sound-Insulating Materials	(720.5 Roof insulation)	
Section 1202 Ventilation	(1202.2 Roof ventilation)	
	(1202.2.1 Ventilated attics and rafter spaces)	
	(1202.3 Unvented attic and unvented enclosed rafter assemblies)	
Section 1502 Roof Drainage		
Section 1503 Weather Protection		
Section 1504 Performance Requirements		
Section 1505 Fire Classification		
Section 1506 Materials		
Section 1507 Requirements for Roof Coverings	(1507.1.1 Underlayment)	
	(1507.10 Built-up roofs)	
	(1507.11 Modified bitumen roofing)	
	(1507.12 Thermoset single-ply roofing)	

Code Section	Subsection	Potential/Observed Issue
	(1507.13 Thermoplastic single- ply roofing)	
Section 1508 Roof Insulation		
Section 1509 Radiant Barriers Installed Above Deck		
Section 1510 Rooftop Structures		
Section 2603 Foam Plastic Insulation	(2603.6 Roofing)	

Fire Protection – Inspection Checklist

Description of Existing Systems

[enter basic description from building system data]

Existing Conditions

Subsystem – Riser and Equipment

Component(s)	Checklist	Photos	Condition
Entrance and Tree	Inspect for: <ul style="list-style-type: none"> • Backflow prevention • Pressure Gauges • Relief Valves • Corrosion or leaks • Valving is locked open and tamperproof 		
Bracing	Inspect for: <ul style="list-style-type: none"> • Presence of bracing • Damage • Corrosion • Secure connections 		
Water Flow Alarm Devices	Inspect for: <ul style="list-style-type: none"> • Presence of devices • Check operation 		

Subsystem – Sprinklers & Piping

Component(s)	Checklist	Photos	Condition
Heads	Inspect for: <ul style="list-style-type: none"> • Spacing • Obstructions • Damage 		
Piping	Inspect for: <ul style="list-style-type: none"> • Leaks • Corrosion • Bracing 		
Accessories	Inspect for: <ul style="list-style-type: none"> • Escutcheons/trims • Air vent condition • Tags/labels 		

Subsystem – Special Fire Protection Systems

Component(s)	Checklist	Photos	Condition
Water Storage	Inspect for: <ul style="list-style-type: none"> • Leaks • Corrosion • Piping 		
Pumps	Inspect for: <ul style="list-style-type: none"> • Operation • Pressure and flow 		
Compressed air systems	Inspect for: <ul style="list-style-type: none"> • Operation • Pipe connections • Leaks 		

Code Deficiencies

[Citations are from the NFPA 13 – check with the AHJ for amendments or for other applicable codes]

Code Section	Subsection	Potential/Observed Issue
Backflow prevention	Local code from utility	
Chapter 6 System components and Hardware	6.2 Sprinklers	
	6.7 Valves	
	6.9 Water Flow Alarm Devices	
Chapter 7 System Requirements	7.1 Wet Pipe Systems	
	7.2 Dry Pipe Systems	
Chapter 8 Installation Requirements	8.5 Position, location, spacing and use of sprinklers	
	8.7 Sidewall sprinklers	
Chapter 9 Hanging, Bracing and Restraint of System Piping	9.1 Hangers	

Code Section	Subsection	Potential/Observed Issue
	9.3 Protection of Piping against Damage Where Subject to Earthquakes	
Chapter 12 General Requirements of Storage	12.9 Restrictions	

Other Electrical Systems – Inspection Checklist

Description of Existing Systems

[enter basic description from building system data]

Existing Conditions

Subsystem – Power Generation & Distribution

Component(s)	Checklist	Photos	Condition
Generator	Inspect for: <ul style="list-style-type: none"> • Damage • Corrosion • Excessive hours • Trickle charger • Fluid levels • Operational pressures • Power delivery • Functionality 		
Switchgear Panel	Inspect for: <ul style="list-style-type: none"> • Damage • Corrosion • Excessive wear • Water intrusion • Review reports <ul style="list-style-type: none"> ○ Arc flash, etc. • Functionality 		
Conduit	Inspect for: <ul style="list-style-type: none"> • Damage • Corrosion 		
Feeder	Inspect for: <ul style="list-style-type: none"> • Damage • Corrosion • Excessive wear • [consider IR imaging] • Functionality 		

Subsystem – Heating Systems

Component(s)	Checklist	Photos	Condition
Baseboard	Inspect for: <ul style="list-style-type: none"> • Damage • Excessive wear • Functionality 		
Unit Heater	Inspect for: <ul style="list-style-type: none"> • Damage • Excessive wear • Functionality 		
Radiator / Heat Exchanger	Inspect for: <ul style="list-style-type: none"> • Damage • Excessive wear • Functionality 		
Radiant Heat	Inspect for: <ul style="list-style-type: none"> • Damage • Excessive wear • Functionality 		

Subsystem – Grounding System

Component(s)	Checklist	Photos	Condition
Special Grounding	Inspect for: <ul style="list-style-type: none"> • Connections • Insulation condition • Corrosion • Damage 		
Lightning Protection	Inspect for: <ul style="list-style-type: none"> • Connections • Continuity • Insulation condition • Corrosion • Damage 		

Code Deficiencies

[Citations are from the NEC (unless noted otherwise) – check with the AHJ for amendments or for other applicable codes]

Code Section	Subsection	Potential/Observed Issue
Section 430.14 Generator location factors	(445.10 Adequate ventilation and adequate room for maintenance)	
445.12 and 445.13(A) Overcurrent protection requirements		
445.18(B) Generator Mechanical reset		
110.12(C) Broken or damaged parts and contamination by foreign materials		
110.13 Secure mounting and adequate ventilation space for equipment		
110.26(B) Working space and dedicated space are not used for storage.		
110.22 Identification of disconnect means and circuit directories for panelboards, switchboards, switchgear and similar equipment		
300.3(C)(1) and (2) Insulation where conductors of different systems share common enclosures		
300.11 and applicable Chapter 3 article(s) Wiring methods are securely fastened in place, supported independently of suspended ceilings, and not used as supports		
404.9(B), 404.12 Grounding of metal switch boxes, switches, and any metal faceplates		

Appendix C – Sample Rating Guides

Rating Guide – Reliability Basis

This rating is based on how close an asset or component is to replacement or major overhaul. Scores will not have a greater granularity than a half point. An asset is in a State of Good Repair if the score is greater than 2.5.

Score	Photos	Condition
5	New or like new	The inspector is 95% to 100% confident in reliability; no visible defects, no damage, cosmetically looks new. Note: An asset is only new once, after rebuild some old parts are not new and therefore the highest score after rebuild is {4.5}.
4.5		The inspector is 90% to 95% confident in the reliability of the component/ asset.
4	Cosmetic defects/minor wear.	The inspector is 80% to 90% confident in the reliability of the component/ asset. Shows minimal signs of wear, no major defects, and some minor defects with only minimal signs of deterioration.
3.5		The inspector is 70% to 80% confident in the reliability of the component/ asset.
3	Small repairs or minor refurbishment.	The inspector is 60% to 70% confident in the reliability of the component/ asset. Some moderately defective or deteriorated components; expected maintenance needs. Cosmetically "fair" but all devices are functioning as designed.
2.5		The inspector is 50% to 60% confident in the reliability of the component/ asset.
2	Significant or multiple repairs needed.	The inspector is 40% to 50% confident in the reliability of the component/ asset. Asset near overhaul or retirement, but in serviceable condition. Asset has increasing number of defects or deteriorated component(s).
1.5		The inspector is 30% to 40% confident in the reliability of the component/ asset.
1	Critical deterioration, overhaul or replacement needed.	The inspector is less than 30% confident in the reliability of the component/ asset. Asset is in need of major repair or refurbishment, multiple minor and major defects. Possible structural issues.
0		Not safe to use, multiple major repairs or Asset set for disposal/retirement.

Rating Guide – Visual Condition

This rating is based on a general visual observation of the component or system. It can incorporate empirical data. An asset is in a State of Good Repair if the score is 3 or above

Score	Photos	Condition
5	Excellent	No visible defects, new or near new condition, may still be under warranty if applicable.
4	Good	Good condition, but no longer new, may have some slightly defective or deteriorated component(s), but is overall functional.
3	Adequate	Moderately deteriorated or defective components; but has not exceeded useful life.
2	Marginal	Defective or deteriorated component(s) in need of replacement; exceeded useful life.
1	Poor	Critically damaged component(s) or in need of immediate repair; well past useful life.

Appendix D – Sample Equipment Lists

Recommended Inspection Equipment

Inspection equipment as required is often needed to access areas of the facility, to measure features, and building operations, and to record observations. This is not a complete list. Specific review of local job conditions, available local support, and general logistics is also important. Guidance on the proper use of inspection equipment should also be provided to condition assessment inspection personnel. Specialized professionals may be required to perform specific condition assessments.

Item	Use	On-site
Transportation	Transport of personnel and equipment to/from locations	Y
Storage Totes/Bins	Gear transport while traveling	Y
Carry Bag	Equipment transport while making condition assessments	Y
Mobile Phone	Primarily communications for logistics (<i>also see note below table</i>)	Y
Laptop or Tablet	Repository of data, files, and records related to the survey	Opt.
Portable Hard Drive	Repository of project information for use on other's computers	Opt.
Thumb Drive (8 GB min.)	Alt. repository of project information for use on other's computers	Opt.
<i>Notepad/Clipboard/Binder *</i>	To hold checklists; location for written notes and observations	Y
<i>Inspection Checklist(s) *</i>	Inspection scope and content; location for notes and observations	Y
<i>Electronic Voice Recorder *</i>	Alternative tool to written notes and observations	Y
<i>Calculator, Construction *</i>	Assists with basic analysis of measurements and capacities	Y
<i>Digital Camera *</i>	Primary means of recording actual conditions	Y
Step Ladder, 6ft	Access to items above head/hand height; primarily interior	Opt
Extension Ladder, 24ft	Access to elevated items and surfaces; primarily exterior	Opt
UAV/Drone w/camera	Alternative for documenting less accessible building/site elements	Opt
Measuring Wheel	Measurements, typically exterior, of large surfaces and distances	Opt
Measuring Tape, 100ft	Measurements of longer dimensions of any type	Y
Measuring Tape, 25ft	Measurements of shorter dimensions of any type	Y
Electronic Tape Measure	Alternative, primarily, to 25ft tape measures	Opt
<i>Penlite/tactical (400lm) *</i>	Illumination and inspection of objects and materials in close range	Y
Flashlight (2000 lm)	Illumination and inspection of objects and materials at a distance	Y
Multi-tip screwdriver	Accessing and re-securing covered component; adjusting elements	Y
Bits: Flat, Philips, Star, Square	For use with multi-bit screwdriver	Y
Awl or probe	Testing wood for decay	Y
<i>Torpedo Level *</i>	Measuring and assessing vertical and horizontal alignments	Y
Mechanic's Grabber	General retrieval in confined locations	Y
Receptacle GFCI Tester	Measuring and assessing grounding and polarity of receptacles	Y
Line Voltage Tester	Assessing the presence of voltage in electrical wiring/systems	Y
Multimeter	Measuring and assessing various electrical conditions	Y
Light Meter	Measuring and assessing required light levels in spaces	Y
Magnet	For determining types of metal (ferrous/non-ferrous)	Y
<i>Accessibility Guidelines for Buildings and Facilities *</i> ISBN-13: 9781557014993	Provides knowledge and information related to universal design and accessibility	Opt
<i>OSHA 29 CFR-1910 General Industry Regs *</i> ISBN 159959385-8	Provides knowledge and information related to operations and maintenance requirements for personnel safety	Opt

Item	Use	On-site
<i>An Illustrated Guide to Building, Plumbing, Mech., and Electrical Codes</i> * ISBN 978-1-56158-911-1	Provides knowledge and information related to building systems and subsystems	Opt
Other		

** Note: Items in italics might be adequately covered with a suitable smartphone with appropriate apps downloaded.*

Recommended Personal Protective Equipment

Safety equipment should be provided to inspection personnel as required. This is not a complete list. Specific review of local and industry standard safety requirements should be reviewed to provide individual safety. Guidance on the proper use of safety equipment should also be provided to condition assessment inspection personnel. Assessment teams comprised of two employees should be standard practice when inspecting electrical, steam, dynamic systems, or other systems where there is a higher safety risk.

Item	Comments	On-site
First Aid Kit	Treatment of minor injuries that might occur during activity	Y
Head Protection (hard/soft)	Soft for general protection; hard hat where warranted	Y
Safety Shoes/Boots	General precaution; use reasonable discretion	Opt
Wet Weather Gear	Poncho or full suit; don't overlook foot wear	Opt
Cold Weather Gear	Seasonal protective gear; consider layers	Opt
Reflective Vest	Helpful in busy or crowded conditions	Y
Safety Glasses	When scope involves observing flying/loose material	Y
Sunglasses	Control of glare and excess solar exposure	Y
Gloves	Hand protection when scope includes lift/carry/adjust	Y
Coveralls	Extra protection when needed from areas with contaminants	Opt
Knee Pads	Protection when crawling is required for assessments	Opt
Bug Spray	Seasonal protection from insects	Y
Ear Plugs/Protection	When scope involves loud noises	Y