

Small Procurement for Construction

Fairbanks Pioneer Home Domestic Hot Water Modifications

Project No. AJF 19-19C

You are invited to submit a quote to: Provide all labor, materials, permits and supervision necessary to modify the Domestic Hot Water System in the Fairbanks Pioneers Home.

A pre-bid walk through is scheduled for Tuesday, December 18, 2018 at 11:00 A.M. meeting in the main entry Fairbanks Pioneer Home, at 2221 Eagan Ave., Fairbanks, Alaska and proceeding from there.

Bids must be received before 2:00 PM local time January 3, 2019 at the address listed in the bid documents.

The project completion date is April 26, 2019.

Please direct all project or site related inquiries to Keith Stephens, Project Manager at (907) 465-1872 or keith.stephens@alaska.gov

PLEASE NOTE: faxing or emailing your bid does not mean it arrived by the designated bid opening time. It would be in your best interest to send your bid early and not wait until the last minute. You may also call James Woods at (907) 465-1871 to confirm he received your bid – The State cannot be held responsible for power and/or phone outages, network slowdowns or other problems that may cause your bid to arrive late.

Issued: December 4, 2018

Small Procurement for Construction

Fairbanks Pioneer Home Domestic Hot Water Modifications

Project No. AJF 19-19C

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Issued: December 4, 2018



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES
FMS FACILITIES

INVITATION FOR QUOTES FOR
A SMALL PROCUREMENT
(CONSTRUCTION RELATED)

[per AS 36.30.320(a)]

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Domestic Hot Water Modifications</u> <u>#AJF 19-19C</u>		Procurement Agency and Address: <u>Dept. of Health & Social Services</u> <u>FMS Facilities</u> <u>333 Willoughby Ave.</u> <u>State Office Bldg. - Suite 760</u> <u>Juneau, AK 99801</u> Email: keith.stephens@alaska.gov
Location: <u>2221 Eagan Ave., Fairbanks, AK 99701</u>		
Contracting Officer: <u>Amy Burke, FMS Facilities Chief</u>		Date of Issuance: <u>December 4, 2018</u>
DESCRIPTION OF WORK, REQUIRED COMPLETION DATE, LISTING OF ATTACHMENTS: Provide all labor, supervision, permits and materials to modify the Domestic Hot Water System in the Fairbanks Pioneers Home. All work is to be done in accordance with the plans and specifications associated with this document. Quotes that exceed \$25,000 must file mandatory bi-weekly certified payrolls - See SPECIAL NOTICE TO BIDDERS for other pertinent DOLWD requirements. Work shall be completed by <u>April 26, 2019</u>. To be considered responsive, Contractor <u>must</u> provide a current copy of their Business license and <u>any required</u> registrations with their Quote Submittal.		
The Project cost estimate is: <input type="checkbox"/> under \$ 10,000 <input checked="" type="checkbox"/> \$ 10,001 - \$ 50,000 <input type="checkbox"/> \$50,001-\$ 100,000 <input type="checkbox"/> \$100,001-\$ 200,000 * *Base Bid Quotes in excess of \$200,000 will be deemed non-responsive.		
Davis-Bacon Wages (Title 36.05) will be required if the project cost is \$25,000 or more. At that amount, online filing with Dept. of Labor and certified payrolls will also be required by the contractor.		
The following insurance is required: <input checked="" type="checkbox"/> Workers Comp <input checked="" type="checkbox"/> General Liability <input checked="" type="checkbox"/> Automobile		
Quotes for furnishing all labor, equipment and materials and performing all work for the above Project are invited. All quotes must be received before 2:00 pm local time on the 3rd day of January, 2019 . Late quotes cannot be accepted. Disadvantaged Business Enterprises (DBE's) may submit quotes and will not be discriminated against on the grounds of race, color, national origin or sex in consideration for an award which results from this invitation. Any errors, omissions, or questions pertaining to solicitation procedures or project requirements, requests for additional documents, or inquiries pertaining to site conditions or scheduled visits must be made to: <u>Keith Stephens, Facilities Manager</u> at: <u>333 Willoughby Ave., State Office Bldg. - Suite 760, Juneau, AK 99801</u> ; Email: keith.stephens@alaska.gov ; Telephone: (907) 465-1872; Fax: (907) 465-2607. Applicable provisions of AS 36.30 and 2 AAC 12 govern this solicitation.		
SUBMITTAL OF QUOTES: Quotes for this project must be submitted in the manner noted below. All contractors must familiarize themselves with the <i>Instructions to Bidders</i> , page 2 of this form, prior to submitting their quote. <input type="checkbox"/> - VERBAL QUOTES SHALL BE GIVEN TO _____ AT THE ABOVE NOTED TELEPHONE NUMBER, PRIOR TO THE STATED DEADLINE. <input checked="" type="checkbox"/> - WRITTEN QUOTES, INCLUDING AMENDMENTS OR WITHDRAWALS, MUST BE RECEIVED PRIOR TO THE ABOVE NOTED DEADLINE. QUOTES MUST BE SUBMITTED ON FORM SPC-002, QUOTE SUBMITTAL, ATTACHED. Written quotes may be submitted by Fax, hand delivered, mailed in a sealed envelope or emailed to: keith.stephens@alaska.gov . Confidentiality is only assured for sealed quotes. Mailed quotes must allow time for delivery and the envelope must be marked as follows: Quote for Project: _____ Procurement Agency Address: _____ Name: <u>FPH Domestic Hot Water Modifications</u> Dept. of Health & Social Services Number: <u>AJF 19-19C</u> FMS Facilities - 333 Willoughby Ave. Attn: <u>Keith Stephens, Facility Manager</u> State Office Bldg. - Suite 760, Juneau, AK 99801 Quote amendments or withdrawals must be made in writing to the individual of the Procurement Agency receiving the quotes, and must be received prior to the time for quote submittal.		



STATE OF ALASKA
DEPARTMENT OF Health & Social Services, Facilities

INVITATION FOR QUOTES FOR
A SMALL PROCUREMENT
(CONSTRUCTION RELATED)

INSTRUCTIONS TO BIDDERS

The State of Alaska desires that all contractors submitting quotes on construction contracts are given a fair and equal opportunity to compete. Contractors are required to follow these instructions:

REVIEW THE PROJECT DOCUMENTS: Most construction projects in excess of \$1,000 will have some type of written documentation prepared expressly for the work. If you are asked to submit a quote and no written information has been provided, you should ask the procurement agency for written documentation. If the scope of services has been described to you verbally, and you are selected for contract award, you must ensure that the information of the services to be performed (scope of work) is put in writing prior to accepting the contract. When providing a quote, carefully review and consider all materials related to the solicitation and work of the contract. **By submitting a quote the contractor warrants that they are familiar with the project requirements, have visited or otherwise examined the site, and are aware of the conditions to be encountered.** Contractors can verify the contents and completeness of their documents by contacting the procurement agency individual named on the front of this form.

SUBMITTING THE QUOTE: The quote must be submitted in one of the following formats as called for in the invitation:

1. **VERBAL** – in addition to the quote, the contractor must provide the following information: (1) their valid Alaska Business License number, (2) if applicable, proof that they are an Alaskan Veteran Bidder, (3) if applicable, valid Contractor's Registration number, (4) their intended use of Alaskan products, (5) the carrier's name and policy number for their Workers' Comp Insurance (or a statement of sole proprietorship, if applicable), (6) mailing address, and (7) the Employer (Tax) Identification Number or Social Security Number. The Procurement Agency will enter this information on the quote schedule.
2. **WRITTEN** - if a written quote is solicited, the contractor must complete, in ink or typewritten, the *Small Procurement Quote Submittal Form* SPC-002. Failure to acknowledge receipt of addenda or to execute the form correctly and completely may disqualify the quote.

NOTE: The Department of Labor requires a contractor to be licensed and registered for the required type of work prior to submitting a quote. If the procurement agency determines that the contractor is improperly registered or licensed, their quote may be deemed nonresponsive.

SUBCONTRACTOR LISTING: Subcontractors intended to be utilized on this contract must be listed in the response to the solicitation. Work shall not be awarded to any subcontractor without prior approval from the procurement agency. Subcontractors may be added or removed only as approved by the procurement agency.

DETERMINATION OF THE LOWEST RESPONSIBLE QUOTE AND CONTRACT AWARD: Following receipt and determination of all **responsive** oral, written or sealed quotes, the procurement agency will compare the quotes and determine the lowest quote. If the procurement agency discovers a discrepancy between the unit price and the extended amount; the unit price will prevail. Conditioned quotes, unless expressly requested, will not be considered. When the quote schedule is composed of a basic amount with alternates, the procurement agency will base its determination of the low quote and the amount of the contract award solely upon those quotes, basic and alternates that are priced within the extent of available construction funds. Alternates will be considered for award in the order listed, except that if the order of award is not affected, the award may include any combination of funded alternates, or none, as may be in the best interest of the procurement agency.

When determining the lowest quote, the procurement agency will also give a 5% Alaska Bidder, 5% Alaska Veteran preference, and an appropriate Alaska Products preference to quotes designating the applicability of any of these preferences. To qualify for the Alaska Bidder preference (per AS 36.30.170) the person must (1) hold a current Alaska business license, (2) submit the quote for goods or services under the name appearing on the business license, (3) has maintained a place of business within the state staffed by the bidder, or an employee of the bidder, for a period of six months immediately preceding the date of the quote; (4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company organized under AS 10.50 and all members are residents of the state, or is a partnership under AS 32.05 or AS 32.11 and all partners are residents of the state; and, (5) if a joint venture, is composed entirely of venturers that qualify under (1) - (4) of this subsection. AS 36.30.170(b). If a bidder qualifies for the Alaska Bidder preference, under AS 36.30.170(b), and is a qualifying entity as defined in AS 36.30.175, they will be awarded an Alaska Veteran preference of five percent (5%). The preference will be given to a (1) sole proprietorship owned by an Alaska Veteran; (2) partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska Veterans; (3) limited liability company organized under AS 10.50 if a majority of the members are Alaska Veterans; or (4) corporation that is wholly owned by individuals and a majority of the individuals are Alaska Veterans.

Upon request, a booklet fully describing the Alaska Products preference program is available from the procurement agency.

The procurement agency will make a determination of **responsibility** as required by 2 AAC 12.500. If the lowest contractor is declared responsible, the procurement agency will execute the *Notice of Award / Notice to Proceed*, Form SPC-003, and send it to the contractor for acknowledgement. If the lowest contractor is found to be nonresponsive, this process will be repeated with the second lowest contractor -- and so on until the lowest responsive and responsible contractor is determined.

NOTICE OF AWARD AND PROTEST: A written notice will be provided on all awards exceeding \$25,000 (2 AAC 12.400(h)). All protests must be filed with the Commissioner of the procurement agency (or designee) and copied to the Procurement Officer. Protest procedures are described in AS 36.30.560 and 2 AAC 12.695. The extent of the protest remedy is limited to quote preparation costs (AS 36.30.585).

NOTICE TO BIDDERS

In order for bids to be considered responsive, the following items must be completed on the Small Procurement Quote Submittal (Construction Related) form (Form SPC-002):

1. Complete all prices and figures as indicated on the Quote Submittal (Form SPC-002) portion of the form, unless indicated otherwise;
2. Complete the Contractor's firm name and authorized signature lines;
3. Enter a valid Alaska Business License number and, if applicable, a valid Contractor's Registration number.
4. Include a current copy of your Contractors license and any required registrations with the Small Procurement Quote Submittal (Construction Related) form (Form SPC-002)

ALASKAN PREFERENCES

Alaska Bidders Preference

To qualify for the Bidder's Preference (per AS 36.30.170), the bidder must:

1. Hold a current Alaska Business License;
2. Submit the bid under the name appearing on the license;
3. Has staffed and maintained a place of business in Alaska for the previous six (6) months;
4. Is incorporated or qualified to do business under the laws of the State.

Alaska Veterans Preference

To qualify for the Veterans Preference (per AS 36.30.175), the bidder must:

1. Qualify for the Alaska Bidder's Preference
2. Add value by actually performing the services or have prior experience in selling the supplies
3. Qualify as an Alaska Veteran
4. The value of the preference cannot exceed \$5,000.

Alaska Products Preference

If applicable, the use of Alaska Products can be claimed on the Alaska Products Preference Worksheet (Form SPB -007). Eligible products can be obtained by contacting the local Department of Commerce & Economic Development office. **WARNING:** If the use of Alaska Products is claimed, the contractor will be mandated to use the specified products in the performance of the contract.

The Adjusted Basic Bid amount will be used for the determination of the low responsive bidder. Once determined, the contract will be awarded for the Total Basic Bid Amount.

CONTRACT AWARD

The apparent low responsive bidder will be required to submit the following documents prior to Contract Award:

1. Project specific requirements, if any, as noted on the Invitation for Quotes;
2. A Certificate of Insurance indicating the insurance coverage outlined on the Invitation for Quotes;
3. Current copies of both the valid Alaska Business License and, if applicable, a copy of the valid Contractor's Registration; and
4. List all subcontractors to be used on the project (form included in bid packet).
5. Copy of a completed Notice of Work form filed with the Dept. of Labor **if required** (see Special Notice to Bidders in packet).



**STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES
FMS FACILITIES**

**SMALL PROCUREMENT QUOTE SUBMITTAL
(CONSTRUCTION RELATED)**

[per AS 36.30.320(a)]

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Domestic Hot Water Modifications</u> <u>#AJF 19-19C</u> Location: <u>2221 Eagan Ave. Fairbanks, AK</u>	Procurement Agency and Address: <u>State of Alaska, DHSS/FMS Facilities</u> <u>333 Willoughby Ave.</u> <u>State Office Bldg. - Suite 760</u> <u>Juneau, AK 99801</u> <u>(907) 465-1872 Fax: (907) 465-2607</u> <u>keith.stephens@alaska.gov</u>
Contracting _____ Officer's Signature: Amy Burke, FMS/FAC Chief	Date of Issuance: December 4, 2018 Bid is Due: January 3, 2019 @ 2:00 p.m.

QUOTE: Offerors must read all attachments to this schedule. **Provide all labor, supervision, permits and materials to modify the Domestic Hot Water System in the Fairbanks Pioneers Home. All work is to be done in accordance with the plans and specifications associated with this document.**

- | | |
|---|----------|
| a. Lump Sum – Total Basic Bid: | \$ _____ |
| b. Alaska Bidder's Preference:
(5% of a.) | \$ _____ |
| c. Alaska Veterans Preference:
(5% of a.) | \$ _____ |
| d. Alaska Products Preference:
(Attach worksheet(s)) | \$ _____ |
| e. Adjusted Basic Bid:
(a – b – c – d) | \$ _____ |

I have reviewed the bid documents, with addenda _____, and understand the scope of services and conditions required for Project number **AJF 19-19C**. I agree to furnish all necessary labor, materials, and equipment for the above amount(s). The Work shall be accomplished in a professional manner acceptable to the Procurement Officer.

Contractor _____ Contractor Reg. No. _____

Authorized Signature _____ Title _____

Address _____

Business License # _____ EIN or SSN _____ Phone # _____

Offeror is Claiming: ☐ Alaska Bidder Preference ☐ Alaska Products Pref. (worksheet)
 ☐ Alaska Veteran Preference

.....
 Procurement Officer: _____

Date of Receipt of Bid: _____

Offeror to Complete this Portion



**STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES**

**NOTICE TO PROCEED (NTP)
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)**

[per AS 36.30.320]

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Domestic Hot Water Modifications</u> <u>AJF 19-19C</u> Location: <u>2221 Eagan Ave., Fairbanks, AK</u>	Procurement Agency and Address: <u>Dept. of Health & Social Services</u> <u>FMS Facilities</u> <u>333 Willoughby Ave.</u> <u>State Office Bldg. - Suite 760</u> <u>Juneau, AK 99801</u> Email: keith.stephens@alaska.gov
Project _____ Manager: Keith Stephens, Facilities Manager	Date of Issuance: _____

TO: _____ _____ _____	FOR: Work related to Basic Bid of: <u>AJF 19-19C</u> including the basic quote and alternate quote item(s): _____	The Contractor Must Submit: Insurance Bonding* Certified Wages** Subcontractor List***
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You have successfully met the requirements for submittal of all contract documents to the Procurement Agency and Dept. of Labor and Workforce Development related to the subject Project.

Upon receipt of this document, the Contractor may begin work on the subject project, in accordance with the terms of the contract. The Work of this contract must commence within 10 calendar days following the date of signature by the Procurement Officer, shown above (i.e., the effective date of the Contract) and all Work of the Contract must be complete on or before **April 26, 2019**

Send all invoices to the address above or email them to: keith.stephens@alaska.gov

Contractor's Signature of Acknowledgment: _____ Date : _____

* **Bonding** - If contract bid amount exceeds \$80,000, Performance & Payment Bonds will be required for 50% of bid amount.
 ** **Certified Wages** – Contracts over \$25,000 require biweekly Certified Payroll be submitted to the Dept. of Labor (see Special Instructions to Bidders form)
 *** **Subcontractor List** – Contractor will be required to submit a Subcontractor list if they are utilized



**STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES**

**NOTICE OF AWARD (NOA)
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)
[per AS 36.30.320]**

Project Name & No.: <u>Fairbanks Pioneer Home</u> <u>Domestic Hot water Modifications</u> <u># AJF 19-19C</u> Location: <u>2221 Eagan Ave., Fairbanks, AK</u>	Procurement Agency and Address: Dept. of Health & Social Services FMS Facilities 333 Willoughby Ave. State Office Bldg. - Suite 760 Juneau, AK 99801 keith.stephens@alaska.gov
Contracting _____ Officer's Signature: Amy Burke, Facilities Chief	Date of Issuance: _____

TO: _____ _____ _____	FOR: Work related to Basic Bid of: <u>AJF 19-19C</u> , including the basic quote and alternate quote item(s): _____	<div style="border: 1px solid black; padding: 2px;">The Contractor Must Submit:</div> Insurance Bonding* Certified Wages** Subcontractor List***
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* **Bonding** - If contract bid amount exceeds \$80,000, Performance & Payment Bonds will be required for 50% of bid amount.
 ** **Certified Wages** - Contracts over \$25,000 require bi-weekly Certified Payroll be submitted to the Dept. of Labor (see Special Instructions to Bidders form)
 *** **Subcontractor List** - Contractor will be required to submit a Subcontractor list if they are utilized

Your quote in the amount of \$ _____ submitted on _____, is accepted for performance of the Work described in the attached Invitation for Quotes (Form SPC-001), and the quote as submitted on the *Small Procurement Quote Submittal* (Form SPC-002), which are a part of this Contract.

The Contractor must sign, date, and return this document to the procurement address shown above or email to: keith.stephens@alaska.gov. The Procurement Officer will then sign and return a copy to the Contractor, and the Award will be deemed made.

The Work of this contract may not commence until the Notice to Proceed (NTP) is issued.

Contractor's Signature of Contract Award Acceptance: _____ Date : _____

NOTICE TO UNSELECTED OFFERORS ON PROJECTS OVER \$ 25,000

In accordance with the protest rights afforded under 2 AAC 12.400(d)(2)(B) & (3), a copy of this Notice of Award is hereby provided to those individuals and businesses who submitted a response to the initial solicitation on which this award is made.



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES

NOTICE OF AWARD (NOA)
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)

GENERAL CONDITIONS

[Construction Procurement under AS 36.30.320]

These terms, conditions and requirements apply to the Contract Documents describing the Work for the Project. If any provision of these Contract Documents is declared by a court to be illegal or in conflict with any law, the validity of the remaining provisions and the ensuing rights and obligations of the Parties to the contract shall not be affected.

Whenever used in these Contract Documents, the following terms shall have the indicated meaning. Any term not so defined shall have its ordinary meaning.

- **Approved or Approval** - means written approval by the Procurement Officer or authorized representative.
- **Award** - means the written acceptance of the lowest responsive and responsible quote by the Procurement Agency.
- **Contract Documents** - includes the *Invitation for Quotes for a Small Procurement*, Form SPC-001 (with Instructions - if issued), the *Notice of Award / Notice to Proceed*, Form SPC-003, any addenda, written changes, or attachments as noted in the description of the Work.
- **Procurement Officer** - the person authorized to enter into and administer the contract on behalf of the Procurement Agency.
- **Parties to the Contract** - includes the Procurement Agency, the owner Agency representing the State of Alaska, and the Contractor, being the entity contracting with the owner Agency for performance of the Work.
- **Project** - The total construction, of which the Work performed under the Contract, is the whole or part.
- **Project Manager** - the Procurement Officer's authorized representative, responsible for Contract administration.
- **Work** - is the act of, and the result from, performing services, furnishing labor, furnishing and incorporating materials and equipment into the Project and performing other duties and obligations, all as required by the Contract Documents.

1. The Procurement Officer (or authorized representative) has the authority to make findings, determinations and decisions with respect to the contract; to Approve materials, Work and payment therefore; and to modify or terminate the contract on behalf of the Procurement Agency.
2. The Contractor shall have sole responsibility for the means, methods, sequences, or procedures of construction and safety precautions related to the Project. The Contractor shall conduct all Work in such a manner that protects the public and State resources.
3. The Contractor must comply with all applicable laws, regulations, codes, ordinances and written directives issued by the Procurement Officer. In addition, the Contractor must obtain applicable licenses and permits; provide supervision, labor, tools, and new materials (except as may otherwise be provided by the Procurement Agency); and utilize Alaska Products and Wood Products when applicable (see AS 36.05.010 & AS 36.30.322). **Hazardous Materials:** The CONTRACTOR is to be aware under 29 CFR 1926.1101(k)(2)(ii) Construction Industry Standards, any building or facility constructed prior to 1980 may contain suspected Hazardous Materials. All known or perceived known Hazardous Materials information will be provided by the DEPARTMENT's facility staff to the CONTRACTOR upon request. Any new suspected Hazardous Materials encountered by the CONTRACTOR shall be made known to the DEPARTMENT within 3 business days of discovery. Once notified the DEPARTMENT will have an Environmental Assessment completed to verify if hazardous materials exist.
4. The Contractor shall not award Work to any subcontractor without prior Approval from the Procurement Officer.
5. The Procurement Agency reserves the right to make written changes to the Contract Documents for modifications within the general scope of the Work.
6. Any act or occurrence be it a result of an emergency, differing site condition or change order, which may form the basis of a claim for a price or time adjustment must be reported immediately to the Procurement Officer.
7. **The Department of Labor and Workforce Development, Wage and Hour Administration, must be notified in accordance with AS 36.05.010 and AS 36.05.030 if the resulting contract for repairs or construction exceeds \$25,000.** The Contractor must comply with the requirements noted within the Department of Labor packet entitled, "Laborers' & Mechanics' Minimum Rates of Pay." To obtain a copy of the referenced packet, contact the Procurement Agency or the Department of Labor.
8. The primary contractor working on public construction projects with an amount of \$25,000 or more must file a Notice of Work and pay a one percent fee based on the estimated value of work performed by the prime contractor and one percent of the value of each subcontractor's price, to the Department of Labor and Workforce Development, Wage and Hour Administration (DOLWD) - The maximum fee is \$5,000.00. The notice and fees must be filed with the DOLWD before work commences on the project.

Upon completing the construction project, the primary contractor must file a Notice of Completion (NOC) and make payment of any additional fees due to increases in the contract amounts due the primary contractor. Contractor must file the Notice of Work and Notice of Completion online. Please call the Dept. of Labor for instructions and/or assistance in filing (<http://labor.alaska.gov/lss/whhome.htm>).

9. The Contractor shall indemnify, save harmless, and defend the Procurement Agency, its agents and its employees in accordance with Appendix B1. Furthermore, the Contractor shall, prior to the Award of the contract, provide proof of Workmen's Compensation, General Liability, and Automobile Insurance in amounts as applicable under Appendix B1. These coverages shall remain in force for the duration of the Contract.
10. The Contractor shall remedy all defects in materials or workmanship that develop within a period of one year from the date of final payment.
11. The Procurement Agency will make final payment to the Contractor following approval of completion of all Work and the Contractor's submittal of all releases, warranties, record documents, permits and invoices. Liens or other claims relating to the Project may be withheld from final payment if written notice is first given to the Contractor. Acceptance of the final payment will constitute the Contractor's waiver to future claims.
12. Any dispute arising out of this Contract, which cannot be satisfactorily remedied by the Parties to the Contract, shall be resolved under AS 36.30.620 - 699.

APPENDIX B¹
BONDS, INDEMNITY AND INSURANCE

Article 1. Bonds

If Required and Noted on Page one of the Notice of Award Form SPC-003, the CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount as shown on the Contract as security for the faithful performance and payment of all CONTRACTOR'S obligations under the Contract Documents. These bonds shall remain in effect for one year after the date of Final Acceptance and until all obligations under this Contract, except special guarantees as per 12.7, have been met. All bonds shall be furnished on forms provided by the DEPARTMENT (or copies thereof) and shall be executed by such Sureties as are authorized to do business in the State of Alaska. The Contracting Officer may at his option copy the Surety with notice of any potential default or liability.

At the option of the CONTRACTOR, bonds may be provided by individual Surety the adequacy of which shall be determined by the Contracting Officer. Any costs incurred by the CONTRACTOR or individual Surety shall be borne by the CONTRACTOR. Where individual Sureties are used, two individual Sureties must each provide the State of Alaska with security equal to the amount of each bond by one, or a combination of, the following methods:

- a. Escrow account in the name of the DEPARTMENT for the duration of the Contract. Acceptable securities would include, but not necessarily be limited to: Cash; treasury notes; bearer instruments having a specific value, or; money market certificates.
- b. First *Deed of Trust* with the DEPARTMENT designated as beneficiary, against the unencumbered value of the real property located within the State of Alaska or an agreement by any second party, including deeds of trust, mortgage, lien or judgment interests to subrogate their interests to that of the State of Alaska in the real property which has been offered by the individual Surety.

A title insurance policy with the State of Alaska as a named beneficiary and a current (within 3 months) professional appraisal or assessed valuation will be required to ascertain the true value of the property offered as collateral. If buildings or other valued improvements are involved then fire and casualty insurance with the State of Alaska as a named insured and in limits and coverages acceptable to the Contracting Officer shall be required. The appraiser shall acknowledge in writing that the appraisal is prepared for the benefit of the DEPARTMENT and the DEPARTMENT has the right to rely on its contents. This *Deed* must be recorded in the recording office where the property is located.

With respect to clauses "a" and "b" above, the *Deed of Trust* or other accepted security shall not be released until 12 months after Final Acceptance of the Project and settlement of all outstanding claims.

Replacement of Bond and Surety:

If the Surety on any bond furnished in connection with this Contract is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.2, or otherwise becomes unacceptable to the DEPARTMENT, or if any such Surety fails to furnish reports as to his financial condition as requested by the DEPARTMENT, the CONTRACTOR shall within five days thereafter substitute another bond and Surety, both of which must be acceptable to DEPARTMENT.

An individual Surety may be replaced by a corporate Surety during the course of the Contract period. If the Surety desires to dispose of the collateral posted, the DEPARTMENT may, at its option, accept substitute collateral.

Article 2. Indemnification

The Contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the Contractor under this agreement. The Contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the Contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "Contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the Contracting agency's selection, administration, monitoring, or controlling of the Contractor and in approving or accepting the Contractor's work.

Article 3. Insurance

Without limiting Contractor's indemnification, it is agreed that Contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the Contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a 30-day prior notice of cancellation, non-renewal or material change of conditions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the Contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

3.1 Workers' Compensation Insurance: The Contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements.

- **The policy must waive subrogation against the State.**

3.2 Commercial General Liability Insurance: covering all business premises and operations used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000, combined single limit per occurrence.

- **The State of Alaska must be named as additional insured.**

3.3 Commercial Automobile Liability Insurance: covering all vehicles used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000, combined single limit per occurrence.



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES
ALASKA PRODUCTS PREFERENCE WORKSHEET
SMALL PROCUREMENT CONTRACT
(CONSTRUCTION RELATED)
 (See Instructions on back)

Project Name: Fairbanks Pioneer Home- Domestic Hot Water Modifications

Project Number: AJF 19-19C

Procurement Agency: FMS Facilities Contractor: _____

PRODUCT	MANUFACTURER	CLASS & PREFERENCE PERCENTAGE	TOTAL DECLARED VALUE	REDUCTION AMOUNT
TOTAL				

INSTRUCTIONS FOR ALASKA PRODUCTS PREFERENCE WORKSHEET

Special Notice: All procurements, except those funded from Federal sources, shall contain Contract provisions for the preference of Alaska products. **To be considered for the Alaska Product Preference, each product listed by the Bidder on this worksheet must have current certification from the Alaska Products Preference Program at the time of Bid Opening. A product with expired certification at the bid opening date will not be considered eligible. Products that are not specified for use on the project will not be considered eligible.** The Alaska Product Preference Program List of certified products is available online at: <http://www.commerce.state.ak.us/ded/dev/prodpref/prodpref.htm> or may be obtained by contacting the local DCED office or writing: Dept. of Commerce & Economic Development, Alaska Products Preference List, P.O. Box 110800, Juneau, Alaska 99811-0800.

BIDDERS INSTRUCTIONS:

- A. General.** The contracting Agency may request documentation to support entries made on this form. False presentations may be subject to AS 36.30.687. All Bidder's entries must conform to the requirements covering bid preparations in general. Discrepancies in price extensions shall be resolved by multiplying the declared total value times the preference percentage and adjusting any resulting computation(s) accordingly.
- B. Form Completion – BASIC BIDS.**
- (1) Enter project number and name, the words "Basic Bid" and the CONTRACTOR'S name in the heading of each page as provided.
 - (2) The Bidder shall compare those candidate products appearing on the preference listing (see Special Notice comments above) against the requirements of the technical specifications appearing in the contract documents. If the Bidder determines that a candidate product can suitably meet the contract requirements, then that product may be included in the worksheet as follows.
 - (3) For each suitable product submitted under the "Basic Bid" enter:
 - The product name, generic description and its corresponding technical specification section number under the heading "PRODUCT",
 - The company name of the Alaska producer under the heading "Manufacturer", and
 - The product class (I, II, or III) and preference percentage (3, 5, or 7% respectively) under the "CLASS/% heading.
 - (4) For each product appearing on the list and to be utilized by the CONTRACTOR enter:
 - Under the heading "TOTAL DECLARED VALUE" the manufacturer's quoted price of the product, (caution: this value is to be the manufacturer's quoted price at the place of origin and shall not include costs for freight, handling or miscellaneous charges of incorporating the product into the Work,) and
 - The resulting preference – i.e. the preference percentage times the total declared value amount – under the heading "REDUCTION AMOUNT".
 - (5) Continue for all "suitable" basic bid products. If the listing exceeds one page enter the words "Page # __ SUB" in front of the word "TOTAL" and on the first line of the following pages enter "SUBTOTAL OF REDUCTION AMOUNT FROM PREVIOUS PAGE".
 - (6) On the final page of the listing enter "BASIC BID PREFERENCE GRAND" immediately before the word "TOTAL".
 - (7) Total the entries in the "REDUCTION AMOUNT" column for each page by commencing at the first entry for that page. If a continuation page exists, ensure that the subtotal from the previous page is computed into the running total. Number pages as appropriate.
 - (8) Compute a Grand Total for the Basic Bid Preference. Enter the amount on the final page of the worksheet. (Note: When solicitations require written bids this amount should also be entered on line "C" of the Basic Bid Schedule.) Submit worksheet(s) with the Bid Schedule.
- C. Form Completion – ALTERNATE BIDS.**
- (1) Enter project number and name, the words "ALTERNATE BID # __", and CONTRACTOR'S name in the heading of each page as provided.
 - (2) On the first entry line enter "ADDITIONAL ALASKA PRODUCTS FOR ALTERNATE BID # __", and repeat procedures 2 through 5 under part B these Bidder's instructions except that references to "Basic Bid" shall be replaced with the words "Alternate Bid # __".
 - (3) Following the listing of all additional Alaska products enter the words "ADDITIONAL PRODUCTS PREFERENCE FOR ALTERNATE BID # __ - SUBTOTAL" and enter a subtotal amount for all additional products as listed. Subtotal amount to be determined by adding all additional product entries in the "REDUCTION AMOUNT" column.
 - (4) Skip three lines and enter "LESS THE FOLLOWING NON-APPLICABLE ALASKA PRODUCTS:
 - (5) Beginning on the next line, enter the product name and manufacturer of each Alaska Product appearing on the "Basic Bid" listing which would be deleted or reduced from the Project should the "Alternate Bid" be selected. Details of entry need only be sufficient to clearly reference the subject product. (i.e. "Pre-hung doors by Alaska Door Co., Anchorage.") Products being reduced shall specify the amount of the reduction. Should no products require deletion enter "None". When a product is listed as a "NON-APPLICABLE ALASKA PRODUCT" for this alternate bid and if under the basic bid the Bidder received a preference on his basic bid as a result of that product, then the applicable entries under the headings "TOTAL DECLARED VALUE" and "REDUCTION AMOUNT" (for each product and from the basic bid listing) shall also be entered into the corresponding headings of this form. Where only a portion of the products has been deleted, the entry (which will differ from those on the basic bid listing) may be "pro-rated" or as otherwise substantiated.
 - (6) Following the listing of all non-applicable Alaska products enter the words "NON-APPLICABLE PRODUCTS PREFERENCE FROM BASIC BID __ SUBTOTAL" and enter a subtotal amount for all non-applicable products listed. Subtotal amount to be determined by adding all non-applicable entries in the "REDUCTION AMOUNT" column.
 - (7) At the bottom of the final page enter the words "ALTERNATE BID # __ PREFERENCE GRAND" immediately before the word "TOTAL".
 - (8) Compute a Grand Total for the Alternate Bid Preference (for Alternate # __) by subtracting the non-applicable product preference subtotal from the additional product preference subtotal. Enter on the final page. (Note: When solicitations require written bids this amount should also be entered on line "C" of the Alternate Bid Schedule.) Submit separate worksheet(s) with each Alternate Bid.



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES

SUBCONTRACTOR LIST

Fairbanks Pioneer Home- Domestic Hot Water Modifications- #AJF 19-19C

The apparent low bidder shall complete this form and submit it so as to be received by the Contracting Officer prior to the close of business on the fifth working day after receipt of written notice from the Department.

Failure to submit this form with all required information by the due date will result in the bidder being declared non-responsive and may result in the forfeiture of the Bid Security.

Scope of work must be clearly defined. If an item of work is to be performed by more than one firm, indicate the portion or percent of work to be done by each.

Check as applicable:

☐ All work on the below-referenced project will be accomplished without subcontracts greater than ½ of 1% of the contract amount.

OR

☐ Subcontractor List is as follows:

LIST FIRST TIER SUBCONTRACTORS ONLY

FIRM NAME, ADDRESS, & PHONE No.	AK BUSINESS LICENSE No. & CONTRACTOR'S REGISTRATION No.	SCOPE OF WORK TO BE PERFORMED

CONTINUE SUBCONTRACTOR INFORMATION ON REVERSE

For projects with federal-aid funding, I hereby certify Alaska Business Licenses and Contractor's registrations will be valid for all subcontractors prior to award of the subcontract. For projects without federal-aid funding (State funding only), I hereby certify the listed Alaska Business Licenses and Contractor's Registration were valid at the time bids were opened for this project.

Signature of Authorized Company Representative

Title

Company Name

Company Address (Street or PO Box, City, State, Zip)

Date

Phone Number

FIRM NAME, ADDRESS, & PHONE No.	AK BUSINESS LICENSE No. & CONTRACTOR'S REGISTRATION No.	SCOPE OF WORK TO BE PERFORMED



STATE OF ALASKA
DEPARTMENT OF HEALTH & SOCIAL SERVICES

ALASKA VETERAN'S PREFERENCE AFFIDAVIT

In response to the Invitation to Bid for:

Fairbanks Pioneer Home- Domestic Hot water Modifications- #AJF 19-19C,

I certify under penalty of perjury that _____
(Name) qualifies for the Alaska Veteran's Preference under the following conditions:

- (a) If a bidder qualifies under AS 36.30.170(b) as an Alaska bidder and is a qualifying entity, a five percent bid preference shall be applied to the bid price (preference may not exceed \$5,000). In this subsection, "qualifying entity" means a:
- (1) Sole proprietorship owned by an Alaska Veteran;
 - (2) Partnership under AS 32.06 or AS 32.11 if a majority of the members are Alaska Veteran's;
 - (3) Limited Liability Company organized under AS 10.50 if a majority of the individuals are Alaska Veterans.
 - (4) Corporation that is wholly owned by individuals and a majority of the individuals are Alaska veterans.
- (b) To qualify for a preference under this section, a bidder must add value by the bidder itself actually performing, controlling, managing and supervising a significant part of the services provided, or the bidder must have sold supplies of the general nature solicited to other state agencies, governments, or the general public.
- (c) In this section, "Alaska Veteran" means an individual who is a:
- (1) Resident of this state; and
 - (2) Veteran; means an individual who:
 - (A) Served in the:
 - (i) Armed Forces of the United States, including a reserve unit of the United States armed forces; or
 - (ii) Alaska Territorial Guard, the Alaska Army National Guard, the Alaska Air National Guard, or the Alaska Naval Militia; and
 - (B) Was separated from the service under a condition that was not dishonorable.

Authorized Signature

Printed Name

Date

Laborers' & Mechanics' Minimum Rates of Pay

Effective September 1, 2018
Issue 37



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THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of Labor and
Workforce Development**

Office of the Commissioner

Post Office Box 111149
Juneau, Alaska 99811
Main: 907.465.2700
fax: 907.465-2784

September 1, 2018

TO ALL CONTRACTING AGENCIES:

At the Alaska Department of Labor and Workforce Development, our goal is putting Alaskans to work. This pamphlet is designed to help contractors awarded public construction contracts understand the most significant laws of the State of Alaska pertaining to prevailing wage and resident hire requirements.

This pamphlet identifies current prevailing wage rates and resident hire classifications for public construction contracts (any construction projects awarded for the State of Alaska or its political subdivisions, such as local governments and certain non-profit organizations). Because these rates may change, this publication is printed in the spring and fall of every year, so please be sure you are using the appropriate rates. The rates published in this edition become effective September 1, 2018.

All projects with a final bid date of September 11, 2018, or later, must pay the prevailing wage rates contained in this pamphlet. As the law now provides, these rates will remain stable during the life of a contract or for 24 calendar months, whichever is shorter. **The 24-month period begins on the date the prime contract is awarded.** Upon expiration of the initial 24-month period, the latest wage rates issued by the department shall become effective for a subsequent 24-month period or until the original contract is completed, whichever occurs first. This process shall be repeated until the original contract is completed.

The term "original contract" means the signed contract that resulted from the original bid and any amendments, including changes of work scope, additions, extensions, change orders, and other instruments agreed to by the parties that have not been subject to subsequent open bid procedures.

If a higher federal rate is required due to partial federal funding or other federal participation, the higher rate must be paid.

For additional copies of this pamphlet, contact the nearest office of the Division of Labor Standards and Safety, Wage and Hour office or the Web address at: <http://labor.state.ak.us/lss/pamp600.htm>

For questions regarding prevailing wage or employment preference requirements, please contact the nearest Wage and Hour office. These offices are listed on Page xi.

Sincerely,

A handwritten signature in black ink, reading "Heidi Drygas".

Heidi Drygas
Commissioner

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Note to Readers: The statutes and administrative regulations listed in this publication were taken from the official codes, as of the effective date of the publication. However, there may be errors or omissions that have not been identified and changes that occurred after the publication was printed. This publication is intended as an informational guide only and is not intended to serve as a precise statement of the statutes and regulations of the State of Alaska. To be certain of the current laws and regulations, please refer to the official codes.

EXCERPTS FROM ALASKA LAW

(The following statute (36.05.005) applies to projects bid on or after October 20, 2011)

Sec. 36.05.005. Applicability.

This chapter applies only to a public construction contract that exceeds \$25,000.

Sec. 36.05.010. Wage rates on public construction.

A contractor or subcontractor who performs work on a public construction contract in the state shall pay not less than the current prevailing rate of wages for work of a similar nature in the region in which the work is done. The current prevailing rate of wages is that contained in the latest determination of prevailing rate of wages issued by the Department of Labor and Workforce Development at least 10 days before the final date for submission of bids for the contract. The rate shall remain in effect for the life of the contract or for 24 calendar months, whichever is shorter. At the end of the initial 24-month period, if new wage determinations have been issued by the department, the latest wage determination shall become effective for the next 24-month period or until the contract is completed, whichever occurs first. This process shall be repeated until the contract is completed.

Sec. 36.05.040. Filing schedule of employees, wages paid, and other information.

All contractors or subcontractors who perform work on a public construction contract for the state or for a political subdivision of the state shall, before the Friday of every second week, file with the Department of Labor and Workforce Development a sworn affidavit for the previous reporting period, setting out in detail the number of persons employed, wages paid, job classification of each employee, hours worked each day and week, and other information on a form provided by the Department of Labor and Workforce Development.

Sec. 36.05.045. Notice of work and completion; withholding of payment.

- (a) Before commencing work on a public construction contract, the person entering into the contract with a contracting agency shall designate a primary contractor for purposes of this section. Before work commences, the primary contractor shall file a notice of work with the Department of Labor and Workforce Development. The notice of work must list work to be performed under the public construction contract by each contractor who will perform any portion of work on the contract and the contract price being paid to each contractor. The primary contractor shall pay all filing fees for each contractor performing work on the contract, including a filing fee based on the contract price being paid for work performed by the primary contractor's employees. The filing fee payable shall be the sum of all fees calculated for each contractor. The filing fee shall be one percent of each contractor's contract price. The total filing fee payable by the primary contractor under this subsection may not exceed \$5,000. In this subsection, "contractor" means an employer who is using employees to perform work on the public construction contract under the contract or a subcontract.
- (b) Upon completion of all work on the public construction contract, the primary contractor shall file with the Department of Labor and Workforce Development a notice of completion together with payment of any additional filing fees owed due to increased contract amounts. Within 30 days after the department's receipt of the primary contractor's notice of completion, the department shall inform the contracting agency of the amount, if any, to be withheld from the final payment.
- (c) A contracting agency
 - (1) may release final payment of a public construction contract to the extent that the agency has received verification from the Department of Labor and Workforce Development that
 - (A) the primary contractor has complied with (a) and (b) of this section;
 - (B) the Department of Labor and Workforce Development is not conducting an investigation under this title; and
 - (C) the Department of Labor and Workforce Development has not issued a notice of a violation of this chapter to the primary contractor or any other contractors working on the public construction contract; and

- (2) shall withhold from the final payment an amount sufficient to pay the department's estimate of what may be needed to compensate the employees of any contractors under investigation on this construction contract, and any unpaid filing fees.
- (d) The notice and filing fee required under (a) of this section may be filed after work has begun if
 - (1) The public construction contract is for work undertaken in immediate response to an emergency; and
 - (2) The notice and fees are filed not later than 14 days after the work has begun.
- (e) A false statement made on a notice required by this section is punishable under AS 11.56.210.

Sec. 36.05.060. Penalty for violation of this chapter.

A contractor who violates this chapter is guilty of a misdemeanor and upon conviction is punishable by a fine of not less than \$100 nor more than \$1,000, or by imprisonment for not less than 10 days nor more than 90 days, or by both. Each day a violation exists constitutes a separate offense.

Sec. 36.05.070. Wage rates in specifications and contracts for public works.

- (a) The advertised specifications for a public construction contract that requires or involves the employment of mechanics, laborers, or field surveyors must contain a provision stating the minimum wages to be paid various classes of laborers, mechanics, or field surveyors and that the rate of wages shall be adjusted to the wage rate under AS 36.05.010.
- (b) Repealed by §17 ch 142 SLA 1972.
- (c) A public construction contract under (a) of this section must contain provisions that
 - (1) the contractor or subcontractors of the contractor shall pay all employees unconditionally and not less than once a week;
 - (2) wages may not be less than those stated in the advertised specifications, regardless of the contractual relationship between the contractor or subcontractors and laborers, mechanics, or field surveyors;
 - (3) the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work;
 - (4) the state or a political subdivision shall withhold so much of the accrued payments as is necessary to pay to laborers, mechanics, or field surveyors employed by the contractor or subcontractors the difference between
 - (A) the rates of wages required by the contract to be paid laborers, mechanics, or field surveyors on the work; and
 - (B) the rates of wages in fact received by laborers, mechanics, or field surveyors.

Sec. 36.05.080. Failure to pay agreed wages.

Every contract within the scope of AS 36.05.070 shall contain a provision that if it is found that a laborer, mechanic, or field surveyor employed by the contractor or subcontractor has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid, the state or its political subdivision may, by written notice to the contractor, terminate the contractor's right to proceed with the work or the part of the work for which there is a failure to pay the required wages and to prosecute the work to completion by contract or otherwise, and the contractor and the contractor's sureties are liable to the state or its political subdivision for excess costs for completing the work.

Sec. 36.05.090. Payment of wages from withheld payments and listing contractors who violate contracts.

- (a) The state disbursing officer in the case of a state public construction contract and the local fiscal officer in the case of a political subdivision public construction contract shall pay directly to laborers, mechanics, or field surveyors from accrued payments withheld under the terms of the contract the wages due laborers, mechanics, or field surveyors under AS 36.05.070.
- (b) The state disbursing officer or the local fiscal officer shall distribute to all departments of the state government and to all political subdivisions of the state a list giving the names of persons who have disregarded their obligations to employees. A person appearing on this list and a firm, corporation,

partnership, or association in which the person has an interest may not work as a contractor or subcontractor on a public construction contract for the state or a political subdivision of the state until three years after the date of publication of the list. If the accrued payments withheld under the contract are insufficient to reimburse all the laborers, mechanics, or field surveyors with respect to whom there has been a failure to pay the wages required under AS 36.05.070, the laborers, mechanics, or field surveyors have the right of action or intervention or both against the contractor and the contractor's sureties conferred by law upon persons furnishing labor or materials, and in the proceedings it is not a defense that the laborers, mechanics, or field surveyors accepted or agreed to accept less than the required rate of wages or voluntarily made refunds.

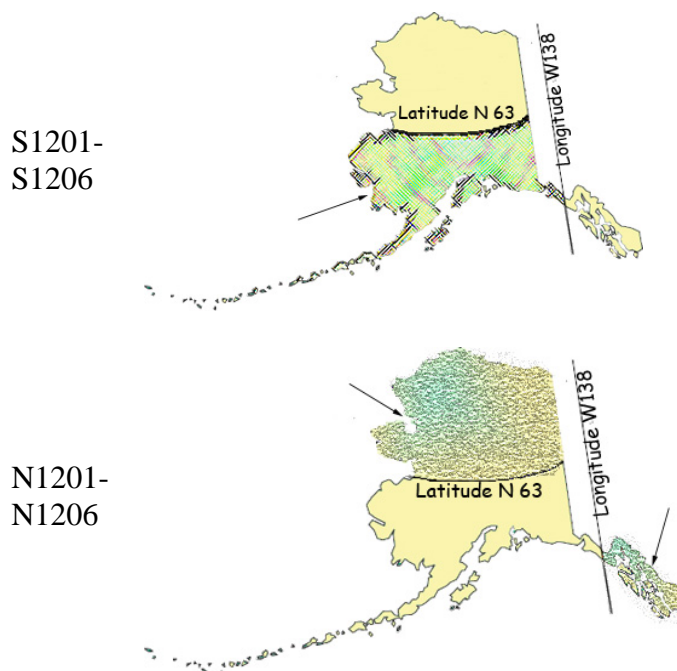
Sec. 36.05.900. Definition.

In this chapter, "contracting agency" means the state or a political subdivision of the state that has entered into a public construction contract with a contractor.

ADDITIONAL INFORMATION

LABORER CLASSIFICATION CLARIFICATION

The laborer rates categorized in class code S1201-S1206 apply in one area of Alaska; the area that is south of N63 latitude and west of W138 Longitude. The laborer rates categorized in class code N1201-N1206 apply in two areas of Alaska; the Alaska areas north of N63 latitude and east of W138 longitude. The following graphic representations should assist with clarifying the applicable wage rate categories:



ACCOMMODATIONS AND PER DIEM

The Alaska Department of Labor and Workforce Development has adopted a per diem requirement for blocklayers, bricklayers, carpenters, dredgemen, heat & frost insulators/asbestos workers, ironworkers, laborers, operative plasterers & cement masons, painters, piledrivers, power equipment operators, roofers, surveyors, truck drivers/surveyors, and tunnel workers. This per diem rate creates an allowable alternative to providing board and lodging under the following conditions:

Employer-Provided Camp or Suitable Accommodations

Unless otherwise approved by the Commissioner, the employer shall ensure that a worker who is employed on a project that is 65 road miles or more from the international airport in either Fairbanks, Juneau or Anchorage or is inaccessible by road in a 2-wheel drive vehicle and who is not a domiciled resident of the locality of the project shall receive meals and lodging. Lodging shall be in accordance with all applicable state and federal laws. In cases where the project site is not road accessible, but the employee can reasonably get to the project worksite from their permanent residence within one hour, the Commissioner may waive these requirements for that employee upon a written request from the employer.

The term “domiciled resident” means a person living within 65 road miles of the project, or in the case of a highway project, the mid-point of the project, for at least 12 consecutive months prior to the award of the project. However, if the employer or person provides sufficient evidence to convince the department that a person has established a permanent residence and an intent to remain indefinitely within the distance to be considered a “domiciled resident,” the employer shall not be required to provide meals and lodging or pay per diem.

Where the employer provides or furnishes board, lodging or any other facility, the cost or amount thereof shall not be considered or included as part of the required prevailing wage basic hourly rate and cannot be applied to meet other fringe benefit requirements. The taxability of employer provided board and lodging shall be determined by the appropriate taxation enforcement authority.

Per Diem

Employers are encouraged to use commercial facilities and lodges; however, when such facilities are not available, per diem in lieu of meals and lodging must be paid at the basic rate of \$75.00 per day, or part thereof, the worker is employed on the project. Per diem shall not be allowed on highway projects west of Livengood on the Elliott Highway, at Mile 0 of the Dalton Highway to the North Slope of Alaska, north of Mile 20 on the Taylor Highway, east of Chicken, Alaska, on the Top of the World Highway and south of Tetlin Junction to the Alaska-Canada border.

The above-listed standards for room and board and per diem only apply to the crafts as identified in Pamphlet 600, *Laborers' and Mechanics' Minimum Rates of Pay*. Other crafts working on public construction projects shall be provided room and board at remote sites based on the department's existing policy guidelines. In the event that a contractor provides lodging facilities, but no meals, the department will accept payment of \$36 per day for meals to meet the per diem requirements.

APPRENTICE HIRING REQUIREMENTS

On November 5, 2015, Governor Walker signed Administrative Order No. 278 to help ensure that there is an adequate pool of well-trained Alaskan construction workers to satisfy the industry needs. AO 278 replaced AO 226 and established a 15 percent goal for hiring federally registered apprentices in certain job categories on all public construction projects awarded by the Alaska Department of Transportation and Public Facilities and the Alaska Department of Administration that exceed \$2.5 million. The Order requires the commissioners of DOTPF and DOA to strive to require not less than 15 percent labor hours on a qualified project are performed by federally registered apprentices in the following classifications:

Boilermakers	Elevator Constructors & Mechanics	Plumbers and Pipefitters
Bricklayers	Insulation Workers	Roofers
Carpenters	Ironworkers	Sheetmetal Workers
Cement Masons	Laborers	Surveyors
Culinary Workers	Mechanics	Sprinkler Fitters
Electricians	Millwrights	Truck Drivers
Equipment Operators	Painters	Tug Boat Workers
	Piledriving Occupations	Welders

A federally registered apprentice is enrolled in an apprentice training program under 29 U.S.C. 50 and 29 C.F.R. 29.1 – 29.13. Contractors will be expected to file apprentice utilization forms throughout the project or utilize the online certified payroll filing system available on the My Alaska website. A copy of AO 278 may be viewed in its entirety at <http://gov.state.ak.us/admin-orders/278.html> or call any Wage and Hour office to receive a copy.

APPRENTICE RATES

Apprentice rates at less than the minimum prevailing rates may be paid to apprentices according to an apprentice program which has been registered and approved by the Commissioner of the Alaska Department of Labor and Workforce Development in writing or according to a bona fide apprenticeship program registered with the U.S. Department of Labor, Office of Apprenticeship Training. **Any employee listed on a payroll at an apprentice wage rate who is not registered as above shall be paid the journeyman prevailing minimum wage in that work classification.** Wage rates are based on prevailing crew makeup practices in Alaska and apply to work performed regardless of either the quality of the work performed by the employee or the titles or classifications which may be assigned to individual employees.

FRINGE BENEFIT PLANS

Contractors/subcontractors may compensate fringe benefits to their employees in any one of three methods. The fringe benefits may be paid into a union trust fund, into an approved benefit plan, or paid directly on the paycheck as gross wages.

Where fringe benefits are paid into approved plans, funds, or programs including union trust funds, the payments must be contributed at least monthly. If contractors submit their own payroll forms and are paying fringe benefits into approved plans, funds, or programs, the employer's certification must include, in addition to those requirements of 8 AAC 30.020(c), a statement that fringe benefit payments have been or will be paid at least monthly. Contractors who pay fringe benefits to a plan must ensure the plan is one approved by the Internal Revenue Service and that the plan meets the requirements of 8 AAC 30.025 (eff. 3/2/08) in order for payments to be credited toward the prevailing wage obligation.

SPECIAL PREVAILING WAGE RATE DETERMINATION

Special prevailing wage rate determinations may be requested for special projects or a special worker classification if the work to be performed does not conform to traditional public construction for which a prevailing wage rate has been established under 8 AAC 30.050(a) of this section. Requests for special wage rate determinations must be in writing and filed with the Commissioner at least 30 days before the award of the contract. An applicant for a special wage rate determination shall have the responsibility to support the necessity for the special rate. An application for a special wage rate determination filed under this section must contain:

- (1) a specification of the contract or project on which the special rates will apply and a description of the work to be performed;
- (2) a brief narrative explaining why special wage rates are necessary;
- (3) the job class or classes involved;
- (4) the special wage rates the applicant is requesting, including survey or other relevant wage data to support the requested rates;
- (5) the approximate number of employees who would be affected; and
- (6) any other information which might be helpful in determining if special wage rates are appropriate.

Requests made pursuant to the above should be addressed to:

Director
Alaska Department of Labor and Workforce Development
Labor Standards & Safety Division
Wage and Hour Administration
P.O. Box 111149
Juneau, AK 99811-1149
-or-
Email: statewide.wagehour@alaska.gov

DEPARTMENT OF LABOR & WORKFORCE DEVELOPMENT
ALASKA EMPLOYMENT PREFERENCE INFORMATION

By authority of AS 36.10.150 and 8 AAC 30.064, the Commissioner of Labor and Workforce Development has determined the State of Alaska to be a Zone of Underemployment. A Zone of Underemployment requires that Alaska residents who are eligible under AS 36.10.140 be given a minimum of 90 percent employment preference on public works contracts throughout the state in certain job classifications. **This 90 percent Alaska resident hiring preference applies on a project-by-project, craft-by-craft or occupational basis and must be met each workweek by each contractor/subcontractor in each of the following classifications:**

Boilermakers	Electricians	Laborers	Roofers
Bricklayers	Engineers & Architects	Mechanics	Sheet Metal Workers
Carpenters	Equipment Operators	Millwrights	Surveyors
Cement Masons	Foremen & Supervisors	Painters	Truck Drivers
Culinary Workers	Insulation Workers	Piledriving Occupations	Tug Boat Workers
	Ironworkers	Plumbers & Pipefitters	Welders

This determination became effective July 1, 2017, and remains in effect through June 30, 2019. This determination will be applied to projects with a bid submission deadline on or after July 1, 2017 and to projects previously covered by the 2015 Alaska employment preference determination. This will afford contractors an opportunity to consider the impacts of Alaska resident hire in their bids.

The first person on a certified payroll in any classification is called the "first worker" and is not required to be an Alaskan resident. However, once the contractor adds any more workers in the classification, then all workers in the classification are counted, and the 90 percent calculation is applied to compute the number of required Alaskans to be in compliance. To compute the number of Alaskan residents required in a workweek in a particular classification, multiply the total number of workers in the classification by 90 percent. The result is then rounded down to the nearest whole number to determine the number of Alaskans that must be employed in that classification.

If a worker works in more than one classification during a week, the classification in which they spent the most time would be counted for employment preference purposes. If the time is split evenly between two classifications, the worker is counted in both classifications.

If you have difficulty meeting the 90 percent requirement, an approved waiver must be obtained before a non-Alaska resident is hired who would put the contractor/subcontractor out of compliance (8 AAC 30.081 (e) (f)). The waiver process requires proof of an adequate search for qualified Alaskan workers. Qualified Alaska residents identified through the search must be hired before waivers for non-resident workers may be granted. To apply for a waiver, contact the nearest Wage and Hour Office for instructions.

Here is an example to apply the 90 percent requirement to four boilermaker workers. Multiply four workers by 90% and drop the fraction ($.90 \times 4 = 3.6 - .6 = 3$). The remaining number is the number of Alaskan resident boilermakers required to be in compliance in that particular classification for that week.

The penalties for being out of compliance are serious. AS 36.10.100 (a) states "A contractor who violates a provision of this chapter shall have deducted from amounts due to the contractor under the contract the prevailing wages which should have been paid to a displaced resident and these amounts shall be retained by the contracting agency." If a contractor/subcontractor is found to be out of compliance, penalties accumulate until they come into compliance.

Contractors are responsible for determining residency status. If you have difficulty determining whether a worker is an Alaska resident, you should contact the nearest Wage and Hour Office. Contact Wage and Hour in Anchorage at (907) 269-4900, in Fairbanks at (907) 451-2886, or in Juneau at (907) 465-4842.

Alaska Department of Labor and Workforce Development
Labor Standards & Safety Division
Wage and Hour Administration
Web site: <http://labor.state.ak.us/lss/pamp600.htm>

Anchorage

1251 Muldoon Road, Suite 113
Anchorage, Alaska 99504-2098
Phone: (907) 269-4900

Email:
statewide.wagehour@alaska.gov

Juneau

1111 W. 8th Street, Suite 302
Juneau, Alaska 99801
Phone: (907) 465-4842

Email:
statewide.wagehour@alaska.gov

Fairbanks

Regional State Office Building
675 7th Ave., Station J-1
Fairbanks, Alaska 99701-4593
Phone: (907) 451-2886

Email:
statewide.wagehour@alaska.gov

LABOR STANDARDS NOTICE REQUESTS

If you would like to receive Wage and Hour Administration or Mechanical Inspection **regulation notices** or **publications information**, they are available via electronic mail, by signing up in the GovDelivery System, <https://public.govdelivery.com/accounts/AKDOL/subscriber/new> and selecting topics *LSS – Wage and Hour – Forms and Publications*, *LSS – Mechanical Inspection Regulations*, or *LSS – Wage and Hour Regulations*.

Publications are also available online at <http://labor.alaska.gov/lss/home.htm>

DEBARMENT LIST

AS 36.05.090(b) states that “the state disbursing officer or the local fiscal officer shall distribute to all departments of the state government and to all political subdivisions of the state a list giving the names of persons who have disregarded their obligations to employees.”

A person appearing on the following debarment list and a firm, corporation, partnership, or association in which the person has an interest may not work as a contractor or subcontractor on a public construction contract for the state or a political subdivision of the state for three years from the date of debarment.

Company Name

Tim Banach, Individual
Boulder Creek Electric

Debarment Expires

February 23, 2021
February 23, 2021

Laborers' & Mechanics' Minimum Rates of Pay

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Boilermakers

						VAC	SAF	
A0101	Boilermaker (journeyman)	46.17	8.57	15.63	1.65	3.00	0.34	75.36

Bricklayers & Blocklayers

**See note on last page if remote site

						L&M		
A0201	Blocklayer	40.81	9.83	8.50	0.55	0.15	0.74	60.58

Bricklayer
Marble or Stone Mason
Refractory Worker (Firebrick, Plastic, Castable, and Gunitite Refractory Applications)
Terrazzo Worker
Tile Setter

						L&M		
A0202	Tuck Pointer Caulker	40.81	9.83	8.50	0.55	0.15	0.74	60.58

Cleaner (PCC)

						L&M		
A0203	Marble & Tile Finisher	34.79	9.83	8.50	0.55	0.15	0.74	54.56

Terrazzo Finisher

						L&M		
A0204	Torginal Applicator	38.83	9.83	8.50	0.55	0.15	0.74	58.60

Carpenters, Statewide

**See note on last page if remote site

						L&M	SAF	
A0301	Carpenter (journeyman)	38.34	10.08	14.63	0.95	0.10	0.10	64.20

Lather/Drywall/Acoustical

Cement Masons, Region I (North of N63 latitude)

**See note on last page if remote site

						L&M		
N0401	Group I, including:	37.88	8.21	11.80	1.18	0.10		59.17

Application of Sealing Compound
Application of Underlayment
Building, General
Cement Mason (journeyman)
Concrete

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Cement Masons, Region I (North of N63 latitude)

**See note on last page if remote site

N0401	Group I, including:	37.88	8.21	11.80	1.18	L&M	0.10	59.17
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Concrete Paving
Curb & Gutter, Sidewalk
Curing of All Concrete
Grouting & Caulking of Tilt-Up Panels
Grouting of All Plates
Patching Concrete
Screed Pin Setter
Spackling/Skim Coating

N0402	Group II, including:	37.88	8.21	11.80	1.18	L&M	0.10	59.17
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Form Setter

N0403	Group III, including:	37.88	8.21	11.80	1.18	L&M	0.10	59.17
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Concrete Saw (self-powered)
Curb & Gutter Machine
Floor Grinder
Pneumatic Power Tools
Power Chipping & Bushing
Sand Blasting Architectural Finish
Screed & Rodding Machine Operator
Troweling Machine Operator

N0404	Group IV, including:	37.88	8.21	11.80	1.18	L&M	0.10	59.17
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Application of All Composition Mastic
Application of All Epoxy Material
Application of All Plastic Material
Finish Colored Concrete
Guniting Nozzleman
Hand Powered Grinder
Tunnel Worker

N0405	Group V, including:	38.13	8.21	11.80	1.18	L&M	0.10	59.42
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Plasterer

Cement Masons, Region II (South of N63 latitude)

**See note on last page if remote site

S0401	Group I, including:	37.63	8.21	11.80	1.18	L&M	0.10	58.92
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Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund;
PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate;
VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Cement Masons, Region II (South of N63 latitude)								
**See note on last page if remote site								
S0401	Group I, including:	37.63	8.21	11.80	1.18	L&M		58.92
	Application of Sealing Compound							
	Application of Underlayment							
	Building, General							
	Cement Mason (journeyman)							
	Concrete							
	Concrete Paving							
	Curb & Gutter, Sidewalk							
	Curing of All Concrete							
	Grouting & Caulking of Tilt-Up Panels							
	Grouting of All Plates							
	Patching Concrete							
	Screed Pin Setter							
	Spackling/Skim Coating							
S0402	Group II, including:	37.63	8.21	11.80	1.18	L&M		58.92
	Form Setter							
S0403	Group III, including:	37.63	8.21	11.80	1.18	L&M		58.92
	Concrete Saw (self-powered)							
	Curb & Gutter Machine							
	Floor Grinder							
	Pneumatic Power Tools							
	Power Chipping & Bushing							
	Sand Blasting Architectural Finish							
	Screed & Rodding Machine Operator							
	Troweling Machine Operator							
S0404	Group IV, including:	37.63	8.21	11.80	1.18	L&M		58.92
	Application of All Composition Mastic							
	Application of All Epoxy Material							
	Application of All Plastic Material							
	Finish Colored Concrete							
	Guniting Nozzleman							
	Hand Powered Grinder							
	Tunnel Worker							
S0405	Group V, including:	37.88	8.21	11.80	1.18	L&M		59.17
	Plasterer							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund;
PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate;
VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Culinary Workers * See note on last page							
A0501	Baker/Cook	28.37	7.40	6.97		LEG 0.07	42.81
A0503	General Helper	25.05	7.40	6.97		LEG 0.07	39.49
	Housekeeper						
	Janitor						
	Kitchen Helper						
A0504	Head Cook	28.97	7.40	6.97		LEG 0.07	43.41
A0505	Head Housekeeper	25.45	7.40	6.97		LEG 0.07	39.89
	Head Kitchen Help						
Dredgemen **See note on last page if remote site							
A0601	Assistant Engineer	39.51	9.80	12.25	1.00	L&M 0.10	62.66
	Craneman						
	Electrical Generator Operator (primary pump/power barge/dredge)						
	Engineer						
	Welder						
A0602	Assistant Mate (deckhand)	38.35	9.80	12.25	1.00	L&M 0.10	61.50
A0603	Fireman	38.79	9.80	12.25	1.00	L&M 0.10	61.94
A0605	Leverman Clamshell	42.04	9.80	12.25	1.00	L&M 0.10	65.19
A0606	Leverman Hydraulic	40.28	9.80	12.25	1.00	L&M 0.10	63.43
A0607	Mate & Boatman	39.51	9.80	12.25	1.00	L&M 0.10	62.66
A0608	Oiler (dredge)	38.79	9.80	12.25	1.00	L&M 0.10	61.94
Electricians							
A0701	Inside Cable Splicer	39.82	13.05	13.63	0.95	L&M 0.20 LEG 0.15	67.80

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Electricians								
A0702	Inside Journeyman Wireman, including: Technicians (including use of drones in electrical construction)	39.49	13.05	13.87	0.95	L&M 0.20	LEG 0.15	67.71
A0703	Power Cable Splicer	54.39	13.05	18.82	0.95	L&M 0.20	LEG 0.15	87.56
A0704	Tele Com Cable Splicer	48.70	13.05	15.48	0.95	L&M 0.20	LEG 0.15	78.53
A0705	Power Journeyman Lineman, including: Power Equipment Operator Technician (including use of drones in electrical construction)	52.64	13.05	18.77	0.95	L&M 0.20	LEG 0.15	85.76
A0706	Tele Com Journeyman Lineman, including: Technician (including use of drones in telecommunications construction) Tele Com Equipment Operator	46.95	13.05	15.43	0.95	L&M 0.20	LEG 0.15	76.73
A0707	Straight Line Installer - Repairman	46.95	13.05	15.43	0.95	L&M 0.20	LEG 0.15	76.73
A0708	Powderman	50.64	13.05	18.71	0.95	L&M 0.20	LEG 0.15	83.70
A0710	Material Handler	26.57	12.27	4.80	0.15	L&M 0.15	LEG 0.15	44.09
A0712	Tree Trimmer Groundman	27.54	13.05	11.82	0.15	L&M 0.15	LEG 0.15	52.86
A0713	Journeyman Tree Trimmer	36.21	13.05	12.08	0.15	L&M 0.15	LEG 0.15	61.79
A0714	Vegetation Control Sprayer	39.66	13.05	12.18	0.15	L&M 0.15	LEG 0.15	65.34
A0715	Inside Journeyman Communications CO/PBX	38.07	13.05	13.58	0.95	L&M 0.20	LEG 0.15	66.00
Elevator Workers								
A0802	Elevator Constructor	38.82	15.42	16.61	0.61	L&M 0.36	VAC 4.04	75.86
A0803	Elevator Constructor Mechanic	55.45	15.42	16.61	0.61	L&M 0.36	VAC 6.16	94.61

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund;
PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate;
VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Heat & Frost Insulators/Asbestos Workers								
**See note on last page if remote site								
A0902	Asbestos Abatement-Mechanical Systems	38.68	9.24	11.01	1.20	SAF	0.12	60.25
A0903	Asbestos Abatement/General Demolition All Systems	38.68	9.24	11.01	1.20	SAF	0.12	60.25
A0904	Insulator, Group II	38.68	9.24	11.01	1.20	SAF	0.12	60.25
A0905	Fire Stop	38.68	9.24	11.01	1.20	SAF	0.12	60.25
IronWorkers								
**See note on last page if remote site								
A1101	Ironworkers, including:	37.90	8.73	21.18	1.57	L&M	IAF	
	Bender Operators					0.20	0.36	69.94
	Bridge & Structural							
	Machinery Mover							
	Ornamental							
	Reinforcing							
	Rigger							
	Sheeter							
	Signalman							
	Stage Rigger							
	Toxic Haz-Mat Work							
	Welder							
A1102	Helicopter	38.90	8.73	21.18	1.57	L&M	IAF	
	Tower (energy producing windmill type towers to include nacelle and blades)					0.20	0.36	70.94
A1103	Fence/Barrier Installer	34.40	8.73	20.93	1.47	L&M	IAF	
	Guard Rail Installer					0.20	0.36	66.09
A1104	Guard Rail Layout Man	35.14	8.73	20.93	1.47	L&M	IAF	
						0.20	0.36	66.83
Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)								
**See note on last page if remote site								
N1201	Group I, including:	30.26	8.70	17.06	1.25	L&M	LEG	
	Asphalt Worker (shovelman, plant crew)					0.20	0.20	57.67

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
N1201	Group I, including:	30.26	8.70	17.06	1.25	0.20	0.20	57.67
	Brush Cutter							
	Camp Maintenance Laborer							
	Carpenter Tender or Helper							
	Choke Setter, Hook Tender, Rigger, Signalman							
	Concrete Labor (curb & gutter, chute handler, curing, grouting, sack & patch, screeding)							
	Crusher Plant Laborer							
	Demolition Laborer							
	Ditch Digger							
	Dumpman							
	Environmental Laborer (hazard/toxic waste, oil spill)							
	Fence Installer							
	Fire Watch Laborer							
	Flagman							
	Form Stripper							
	General Laborer							
	Guardrail Laborer, Bridge Rail Installer							
	Hydro-seeder Nozzleman							
	Laborer, Building							
	Landscape or Planter							
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block 4 feet or less - highway or landscape work)							
	Material Handler							
	Pneumatic or Power Tools							
	Portable or Chemical Toilet Serviceman							
	Pump Man or Mixer Man							
	Railroad Track Laborer							
	Sandblast, Pot Tender							
	Saw Tender							
	Slurry Work							
	Steam Cleaner Operator							
	Steam Point or Water Jet Operator							
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)							
	Tank Cleaning							
	Utiliwalk & Utilidor Laborer							
	Watchman (construction projects)							
	Window Cleaner							

						L&M	LEG	
N1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20	58.67
	Burning & Cutting Torch							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

							L&M	LEG	
N1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20	58.67	

Cement or Lime Dumper or Handler (sack or bulk)
 Certified Erosion Sediment Control Lead (CESCL Laborer)
 Choker Splicer
 Chucktender (wagon, air-track & hydraulic drills)
 Concrete Laborer (power buggy, concrete saws, pumpcrete nozzleman, vibratorman)
 Culvert Pipe Laborer
 Cured Inplace Pipelayer
 Environmental Laborer (asbestos, marine work)
 Floor Preparation, Core Drilling
 Foam Gun or Foam Machine Operator
 Green Cutter (dam work)
 Guniting Operator
 Hod Carrier
 Jackhammer/Chipping Gun or Pavement Breaker
 Laser Instrument Operator
 Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work)
 Mason Tender & Mud Mixer (sewer work)
 Pilot Car
 Pipelayer Helper
 Plasterer, Bricklayer & Cement Finisher Tender
 Powderman Helper
 Power Saw Operator
 Railroad Switch Layout Laborer
 Sandblaster
 Scaffold Building & Erecting
 Sewer Caulker
 Sewer Plant Maintenance Man
 Thermal Plastic Applicator
 Timber Faller, Chainsaw Operator, Filer
 Timberman

							L&M	LEG	
N1203	Group III, including:	32.16	8.70	17.06	1.25	0.20	0.20	59.57	

Bit Grinder
 Camera/Tool/Video Operator
 Guardrail Machine Operator
 High Rigger & Tree Topper
 High Scaler
 Multiplate
 Plastic Welding

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund;
 PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate;
 VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
N1203	Group III, including:	32.16	8.70	17.06	1.25	0.20	0.20	59.57

Slurry Seal Squeegee Man
Traffic Control Supervisor
Welding Certified (in connection with laborer's work)

						L&M	LEG	
N1204	Group IIIA	35.44	8.70	17.06	1.25	0.20	0.20	62.85

Asphalt Raker, Asphalt Belly Dump Lay Down
Drill Doctor (in the field)
Driller (including, but not limited to, wagon drills, air-track drills, hydraulic drills)
Pioneer Drilling & Drilling Off Tugger (all type drills)
Pipelayers
Powderman (Employee Possessor)
Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)
Traffic Control Supervisor, DOT Qualified

						L&M	LEG	
N1205	Group IV	19.83	8.70	17.06	1.25	0.20	0.20	47.24

Final Building Cleanup
Permanent Yard Worker

						L&M	LEG	
N1206	Group IIIB	38.98	5.99	17.06	1.25	0.20	0.20	63.68

Federal Powderman (Responsible Person in Charge)
Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
Stake Hopper

Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S1201	Group I, including:	30.26	8.70	17.06	1.25	0.20	0.20	57.67

Asphalt Worker (shovelman, plant crew)
Brush Cutter
Camp Maintenance Laborer
Carpenter Tender or Helper
Choke Setter, Hook Tender, Rigger, Signalman
Concrete Labor (curb & gutter, chute handler, curing, grouting, sack & patch, screeding)
Crusher Plant Laborer
Demolition Laborer
Ditch Digger

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S1201	Group I, including:	30.26	8.70	17.06	1.25	0.20	0.20	57.67
	Dumpman							
	Environmental Laborer (hazard/toxic waste, oil spill)							
	Fence Installer							
	Fire Watch Laborer							
	Flagman							
	Form Stripper							
	General Laborer							
	Guardrail Laborer, Bridge Rail Installer							
	Hydro-seeder Nozzleman							
	Laborer, Building							
	Landscafer or Planter							
	Laying of Mortarless Decorative Block (retaining walls, flowered decorative block 4 feet or less - highway or landscape work)							
	Material Handler							
	Pneumatic or Power Tools							
	Portable or Chemical Toilet Serviceman							
	Pump Man or Mixer Man							
	Railroad Track Laborer							
	Sandblast, Pot Tender							
	Saw Tender							
	Slurry Work							
	Steam Cleaner Operator							
	Steam Point or Water Jet Operator							
	Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)							
	Tank Cleaning							
	Utiliwalk & Utilidor Laborer							
	Watchman (construction projects)							
	Window Cleaner							

						L&M	LEG	
S1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20	58.67
	Burning & Cutting Torch							
	Cement or Lime Dumper or Handler (sack or bulk)							
	Certified Erosion Sediment Control Lead (CESCL Laborer)							
	Choker Splicer							
	Chucktender (wagon, air-track & hydraulic drills)							
	Concrete Laborer (power buggy, concrete saws, pumpcrete nozzleman, vibratorman)							
	Culvert Pipe Laborer							
	Cured Inplace Pipelayer							
	Environmental Laborer (asbestos, marine work)							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S1202	Group II, including:	31.26	8.70	17.06	1.25	0.20	0.20	58.67

Floor Preparation, Core Drilling
Foam Gun or Foam Machine Operator
Green Cutter (dam work)
Guniting Operator
Hod Carrier
Jackhammer/Chipping Gun or Pavement Breaker
Laser Instrument Operator
Laying of Mortarless Decorative Block (retaining walls, flowered decorative block over 4 feet - highway or landscape work)
Mason Tender & Mud Mixer (sewer work)
Pilot Car
Pipelayer Helper
Plasterer, Bricklayer & Cement Finisher Tender
Powderman Helper
Power Saw Operator
Railroad Switch Layout Laborer
Sandblaster
Scaffold Building & Erecting
Sewer Caulker
Sewer Plant Maintenance Man
Thermal Plastic Applicator
Timber Faller, Chainsaw Operator, Filer
Timberman

						L&M	LEG	
S1203	Group III, including:	32.16	8.70	17.06	1.25	0.20	0.20	59.57

Bit Grinder
Camera/Tool/Video Operator
Guardrail Machine Operator
High Rigger & Tree Topper
High Scaler
Multiplate
Plastic Welding
Slurry Seal Squeegee Man
Traffic Control Supervisor
Welding Certified (in connection with laborer's work)

						L&M	LEG	
S1204	Group IIIA	35.44	8.70	17.06	1.25	0.20	0.20	62.85

Asphalt Raker, Asphalt Belly Dump Lay Down
Drill Doctor (in the field)

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S1204	Group IIIA	35.44	8.70	17.06	1.25	0.20	0.20	62.85

Driller (including, but not limited to, wagon drills, air-track drills, hydraulic drills)
Pioneer Drilling & Drilling Off Tugger (all type drills)
Pipelayers
Powderman (Employee Possessor)
Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)
Traffic Control Supervisor, DOT Qualified

						L&M	LEG	
S1205	Group IV	19.83	8.70	17.06	1.25	0.20	0.20	47.24

Final Building Cleanup
Permanent Yard Worker

						L&M	LEG	
S1206	Group IIIB	38.98	5.99	17.06	1.25	0.20	0.20	63.68

Federal Powderman (Responsible Person in Charge)
Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
Stake Hopper

Millwrights

						L&M		
A1251	Millwright (journeyman)	36.99	10.08	12.28	1.00	0.40	0.05	60.80

						L&M		
A1252	Millwright Welder	37.99	10.08	12.28	1.00	0.40	0.05	61.80

Painters, Region I (North of N63 latitude)

**See note on last page if remote site

						L&M		
N1301	Group I, including:	32.09	8.21	11.90	1.08	0.07		53.35

Brush
General Painter
Hand Taping
Hazardous Material Handler
Lead-Based Paint Abatement
Roll

						L&M		
N1302	Group II, including:	32.61	8.21	11.90	1.08	0.07		53.87

Bridge Painter

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Painters, Region I (North of N63 latitude)								
**See note on last page if remote site								
N1302	Group II, including:	32.61	8.21	11.90	1.08	L&M		53.87
	Epoxy Applicator							
	General Drywall Finisher							
	Hand/Spray Texturing							
	Industrial Coatings Specialist							
	Machine/Automatic Taping							
	Pot Tender							
	Sandblasting							
	Specialty Painter							
	Spray							
	Structural Steel Painter							
	Wallpaper/Vinyl Hanger							
N1304	Group IV, including:	39.28	8.21	14.23	1.05			62.82
	Glazier							
	Storefront/Automatic Door Mechanic							
N1305	Group V, including:	29.13	8.21	5.02	0.83			43.26
	Carpet Installer							
	Floor Coverer							
	Heat Weld/Cove Base							
	Linoleum/Soft Tile Installer							
Painters, Region II (South of N63 latitude)								
**See note on last page if remote site								
S1301	Group I, including :	30.13	8.21	11.85	1.08	L&M		51.34
	Brush							
	General Painter							
	Hand Taping							
	Hazardous Material Handler							
	Lead-Based Paint Abatement							
	Roll							
	Spray							
S1302	Group II, including :	31.38	8.21	11.85	1.08	L&M		52.59
	General Drywall Finisher							
	Hand/Spray Texturing							
	Machine/Automatic Taping							
	Wallpaper/Vinyl Hanger							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Painters, Region II (South of N63 latitude)								
**See note on last page if remote site								
S1303	Group III, including :	31.48	8.21	11.85	1.08	L&M		52.69
	Bridge Painter							
	Epoxy Applicator							
	Industrial Coatings Specialist							
	Pot Tender							
	Sandblasting							
	Specialty Painter							
	Structural Steel Painter							
S1304	Group IV, including:	39.53	8.21	13.23	1.08	L&M		62.12
	Glazier							
	Storefront/Automatic Door Mechanic							
S1305	Group V, including:	29.13	8.21	5.02	0.83	L&M		43.26
	Carpet Installer							
	Floor Coverer							
	Heat Weld/Cove Base							
	Linoleum/Soft Tile Installer							
Piledrivers								
**See note on last page if remote site								
A1401	Piledriver	38.34	10.08	14.63	0.95	L&M		64.20
	Assistant Dive Tender							
	Carpenter/Piledriver							
	Rigger							
	Sheet Stabber							
	Skiff Operator							
A1402	Piledriver-Welder/Toxic Worker	39.34	10.08	14.63	0.95	L&M		65.20
A1403	Remotely Operated Vehicle Pilot/Technician	42.65	10.08	14.63	0.95	L&M		68.51
	Single Atmosphere Suit, Bell or Submersible Pilot							
A1404	Diver (working) ***See note on last page	82.45	10.08	14.63	0.95	L&M		108.31
A1405	Diver (standby) ***See note on last page	42.65	10.08	14.63	0.95	L&M		68.51

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Piledrivers								
**See note on last page if remote site								
A1406	Dive Tender ***See note on last page	41.65	10.08	14.63	0.95	L&M	IAF	67.51
						0.10	0.10	
A1407	Welder (American Welding Society, Certified Welding Inspector)	43.90	10.08	14.63	0.95	L&M	IAF	69.76
						0.10	0.10	
Plumbers, Region I (North of N63 latitude)								
N1501	Journeyman Pipefitter	41.46	8.25	16.90	1.25	L&M	S&L	68.51
	Plumber							
	Welder							
Plumbers, Region II (South of N63 latitude)								
S1501	Journeyman Pipefitter	39.00	9.58	13.87	1.25	L&M		63.90
	Plumber					0.20		
	Welder							
Plumbers, Region IIA (1st Judicial District)								
X1501	Journeyman Pipefitter	38.02	13.37	11.25	2.50	L&M		65.38
	Plumber					0.24		
	Welder							
Power Equipment Operators								
**See note on last page if remote site								
A1601	Group I, including:	40.28	9.80	12.25	1.00	L&M		63.43
	Asphalt Roller: Breakdown, Intermediate, and Finish							
	Back Filler							
	Barrier Machine (Zipper)							
	Beltcrete with Power Pack & similar conveyors							
	Bending Machine							
	Boat Coxswain							
	Bulldozer							
	Cableways, Highlines & Cablecars							
	Cleaning Machine							
	Coating Machine							
Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation								

Power Equipment Operators

**See note on last page if remote site

							L&M	
A1601	Group I, including:	40.28	9.80	12.25	1.00	0.10		63.43

Concrete Hydro Blaster
 Cranes (45 tons & under or 150 feet of boom & under (including jib & attachments))
 (a) Hydralifts or Transporters, (all track or truck type)
 (b) Derricks
 (c) Overhead
 Crushers
 Deck Winches, Double Drum
 Ditching or Trenching Machine (16 inch or over)
 Drag Scraper, Yarder, and similar types
 Drilling Machines, Core, Cable, Rotary and Exploration
 Finishing Machine Operator, Concrete Paving, Laser Screed, Sidewalk, Curb & Gutter Machine
 Helicopters
 Hover Craft, Flex Craft, Loadmaster, Air Cushion, All-Terrain Vehicle, Rollagon, Bargecable, Nodwell, & Snow Cat
 Hydro Ax, Feller Buncher & similar
 Hydro Excavation (Vac-Truck and Similar)
 Licensed Line & Grade
 Loaders (2 1/2 yards through 5 yards, including all attachments):
 (a) Forklifts (with telescopic boom & swing attachment)
 (b) Front End & Overhead, (2-1/2 yards through 5 yards)
 (c) Loaders, (with forks or pipe clamp)
 (d) Loaders, (elevating belt type, Euclid & similar types)
 Material Transfer Vehicle (Elevating Grader, Pickup Machine, and similar types)
 Mechanic, Welder, Bodyman, Electrical, Camp & Maintenance Engineer
 Micro Tunneling Machine
 Mixers: Mobile type with hoist combination
 Motor Patrol Grader
 Mucking Machine: Mole, Tunnel Drill, Horizontal/Directional Drill Operator and/or Shield
 Off-Road Hauler (including Articulating and Haul Trucks)
 Operator on Dredges
 Piledriver Engineer, L.B. Foster, Puller or similar paving breaker
 Plant Operator (Asphalt & Concrete)
 Power Plant, Turbine Operator 200 k.w & over (power plants or combination of power units over 300 k.w.)
 Remote Controlled Equipment
 Scraper (through 40 yards)
 Service Oiler/Service Engineer
 Shot Blast Machine

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Power Equipment Operators

**See note on last page if remote site

A1601	Group I, including:	40.28	9.80	12.25	1.00	L&M	0.10	63.43
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Shovels, Backhoes, Excavators with all attachments, and Gradealls (3 yards & under)
Sideboom (under 45 tons)
Spreaders Topside (Asphalt Paver, Slurry machine, and similar types)
Sub Grader (Gurries, Reclaimer & similar types)
Tack Tractor
Truck Mounted Concrete Pump, Conveyor/Tele-belt, & Creter
Wate Kote Machine

A1602	Group IA, including:	42.04	9.80	12.25	1.00	L&M	0.10	65.19
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Camera/Tool/Video Operator (Slipline)
Certified Welder, Electrical Mechanic, Camp Maintenance Engineer, Mechanic (over 10,000 hours)
Cranes (over 45 tons or 150 feet including jib & attachments)
(a) Clamshells & Draglines (over 3 yards)
(b) Tower Cranes
Licensed Water/Waste Water Treatment Operator
Loaders (over 5 yards)
Motor Patrol Grader, Dozer, Grade Tractor, Roto-Mill/Profiler (finish: when finishing to final grade and/or to hubs, or for asphalt)
Power Plants (1000 k.w. & over)
Quad
Scrapers (over 40 yards)
Screed
Shovels, Backhoes, Excavators with all attachments (over 3 yards)
Sidebooms (over 45 tons)
Slip Form Paver, C.M.I. & similar types

A1603	Group II, including:	39.51	9.80	12.25	1.00	L&M	0.10	62.66
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Boiler - Fireman
Cement Hogs & Concrete Pump Operator
Conveyors (except those listed in Group I)
Grade Checker
Hoists on Steel Erection, Towermobiles & Air Tuggers
Horizontal/Directional Drill Locator
Licensed Grade Technician
Locomotives, Rod & Geared Engines
Mixers
Screening, Washing Plant
Sideboom (cradling rock drill, regardless of size)

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Power Equipment Operators								
**See note on last page if remote site								
A1603	Group II, including:	39.51	9.80	12.25	1.00	L&M	0.10	62.66
	Skidder							
	Trenching Machines (under 16 inches)							
	Water/Waste Water Treatment Operator							
A1604	Group III, including:	38.79	9.80	12.25	1.00	L&M	0.10	61.94
	"A" Frame Trucks, Deck Winches							
	Bombardier (tack or tow rig)							
	Boring Machine							
	Brooms, Power (sweeper, elevator, vacuum, or similar)							
	Bump Cutter							
	Compressor							
	Farm Tractor							
	Forklift, Industrial Type							
	Gin Truck or Winch Truck (with poles when used for hoisting)							
	Hoists, Air Tuggers, Elevators							
	Loaders:							
	(a) Elevating-Athey, Barber Greene & similar types							
	(b) Forklifts or Lumber Carrier (on construction job sites)							
	(c) Forklifts, (with tower)							
	(d) Overhead & Front End, (under 2-1/2 yards)							
	Locomotives: Dinkey (air, steam, gas & electric) Speeders							
	Mechanics, Light Duty							
	Oil, Blower Distribution							
	Posthole Digger, Mechanical							
	Pot Fireman (power agitated)							
	Power Plant, Turbine Operator, (under 200 k.w.)							
	Pumps, Water							
	Roller (other than Asphalt)							
	Saws, Concrete							
	Skid Hustler							
	Skid Steer (with all attachments)							
	Stake Hopper							
	Straightening Machine							
	Tow Tractor							
A1605	Group IV, including:	32.58	9.80	12.25	1.00	L&M	0.10	55.73
	Crane Assistant Engineer/Rig Oiler							
	Drill Helper							
	Parts & Equipment Coordinator							
	Spotter							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund;
PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate;
VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Power Equipment Operators

**See note on last page if remote site

A1605	Group IV, including:	32.58	9.80	12.25	1.00		L&M 0.10	55.73
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Steam Cleaner

Swamper (on trenching machines or shovel type equipment)

Roofers

**See note on last page if remote site

A1701	Roofer & Waterproofer	44.62	11.75	2.91	0.81		L&M 0.10 0.03	60.22
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A1702	Roofer Material Handler	31.23	11.75	2.91	0.81		L&M 0.10 0.03	46.83
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Sheet Metal Workers, Region I (North of N63 latitude)

N1801	Sheet Metal Journeyman	47.74	10.80	13.11	1.45		L&M 0.12	73.22
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Air Balancing and duct cleaning of HVAC systems

Brazing, soldering or welding of metals

Demolition of sheet metal HVAC systems

Fabrication and installation of exterior wall sheathing, siding, metal roofing, flashing, decking and architectural sheet metal work

Fabrication and installation of heating, ventilation and air conditioning ducts and equipment

Fabrication and installation of louvers and hoods

Fabrication and installation of sheet metal lagging

Fabrication and installation of stainless steel commercial or industrial food service equipment

Manufacture, fabrication assembly, installation and alteration of all ferrous and nonferrous metal work

Metal lavatory partitions

Preparation of drawings taken from architectural and engineering plans required for fabrication and erection of sheet metal work

Sheet Metal shelving

Sheet Metal venting, chimneys and breaching

Skylight installation

Sheet Metal Workers, Region II (South of N63 latitude)

S1801	Sheet Metal Journeyman	42.70	10.80	13.49	1.68		L&M 0.43	69.10
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Air Balancing and duct cleaning of HVAC systems

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Sheet Metal Workers, Region II (South of N63 latitude)								
							L&M	
S1801	Sheet Metal Journeyman	42.70	10.80	13.49	1.68	0.43		69.10
	Brazing, soldering or welding of metals							
	Demolition of sheet metal HVAC systems							
	Fabrication and installation of exterior wall sheathing, siding, metal roofing, flashing, decking and architectural sheet metal work							
	Fabrication and installation of heating, ventilation and air conditioning ducts and equipment							
	Fabrication and installation of louvers and hoods							
	Fabrication and installation of sheet metal lagging							
	Fabrication and installation of stainless steel commercial or industrial food service equipment							
	Manufacture, fabrication assembly, installation and alteration of all ferrous and nonferrous metal work							
	Metal lavatory partitions							
	Preparation of drawings taken from architectural and engineering plans required for fabrication and erection of sheet metal work							
	Sheet Metal shelving							
	Sheet Metal venting, chimneys and breaching							
	Skylight installation							
Sprinkler Fitters								
							L&M	
A1901	Sprinkler Fitter	47.25	9.67	14.10	0.52	0.25		71.79
Surveyors								
**See note on last page if remote site								
							L&M	
A2001	Chief of Parties	42.81	10.58	11.89	1.15	0.10		66.53
							L&M	
A2002	Party Chief	41.22	10.58	11.89	1.15	0.10		64.94
							L&M	
A2003	Line & Grade Technician/Office Technician/GPS, Drones	40.62	10.58	11.89	1.15	0.10		64.34
							L&M	
A2004	Associate Party Chief (including Instrument Person & Head Chain Person)/Stake Hop/Grademan	38.50	10.58	11.89	1.15	0.10		62.22
							L&M	
A2006	Chain Person (for crews with more than 2 people)	34.16	10.58	11.89	1.15	0.10		57.88

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Truck Drivers

**See note on last page if remote site

A2101	Group I, including:	39.59	10.58	11.89	1.15	L&M 0.10	63.31
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Air/Sea Traffic Controllers
Ambulance/Fire Truck Driver (EMT certified)
Boat Coxswain
Captains & Pilots (air & water)
Deltas, Commanders, Rollagons, & similar equipment (when pulling sleds, trailers or similar equipment)
Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 40 yards up to & including 60 yards
Helicopter Transporter
Liquid Vac Truck/Super Vac Truck
Lowboys (including attached trailers & jeeps up to & including 8 axles)
Material Coordinator or Purchasing Agent
Ready-mix (over 12 yards up to & including 15 yards) (over 15 yards to be negotiated)
Semi with Double Box Mixer
Tireman, Heavy Duty/Fueler
Water Wagon (250 Bbls and above)

A2102	Group 1A including:	40.86	10.58	11.89	1.15	L&M 0.10	64.58
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Dump Trucks (including rockbuggy, side dump, belly dump & trucks with pups) over 60 yards up to & including 100 yards (over 100 yards to be negotiated)
Jeeps (driver under load)
Lowboys, including tractor attached trailers & jeeps, 9 axles, up to & including 12 axles (over 12 axles or 150 tons to be negotiated)

A2103	Group II, including:	38.33	10.58	11.89	1.15	L&M 0.10	62.05
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All Deltas, Commanders, Rollagons, & similar equipment
Batch Trucks (8 yards & up)
Batch Trucks (up to & including 7 yards)
Boom Truck/Knuckle Truck (over 5 tons)
Cacasco Truck/Heat Stress Truck
Construction and Material Safety Technician
Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 20 yards up to & including 40 yards
Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating over 5 tons)
Mechanics
Oil Distributor Driver
Partsman
Ready-mix (up to & including 12 yards)

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
Truck Drivers								
**See note on last page if remote site								
A2103	Group II, including:	38.33	10.58	11.89	1.15		L&M 0.10	62.05
	Stringing Truck							
	Turn-O-Wagon or DW-10 (not self loading)							
A2104	Group III, including:	37.51	10.58	11.89	1.15		L&M 0.10	61.23
	Boom Truck/Knuckle Truck (up to & including 5 tons)							
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) over 10 yards up to & including 20 yards							
	Expeditor (electrical & pipefitting materials)							
	Gin Pole Truck, Winch Truck, Wrecker (truck mounted "A" frame manufactured rating 5 tons & under)							
	Greaser - Shop							
	Thermal Plastic Layout Technician							
	Traffic Control Technician							
	Trucks/Jeeps (push or pull)							
A2105	Group IV, including:	36.93	10.58	11.89	1.15		L&M 0.10	60.65
	Air Cushion or similar type vehicle							
	All Terrain Vehicle							
	Buggymobile							
	Bull Lift & Fork Lift, Fork Lift with Power Boom & Swing Attachment (over 5 tons)							
	Bus Operator (over 30 passengers)							
	Cement Spreader, Dry							
	Combination Truck-Fuel & Grease							
	Compactor (when pulled by rubber tired equipment)							
	Dump Trucks (including rockbuggy, side dump, belly dump, & trucks with pups) up to & including 10 yards							
	Dumpster							
	Expeditor (general)							
	Fire Truck/Ambulance Driver							
	Flat Beds, Dual Rear Axle							
	Foam Distributor Truck Dual Axle							
	Front End Loader with Fork							
	Grease Truck							
	Hydro Seeder, Dual Axle							
	Hyster Operators (handling bulk aggregate)							
	Loadmaster (air & water operations)							
	Lumber Carrier							
	Ready-mix, (up to & including 7 yards)							
	Rigger (air/water/oilfield)							
	Semi or Truck & Trailer							

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Truck Drivers

**See note on last page if remote site

A2105	Group IV, including:	36.93	10.58	11.89	1.15	L&M	0.10	60.65
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Tireman, Light Duty
Track Truck Equipment
Truck Vacuum Sweeper
Warehouseperson
Water Truck (Below 250 Bbls)
Water Truck (straight)
Water Wagon, Semi

A2106	Group V, including:	36.17	10.58	11.89	1.15	L&M	0.10	59.89
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Buffer Truck
Bull Lifts & Fork Lifts, Fork Lifts with Power Boom & Swing
Attachments (up to & including 5 tons)
Bus Operator (up to 30 passengers)
Farm Type Rubber Tired Tractor (when material handling or pulling
wagons on a construction project)
Flat Beds, Single Rear Axle
Foam Distributor Truck Single Axle
Fuel Handler (station/bulk attendant)
Gear/Supply Truck
Gravel Spreader Box Operator on Truck
Hydro Seeders, Single axle
Pickups (pilot cars & all light-duty vehicles)
Rigger/Swamper
Tack Truck
Team Drivers (horses, mules, & similar equipment)

Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

N2201	Group I, including:	33.29	8.70	17.06	1.25	L&M	0.20	LEG	0.20	60.70
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Brakeman
Mucker
Nipper
Storm Water Pollution Protection Plan Worker (SWPPP Worker -
erosion and sediment control Laborer)
Topman & Bull Gang
Tunnel Track Laborer

N2202	Group II, including:	34.39	8.70	17.06	1.25	L&M	0.20	LEG	0.20	61.80
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Burning & Cutting Torch

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund;
PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate;
VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Tunnel Workers, Laborers (The Alaska areas north of N63 latitude and east of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
N2202	Group II, including:	34.39	8.70	17.06	1.25	0.20	0.20	61.80

Certified Erosion Sediment Control Lead (CESCL Laborer)
Concrete Laborer
Floor Preparation, Core Drilling
Jackhammer/Chipping Gun or Pavement Breaker
Laser Instrument Operator
Nozzlemen, Pumpcrete or Shotcrete
Pipelayer Helper

						L&M	LEG	
N2203	Group III, including:	35.38	8.70	17.06	1.25	0.20	0.20	62.79

Miner
Retimberman

						L&M	LEG	
N2204	Group IIIA, including:	38.98	8.70	17.06	1.25	0.20	0.20	66.39

Asphalt Raker, Asphalt Belly Dump Lay Down
Drill Doctor (in the field)
Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)
Pioneer Drilling & Drilling Off Tugger (all type drills)
Pipelayer
Powderman (Employee Possessor)
Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)

						L&M	LEG	
N2206	Group IIIB, including:	42.88	5.99	17.06	1.25	0.20	0.20	67.58

Federal Powderman (Responsible Person in Charge)
Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
Stake Hopper

Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S2201	Group I, including:	33.29	8.70	17.06	1.25	0.20	0.20	60.70

Brakeman
Mucker
Nipper
Storm Water Pollution Protection Plan Worker (SWPPP Worker - erosion and sediment control Laborer)
Topman & Bull Gang
Tunnel Track Laborer

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other	Benefits	THR
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Tunnel Workers, Laborers (The area that is south of N63 latitude and west of W138 longitude)

**See note on last page if remote site

						L&M	LEG	
S2202	Group II, including:	34.39	8.70	17.06	1.25	0.20	0.20	61.80

Burning & Cutting Torch
Certified Erosion Sediment Control Lead (CESCL Laborer)
Concrete Laborer
Floor Preparation, Core Drilling
Jackhammer/Chipping Gun or Pavement Breaker
Laser Instrument Operator
Nozzlemen, Pumpcrete or Shotcrete
Pipelayer Helper

						L&M	LEG	
S2203	Group III, including:	35.38	8.70	17.06	1.25	0.20	0.20	62.79

Miner
Retimberman

						L&M	LEG	
S2204	Group IIIA, including:	38.98	8.70	17.06	1.25	0.20	0.20	66.39

Asphalt Raker, Asphalt Belly Dump Lay Down
Drill Doctor (in the field)
Driller (including, but not limited to wagon drills, air-track drills, hydraulic drills)
Pioneer Drilling & Drilling Off Tugger (all type drills)
Pipelayer
Powderman (Employee Possessor)
Storm Water Pollution Protection Plan Specialist (SWPPP Specialist)

						L&M	LEG	
S2206	Group IIIB, including:	42.88	5.99	17.06	1.25	0.20	0.20	67.58

Federal Powderman (Responsible Person in Charge)
Grade Checking (setting or transferring of grade marks, line and grade, GPS, drones)
Stake Hopper

Tunnel Workers, Power Equipment Operators

**See note on last page if remote site

						L&M	
A2207	Group I	44.31	9.80	12.25	1.00	0.10	67.46

						L&M	
A2208	Group IA	46.24	9.80	12.25	1.00	0.10	69.39

						L&M	
A2209	Group II	43.46	9.80	12.25	1.00	0.10	66.61

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation

Class Code	Classification of Laborers & Mechanics	BHR	H&W	PEN	TRN	Other Benefits	THR
Tunnel Workers, Power Equipment Operators							
**See note on last page if remote site							
A2210	Group III	42.67	9.80	12.25	1.00	L&M 0.10	65.82
A2211	Group IV	35.84	9.80	12.25	1.00	L&M 0.10	58.99

* A remote site is isolated and relatively distant from the amenities of civilization, and usually far from the employee's home. As a condition of employment, the workers must eat, sleep, and socialize at the worksite and remain there for extended periods.

** This classification must receive board and lodging under certain conditions. A per diem option of \$75 is an alternative to providing meals and lodging. See Page v for an explanation.

*** Work in combination of classifications: Employees working in any combination of classifications within the diving crew (working diver, standby diver, and tender) in a shift are paid in the classification with the highest rate for a minimum of 8 hours per shift.

Wage benefits key: BHR=basic hourly rate; H&W=health and welfare; IAF=industry advancement fund; LEG=legal fund; L&M=labor/management fund; PEN=pension fund; SAF=safety; SUI=supplemental unemployment insurance; S&L=SUI & LEG combined; TRN=training; THR=total hourly rate; VAC=vacation



State of Alaska
Department of Administration
Substitute Form W-9

Questions? Email DOA.DOF.Vendor.HelpDesk@alaska.gov

RETURN COMPLETED FORM TO:

Department of Administration
Division of Finance
P.O. Box 110204
Juneau, AK 99811-0204
Or FAX to: (907) 465-2169

DO NOT send to IRS

Taxpayer Identification Number (TIN) Verification

The Internal Revenue Service requires the State of Alaska to issue 1099 forms when payments to individuals, partnerships or limited liability companies for rents, services, prizes, and awards meet or exceed \$600.00 for the year. An IRS Form 1099 is not required when payments are specifically for merchandise or made to some types of corporations.

Print or Type

Please see attachment or reverse for complete instructions

Legal Name (as shown on your income tax return)	State of Alaska Vendor Number (if known)
Business Name , if different from above (use if doing business as (DBA) or enter business name of Sole Proprietorship)	Entity Designation (check only one type) <input type="radio"/> Individual / Sole Proprietor <input type="radio"/> Partnership <input type="radio"/> General Corporation <input type="radio"/> Medical Corporation <input type="radio"/> Legal Corporation <input type="radio"/> Limited Liability Company – Individual <input type="radio"/> Limited Liability Company – Partnership <input type="radio"/> Limited Liability Company – Corporation <input type="radio"/> Government Entity <input type="radio"/> Estate / Trust <input type="radio"/> Organization Exempt from Tax - Nonprofit (under Section 501 (a)(b)(c)(d))
Primary Address (for 1099 form) PO Box or Number and Street, City, State, Zip + 4	Exemption (See Instructions) <input type="text"/> Exempt payee code (if any) <input type="text"/> Exemption from FATCA Reporting Code (if any)
Remit Address (where payment should be mailed, if different from Primary Address) PO Box or Number and Street, City, State, Zip + 4	

Taxpayer Identification Number (TIN) Provide Only One (If sole proprietorship provide EIN, if applicable)

Social Security Number (SSN)	Employer Identification Number (EIN)
If Change of Ownership or Entity Designation	Date of Change:
Previous Owner / Business Name	Previous Taxpayer Identification Number (TIN)

Certification

The Internal Revenue Service does not require your consent to any provision of this document other than the certifications required to avoid backup withholding.

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number, **AND**
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, **AND**
3. I am a U.S. person (including a U.S. resident alien), **AND**
4. The FATCA code(s) entered on this form (if any) indicating I am exempt from FATCA reporting is correct.

Printed Name	Printed Title	Telephone Number
Signature	Date	Email Address

Instructions for Completing Taxpayer Identification Number (TIN) Verification (Substitute W-9) -- Page 1

Legal Name

As registered with the Internal Revenue Service (IRS)

- Individuals: Enter First Name MI Last Name
- Sole Proprietorships: Enter First Name MI Last Name
- LLC Single Owner: Enter owner's First Name MI Last Name
- All Others: Enter Legal Name of Business

Business Name

- Individuals: Leave blank
- Sole Proprietorships: Enter Business Name
- LLC Single Owner: Enter LLC Business Name
- All Others: Complete only if doing business as a DBA

Primary Address

Address where 1099 tax form should be mailed.

Remit Address

Address where payment should be mailed. Complete only if different from primary address.

State of Alaska Vendor Number

Your vendor number is an eight character alphanumeric code assigned to your company in the State of Alaska's accounting system. You may contact us at the email address listed on the form if you do not know your vendor number.

Entity Designation

Check *ONE* box which describes the type of business entity.

Taxpayer Identification Number

LIST ONLY ONE: Social Security Number OR Employer Identification Number. See *"What Name and Number to Give the Requester"* at right.

If you do not have a TIN, apply for one immediately. Individuals use federal form SS-05 which can be obtained from the Social Security Administration. Businesses and all other entities use federal form SS-04 which can be obtained from the Internal Revenue Service.

Change of Ownership or Entity Designation

This information is requested to allow taxable income to be reported correctly for both the new and old entities.

Certification

You must cross out item 2 if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to furnish your correct TIN to persons who must file information

returns with the IRS to report interest, dividends, and certain other income paid to you, mortgage interest you paid, the acquisition or abandonment of secured property, or contributions you made to an IRA. The IRS uses the numbers for identification purposes and to help verify the accuracy of your tax return. You must provide your TIN whether or not you are required to file a tax return. Payers must generally withhold 28% of taxable interest, dividend, and certain other payments to a payee who does not furnish a TIN to a payer. Certain penalties may also apply.

What Name and Number to Give the Requester

For this type of account:	Give name and SSN of:
Individual	The individual
Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account ¹
Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
Sole proprietorship or Single-Owner LLC	The owner ¹
For this type of account:	Give name and EIN of:
Sole Proprietorship or Single-Owner LLC	The owner ³
A valid trust, estate, or pension trust	Legal entity ⁴
Corporation or LLC electing corporate status on Form 8832	The corporation
Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
Partnership or multi-member LLC	The partnership
A broker or registered nominee	The broker or nominee
Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district or prison) that receives agricultural program payments	The public entity

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ **You must show your individual name**, but you may also enter your business or "DBA" name. You may use either your SSN or EIN (if you have one).

⁴ List first and circle the name of the legal trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) **Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Revised 09/29/2015

Instructions for Completing Taxpayer Identification Number (TIN) Verification (Substitute W-9) -- Page 2

Exemptions

If you are exempt from backup withholding and/or Foreign Account Tax Compliance Act (FATCA) reporting, enter in the Exemptions box any code(s) that may apply to you. See **Exempt payee code** and **Exemption from FATCA reporting code** below.

Exempt payee code

Generally, individuals (including sole proprietors) are not exempt from backup withholding. Corporations are exempt from backup withholding for certain payments, such as interest and dividends. Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.

Note. If you are exempt from backup withholding, you should still complete this form to avoid possible erroneous backup withholding.

The following codes identify payees that are exempt from backup withholding:

1. An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
2. The United States or any of its agencies or instrumentalities
3. A state, the District of Columbia, a possession of the United States, or any of their political subdivisions or instrumentalities
4. A foreign government or any of its political subdivisions, agencies, or instrumentalities
5. A corporation
6. A dealer in securities or commodities required to register in the United States, the District of Columbia, or a possession of the United States
7. A futures commission merchant registered with the Commodity Futures Trading Commission
8. A real estate investment trust
9. An entity registered at all times during the tax year under the Investment Company Act of 1940
10. A common trust fund operated by a bank under section 584(a)
11. A financial institution
12. A middleman known in the investment community as a nominee or custodian
13. A trust exempt from tax under section 664 or described in section 4947

Exemption from FATCA reporting code

The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements.

- A. An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)
- B. The United States or any of its agencies or instrumentalities
- C. A state, the District of Columbia, a possession of the United States, or any of their political subdivisions or instrumentalities
- D. A corporation the stock of which is regularly traded on one or more established securities markets, as described in Reg. section 1.1472-1(c)(1)(i)
- E. A corporation that is a member of the same expanded affiliated group as a corporation described in Reg. section 1.1472-1(c)(1)(i)
- F. A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state
- G. A real estate investment trust
- H. A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940
- I. A common trust fund as defined in section 584(a)
- J. A bank as defined in section 581
- K. A broker
- L. A trust exempt from tax under section 664 or described in section 4947(a)(1)
- M. A tax exempt trust under a section 403(b) plan or section 457(g) plan

Scope of Work
Fairbanks Pioneer Home
Hot Water Modifications
Project #AJF 19-19C

Project Description:

The project includes modifying the Domestic Hot Water in the Fairbanks Pioneers home as shown in the Fairbanks Pioneer Home Domestic Hot Water Modifications drawings dated March 12, 2013.

Scope:

Contractor is to provide all labor, supervision, permits and materials to modify the Domestic Hot Water in the Fairbanks Pioneers home by adding control valves to the storage tanks, modifying piping at the tempering valve, and installing a backup heat exchanger in strict accordance with the specifications as shown in the Fairbanks Pioneer Home Domestic Hot Water Modifications specifications and detailed drawings dated March 12, 2013.

- This facility is a 24 hour resident care facility; therefore the Using Agency will occupy premises during entire period of this project for the conduct of normal operations. Special care must be given due to the elderly population in residence. All work is to be coordinated through the Project Manager and onsite Maintenance Foreman.
- Verify existing conditions affecting Work including existing sizes and materials indicated prior to beginning Work or ordering materials that are affected by existing conditions. Notify Contracting Officer of conflicts.
- During construction contractor must maintain hot water availability throughout the facility unless otherwise indicated. If shutdown of hot water is required, coordinate shutdown period to occur during minimum usage period, during late evening or early morning, with Owner. Limit any one shutdown to a maximum 2 hour period.
- Contractor is to be made aware of and shall provide programming and coordinate control valves at storage tanks with actuators that can be operated by existing DDC Johnson Controller System.
- Initial Contractor Work Plan shall be submitted by the contractor after award of contract for review and approval. All photographs shall be taken at same location and of same components as submitted in pre-job report and contractor work plan.

Coordinate the work hours and type of work to be conducted with the onsite Maintenance General Foreman, Andrew Carie, whom is available at (907) 687-5433.

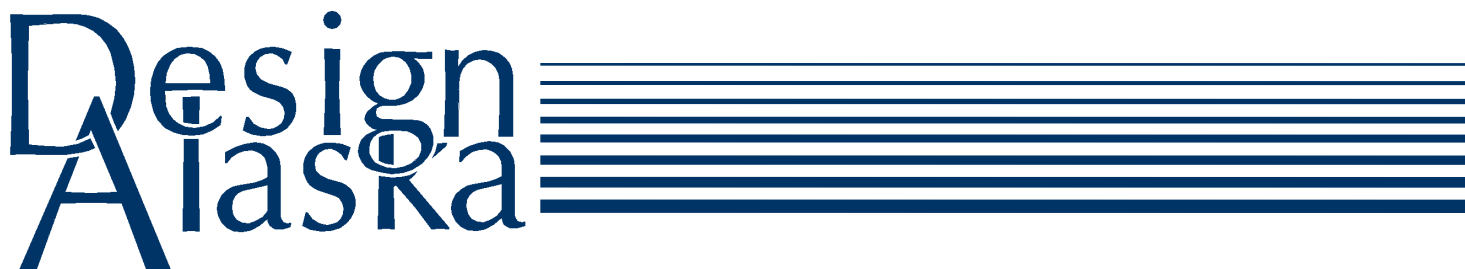
Location: 2221 Eagan Ave., Fairbanks, Alaska 99701-5709

**Fairbanks Pioneer Home
Domestic Hot Water Modifications
Project No.: AJF 19-19C**

Final

**For:
State of Alaska
DHSS/FMS Facilities
333 Willoughby Ave.
State Office Building - Suite 760
Juneau, AK 99801**

March 12, 2013



Fairbanks Pioneer Home Domestic Hot Water Modifications Project No.: AJF 19-19C

Final

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- **Specifications**
- **Catalog Cuts**
- **Drawings**

**By:
Design Alaska, Inc.
601 College Road
Fairbanks, Alaska 99701**

March 12, 20113

DIVISION 01	GENERAL REQUIREMENTS
01005	Administrative Provisions
01028	Change Order Procedures
	<i>Change Order to Construction Contract</i>
01045	Cutting and Patching
01073	Explanations: Drawings and Specifications
01120	Alteration Project Procedures
01300	Submittals
	<i>Item Data Sheet</i>
	<i>Submittal Register</i>
01400	Quality Control
01600	Material and Equipment
01700	Contract Closeout
DIVISION 15	MECHANICAL
15010	Common Work Results
15020	Common Submittal Requirements
15038	Operation and Maintenance
15047	Identification
15050	Common Work Results for Piping
15061	Steel Pipe and Fittings
15063	Copper Tube and Fittings
15094	Hangers and Supports
15100	General Duty Valves
15180	Insulation
15401	Domestic Water System
15702	Hydronic Heating System

PART 1 GENERAL

1.1 SCOPE: SECTION 01005 – ADMINISTRATIVE PROVISIONS

- A. Local Conditions.
- B. Permits, Fees, and Inspections.
- C. Work Covered by Contract Documents.
- D. Alternates.
- E. Work Sequence.
- F. Progress Meetings.
- G. Pre-Installation Conferences.
- H. Applications for Payment.
- I. Contractor Use of Premises.
- J. Owner Occupancy.
- K. Owner - Furnished Products.
- L. Coordination.
- M. Reference Standards.

1.2 LOCAL CONDITIONS

- A. Bidders shall familiarize themselves with the Contract Documents and existing conditions, which affect Work, required by the Contract Documents. It will be assumed that bidders have made a personal examination of the jobsite, existing conditions, and documents for prior construction projects associated with this facility made available by the Owner for review by Bidders during the bid period.
- B. During construction contractor must maintain hot water availability throughout the facility unless otherwise indicated. If shutdown of hot water is required, coordinate shutdown period to occur during minimum usage period, during late evening or early morning, with Owner. Limit any one shutdown to a maximum 2 hour period.
- C. Failure to visit the job-site, to review existing conditions, or to review documents for prior construction projects associated with this facility made available by the Owner for review by Bidders during the bid period will in no way relieve the successful Bidder from the necessity of furnishing any materials or performing any Work that may be required to complete the Work in accordance with the Contract Documents with no additional cost to the Owner.

- C. For building access and for access to the documents for prior construction projects associated with this facility contact:

Andrew Carie
Work (907) 458-2227
Cell (907) 687-5433 (best)
Maintenance Supervisor Fairbanks Pioneer Home
2221 Eagan Avenue Fairbanks, AK 99701

1.3 PERMITS, FEES, AND INSPECTIONS

- A. Obtain, pay for, and comply with the requirements of all permits, fees, and inspections required by public authorities.
- B. Transmit copies of permit applications, permits received, and public authority inspection reports to the Contracting Officer within three days of making permit application or receiving permits or reports.

1.4 PROGRESS MEETINGS

- A. Attend Contracting Officer scheduled and administered Project meetings throughout progress of Work at a maximum of one week intervals to discuss Work progress, status of submittals, pending changes and substitutions, and other items affecting progress and status of Work.
- B. Make physical arrangements for meetings. Employ job superintendent to attend meetings. Instruct subcontractor representatives to attend meetings as appropriate to discuss progress and status of Work.
- C. Notify Contracting Officer a minimum of 48 hours prior to meeting of any requested agenda items.

1.5 PRE-INSTALLATION CONFERENCES

- A. When required by individual specification section, convene pre-installation conference prior to commencing work of that section.
- B. Require attendance of entities directly affecting, or affected by, work of that section.
- C. At the meeting review conditions of installation, preparation and installation procedures, and coordination with related work.

1.6 APPLICATIONS FOR PAYMENT

- A. Submit three copies of each application under procedures of Section 01300.
- B. Content and Format: That specified for schedule of values in Section 01300.

1.7 CONTRACTOR USE OF PREMISES

- A. Limit use of premises for Work and for construction operations, to allow for Owner occupancy, Work of other Contractors, and public access.
- B. Limit areas of construction operations to those areas requiring renovation only.
- C. Limit on site storage of materials to areas under construction. Contractor is responsible for security of stored materials.
- D. Give written notice two weeks in advance of beginning of Work in any Work area.
- E. During construction maintain hot water availability throughout the facility unless otherwise indicated. If shutdown of hot water is required, coordinate shutdown period to occur during minimum usage period, during late evening or early morning, with Owner. Limit any one shutdown to a maximum 2 hour period.
- F. Do not smoke on premises.
- G. Take reasonable and adequate precautions to protect the Owner's property from damage during execution of Work. Restore any damage to Owner property resulting from execution of Work or replace in a manner satisfactory to the Contracting Officer.
- H. Do not begin demolition of existing Work or construction of new Work in any Work area until all required construction materials for that Work area are stored on site or at Contractor's place of business.
- I. Limit construction access to building to the location indicated. Keep construction access points locked at all times. Contractor will be provided with two sets of keys for construction access points.
- J. Move Owner tools, equipment, shelving, stored materials, etc. as required to accomplish Work. Return to original location as soon as possible.
- K. Protect Owner tools, equipment, shelving, stored materials, and equipment, etc. from Work.
- L. In Owner occupied areas:
 - 1. Cover and protect from dust and debris, at the start of each work day, electronic office equipment such as personal computers, computer terminals, facsimile machines, copiers, printers, postage meters, VCR, monitors, typewriters, etc. Remove protection at the end of each work day.
 - 2. Do not use furniture, such as counter-tops, desks, filing cabinets, book shelves, and tables as work surfaces or as steps to access Work.
 - 3. At the end of each workday, move back to original location equipment and furniture moved to accommodate Work. Do not move electronic equipment unless absolutely necessary to accomplish Work.
 - 4. At the end of each workday replace ceiling tiles removed to access Work.
 - 5. At the end of each work day, clean work areas, including floors with a vacuum, and remove tools, equipment, and construction material from work areas.
- M. Existing systems shall be fully operational for intended purpose at the beginning of each Owner workday.

1.8 OWNER OCCUPANCY

- A. The Owner will occupy premises during entire period of construction for the conduct of its normal operations.
- B. Maintain IBC complying access to and through corridors, stairways, and building exits at all times.
- C. Cooperate with Owner to minimize conflict and to facilitate its operations. In case of conflict accept Contracting Officer's direction as final and adjust use of premises accordingly.
- D. Coordinate Work in and use of premises with the Owner.

1.9 COORDINATION

- A. Coordinate Work of the various Sections of Specifications prior to ordering materials and fabrication to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later. Notify Contracting Officer of conflicts between elements prior to installation of any element.
- B. During construction maintain hot water availability throughout the facility unless otherwise indicated. If shutdown of hot water is required, coordinate shutdown period to occur during minimum usage period, during late evening or early morning, with Owner. Limit any one shutdown to a maximum 2 hour period.
- C. Verify characteristics of elements of interrelated operating equipment are compatible; coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements and installation of mechanical and electrical Work, which is indicated diagrammatically on Drawings. Follow routing shown for ducts and conduits as closely as practical. Make piping, duct, and conduit runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas, unless otherwise indicated, conceal pipes, ducts, and wiring in the construction. Coordinate locations of sprinkler heads, fixtures, and outlets with finish elements.
- F. After Owner acceptance of Work, coordinate access to site by various trades for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner activities.
- G. After Substantial Completion, the Owner will install equipment and furnishings. Cooperate with the Owner and provide access to the Owner for this Work.

1.10 REFERENCE STANDARDS

- A. For products or workmanship specified by association, trade, or regulatory agency standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Obtain a copy of standards referenced. Maintain a copy at the jobsite during execution of Work to which the standard applies.
- C. The date of the standard is that in effect as of the bid date except when a specific date is specified.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

- A. During construction contractor must maintain hot water availability throughout the facility unless otherwise indicated. If shutdown of hot water is required, coordinate shutdown period to occur during minimum usage period, during late evening or early morning, with Owner. Limit any one shutdown to a maximum 2 hour period.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 01028 – CHANGE ORDER PROCEDURES

- A. Procedures for processing Change Orders.

1.2 SUBMITTALS

- A. Submit name of the individual authorized to accept changes, and to be responsible for informing others in Contractor's employ of changes in the Work.
- B. Change Order Forms: Use copies of forms provided by the Contracting Officer. See sample Change Order form located at the end of this section.

1.3 DOCUMENTATION OF CHANGE IN CONTRACT PRICE AND CONTRACT TIME

- A. Maintain detailed records of Work done on a Cost of the Work plus a Fee basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
- B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- C. On request, provide additional data to support computations:
 - 1. Quantities of products, labor, and equipment.
 - 2. Taxes, insurance, and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.
- D. Support each claim for additional costs, and for Work done on a cost of the Work plus a Fee basis, with additional information:
 - 1. Origin and date of claim.
 - 2. Dates and times Work was performed, and by whom.
 - 3. Time records and wage rates paid.
 - 4. Invoices and receipts for products, equipment and subcontracts, similarly documented.

1.4 PRELIMINARY PROCEDURES

- A. Contracting Officer may submit a Proposal Request which includes: Detailed description of change with supplementary or revised Drawings and Specifications, the projected time for executing the change and the period of time during which the requested price will be considered valid.
- B. Contractor may initiate a change by submittal of a request to Contracting Officer describing the proposed change with a statement of the reason for the change, and the effect on Contract Price and Contract Time with full documentation.

1.5 LUMP SUM CHANGE ORDER

- A. Will be based on Proposal Request and Contractor's lump sum quotation or Contractor's request for Change Order as approved by the Contracting Officer.

1.6 UNIT PRICE CHANGE ORDER

- A. For pre-determined unit prices and quantities, Change Order will be executed on a lump sum basis.
- B. For unit costs or quantities of units of work which are not predetermined, execute Work under a Work Order. Changes in Contract Price or Contract Time will be computed as specified for Cost of the Work plus
- C. Fee via Change Order.

1.7 COST OF THE WORK CHANGE ORDER

- A. Submit itemized account and supporting data after completion of change, within time limits in Conditions of the Contract.
- B. Contracting Officer will determine the change allowable in Contract Price and Contract Time as provided in Conditions of the Contract.

1.8 EXECUTION OF CHANGE ORDERS

- A. Contracting Officer will issue Change Orders for signatures of parties as provided in Conditions of the Contract.

1.9 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Price as shown on Change Order.

- B. Promptly revise Progress Schedules to reflect any change in Contract Time and to adjust times for other items of Work affected by the change and resubmit.
- C. Promptly enter changes in Project Record Documents.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

ATTACHMENT: CHANGE ORDER TO CONSTRUCTION CONTRACT

CHANGE ORDER TO CONSTRUCTION CONTRACT

OWNER:	CONTRACT DATE:
CHANGE ORDER NO:	
PROJECT NAME:	
CONTRACTOR:	

DESCRIPTION OF CHANGES

•

\$

Total Amount of this Change Order: \$

SUBSTANTIAL COMPLETION

Original Date:	Prior to this Change Order:	Including this Change Order:
None		

THESE CHANGES RESULT IN THE FOLLOWING ADJUSTMENTS OF CONTRACT PRICE:

ORIGINAL CONTRACT AMOUNT	\$
TOTAL PRIOR CHANGE ORDER AMOUNT	\$
CONTRACT PRICE PRIOR TO THIS CHANGE ORDER (through CO#)	\$
NET THIS CHANGE ORDER.....	\$
CONTRACT AMOUNT INCLUDING THIS CHANGE ORDER	\$

ACCEPTED BY: _____ DATE: _____

APPROVED BY: _____ DATE: _____
Consultant

APPROVED BY: _____ DATE: _____
Owner

ATTACHMENTS:

PART 1 GENERAL

1.1 SCOPE: SECTION 01045 – CUTTING AND PATCHING

- A. Requirements and limitations for cutting and patching of Work.

1.2 SUBMITTALS

- A. Submit written request two weeks in advance of cutting or alteration which affects:

1. Structural integrity of any element of Project.
2. Integrity of weather-exposed or moisture-resistant element.
3. Efficiency, maintenance, or safety of any operational element.
4. Visual qualities of sight-exposed elements.
5. Work of Owner or separate Contractor.

- B. Include in request:

1. Identification of Project and Owner's Project number.
2. Location and description of affected Work.
3. Necessity for cutting or alteration.
4. Description of proposed Work and products to be used.
5. Alternatives to cutting and patching.
6. Effect on Work of Owner or separate Contractor.
7. Written permission of affected separate Contractor.
8. Date and time that Work will be executed.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Those required for original installation.
- B. For any change in materials, submit request for substitution under provisions of Section 01300 the General Requirements.

PART 3 EXECUTION

3.1 GENERAL

- A. Locate penetrations to avoid structural members.
- B. Execute cutting, fitting, and patching including excavation and fill to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install ill-timed Work.
 - 3. Remove and replace non-conforming and defective Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.

3.2 INSPECTION

- A. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- B. After uncovering, inspect conditions affecting performance of Work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.3 PREPARATION

- A. Provide supports to assure structural integrity of surroundings. Provide devices and employ methods as required to protect other portions of Project from damage.
- B. Provide protection from elements for areas that may be exposed by uncovering Work; maintain excavations free of water.
- C. Provide devices and employ methods as required to protect Contractor and Owner personnel from openings in walls, floors, and ceilings through which personnel may fall or through which objects may fall on to personnel below.

3.4 PERFORMANCE

- A. Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- B. For all new Work, employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.

- C. Cut rigid materials using masonry saw or core drill. Pneumatic tools and electric hammers are not permitted.
- D. Restore Work with new products in accordance with requirements of Contract Documents.
- E. Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- F. Seal pipe and conduit penetrations at rated floors and walls with firestopping installed in accordance with firestopping manufacturer's UL listed installation requirements for indicated rating.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 01073 – EXPLANATIONS: DRAWINGS AND SPECIFICATIONS

- A. Explanation of terminology used within the Drawings and Specifications.

1.2 SPECIFICATION FORMAT AND COMPOSITION

- A. Specifications are divided into Divisions and Sections for the convenience of writing and using. Titles are not intended to imply a particular meaning or to fully describe the Work of each Division or Section, and are not an integral part of the text that specifies the requirements. Contracting Officer is not bound to define the limits of any subcontract, and will not enter into disputes between the Contractor and his employees, including subcontractors.
- B. Pages are numbered independently for each Section. Section number is shown with the page number at the bottom of each page. "End of Section" is noted on the last page of each Section. It is Contractor's responsibility to verify that Contract Documents received for bidding and construction are complete in accordance with Table of Contents.
- C. These Specifications are of the abbreviated, or "streamlined" type, and include incomplete sentences.
- D. Omissions of words or phrases such as "the Contractor shall," "in conformity therewith," "shall be," "as noted on the Drawings," "according to the Drawings," "a," "an," "the" and "all" are intentional.
- E. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.

1.3 DRAWINGS: CONTENT EXPLANATION

- A. Where on any of the Drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other portions of the Work.
- B. Wherever a detail is referenced and developed for a specific condition, same or similar detail shall apply to identical or similar conditions elsewhere on Project even though not specifically referenced.
- C. Where the word "similar" occurs on the Drawings, it shall be interpreted in its general sense and not as meaning identical, all details shall be worked out in relation to their location and their connection with other parts of the Work.
- D. The figured dimensions on the Drawings or notes indicating dimensions shall be used instead of measurements of the Drawings by scale. No scale measurements shall be used as a dimension.
- E. Provide piping, ductwork, equipment, and accessories indicated on the Drawings unless it is specifically indicated that the piping, ductwork, equipment, or accessory is existing.

- F. Unless otherwise indicated, abbreviations and symbols used in the Drawings and Specifications are intended to have the meaning commonly accepted in the construction industry. Contact the Contracting Officer for definition if any question arises concerning them.
- G. Certain items used generally throughout the Specifications and Drawings are used as follows:
1. Indicated: The term "indicated" is a cross reference to details, notes, or schedules on the Drawings, other paragraphs, or schedules in the Specifications, and similar means of recording requirements in the Contract Documents. Where terms such as "shown", "noted", "schedules", and "specified" are used in lieu of "indicate", it is for the purpose of helping the reader accomplish the cross reference, and no limitation of location is intended except as specifically noted.
 2. Installer: The person or entity engaged by Contractor, his subcontractor or sub-subcontractor for the performance of a particular unit of work at the Project site, including installation, erection, application, and similar required operations. It is a general requirement that installers be recognized experts in the Work they are engaged to perform.
 3. Provide: Except to the extent further defined, the term "provide" means to supply and install, complete and ready for the intended use.
 4. Furnish: Except as otherwise defined in greater detail, the term "furnish" is used to mean the same as "provide".
 5. Guarantee and Warranty: "Warranty" is generally used in conjunction with products manufactured or fabricated away from the Project site, and "guarantee" is generally used in conjunction with units of work which require both products and substantial amounts of labor at the Project site. The resulting difference is that warranties are frequently issued by manufacturers, and guarantees are generally issued by Contractor and frequently supported (partially) by product warranties from manufacturers.
 6. Work: Work is the act of, and the result of, performing services, furnishing labor, furnishing and incorporating materials and equipment into the Project and performing other duties and obligations, all as required by the Contract Documents. Such Work, however incremental, shall culminate in the entire completed Project, or the various separately identifiable parts thereof.
 7. Contracting Officer: Contracting Officer means Contracting Officer or Contracting Officer's Representative.

1.4 CONFLICTS

- A. Report any conflicts to Contracting Officer for clarification.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 01120 – ALTERATION PROJECT PROCEDURES

- A. Demolition.
- B. Abatement of hazardous materials.
- C. Rehabilitation and renovation of existing spaces and materials.

1.2 SUBMITTALS

- A. Submit dump receipts, bills of lading, handling and tracking records, and other information demonstrating that all debris and abandoned items resulting from demolition operations have been legally and properly removed from the site.

PART 2 PRODUCTS

2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

- A. New Materials: As specified in individual Specification Sections.
- B. Match existing products and work for patching and extending Work.
- C. Determine type and quality of existing products by inspection and any necessary testing, and workmanship by use of existing as a standard. Presence of a product, finish, or type of Work, requires that patching, extending, or matching shall be performed as necessary to make Work complete and consistent with existing quality and Contract Documents.

PART 3 EXECUTION

3.1 GENERAL

- A. Remove existing work, materials and items as indicated on the Drawings, as required by job site conditions, as scheduled, and as specified herein, to accomplish new Work and alteration in the existing building.
- B. Remove work carefully and only to the extent required for the final Work. Minimize damage to adjacent materials.
- C. When portions of existing conditions are shown, it is not meant to indicate that all existing conditions are shown.

- D. Patch existing surfaces which are made defective in appearance or function by the execution of Work.
- E. Cut rigid materials using masonry saw or core drill. Pneumatic tools and electric hammers are not permitted.
- F. Conduct all operations with a minimum of noise.
- G. Take reasonable and adequate precautions to protect the Owner's property from damage during demolition Work, moving of debris, and damage by the elements. Restore any damage to Owner property due to the aforesaid work or replace in a manner satisfactory to the Contracting Officer.
- H. Provide and maintain suitable barricades, shelters, lights, and danger signals during the progress of the Work. Provide barricades meeting the requirements of the applicable building codes. Assume the responsibility of barriers to completion of Contract and remove at completion of Contract.
- I. During construction maintain hot water availability throughout the facility unless otherwise indicated. If shutdown of hot water is required, coordinate shutdown period to occur during minimum usage period, during late evening or early morning, with Owner. Limit any one shutdown to a maximum 2 hour period.
- J. Locate penetrations to avoid structural members.

3.2 PREPARATION

- A. Plan all work in advance, informing Contracting Officer of procedure and schedule.
- B. Verify existing conditions affecting Work including existing sizes and materials indicated prior to beginning Work or ordering materials that are affected by existing conditions. Notify Contracting Officer of conflicts in writing.
- C. Erect dust-proof partitions where demolition work is in progress and as directed. Such partitions shall remain in place until their removal is directed.
- D. Where openings are to be cut in existing structures, cut such openings with care. Where materials, equipment, frames, etc., are to be removed, remove such items with care to minimize damage to adjacent materials.
- E. Cut, move, or remove items as necessary for access to alterations and renovations Work; replace and restore at completion.
- F. Cut pockets, openings, chases, depressions, etc., to install or allow for installation of materials or equipment.
- G. Remove from site unsuitable material not marked for salvage, such as rotted wood, rusted metals, and deteriorated masonry and concrete; replace materials as specified for finished Work.
- H. Prepare surfaces and remove surface finishes to provide for proper installation of new Work and new finishes.
- I. Close openings in exterior surfaces to protect existing work and salvage items from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

3.3 DISPOSAL OF DEBRIS

- A. Promptly remove from the site, including concealed spaces, debris resulting from construction and demolition operations and abandoned items. No accumulation of debris will be permitted.
- B. Legally and safely dispose of debris resulting from construction and demolition operations at a landfill of the Contractor's choosing off site.
- C. Do not burn debris resulting from construction and demolition operations on site.

3.4 INSPECTION

- A. Verify that demolition is complete, and areas are ready for installation of new Work.
- B. Beginning of restoration Work means acceptance of existing conditions.

3.5 INSTALLATION

- A. Coordinate Work of alterations and renovations to expedite completion and to accommodate Owner occupancy.
- B. Remove, cut, and patch Work in a manner to minimize damage and to provide means of restoring products and finishes to original condition.
- C. Refinish visible existing surfaces to remain in renovated rooms and spaces with a neat transition to adjacent new finishes.
- D. In addition to specified replacement of equipment restore existing mechanical and electrical systems to full operational condition.
- E. Install products as specified in individual Specification Sections.

3.6 TRANSITIONS

- A. Where new Work abuts or aligns with existing, make a smooth and even transition. Patched Work shall match existing adjacent work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Contracting Officer.

3.7 ADJUSTMENTS

- A. Where removal of partitions results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads. Where a change of plane of 1/4 inch or more occurs, submit recommendation for providing a smooth transition for Contracting Officer review.

- B. Trim existing doors as necessary to clear new floor finishes; refinish trimmed areas.
- C. Fit Work at penetrations of surfaces as specified in Sections 01005 and 01045.

3.8 REPAIR OF DAMAGED SURFACES

- A. Patch or replace portions of existing surfaces which are disturbed, damaged, or otherwise made defective in appearance or function by the execution of Work under this Contract. Restore to original condition.
- B. Repair substrate prior to patching finish.

3.9 FINISHES

- A. Finish surfaces as specified in individual Sections.
- B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.10 CLEANING

- A. In addition to cleaning specified in Section 01500, clean Owner occupied areas of Work daily.
- B. After the demolition Work in any area is completed, clean the area before new construction is started.

3.11 HAZARDOUS MATERIALS

- A. There are no known hazardous materials present at the Project site. However, owing to the nature of the work, the presence of hazardous materials may not be discovered until the Contractor begins its work. The Contractor should be alert to the possible presence of hazardous materials when unfamiliar materials are encountered in any demolition, rehabilitation or maintenance on a Project.
- B. If a hazardous material is disturbed or the Contractor suspects it has encountered such material it shall immediately stop work in the area, order all persons out and notify the Contracting Officer of the hazardous or suspected hazardous materials.
- C. The Contracting Officer upon receipt of notification shall cause an investigation to be conducted and shall make such tests as are necessary to determine whether such material exists and if so whether the hazardous material poses a health hazard. The Contracting Officer may ask the Contractor to revise its schedule or issue a change modifying the work. An equitable adjustment in the contract shall be made for any additions or deletions to the work. However, the Contractor shall not be entitled to any costs in addition to the Contract from any delay or subsequent extension of time from any act, omission or work under this article.

- D. The Contractor shall provide the appropriate safeguards in order to avoid disturbing hazardous materials when warned and for the protection of its employees. The Contractor shall be liable for all costs resulting from its negligence in fulfilling its responsibilities under this Specification.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 01300 - SUBMITTALS

- A. Procedures.
- B. Submittal Register.
- C. Construction Progress Schedules.
- D. Schedule of Values.
- E. Shop Drawings, Product Data, and Samples.

1.2 PROCEDURES

- A. Deliver submittals to Contracting Officer as directed under Contracting Officer accepted form.
- B. Transmit submittals in accordance with approved Progress Schedule and in such sequence to avoid delay in the Work or Work of other Contracts.
- C. Review submittals prior to transmittal; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal with requirements of Contract Documents.
- D. Coordinate submittals with requirements of Work and of Contract Documents.
- E. After Contracting Officer review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
- F. Distribute copies of reviewed submittals to concerned persons including one set to field office. Instruct recipients to promptly report any inability to comply with provisions.
- G. Make resubmittals under procedures specified for initial submittals; identify changes made since previous submittal.
- H. Acceptance of schedules, Shop Drawings, Product Data, or samples by the Owner or his representative in no way relieves the Contractor of obligation to perform Work in accordance with requirements of the Contract Documents.

1.3 SUBMITTAL REGISTER

- A. Submit a register of submittals, on Owner accepted form.
- B. Include all required submittals listing applicable Specification paragraph number, type of submittal, description of material, action dates, status, and remarks.
- C. Other submittals will not be accepted for review until a submittal register acceptable to the Contracting Officer has been received by the Contracting Officer.

1.4 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit 3 copies of initial progress schedules not more than 21 days after Contract award.
- B. The progress schedule must be approved by the Contracting Officer before any Application for Payment will be processed by the Contracting Officer.
- C. Submit horizontal bar chart with separate bar for each major trade or operation, identifying first workday of each week.
- D. Submit three copies of updated progress schedules monthly with each Application for Payment.
 - 1. Reflect changes since previous submittal.
 - 2. Indicate progress of each activity to date of submission.
 - 3. Provide narrative identifying:
 - a. Problem areas, anticipated delays, and impact on schedule.
 - b. Corrective action recommended and its effect.

1.5 SCHEDULE OF VALUES

- A. Submit three copies of Schedule of Values a minimum of 21 days prior to submitting first application for payment. Use Owner accepted form.
- B. Provide with line item break down matching the line items on the Construction Progress Schedule.
- C. Prepare a schedule that provides a total sum of line item values equal to the total contract amount. Include in each line item a directly proportional amount of Contractor's overhead and profit.
- D. Provide substantiating information justifying information provided when requested.
- E. Do not revise value attributed to each category once the Contracting Officer accepts the Schedule of Values.
- F. Revise schedule to list change orders, for each application for payment.

1.6 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- A. General:
 - 1. Submit a minimum of four, plus the number required by the Contractor, identical copies of the review submittal or resubmittal for review and acceptance by the Contracting Officer. The Contracting Officer will retain four copies of each submittal or resubmittal.
 - 2. Submittals are required for all materials of construction and equipment specified and indicated on the Drawings.

3. Coordinate submittals into logical groupings to facilitate interrelation of the several items:
 - a. Interior finishes which involve Contracting Officer selection of colors, textures, or patterns. No selections will be made until all interior materials requiring color, texture, or pattern selection have been submitted.
 - b. Exterior finishes which involve Contracting Officer selection of colors, textures, or patterns. No selections will be made until all exterior materials requiring color, texture, or pattern selection have been submitted.
 - c. Associated items, which require correlation for efficient function or for installation.
 - d. Division 15: Submit all Division 15 items simultaneously unless otherwise permitted.
4. The Contracting Officer will consider expedited review of required submittals. Submit a list of items for which expedited reviews are requested at the preconstruction conference. Substantiate each request by reference to the Project schedule. The Contracting Officer will be the sole judge as to whether or not expedited reviews are warranted.
5. Apply Contractor's stamp, signed or initialed, certifying to review, verification of products, field dimensions and field construction criteria, and coordination of information with requirements of Work and Contract Documents. Notify Contracting Officer in writing at time of submittal of any deviations from requirements of Contract Documents. Note deviation on Item Data Sheet.
6. Precede each item with a completed Item Data Sheet. See required format attached to the end of this Specification Section.
7. Identify each item with an item number matching the item number for that item listed in the Submittal Schedule and Shop Drawing Record. Separate each item by divider sheets with plastic index tabs between each item. Type item numbers on both sides of paper inserts.
8. Each submittal or resubmittal shall be complete and shall contain all previously submitted material except that being replaced by new or revised material, which shall be removed. Partial or improperly indexed or tabbed submittals or resubmittals shall be rejected without review or comment.
9. With each resubmittal include a complete summary of all changes and additions made to the equipment review submittal since the previous submittal. Only those items included in the summary will be reviewed with the resubmitted package.
10. Do not submit "updates" for previous submittal packages with resubmittals. Previous submittals will not be updated.
11. A list of minimum submittals required is provided in each Section. These lists are not necessarily complete or all-inclusive and the Contractor is responsible for complete submittal.
12. See Divisions 15 for additional submittal requirements, which affect those Divisions.

B. Shop Drawings:

1. Present in a clear and thorough manner. Label each Drawing with Owner Project name and Project number. Identify each element of Drawings by reference to sheet number and detail, schedule, or room number of Contract Documents.
2. Identify field dimensions; show relation to adjacent or critical features or Work or products.
3. Minimum Sheet Size: 11 inches by 17 inches.

C. Product Data:

1. Submit only pages that are pertinent; mark each copy of standard printed data to identify pertinent products, referenced to Specification Section and Article number. Show reference standards, performance characteristics, and capacities; wiring and piping diagrams and controls; component parts; finishes; dimensions; and required clearances.
2. Modify manufacturer's standard schematic Drawings and diagrams to supplement standard information and to provide information specifically applicable to the Work. Delete information not applicable.

D. Samples:

1. Submit full range of manufacturers' standard colors, textures, and patterns except when more restrictive requirements are specified.
2. Submit samples to illustrate functional characteristics of the product, with integral parts and attachment devices.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

ATTACHMENT: ITEM DATA SHEET
SUBMITTAL REGISTER

ITEM DATA SHEET

1. Item number:
2. Item name/Drawing equipment number:
3. Specification section/Drawing number:
4. Manufacturer/model number:
5. Use and location: (1)
6. Spare parts source:
7. Providers of warranty service:
8. Proposed deviations from the Contract Documents: (2)
9. Other Contractor comments:
10. Contractor Certification: (3)
The undersigned Contractor Representative certifies that he has reviewed the attached information and has determined that the proposed material complies with the requirements of the Contract Documents; he has coordinated installation of the material with the work of other trades and existing conditions; he has determined and verified field measurements, field construction criteria, manufacturer's installation requirements affecting the proposed material; and has notified the Contracting Officer of conflicts.

Contractor Representative's Signature

- (1) Unless otherwise indicated, provide this information only when the product's use and location is not obvious.
- (2) If this section is left blank it will be assumed that proposed equipment is exactly as specified and indicated on the Drawings.
- (3) The Contractor referenced here is the General Contractor for the project. The signature of a subcontractor representative is not acceptable.

Printed on: 3/15/2013						Project: Fairbanks Pioneer Home Domestic Hot Water Modifications		Owner: DHSS		
						Project No: AJF 19-19C		Contractor:		
								Consultant: Design Alaska, Inc.		
SD-01 Preconstruction; SD-02 Shop Drawings; SD-03 Product Data; SD-04 Samples; SD-05 Design Data; SD-06 Test Report; SD-07 Certificates; SD-08 Manufacturer's Instructions; SD-09 Manufacturer's Report; SD-10 O&M Data; SD-11 Closeout; SD-12 LEED										
1=No Exception Taken; 2 = Accepted as Noted; 3 = Revise & Resubmit; 4 = Submit Specified Item; 5 = Rejected										
Item No.	Transmittal No.	Spec. Section or Drawing No.	Submittal Description	Spec. Paragraph or Drawing Detail No.	Item Description	Contractor's Scheduled Submittal Date	Actual Submittal Date Return Date		Status	<div> <p>Corrections or comments do not relieve Contractor from compliance with Contract Documents. Submittals are reviewed only for general conformance with the design concept of the project and general compliance with the Contract Documents. The Contractor is responsible for confirming compliance with the Contract Documents, confirming & correlating all quantities & dimensions, selecting fabrication processes, techniques of construction, coordinating his work with that of other trades, and existing conditions; and performing his work in a safe and satisfactory manner.</p> </div>
Review Comments										
01028					Change Order Procedures					
1		1.2.A	SD-01		Name of Authorized Individual					
01045					Cutting and Patching					
1		1.2.A	SD-01		Written Request - Cutting or Alteration					
01120					Alteration Project Procedures					
1		1.2.A	SD-11		Dump Receipts, Bills of Lading, Handling and Tracking Records					
01300					Submittals					
1		1.3	SD-01		Submittal Register					
2		1.4	SD-01		Construction Progress Schedules					
3		1.5	SD-01		Schedule of Values					
01400					Quality Control					
1		1.2.A,B,C	SD-01		Testing Laboratory Information					
01700					Contract Closeout					
1		1.5.A.1	SD-10		Mechanical Equipment O&M					
15047					Identification					
1		1.2.A	SD-03	2.1	Pipe Markers - Pressure Sensitive					
2		1.2.A	SD-03	2.2	Pipe Markers - Removable					
3		1.2.A	SD-03	2.3	Valve Tags					
4		1.2.A	SD-03	2.4	Equipment Labels					
5		1.2.B	SD-01		Valve Tag Schedule					
15050					Common Work Results for Piping					
1		1.2.A	SD-03	2.2	Thermometers					
2		1.2.A	SD-03	2.3	Pressure Test Ports					
3		1.2.A	SD-03	2.4	Drain Valves					
4		1.2.A	SD-03	2.5	Air Vents					
5		1.2.A	SD-03	2.6	Strainers					
6		1.2.A	SD-03	2.7	Dielectric Pipe Protection					
7		1.2.B	SD-02		Substantial Deviations					

Reviewed By _____

Date _____

Printed on: 3/15/2013					Project: Fairbanks Pioneer Home Domestic Hot Water Modifications Project No: AJF 19-19C					Owner: DHSS Contractor: Consultant: Design Alaska, Inc.	
SD-01 Preconstruction; SD-02 Shop Drawings; SD-03 Product Data; SD-04 Samples; SD-05 Design Data; SD-06 Test Report; SD-07 Certificates; SD-08 Manufacturer's Instructions; SD-09 Manufacturer's Report; SD-10 O&M Data; SD-11 Closeout; SD-12 LEED											
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Item No.	Transmittal No.	Spec. Section or Drawing No.	Submittal Description	Spec. Paragraph or Drawing Detail No.	Item Description	Contractor's Scheduled Submittal Date	Actual		Status	Review Comments	
							Submittal Date	Return Date			
15094					Hangers and Supports						
1		1.2.A	SD-03	2.2	Non Insulated Pipe Hangers						
2		1.2.A	SD-03	2.3	Riser Clamps						
3		1.2.A	SD-03	2.4	Hanger Rods						
4		1.2.A	SD-03	2.5	Channel Struts						
5		1.2.A	SD-03	2.6	Concrete Anchor Bolts						
6		1.2.B	SD-01		Proposed Application for Each Style of Hanger or Support						
7		1.2.C	SD-02		Shop Drawings - Fabricated Items						
15100					General Duty Valves						
1		1.2.A	SD-03	2.2.A.1	Valves 3 Inches and Smaller: Isolation Ball Valves						
2		1.2.B	SD-01		Proposed Service and Sizes for Each Valve						
15180					Insulation						
1		1.2.A	SD-01		Insulation Application and Thickness						
2		1.2.B	SD-03	2.1.C	Lagging Fabric						
3		1.2.B	SD-03	2.1.D	Thermal Insulation Coatings						
4		1.2.B	SD-03	2.2.A	Interior, Above Grade, Piping System Insulation						
5		1.2.B	SD-03	2.2.E	Insulating Cements						
6		1.2.B	SD-03	2.2.G	Plastic Insulation Covers						
7		1.2.C	SD-08		Manufacturer's Installation Instructions						
15401					Domestic Water System						
1		1.2.A	SD-01		Pipe and Fittings Material Schedule						
2		1.2.B	SD-03	2.2	Dielectric Nipples						
15702					Hydronic Heating System						
1		1.2.A	SD-01		Pipe and Fittings Material Schedule						
2		1.2.B	SD-03	2.2	Heating System Fluid						
3		1.2.B	SD-03	2.3	Heating System Chemical Cleaning Compound						
					Drawings						
1		M2.1	SD-03		1-1/2" Control Valves						
2		M2.1	SD-03		Pressure Relief Valve						

Corrections or comments do not relieve Contractor from compliance with Contract Documents. Submittals are reviewed only for general conformance with the design concept of the project and general compliance with the Contract Documents. The Contractor is responsible for confirming compliance with the Contract Documents, confirming & correlating all quantities & dimensions, selecting fabrication processes, techniques of construction, coordinating his work with that of other trades, and existing conditions; and performing his work in a safe and satisfactory manner.

PART 1 GENERAL

1.1 SCOPE: SECTION 01400 – QUALITY CONTROL

- A. General Quality Control.
- B. Codes, Ordinances, and Standards.
- C. Workmanship.
- D. Mockups.
- E. Manufacturer's Instructions.
- F. Construction Photographs.
- G. Testing Laboratory Services.
- H. Owner Inspection Services.

1.2 SUBMITTALS

- A. Testing laboratory name, address, and telephone number.
- B. Evidence of testing laboratory's authorization to operate in the State of Alaska.
- C. Name, registration, address, and telephone number of registered engineer employed by testing agency to review services provided by testing agency.

1.3 QUALITY CONTROL, GENERAL

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce Work of specified quality.

1.4 CODES, ORDINANCES, AND STANDARDS

- A. Federal, State and Local Codes and Ordinances take precedence over these Specifications and Drawings where conflicts occur unless the Drawings or Specifications call for more stringent requirements. Notify the Contracting Officer in writing of conflicts.
- B. Follow latest adopted editions of Code of Federal Regulations, Alaska Administrative Code, International Building Code, International Mechanical Code, Uniform Plumbing Code, International Fire Code, National Electrical Code, ADA Accessibility Guidelines, NFPA, ASME, NEMA, ASHRAE, SMACNA, etc. as applicable.

- C. Comply with all applicable laws, building and construction codes, OSHA Safety and Health Regulations and applicable requirements of any governmental agency under whose jurisdiction this Work is being performed.

1.5 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform Work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking and to minimize the transfer of sound and vibration.
- D. Provide finishes to match approved samples.

1.6 MANUFACTURERS' INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Provide accessories recommended by manufacturer for service intended and accessories indicated. Should instructions conflict with Contract Documents, request clarification from Contracting Officer before proceeding.

1.7 TESTING LABORATORY SERVICES

- A. Employ and pay for services of an Independent Testing Laboratory, authorized to operate in the State of Alaska, to perform inspections, tests, and other services required by individual Specification Sections.
- B. Testing Laboratory Responsibilities:
 - 1. Employ registered engineer to review services.
 - 2. Perform services in accordance with requirements of governing authorities and with specified standards.
 - 3. Cooperate with the Contracting Officer in performing services.
 - 4. Utilize testing equipment calibrated within a period of six months, or as otherwise recommended by the equipment manufacturer, and checked for accuracy prior to use.
 - 5. Promptly submit inspection and test reports to Contracting Officer in duplicate list the following applicable information:
 - a. Project title, number, and location.
 - b. Testing laboratory name, address, and telephone number.
 - c. Name of inspector.

- d. Date of inspection or test.
 - e. Date of report.
 - f. Work and location of Work tested or inspected.
 - g. Applicable Specification Section.
 - h. Type of test performed, results of test, interpretation of test results, and indication of compliance or non-compliance with specified standards and with Contract Documents.
6. Leave copies of inspection and test reports for the following items with the Contractor on site before leaving the site:
- a. Compaction tests.
 - b. Concrete slump and air entrainment tests.
 - c. Visual weld inspections.
 - d. Bolted connection inspections.

1.8 OWNER INSPECTION SERVICES

- A. The Owner will periodically inspect the Work. Provide assistance to inspection personnel required for complete and thorough inspections.
- B. Submit written requests for inspections and testing by the Owner at the following stages of construction and at stages specified elsewhere:
 - 1. At completion of demolition Work.
 - 2. At completion of buried Work, while Work is under test and before backfill.
 - 3. At completion of structural framing and before framing is concealed.
 - 4. At completion of mechanical and electrical rough-in installations and before rough-ins are concealed.
 - 5. At completion of exterior thermal insulation installation before vapor retarder has been installed.
 - 6. After installation of vapor retarder and before gypsum board is installed.
 - 7. Substantial completion inspection.
 - 8. Final inspection.
- C. Inspection of Work or the witnessing of testing of Work by the Owner or his representative in no way relieves the Contractor of obligation to perform Work in accordance with requirements of the Contract Documents.

- D. Request shall identify the Project, Project No., its location, the Contractor, and a contact person and describe the nature of the desired test or inspection.
- E. If the request is for testing or inspection of Work previously tested or inspected, include the Owner's prior listing of deficiencies accompanied by the remedies provided since the prior test or inspection.
- F. Provide a minimum of three (3) working days notice to Contracting Officer and public authorities prior to performing testing of Work. The Contracting Officer or his representative will not necessarily witness testing.
 - 1. Record the performance of tests.
 - 2. Include date, time and time interval, test results, brief description of method of tests, and witnesses.
 - 3. Submit this record to the Contracting Officer prior to scheduling substantial completion and final inspections.
- G. Provide minimum of 14-calendar days written notice to Contracting Officer and public authorities of intent to have Work ready for inspection. Confirm that Work will be ready for inspection a minimum of three (3) working days notice prior to date of inspection.
- H. Substantial Completion and Final Inspections:
 - 1. Prior to inspection:
 - a. Deliver to the Contracting Officer required equipment, Drawings, and records.
 - b. Clean fixtures and equipment. Remove manufacturer's stickers and leave free of dust and dirt.
 - c. Remove boxes, scrap, and other debris.
 - d. Touch up holidays or damaged painted surfaces.
 - e. Contractor's Superintendent shall review Work for conformance with Contract Documents and develop a list of items not conforming to the Contract Documents. Correct Work identified as not conforming to the Contract Documents. With request for inspection, Contractor's Superintendent shall verify in writing that this review has been performed, that the Work conforms with the Contract Documents, and submit his original list of items not conforming to the Contract Documents, annotated with corrective action taken to resolve each deficiency noted.
 - f. Deliver to Owner personnel all special tools and devices furnished by the manufacturer with items, specialties or equipment to allow installation, disassembly, adjustment, repair, or maintenance. Identify special tools or devices as to item to which it is applicable.
 - g. Deliver to the Contracting Officer a Certificate of Instruction signed by all Owner personnel receiving instruction, all Contractor personnel providing instruction, and indicating dates of instruction.

2. During inspection:
 - a. Provide complete and operating systems suitable for the season.
 - b. Demonstrate that mechanical and electrical systems perform in accordance with the Contract Documents. Provide material and personnel required to perform the demonstration.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 01600 – MATERIAL AND EQUIPMENT

- A. Products.
- B. Transportation and Handling.
- C. Storage and Protection.
- D. Product Options.
- E. Substitutions.

1.2 PRODUCTS

- A. Products include material, equipment, and systems.
- B. Comply with Specifications and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a Specification Section shall be the same, and shall be interchangeable.
- D. Do not use materials and equipment removed from existing structure, except as specifically required, or allowed, by Contract Documents.
- E. Provide products and systems that do not contain asbestos or asbestos-containing materials.

1.3 TRANSPORTATION AND HANDLING

- A. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.
- B. Provide equipment and personnel to handle products by methods to prevent soiling or damage.
- C. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.

1.4 STORAGE AND PROTECTION

- A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.

- B. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- C. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.

1.5 PRODUCT OPTIONS

- A. Products specified by reference standards or by description only: Use any product meeting those standards.
- B. Products specified by naming one or more manufacturers followed by the term "No Substitutions": Use only specified manufacturers, no substitutions allowed.
- C. Products specified by naming one or more manufacturers followed by the term "or equal": Submit a request for substitution for any manufacturer not specifically named.
- D. When only one product manufacturer is specified, it is intended only to establish the level of quality against which the proposed substitutions shall be judged, and shall not be construed as attempting to limit competition.

1.6 SUBSTITUTIONS

- A. Whenever a material, article or piece of equipment is identified in the Contract Documents by reference to manufacturer's or vendor's names, trade names, catalog numbers, etc., it is intended to establish a minimum standard. Unless otherwise noted any material, article or equipment of other manufacturers or vendors which will perform adequately the duties imposed by the general design of the Project will be considered equally acceptable; provided, the material, article or equipment so proposed is, in the opinion of the Contracting Officer, of equal substance, function, dimension, appearance and quality.
- B. Prior to the bid opening, the Bidder shall make his own determination in selecting which specified or substitute equipment to base his proposal upon. Substituted items shall be equal to or better than that specified or indicated in regards to quality, workmanship, finish, space requirements, electrical requirements, performance, or warranties.
- C. After the bid opening, the Contractor shall submit sufficient data in accordance with this Section to establish equality. The Contracting Officer shall be the sole judge of equality and acceptability.
- D. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Submit three copies of request for substitution on form provided by Contracting Officer.
- E. Request for substitution constitutes a representation that the Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.

2. Will provide the same warranty for the substitution as for the specified product.
 3. Will coordinate installation and make other changes that may be required for Work to be complete in all respects.
 4. Waives claim for additional costs that may subsequently become apparent.
- F. Acceptance of substitute materials will not relieve the Contractor of the responsibility for any changes in his own work or in the work of other crafts caused by the substitution. Any additional costs resulting from substitutions are the responsibility of the Contractor.
- G. Any proposed substitution whose characteristics differ from the specified item to such an extent as to necessitate changes in the mechanical, electrical or other basic design of the Project, shall include the cost of any such changes, the design and the cost of design, which costs shall be borne by the Contractor. Determination of a substitution request will be based on the Contracting Officer's comparisons as to quality, adaptability, aesthetics, Contract amount change, if applicable, etc., between the proposed substitution and specified item.
- H. Substitutions will not be considered when they are indicated or implied on Shop Drawings or Product Data submittals without separate written request, or when acceptance will require substantial revision of Contract Documents.
- I. Only one request for substitution will be considered for each product. When substitution is not accepted, provide specified product.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 01700 – CONTRACT CLOSEOUT

- A. Closeout Procedures.
- B. Final Cleaning.
- C. Project Record Documents.
- D. Operation and Maintenance Data.
- E. Warranties and Bonds.
- F. Spare Parts and Maintenance Materials.
- G. System Demonstrations and Instructions to Owner.

1.2 CLOSEOUT PROCEDURES

- A. Comply with procedures stated in General Conditions of the Contract for issuance of Certificate of Substantial Completion.
- B. Owner will occupy Project for the purpose of conducting business under provision stated in Certificate of Substantial Completion.
- C. When Contractor considers Work to be substantially complete, submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Owner inspection.
- D. Substantial Completion is obtained when the Work has progressed to the point where, in the opinion of the Owner, the Work is sufficiently complete in accordance with the Contract Documents so that the Work can be utilized for the purposes for which it was intended. Irrespective of other Work, Substantial Completion cannot be obtained until electrical, detection, mechanical, and life-safety systems are in place, balanced, and tested for proper operation. When the Contractor, by written notice to the Owner, certifies that the Work is substantially complete, the Owner and its representatives, within a reasonable time, will conduct an inspection to determine the actual status of completion. When the Owner, on basis of said inspection, determines that the Work is substantially complete, the Contractor will be so notified and a list of deficiencies, to be corrected or completed by the Contractor, will be attached to said notice. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.
- E. In addition to submittals required by the conditions of the Contract, provide submittals required by governing authorities, and submit a final statement of accounting giving total adjusted Contract Price, previous payments, and sum remaining due.
- F. Owner will issue a final Change Order reflecting approved adjustments to Contract Price not previously made by Change Order.

1.3 FINAL CLEANING

- A. Execute prior to substantial completion.
- B. Clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces. Clean equipment and fixtures to a sanitary condition.
- C. Clean site; sweep paved areas, rake clean other surfaces.

1.4 PROJECT RECORD DOCUMENTS

- A. Maintain one record copy of:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Design Clarifications (DCVRs).
 - 5. Change Orders and other modifications to the Contract.
 - 6. Reviewed Shop Drawings, Product Data, and Samples.
 - 7. Survey and field records.
 - 8. Field test records.
 - 9. Inspection certificates.
 - 10. Manufacturer's certificates.
 - 11. Construction photographs.
- B. Store Record Documents and samples in clean, dry, and legible condition in Field Office apart from documents used for construction.
- C. Keep Record Documents and samples available for inspection by Contracting Officer.
- D. Record actual construction information on a set of blue line opaque Construction Document Drawings.
- E. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.

- F. Legibly mark Contract Drawings and Shop Drawings to record actual construction, including:
 - 1. Measured depths of elements of foundation in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by Addenda.
 - 6. Changes made by Modifications.
 - 7. Details not on original Contract Drawings.
 - 8. References to related shop drawings and Modifications.
- G. Legibly mark Contract Specifications to record actual construction, including:
 - 1. Manufacturer, trade name, and catalog number of each product actually installed, particularly optional items and substitute items.
 - 2. Changes made by Addenda and Modifications.
- H. Upon request by the Contracting Officer submit complete collection of Record Documents to the Contracting Officer for review and duplication as desired.
- I. Prior to request for final inspection, submit record documents to the Contracting Officer for review. Documents shall bear a statement signed by a legal representative of the Contractor indicating that the Record Documents reflect "as-built" conditions. Correct and resubmit to Contracting Officer until Contracting Officer accepts the Record Documents as complete.
- J. At Contract closeout, transfer Project Record Drawing information to a set of Mylar reproducible Drawings and deliver corrected Record Documents and samples to the Contracting Officer. Documents shall bear a statement signed by a legal representative of the Contractor indicating that the Record Documents reflect "as-built" conditions.

1.5 OPERATION AND MAINTENANCE DATA

- A. Provide data in separate volumes for:
 - 1. Mechanical equipment:
 - a. See Division 15.
 - 2. Place copies of warranties in the Operation and Maintenance Manuals combined with the rest of the data provided for the equipment warrantied.

B. Form:

1. Organize by specification section. Separate each section by a heavy stock divider sheet with plastic index tab. Type Specification section numbers on both sides of paper inserts.
2. Identify each item of the O&M Manual with an item number. Number the first item within a Specification section "#1", the second item within a Specification section "#2", and so forth. Restart numbering sequence with each Specification section. Further separate sections by divider sheets with plastic index tabs between each item. Type item numbers on both sides of paper inserts.
3. Include equipment indicated on the Drawings, but not covered by a Specification section, with the appropriate volume under a tab marked "Drawings". Rules for item numbering and item data sheets apply.
4. Provide copies of warranties combined with the rest of the data provided for the equipment warrantied.
5. Provide an alphabetical index at the front of the binder that locates individual items by tab number.
6. Separate each item with consecutively numbered heavy stock divider sheets with plastic index tab. Type item number on both sides of paper inserts.
7. Precede each item by a copy of the item data sheet attached at the end of specification section 01300.
8. Material included shall indicate the specific item(s) utilized for this project. Delete or cross out all other items.
9. All material must be clearly readable. "Faxed" then photocopied information is not acceptable.
10. Provide complete operation and maintenance manual submittals. Partial or incomplete submittals required under this section will be returned without review.

C. Binding:

1. Bind the Operation and Maintenance Manuals in three ring, D-ring style binders with page lifters and vinyl covers. Expandable catalog type two-hole binders with soft board covers and metal prong fasteners will not be accepted.
2. Provide multiple binders as required to limit single binder thickness to three inches. Divide binders at logical points. Do not overfill binders.
3. Label the front cover and end panel. Label to include Project title, Project number, date, and facility name.

D. Required Copies and Timing:

1. Review submittals:

- a. Submit for review two copies plus the number required by the Contractor. The Contracting Officer will retain one copy for his reference and the additional reviewed copy will be returned to the Contractor.
- b. Submit for review not less than thirty days prior to substantial completion inspection.

2. Final Operation and Maintenance Manuals:

- a. Provide four (two binders & two in digital form) complete, reviewed, corrected and accepted Operation and Maintenance Manuals to the Contracting Officer a minimum of five working days prior to Project Substantial Completion Inspection.

1.6 WARRANTIES AND BONDS

- A. All manufacturer and supplier standard equipment, item or accessory warranties covered under this Division shall be the Contractor's responsibility under Project warranty period.
- B. Equipment, item, or accessory warranties shall commence upon the date of Final Acceptance by the Owner.
- C. Transfer all manufacturer and supplier standard equipment, item or accessory warranties to the Owner upon expiration of project warranty period.
- D. Any warranties, more stringent than manufacturer's standard, specified or indicated under this Division remain the responsibility of the Contractor before and after expiration of Project warranty period.
- E. Minimum manufacturer or supplier warranty is that of the manufacturer or supplier used as the basis of design.
- F. Provide duplicate, notarized copies. Execute Contractor's submittals and assemble documents executed by subcontractors and suppliers. Provide Table of Contents and assemble one set in a binder with durable plastic cover. Place the second set in the Operation and Maintenance Manuals combined with the rest of the data provided for the equipment warranted.
- G. Submit material prior to final Application for Payment. For equipment put into use with Owner permission during construction, submit within 10 days after first operation. For items of Work delayed materially beyond Date of Substantial Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

1.7 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, and maintenance materials in quantities specified in each Section, in addition to that used for construction of Work. Coordinate with Owner, deliver to Project site, and obtain receipt prior to final payment.
- B. Provide a table listing extra stock materials required by the various specification sections. At a minimum include specification section number, section name, paragraph, material, date received, received by, and placed stored.

1.8 SYSTEMS DEMONSTRATION AND INSTRUCTIONS TO OWNER

- A. Prior to substantial completion, demonstrate operation of each system to Contracting Officer.
- B. Prepare a comprehensive training schedule and submit to the Contracting Officer for review and approval a minimum of 14 days prior to planned date of first training session.
- C. Prior to substantial completion instruct designated Owner personnel in proper operation, adjustment, and maintenance of equipment and systems, utilizing an accepted Operations and Maintenance Manual.
- D. Instruct only those Owner personnel specifically designated by the Contracting Officer. Instruction of other Owner personnel will not meet the requirements of this section.
- E. Reference individual Specification Sections for additional Owner instruction requirements.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15010 – COMMON WORK RESULTS

- A. This Section covers general mechanical requirements for Work covered under this Division.
- B. All Work and services specifically covered under this Division is supplementary to that covered under other Divisions of these Contract Documents. The requirements of this Division which are more stringent than that covered under other parts of these Contract Documents apply to Work covered under this Division.
- C. All incidental Work required but not specified under this Division shall comply with the Division in which it is specified.
- D. Review the Drawings and Specifications of all other Divisions for additional Work under Division 15.

1.2 GENERAL REQUIREMENTS

- A. Provide the Owner with complete, coordinated, operating, tested, and adjusted mechanical systems.
- B. Place all equipment in operation and instruct the Owner's maintenance personnel as to the proper operation, periodic maintenance, and lubrication of new mechanical equipment and systems.
- C. The Drawings are somewhat diagrammatic and do not attempt to show all offsets or fittings required for installation of the mechanical system. Furnish and install pipes with fittings required for complete and proper installation of mechanical systems specified or required under this Division.
- D. Provide piping, equipment, and accessories indicated on the Drawings unless it is specifically indicated that the piping, equipment, or accessory is existing.
- E. Install piping, and equipment in accordance with manufacturer's recommendations, with accessories recommended by the manufacturer for service intended, and with accessories indicated. Should recommendations conflict with Contract Documents, contact Contracting Officer for clarification before proceeding.
- F. Coordinate the installation of the mechanical systems with existing conditions. Route mechanical systems as required to avoid interference with existing conditions.
- G. Provide access to concealed piping accessories and equipment requiring access for periodic maintenance, inspection, replacement, or adjustment.
- H. Do not scale the Mechanical Drawings. Verify dimensions as construction progresses.
- I. Report any errors, discrepancies, or ambiguities to the Contracting Officer who will answer all questions and interpret intended meaning of these Contract Documents. Accept Contracting Officer's interpretation as final.

- J. Perform Work in a neat and workmanlike manner with skilled craftsmen specializing in said Work.
- K. Provide new equipment and materials direct from the manufacturer unless specifically indicated otherwise. Remanufactured equipment and materials are specifically not acceptable.
- L. Provide the product of only one manufacturer for each item or type of item provided in quantity.
- M. Where the selection of materials or methods is left to the discretion of the Contractor, faithfully pursue the use of the best available materials or methods suitable for the purpose intended.
- N. Install Owner furnished fixtures, appliances, and equipment indicated to be Contractor installed, and furnish and install all piping required to connect Owner furnished fixtures, appliances, and equipment to the Mechanical systems, in accordance with the fixture, appliance, or equipment manufacturer's recommendations and as indicated.

1.3 LOCAL CONDITIONS

- A. Bidders shall familiarize themselves with the Contract Documents and existing conditions which affect Work required by the Contract Documents. It will be assumed that bidders have made a personal examination of the jobsite and existing conditions.
- B. Failure to visit the jobsite will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any Work that may be required to complete the Work in accordance with the Contract Documents with no additional cost to the Owner.

1.4 PERMITS, TESTING AND INSPECTIONS

- A. Obtain, pay for, and comply with the requirements of all permits, fees and inspections by public authorities required for the Work covered under this Division of the Specifications.
- B. Transmit copies of permit applications, permits received, and public authority inspection reports to the Contracting Officer.
- C. Test mechanical systems in accordance with the most restrictive procedures as defined under applicable codes or as specified elsewhere under this Division.
 - 1. Provide a minimum of 3 working days' notice to Contracting Officer and public authorities prior to performance of test.
 - 2. If less than required notice is given, the Contracting Officer may require the Contractor to repeat the test at no additional cost to the Owner.
 - 3. Test Work prior to insulating or concealing. If less than required notice is given prior to insulating or concealing, the Contracting Officer may require the Contractor to uncover such Work for inspection and recover same at no additional cost to the Owner.

4. Submit certificate of compliance for all tests indicating system tested, results of tests, witnesses and dates prior to calling for Substantial Completion and final inspections.
5. During testing, isolate piping system equipment and accessories that are not rated to withstand test pressures or perform test prior to connection of such equipment and accessories to the piping system.

D. Substantial Completion and Final Inspections:

1. Provide minimum of 14 calendar days' notice to Contracting Officer and public authorities of intent to have Work ready for inspection. Confirm that Work will be ready for inspection a minimum of 3 working days' notice prior to requested inspection.
2. Prior to inspection:
 - a. Deliver to the Contracting Officer required equipment, Drawings, and records.
 - b. Clean fixtures and equipment. Remove manufacturer's stickers and leave free of dust and dirt.
 - c. Remove boxes, scrap, and other debris.
 - d. Touch up holidays or damaged painted surfaces.
 - e. Contractor's Mechanical Administrator, licensed by the State of Alaska, shall review mechanical systems installation for conformance with Contract Documents. With request for inspection, Contractor's Mechanical Administrator shall verify in writing that this review has been performed and note anything not conforming to Contract Documents.
 - f. With request for reinspection of Work previously inspected, provide the Owner's previous inspection's deficiency list accompanied by an item by item statement of measures taken to correct the previously listed deficiencies.
 - g. Deliver to Owner personnel all special tools and devices furnished by the manufacturer with items, specialties or equipment to allow installation, disassembly, adjustment, repair or maintenance. Identify special tools or devices as to item to which it is applicable.
 - h. Provide mechanical receivables that the Owner is to receive upon completion of the Project. Turn over an inventory list of materials provided for the Owner's use to the Contracting Officer prior to scheduling substantial completion and final inspections.
 - i. Deliver to the Contracting Officer a Certificate of Instruction signed by all Owner personnel receiving instruction, all Contractor personnel providing instruction, and indicating dates of instruction.

3. During inspection:
 - a. Provide complete and operating systems suitable for the season.
 - b. Demonstrate that the mechanical system performs in accordance with the Contract Documents. Provide material and personnel required to perform the demonstration.
 - c. Provide assistance to inspection personnel required for a complete and thorough inspection.

1.5 CODES, ORDINANCES, AND STANDARDS

- A. Federal, State and local Codes and Ordinances take precedence over these Specifications and Drawings where conflicts occur unless the Drawings or Specifications call for more stringent requirements. Notify the Contracting Officer in writing of conflicts.
- B. Follow latest adopted editions of Code of Federal Regulations, Alaska Administrative Code, International Building Code, International Mechanical Code, International Fuel Gas Code, Uniform Plumbing Code, International Fire Code, National Electrical Code, ADA Accessibility Guidelines, NFPA, ASME, NEMA, ASHRAE, SMACNA, etc. as applicable.
- C. Comply with all applicable laws, building and construction codes, OSHA Safety and Health Regulations and applicable requirements of any governmental agency under whose jurisdiction this Work is being performed.

1.6 MECHANICAL ABBREVIATIONS

- A. Any or all of the following may appear in the Mechanical Drawings and Specifications and shall be applied per the following explanations. Other abbreviations and initials which may appear in the Mechanical Drawings and Specifications are intended to have the meanings commonly accepted in the mechanical construction industry. Contact the Contracting Officer for definition if any question arises concerning other abbreviations and initials.

ENGLISH UNITS

#	POUNDS
BHP	BRAKE HORSE POWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CFM	CUBIC FEET PER MINUTE
F	DEGREES FAHRENHEIT
FPM	FEET PER MINUTE
FT	FEET
FT WG	FEET OF WATER GAUGE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
IN	INCH
IN WG	INCHES OF WATER GAUGE
KW	KILOWATT

LB	POUNDS
LF	LINEAL FOOT
MBH	ONE THOUSAND BTU PER HOUR
PSI	POUNDS PER SQUARE INCH
WG	WATER GAUGE

ABBREVIATIONS

&	AND
@	AT
#	NUMBER
A	AIR
AFF	ABOVE FINISHED FLOOR
AGT	AVERAGE GLYCOL TEMPERATURE
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
APPR	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
ASSOC	ASSOCIATED
AUTO	AUTOMATIC
AV	ACID VENT
AW	ACID WASTE
BAL	BALANCING
BFW	BOILER FEED WATER
C	COMMON
CAPAC	CAPACITY
CI	CAST IRON
CHWS(R)	CHILLED WATER SUPPLY AND RETURN
CLG	CEILING
CLG	COOLING
CO	CLEAN OUT
CR	CONDENSATE RETURN
C _v	VALVE COEFFICIENT
CW	COLD WATER
CWS(R)	CONDENSER WATER SUPPLY (RETURN)
DB	DECIBEL
DB	DRYBULB
DI	DUCTILE IRON
DIA	DIAMETER
DN	DOWN
DWDI	DOUBLE WIDTH DOUBLE INLET
EA	EACH
EA(D)	EXHAUST AIR (DAMPER)
EAT	ENTERING AIR TEMP
EF	EXHAUST FAN
EGT	ENTERING GLYCOL TEMP
ELEC	ELECTRICAL

ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
EXIST	EXISTING
FC	FORWARD CURVED
FD	FLOOR DRAIN
FIN	FINISH
FLA	FULL LOAD AMPERAGE
FLEX	FLEXIBLE
GA	GAUGE
GALV	GALVANIZED
GCHWS(R)	GLYCOL CHILLED WATER SUPPLY (RETURN)
GCS(R)	GLYCOL CONDENSER WATER SUPPLY (RETURN)
GFCI	GOVERNMENT FURNISHED CONTRACTOR INSTALLED
GHRS(R)	GLYCOL HEAT RECOVERY SUPPLY (RETURN)
GHS(R)	GLYCOL HEATING SUPPLY (RETURN)
GI	GALVANIZED IRON
H ₂ O	WATER
HB	HOSE BIBB
HPS	HIGH PRESSURE STEAM
HR	HOUR
HTG	HEATING
HW	HOT WATER
HWS(R)	HEATING WATER SUPPLY (RETURN)
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INSUL	INSULATION
IPS	IRON PIPE SIZE
LAT	LEAVING AIR TEMPERATURE
LGT	LEAVING GLYCOL TEMPERATURE
LPS	LOW PRESSURE STEAM
M	MINUTES
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MTR	MOTOR
NC	NORMALLY CLOSED OR NOISE CRITERIA
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET PUMP SUCTION HEAD
NTS	NOT TO SCALE
OBVD	OPPOSED BLADE VOLUME DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER

OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAIN LEADER
OSA(D)	OUTSIDE AIR (DAMPER)
OSAT	OUTSIDE AIR TEMPERATURE
P&TRV	PRESSURE AND TEMPERATURE RELIEF VALVE
PD	PRESSURE DROP
PH	PHASE
PRDV	PRESSURE REDUCING VALVE
PRV	PRESSURE RELIEF VALVE
RA(D)	RETURN AIR (DAMPER)
RD	ROOF DRAIN
RHW	RECIRCULATED HOT WATER
RL	RAIN LEADER
RP	RADIANT PANEL
RPM	REVOLUTIONS PER MINUTE
S	SECONDS
SH	SHOWER
SIM	SIMILAR
S/M	SHEET METAL
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SS	STAINLESS STEEL
S/S	START/STOP
ST	STEAM
SWSI	SINGLE WIDTH SINGLE INLET
TDH	TOTAL DYNAMIC HEAD
THW	TEMPERED HOT WATER
TP	TRAP PRIMER
TYP	TYPICAL
V	VOLTS OR VENT
VAV	VARIABLE AIR VOLUME
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VTR	VENT THROUGH ROOF
W	WASTE
W/	WITH
W/O	WITHOUT
WB	WET BULB
WCO	WALL CLEAN OUT
WHA	WATER HAMMER ARRESTOR

1.7 MECHANICAL COMPLIANCE RECORD

- A. Record the performance of all tests, sterilization, cleaning, flushing and refilling of mechanical systems required under this Division.
- B. Include date, time and time interval, test results, brief description of method of tests, and witnesses.
- C. Submit this record to the Contracting Officer prior to scheduling Substantial Completion and final inspections.

1.8 RECORD DOCUMENTS

- A. When submitting record documents required by Division 1 - General Requirements also submit reproducible As-built Drawings of Contractor designed systems such as control systems.
- B. Add the following to the list of items required by Division 1 that be legibly marked on Contract Drawings:
 - 1. Changes made to equipment identification assignments, replacing Contract Document assigned equipment designations, at each location that designation occurs.
 - 2. Valve numbering for each valve assigned a number at each location shown on the Drawings.

1.9 WARRANTY

- A. All manufacturer and supplier standard equipment, item or accessory warranties covered under this Division shall be the Contractor's responsibility under Project warranty period.
- B. Equipment, item, or accessory warranties shall commence upon the date of Final Acceptance by the Owner.
- C. Transfer all manufacturer and supplier standard equipment, item or accessory warranties to the Owner upon expiration of Project warranty period.
- D. Any warranties, more stringent than manufacturer's standard, specified or indicated under this Division remain the responsibility of the Contractor before and after expiration of Project warranty period.
- E. Minimum manufacturer or supplier warranty is that of the manufacturer or supplier used as the basis of design.

1.10 MECHANICAL WORK IN EXISTING FACILITIES

- A. Carefully lay out Work in advance.
- B. Verify existing conditions affecting Work, including existing sizes and materials indicated, prior to beginning Work or ordering materials that are affected by existing conditions. Beginning of Work means acceptance of existing conditions. Match existing products and Work unless otherwise noted. Notify Contracting Officer of conflicts in writing.

- C. Verify locations and elevations of utilities that are crossed or connected to prior to installation of new Work.
- D. When portions of existing mechanical, electrical, structural, etc. conditions are shown, it is not meant to indicate that all of such systems are shown.
- E. Where cutting, channeling, chasing, or drilling of floors, walls, partitions, ceilings or other surfaces is necessary for the proper installation, support or anchorage of the mechanical equipment or piping, carefully perform this Work and patch to match existing conditions.
- F. Repair any damage to building, piping, or equipment with skilled mechanics of the appropriate trade.
- G. Coordinate connection of new services to existing building systems, including required systems shut downs, with the Contracting Officer. Limit required shut down periods to a minimum. Isolate, drain, and refill existing systems as required to accommodate Work. Restore existing systems to full operational condition.
- H. Cut, move, or remove existing items as necessary for installation of new Work and restore and replace at completion.
- I. Remove from site removed materials unless otherwise indicated that the material is to be salvaged for the Owner.
- J. Remove, cut, and patch in a manner to minimize damage and to provide means of restoring items to original conditions.
- K. Replace existing mechanical insulation that is removed to accomplish Work with new insulation matching existing.
- L. Remove piping connected to or serving fixtures or equipment being removed and other piping and ductwork being removed, back to its main or connection to a still active branch and cap. Remove associated hangers and supports. Patch, to match existing, pipe or ductwork insulation on mains at removed branch lines. Patch, to match existing, openings in walls, ceilings, or floors left or created as a result of piping or removal.

1.11 ASBESTOS FREE MECHANICAL SYSTEMS

- A. Provide mechanical systems that do not contain asbestos or asbestos-containing materials.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15020 – COMMON SUBMITTAL REQUIREMENTS

- A. This Section covers required mechanical equipment review submittals of material, equipment, items and accessories covered under this Division for review by the Contracting Officer to determine conformance with the Project design concepts and Contract documents prior to commencement of Work under this Division.

PART 2 PRODUCTS

2.1 FORM

- A. Each equipment review submittal or resubmittal shall be indexed, tabbed, and bound copies of data, Drawings, and materials lists. Alphabetize the index by item name and list the Specification Section and item number under which each item is submitted.
- B. Submittal information is required for all material and equipment specified or indicated on the Drawings.
- C. Organize submittals by Specification Section. Separate each Section by a heavy stock divider sheet with plastic index tab. Type Specification Section numbers on both sides of paper inserts.
- D. Identify each item of the submittal with an item number. Number the first item within a Specification Section "#1", the second item within a Specification Section "#2", and so forth. Restart numbering sequence with each Specification Section. Type item numbers on both sides of paper inserts.
- E. Include equipment indicated on the Drawings, but not covered by a Specification Section, with the appropriate volume under a tab marked "Drawings". Rules for item numbering and item data sheets apply.
- F. Precede each item with a completed Item Data Sheet. See required format attached to the end of Specification Section 01300.
- G. Material submitted shall indicate the specific item(s) proposed for this Project. Delete or cross out all other items.
- H. Submit all mechanical equipment for review in a single volume. Division of the submittal into separate volumes is not permitted.
- I. Long lead mechanical equipment may be submitted for review in a separate volume. Include all long lead items in a single volume that is indexed, tabbed and bound as required for regular mechanical equipment review submittals. Maintain the long lead item submittal as a separate volume throughout the submittal review process; do not incorporate into the regular mechanical equipment review volumes.

- J. Each submittal or resubmittal of each volume shall be complete and shall contain all previously submitted material except that being replaced by new or revised material which shall be removed. Partial or improperly indexed or tabbed submittals or resubmittals shall be rejected without review or comment.
- K. With each resubmittal include a complete summary of all changes and additions made to the equipment review submittal since the previous submittal. Only those items included in the summary will be reviewed with the resubmitted package.
- L. Do not submit "updates" for previous submittal packages with resubmittals. Previous submittals will not be updated.

2.2 DATA

- A. Include the following data for each item as applicable:
 - 1. Manufacturer and model number.
 - 2. Drawing equipment number.
 - 3. Catalog literature.
 - 4. Operating characteristics including capacity data, performance curves, flow rates, pressure drops, etc.
 - 5. Electrical characteristics and wiring diagrams.
 - 6. Dimensions and connection sizes.
 - 7. Installation and adjustment instructions, requirements and recommendations.
 - 8. Color samples.
 - 9. Warranty data.
- B. A list of minimum submittals required is provided in each Section. These lists are not necessarily complete or all inclusive and the Contractor is responsible for complete submittal.

2.3 BINDING

- A. Bind the mechanical equipment review submittals in three (3) ring, D-ring style binders with page lifters and vinyl covers. Expandable catalog type two (2) hole binders with soft board covers and metal prong fasteners will not be accepted.
- B. Provide multiple binders as required to limit single binder thickness to three inches. Divide binders at logical points.
- C. Label the front cover and end panel. Label to include Project title, Project number, date, and facility name.

PART 3 EXECUTION

3.1 REQUIRED COPIES AND TIMING

- A. Submit a minimum of four, plus the number required by the Contractor, identical copies of the mechanical equipment review submittal or resubmittal for review and acceptance by the Contracting Officer. Three copies of each submittal or resubmittal will be retained by the Contracting Officer.
- B. Materials submitted shall be reviewed and accepted by the Contracting Officer before Contractor releases material for fabrication or shipment.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15038 – OPERATION AND MAINTENANCE

- A. This Section covers form, content, and submittal of mechanical system Operation and Maintenance Manuals.

PART 2 PRODUCTS

2.1 FORM

- A. Arrange operation and maintenance data sequentially by Specification Section.
- B. Provide 2 indexes at the front of the binder that locates individual items by tab number. The first by Specification Section. The second, an alphabetical index of all items without regard to Specification Section.
- C. Separate each item with consecutively numbered heavy stock divider sheets with plastic index tab. Type item number on both sides of paper inserts.
- D. Precede each item with a completed Item Data Sheet. See required format attached to the end of Specification Section 01300.
- E. Material included shall indicate the specific item(s) utilized for this Project. Delete or cross out all other items.
- F. Provide complete operation and maintenance manual submittals. Partial or incomplete submittals required under this Section will be returned without review.

2.2 DATA

- A. Provide data for all items, equipment, and equipment components specified or indicated under this Division, so that the Owner's maintenance personnel will have complete service and replacement information required for routine maintenance and repair and to provide maximum usable life. Include data not only for maintainable and repairable items, but also for replaceable but not repairable items. Typical items for which information is required include:
 - 1. Equipment including all components and accessories such as motors, pulleys, belts, couplings, switches, etc.
 - 2. Valves, thermometers, pressure gauges, strainers, filters, and other piping accessories.
 - 3. Control components and a complete set of As-built point-to-point Control Drawings. Provide a copy of the Sequence of Operations with Control Drawings.

- B. Include the following data for each item as applicable. Some of this data can be extracted from equipment review submittals and included with the O&M Manuals.
 - 1. Manufacturer's catalog literature and illustrations.
 - 2. Operating characteristics including capacity data, performance curves, flow rates, pressure drops, etc.
 - 3. Electrical characteristics and wiring diagrams.
 - 4. Dimensions and connection sizes.
 - 5. Installation and adjustment instructions, requirements, and recommendations.
 - 6. Parts lists and assembly Drawings.
 - 7. Maintenance, operational, and troubleshooting instructions.
 - 8. Warranty data.
- C. Data shall be as provided by the equipment manufacturer or supplier.
- D. Data is required for all component items of equipment whether or not the components are products of the equipment manufacturer.
- E. All material must be clearly readable. "Faxed" then photocopied information is not acceptable.
- F. Include a chart, neatly typed and arranged by system, summarizing periodic inspections and maintenance recommended by equipment manufacturers and/or required to properly maintain the facility's new mechanical systems. The periodic maintenance summary chart shall include equipment name, identification symbol, location, type of maintenance or inspection required, and recommended time interval.
- G. Include an equipment schedule, neatly typed and arranged by system, listing new equipment with equipment symbol, nomenclature, function and area served, location, manufacturer, nameplate data including model and serial number and motor data including full load amps, horsepower, volts and phase.
- H. Include a valve schedule, neatly typed and arranged by system, listing new valve tags with information required on valve tag plus location and normal position, open or closed.

2.3 BINDING

- A. Bind the Operation and Maintenance Manuals in 3 ring, D-ring style binders with page lifters and vinyl covers. Expandable catalog type 2 hole binders with soft board covers and metal prong fasteners will not be accepted.
- B. Provide multiple binders as required to limit single binder thickness to 3 inches. Divide binders at logical points. Do not overfill binders.

- C. Controls system Operation and Maintenance Manuals and fire protection system Operation and Maintenance Manuals may be bound and submitted for review as separate manuals.
- D. Label the front cover and end panel. Label to include Project title, Project number, date, and facility name.

PART 3 EXECUTION

3.1 REQUIRED COPIES AND TIMING

- A. Review submittals:
 - 1. Submit for review 2 copies plus the number required by the Contractor. The Contracting Officer will retain 1 copy for his reference and the additional reviewed copy will be returned to the Contractor.
 - 2. Submit for review not less than 30 days prior to Substantial Completion Inspection.
- B. Final Operation and Maintenance Manuals:
 - 1. Provide 5 complete, reviewed, corrected and accepted Operation and Maintenance Manuals to the Contracting Officer a minimum of 5 working days prior to Project Substantial Completion Inspection and 5 working days prior to any scheduled training on equipment covered by the O&M Manual.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15047 - IDENTIFICATION

- A. This Section covers the identification of mechanical systems and components.

1.2 SUBMITTALS

- A. Prior to Construction: Manufacturer's catalog literature and illustrations.
- B. Prior to Ordering Valve Tags: Valve tag schedule.

PART 2 PRODUCTS

2.1 PIPE MARKERS

- A. Pressure-sensitive identification markers banded in place with color-coded tape incorporating direction of flow arrows. "Opti-Code" markers and "Arrows On a Roll", Seton Name Plate Corp., Brady, Brimar, or equal. Painted stencil markers are not acceptable.
- B. Provide markers of length and with letter size indicated below. Diameter listed is outer diameter of insulation if piping is insulated.

<u>Nominal Diameter</u>	<u>Marker Length</u>	<u>Letter Height</u>
3/4 inch to 1-1/4 inch	8 inches	1/2 inch
1-1/2 inches to 2 inches	8 inches	3/4 inch
2-1/2 inches to 7 inches	12 inches	1-1/4 inch

- C. Provide marker with appropriately color-coded background and with a clearly printed legend to identify the contents of the pipe in conformance with the "Scheme for the Identification of Piping Systems" (ANSI A13.1).

2.2 PIPE MARKERS

- A. Removable and reusable, color-coded, vinyl identification markers and direction of flow arrows on plastic base, held in place with color-coded, plastic coated wire. Brady Snap-On, Brimar or preapproved equal.

- B. Provide markers of length and with letter size indicated below. Diameter listed is outer diameter of insulation if piping is insulated.

<u>Nominal Diameter</u>	<u>Base Length</u>	<u>Base Height</u>
3/4 inch or less	4 1/2 inches	1 inch
1 inch to 2-1/2 inches	11 inches	1-1/2 inches

- C. Provide marker with appropriately color-coded background and with a clearly printed legend to identify the contents of the pipe in conformance with the "Scheme for the Identification of Piping Systems" (ANSI A13.1).

2.3 VALVE TAGS

- A. Laminated plastic with subsurface printing, heavy duty, nickel plated grommet, brass bead chain, and appropriately colored border. Craftmark, Seton, Brimar, or equal.
- B. Tags installed within 8 feet of the floor or maintenance platform: Minimum 3-1/2 inches by 2 inches with four lines, 0.2 inch high characters, 8 characters per line.
- C. Tags installed higher than 8 feet off the floor or maintenance platform: Minimum 5 inches by 3-1/2 inches with four lines, 0.4 inch high characters, 8 characters per line.
- D. On each tag print valve number and message describing system, function, and equipment and/or area/room served. Message shall be as complete as possible within space available.
- E. Number valves in accordance with numbering system provided by Contracting Officer.

2.4 EQUIPMENT LABELS

- A. Minimum 1 inch high by 1/16 inch thick, black, laminated plastic with white core. "Setonply" by Seton Nameplate Corp., Craftmark, Brimar, or equal.
- B. Engraved with 3/8 inch high characters identifying the item or equipment by symbol and description provided by Contracting Officer.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION

- A. Identify new piping, valves, and equipment in the facility whether concealed within accessible spaces or exposed.
- B. Identify insulated and uninsulated piping.
- C. Locate identification so that it is readable by a person standing on the floor for exposed items or at point of access for concealed items.

3.2 PIPING

- A. Provide identification at both sides of partitions and floors, at all branch takeoffs, at connections to equipment and at intermediate intervals not in excess of 50 feet.
- B. Secure pipe pressure-sensitive vinyl markers in place with pressure-sensitive tape incorporating direction of flow arrows on both ends of label. At each end make 2 complete wraps around the pipe with tape so that tape is wrapped back on itself to assure attachment.

3.3 VALVES

- A. Identify normally open valves and balancing cocks with valve identification tags. Unless otherwise noted, equipment isolation valves and balancing cocks that are located adjacent to equipment isolated are exempted from this requirement.
- B. Identify normally closed valves with valve identification tags and with a second valve tag reading "NORMALLY CLOSED" in 1/2 inch high letters.
- C. Permanently mark, etched or stamped, balancing cock setpoint readings on 1-1/2 inches diameter brass valve tags attached to balancing cocks with No. 6 bead chain.

3.4 EQUIPMENT

- A. Identify equipment, i.e. pumps, tanks, control panels, etc., with equipment labels mounted in readily accessible and readable location.
- B. Mechanically secure labels with a minimum of two screws, bolts, or rivets. Adhesive backing does not provide secure mounting.

3.5 PIPE AND VALVE MARKER AND TAG SCHEDULE

<u>SERVICE</u>	<u>LABEL</u>	<u>B.G. COLOR</u>
Cold Water	Cold Water	Green
Tempered Water	Water	Green
Hot Water (160 Fahrenheit)	Hot Water (160 Fahrenheit)	Yellow
Recirculating Hot Water	Recirc Hot Water	Yellow
Heating Water Supply	Heating Supply	Yellow
Heating Water Return	Heating Return	Yellow

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15050 – COMMON WORK RESULTS FOR PIPING

- A. This Section covers selection and installation of basic pipe materials and specialties.

1.2 SUBMITTALS

- A. Manufacturer's catalog literature and illustrations.
- B. Substantial deviations:
 - 1. Submit to the Contracting Officer Shop Drawings of any proposed substantial deviations in the piping systems for this facility from these documents for review and acceptance. Include 4, plus the number required by the Contractor, copies of each Shop Drawing submitted.
 - 2. Any substantial deviations from these documents installed prior to Contracting Officer review and acceptance of submittal may be required by the Contracting Officer to be removed and the indicated system be installed at no additional cost to the Owner.
 - 3. The Contracting Officer is the sole judge of what constitutes a substantial deviation and what is an acceptable alternate technique or method.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide all pipes, fittings, and accessories required for complete functioning installation of all piping systems specified and required under this Division.
- B. Miscellaneous items specified and required under this Division are not necessarily indicated on the Drawings.

2.2 THERMOMETERS

- A. Solar or light powered 3/8 inch LCD digital display, -40 to 300 degree Fahrenheit range, adjustable position face. Weiss, Miljoco or equal.
- B. Pipe mounted with brass separable socket.
- C. Provide insulation extensions as required.

2.3 PRESSURE TEST PORTS

- A. Provide as isolation valve and threaded plug.
- B. Provide with insulation extensions as required.

2.4 DRAIN VALVES

- A. Unless otherwise indicated, provide 3/4 inch ball valve or 1/2 inch ball valve if line size is less than 3/4 inch. Provide with brass hose end fitting and cap.

2.5 AIR VENTS

- A. Manual air vents: "Coin-operated" air vent. B & G No. 4V or equal.

2.6 STRAINERS

- A. Copper systems: Bronze body and cap with 304 stainless steel screen. Sarco BT/TBT, Armstrong, or equal.
- B. Pressure rating to match system rating.
- C. Unless otherwise indicated provide with the following screen sizes:
 - 1. Hydronic systems: 3 inches and smaller, 20 mesh.

2.7 DIELECTRIC PIPE PROTECTION

- A. Polyvinyl, 20 mil, self adhesive. Westape, Calpico, 3M or equal.
- B. Dielectric nipples and flanges only. Dielectric unions are specifically not allowed.

PART 3 EXECUTION

3.1 GENERAL INSTALLATION AND APPEARANCE

- A. Route piping within the facility vapor retarder and insulation boundary.
- B. Ream pipes thoroughly and clean before installation.
- C. Flush lines clear of debris, scale and discoloration prior to startup. Clean out all strainers and drip pockets after flushing.
- D. Run pipes with proper grade to provide for easy drainage and venting.
- E. Support piping to provide an installation that is without sag or droops.

- F. Provide pipe supports and offsets, loops or accessories at equipment connections to minimize connection stress caused by normal system warm-up, cool-down and equipment operation.
- G. Install parallel runs of non-insulated piping as required to provide a minimum of 6 inches clearance between piping.
- H. Install parallel runs of insulated piping as required to provide a minimum of 4 inches clearance between insulation surfaces.
- I. Install piping and equipment as required to provide minimum 6 feet 8 inches headroom in mechanical rooms, piping within 12 inches of the ceiling in other spaces with exposed piping, and as required to not interfere with other items or access to equipment.

3.2 FITTINGS, VALVES, AND ACCESSORIES

- A. Make changes of direction, branches, and reductions in pipe size with fittings. Bushings are allowed only in non-pressurized tanks and similar equipment.
- B. Provide isolation valves at pressure gauges.
- C. At pressure reducing valves, control valves, and other devices whose size is less than adjoining pipe size, provide reducers immediately adjacent to the device.
- D. Provide isolation valves in piping adjacent to equipment, including terminal units, and where indicated. Locate valves on system side of unions or flanges.
- E. Provide unions or flanges at connections to equipment and control valves to allow maintenance. Locate unions or flanges to allow maintenance without removal of any additional piping other than that between the union or flange and the equipment. Use of dielectric unions is prohibited.
- F. Provide drain valves at all low points in piping systems for drainage unless otherwise indicated.
 - 1. Drains are not required at plumbing fixtures if stop valve forms the low point of the branch.
 - 2. Drains are not required where screwed cap dirt legs are indicated.
 - 3. Provide threaded plug where space is not available to install a drain valve.
- G. Provide metal to metal seated globe valves at strainer blow down connections. Valve size to match blow down connection size.
- H. Provide air vents at high points in closed loop or recirculating piping systems. Install balancing cocks with test ports at or above the horizontal position. Permanently mark, etched or stamped, balancing cock setpoint scale readings and balanced flow in GPM on 1-1/2 inches diameter brass valve tags attached to balancing cock with No. 6 bead chain. This tag is in addition to valve identification tag called for elsewhere.
- I. Provide pressure and temperature test ports where indicated and at the following locations:
 - 1. At inlets to and outlets from hydronic system terminal units except finned tube radiation, reheat coils, unit heaters, and cabinet unit heaters.

- J. Install thermometers, gauges, and plugs above the horizontal axis on horizontal pipe and orientated such that they are easily readable by a person standing on the floor for exposed equipment or from point of access for concealed equipment. Provide insulation extensions where thermometers, gauges, and plugs are installed on insulated piping.
- K. At 1-1/2 inches and smaller piping install thermometers in pipe tees one size larger than line size.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15061 – STEEL PIPE AND FITTINGS

- A. This Section covers selection and installation of steel pipe, tube, fittings, and accessories.

1.2 SUBMITTALS

- A. Submittals are not required under this Section.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Steel pipe: Schedule 40, A53 Grade B black steel, unless otherwise indicated.
- B. Pipe fittings, unions, nipples, and couplings: Malleable iron, cast iron, or steel with pressure rating to suit application.
- C. Unions: Provide ground joint unions on piping 2 inches and smaller and gasketed, flanged joint unions on piping 2-1/2 inches and larger. Provide gaskets compatible with fluid carried.
- D. Welded fittings and flanges: Fabricated from the same material as the pipe.
- E. Sleeve couplings:
 - 1. Gasketed sleeve type consisting of one steel middle ring, two steel followers, two gaskets, and the necessary steel bolts and nuts to compress the gasket. Dresser or equal.
 - 2. Gasket material as recommended by the manufacturer for fluid carried.
 - 3. Pressure rating not less than adjoining pipeline.
 - 4. Constructed to permit pipe expansion, contraction, and angular deflection.

PART 3 EXECUTION

3.1 APPLICATION AND INSTALLATION

- A. Specific pipe, joint, and fitting application and installation is specified with various piping systems covered elsewhere under this Division.
- B. Do not intermix galvanized and black steel piping on a piping system.
- C. Cut pipe square and clean, ream, and clear pipe of all burrs and debris.

3.2 SCREWED JOINTS

- A. Cut threads clean and sharp and to a length equal to 1-1/8 times the length of the female thread.
- B. Make pipe tight with thread lubricant worked into male thread only. Do not extend lubricant beyond end of thread or inside pipe. Wipe surplus materials off the joint and leave neat and clean.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15063 – COPPER TUBE AND FITTINGS

- A. This Section covers selection and installation of copper tube and fittings.

1.2 SUBMITTALS

- A. Submittals are not required under this Section.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Specific pipe and fitting materials is specified with various piping systems covered elsewhere under this Division.
- B. Silver solder: 1000 degrees Fahrenheit minimum melting temperature, Handy-Harmon Silfos, JDW Harris Staysilv, or equal.
- C. Lead free solder: 95.5 tin/4 copper/0.5 silver. Englehard Silvabrite 100, Canfield, or equal.
- D. Flux: Non-corrosive and water flushable meeting ASTM Standard B813.

2.2 MECHANICALLY FORMED TEE CONNECTIONS

- A. Tee connections consisting of branch piping brazed to collars mechanically extracted from run piping. T-Drill Industries, Inc. or equal.
- B. Form collars in a continuous operation consisting of drilling a pilot hole and drawing out the tube surface to a height of not less than 3 times the thickness of the branch tube wall.
- C. Notch branch tube to conform with the inner curve of the run tube and dimple with depth 2 stops, one 1/4 inch above the other, to insure proper penetration of the branch tube into the collar and to provide a visual point of inspection.
- D. Braze joints with BCuP series filler metal in accordance with American Welding Society recommendations for lap joint weld.

PART 3 EXECUTION

3.1 APPLICATION AND INSTALLATION

- A. Specific pipe, joint and fitting application and installation is specified with various piping systems covered elsewhere under this Division.
- B. Cut pipe square and clean, ream, and clear pipe of all burrs and debris.
- C. Wrap copper pipe in contact with concrete with two layers of dielectric pipe wrap.

3.2 SOLDER JOINTS AND FITTINGS

- A. Clean exterior of pipe and interior of fittings to bright metal and fill with solder full length of joint.
- B. Apply applicable flux to exterior of pipe full length of joint. Do not extend flux beyond pipe or into pipe interior. Insert pipe into fitting a minimum of 80 percent joint depth.
- C. Fully heat joint with flame and fill with solder utilizing capillary action. Wipe joint to provide a neat appearance.
- D. Do not use solder as a gap filler.
- E. Utilize only low temperature flame such as propane, butane or Mapp gas except for silver solder to avoid heat tempering or embrittlement of pipe and joint.
- F. Replace valves and other accessories subjected to heat damage.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15094 – HANGERS AND SUPPORTS

- A. This Section covers selection, installation, and adjustment of equipment and material used to hang and/or support mechanical systems and equipment.

1.2 SUBMITTALS

- A. Manufacturer's catalog literature and illustrations.
- B. Proposed application for each style of hanger or support.
- C. Shop Drawings for fabricated pipe or equipment hangers or supports including:
 - 1. Dimensions.
 - 2. Construction details.
 - 3. Materials.
 - 4. Deflection for spring hangers.
 - 5. Rated or design load, actual load and safety factors.
 - 6. Applications.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide factory standard hangers and supports complete with necessary inserts, bolts, nuts, rods, washers, and other accessories. Elcen, Fee and Mason, Grinnell, Michigan Hanger Company, or equal.

2.2 NON INSULATED PIPE HANGERS

- A. Pipe hangers placed in direct contact with pipe:
 - 1. Pipe hangers for 6 inches and smaller copper pipe: Swivel loop style, copper plated carbon steel. M-CO #101 or equal.

2.3 RISER CLAMPS

- A. Riser clamps for copper pipe: Copper-electro plated carbon steel. M-CO #511 or equal.

2.4 HANGER RODS

- A. Electro-galvanized carbon steel. M-CO #50 or equal.
- B. Select equipment hanger rods as required to properly support the equipment in-service load. Select tank, flat plate heat exchanger, etc. supports assuming that they are full of water when in service. Size equipment hanger rods as follows:

<u>Load/rod</u>	<u>Hanger Rod</u>
0 - 300 Pounds	3/8 inch

- C. Size pipe hanger rods as follows:

<u>Pipe Size</u>	<u>Hanger Rod</u>
1/2 inch to 2 inches	3/8 inch
2-1/2 inches to 4 inches	1/2 inch

2.5 CHANNEL STRUTS

- A. Fabricated from 0.105 inch thick rolled mild steel. Unistrut, M-CO O-Strut, Power Strut, or equal. Select as follows for spans up to 7 feet. For longer spans or greater loads submit Shop Drawing for review.

<u>Total Load</u>	<u>Unistrut</u>	<u>Power Strut</u>	<u>M-CO</u>
0 - 245 Pounds	P1000	PS 200	A-12
246 - 680 Pounds	P1001	PS 200 2T3	A-12A

- B. Finish: Zinc plated electrostatically for interior applications and hot dipped galvanized after fabrication for exterior applications.

2.6 CONCRETE ANCHOR BOLTS

- A. Anchor bolts tested and listed by third party suitable for seismic loads. Powers Fastener, Hilti or equal.

PART 3 EXECUTION

3.1 GENERAL

- A. Examine existing conditions and provide additional structural members or framing required to support the mechanical systems.
- B. Hanger spacing: Provide additional support at pump bodies, valves, elbows, bends, and other locations where concentrated loads occur.

<u>Metallic Pipe Size</u>	<u>Maximum Spacing Between Supports</u>
1/2 inch	5 feet
3/4 inch	6 feet
1 inch	7 feet
1-1/4 inch	8 feet
1-1/2 inches	9 feet
2 inches	10 feet
2-1/2 inches	11 feet

- C. Where groups of three or more pipes occur they may be supported with trapeze hangers constructed from channel strut and hanger rods. Space trapeze hangers for smallest pipe supported.
- D. Do not support piping 4 inches size and larger from a single joist or structural member.
- E. Support hub and no-hub cast iron piping at each joint, in accordance with above hanger spacing table, or in accordance with coupling manufacturer's recommendations, whichever is more stringent.
- F. Support piping with sleeved couplings and grooved end piping at each length of pipe and at each fitting, in accordance with above hanger spacing table, or in accordance with coupling manufacturer's recommendations, whichever is more stringent.
- G. Provide floor mounted channel strut racks to support piping and equipment that cannot be otherwise supported from structure overhead or from walls.
- H. Seal all penetrations of vapor retarder or membranes vapor tight.
- I. Adjust hangers and supports and place grout for concrete supports to bring support to proper elevations.
- J. When copper piping is placed in direct contact with channel strut supports, wrap piping at point of contact with 2 wraps of dielectric pipe wrap.

3.2 HANGERS ON INSULATED PIPING

- A. Place hanger or support in direct contact with the pipe unless specifically indicated that piping is to have insulated hangers. When placed in direct contact install fiberglass insulation around the hangers.

- B. With suspended, insulated hangers and supports provide calcium silicate insulation segments between the pipes supported and the support. In addition, provide galvanized iron shields between the insulation segments and the supports. Fabricate shields for 4 inches and larger pipes of 16 gauge iron, 18 inches long, and shields for 3 inches and smaller pipes of 18 gauge material, 12 inches long. Match the radius of curvature of the shields with the outside radius of the insulation.

3.3 CONCRETE STRUCTURES

- A. General:
 - 1. Provide flat washers under all nuts.
- B. Concrete anchors bolts:
 - 1. Install in accordance with manufacturer's installation instructions.
 - 2. Chemical anchors may not be used for equipment or equipment supports under tension.
- C. Through bolts:
 - 1. ASTM A307 bolts and nuts.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15100 – GENERAL DUTY VALVES

- A. This Section covers the selection and installation of manual valves.

1.2 SUBMITTALS

- A. Manufacturer's catalog literature and illustrations.
- B. Proposed service and sizes for each valve.

PART 2 PRODUCTS

2.1 GENERAL

- A. Standardize on one make as much as possible but not to the extent of sacrificing quality listed. Grinnell, Milwaukee, Nibco, Stockham, Vogt or equal.
- B. Contractor is to be made aware of and shall provide programming and coordinate control valves at storage tanks with actuator that can be operated by existing DDC Johnson Controller System.
- C. Provide ball valves where indicated and in lieu of gate valves for domestic water and heating systems in piping 2 inches and less in size. All valves, 2 inches and smaller, shall be of same type. Provide ball valves installed in insulated piping systems with extended stems to bring the handle clear of the insulation.
- D. ASME Class 125 unless otherwise indicated.

2.2 DOMESTIC WATER AND HYDRONIC VALVES

- A. Valves 3 Inches and Smaller:
 - 1. Isolation valves:
 - a. Ball valves: Full port, two piece, bronze body with brass internals, chrome plated or stainless steel ball, reinforced teflon seats and seals, non-blowout stem. Nibco S585-70/T585-70 or equal.
 - b. Pressure gauge, pressure test port isolation valves and finned tube element drain valves: Bronze body ball valve, teflon seats, viton O-ring stem seals, chrome plated brass ball, non-blow out stem. For finned tube element drains provide with screw slot instead of handle. Jomar T-82 Mini or equal.
 - 2. Check valves installed in horizontal lines and vertical lines with upward flow: Bronze body and cap, renewable seat and disc, teflon disc. Swing check, Y-Pattern, with threaded cap that allows for removal of entire disc assembly through top of valve body. Nibco S-413-Y/T-413-Y or equal.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Provide isolation valves in piping adjacent to equipment, including terminal units, and where indicated. Locate valves on system side of unions or flanges.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15180 - INSULATION

- A. This Section covers selection and installation of insulation used in the mechanical systems.

1.2 SUBMITTALS

- A. Insulation application and thickness for each system.
- B. Manufacturer's catalog literature and illustrations.
- C. Manufacturer's installation instructions.

PART 2 PRODUCTS

2.1 GENERAL

- A. Provide interior insulation having UL listed composite fire and smoke hazard rating not exceeding:
 - 1. Flame Spread: 25.
 - 2. Smoke Developed: 50.
- B. Provide accessories such as adhesives, mastics, cement, tapes, and jackets having the same component rating as listed above.
- C. Lagging fabric: 100 percent textured silica yarn or 100 percent cotton fabric, 8 oz/sy, with or without pre-applied rewettable adhesive finish. Fattal's Thermocanvas, Zetex 300, or equal.
- D. Thermal Insulation Coatings: Washable, abrasion resistant coating for thermal insulation. Minimum continuous service rating of 180 degrees Fahrenheit. Used to adhere lagging fabric without pre-applied rewettable adhesive finish to pipe and duct insulation. Foster #30-36 Sealfas, MEI, or equal.

2.2 INTERIOR, ABOVE GRADE, PIPING SYSTEM INSULATION

- A. Fiberglass preformed by the manufacturer specifically for the size pipe or tubing on which it is to be installed unless otherwise indicated. Owens/Corning Fiberglass 25 ASJ, Johns-Manville Micro-Lok 650 with AP-T self-sealing jacket, Knauf ASJ, or equal.
- B. Continuous service rating: 500 degrees Fahrenheit minimum.
- C. Provide with vapor barrier jacket with maximum water vapor permeability of 0.02 perm and minimum beach puncture resistance rating of 50 units and a white kraft paper facing.

- D. Conductivity: $0.28 \text{ btu-in/ft}^2\text{-hr-F}$ maximum at 100 degrees Fahrenheit mean temperature.
- E. Insulating cements: Mineral fiber base with maximum $0.90 \text{ BTU-in/sq ft-hr-F}$ conductivity at 200 degrees Fahrenheit mean temperature.
- F. Vapor barrier coatings: Water based, fire resistive, flexible, maximum 0.08 perm water vapor permeability. Foster #30-80, MEI, or equal.
- G. Preformed plastic insulation covers and inserts: PVC with fiberglass inserts provided by cover manufacturer. Johns-Manville Zeston, Fuller Speedline, Proto, or equal.

PART 3 EXECUTION

3.1 GENERAL

- A. Replace existing insulation that is removed to accomplish Work with new insulation as specified in Part 2 of this Section or to match existing if not specified. Match existing thickness unless otherwise indicated.
- B. Surface Preparation: Prior to insulation installation, clean and dry exterior surfaces of pipe.
- C. Patch insulation on existing pipe mains at removed branches. Match existing insulation and finish.
- D. Do not cover or obscure manufacturer or field applied identification tags, name plates, information labels, etc.
- E. Seal exposed ends and face of cuts in fiberglass insulation with thermal insulation coating.

3.2 INTERIOR, ABOVE GRADE PIPING SYSTEMS INSULATION, GENERAL

- A. Unless otherwise indicated insulate the following piping systems with insulation thickness, additional insulation covering and insulated hangers in accordance with the following schedule:

- 1. Interior domestic cold water, plumbing vent and rain water leader cold piping:

<u>Pipe Size</u>	<u>Insulation Thickness</u>	<u>Lagging Fabric Required</u>	<u>Insulated Hangers Required</u>
All Sizes	1/2 inch	Yes	No

- 2. Interior domestic hot water and recirculated domestic hot water hot piping:

<u>Pipe Size</u>	<u>Insulation Thickness</u>	<u>Lagging Fabric Required</u>	<u>Insulated Hangers Required</u>
1/2 inch	1/2 inch	{ 1 }	No
3/4 inch – 1-1/2 inches	1 inch	{ 1 }	No
2 inches and larger	1 1/2 inches	{ 1 }	No

- B. Where pipes are insulated with 2 layers, stagger the insulation joints.
- C. Where insulation terminates, continue insulation jacketing to cover exposed insulating material and seal to adjoining pipe.
- D. Insulate equipment and accessories with the same thickness as is called for on adjoining piping unless otherwise indicated.
- E. Insulate pipe fittings to the same thickness as adjoining pipe insulation. Insulate fittings with preformed plastic insulation covers packed full with fitting manufacturer provided fiberglass insulation or with segmented sections of pipe insulation and 1/4 inch coat of insulating cement.
- F. Insulate solder and threaded end gate, globe, and ball valve bodies with pipe insulation. Do not insulate valve bonnets or bonnet rings. Fill voids between cut-outs and valve body with insulating cement.
- G. Insulate flanged end gate and globe valve bodies with insulating cement. Do not insulate valve bonnets.
- H. Insulate thermometer and aquastat wells with pipe insulation. Terminate insulation at the socket.
- I. Insulate air separators and heat exchangers same as pipe.
- J. Non Insulated Hangers:
 - 1. Place hanger or support in direct contact with the pipe and install fiberglass insulation around the hangers.

3.3 INTERIOR, ABOVE GRADE PIPING SYSTEMS INSULATION - HOT PIPING

- A. Insulate domestic hot water piping in which hot water is being recirculated. Insulation is not required on branch piping to fixtures through which hot water is not being recirculated.
- B. Terminate insulation at wall and floor penetrations. Maintain minimum 1 inch clearance to combustible construction. At exposed locations, size penetration so that butting insulation to wall trims out penetration.
- C. Seal and secure seams and joints to provide a neat and evenly rounded finished surface. It is not necessary to seal penetrations if holes are neatly cut in the insulation and there is a tight fit between the insulation and the penetrating equipment. A complete vapor barrier envelope is not required.
- D. At exposed installations, including mechanical spaces, cover piping insulation and ends with lagging fabric which has been dipped in a thermal insulation coating. Lap lagging fabric over ends of preformed plastic insulation covers.
- E. Secure self-sealing lap on concealed piping insulation with outward clinching staples at a maximum spacing of one foot on center.
- F. Insulation is not required on flexible connectors, check valves, pipe guides, anchors, strainers, traps, meters, and pump bodies and any section of pipe between them less than 6 inches in length.

- G. When pipe insulation is installed around ring, clamp, and clevis type hangers place the seam at the hanger rod and slit the sealing lap to pass around the rod.
- H. Notch pipe insulation at trapeze hangers and at angle iron floor and wall supports. Seal insulation exposed to atmosphere with a thermal insulation coating.

3.4 INTERIOR, ABOVE GRADE PIPING SYSTEMS INSULATION - COLD PIPING

- A. Seal and secure seams, joints, and penetrations in order to provide a neat and evenly rounded finished surface and complete vapor barrier envelope. Fill gaps between insulation and penetrating equipment with insulating cement.
- B. Cover piping insulation and ends with lagging fabric which has been dipped in a thermal insulation coating. Lap lagging fabric over ends of preformed plastic insulation covers. Install lagging fabric neatly, with cut rather than torn edges, to give a clean architectural appearance.
- C. When pipe insulation is installed around ring, clamp, and clevis type hangers place the seam at the hanger rod and slit the sealing lap to pass around the rod. After installation, seal these slits with a vapor barrier coating. If notching of the insulation is required to accommodate the hanger, fill the notches with insulating cement.
- D. When trapeze hangers and angle iron wall or floor supports are used on piping systems place the pipes supported in direct contact with the hanger. Notch fiberglass insulation at these hangers and supports. Fill the notches with insulating cement.
- E. Insulate check valves with insulating cement or with an oversized section of pipe insulation. If pipe insulation is used, the inside diameter shall equal the outside diameter of the adjoining pipe insulation. If insulating cement is used, do not insulate the cap, flanges, and the side plug provided for access to the hinge pin.
- F. Insulate balancing cock with pipe insulation. Insulation shall not interfere with use of the pressure sensing taps or the volume regulating mechanism. Fill voids between cut-outs and valve body with insulating cement.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15401 – DOMESTIC WATER SYSTEM

- A. This Section covers selection, installation, testing, and sterilization of domestic water piping and storage tanks.

1.2 SUBMITTALS

- A. Submit pipe and fittings material schedule indicating the type of products, piping, and fittings proposed for each size or application. Catalog cuts of pipe and fittings are not required.
- B. Manufacturer's catalog literature and illustrations for equipment and accessory items.

PART 2 PRODUCTS

2.1 PIPE, FITTINGS AND JOINTS

- A. At minor modifications to existing piping: Match existing.
- B. Interior, above ground, 3 inches and smaller:
 - 1. Type L hard copper tubing with wrought copper solder fittings with lead free solder.
 - 2. 1/2 inch, 3/4 inch and 1 inch branch piping may be connected to copper run piping using mechanically formed tee connections when run piping is minimum 1 inch, 1-1/2 inches and 2 inches respectively. 1/2 inch branch piping may only be used to connect a single lavatory or drinking fountain.

2.2 DIELECTRIC NIPPLES

- A. Nipples specifically designed to dielectrically isolate dissimilar metal piping systems. Epco, Capitol, or equal.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Prior to performing Work on the existing domestic water system isolate that portion of system requiring renovation from the rest of the facility's domestic water system. Do not reconnect the isolated portion of the domestic water system to the existing system until sterilization and testing are complete.

- B. Provide dielectric nipples or flanges with dielectric gaskets at flange faces, bolt heads, and nut faces at connections of dissimilar piping materials in the domestic water system including connections of iron body valves to copper piping systems.

3.2 TESTING

- A. Hydrostatically test new system at 100 psig for 1 hour with no noticeable pressure drop or water leaks.
- B. Report any leaks in the existing system to the Contract Officer. At the option of the Contract Officer, he will issue a Contract Amendment to repair leaks or he will have other maintenance personnel repair the leaks.
- C. Test minor modifications to existing system by returning system to normal operating conditions and visually inspect new joints for leaks.
- D. Firmly tap soldered fittings with a leather or rubber mallet during the pressure test to demonstrate soundness of soldered joints.

3.3 STERILIZATION

- A. Flush piping clear of debris or discoloration prior to sterilization.
- B. Prior to connection of the isolated portion of the domestic water system to the existing system thoroughly sterilize new and isolated existing portions of the domestic water system with sodium hypochlorite mixed in solution with water as required to achieve not less than 50 parts per million of available chlorine for a minimum of 24 hours. Take all precautions required to avoid introduction of foreign material into the non-isolated portion of the existing domestic water system. If foreign materials are introduced then sterilize the entire existing domestic water system.
- C. Introduce the sterilizing solution into the system in a manner which will cause all parts of the system to come into contact with the solution. Operate all valves at least twice during the contact period.
- D. After sterilization, flush the solution from the system with clean water until the residual chlorine content is less than 0.2 PPM throughout the system. During the flushing period, open and close all valves several times.
- E. 24 hours after flushing the system, sample the water at each domestic water storage tank, at one lavatory in each bathroom, at each drinking fountain, at each breakroom or coffee sink, and at the kitchen pot sink and submit samples to an independent testing laboratory for bacteriological testing. Submit certificate of conformance with bacteriological quantity standards, by State of Alaska, Department of Environmental Conservation Drinking Water Regulations (18AAC80), to the Contracting Officer.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE: SECTION 15702 – HYDRONIC HEATING SYSTEM

- A. This Section covers selection, installation, and testing of hydronic heating piping systems.

1.2 SUBMITTALS

- A. Submit pipe and fittings material schedule indicating the type of products, piping, and fittings proposed for each size or application. Catalog cuts of pipe and fittings are not required.
- B. Manufacturer's catalog literature and illustrations for equipment and accessory items.

PART 2 PRODUCTS

2.1 PIPE AND FITTINGS FOR ABOVE GRADE HYDRONIC HEATING SYSTEM

- A. 2 inches and smaller:
 - 1. Type L hard copper tubing with wrought copper solder fittings with lead free solder.
 - 2. 3/4 inch and 1 inch branch piping may be connected to copper run piping using mechanically formed tee connections when run piping is minimum 1-1/2 inches and 2 inches respectively.
- B. 2-1/2 inches and larger: Schedule 40 black steel pipe with butt welded steel joints and fittings.
- C. At minor modifications to existing systems, match existing piping and fittings.

2.2 HEATING SYSTEM FLUID

- A. Match existing.

2.3 HEATING SYSTEM CHEMICAL CLEANING COMPOUND

- A. 1 percent-2 percent Tri-Sodium Phosphate and water solution, or equal. Approximately 1lb per 50 gallons.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install piping level or slightly sloped up in direction of flow.
- B. Provide air vents with isolation at all high points and drain valves at all low points.
- C. Drain existing system as required to accommodate new work. Check existing boiler chemistry. Schedule system shut down for when the system is not used.
- D. At Contractor's option, hydronic system may be hot-tapped to avoid system shut down.
- E. Discard drained existing heating system fluid.

3.2 TESTING

- A. Hydrostatically test new system at 100 psig for 1 hour with no noticeable pressure drop or water leaks.
- B. Report any leaks in the existing system to the Contracting Officer. At the option of the Contracting Officer, he will issue a Contract Amendment to repair leaks or he will have Owner maintenance personnel repair the leaks.
- C. Testing minor modifications to existing system by returning system to normal operating conditions and visually inspect new joints for leaks.
- D. Firmly tap soldered fittings with a leather or rubber mallet during the pressure test to demonstrate soundness of soldered joints.

3.3 CLEANING

- A. Drain system and refill and clean system with building domestic water treated with chemical cleaning compound using manufacturer's recommended concentrations.
- B. Clean system by maintaining system temperature at 140 degrees Fahrenheit, operating all pumps with all control valves positioned to full heating, for a period of 8 hours. At Contractor's option room temperature water may be used but circulation time shall be increased to 24 hours.
- C. Flush and drain the system with all strainers cleaned at least twice.

3.4 FILLING

- A. Fill with domestic water and remove air from system.

END OF SECTION

FAIRBANKS PIONEER HOME DOMESTIC HOT WATER MODIFICATIONS

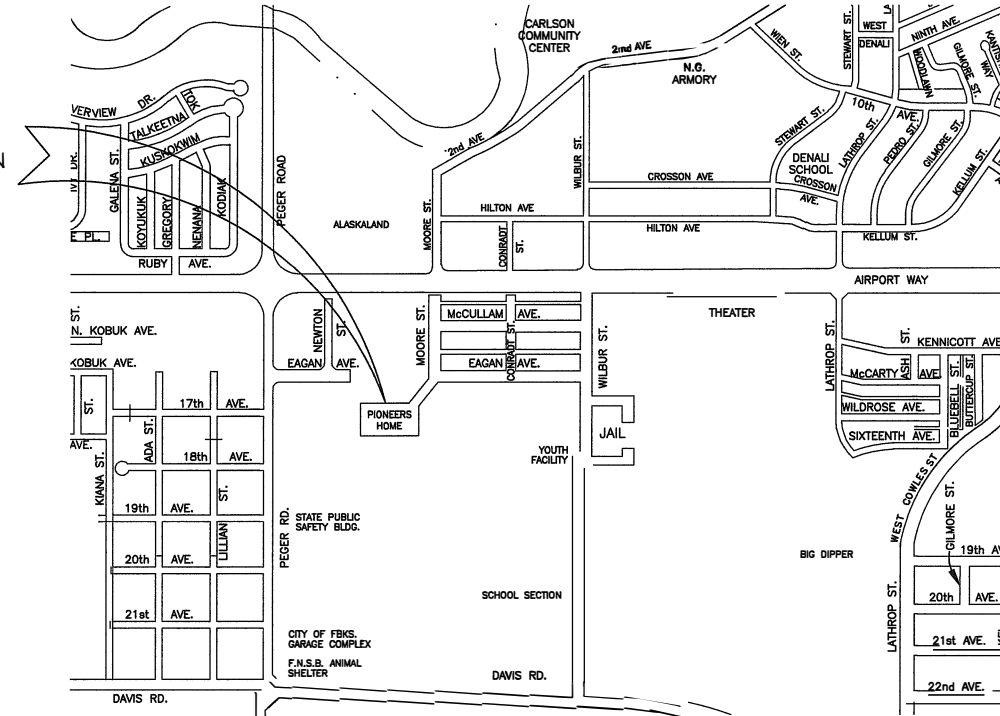
PROJECT NO. AJF 19-19C

DRAWING INDEX

MECHANICAL

- M0.1 SCHEDULES AND LEGENDS
M1.0 EXISTING WATER HEATING SYSTEM
M2.0 DOMESTIC HOT WATER SYSTEM
M2.1 DOMESTIC HOT WATER SYSTEM
M2.2 DOMESTIC HOT WATER SYSTEM SECTION VIEWS

PROJECT LOCATION



JOB LOCATION MAP - FAIRBANKS, AK

LEGEND

MECHANICAL SYMBOLS

- | | | | |
|--|-------------------------|--|------------------------|
| | PRESSURE REDUCING VALVE | | PIPE CONNECTION |
| | PRESSURE RELIEF VALVE | | ELBOW TURNED DOWN |
| | UNION | | ELBOW TURNED UP |
| | HOSE BIBB | | BALANCING COCK |
| | 2-WAY CONTROL VALVE | | CHECK VALVE |
| | STRAINER W/ BLOWDOWN | | NON-SLAM CHECK VALVE |
| | THERMOMETER | | ISOLATION VALVE |
| | PRESSURE GAUGE | | CONNECTION TO EXISTING |
| | PIPE CAP | | THREADED PIPE CAP |

PIPING SYMBOLS

- | SYMBOL | ABBREV | SYSTEM |
|--------|--------|--|
| | CW | COLD WATER |
| | HW | HOT WATER |
| | | EXISTING PIPING/EQUIPMENT |
| | | EXISTING PIPING/DUCTWORK/
TO BE REMOVED |

SCHEDULES

MISCELLANEOUS EQUIPMENT SCHEDULE

SYMBOL	ITEM	CAPACITY / SIZE	MOTOR DATA	OPERATING {1} WEIGHT (LB)	BASIS OF DESIGN	ELECTRICAL DATA	REMARKS
HX-2A	DOMESTIC HOT WATER HEAT EXCHANGER	1,000,000 BTU HOT SIDE: 70 GPM, 180F EGT, 5" MAX PD COLD SIDE: 17 GPM, 40F EWT, 0.5" MAX PD	—	270	FLATPLATE DW10X20-198	----	EXISTING
HX-2B	DOMESTIC HOT WATER HEAT EXCHANGER	1,000,000 BTU HOT SIDE: 70 GPM, 180F EGT, 5" MAX PD COLD SIDE: 17 GPM, 40F EWT, 0.5" MAX PD	—	270	FLATPLATE DW10X20-198	----	OWNER PROVIDED, CONTRACTOR INSTALLED

Revision Date No.

FAIRBANKS PIONEER
HOME DOMESTIC HOT
WATER MODIFICATIONS



Design
Alaska

Architects Engineers Surveyors
601 College Road Fairbanks, Alaska 99701
Telephone 907 452 1241

SCHEDULES AND
LEGENDS

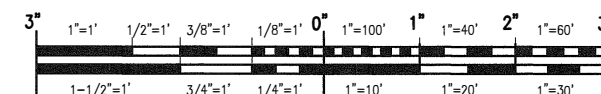
Date 12 MAR 13 Comm. No. 381301

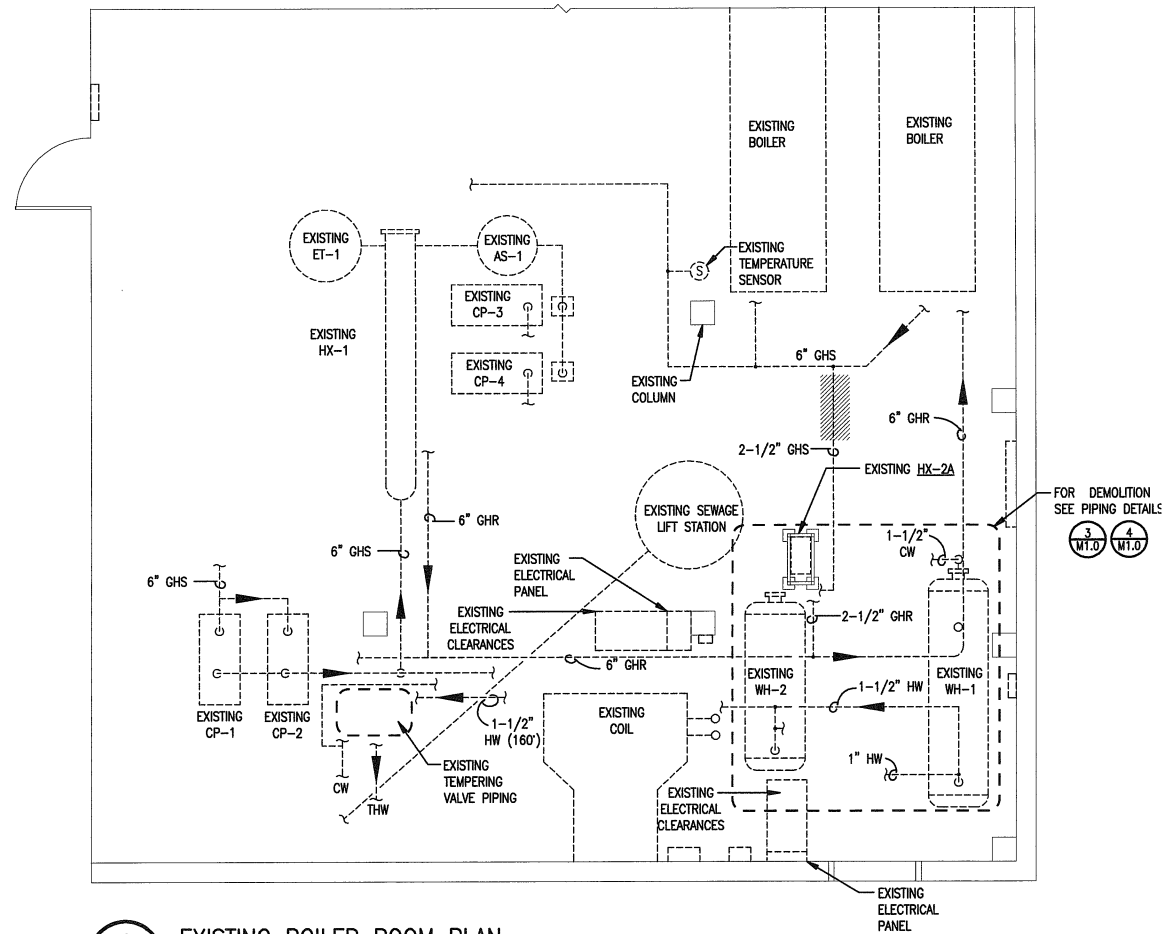
In Charge MAF

Drawn By MLB

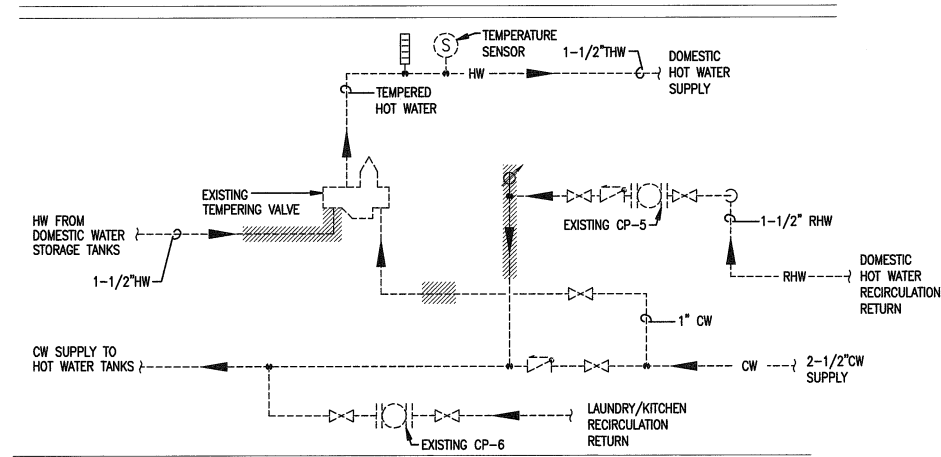
Checked By MHE

MO.1

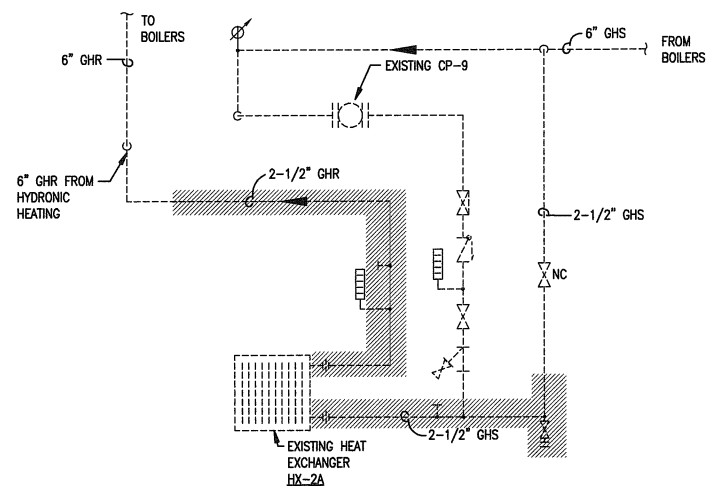




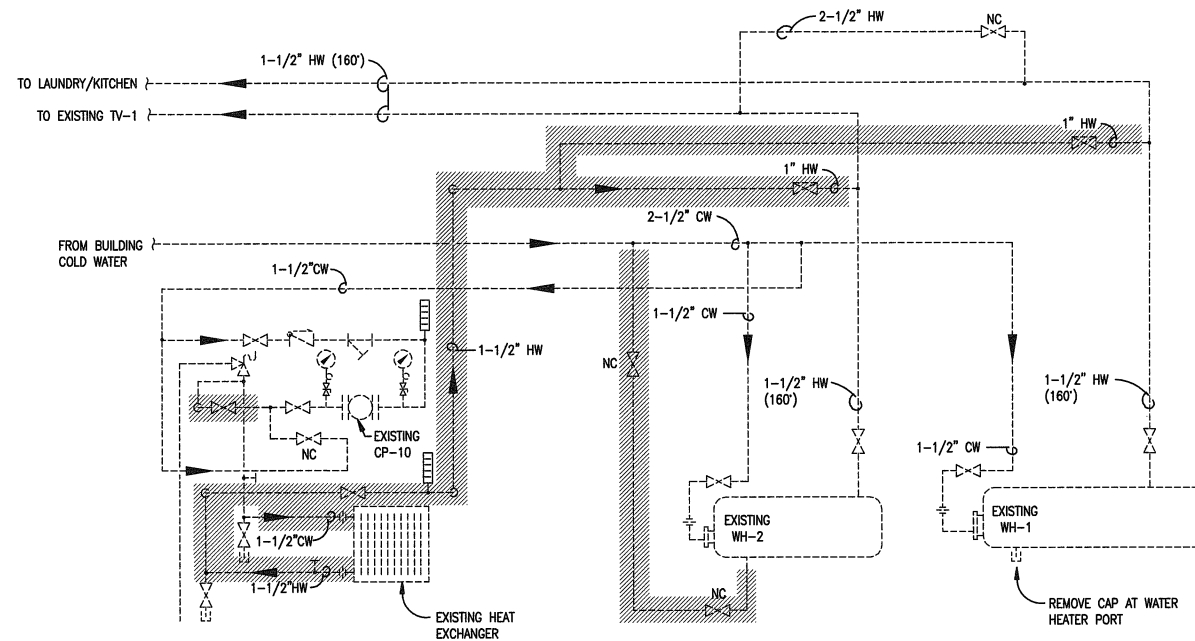
1 EXISTING BOILER ROOM PLAN
M1.0 1/4" = 1'



2 EXISTING TEMPERING VALVE DEMOLITION PIPING DIAGRAM
M1.0 NO SCALE



3 GLYCOL HEATING SIDE OF EXISTING HEAT EXCHANGER - DEMOLITION
M1.0 NO SCALE



4 DOMESTIC WATER SIDE OF EXISTING HEAT EXCHANGER - DEMOLITION
M1.0 NO SCALE

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EXISTING WATER HEATING SYSTEM

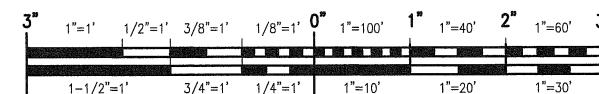
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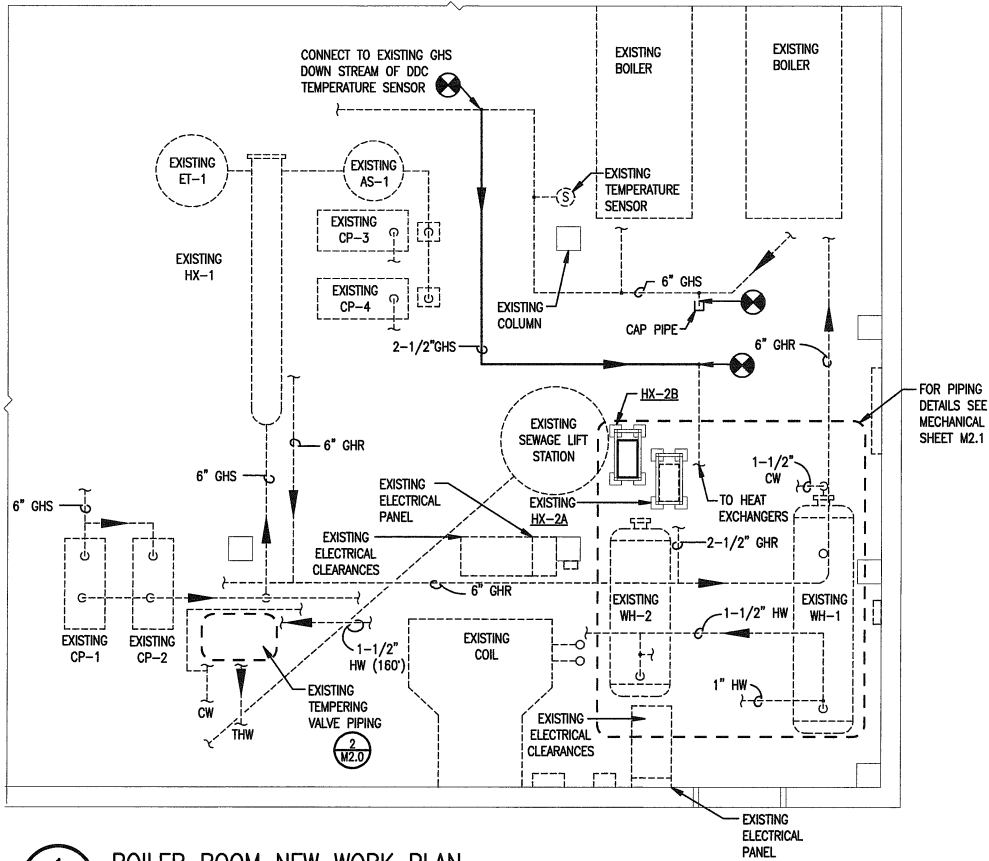
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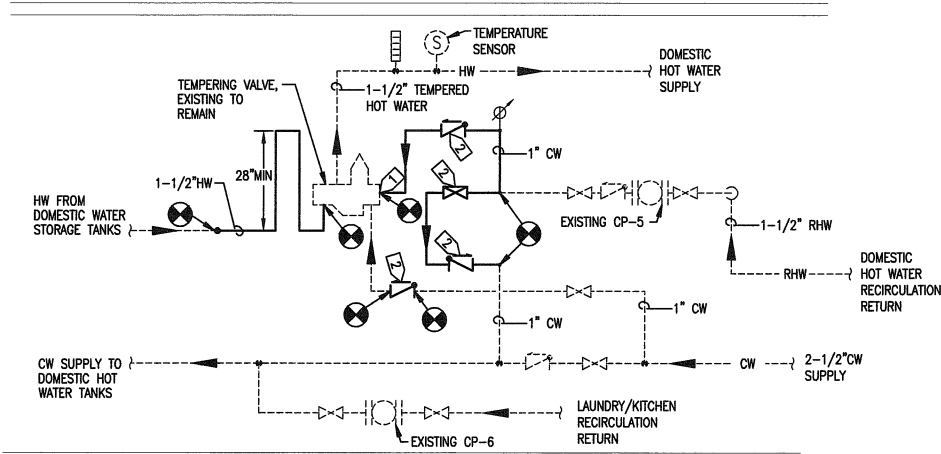
Checked By MAF

M1.0





1 BOILER ROOM NEW WORK PLAN
M2.0 1/4" = 1'



GENERAL NOTES

1. ENSURE THAT TEMPERING VALVE SUPPLY TEMPERATURE DOES NOT EXCEED 120 DEGREES FAHRENHEIT OVERNIGHT OR DURING TIMES OF LOW HOT WATER CONSUMPTION.
2. INSTALL CHECK VALVES HORIZONTALLY.

SPECIFIC NOTES

- 1 DOMESTIC HOT WATER RECIRCULATION PORT
- 2 INSTALL CHECK VALVES AND BALANCE COCK AND ADJUST BALANCE COCK PER TEMPERING VALVE MANUFACTURER'S INSTRUCTIONS

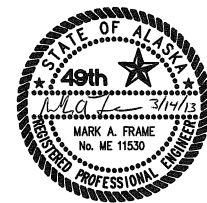
2 TEMPERING VALVE PIPING DIAGRAM
M2.0 NO SCALE

GENERAL NOTES

1. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE & ALL OTHER APPLICABLE LOCAL CODES & REVISIONS.
2. PAY ALL FEES FOR LICENSES, PERMITS OR OTHER CERTIFICATIONS REQUIRED TO PERFORM WORK IN THIS CONTRACT.
3. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS AMONG EQUIPMENT & TO PROVIDE NEAT SYMMETRICAL APPEARANCE OF VISIBLE EQUIPMENT IN FINISHED AREAS.
4. ALL NEW PIPING TO HAVE 2 INCHES OF INSULATION.

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DOMESTIC HOT WATER SYSTEM

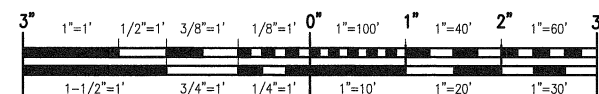
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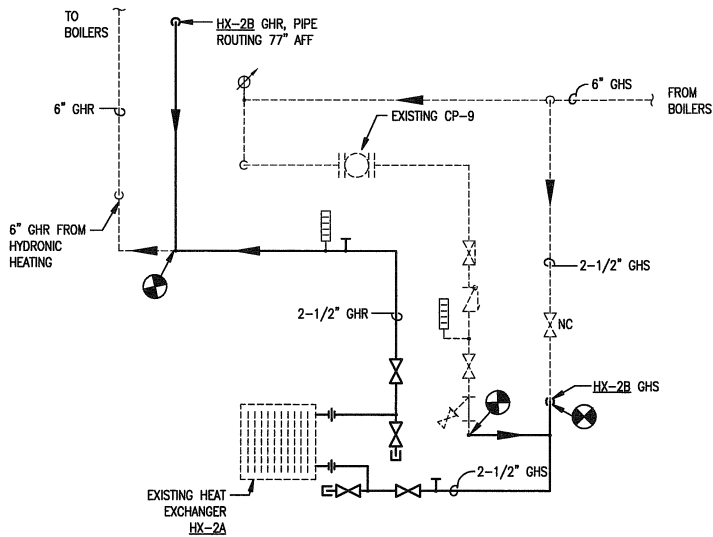
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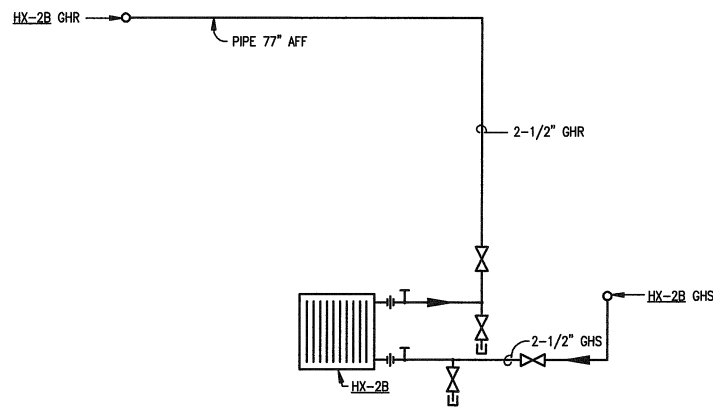
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M2.0

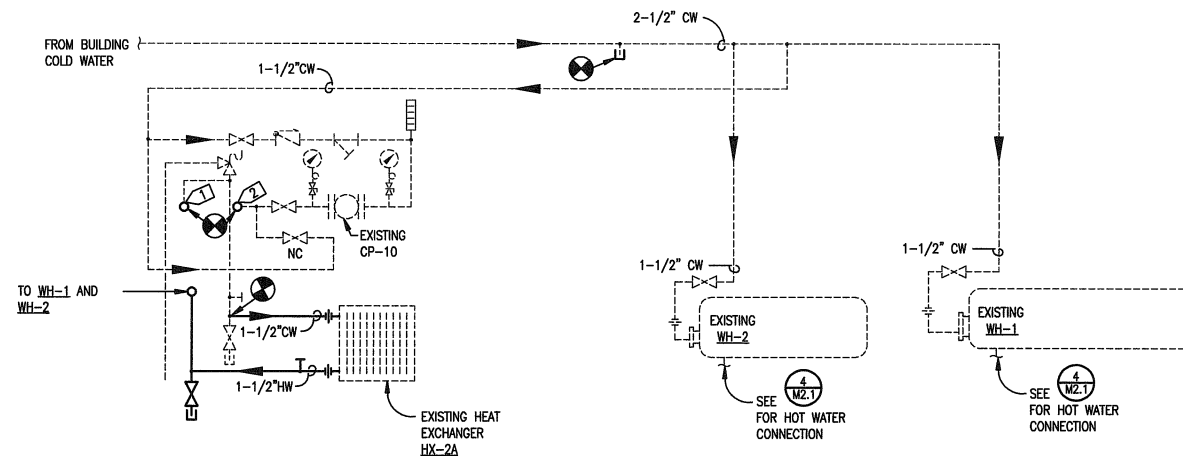




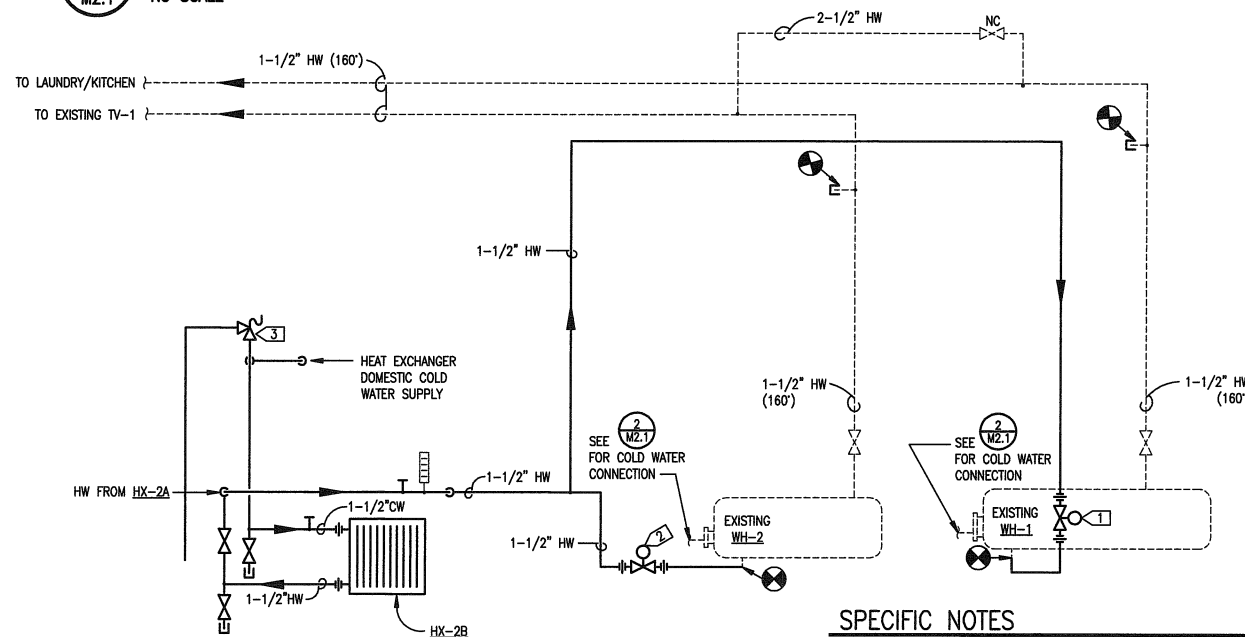
1
M2.1
GLYCOL HEATING SIDE OF
EXISTING HEAT EXCHANGER 2A
NO SCALE



3
M2.1
GLYCOL HEATING SIDE
OF HEAT EXCHANGER 2B
NO SCALE



2
M2.1
DOMESTIC WATER SIDE OF
EXISTING HEAT EXCHANGER 2A
NO SCALE



4
M2.1
DOMESTIC WATER SIDE
OF HEAT EXCHANGER 2B
NO SCALE

SPECIFIC NOTES

- 1 HX-2A DOMESTIC CW SUPPLY, SEE M2.2
- 2 DOMESTIC CW SUPPLY TO HEAT EXCHANGERS, SEE M2.2

SPECIFIC NOTES

- 1 1-1/2" HW TWO WAY CONTROL VALVE #1 DRIVEN CLOSED WHEN TEMPERATURE OF WH-1 IS MET. CYCLE SLOWLY TO PREVENT WATER HAMMER. KZVALVE FULL PORT STAINLESS STEEL BALL VALVE WITH MANUAL HANDLE, OR EQUAL. PROVIDE WITH ACTUATOR THAT CAN BE OPERATED BY THE EXISTING JOHNSON CONTROLS DDC.
- 2 1-1/2" HW TWO WAY CONTROL VALVE #2 DRIVEN CLOSED WHEN TEMPERATURE OF WH-2 IS MET. CYCLE SLOWLY TO PREVENT WATER HAMMER. KZVALVE FULL PORT STAINLESS STEEL BALL VALVE WITH MANUAL HANDLE, OR EQUAL. PROVIDE WITH ACTUATOR THAT CAN BE OPERATED BY THE EXISTING JOHNSON CONTROLS DDC.
- 3 BELL AND GOSSETT MODEL NO. 790-125 WITH 3/4" NPT SET AT 110 PSIG, RATED AT 2,535,000 BTU/Hr

SEQUENCE OF OPERATIONS

- WH-1
1. CYCLE DOMESTIC HOT WATER CONTROL VALVE #1 OPEN AS REQUIRED TO MAINTAIN A TANK SETPOINT TEMPERATURE OF 160 DEGREES F.
 2. OPERATE HEAT EXCHANGER PUMPS CP-9 AND CP-10 CONTINUOUSLY WHEN WH-1 IS BELOW SETPOINT.
- WH-2
1. CYCLE DOMESTIC HOT WATER CONTROL VALVE #2 OPEN AS REQUIRED TO MAINTAIN A TANK SETPOINT TEMPERATURE OF 160 DEGREES F.
 2. OPERATE HEAT EXCHANGER PUMPS CP-9 AND CP-10 CONTINUOUSLY WHEN WH-2 IS BELOW SETPOINT.
- DOMESTIC HOT WATER RECIRCULATION PUMPS
1. OPERATE DOMESTIC HOT WATER RECIRCULATION PUMP CP-5 CONTINUOUSLY.
 2. OPERATE LAUNDRY/KITCHEN DOMESTIC HOT WATER RECIRCULATION PUMP CP-6 CONTINUOUSLY.

GENERAL NOTES

1. ALL NEW PIPING TO HAVE 2 INCHES OF INSULATION.

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**DOMESTIC HOT
WATER SYSTEM**

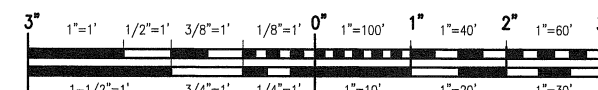
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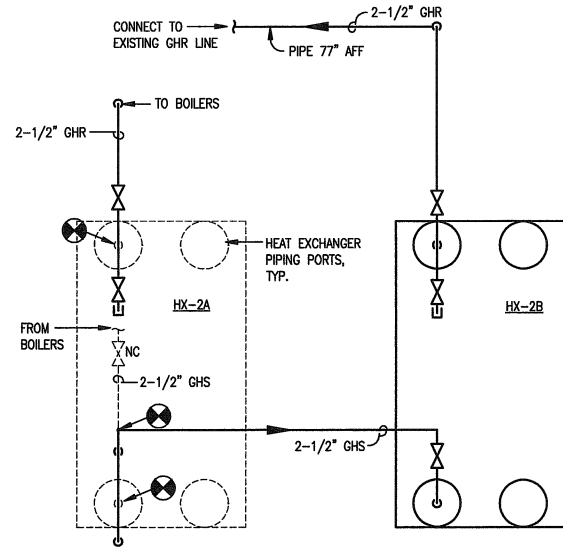
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Drawn By MLB

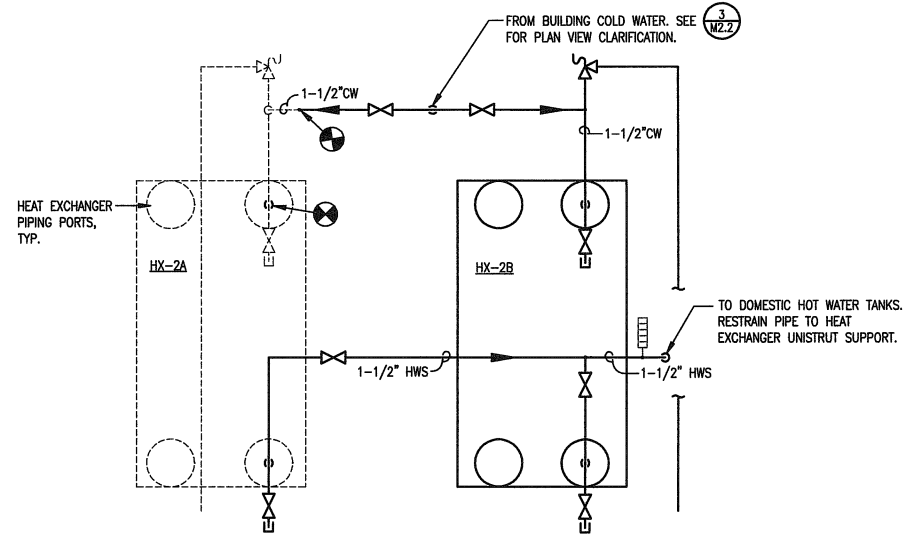
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M2.1

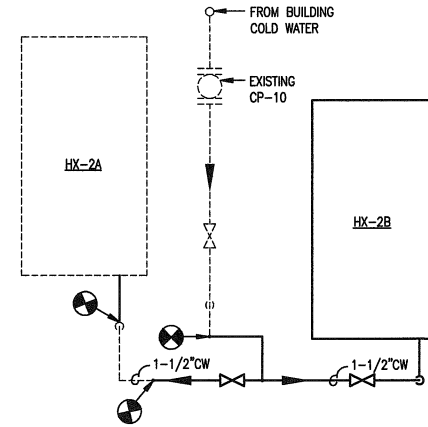




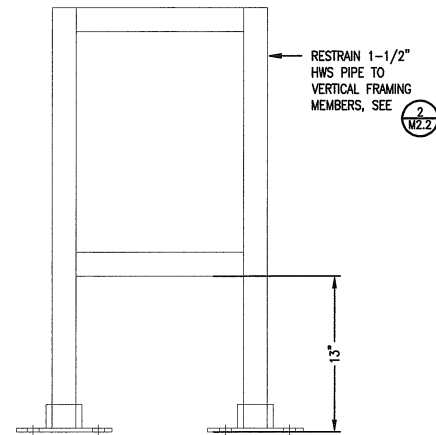
1 SECTION VIEW OF GLYCOL HEATING PIPING
M2.2 NO SCALE



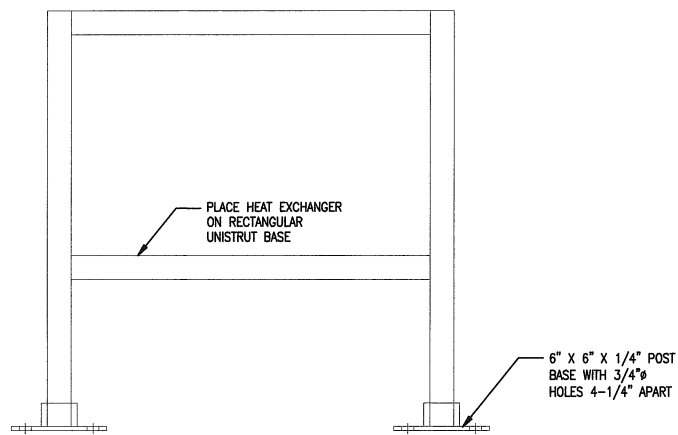
2 SECTION VIEW OF DOMESTIC HOT WATER PIPING
M2.2 NO SCALE



3 PLAN VIEW OF DOMESTIC HOT WATER PIPING
M2.2 NO SCALE



FRONT VIEW



SIDE VIEW

GENERAL NOTES

- ALL STRUCTURAL MEMBERS ARE P9000 UNISTRUT W/APPROPRIATE CONNECTORS.
- CONSTRUCT HX-2B SUPPORT SIMILAR TO EXISTING HX-2A SUPPORT.

4 HEAT EXCHANGER BRACING
M2.2 NO SCALE

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**DOMESTIC HOT
WATER SYSTEM
SECTION VIEWS**

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In Charge MAF

Drawn By MLB

Checked By MAF

M2.2

