

INVITATION TO BID

Alaska Veterans & Pioneers Home Resident Restroom Renovations ANC 23-22C

Bidders are invited to submit sealed bids, in single copy, to: Contractor to submit a bid to provide all labor, supervision, permits, equipment and materials to renovate resident restrooms as described in accordance with the plans and specifications associated with this document. This project consists of a base bid and two additive alternates.

Project related questions or clarifications: Chris Capps, Project Manager at (907) 269-7816 or Chris.capps@alaska.gov

**Bid Deadline is 2:00pm November 22, 2022, local time.
Bids will be opened publicly at 2:00 pm local time November 22, 2022, at 3601 C Street Suite 578 Anchorage, AK 99503**

Bids, modifications or withdrawals transmitted by mail must be received no later than 30 minutes prior to the scheduled time of bid opening.

Mark Moon at 3601 C Street - Suite 578 Anchorage Alaska 99503 must receive hand-delivered bids, modifications or withdrawals prior to the scheduled time of bid opening.

Faxed bid modifications must be addressed to:

DHSS/FMS/Facilities - ATTN: Mark Moon - Fax number: (907) 334-2689

The Engineer's Estimate: Between \$250,000 and \$500,000

The Project completion date: 210 Days after NTP

Plans and Specifications may be printed by the Bidder from:

- the State of Alaska website (www.state.ak.us) Public Notices Online button, click on the More Public Notices button, Browse Active Public Notice button, then Health & Social Services, and Procurement

OR

- the Bidder may forward the project website location/address information to the print shop of their choice for printing – all associated printing costs are payable by the Bidder

Bidders are responsible for checking this website for addenda. Not acknowledging addenda at the time of bid will deem the Bidder non-responsive.

Issued: November 10, 2022

Alaska Veterans & Pioneers Home

Resident Restroom Renovations

PROJECT NO. ANC 23-22C

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Alaska Veterans & Pioneers Home

Resident Restroom Renovations

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STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES

INVITATION TO BID
for Construction Contract

Date _____

Alaska Veterans & Pioneers Home – Resident Restroom Renovations, ANC 23-22C

Project Name and Number

Location of Project: Palmer, Alaska
Contracting Officer: Janelle Earls, Contracting Officer
Issuing Office: Dept. of Family & Community Services, Office of the Commissioner, Finance & Management Services
State Funded [] Federal Aid []

Description of Work: - Work consists of a base bid and 2 bid alternates.
Base bid consists of renovations to thirty-one (31) resident restrooms including but not limited to: mechanical, electrical, hazardous material remediation, architectural, new fixtures, finishes and flooring, in the Raven, Cordova, and Fireweed resident wings.
Bid Alternate #1: Renovations to eight (8) resident restrooms in the Homestead Wing
Bid Alternate #2: Renovations to four (4) single occupancy restrooms in the Raven Wing.
See Drawings and Specifications for additional details.

The Engineer's Estimate is between:
\$250,000 and \$500,000

All work shall be completed in 210 Calendar Days, or by _____.
Interim Completion dates, if applicable, will be shown in the Special Provisions.

Bidders are invited to submit sealed bids, in single copy, for furnishing all labor, equipment, and materials and for performing all work for the project described above. Bids will be opened publicly at 2:00 pm local time, at 3601 C Street, Suite 578 Anchorage, Alaska 99503 on the 22th of November 2022.

SUBMISSION OF BIDS

ALL BIDS INCLUDING ANY AMENDMENTS OR WITHDRAWALS MUST BE RECEIVED PRIOR TO BID OPENING. BIDS SHALL BE SUBMITTED ON THE FORMS FURNISHED AND MUST BE IN A SEALED ENVELOPE MARKED AS FOLLOWS:

Bid for Project: ANC 23-22C Alaska Veterans & Pioneers Home Resident Restroom Renovations	ATTN: Mark Moon State of Alaska Department of Family & Community Services Facilities Office 3601 C Street Suite 578 Anchorage, AK 99503
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Bids, amendments, or withdrawals transmitted by mail must be received in the above specified post office box no later than **30 minutes** prior to the scheduled time of bid opening. Hand-delivered bids, amendments or withdrawals must be received at **3601 C Street – Suite 578 Anchorage, Alaska 99503** prior to the scheduled time of bid opening. Faxed bid amendments must be addressed to **Mark Moon**. Fax number: (907) 334-2689.

A bid guaranty is required with each bid in the amount of 5% of the amount bid. (Alternate bid items as well as supplemental bid items appearing on the bid schedule shall be included as part of the total amount bid when determining the amount of bid guaranty required for the project.)

The Department hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this Invitation, Disadvantaged Business Enterprises (DBEs) will be afforded full opportunity to submit bids and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

NOTICE TO BIDDERS

Bidders are hereby notified that data to assist in preparing bids is available as follows:

Plans and Specifications may be printed by the Bidder from:

- the State of Alaska website under Public Notices On-line

OR

- the Bidder may forward the project website location/address information to the print shop of their choice for printing – all associated printing costs are payable by the Bidder

All questions relating to technical aspects of the project should be directed to the following. Bidders requesting assistance in viewing the project must make arrangements at least 48 hours in advance with:

Project Manager: Chris Capps, DFCS Building Management Specialist

Fax: (907) 334-2689 _____ Phone: (907) 907 269-7816 _____ Email: mark.moon@alaska.gov

All questions concerning bidding procedures should be directed to:

ATTN: Chris Capps

State of Alaska

Department of Family & Community Services

Facilities Office

3601 C Street, Suite 578 Anchorage, AK 99503

907 269-7812

Other Information:

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 & Complete/sign Alaska Veterans Affidavit (06D-17, dated 4/12)
4. The value of the preference cannot exceed \$5,000.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
INFORMATION TO BIDDERS

This Information to Bidders outlines requirements that a bidder must follow when submitting a bid. The Department will reject a noncompliant bid.

100.01 BIDDERS QUALIFICATIONS

A bidder shall:

Submit evidence of a valid Department of Commerce, Community, and Economic Development certificate of Contractor Registration (Contractor Registration), under AS 08.18, and submit evidence of a valid Alaska Business License prior to award; and

When requested, submit a completed Contractor's Questionnaire (Form 25D-8) stating previous experience in performing comparable work, business and technical organization, financial resources, and equipment available to be used in performing the work.

Before a bid is considered for award, the bidder may be requested by the Department to submit a statement of facts, in detail, as to his previous experience in performing comparable work, his business and technical organization, financial resources, and plant available to be used in performing the contemplated work.

100.02 CONTENTS OF BID PACKAGE

Upon request, the Department will furnish prospective bidders with a bid package, at the price stated in the Invitation To Bid.

The bid package includes the following:

- 1) Location and description of the project;
- 2) Time in which the work must be completed;
- 3) Amount of the bid guaranty;
- 4) Date, time, and place when bids are due;
- 5) Plans and specifications; and
- 6) Bid forms.

Unless otherwise stated in the bid package, the Plans, Contract Provisions and Specifications, Standard Modifications, Special Provisions, permits, forms and any other documents designated in the bid package are considered a part of the bid whether attached or not.

100.03 EXAMINATION OF CONTRACT REQUIREMENTS

Bidders are responsible for carefully examining the plans, specifications and all other documents incorporated in the contract to determine the requirements thereof before preparing bids.

Any explanation desired by bidders regarding the meaning or interpretation of drawings and specifications must be requested in writing and with sufficient time allowed for a reply to reach them before the submission of their bids. Oral explanations or instructions given before the award of the contract will not be binding. Any interpretation made will be in the form of an addendum to the specifications or drawings and will be furnished to all bidders and its receipt by the bidder shall be acknowledged.

100.04 CONDITIONS AT SITE OF WORK

Bidders are responsible for visiting the site to ascertain pertinent local conditions such as the location, accessibility and character of the site, labor conditions, the character and extent of the existing work within or adjacent thereto, and any other work being performed thereon.

100.05 PREPARATION OF BIDS

A. A bidder shall prepare its bid using the Department provided bid forms or legible copies of the Department's forms.

The bid must be signed in ink by the person or persons authorized to sign the Contract for the bidder. If a bidder is a corporation, the bid must be signed by a corporate officer or agent with authority to bind the corporation. If a bidder is a partnership, a partner must sign. If the bidder is a joint venture, each principal member must sign. If a bidder is a sole proprietorship, the owner must sign. Each person signing the bid must initial any changes made to entries on the bid forms.

B. The bid schedule contains empty space(s) that call for the bidder to enter its proposed price for each corresponding item which may include unit price or lump sum items and alternative, optional or supplemental price schedules or a combination thereof which will result in a total bid amount for the proposed construction.

C. The bidder shall specify the price or prices bid in figures. On unit price contracts the bidder shall also show the products of the respective unit prices and quantities written in figures in the column provided for the purpose and the total amount of the proposal obtained by adding the amounts of the several items. All the figures shall be in ink or typed.

D. Neither conditional nor alternative bids will be considered unless called for.

100.06 BID SECURITY

All bids shall be accompanied by a bid security in the amount specified on the Invitation to Bid. The bid security shall be unconditionally payable to the State of Alaska and shall be in the form of an acceptable Bid Bond (Form 25D-14), or a certified check, a cashier's check or a money order made payable to the State of Alaska.

The surety of a Bid Bond may be any corporation or partnership authorized to do business in Alaska as an insurer under AS 21.09. A legible power of attorney shall be included with each Bid Bond (Form 25D-14).

A Bid Bond must be accompanied by a legible Power of Attorney.

An individual surety will not be accepted as a bid security.

100.07 ADDENDA REQUIREMENTS

The Department will issue addenda if it determines, in its discretion, that clarifications or changes to the Contract documents or bid due date are needed. The Department may send addenda by any reasonable method such as fax, email, or may post the addenda on its website or online bidding service. Unless picked up in person or included with the bid documents, addenda or notice that an addendum has been issued will be addressed to the individual or company to whom bidding documents were issued and sent to the email address or fax number on the plan holders' list. Notwithstanding the Department's efforts to distribute addenda, bidders are responsible for ensuring that they have received all addenda affecting the Invitation To Bid. Bidders must acknowledge all addenda on the Bid Forms, by fax, or by email before the deadline stated in the Invitation to Bid.

100.08 DELIVERY OF BIDS

Bids shall be submitted in a sealed envelope. When bids are submitted in a sealed envelope, the envelope shall clearly indicate its contents and the address of the Department's designated contracts office, as specified on the Invitation to Bid. Bids for other work may not be included in the envelope. Emailed or faxed bids will not be considered, unless specifically called for in the Invitation to Bid.

100.09 WITHDRAWAL OR REVISION OF BIDS

Bids may be withdrawn or revised in writing delivered by mail, fax, or email, provided that the Department's designated office receives the withdrawal or revision before the deadline stated in the Invitation To Bid. Withdrawal requests must be signed and submitted by the bidder's duly appointed representative who is legally authorized to bind the bidder. Revisions shall include both the modification of the unit bid price and the total modification of each item modified but shall not reveal the amount of the total original or revised bids.

100.10 PROTEST OF INVITATION TO BID

An interested party, as defined in AS 36.30.699, may protest an Invitation to Bid before the bid opening in accordance with AS 36.30.560 and AS 36.30.565. The interested party must submit a protest to the Contracting Officer.

100.011 RECEIPT AND OPENING OF BIDS

The Department will only consider bids, revisions, and withdrawals received before the deadline stated in the Invitation to Bid.

The Department will assemble, open, and publicly announce bids at the time and place indicated in the Invitation to Bid, or as soon thereafter as practicable. The Department is not responsible for prematurely opening or for failing to open bids that are improperly addressed or identified.

100.012 NONRESPONSIVE BIDS

1. A bid shall be rejected as nonresponsive if it:
 - a. Is not properly signed by an authorized representative of the bidder and in a legally binding manner;
 - b. Contains unauthorized additions, conditional or alternative bids, or other irregularities that make the bid incomplete, indefinite, or ambiguous;
 - c. Includes a reservation of the right to accept or reject any award, or to enter into a contract pursuant to an award,
 - d. Fails to include an acceptable bid guaranty with the bid;
 - e. Is materially unbalanced; or
 - f. Fails to meet any other material requirement of the Invitation To Bid.
2. A bid may be rejected as nonresponsive, in the Department's discretion, if it:
 - a. Is not typed or completed in ink;
 - b. Fails to include an acknowledgement of receipt of each addendum by assigned number and date of issue; or
 - c. Is missing a bid price for any pay item, except when alternate pay items are authorized.

100.013 BIDDERS INTERESTED IN MORE THAN ONE BID

A party who has quoted prices to a bidder is not thereby disqualified from quoting prices to other bidders or from submitting a bid directly for the work.

100.014 ELECTRONIC MAIL

Within its submitted bid, a bidder must include a current electronic mail (email) address of bidder's representative who possesses authority to receive, process, and respond to Department emails regarding the advertised project.

The Department may send notices and information to a bidder by using the furnished email address of the bidder's authorized representative.

A bidder shall notify the Department if the bidder requests the Department to send email notices or information to an address different from the email address initially provided in its bid forms. The bidder shall notify the Department of such change by sending a request in writing to the Contract's point of contact identified on the Invitation to Bid that is signed by a representative who is authorized and empowered to legally bind the bidder.

Delivery of an email sent by the Department is complete upon receipt in the addressee's email account. An email sent after 4:30 pm shall be deemed to have occurred at the opening of business on the next working day.

If needed, the Department may demonstrate proof of email delivery by affidavit or certification that includes the following:

1. The date and time that the Department sent the email message;
2. The email address from which the Department sent the message;
3. The name and email address to which the Department sent the message;
4. A statement that the Department sent the email message and that the person signing the affidavit or certification believes the transmission to have been complete and without error; and
5. An attached copy of the subject email.

100.015 CONSIDERATION OF BIDS

Until the Award, the Department may reject any or all bids, waive minor informalities or advertise for new bids without liability to any bidder if the Department, in its discretion, determines that to do so is in the best interests of the State.

A bidder may request withdrawal of a bid after opening and before the Award only in accordance with AS 36.30.160(b) and State procurement regulations. The bidder must submit the request to the Contracting Officer.

An interested party, as defined in AS 36.30.699, may protest a proposed Award of contract as per AS 36.30.560 and AS 36.30.565. The bidder must submit the protest to the Contracting Officer.

WHOLLY STATE-FUNDED PROJECTS. On wholly state-funded projects, determination of the low bidder will include bidder preferences as required under AS 36.30.321, according to subsections 1-3 below. Alaska Bidder Preference, Alaska Veteran Preference, and Alaska Product Preference are not applicable on projects with federal funding.

1. Alaska Bidder Preference: A bidder claiming this preference shall provide with their bid an Alaska Bidder Preference Certification, certifying they qualify as an Alaska bidder eligible for Alaska Bidder Preference according to AS 36.30.

If the bidder qualifies as an Alaska bidder, a five percent (5%) preference will be applied to the price of the bid. "Alaska bidder" means a person who:

- a. holds a current Alaska business license;
- b. submits a bid for goods, services, or construction under the name as appearing on the person's current Alaska business license;

- c. 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 bid;
 - d. 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 former AS 32.05, AS 32.06, or AS 32.11 and all partners are residents of the state; and
 - e. If a joint venture, is composed entirely of ventures that qualify under (a) through (d), above.
2. Alaska Veteran Preference: A bidder claiming this preference shall provide an Alaska Veteran Preference Certification, certifying they qualify as an Alaska bidder eligible for Alaska Veteran preference according to AS 36.30.

If a bidder qualifies as an Alaska bidder and is a qualifying entity, an Alaska Veteran Preference of 5 percent shall be applied to the bid price. The preference may not exceed \$5,000 (AS 36.30.321). A “qualifying entity” means a:

- a. sole proprietorship owned by an Alaska veteran;
- b. partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska veterans;
- c. limited liability company organized under AS 10.50 if a majority of the members are Alaska veterans; or
- d. corporation that is wholly owned by individuals, and a majority of the individuals are Alaska veterans.

A preference under this section is in addition to any other preference for which the bidder qualifies.

To qualify for this preference, the 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.

An Alaska veteran is a resident of Alaska who:

- 1) served in the Armed forces of the United States, including a reserve unit of the United States armed forces; or the Alaska Territorial Guard, the Alaska Army National Guard, the Alaska Air National Guard, or the Alaska Naval Militia; and
 - 2) was separated from service under a condition that was not dishonorable.
3. Alaska Product Preference: A bidder claiming this preference shall complete and sign the Alaska Product Preference Worksheet, according to the worksheet instructions, and submit the completed worksheet with their bid.

Except for timber, lumber and manufactured lumber products used in the construction project under AS 36.30.322(b), an Alaska products preference will be given as required under AS 36.30.326 - 36.30.332 when the bidder designates the use of Alaska products.

If the successful bidder/contractor proposes to use an Alaska product and does not do so, a penalty will be assessed against the successful bidder/contractor according to AS 36.30.330(a).

Each Alaska product declared on the Alaska Product Preference Worksheet must have an "Approval" date on the Alaska Product Preference Program List, that is on or before the bid opening date for this contract, and that does not expire before the bid opening date for this contract.

100.016 RESPONSIBILITY OF BIDDERS

The Department may find a bidder is nonresponsible for any one of the following reasons, but is not limited in its responsibility analysis to the following factors:

1. Evidence of bid rigging or collusion;
2. Fraud or dishonesty in the performance of previous contracts;
3. More than one bid for the same work from an individual, firm, or corporation under the same or different name;
4. Unsatisfactory performance on previous or current contracts;
5. Failure to pay, or satisfactorily settle, all bills due for labor and material on previous contracts;
6. Uncompleted work that, in the judgment of the Department, might hinder or prevent the bidder's prompt completion of additional work, if awarded;
7. Failure to reimburse the State for monies owed on any previous contracts;
8. Default under previous contracts;
9. Failure to submit evidence of registration and licensing;
10. Failure to comply with any qualification requirements of the Department;
11. Engaging in any activity that constitutes a cause for debarment or suspension under the State Procurement Code (AS 36.30) or submitting a bid during a period of debarment;
12. Failure to satisfy the responsibility standards set out in state regulations;
13. Lack of skill, ability, financial resources, or equipment required to perform the contract;
or
14. Lack of legal capacity to contract.

Nothing contained in this section deprives the Department of its discretion in determining the lowest responsible bidder.

100.017 SUBCONTRACTOR LIST

The apparent low bidder shall submit a completed Subcontractor List, Form 25D-5, within five working days following receipt of written notification by the Department that it is the low bidder.

An apparent low bidder who fails to submit a completed Subcontractor List form within the time allowed will be declared nonresponsible and may be required to forfeit the bid security. The Department will then consider the next lowest bidder for award of the Contract.

If a bidder fails to list a subcontractor, or lists more than one subcontractor for the same portion of work, and the value of that work is in excess of one-half of one percent of the total bid amount, the bidder agrees to perform that portion of work without a subcontractor and represents that it is qualified to perform that work.

A bidder who lists as a subcontractor another contractor who, in turn, sublets the majority of the work required under the Contract, violates this subsection.

A bidder or Contractor may, without penalty, replace a listed subcontractor who:

- 1) Fails to comply with licensing and registration requirements of AS 08.18;
- 2) Fails to obtain a valid Alaska business license;
- 3) Files for bankruptcy or becomes insolvent;
- 4) Fails to execute a subcontract for performance of the work for which the subcontractor was listed, and the bidder acted in good faith;
- 5) Fails to obtain bonding acceptable to the Department;
- 6) Fails to obtain insurance acceptable to the Department;
- 7) Fails to perform the subcontract work for which the subcontractor was listed;
- 8) Must be replaced to meet the bidder's required state or federal affirmative action requirements;
- 9) Refuses to agree or abide with the bidder's labor agreement; or
- 10) Is determined by the Department to be not responsible.

In addition to the circumstances described above, a Contractor may in writing request permission from the Department to add a new subcontractor or replace a listed subcontractor. The Department will approve the request if it determines in writing that allowing the addition or replacement is in the best interest of the State.

A bidder or Contractor shall submit a written request to add a new subcontractor or replace a listed subcontractor to the Contracting Officer a minimum of five working days before the date the new subcontractor is scheduled to begin work on the construction site. The request must state the basis for the request and include supporting documentation acceptable to the Contracting Officer.

If a bidder violates this subsection, the Contracting Officer may:

- 1) Cancel the Contract after Award without any damages accruing to the Department; or
- 2) After notice and a hearing, assess a penalty on the bidder in an amount not exceeding 10 percent of the value of the subcontract at issue.

100.018 AWARD OF CONTRACT

The Department will award the Contract to the lowest responsible and responsive bidder unless it rejects all bids. The Department will notify all bidders in writing via email, fax, or U.S. Mail of its intent to award.

In order to establish a clear and definitive basis of award for contracts with additive alternates, the State has established a budgeted amount from which the order of bidders will be determined. The amount will be disclosed when timely received bids are announced. The low bid will be determined by considering the basic bid and additive alternate(s) in the order listed on the Bid Schedule up to a total not to exceed the budgeted amount. The State reserves the right to reject all bids. The State also reserves the right to award the contract above or below the budgeted amount to the low bidder based on any combination of alternate(s) or no alternate(s), providing that the low bidder remains unchanged.

The Department will notify the successful bidder in writing of its intent to award the Contract and request that certain required documents, including the Contract Form, bonds, and insurance be submitted within the time specified. The successful bidder's refusal to sign the Contract and provide the requested documents within the time specified may result in cancellation of the notice of intent to award and forfeiture of the bid security.

If an award is made, it will be made as soon as practicable and usually within 40 days after bid opening. Award may be delayed due to bid irregularities or a bid protest, or if the award date is extended by mutual consent. Bids shall be valid for 120 days after bid opening, and may be extended by mutual consent.

100.019 RETURN OF BID SECURITY

The Department will return bid securities, other than bid bonds:

1. To all except the two lowest responsive and responsible bidders, as soon as practicable after the opening of bids; and
2. To the two lowest responsive and responsible bidders immediately after Contract award.

100.020 PERFORMANCE AND PAYMENT BONDS

The successful bidder shall furnish all required Performance and Payment Bonds on forms provided by the Department for the sums specified in the Contract. If no sum is specified, the successful bidder shall comply with AS 36.25.010. The Surety on each bond may be any corporation or partnership authorized to do business in the state as an insurer under AS 21.09 or two individual sureties approved by the Contracting Officer.

If individual sureties are used, two individual sureties must each provide the Department with security assets located in Alaska equal to the penal amount of either the performance bond or the payment bond. Any costs incurred by the Contractor and the individual Surety are subsidiary and shall be borne by the Contractor or the individual Surety. In no event will the Department be liable for these costs.

Individual sureties shall provide security by one, or a combination, of the following methods:

1. Escrow Account, with a federally insured financial institution, in the name of the Department. Acceptable securities include, but are not limited to, cash, treasury notes, bearer instruments having a specific value, or money market certificates.
2. Irrevocable letters of credit, from a financial institution approved by the Contracting Officer, with the Department named as beneficiary.
3. Cashier's or certified check made payable to the State of Alaska issued by financial institutions approved by the Contracting Officer.

These bonds and security assets, as applicable, shall remain in effect for 12 months after the date of final payment or, if longer, until all obligations and liens under this Contract are satisfied, including, but not limited to, obligations under General Conditions, Subsection 12.7.

The Department may, in its discretion, notify the bonding company or Surety of any potential default or liability.

The Contractor shall substitute, within five working days, another bond or surety acceptable to the Department if an individual Surety or the Surety on any bond furnished in connection with the Contract:

1. Becomes insolvent or is declared bankrupt;
2. Loses its right to do business in any state affecting the work;
3. Ceases to meet Contract requirements;
4. Fails to furnish reports of financial condition upon request; or
5. Otherwise becomes unacceptable to the Department.

When approved by the Contracting Officer, the Contractor may replace:

1. An individual surety with a corporate surety; or
2. Posted collateral with substitute collateral.

Failure to maintain the specified bonds or to provide substitute bonds when required under this section may be grounds for withholding contract payments until substitute bonding is obtained, and may, in the Department's discretion, be grounds for declaring the Contractor in default.



STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES

REQUIRED DOCUMENTS

State Funded Contracts

Alaska Veterans & Pioneers Home – Resident Restroom Renovations, ANC 23-22C

REQUIRED FOR BID. Bids will not be considered if the following documents are not filled out and submitted at the time of bidding:

1. **Bid Form (Form 25D-9S)**
2. **Bid Schedule**
3. **Bid Security (Form 25D-14)**

REQUIRED FOR BID MODIFICATIONS. Any bid revisions must be submitted by the bidder prior to bid opening on the following form:

4. **Bid Modification (Form 25D-16)**

REQUIRED FOR CLAIMED PROCUREMENT PREFERENCE. The Department will not consider a claimed procurement preference unless a bidder submits the appropriate, signed certification(s) for the claimed preference at the time of bidding:

5. **Alaska Bidder Preference Certification (Form 25D-19)**
6. **Alaska Veteran Preference Certification (Form 25D-17)**
7. **Alaska Products Preference Certification (Form 25D-20)**

REQUIRED AFTER NOTICE OF APPARENT LOW BIDDER. The apparent low bidder is required to complete and submit the following document within 5 working days after receipt of written notification:

1. **Subcontractor List (Form 25D-5)**

REQUIRED FOR AWARD. In order to be awarded the contract, the successful bidder must completely fill out and submit the following documents within the time specified in the intent to award letter:

1. **Construction Contract (Form 25D-10A) or (Form 25D-10H), as applicable.**
2. **Payment Bond (Form 25D-12)**
3. **Performance Bond (Form 25D-13)**
4. **Contractor's Questionnaire (Form 25D-8)**
5. **Contractor's Certification of Subcontractors**
6. **Certificate of Insurance (from carrier)**
7. **Dept. of Labor – Notice of Work Form**



STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES

Proposal

for
Alaska Veterans & Pioneers Home – Resident Restroom Renovations # ANC 23-22C

Project Name and Number

By

Company Name

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

**To the CONTRACTING OFFICER,
DEPARTMENT OF FAMILY & COMMUNITY SERVICES**

In compliance with your Invitation for Bids dated _____, the Undersigned proposes to furnish and deliver all the materials and do all the work and labor required in the construction of the above-referenced Project, located at or near **Palmer, Alaska**, according to the plans and specifications and for the amount and prices named herein as indicated on the Bid Schedule consisting of _____ sheet(s), which is made a part of this Bid.

The Undersigned declares that he has carefully examined the contract requirements and that he has made a personal examination of the site of the work; that he understands that the quantities, where such are specified in the Bid Schedule or on the plans for this project, are approximate only and subject to increase or decrease, and that he is willing to perform increased or decreased quantities of work at unit prices bid under the conditions set forth in the Contract Documents.

The Undersigned hereby agrees to execute the said contract and bonds within fifteen calendar days, or such further time as may be allowed in writing by the Contracting Officer, after receiving notification of the acceptance of this bid, and it is hereby mutually understood and agreed that in case the Undersigned does not, the accompanying bid guarantee shall be forfeited to the State of Alaska, Department of Health & Social Services as liquidated damages, and the said Contracting Officer may proceed to award the contract to others.

The Undersigned agrees to commence the work within 10 calendar days and to complete the work by **210** calendar days, after the effective date of the Notice to Proceed or by _____, unless extended in writing by the Contracting Officer.

The Undersigned proposes to furnish Payment Bond in the amount of **100%** and Performance Bond in the amount of **100%** (of the contract), as surety conditioned for the full, complete, and faithful performance of this contract.

The Undersigned acknowledges receipt of the following addenda to the drawings and/or specifications
(Give number and date of each).

Addenda Number	Date Issued	Addenda Number	Date Issued	Addenda Number	Date Issued

NON-COLLUSION AFFIDAVIT

The Undersigned declares, under penalty of perjury under the laws of the United States, that neither he, nor the firm, association, or corporation of which he is a member, has, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this bid.

The Undersigned has read the foregoing proposal and hereby agrees to the conditions stated therein by affixing his signature below:

Signature of Authorized Company Representative

Typed or Printed Name and Title

Phone Number

Fax Number

Email Address



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

ALASKA BIDDER PREFERENCE CERTIFICATION

In response to the advertised procurement for:

Project Name and Number: _____

Bidder/Proposer (company name): _____

Operation of Alaska Bidder Preference

Procurement preferences under the Alaska Procurement Code are benefits that the State grants only to qualified bidders. Under AS 36.30.990(2), if a bidder is an eligible "Alaska Bidder", the Department will apply a five percent preference to the price of the bidder's proposal.

Instructions regarding Alaska Bidder Preference

A bidder that claims the Alaska Bidder Preference must review and then certify that each statement appearing under the heading "Alaska Bidder Certification" is true. The individual that signs the certification shall include his/her printed name and position within bidder's organization, e.g., sole proprietor, partner, etc. If a bidder fails to submit a signed certification, the Department will not apply the claimed preference.

Alaska Bidder Certification

The bidding entity for which I am the duly authorized representative:

- (A) Holds a current Alaska business license;
- (B) Is submitting a bid or proposal for goods, services, or construction under the name appearing on the bidder's current Alaska business license;
- (C) Has maintained a place of business in the State staffed by the bidder or an employee of the bidder for a period of six months immediately preceding the date of the proposal;
- (D) 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 former AS 32.05, AS 32.06, or AS 32.11 and all partners are residents of the State; and
- (E) If a joint venture, is composed entirely of ventures that qualify under the four preceding paragraphs of this Alaska Bidder Certification.

By applying my signature below, I certify under penalty of perjury that I am the duly appointed representative of this bidder, which has authorized and empowered me to legally bind it concerning its proposal, and that the foregoing statements are true and correct.

By (signature)

Date

Printed name

Alaska Business License Number

Title:



ALASKA VETERAN'S PREFERENCE AFFIDAVIT

In response to the Invitation to Bid for: **Alaska Veterans & Pioneers Home**
Project Name and Number: **Resident Restroom Renovations, Project # ANC 23-22C**

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 Veterans;
- (3) Limited Liability Company organized under AS 10.50 if 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

INSTRUCTIONS FOR ALASKA PRODUCTS PREFERENCE WORKSHEET

Special Note:

All procurements, except those funded from Federal sources, shall contain Contract provisions for the preference of Alaska products. The products listed by the Bidder on this worksheet have been selected for the referenced project from the "Alaska Product Preference List" which was in force 30 days prior to the advertisement date of this contract. Bidders may obtain a copy of the appropriate listing "Alaska Preference List" by contacting their local DCED office or by writing: Dept. of Commerce & Economic Development, Alaska Products Preference Listing, P.O. Box D, Juneau, AK 99811.

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 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--ie.: 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 entry line of the following page 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 this amount on the final page of the worksheet and at line or column "C" on the Bid Schedule or Bid Schedule Summary Sheet as appropriate. Submit worksheet(s) with Bid Schedule Summary Sheet.

C. Forms 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 of 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. (ie. "Prehung Doors by Alaska Door Co. in lieu of "Prehung Solid Core Wood Door, model "Super Door", Section 08210, 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 product 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 FORM BASIC BID --SUBTOTAL" and enter a subtotal amount for all non-applicable products as 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 as provided and at the corresponding line in column "C" on the Bid Schedule Summary Sheet. Submit worksheet(s) with the Bid Schedule Summary Sheet.

(9) A separate listing for each alternate bid is required.

BID SCHEDULE

Project: **Alaska Veterans & Pioneers Home – Resident Restroom Renovations, ANC 23-22C**

Bidders Please Note: Before preparing this bid schedule, read carefully, "Information to Bidders", "Supplementary Information to Bidders", and the following:

The Bidder shall insert a fixed price in figures opposite each pay item that appears in the bid schedule to furnish all labor, material, equipment, supervision, and provide all work for each item listed. No price is to be entered or tendered for any item not appearing in the bid schedule. Conditioned or qualified bids will be considered non-responsive.

PAY ITEM	DESCRIPTION OF PAY ITEM	TOTAL BID PRICE, IN FIGURES
----------	-------------------------	-----------------------------

1. BASIC BID, ADDITIVE ALTERNATE #'s 1 and 2

All work described in the Specifications and Construction Documents for Project # **ANC 23-22C**

- a. Lump Sum Total Basic Bid \$ _____
- b. Additive Alternate #1 \$ _____
- c. Additive Alternate #2 \$ _____
- d. Alaska Bidders Preference (5% of Basic Bid) \$ _____
- e. Alaska Bidders Preference Add Alt #1 (5% of Additive Alternate #1) \$ _____
- f. Alaska Bidders Preference Add Alt #2 (5% of Additive Alternate #2) \$ _____
- g. Alaska Veterans Preference (5% of Basic Bid NTE \$5,000) \$ _____
- h. Alaska Veterans Preference (5% of Basic Bid + 5% Add. Alt #1 - NTE \$5,000) \$ _____
- i. Alaska Veterans Preference (5% of Basic Bid + 5% Add. Alt #1 + 5% Add Alt #2 - NTE \$5000) \$ _____
- j. Alaska Products Preference – Attach Worksheet \$ _____
- k. ADJUSTED Basic Bid (a – d – g – j) \$ _____
- l. ADJUSTED Basic Bid + Adjusted Add Alt #1 (a + b – d – e – h – j) \$ _____
- m. ADJUSTED Basic Bid + Adj. Add Alt #1 + Adj. Add Alt #2
(a + b + c – d – e – f – i – j) \$ _____

2. UNIT PRICING:

Provide a price per square foot for unforeseen and unidentified Abatement areas \$ _____

BID SCHEDULE

Contractor's Name (Printed)

Alaska Contractor's Registration #

Expires

Alaska Business License #

Expires

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

.....

Procurement Officer: _____

Date of Receipt of Bid: _____



STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES

BID BOND

For

Alaska Veterans & Pioneers Home – Resident Restroom Renovations, ANC 23-22C

Project Name and Number

DATE BOND EXECUTED: _____

PRINCIPAL (Legal name and business address):

TYPE OF ORGANIZATION:

	<input type="checkbox"/> Individual	<input type="checkbox"/> Partnership
	<input type="checkbox"/> Joint Venture	<input type="checkbox"/> Corporation
STATE OF INCORPORATION:		

SURETY(IES) (Name and business address):

A.	B.	C.
PENAL SUM OF BOND:		DATE OF BID:

We, the PRINCIPAL and SURETY above named, are held and firmly bound to the State (State of Alaska), in the penal sum of the amount stated above, for the payment of which sum will be made, we bind ourselves and our legal representatives and successors, jointly and severally, by this instrument.

THE CONDITION OF THE FOREGOING OBLIGATION is that the Principal has submitted the accompanying bid in writing, date as shown above, on above-referenced Project in accordance with contract documents filed in the office of the Contracting Officer, and under the Invitation for Bids therefore, and is required to furnish a bond in the amount stated above.

If the Principal's bid is accepted and he is offered the proposed contract for award, and if the Principal fails to enter into the contract, then the obligation to the State created by this bond shall be in full force and effect.

If the Principal enters into the contract, then the foregoing obligation is null and void.

PRINCIPAL

Signature(s)	1.	2.	3.
Name(s) & Title(s) (Typed)	1.	2.	3.

Corporate
Seal

See Instructions on Reverse

CORPORATE SURETY(IES)

Surety A	Name of Corporation	State of Incorporation	Liability Limit \$
Signature(s)	1.	2.	Corporate Seal
Name(s) & Titles (Typed)	1.	2.	

Surety B	Name of Corporation	State of Incorporation	Liability Limit \$
Signature(s)	1.	2.	Corporate Seal
Name(s) & Titles (Typed)	1.	2.	

Surety C	Name of Corporation	State of Incorporation	Liability Limit \$
Signature(s)	1.	2.	Corporate Seal
Name(s) & Titles (Typed)	1.	2.	

INSTRUCTIONS

1. This form shall be used whenever a bid bond is submitted.
2. Insert the full legal name and business address of the Principal in the space designated. If the Principal is a partnership or joint venture, the names of all principal parties must be included (e.g., "Smith Construction, Inc. and Jones Contracting, Inc. DBA Smith/Jones Builders, a joint venture"). If the Principal is a corporation, the name of the state in which incorporated shall be inserted in the space provided.
3. Insert the full legal name and business address of the Surety in the space designated. The Surety on the bond may be any corporation or partnership authorized to do business in Alaska as an insurer under AS 21.09. Individual sureties will not be accepted.
4. The penal amount of the bond may be shown either as an amount (in words and figures) or as a percent of the contract bid price (a not-to-exceed amount may be included).
5. The scheduled bid opening date shall be entered in the space marked Date of Bid.
6. The bond shall be executed by authorized representatives of the Principal and Surety. Corporations executing the bond shall also affix their corporate seal.
7. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.
8. The states of incorporation and the limits of liability of each surety shall be indicated in the spaces provided.
9. The date that bond is executed must not be later than the bid opening date.



CONSTRUCTION CONTRACT

Alaska Veterans & Pioneers Home – Resident Restroom Renovations, ANC 23-22C
Project Name and Number

This CONTRACT, between the STATE OF ALASKA, DEPARTMENT OF HEALTH & SOCIAL SERVICES, herein called the Department, acting by and through its Contracting Officer, and

Company Name

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

a/an Individual Partnership Joint Venture Sole Proprietorship Corporation incorporated under the laws of the State of _____, its successors and assigns, herein called the Contractor, is effective the date of the signature of the Contracting Officer on this document.

WITNESSETH: That the Contractor, for and in consideration of the payment or payments herein specified and agreed to by the Department, hereby covenants and agrees to furnish and deliver all the materials and to do and perform all the work and labor required in the construction of the above-referenced project at the prices bid by the Contractor for the respective estimated quantities aggregating approximately the sum of

_____ Dollars
(\$ _____), and such other items as are mentioned in the original Bid, which Bid and prices named, together with the Contract Documents are made a part of this Contract and accepted as such.

It is distinctly understood and agreed that no claim for additional work or materials, done or furnished by the Contractor and not specifically herein provided for, will be allowed by the Department, nor shall the Contractor do any work or furnish any material not covered by this Contract, unless such work is ordered in writing by the Department. In no event shall the Department be liable for any materials furnished or used, or for any work or labor done, unless the materials, work, or labor are required by the Contract or on written order furnished by the Department. Any such work or materials which may be done or furnished by the Contractor without written order first being given shall be at the Contractor's own risk, cost, and expense and the Contractor hereby covenants and agrees to make no claim for compensation for work or materials done or furnished without such written order.

The Contractor further covenants and agrees that all materials shall be furnished and delivered, and all labor shall be done and performed, in every respect, to the satisfaction of the Department, on or before: _____. It is expressly understood and agreed that in case of the failure on the part of the Contractor, for any reason, except with the written consent of the Department, to complete the furnishing and delivery of materials and the doing and performance of the work before the aforesaid date, the Department shall have the right to deduct from any money due or which may become due the Contractor, or if no money shall be due, the Department shall have the right to recover **Five Hundred** dollars (\$500.00) per day for each calendar day elapsing between the time stipulated for the completion and the actual date of completion in accordance with the terms hereof; such deduction to be made, or sum to be recovered, not as a penalty but as liquidated damages.

The bonds given by the Contractor in the sum of \$ _____ Payment Bond, and \$ _____ Performance Bond, to secure the proper compliance with the terms and provisions of this Contract, are submitted herewith and made a part hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Contract and hereby agree to its terms and conditions.

CONTRACTOR

Company Name

Signature of Authorized Company Representative

Typed or Printed Name and Title

Date

(Corporate Seal)

**STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES**

Signature of Contracting Officer

Typed or Printed Name

Date



STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES

PERFORMANCE BOND

Bond No. _____

For

Alaska Veterans & Pioneers Home – Resident Restroom Renovations, ANC 23-22C
Project Name and Number

KNOW ALL WHO SHALL SEE THESE PRESENTS:

That _____
of _____ as Principal,
and _____
of _____ as Surety,
firmly bound and held unto the State of Alaska in the penal sum of _____ Dollars

(\$ _____) good and lawful money of the United States of America for the payment whereof, well and truly to be paid to the State of Alaska, we bind ourselves, our heirs, successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has entered into a written contract with said State of Alaska, on the _____ of _____ A.D., 20____, for construction of the above-named project, said work to be done according to the terms of said contract.

Now, THEREFORE, the conditions of the foregoing obligation are such that if the said Principal shall well and truly perform and complete all obligations and work under said contract and if the Principal shall reimburse upon demand of the Department of Transportation and Public Facilities any sums paid him which exceed the final payment determined to be due upon completion of the project, then these presents shall become null and void; otherwise they shall remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals at _____, _____ this _____ day of _____ A.D., 20____.

Principal: _____
Address: _____
By: _____
Contact Name: _____
Phone: () _____

Surety: _____
Address: _____
By: _____
Contact Name: _____
Phone: () _____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

See Instructions on Reverse

INSTRUCTIONS

1. This form shall be used whenever a performance bond is required. There shall be no deviation from this form without approval from the Contracting Officer.
2. The full legal name, business address, phone number, and point of contact of the Principal and Surety shall be typed on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
3. The penal amount of the bond, or in the case of more than one surety the amount of obligation, shall be typed in words and in figures.
4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Contracting Officer.
5. The bond shall be signed by authorized persons. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.



STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES

PAYMENT BOND

Bond No. _____

For

Alaska Veterans & Pioneers Home – Resident Restroom Renovations, ANC 23-22C
Project Name and Number

KNOW ALL WHO SHALL SEE THESE PRESENTS:

That _____
of _____ as Principal,
and _____
of _____ as Surety,
firmly bound and held unto the State of Alaska in the penal sum of _____ Dollars

(\$ _____) good and lawful money of the United States of America for the payment whereof,
well and truly to be paid to the State of Alaska, we bind ourselves, our heirs, successors, executors, administrators, and assigns,
jointly and severally, firmly by these presents.

WHEREAS, the said Principal has entered into a written contract with said State of Alaska, on the _____ of _____
A.D., 20____, for construction of the above-referenced project, said work to be done according to the terms of said contract.

Now, THEREFORE, the conditions of the foregoing obligation are such that if the said Principal shall comply with all requirements
of law and pay, as they become due, all just claims for labor performed and materials and supplies furnished upon or for the work
under said contract, whether said labor be performed and said materials and supplies be furnished under the original contract, any
subcontract, or any and all duly authorized modifications thereto, then these presents shall become null and void; otherwise they
shall remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals at _____,
_____ this _____ day of _____ A.D., 20_____.

Principal: _____
Address: _____
By: _____
Contact Name: _____
Phone: () _____

Surety: _____
Address: _____
By: _____
Contact Name: _____
Phone: () _____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

Alaska Department of Family & Community Authorized Representative

Date

See Instructions on Reverse

INSTRUCTIONS

1. This form, for the protection of persons supplying labor and material, shall be used whenever a payment bond is required. There shall be no deviation from this form without approval from the Contracting Officer.
2. The full legal name, business address, phone number, and point of contact of the Principal and Surety shall be typed on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
3. The penal amount of the bond, or in the case of more than one surety the amount of obligation, shall be typed in words and in figures.
4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Contracting Officer.
5. The bond shall be signed by authorized persons. Where such persons are signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.

2. What percent of the total value of this contract do you intend to subcontract? _____ %

3. Do you propose to purchase any equipment for use on this project?
[] No [] Yes If YES, describe type, quantity, and approximate cost:

4. Do you propose to rent any equipment for this work?
[] No [] Yes If YES, describe type and quantity:

5. Is your bid based on firm offers for all materials necessary for this project?
[] Yes [] No If NO, please explain:

C. EXPERIENCE

1. Have you had previous construction contracts or subcontracts with the State of Alaska?
[] Yes [] No

Describe the most recent or current contract, its completion date, and scope of work:

2. List, as an attachment to this questionnaire, other construction projects you have completed, the dates of completion, scope of work, and total contract amount for each project completed in the past 12 months.

I hereby certify that the above statements are true and complete.

Name of Contractor

Name and Title of Person Signing

Signature

Date

**STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES
DOCUMENT 00700 -**

**GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT FOR
BUILDINGS**

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ACKNOWLEDGMENT

"The State of Alaska, General Conditions of the Construction Contract for Buildings " is based on the "Standard General Conditions of the Construction Contract" as published by the National Society of Professional Engineers (document number 1910-8, 1983 edition) on behalf of the Engineers Joint Construction Documents Committee. Portions of the NSPE General Conditions are reprinted herein by the express permission of NSPE. Modifications to the NSPE text are made to provide for State laws, regulations, and established procedures.

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ARTICLE 1 - DEFINITIONS

Wherever used in the Contract Documents the following terms, or pronouns in place of them, are used, the intent and meaning, unless a different intent or meaning is clearly indicated, shall be interpreted as set forth below.

The titles and headings of the articles, sections, and subsections herein are intended for convenience of reference and shall not be considered as having bearing on their interpretation.

Whenever used in the Specifications or other Contract Documents the following terms have the meaning indicated which are applicable to both the singular and plural thereof. Working titles which have a masculine gender, are intended to refer to persons of either sex.

Terms not defined below shall have their ordinary accepted meanings within the context which they are used. Words which have a well-known technical or trade meaning when used to describe work, materials or equipment shall be interpreted in accordance with such meaning. Words defined in Article 1 are capitalized throughout these General Conditions.

Addenda - All clarifications, corrections, or changes issued graphically or in writing by the DEPARTMENT after the Advertisement but prior to the opening of Proposals.

Advertisement - The public announcement, as required by law, inviting bids for Work to be performed or materials to be furnished.

Application for Payment - The form provided by the DEPARTMENT which is to be used by the CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

Approved or Approval - Means written approval by the Contracting Officer or his authorized representative as defined in Article 2.1.

A.S - Initials which stand for Alaska Statute.

Award - The acceptance, by the DEPARTMENT, of the successful bid.

Bid Bond - A type of Proposal Guaranty.

Bidder - Any individual, firm, corporation or any acceptable combination thereof, or joint venture submitting a bid for the advertised Work.

Calendar Day - Every day shown on the calendar, beginning and ending at midnight.

Change Order - A written order by the DEPARTMENT directing changes to the Contract Documents, within their general scope.

Conditions of the Contract - Those portions of the Contract Documents which define the rights and responsibilities of the contracting parties and of others involved in the Work. The Conditions of the Contract include General Conditions, Supplementary Conditions and other conditions.

Consultant - The person, firm, or corporation retained directly by the DEPARTMENT to prepare Contract Documents, perform construction administration services, or other Project related services.

Contingent Sum Work Item - When the bid schedule contains a Contingent Sum Work Item, the Work covered shall be performed only upon the written Directive of the Project Manager. Payment shall be made as provided in the Directive.

Contract - The written agreement between the DEPARTMENT and the CONTRACTOR setting forth the obligations of the parties and covering the Work to be performed, all as required by the Contract Documents.

Contract Documents - The Contract form, Addenda, the bidding requirements and CONTRACTOR's bid (including all appropriate bid tender forms), the bonds, the Conditions of the Contract and all other Contract requirements, the Specifications, and the Drawings furnished by the DEPARTMENT to the CONTRACTOR, together with all Change Orders and documents approved by the Contracting Officer, for inclusion, modifications and supplements issued on or after the Effective Date of the Contract.

Contracting Officer - The person authorized by the Commissioner to enter into and administer the Contract on behalf of the DEPARTMENT. He has authority to make findings, determinations and decisions with respect to the Contract and, when necessary, to modify or terminate the Contract. The Contracting Officer is identified on the construction Contract.

CONTRACTOR - The individual, firm, corporation or any acceptable combination thereof, contracting with the DEPARTMENT for performance of the Work.

Contract Price - The total moneys payable by the DEPARTMENT to the CONTRACTOR under the terms of the Contract Documents.

Contract Time - The number of Calendar Days or the date specified in the construction Contract and authorized time extensions which identify how much time the CONTRACTOR is allowed to achieve Final Completion.

Controlling Item - Any feature of the Work considered at the time by the Contracting Officer as essential to the orderly completion of the Work and which, if delayed, will delay the time of Final Completion of the Contract (such as an item of Work on the critical path of a network schedule).

Defective - An adjective which refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or Approval referred to in the Contract Documents, or has been damaged prior to the DEPARTMENT's Approval.

DEPARTMENT - The Alaska Department of Health and Social Services. References to "Owner", "State", "Contracting Agency", mean the DEPARTMENT.

Directive - A written communication to the CONTRACTOR from the Contracting Officer interpreting or enforcing a Contract requirement or ordering commencement of an item of Work.

Drawings - The Drawings which show the character and scope of the Work to be performed and which have been furnished by the DEPARTMENT or the DEPARTMENT's Consultant and are by reference made a part of the Contract Documents.

Effective Date of the Contract - The date on which the Contract is fully executed by both CONTRACTOR and the DEPARTMENT.

Final Acceptance - The DEPARTMENT's written acceptance of the Work following Final Completion and the performance of all Contract requirements by the CONTRACTOR.

Final Completion - The Project (or specified part thereof) has progressed to the point that all required Work is complete as determined by the Contracting Officer.

General Requirements - Sections of Division I of the Specifications which contain administrative and procedural requirements as well as requirements for temporary facilities which apply to Specification Divisions 2 through 16.

Holidays - In the State of Alaska, Legal Holidays occur on:

1. New Years Day - January 1
2. Martin Luther King's Birthday - Third Monday in January
3. President's Day - Third Monday in February
4. Seward's Day - Last Monday in March
5. Memorial Day - Last Monday in May
6. Independence Day - July 4
7. Labor Day - First Monday in September
8. Alaska Day - October 18
9. Veteran's Day - November 11
10. Thanksgiving Day - Fourth Thursday in November
11. Christmas Day - December 25
12. Every Sunday
13. Every day designated by public proclamation by the President of the United States or the Governor of the State as a legal Holiday.

If any Holiday listed above falls on a Saturday, Saturday and the preceding Friday are both legal Holidays. If the Holiday should fall on a Sunday, except (12) above, Sunday and the following Monday are both legal Holidays. See Title 44, Alaska Statutes.

Install - Means to build into the Work, ready to be used in complete and operable condition and in compliance with Contract Documents.

Invitation for Bids - A portion of the bidding documents soliciting bids for the Work to be performed.

Notice of Intent to Award - The written notice by the DEPARTMENT to all Bidders identifying the apparent successful Bidder and establishing the DEPARTMENT's intent to execute the Contract when all conditions required for execution of the Contract are met.

Notice to Proceed - A written notice to the CONTRACTOR to begin the Work and establishing the date on which the Contract Time begins.

Payment Bond - The security furnished by the CONTRACTOR and his Surety to guarantee payment of the debts covered by the bond.

Performance Bond - The security furnished by the CONTRACTOR and his Surety to guarantee performance and completion of the Work in accordance with the Contract.

Project - The total construction, of which the Work performed under the Contract Documents is the whole or a part, where such total construction may be performed by more than one CONTRACTOR.

Project Manager - The authorized representative of the Contracting Officer who is responsible for administration of the Contract.

Proposal - The offer of a Bidder, on the prescribed forms, to perform the Work at the prices quoted.

Proposal Guaranty - The security furnished with a Proposal to guarantee that the bidder will enter into a Contract if his Proposal is accepted by the DEPARTMENT.

Regulatory Requirements - Laws, rules, regulations, ordinances, codes and/or orders.

Schedule of Values - The DEPARTMENT's document, submitted by the CONTRACTOR and reviewed by the Contracting Officer, which shall serve as the basis for computing payment and for establishing the value of separate items of Work which comprise the Contract Price.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules,

performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the CONTRACTOR to illustrate material, equipment, fabrication, or erection for some portion of the Work.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative and procedural details applicable thereto.

Subcontractor - An individual, firm, or corporation to whom the CONTRACTOR or any other Subcontractor sublets part of the Contract.

Substantial Completion - Although not fully completed, the Work (or a specified part thereof) has progressed to the point where, in the opinion of the Contracting Officer, as evidence by the DEPARTMENT's written notice, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended. The terms "Substantially Complete" and "Substantially Completed" as applied to any Work refer to Substantial Completion thereof.

Supplemental Agreement - A written agreement between the CONTRACTOR and the DEPARTMENT covering work that is not within the general scope of the Contract.

Supplementary Conditions - The part of the Contract Documents which amends or supplements these General Conditions.

Supplier - A manufacturer, fabricator, distributor, materialman or vendor of materials or equipment.

Surety - The corporation, partnership, or individual, other than the CONTRACTOR, executing a bond furnished by the CONTRACTOR.

Unit Price Work - Work to be paid for on the basis of unit prices.

Using Agency - The entity who will occupy or use the completed Project.

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, will culminate in the entire completed Project, or the various separately identifiable parts thereof.

ARTICLE 2 - AUTHORIZATION AND LIMITATIONS

2.1 Authorities and Limitations

2.1.1 The Contracting Officer alone, shall have the power to bind the DEPARTMENT and to exercise the rights, responsibilities, authorities and functions vested in the Contracting Officer by the Contract Documents, except that the Contracting Officer shall have the right to designate in writing authorized representatives to act for him. Wherever any provision of the Contract Documents specifies an individual or organization, whether governmental or private, to perform any act on behalf of or in the interest of the DEPARTMENT that individual or organization shall be deemed to be the Contracting Officer's authorized representative under this Contract but only to the extent so specified. The Contracting Officer may, at any time during the performance of this Contract, vest in any such authorized representatives additional power and authority to act for the Contracting Officer or designate additional representatives, specifying the extent of their authority to act for the Contracting Officer; a copy of each document vesting additional authority in or removing that authority from an authorized representative or designating an additional authorized representative shall be furnished to the CONTRACTOR. The head of the Contracting Agency reserves the right to appoint a new Contracting Officer without affecting any of the CONTRACTOR's obligations to the DEPARTMENT under this Contract.

2.1.2 The CONTRACTOR shall perform the Work in accordance with any written order (including but not limited to instruction, direction, interpretation or determination) issued by an authorized representative in accordance with the authorized representative's authority to act for the Contracting Officer. The CONTRACTOR assumes all the risk and consequences of performing the Work in accordance with any order (including but not limited to instruction, direction, interpretation or determination) of anyone not authorized to issue such order, and of any order not in writing.

- 2.1.3 Should the Contracting Officer or his authorized representative designate Consultant(s) to act for the DEPARTMENT as provided for in Paragraph 2.1.1, the performance or nonperformance of the Consultant under such authority to act, shall not give rise to any contractual obligation or duty of the Consultant to the CONTRACTOR, any Subcontractor, any Supplier, or any other organization performing any of the Work or any Surety representing them.
- 2.1.4 The term "Contracting Officer" when used in the text of these General Conditions or other Contract Documents following this section shall also mean any duly authorized representative of the Contracting Officer when authorized in accordance with Paragraph 2.1.1.

2.2 Evaluations by Contracting Officer:

- 2.2.1 The Contracting Officer will decide all questions which may arise as to:
- a. Quality and acceptability of materials furnished;
 - b. Quality and acceptability of Work performed;
 - c. Compliance with the schedule of progress;
 - d. Interpretation of Contract Documents;
 - e. Acceptable fulfillment of the Contract on the part of the CONTRACTOR.
- 2.2.2 In order to avoid cumbersome terms and confusing repetition of expressions in the Contract Documents the terms "as ordered", "as directed", "as required", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used it shall be understood as if the expression were followed by the words "the Contracting Officer".
- When such terms are used to describe a requirement, direction, review or judgment of the Contracting Officer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise).
- 2.2.3 The use of any such term or adjective shall not be effective to assign to the DEPARTMENT any duty of authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

2.3 Means & Methods:

The means, methods, techniques, sequences or procedures of construction, or safety precautions and the program incident thereto, and the failure to perform or furnish the Work in accordance with the Contract Documents are the sole responsibility of the CONTRACTOR.

2.4 Visits to Site/Place of Business:

The Contracting Officer will make visits to the site and approved remote storage sites at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. The Contracting Officer may, at reasonable times, inspect that part of the plant or place of business of the CONTRACTOR or Subcontractor that is related to the performance of the Contract. Such observations or the lack of such observations shall in no way relieve the CONTRACTOR from his duty to perform the Work in accordance with the Contract Documents.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 Incomplete Contract Documents:

The submission of a bid by the Bidder is considered a representation that the Bidder examined the Contract Documents to make certain that all sheets and pages were provided and that the Bidder is satisfied as to the conditions to be encountered in performing the Work. The DEPARTMENT expressly denies any responsibility or liability for a bid submitted on the basis of an incomplete set of Contract Documents.

3.2 Copies of Contract Documents:

The DEPARTMENT shall furnish to the CONTRACTOR up to ten copies of the Contract Documents. Additional copies will be furnished, upon request, at the cost of reproduction.

3.3 Scope of Work:

The Contract Documents comprise the entire Contract between the DEPARTMENT and the CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the Regulatory Requirements of the place of the Project.

It is specifically agreed between the parties executing this Contract that it is not intended by any of the provisions of the Contract to create in the public or any member thereof a third party benefit, or to authorize anyone not a party to this Contract to maintain a suit pursuant to the terms or provisions of the Contract.

3.4 Intent of Contract Documents:

3.4.1 It is the intent of the Contract Documents to describe a functionally complete Project to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied, without any adjustment in Contract Price or Contract Time, whether or not specifically called for.

3.4.2 Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Regulatory Requirements of any governmental authority, whether such reference be specific or by implication, shall mean the edition stated in the Contract Documents or if not stated the latest standard specification, manual, code or Regulatory Requirements in effect at the time of Advertisement for the Project (or, on the Effective Date of the Contract if there was no Advertisement). However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the DEPARTMENT and the CONTRACTOR, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the DEPARTMENT or any of the DEPARTMENT's Consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

3.5 Discrepancy in Contract Documents:

3.5.1 Before undertaking the Work, the CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures, and dimensions shown thereon and all applicable field measurements. Work in the area by the CONTRACTOR shall imply verification of figures, dimensions and field measurements. If, during the above study or during the performance of the Work, the CONTRACTOR finds a conflict, error, discrepancy or omission in the Contract Documents, or a discrepancy between the Contract Documents and any standard specification, manual, code, or Regulatory Requirement which affects the Work, the CONTRACTOR shall promptly report such discrepancy in writing to the Contracting Officer. The CONTRACTOR shall obtain a written interpretation or clarification from the Contracting Officer before proceeding with any Work affected thereby. Any adjustment made by the CONTRACTOR without this determination shall be at his own risk and expense. However, the CONTRACTOR shall not be liable to the DEPARTMENT for failure to report any conflict, error or discrepancy in the Contract Documents unless the CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

3.5.2 Discrepancy - Order of Precedence:

When conflicts, errors, or discrepancies within the Contract Documents exist, the order of precedence from most governing to least governing will be as follows:

- Contents of Addenda
- Supplementary Conditions
- General Conditions
- General Requirements
- Technical Specifications
- Drawings
- Recorded dimensions will govern over scaled dimensions
- Large scale details over small scale details
- Schedules over plans
- Architectural drawings over structural drawings Structural drawings over mechanical and electrical drawings

3.6 Clarifications and Interpretations:

The Contracting Officer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as the Contracting Officer may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

3.7 Reuse of Documents:

Neither the CONTRACTOR nor any Subcontractor, or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with the DEPARTMENT shall have or acquire any title to or ownership rights in any of the Contract Documents (or copies thereof) prepared by or for the DEPARTMENT and they shall not reuse any of the Contract Documents on extensions of the Project or any other project without written consent of the Contracting Officer.

Contract Documents prepared by the CONTRACTOR in connection with the Work shall become the property of the DEPARTMENT.

ARTICLE 4 - LANDS AND PHYSICAL CONDITIONS

4.1 Availability of Lands:

The DEPARTMENT shall furnish as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for use of the CONTRACTOR in connection with the Work. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the DEPARTMENT, unless otherwise provided in the Contract Documents. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Visit to Site:

The submission of a bid by the CONTRACTOR is considered a representation that the CONTRACTOR has visited and carefully examined the site and is satisfied as to the conditions to be encountered in performing the Work and as to the requirements of the Contract Documents.

4.3 Explorations and Reports:

1. Reference is made to the Supplementary Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by the DEPARTMENT in preparation of the Contract Documents. The CONTRACTOR may for his purposes rely upon the accuracy of the factual data contained in such reports, but not upon interpretations or opinions drawn from such factual data contained therein or for the completeness or sufficiency thereof. Except as indicated in the immediately preceding sentence and in paragraphs 4.4 and 9.9, CONTRACTOR shall have full responsibility with respect to surface and subsurface conditions at the site.

2. **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.

4.4 Utilities:

The horizontal and vertical locations of known underground utilities as shown or indicated by the Contract Documents are approximate and are based on information and data furnished to the DEPARTMENT by the owners of such underground utilities.

4.4.2 The CONTRACTOR shall have full responsibility for:

- a. Reviewing and checking all information and data concerning utilities.
- b. Locating all underground utilities shown or indicated in the Contract Documents which are affected by the Work.
- c. Coordination of the Work with the owners of all utilities during construction.
- d. Safety and protection of all utilities as provided in paragraph 6.17.
- e. Repair of any damage to utilities resulting from the Work in accordance with 4.4.4 and 4.5.

4.4.3 If Work is to be performed by any utility owner, the CONTRACTOR shall cooperate with such owners to facilitate the Work.

4.4.4 In the event of interruption to any utility service as a result of accidental breakage or as result of being exposed or unsupported, the CONTRACTOR shall promptly notify the utility owner and the Contracting Officer. If service is interrupted, repair work shall be continuous until the service is restored. No Work shall be undertaken around fire hydrants until provisions for continued service has been approved by the local fire authority.

4.5 Damaged Utilities:

When utilities are damaged by the CONTRACTOR, the utility owner shall have the choice of repairing the utility or having the CONTRACTOR repair the utility. In the following circumstances, the CONTRACTOR shall reimburse the utility owner for repair costs or provide at no cost to the utility owner or the DEPARTMENT, all materials, equipment and labor necessary to complete repair of the damage:

- a. When the utility is shown or indicated in the Contract Documents.
- b. When the utility has been located by the utility owner.
- c. When no locate was requested by the CONTRACTOR for utilities shown or indicated in the Contract Documents.
- d. All visible utilities.
- e. When the CONTRACTOR could have, otherwise, reasonably been expected to be aware of such utility.

4.6 Utilities Not Shown or Indicated:

If, while directly performing the Work, an underground utility is uncovered or revealed at the site which was not shown or indicated in the Contract Documents and which the CONTRACTOR could not reasonably have

been expected to be aware of, the CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.19) identify the owner of such underground utility and give written notice thereof to that owner and to the Contracting Officer. The Contracting Officer will promptly review the underground utility to determine the extent to which the Contract Documents and the Work should be modified to reflect the impacts of the discovered utility. The Contract Documents will be amended or supplemented in accordance with paragraph 9.2 and to the extent necessary through the issuance of a change document by the Contracting Officer. During such time, the CONTRACTOR shall be responsible for the safety and protection of such underground utility as provided in paragraph 6.17. The CONTRACTOR may be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are directly attributable to the existence of any underground utility that was not shown or indicated in the Contract Documents and which the CONTRACTOR could not reasonably have been expected to be aware of.

4.7 Survey Control:

The DEPARTMENT will identify sufficient horizontal and vertical control data to enable the CONTRACTOR to survey and layout the Work. All survey work shall be performed under the direct supervision of a registered land surveyor when required by paragraph 7.8. Copies of all survey notes will be provided the DEPARTMENT on a weekly basis with variations between the Contract Documents and actual field conditions identified. Survey notes are to be in a format acceptable to the DEPARTMENT.

ARTICLE 5 - BONDS, INSURANCE, AND INDEMNIFICATION

5.1 Delivery of Bonds:

When the CONTRACTOR delivers the executed Contract to the Contracting Officer, the CONTRACTOR shall also deliver to the Contracting Officer such bonds as the CONTRACTOR may be required to furnish in accordance with paragraph 5.2.

5.2 Bonds:

5.2.1 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.

5.2.2 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.

5.3 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.

5.4 Insurance Requirements:

5.4.1 The CONTRACTOR shall provide evidence of insurance with a carrier or carriers satisfactory to the DEPARTMENT covering injury to persons and/or property suffered by the State of Alaska or a third party, as a result of operations which arise both out of and during the course of this Contract by the CONTRACTOR or by any Subcontractor. This coverage will also provide protection against injuries to all employees of the CONTRACTOR and the employees of any Subcontractor engaged in Work under this Contract.

5.4.2 The CONTRACTOR shall maintain in force at all times during the performance of Work under this agreement the following policies of insurance. Where specific limits and coverages are shown, it is understood that they shall be the minimum acceptable. The requirements of this paragraph shall not limit the CONTRACTOR’s responsibility to indemnify under paragraph 5.5. Additional insurance requirements specific to this Contract are contained in the Supplementary Conditions, when applicable.

a. Worker’s Compensation Insurance:

The Contractor shall provide and maintain, for all employees engaged in work under this contract, statutory limits coverage as required by AS 23.30.045.

The policy must waive subrogation against the State and include Employer’s Liability Protection with policy limits not less than:

\$500,000 each accident,
\$500,000 each disease.

b. Commercial General Liability Insurance: on an occurrence policy form covering all operations by or on behalf of the CONTRACTOR with combined single limits not less than:

\$1,000,000 each occurrence

\$1,000,000 for Personal Injury Liability

\$2,000,000 aggregate for Products-Completed Operations

\$2,000,000 general aggregate

The State of Alaska shall be named as additional insured. This insurance shall be considered to be primary and non-contributory to any other insurance carried by the State through self insurance or otherwise.

- c. Automobile Liability Insurance: covering all vehicles used by the Contractor in the performance of services under this agreement with combined single limits not less than:

\$1,000,000 each occurrence

- d.

- e. Other Coverages: As specified in the Supplementary Conditions.

- 5.4.3 All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21. Failure to maintain insurance may, at the option of the Contracting Officer, be deemed Defective Work and remedied in accordance with the Contract.

Evidence of Insurance, consisting of a certificate of insurance or the policy declaration page with required endorsements attached thereto - all of which have been executed by the insurer's representative and issued to the DEPARTMENT - shall denote the type, amount, class of operations covered, effective (and retroactive) dates, and dates of expiration. Evidence of Insurance must provide for a 30-day prior notice of cancellation, nonrenewal or material change of conditions.

Evidence pertaining to Worker's Compensation, Commercial General Liability, or Automobile Liability is required for Award. All other coverages shall be evidenced prior to commencement of WORK. Acceptance by the DEPARTMENT of deficient evidence does not constitute a waiver of Contract requirements as provided for the Conditions of the Contract.

If a certificate of insurance is submitted as evidence it shall contain the following statement:

"This is to certify that the policies described herein comply with all aspects of the insurance requirements of (Contract Name and Number, and Project Number)."

5.5 Indemnification:

The CONTRACTOR shall indemnify, save harmless, and defend the DEPARTMENT, its agents and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from the CONTRACTOR or SUBCONTRACTOR's performance of WORK under this Contract; however, this provision has no effect if, but only if, the sole proximate cause of the injury or damage is the DEPARTMENT's negligence.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 Supervision of Work:

The CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. All Work under this Contract shall be performed in a skillful and workmanlike manner. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.

6.2 Superintendence by CONTRACTOR:

The CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent. The Contracting Officer shall be advised in writing of the superintendent's name, local address, and telephone number. This written advice is to be kept current until Final Acceptance by the DEPARTMENT. The superintendent will be the CONTRACTOR's representative at the site and shall have full authority to act and sign documents on behalf of the CONTRACTOR.

All communications given to the superintendent shall be as binding as if given to the CONTRACTOR. The CONTRACTOR shall cooperate with the Contracting Officer in every way possible.

6.3 Character of Workers:

The CONTRACTOR shall provide a sufficient number of competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. The CONTRACTOR shall at all times maintain good discipline and order at the site. The Contracting Officer may, in writing, require the CONTRACTOR to remove from the Work any employee the Contracting Officer deems incompetent, careless, or otherwise detrimental to the progress of the Work, but the Contracting Officer shall have no duty to exercise this right.

6.4 CONTRACTOR to Furnish:

Unless otherwise specified in the General Requirements, the CONTRACTOR shall furnish and assume full responsibility for all materials, equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance testing, start-up and completion of the Work.

6.5 Materials and Equipment:

All materials and equipment shall be of specified quality and new, except as otherwise provided in the Contract Documents. If required by the Contracting Officer, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to the DEPARTMENT or any of the DEPARTMENT's Consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

6.6 Anticipated Schedules:

6.6.1 Within reasonable time prior to the preconstruction conference the CONTRACTOR shall submit to the Contracting Officer for review an anticipated progress schedule indicating the starting and completion dates of the various stages of the Work.

6.6.2 Within fifteen days after the date of the Notice to Proceed, the CONTRACTOR shall submit to the Contracting Officer for review:

Anticipated schedule of Shop Drawing submissions; and

Anticipated Schedule of Values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by the CONTRACTOR at the time of submission.

6.7 Finalizing Schedules:

Prior to processing the first Application for Payment the Contracting Officer and the CONTRACTOR will finalize schedules required by paragraph 6.6. The finalized progress schedule will be acceptable to the DEPARTMENT as providing information related to the orderly progression of the Work to completion within the Contract Time; but such acceptance will neither impose on the DEPARTMENT nor relieve the CONTRACTOR from full responsibility for the progress or scheduling of the Work. If accepted, the finalized schedule of Shop Drawing and other required submissions will be acknowledgment by the DEPARTMENT as providing a workable arrangement for processing the submissions. If accepted, the finalized Schedule of Values will be acknowledgment by the DEPARTMENT as an approximation of anticipated value of Work accomplished over the anticipated Contract Time. Receipt and acceptance of a schedule submitted by the CONTRACTOR shall not be construed to assign responsibility for performance or contingencies to the DEPARTMENT or relieve the CONTRACTOR of his responsibility to adjust his forces, equipment, and work

schedules as may be necessary to insure completion of the Work within prescribed Contract Time. Should the prosecution of the Work be discontinued for any reason, the CONTRACTOR shall notify the Contracting Officer at least 24 hours in advance of resuming operations.

6.8 Adjusting Schedules:

Upon substantial changes to the schedule or upon request the CONTRACTOR shall submit to the Contracting Officer for acceptance (to the extent indicated in paragraph 6.7 and the General Requirements) adjustments in the schedules to reflect the actual present and anticipated progress of the Work.

6.9 Substitutes or "Or-Equal" Items:

- 6.9.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that substitution is limited or not permitted, materials or equipment of other Suppliers may be accepted by the Contracting Officer only if sufficient information is submitted by the CONTRACTOR which clearly demonstrates to the Contracting Officer that the material or equipment proposed is equivalent or equal in all aspects to that named. The procedure for review by the Contracting Officer will include the following as supplemented in the General Requirements.
- 6.9.2 Requests for review of substitute items of material and equipment will not be accepted by the Contracting Officer from anyone other than the CONTRACTOR.
- 6.9.3 If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the Contracting Officer for Approval thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as the specified. The application will state that the evaluation and Approval of the proposed substitute will not delay the CONTRACTOR's timely achievement of Substantial or Final Completion, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with the DEPARTMENT for Work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.
- 6.9.4 All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the DEPARTMENT in evaluating the proposed substitute. The DEPARTMENT may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute. The Contracting Officer may reject any substitution request which the Contracting Officer determines is not in the best interest of the DEPARTMENT.

6.10 Substitute Means and Methods:

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Contracting Officer, if the CONTRACTOR submits sufficient information to allow the Contracting Officer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by the Contracting Officer will be similar to that provided in paragraph 6.9 as applied by the Contracting Officer and as may be supplemented in the General Requirements.

6.11 Evaluation of Substitution:

The Contracting Officer will be allowed a reasonable time within which to evaluate each proposed substitute. The Contracting Officer will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without the Contracting Officer's prior written Approval which will be evidenced by either a Change Order or a Shop Drawing Approved in accordance with Sections 6.20 and 6.21. The Contracting Officer may

require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other Surety with respect to any substitute.

6.12 Dividing the Work:

The divisions and sections of the Specifications and the identifications of any Drawings shall not control the CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.13 Subcontractors:

The CONTRACTOR may utilize the services of appropriately licensed Subcontractors on those parts of the Work which, under normal contracting practices, are performed by Subcontractors, in accordance with the following conditions:

- 6.13.1 The CONTRACTOR shall not award any Work to any Subcontractor without prior written Approval of the Contracting Officer. This Approval will not be given until the CONTRACTOR submits to the Contracting Officer a written statement concerning the proposed award to the Subcontractor which shall contain required Equal Employment Opportunity documents, evidence of insurance whose limits are acceptable to the CONTRACTOR, and an executed copy of the subcontract. All subcontracts submitted for Approval must contain provisions for payment for Work done by the Subcontractor within 7 days of receipt of payment by the CONTRACTOR. No acceptance by the Contracting Officer of any such Subcontractor shall constitute a waiver of any right of the DEPARTMENT to reject Defective Work.
- 6.13.2 The CONTRACTOR shall be fully responsible to the DEPARTMENT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR's own acts and omissions.
- 6.13.3 All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate written agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the DEPARTMENT and contains waiver provisions as required by paragraph 13.17 and termination provisions as required by Article 14.
- 6.13.4 Nothing in the Contract Documents shall create any contractual relationship between the DEPARTMENT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the DEPARTMENT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Regulatory Requirements. The DEPARTMENT will not undertake to settle any differences between or among the CONTRACTOR, Subcontractors, or Suppliers.
- 6.13.5 The CONTRACTOR and Subcontractors shall coordinate their work and cooperate with other trades so to facilitate general progress of Work. Each trade shall afford other trades every reasonable opportunity for installation of their work and storage of materials. If cooperative work of one trade must be altered due to lack of proper supervision, or failure to make proper provisions in time by another trade, such conditions shall be remedied by the CONTRACTOR with no change in Contract Price or Contract Time.
- 6.13.6 The CONTRACTOR shall include on his own payrolls any person or persons working on this Contract who are not covered by written subcontract, and shall ensure that all Subcontractors include on their payrolls all persons performing Work under the direction of the Subcontractor.

6.14 Use of Premises:

The CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project limits and approved remote storage sites and lands and areas identified in and permitted by Regulatory Requirements, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. The CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or

of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against the DEPARTMENT by any such owner or occupant because of the performance of the Work, the CONTRACTOR shall hold the DEPARTMENT harmless.

6.15 Structural Loading:

The CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.16 Record Documents:

The CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Directives, Change Orders, Supplemental Agreements, and written interpretations and clarifications (issued pursuant to paragraph 3.6) in good order and annotated to show all changes made during construction. These record documents together with all Approved samples and a counterpart of all Approved Shop Drawings will be available to the Contracting Officer for reference and copying. Upon completion of the Work, the annotated record documents, samples and Shop Drawings will be delivered to the Contracting Officer. Record documents shall accurately record variations in the Work which vary from requirements shown or indicated in the Contract Documents.

6.17 Safety and Protection:

The CONTRACTOR alone shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

- 6.17.1 All employees on the Work and other persons and organizations who may be affected thereby;
- 6.17.2 All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- 6.17.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.

The CONTRACTOR shall comply with all applicable Regulatory Requirements of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the CONTRACTOR with no change in Contract Price or Contract Time except as stated in 4.6, except damage or loss attributable to unforeseeable causes beyond the control of and without the fault or negligence of the CONTRACTOR, including but not restricted to acts of God, of the public enemy or governmental authorities. The CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until Final Acceptance (except as otherwise expressly provided in connection with Substantial Completion).

6.18 Safety Representative:

The CONTRACTOR shall designate a responsible safety representative at the site. This person shall be the CONTRACTOR's superintendent unless otherwise designated in writing by the CONTRACTOR to the Contracting Officer.

6.19 Emergencies:

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the DEPARTMENT, is obligated to act to prevent threatened damage, injury or loss. The CONTRACTOR shall give the Contracting Officer prompt written notice if the CONTRACTOR believes that any significant changes in the Work or

variations from the Contract Documents have been caused thereby. If the DEPARTMENT determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a change will be authorized by one of the methods indicated in Paragraph 9.2, as determined appropriate by the Contracting Officer.

6.20 Shop Drawings and Samples:

- 6.20.1 After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, the CONTRACTOR shall submit to the Contracting Officer for review and Approval in accordance with the accepted schedule of Shop Drawing submissions the required number of all Shop Drawings, which will bear a stamp or specific written indication that the CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as the Contracting Officer may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable the Contracting Officer to review the information as required.
- 6.20.2 The CONTRACTOR shall also submit to the Contracting Officer for review and Approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that the CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.
- 6.20.3 Before submission of each Shop Drawing or sample the CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.
- 6.20.4 At the time of each submission the CONTRACTOR shall give the Contracting Officer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to the Contracting Officer for review and Approval of each such variation. All variations of the proposed Shop Drawing from that specified will be identified in the submission and available maintenance, repair and replacement service will be indicated. The submittal will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such variation, including costs of redesign and claims of other Contractors affected by the resulting change, all of which shall be considered by the DEPARTMENT in evaluating the proposed variation. If the variation may result in a change of Contract Time or Price, or Contract responsibility, and is not minor in nature; the CONTRACTOR must submit a written request for Change Order with the variation to notify the DEPARTMENT of his intent. The DEPARTMENT may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed variation. The Contracting Officer may reject any variation request which the Contracting Officer determines is not in the best interest of the DEPARTMENT.

6.21 Shop Drawing and Sample Review:

- 6.21.1 The Contracting Officer will review with reasonable promptness Shop Drawings and samples, but the Contracting Officer's review will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review of a separate item as such will not indicate acceptance of the assembly in which the item functions. The CONTRACTOR shall make corrections required by the Contracting Officer and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review. The CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by the Contracting Officer on previous submittals.

- 6.21.2 The Contracting Officer's review of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless the CONTRACTOR has in writing advised the Contracting Officer of each such variation at the time of submission as required by paragraph 6.20.4. The Contracting Officer if he so determines, may give written Approval of each such variation by Change Order, except that, if the variation is minor and no Change Order has been requested a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample review comments shall suffice as a modification. Approval by the Contracting Officer will not relieve the CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.20.3.
- 6.21.3 The DEPARTMENT shall be responsible for all DEPARTMENT review costs resulting from the initial submission and the resubmittal. The CONTRACTOR shall, at the discretion of the Contracting Agency, pay all review costs incurred by the DEPARTMENT as a result of any additional re-submittals.
- 6.21.4 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to the Contracting Officer's review and Approval of the pertinent submission will be the sole expense and responsibility of the CONTRACTOR.

6.22 Maintenance During Construction:

The CONTRACTOR shall maintain the Work during construction and until Substantial Completion, at which time the responsibility for maintenance shall be established in accordance with paragraph 13.10.

6.23 Continuing the Work:

The CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the DEPARTMENT. No Work shall be delayed or postponed pending resolution of any disputes, disagreements, or claims except as the CONTRACTOR and the Contracting Officer may otherwise agree in writing.

6.24 Consent to Assignment:

The CONTRACTOR shall obtain the prior written consent of the Contracting Officer to any proposed assignment of any interest in, or part of this Contract. The consent to any assignment or transfer shall not operate to relieve the CONTRACTOR or his Sureties of any of his or its obligations under this Contract or the Performance Bonds. Nothing herein contained shall be construed to hinder, prevent, or affect an assignment of monies due, or to become due hereunder, made for the benefit of the CONTRACTOR's creditors pursuant to law.

6.25 Use of Explosives:

- 6.25.1 When the use of explosives is necessary for the prosecution of the Work, the CONTRACTOR shall exercise the utmost care not to endanger life or property, including new Work and shall follow all Regulatory Requirements applicable to the use of explosives. The CONTRACTOR shall be responsible for all damage resulting from the use of explosives.
- 6.25.2 All explosives shall be stored in a secure manner in compliance with all Regulatory Requirements, and all such storage places shall be clearly marked. Where no Regulatory Requirements apply, safe storage shall be provided not closer than 1,000 feet from any building, camping area, or place of human occupancy.
- 6.25.3 The CONTRACTOR shall notify each public utility owner having structures in proximity to the site of his intention to use explosives. Such notice shall be given sufficiently in advance to enable utility owners to take such steps as they may deem necessary to protect their property from injury. However, the CONTRACTOR shall be responsible for all damage resulting from the use of the explosives, whether or not, utility owners act to protect their property.

6.26 CONTRACTOR's Records:

- 6.26.1 Records of the CONTRACTOR and Subcontractors relating to personnel, payrolls, invoices of materials, and any and all other data relevant to the performance of this Contract, must be kept on a generally recognized accounting system. Such records must be available during normal work hours to the

Contracting Officer for purposes of investigation to ascertain compliance with Regulatory Requirements and provisions of the Contract Documents.

- 6.26.2 Payroll records must contain the name and address of each employee, his correct classification, rate of pay, daily and weekly number of hours of work, deductions made, and actual wages paid. The CONTRACTOR and Subcontractors shall make employment records available for inspection by the Contracting Officer and representatives of the U.S. and/or State Department of Labor and will permit such representatives to interview employees during working hours on the Project.
- 6.26.3 Records of all communications between the DEPARTMENT and the CONTRACTOR and other parties, where such communications affected performance of this Contract, must be kept by the CONTRACTOR and maintained for a period of three years from Final Acceptance. The DEPARTMENT or its assigned representative may perform an audit of these records during normal work hours after written notice to the CONTRACTOR.

ARTICLE 7 - LAWS AND REGULATIONS

7.1 Laws to be Observed

The CONTRACTOR shall keep fully informed of all federal and state Regulatory Requirements and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the Work, or which in any way affect the conduct of the Work. The CONTRACTOR shall at all times observe and comply with all such Regulatory Requirements, orders and decrees; and shall protect and indemnify the DEPARTMENT and its representatives against claim or liability arising from or based on the violation of any such Regulatory Requirement, order, or decree whether by the CONTRACTOR, Subcontractor, or any employee of either. Except where otherwise expressly required by applicable Regulatory Requirements, the DEPARTMENT shall not be responsible for monitoring CONTRACTOR's compliance with any Regulatory Requirements.

7.2 Permits, Licenses, and Taxes

- 7.2.1 The CONTRACTOR shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the Work. As a condition of performance of this Contract, the CONTRACTOR shall pay all federal, state and local taxes incurred by the CONTRACTOR, in the performance of this Contract. Proof of payment of these taxes is a condition precedent to final payment by the DEPARTMENT under this Contract.
- 7.2.2 The CONTRACTOR's certification that taxes have been paid (as contained in the *Release of Contract*) will be verified with the Department of Revenue and Department of Labor, prior to final payment.
- 7.2.3 If any federal, state or local tax is imposed, charged, or repealed after the date of bid opening and is made applicable to and paid by the CONTRACTOR on the articles or supplies herein contracted for, then the Contract shall be increased or decreased accordingly by a Change Order.

7.3 Patented Devices, Materials and Processes

If the CONTRACTOR employs any design, device, material, or process covered by letters of patent, trademark or copyright, the CONTRACTOR shall provide for such use by suitable legal agreement with the patentee or owner. The CONTRACTOR and the Surety shall indemnify and save harmless the DEPARTMENT, any affected third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the DEPARTMENT for any costs, expenses, and damages which it may be obliged to pay by reason of any infringement, at any time during the prosecution or after the completion of the Work.

7.4 Compliance of Specifications and Drawings:

If the CONTRACTOR observes that the Specifications and Drawings supplied by the DEPARTMENT are at variance with any Regulatory Requirements, CONTRACTOR shall give the Contracting Officer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 9.2. as determined appropriate by the Contracting Officer. If the CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Regulatory Requirements, and without such notice to the

Contracting Officer, the CONTRACTOR shall bear all costs arising therefrom; however, it shall not be the CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings supplied by the DEPARTMENT are in accordance with such Regulatory Requirements.

7.5 Accident Prevention:

The CONTRACTOR shall comply with AS 18.60.075 and all pertinent provisions of the Construction Code Occupational Safety and Health Standards issued by the Alaska Department of Labor.

7.6 Sanitary Provisions:

The CONTRACTOR shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees and DEPARTMENT representatives as may be necessary to comply with the requirements of the State and local Boards of Health, or of other bodies or tribunals having jurisdiction.

7.7 Business Registration:

Comply with AS 08.18.011, as follows: "it is unlawful for a person to submit a bid or work as a contractor until he has been issued a certificate of registration by the Department of Commerce. A partnership or joint venture shall be considered registered if one of the general partners or venturers whose name appears in the name under which the partnership or venture does business is registered."

7.8 Professional Registration and Certification:

All craft trades, architects, engineers and land surveyors, electrical administrators, and explosive handlers employed under the Contract shall specifically comply with applicable provisions of AS 08.18, 08.48, 08.40, and 08.52. Provide copies of individual licenses within seven days following a request from the Contracting Officer.

7.9 Local Building Codes:

The CONTRACTOR shall comply with AS 35.10.025 which requires construction in accordance with applicable local building codes to include the obtaining of required permits.

7.10 Air Quality Control:

The CONTRACTOR shall comply with all applicable provisions of AS 46.03.04 as pertains to Air Pollution Control.

7.11 Archaeological or Paleontological Discoveries:

When the CONTRACTOR's operation encounters prehistoric artifacts, burials, remains of dwelling sites, or paleontological remains, such as shell heaps, land or sea mammal bones or tusks, the CONTRACTOR shall cease operations immediately and notify the Contracting Officer. No artifacts or specimens shall be further disturbed or removed from the ground and no further operations shall be performed at the site until so directed. Should the Contracting Officer order suspension of the CONTRACTOR's operations in order to protect an archaeological or historical finding, or order the CONTRACTOR to perform extra Work, such shall be covered by an appropriate Contract change document.

7.12 Applicable Alaska Preferences:

- 7.12.1 In determining the low bidder for State funded projects, a 5% bid preference has been given to "Alaska bidders", as required under AS 36.30.170. "Alaska bidder" means a person who:
- (1) holds a current Alaska business license;
 - (2) submits a bid for goods, services, or construction under the name as appearing on the person's current Alaska 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 bid;
 - (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 or is a partnership, and all partners are residents of the state; and
 - (5) if a joint venture, is composed entirely of ventures that qualify under (1) through (4), above.

- 7.12.2 In determining the low bidder for State funded projects, a 5% bid preference has been given to "Alaska Veteran bidders", as required under AS 36.30.175 for Alaska veteran-owned businesses. 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.
- 7.12.3 In determining the low bidder for State funded projects, an "Alaska products" preference has been given as required under AS 36.30.326 - 36.30.332, when the bid documents designate the use of Alaska products. If the successful Bidder/CONTRACTOR proposes to use an Alaska product and does not do so, a penalty will be assessed against the successful Bidder/CONTRACTOR in an amount equal to the product preference percentage granted to the successful Bidder/CONTRACTOR plus one percent multiplied by the total declared value of the Alaska products proposed but not used.
- 7.12.4 Pursuant to AS 36.15.050 and AS 36.30.322, "agricultural/wood" products harvested in Alaska shall be used in State funded projects whenever they are priced no more than seven percent above agricultural/wood products harvested outside the state and are of a like quality as compared with agricultural/wood products harvested outside the state, when such products are not utilized, the CONTRACTOR shall document the efforts he made towards obtaining agricultural/wood products harvested in Alaska and include in this documentation a written statement that he contacted the manufacturers and suppliers identified on the Department of Commerce and Economic Development's list of suppliers of Alaska forest products concerning the availability of agricultural/wood products harvested in Alaska and, if available, the product prices. The CONTRACTOR's use of agricultural/wood products that fail to meet the requirements of this section shall be subject to the provisions of paragraphs 12.6 through 12.9 relating to Defective Work.
- 7.12.5 The CONTRACTOR shall maintain records, in a format acceptable to the Contracting Officer, which establish the type and extent of "agricultural/wood" and "Alaska" products utilized. All record keeping and documentation associated with the requirements 7.12.2 and 7.12.3 of this paragraph, must be provided to the DEPARTMENT upon written request or as otherwise provided within the Contract Documents.

7.13 Preferential Employment:

The CONTRACTOR shall comply with all applicable and valid laws and regulations regarding the hiring of Alaska residents now in effect or that might subsequently take effect during the term of this Contract. In order to ensure that CONTRACTOR's Subcontractors will comply with all applicable laws and regulations regarding the hiring of Alaska residents now in effect or that might subsequently take effect, the CONTRACTOR shall include in its contracts with Subcontractors under this Contract language that is substantially the same as the first sentence of this provision.

7.14 Wages and Hours of Labor:

- 7.14.1 One certified copy of all payrolls shall be submitted weekly to the State Department of Labor and, upon request, to the Contracting Officer to assure to assure compliance with AS 36.05.040, *Filing Schedule of Employees Wages Paid and Other Information*. The CONTRACTOR shall be responsible for the submission of certified copies of payrolls of all Subcontractors. The certification shall affirm that the payrolls are current and complete, that the wage rates contained therein are not less than the applicable rates referenced in these Contract Documents, and that the classification set forth for each laborer or mechanic conforms with the Work he performed. The CONTRACTOR and his Subcontractors shall attend all hearings and conferences and produce such books, papers, and documents all as requested by the Department of Labor. Should federal funds be involved, the appropriate federal agency shall also receive a copy of the CONTRACTOR's certified payrolls.
- 7.14.2 The following labor provisions shall also apply to this Contract:
- a. The CONTRACTOR and his Subcontractors shall pay all employees unconditionally and not less than once a week;

- b. wages may not be less than those stated under AS 36.05.010, regardless of the contractual relationship between the CONTRACTOR or Subcontractors and laborers, mechanics, or field surveyors;
- c. 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;
- d. the DEPARTMENT 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
 - 1. The rates of wages required by the Contract to be paid laborers, mechanics, or field surveyors on the Work, and
 - 2. The rates of wages in fact received by laborers, mechanics or field surveyors.

7.15 Overtime Work Hours and Compensation:

Pursuant to 40 U.S.C. 327-330 and AS 23.10.060 -110, the CONTRACTOR shall not require nor permit any laborer or mechanic in any workweek in which he is employed on any Work under this Contract to work in excess of eight hours in any Calendar Day or in excess of forty hours in such workweek on Work subject to the provisions of the *Contract Work Hours and Safety Standards Act* unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all such hours worked in excess of eight hours in any Calendar Day or in excess of forty hours in such workweek whichever is the greater number of overtime hours. In the event of any violation of this provision, the CONTRACTOR shall be liable to any affected employee for any amounts due and penalties and to the DEPARTMENT for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of this provision in the sum of \$10.00 for each Calendar Day on which such employee was required or permitted to be employed on such Work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by this paragraph.

7.16 Covenant Against Contingent Fees:

The CONTRACTOR warrants that no person or selling agent has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the CONTRACTOR for the purpose of securing business. For breach or violation of this warrant, the DEPARTMENT shall have the right to annul this Contract without liability or, in its discretion, to deduct price of consideration from the Contract or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

7.17 Officials Not to Benefit:

No member of or delegate to the U.S. Congress, the Alaska State Legislature or other state official shall be admitted to any share or part of this Contract, nor to any benefit that may arise there from. However, this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

7.18 Personal Liability of Public Officials:

In carrying out any of the provisions thereof, or in exercising any power or authority granted to the Contracting Officer by the Contract, there will be no liability upon the Contracting Officer nor upon state employees authorized as his representatives, either personally or as officials of the State of Alaska, it being always understood that in such matters they act as agents and representatives of the DEPARTMENT.

ARTICLE 8 - OTHER WORK

8.1 Related Work at Site:

- 8.1.1 The DEPARTMENT reserves the right at any time to contract for and perform other or additional work on or near the Work covered by the Contract.
- 8.1.2 When separate contracts are let within the limits of the Project, the CONTRACTOR shall conduct his Work so as not to interfere with or hinder the work being performed by other contractors. The

CONTRACTOR when working on the same Project with other contractors shall cooperate with such other contractors. The CONTRACTOR shall join his Work with that of the others in an acceptable manner and shall perform it in proper sequence to that of others.

- 8.1.3 If the fact that other such work is to be performed is identified or shown in the Contract Documents the CONTRACTOR shall assume all liability, financial or otherwise, in connection with this Contract and indemnify and save harmless the DEPARTMENT from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by the CONTRACTOR because of the presence and operations of other contractors.
- 8.1.4 If the fact that such other work is to be performed was not identified or shown in the Contract Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work. If the CONTRACTOR believes that such performance will require an increase in Contract Price or Contract Time, the CONTRACTOR shall notify the Contracting Officer of such required increase within fifteen (15) calendar days following receipt of the Contracting Officer's notice. Should the Contracting Officer find such increase(s) to be justified, a Change Order will be executed.

8.2 Access, Cutting, and Patching:

The CONTRACTOR shall afford each utility owner and any other contractor who is a party to such a direct contract with the DEPARTMENT (or the DEPARTMENT, if the DEPARTMENT is performing the additional work with the DEPARTMENT's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with the work of others. The CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work, the CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter such other work with the written consent of the Contracting Officer. The duties and responsibilities of the CONTRACTOR under this paragraph are for the benefit of other contractors to the extent that there are comparable provisions for the benefit of the CONTRACTOR in said direct contracts between the DEPARTMENT and other contractors.

8.3 Defective Work by Others:

If any part of the CONTRACTOR's Work depends for proper execution or results upon the work of any such other contractor, utility owner, or the DEPARTMENT, the CONTRACTOR shall inspect and promptly report to the Contracting Officer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. The CONTRACTOR's failure to so report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR's Work except for latent or nonapparent defects and deficiencies in the other work.

8.4 Coordination:

If the DEPARTMENT contracts with others for the performance of other work at the site, Contracting Officer will have authority and responsibility for coordination of the activities among the various prime contractors.

ARTICLE 9 - CHANGES

9.1 DEPARTMENT's Right to Change

Without invalidating the Contract and without notice to any Surety, the DEPARTMENT may, at any time or from time to time, order additions, deletions or revisions in the Work within the general scope of the Contract, including but not limited to changes:

- 9.1.1 In the Contract Documents;
- 9.1.2 In the method or manner of performance of the Work;
- 9.1.3 In State-furnished facilities, equipment, materials, services, or site;
- 9.1.4 Directing acceleration in the performance of the Work.

9.2 Authorization of Changes within the General Scope.

Additions, deletions, or revisions in the Work within the general scope of the Contract as specified in 9.1 shall be authorized by one or more of following ways:

- 9.2.1 Directive (pursuant to paragraph 9.3)
- 9.2.2 A Change Order (pursuant to paragraph 9.4)
- 9.2.3 DEPARTMENT's acceptance of Shop Drawing variations from the Contract Documents as specifically identified by the CONTRACTOR as required by paragraph 6.20.4.

9.3 Directive

- 9.3.1 The Contracting Officer shall provide written clarification or interpretation of the Contract Documents (pursuant to paragraph 3.6).
- 9.3.2 The Contracting Officer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents.
- 9.3.3 The Contracting Officer may order the Contractor to correct Defective Work or methods which are not in conformance with the Contract Documents.
- 9.3.4 The Contracting Officer may direct the commencement or suspension of Work or emergency related Work (as provided in paragraph 6.19).
- 9.3.5 Upon the issuance of a Directive to the CONTRACTOR by the Contracting Officer, the CONTRACTOR shall proceed with the performance of the Work as prescribed by such Directive.
- 9.3.6 If the CONTRACTOR believes that the changes noted in a Directive may cause an increase in the Contract Price or an extension of Contract Time, the CONTRACTOR shall immediately provide written notice to the Contracting Officer depicting such increases before proceeding with the Directive, except in the case of an emergency. If the Contracting Officer finds the increase in Contract Price or the extension of Contract Time justified, a Change Order will be issued. If however, the Contracting Officer does not find that a Change Order is justified, the Contracting Officer may direct the CONTRACTOR to proceed with the Work. The CONTRACTOR shall cooperate with the Contracting Officer in keeping complete daily records of the cost of such Work. If a Change Order is ultimately determined to be justified, in the absence of agreed prices and unit prices, payment for such Work will be made on a "cost of the work basis" as provided in 10.4

9.4 Change Order

A change in Contract Time, Contract Price, or responsibility may be made for changes within the scope of the Work only by Change Order. Upon receipt of an executed Change Order, the CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents except as otherwise specifically provided. Changes in Contract Price and Contract Time shall be made in accordance with Articles 10 and 11.

9.5 Shop Drawing Variations

Variations by shop drawings shall only be eligible for consideration under 9.4 when the conditions affecting the price, time, or responsibility are identified by the CONTRACTOR in writing and a request for a Change Order is submitted as per 6.20.4.

9.6 Changes Outside the General Scope; Supplemental Agreement

Any change which is outside the general scope of the Contract, as determined by the Contracting Officer, must be authorized by a Supplemental Agreement signed by the appropriate representatives of the DEPARTMENT and the CONTRACTOR.

9.7 Unauthorized Work:

The CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in this Article 9, except in the case of an emergency as provided in paragraph 6.19 and except in the case of uncovering Work as provided in paragraph 12.4.2.

9.8 Notification of Surety:

If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any bond to be given to a Surety, the giving of any such notice will be the CONTRACTOR's responsibility, and the amount of each applicable bond will be adjusted accordingly.

9.9 Differing Site Conditions:

9.9.1 The CONTRACTOR shall promptly, and before such conditions are disturbed (except in an emergency as permitted by paragraph 6.19), notify the Contracting Officer in writing of: (1) subsurface or latent physical conditions at the site differing materially from those indicated in the Contract, and which could not have been discovered by a careful examination of the site, or (2) unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract. The Contracting Officer shall promptly investigate the conditions, and if the Contracting Officer finds that such conditions do materially so differ and cause an increase or decrease in the CONTRACTOR's cost of, or time required for, performance of this Contract, an equitable adjustment shall be made and the Contract modified in writing accordingly.

9.9.2 Any claim for additional compensation by the CONTRACTOR under this clause shall be made in accordance with Article 15. In the event that the Contracting Officer and the CONTRACTOR are unable to reach an agreement concerning an alleged differing site condition, the CONTRACTOR will be required to keep an accurate and detailed record which will indicate the actual "cost of the work" done under the alleged differing site condition. Failure to keep such a record shall be a bar to any recovery by reason of such alleged differing site conditions. The Contracting Officer shall be given the opportunity to supervise and check the keeping of such records.

ARTICLE 10 - CONTRACT PRICE; COMPUTATION AND CHANGE

10.1 Contract Price:

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to the CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the CONTRACTOR shall be at his expense without change in the Contract Price. The Contract Price may only be changed by a Change Order or Supplemental Agreement.

10.2 Claim for Price Change:

Any claim for an increase or decrease in the Contract Price shall be submitted in accordance with the terms of Article 15, and shall not be allowed unless notice requirements of this Contract have been met.

10.3 Change Order Price Determination:

The value of any Work covered by a Change Order for an increase or decrease in the Contract Price shall be determined in one of the following ways:

10.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of subparagraphs 10.9.1 through 10.9.3, inclusive).

10.3.2 By mutual acceptance of a lump sum price which includes overhead and profit.

- 10.3.3 When 10.3.1 and 10.3.2 are inapplicable, on the basis of the "cost of the work" (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTOR's fee for overhead and profit (determined as provided in paragraph 10.6).
- 10.3.4 Before a Change Order or Supplemental Agreement is Approved, the CONTRACTOR shall submit cost or pricing data regarding the changed or extra Work. The CONTRACTOR shall certify that the data submitted is, to his best knowledge and belief, accurate, complete and current as of a mutually determined specified date and that such data will continue to be accurate and complete during the performance of the changed or extra Work.

10.4 Cost of the Work:

The term "cost of the work" means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by the DEPARTMENT, such costs shall be in amount no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in subparagraph 10.5:

- 10.4.1 Payroll costs for employees in the direct employ of the CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by the DEPARTMENT and the CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by the DEPARTMENT.
- 10.4.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to the CONTRACTOR unless the DEPARTMENT deposits funds with the CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to the DEPARTMENT. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to the DEPARTMENT, and the CONTRACTOR shall make provisions so that they may be obtained.
- 10.4.3 Payments made by the CONTRACTOR to Subcontractors for Work performed by Subcontractors. If required by the DEPARTMENT, CONTRACTOR shall obtain competitive quotes from Subcontractors or Suppliers acceptable to the CONTRACTOR and shall deliver such quotes to the DEPARTMENT who will then determine which quotes will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of "cost of the work" plus a fee, the Subcontractor's "cost of the work" shall be determined in the same manner as the CONTRACTOR's "cost of work" as described in paragraphs 10.4 through 10.5; and the Subcontractor's fee shall be established as provided for under subparagraph 10.6.2 clause b. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.
- 10.4.4 Costs of special consultants (including but not limited to engineers, architects, testing laboratories, and surveyors) employed for services necessary for the completion of the Work.
- 10.4.5 Supplemental costs including the following:
- a. The proportion of necessary transportation, travel and subsistence expenses of the CONTRACTOR's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of the CONTRACTOR.
 - c. Rentals of all construction equipment and machinery and the parts thereof whether rented from the CONTRACTOR or others in accordance with rental agreements Approved by the DEPARTMENT and the costs of transportation, loading, unloading, installation, dismantling and removal thereof - all in accordance

with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use or similar taxes related to the Work, and for which the CONTRACTOR is liable, imposed by Regulatory Requirements.
- e. Deposits lost for causes other than negligence of the CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by the CONTRACTOR in connection with the performance and furnishing of the Work provided they have resulted from causes other than the negligence of the CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and Approval of the DEPARTMENT. No such losses, damages and expenses shall be included in the "cost of the work" for the purpose of determining the CONTRACTOR's fee. If, however, any such loss or damage requires reconstruction and the CONTRACTOR is placed in charge thereof, the CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraphs 10.6.2.a and 10.6.2.b.
- g. The cost of utilities, fuel and sanitary facilities at the site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.
- I. Cost of premiums for additional bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by the DEPARTMENT in accordance with Article 5.

10.5 Excluded Costs:

The term "cost of the work" shall not include any of the following:

- 10.5.1 Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agency, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 or specifically covered by paragraph 10.4.4 all of which are to be considered administrative costs covered by the CONTRACTOR's fee.
- 10.5.2 Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the site.
- 10.5.3 Any part of CONTRACTOR's capital expenses including interest on CONTRACTOR's capital employed for the Work and charges against CONTRACTOR for delinquent payments.
- 10.5.4 Cost of premiums for all bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.5.i above).
- 10.5.5 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.
- 10.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6 CONTRACTOR's Fee:

The CONTRACTOR's fee allowed to CONTRACTOR for overhead and profit shall be determined as follows.

- 10.6.1 A mutually acceptable fixed fee; or if none can be agreed upon.
- 10.6.2 A fee based on the following percentages of the various portions of the "cost of the work":
- a. For costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR's fee shall be twenty percent;
 - b. For costs incurred under paragraph 10.4.3, the CONTRACTOR's fee shall be ten percent; and if a subcontract is on the basis of "cost of the work" plus a fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors and multiple tiers thereof shall be fifteen percent;
 - c. No fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;
 - d. The amount of credit to be allowed by the CONTRACTOR to the DEPARTMENT for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR's fee by an amount equal to ten percent of the net decrease; and
 - e. When both additions and credits are involved in any one change, the adjustment in CONTRACTOR's fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.a through 10.6.2.d, inclusive.

10.7 Cost Breakdown:

Whenever the cost of any Work is to be determined pursuant to paragraphs 10.4 and 10.5, the CONTRACTOR will submit in a form acceptable to the DEPARTMENT an itemized cost breakdown together with supporting data.

10.8 Cash Allowances:

It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to the Contracting Officer. CONTRACTOR agrees that:

- 10.8.1 The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and
- 10.8.2 CONTRACTOR's cost for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

Prior to final payment, an appropriate Change Order will be issued to reflect actual amounts due the CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

10.9 Unit Price Work:

- 10.9.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Contract. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by the CONTRACTOR will be made by the DEPARTMENT in accordance with paragraph 10.10.
- 10.9.2 Each unit price will be deemed to include an amount considered by the CONTRACTOR to be adequate to cover the CONTRACTOR's overhead and profit for each separately identified item. If the "Basis of Payment" clause in the Contract Documents relating to any unit price in the bid schedule requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Contract Documents.

- 10.9.3 Payment to the CONTRACTOR shall be made only for the actual quantities of Work performed and accepted or materials furnished, in conformance with the Contract Documents. When the accepted quantities of Work or materials vary from the quantities stated in the bid schedule, or change documents, the CONTRACTOR shall accept as payment in full, payment at the stated unit prices for the accepted quantities of Work and materials furnished, completed and accepted; except as provided below:
- a. When the quantity of Work to be done or material to be furnished under any item, for which the total cost of the item exceeds 10% of the total Contract Price, is increased by more than 25 percent of the quantity stated in the bid schedule, or change documents, either party to the Contract, upon demand, shall be entitled to an equitable unit price adjustment on that portion of the Work above 125 percent of the quantity stated in the bid schedule.
 - b. When the quantity of Work to be done or material to be furnished under any major item, for which the total cost of the item exceeds 10% of the total Contract Price, is decreased by more than 25 percent of the quantity stated in the bid schedule, or change documents either party to the Contract, upon demand, shall be entitled to an equitable price adjustment for the quantity of Work performed or material furnished, limited to a total payment of not more than 75 percent of the amount originally bid for the item.

10.10 Determinations for Unit Prices:

The Contracting Officer will determine the actual quantities and classifications of Unit Price Work performed by the CONTRACTOR. The Contracting Officer will review with the CONTRACTOR preliminary determinations on such matters before finalizing the costs and quantities on the Schedule of Values. The Contracting Officer's acknowledgment thereof will be final and binding on the CONTRACTOR, unless, within 10 days after the date of any such decisions, the CONTRACTOR delivers to the Contracting Officer written notice of intention to appeal from such a decision.

10.11 Disadvantaged and Women Business Enterprises (DBE & WBE) Program:

The Contract Price shall be adjusted by such means as provided in the section entitled "Phase III - Determination of Liquidated Damages and Bonuses", DISADVANTAGED AND WOMEN BUSINESS ENTERPRISE (DBE & WBE) PROGRAM, Form 25A300.

ARTICLE 11 - CONTRACT TIME; COMPUTATION AND CHANGE

11.1 Commencement of Contract Time; Notice to Proceed:

The Contract Time will commence to run on the day indicated in the Notice to Proceed.

11.2 Starting the Work:

No Work on Contract items shall be performed before the effective date of the Notice to Proceed. The CONTRACTOR shall notify the Contracting Officer at least 24 hours in advance of the time actual construction operations will begin. The CONTRACTOR may request a limited Notice to Proceed after Award has been made, to permit him to order long lead materials which could cause delays in Project completion. However, granting is within the sole discretion of the Contracting Officer, and refusal or failure to grant a limited Notice to Proceed shall not be a basis for claiming for delay, extension of time, or alteration of price.

11.3 Computation of Contract Time:

- 11.3.1 When the Contract Time is specified on a Calendar Day basis, all Work under the Contract shall be completed within the number of Calendar Days specified. The count of Contract Time begins on the day following receipt of the Notice to Proceed by the CONTRACTOR, if no starting day is stipulated therein.

Calendar Days shall continue to be counted against Contract Time until and including the date of Final Completion of the Work.

- 11.3.2 When the Contract completion time is specified as a fixed calendar date, it shall be the date of Final Completion.

11.4 Time Change:

The Contract Time may only be changed by a Change Order or Supplemental Agreement.

11.5 Extension Due to Delays:

The right of the CONTRACTOR to proceed shall not be terminated nor the CONTRACTOR charged with liquidated or actual damages because of delays to the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including, but not restricted to the following: acts of God or of the public enemy, acts of the DEPARTMENT in its contractual capacity, acts of another contractor in the performance of a contract with the DEPARTMENT, floods, fires, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather and delays of Subcontractors or Suppliers due to such causes. Any delay in receipt of materials on the site, caused by other than one of the specifically mentioned occurrences above, does not of itself justify a time extension, provided that the CONTRACTOR shall within twenty four (24) hours from the beginning of any such delay (unless the Contracting Officer shall grant a further period of the time prior to the date of final settlement of the Contract), notify the Contracting Officer in writing of the cause of delay. The Contracting Officer shall ascertain the facts and the extent of the delay and extend the time for completing the Work when the findings of fact justify such an extension.

11.6 Essence of Contract:

All time limits stated in the Contract Documents are of the essence of the Contract.

11.7 Reasonable Completion Time:

It is expressly understood and agreed by and between the CONTRACTOR and the DEPARTMENT that the date of beginning and the time for Final Completion of the Work described herein are reasonable times for the completion of the Work.

11.8 Delay Damages:

Whether or not the CONTRACTOR's right to proceed with the Work is terminated, he and his Sureties shall be liable for damages resulting from his refusal or failure to complete the Work within the specified time.

Liquidated and actual damages for delay shall be paid by the CONTRACTOR or his Surety to the DEPARTMENT in the amount as specified in the Supplementary Conditions for each Calendar Day the completion of the Work or any part thereof is delayed beyond the time required by the Contract, or any extension thereof. If a listing of incidents resulting from a delay and expected to give rise to actual or liquidated damages is not established by the Contract Documents, then the CONTRACTOR and his Surety shall be liable to the DEPARTMENT for any actual damages occasioned by such delay. The CONTRACTOR acknowledges that the liquidated damages established herein are not a penalty but rather constitute an estimate of damages that the DEPARTMENT will sustain by reason of delayed completion. These liquidated and actual damages are intended as compensation for losses anticipated to arise, and include those items enumerated in the Supplementary Conditions.

These damages will continue to run both before and after termination in the event of default termination. These liquidated damages do not cover excess costs of completion or DEPARTMENT costs, fees, and charges related to reprocurement. If a default termination occurs, the CONTRACTOR or his Surety shall pay in addition to these damages, all excess costs and expenses related to completion as provided by Article 14.2.5.

ARTICLE 12 - QUALITY ASSURANCE

12.1 Warranty and Guaranty:

The CONTRACTOR warrants and guarantees to the DEPARTMENT that all Work will be in accordance with the Contract Documents and will not be Defective. Prompt notice of all defects shall be given to the CONTRACTOR. All Defective Work, whether or not in place, may be rejected, corrected or accepted as provided for in this article.

12.2 Access to Work:

The DEPARTMENT and the DEPARTMENT's representatives, testing agencies and governmental agencies with jurisdiction interests will have access to the Work at reasonable times for their observation, inspecting and testing. The CONTRACTOR shall provide proper and safe conditions for such access.

12.3 Tests and Inspections:

- 12.3.1 The CONTRACTOR shall give the Contracting Officer timely notice of readiness of the Work for all required inspections, tests or Approvals.
- 12.3.2 If Regulatory Requirements of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, the CONTRACTOR shall assume full responsibility therefor, pay all costs in connection therewith and furnish the Contracting Officer the required certificates of inspection, testing or approval. The CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with DEPARTMENT's acceptance of a Supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for Approval prior to the CONTRACTOR's purchase thereof for incorporation in the Work. The cost of all inspections, tests and approvals in addition to the above which are required by the Contract Documents shall be paid by the CONTRACTOR. The DEPARTMENT may perform additional tests and inspections which it deems necessary to insure quality control. All such failed tests or inspections shall be at the CONTRACTOR's expense.
- 12.3.4 If any Work (including the work of others) that is to be inspected, tested or Approved is covered without written concurrence of the Contracting Officer, it must, if requested by the Contracting Officer, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense unless the CONTRACTOR has given the Contracting Officer timely notice of CONTRACTOR's intention to cover the same and the Contracting Officer has not acted with reasonable promptness in response to such notice.
- 12.3.5 Neither observations nor inspections, tests or Approvals by the DEPARTMENT or others shall relieve the CONTRACTOR from the CONTRACTOR's obligations to perform the Work in accordance with the Contract Documents.

12.4 Uncovering Work:

- 12.4.1 If any Work is covered contrary to the written request of the Contracting Officer, it must, if requested by the Contracting Officer, be uncovered for the Contracting Officer's observation and replaced at the CONTRACTOR's expense.
- 12.4.2 If the Contracting Officer considers it necessary or advisable that covered Work be observed inspected or tested, the CONTRACTOR, at the Contracting Officer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Contracting Officer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is Defective, the CONTRACTOR shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) and the DEPARTMENT shall be entitled to an appropriate decrease in the Contract Price. If, however, such Work is not found to be Defective, the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

12.5 DEPARTMENT May Stop the Work:

If the Work is Defective, or the CONTRACTOR fails to supply suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, the Contracting Officer may order the CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Contracting Officer to stop the Work shall not give rise to any duty on the part of the Contracting Officer to exercise this right for the benefit of the CONTRACTOR or any other party.

12.6 Correction or Removal of Defective Work:

If required by the Contracting Officer, the CONTRACTOR shall promptly, as directed, either correct all Defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the Contracting Officer, remove it from the site and replace it with Work which conforms to the requirements of the Contract Documents. The CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.7 One Year Correction Period:

If within one year after the date of Final Completion or such longer period of time as may be prescribed by Regulatory Requirements or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be Defective, the CONTRACTOR shall promptly, without cost to the DEPARTMENT and in accordance with the Contracting Officer's written instructions, either correct such Defective Work, or, if it has been rejected by the Contracting Officer, remove it from the site and replace it with conforming Work. If the CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the DEPARTMENT may have the Defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by the CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service for the benefit of the DEPARTMENT before Substantial Completion of all the Work, the correction period for that item may begin on an earlier date if so provided in the Specifications or by Change Order. Provisions of this paragraph are not intended to shorten the statute of limitations for bringing an action.

12.8 Acceptance of Defective Work:

Instead of requiring correction or removal and replacement of Defective Work, the Contracting Officer may accept Defective Work, the CONTRACTOR shall bear all direct, indirect and consequential costs attributable to the Contracting Officer's evaluation of and determination to accept such Defective Work (costs to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the DEPARTMENT shall be entitled to an appropriate decrease in the Contract Price. If the DEPARTMENT has already made final payment to the CONTRACTOR, an appropriate amount shall be paid by the CONTRACTOR or his Surety to the DEPARTMENT.

12.9 DEPARTMENT May Correct Defective Work:

If the CONTRACTOR fails within a reasonable time after written notice from the Contracting Officer to proceed to correct Defective Work or to remove and replace rejected Work as required by the Contracting Officer in accordance with paragraph 12.6, or if the CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if the CONTRACTOR fails to comply with any other provision of the Contract Documents, the DEPARTMENT may, after 7 days' written notice to the CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph the DEPARTMENT shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, the Contracting Officer may exclude the CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend the CONTRACTOR's services related thereto, take possession of the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or approved remote storage sites or for which the DEPARTMENT has paid the CONTRACTOR but which are stored elsewhere. The CONTRACTOR shall allow the Contracting Officer and his authorized representatives such access to the site as may be necessary to enable the Contracting Officer to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of the DEPARTMENT in exercising such rights and remedies will be charged against the CONTRACTOR, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the DEPARTMENT shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of the CONTRACTOR's Defective Work. The CONTRACTOR shall not be allowed an extension of time because of

any delay in performance of the work attributable to the exercise, by the Contracting Officer, of the DEPARTMENT's rights and remedies hereunder.

ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION

13.1 Schedule of Values:

The Schedule of Values established as provided in paragraph 6.6 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the Contracting Officer. Progress payments on account of Unit Price Work will be based on the number of units completed.

13.2 Preliminary Payments:

Upon approval of the Schedule of Values the CONTRACTOR may be paid for direct costs substantiated by paid invoices and other prerequisite documents required by the General Requirements. Direct costs shall include the cost of bonds, insurance, approved materials stored on the site or at approved remote storage sites, deposits required by a Supplier prior to fabricating materials, and other approved direct mobilization costs substantiated as indicated above. These payments shall be included as a part of the total Contract Price as stated in the Contract.

13.3 Application for Progress Payment:

The CONTRACTOR shall submit to the Contracting Officer for review an Application for Payment filled out and signed by the CONTRACTOR covering the Work completed as of the date of the Application for Payment and accompanied by such supporting documentation as is required by the Contract Documents. Progress payments will be made as the Work progresses on a monthly basis or twice a month when requested by the CONTRACTOR, but only when the approved invoice exceeds \$10,000.00.

13.4 Review of Applications for Progress Payment:

Contracting Officer will either indicate in writing a recommendation of payment or return the Application for Payment to the CONTRACTOR indicating in writing the Contracting Officer's reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the Application for Payment.

13.5 Stored Materials and Equipment:

If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, paid invoice or other documentation warranting that the DEPARTMENT has received the materials and equipment free and clear of all charges, security interests and encumbrances and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the DEPARTMENT's interest therein, all of which will be satisfactory to the Contracting Officer. No payment will be made for perishable materials that could be rendered useless because of long storage periods. No progress payment will be made for living plant materials until planted.

13.6 CONTRACTOR's Warranty of Title:

The CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to the DEPARTMENT no later than the time of payment free and clear of any claims, liens, security interests and further obligations.

13.7 Withholding of Payments:

The DEPARTMENT may withhold or refuse payment for any of the reasons listed below provided it gives written notice of its intent to withhold and of the basis for withholding:

- 13.7.1 The Work is Defective, or completed Work has been damaged requiring correction or replacement, or has been installed without Approval of Shop Drawings, or by an unapproved Subcontractor, or for unsuitable storage of materials and equipment.
- 13.7.2 The Contract Price has been reduced by Change Order,

- 13.7.3 The DEPARTMENT has been required to correct Defective Work or complete Work in accordance with paragraph 12.9.
- 13.7.4 The DEPARTMENT's actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.2.1.a through 14.2.1.k inclusive.
- 13.7.5 Claims have been made against the DEPARTMENT or against the funds held by the DEPARTMENT on account of the CONTRACTOR's actions or inactions in performing this Contract, or there are other items entitling the DEPARTMENT to a set off.
- 13.7.6 Subsequently discovered evidence or the results of subsequent inspections or test, nullify any previous payments for reasons stated in subparagraphs 13.7.1 through 13.7.5.
- 13.7.7 The CONTRACTOR has failed to fulfill or is in violation of any of his obligations under any provision of this Contract.

13.8 Retainage:

At any time the DEPARTMENT finds that satisfactory progress is not being made it may in addition to the amounts withheld under 13.7 retain a maximum amount equal to 10% of the total amount earned on all subsequent progress payments. This retainage may be released at such time as the Contracting Officer finds that satisfactory progress is being made.

13.9 Request for Release of Funds:

If the CONTRACTOR believes the basis for withholding is invalid or no longer exists, immediate written notice of the facts and Contract provisions on which the CONTRACTOR relies, shall be given to the DEPARTMENT, together with a request for release of funds and adequate documentary evidence proving that the problem has been cured. In the case of withholding which has occurred at the request of the Department of Labor, the CONTRACTOR shall provide a letter from the Department of Labor stating that withholding is no longer requested. Following such a submittal by the CONTRACTOR, the DEPARTMENT shall have a reasonable time to investigate and verify the facts and seek additional assurances before determining whether release of withheld payments is justified.

13.10 Substantial Completion:

When the CONTRACTOR considers the Work ready for its intended use the CONTRACTOR shall notify the Contracting Officer in writing that the Work or a portion of Work which has been specifically identified in the Contract Documents is substantially complete (except for items specifically listed by the CONTRACTOR as incomplete) and request that the DEPARTMENT issue a certificate of Substantial Completion. Within a reasonable time thereafter, the Contracting Officer, the CONTRACTOR and appropriate Consultant(s) shall make an inspection of the Work to determine the status of completion. If the Contracting Officer does not consider the Work substantially complete, the Contracting Officer will notify the CONTRACTOR in writing giving the reasons therefor. If the Contracting Officer considers the Work substantially complete, the Contracting Officer will within fourteen days execute and deliver to the CONTRACTOR a certificate of Substantial Completion with tentative list of items to be completed or corrected. At the time of delivery of the certificate of Substantial Completion the Contracting Officer will deliver to the CONTRACTOR a written division of responsibilities pending Final Completion with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties which shall be consistent with the terms of the Contract Documents.

The DEPARTMENT shall be responsible for all DEPARTMENT costs resulting from the initial inspection and the first re-inspection, the CONTRACTOR shall pay all costs incurred by the DEPARTMENT resulting from re-inspections, thereafter.

13.11 Access Following Substantial Completion:

The DEPARTMENT shall have the right to exclude the CONTRACTOR from the Work after the date of Substantial Completion, but the DEPARTMENT shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

13.12 Final Inspection:

Upon written notice from the CONTRACTOR that the entire Work or an agreed portion thereof is complete, the Contracting Officer will make a final inspection with the CONTRACTOR and appropriate Consultant(s) and will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or Defective. The CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies. The CONTRACTOR shall pay for all costs incurred by the DEPARTMENT resulting from re-inspections.

13.13 Final Completion and Application for Payment:

After the CONTRACTOR has completed all such corrections to the satisfaction of the Contracting Officer and delivered all maintenance and operating instructions, schedules, guarantees, bonds, certificates of payment to all laborers, Subcontractors and Suppliers, certificates of inspection, marked-up record documents and other documents - all as required by the Contract Documents; and after the Contracting Officer has indicated in writing that the Work has met the requirements for Final Completion, and subject to the provisions of paragraph 13.18, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all remaining certificates, warranties, guarantees, releases, affidavits, and other documentation required by the Contract Documents.

13.14 Final Payment:

13.14.1 If on the basis of the Contracting Officer's observation of the Work during construction and final inspection, and the Contracting Officer's review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents; and the Contracting Officer is satisfied that the Work has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the DEPARTMENT will process final Application for Payment. Otherwise, the Contracting Officer will return the Application for Payment to the CONTRACTOR, indicating in writing the reasons for refusing to process final payment, in which case the CONTRACTOR shall make the necessary corrections and resubmit the final Application for Payment.

13.14.2 If, through no fault of the CONTRACTOR, Final Completion of the Work is significantly delayed, the Contracting Officer shall, upon receipt of the CONTRACTOR's final Application for Payment, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by the DEPARTMENT for Work not fully completed or corrected is less than the retainage provided for in paragraph 13.9, and if bonds have been furnished as required in paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the CONTRACTOR to the DEPARTMENT with the application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

13.15 Final Acceptance:

Following certification of payment of payroll and revenue taxes, and final payment to the CONTRACTOR, the DEPARTMENT will issue a letter of Final Acceptance, releasing the CONTRACTOR from further obligations under the Contract, except as provided in paragraph 13.17.

13.16 CONTRACTOR's Continuing Obligation:

The CONTRACTOR's obligation to perform and complete the Work and pay all laborers, Subcontractors, and materialmen in accordance with the Contract Documents shall be absolute. Neither any progress or final payment by the DEPARTMENT, nor the issuance of a certificate of Substantial Completion, nor any use or occupancy of the Work or any part thereof by the DEPARTMENT or Using Agency, nor any act of acceptance by the DEPARTMENT nor any failure to do so, nor any review and Approval of a Shop Drawing or sample submission, nor any correction of Defective Work by the DEPARTMENT will constitute an acceptance of

Work not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.

13.17 Waiver of Claims by CONTRACTOR:

The making and acceptance of final payment will constitute a waiver of all claims by the CONTRACTOR against the DEPARTMENT other than those previously made in writing and still unsettled.

13.18 No Waiver of Legal Rights:

The DEPARTMENT shall not be precluded or be estopped by any payment, measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefor, from showing the true amount and character of the Work performed and materials furnished by the CONTRACTOR, nor from showing that any payment, measurement, estimate or certificate is untrue or is incorrectly made, or that the Work or materials are Defective. The DEPARTMENT shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the CONTRACTOR or his Sureties, or both, such damages as it may sustain by reason of his failure to comply with requirements of the Contract Documents. Neither the acceptance by the DEPARTMENT, or any representative of the DEPARTMENT, nor any payment for or acceptance of the whole or any part of the Work, nor any extension of the Contract Time, nor any possession taken by the DEPARTMENT, shall operate as a waiver of any portion of the Contract or of any power herein reserved, or of any right to damages. A waiver by the DEPARTMENT of any breach of the Contract shall not be held to be a waiver of any other subsequent breach.

ARTICLE 14 - SUSPENSION OF WORK, DEFAULT AND TERMINATION

14.1 DEPARTMENT May Suspend Work:

14.1.1 The DEPARTMENT may, at any time, suspend the Work or any portion thereof by notice in writing to the CONTRACTOR. If the Work is suspended without cause the CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if the CONTRACTOR makes an Approved claim therefor as provided in Article 15. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that suspension is due to the fault or negligence of the CONTRACTOR, or that suspension is necessary for Contract compliance, or that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the CONTRACTOR.

14.1.2 In case of suspension of Work, the CONTRACTOR shall be responsible for preventing damage to or loss of any of the Work already performed and of all materials whether stored on or off the site or Approved remote storage sites.

14.2 Default of Contract:

14.2.1 If the CONTRACTOR:

- a. Fails to begin the Work under the Contract within the time specified in the Proposal, or
- b. Fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficiently skilled workmen, suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 6.6 as revised from time to time), or
- c. Performs the Work unsuitably or neglects or refuses to remove materials or to correct Defective Work, or
- d. Discontinues the prosecution of the Work, or
- e. Fails to resume Work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent, except that if the CONTRACTOR declares bankruptcy termination in accordance with all *U.S.C. 362* and/or *11 U.S.C. 365*. In the event the CONTRACTOR declares bankruptcy the CONTRACTOR agrees that the Contract will be assumed or rejected in a timely manner so that the Contract will be completed by the date specified in the Contract Documents, or

- g. Allows any final judgment to stand against him unsatisfied for period of 60 days, or
 - h. Makes an assignment for the benefit of creditors without the consent of the Contracting Officer, or
 - i. Disregards Regulatory Requirements of any public body having jurisdiction, or
 - j. Otherwise violates in any substantial way any provisions of the Contract Documents, or
 - k. For any cause whatsoever, fails to carry on the Work in an acceptable manner, the Contracting Officer may give notice in writing to the CONTRACTOR and his Surety of such delay, neglect, or default.
- 14.2.2 If the CONTRACTOR or Surety, within the time specified in the above notice of default, shall not proceed in accordance therewith, then the DEPARTMENT may, upon written notification from the Contracting Officer of the fact of such delay, neglect or default and the CONTRACTOR's failure to comply with such notice, have full power and authority without violating the Contract, to take the prosecution of the Work out of the hands of the CONTRACTOR. The DEPARTMENT may terminate the services of the CONTRACTOR, exclude the CONTRACTOR from the site and take possession of the Work and of all the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by the CONTRACTOR (without liability to the CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the DEPARTMENT has paid the CONTRACTOR but which are stored elsewhere, and finish the Work as the DEPARTMENT may deem expedient. The DEPARTMENT may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods that in the opinion of the Contracting Officer are required for the completion of said Contract in an acceptable manner.
- 14.2.3 The Contracting Officer may, by written notice to the CONTRACTOR and his Surety or his representative, transfer the employment of the Work from the CONTRACTOR to the Surety, or if the CONTRACTOR abandons the Work undertaken under the Contract, the Contracting Officer may, at his option with written notice to the Surety and without any written notice to the CONTRACTOR, transfer the employment for said Work directly to the Surety. The Surety shall submit its plan for completion of the Work, including any contracts or agreements with third parties for such completion, to the DEPARTMENT for Approval prior to beginning completion of the Work. Approval of such contracts shall be in accordance with all applicable requirements and procedures for Approval of subcontracts as stated in the Contract Documents.
- 14.2.4 Upon receipt of the notice terminating the services of the CONTRACTOR, the Surety shall enter upon the premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the Work included under the Contract and employ by contract or otherwise any person or persons to finish the Work and provide the materials therefor, without termination of the continuing full force and effect of this Contract. In case of such transfer of employment to the Surety, the Surety shall be paid in its own name on estimates covering Work subsequently performed under the terms of the Contract and according to the terms thereof without any right of the CONTRACTOR to make any claim for the same or any part thereof.
- 14.2.5 If the Contract is terminated for default, the CONTRACTOR and the Surety shall be jointly and severally liable for damages for delay as provided by paragraph 11.8, and for the excess cost of completion, and all costs and expenses incurred by the DEPARTMENT in completing the Work or arranging for completion of the Work, including but not limited to costs of assessing the Work to be done, costs associated with advertising, soliciting or negotiating for bids or proposals for completion, and other procurement costs. Following termination the CONTRACTOR shall not be entitled to receive any further balance of the amount to be paid under the Contract until the Work is fully finished and accepted, at which time if the unpaid balance exceeds the amount due the DEPARTMENT and any amounts due to persons for whose benefit the DEPARTMENT has withheld funds, such excess shall be paid by the DEPARTMENT to the CONTRACTOR. If the damages, costs, and expenses due the DEPARTMENT exceed the unpaid balance, the CONTRACTOR and his Surety shall pay the difference.
- 14.2.6 If, after notice of termination of the CONTRACTOR's right to proceed under the provisions of this clause, it is determined for any reason that the CONTRACTOR was not in default under the provisions of this

clause, or that the delay was excusable under the provisions of this clause, or that termination was wrongful, the rights and obligations of the parties shall be determined in accordance with the clause providing for convenience termination.

14.3 Rights or Remedies:

Where the CONTRACTOR's services have been so terminated by the DEPARTMENT, the termination will not affect any rights or remedies of the DEPARTMENT against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due the CONTRACTOR by the DEPARTMENT will not release the CONTRACTOR from liability.

14.4 Convenience Termination:

14.4.1 The performance of the Work may be terminated by the DEPARTMENT in accordance with this section in whole or in part, whenever, for any reason the Contracting Officer shall determine that such termination is in the best interest of the DEPARTMENT. Any such termination shall be effected by delivery to the CONTRACTOR of a *Notice of Termination*, specifying termination is for the convenience of the DEPARTMENT the extent to which performance of Work is terminated, and the date upon which such termination becomes effective.

Immediately upon receipt of a *Notice of Termination* and except as otherwise directed by the Contracting Officer, the CONTRACTOR shall:

- a. Stop Work on the date and to the extent specified in the *Notice of Termination*;
- b. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the Work as is not terminated;
- c. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the *Notice of Termination*;
- d. With the written Approval of the Contracting Officer, to the extent he may require, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, the cost of which would be reimbursable, in whole, or in part, in accordance with the provisions of the Contract;
- e. Submit to the Contracting Officer a list, certified as to quantity and quality, of any or all items of termination inventory exclusive of items the disposition of which had been directed or authorized by the Contracting Officer;
- f. Transfer to the Contracting Officer the completed or partially completed record drawings, Shop Drawings, information, and other property which, if the Contract had been completed, would be required to be furnished to the DEPARTMENT;
- g. Take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to the Contract which is in the possession of the CONTRACTOR and in which the DEPARTMENT has or may acquire any interest.

The CONTRACTOR shall proceed immediately with the performance of the above obligations.

14.4.2 When the DEPARTMENT orders termination of the Work effective on a certain date, all Work in place as of that date will be paid for in accordance with Article 13 of the Contract. Materials required for completion and on hand but not incorporated in the Work will be paid for at invoice cost plus 15 % with materials becoming the property of the DEPARTMENT - or the CONTRACTOR may retain title to the materials and be paid an agreed upon lump sum. Materials on order shall be cancelled, and the DEPARTMENT shall pay reasonable factory cancellation charges with the option of taking delivery of the materials in lieu of payment of cancellation charges. The CONTRACTOR shall be paid 10% of the cost, freight not included, of materials cancelled, and direct expenses only for CONTRACTOR chartered freight transport which cannot be cancelled without charges, to the extent that the CONTRACTOR can establish them. The extra costs due to cancellation of bonds and insurance and that part of job start-up and phase-out costs not amortized by the amount of Work accomplished shall be paid by the DEPARTMENT. Charges for loss of profit or consequential damages shall not be recoverable except as provided above.

- 14.4.3 The termination claim shall be submitted promptly, but in no event later than 90 days from the effective date of termination, unless extensions in writing are granted by the Contracting Officer upon written request of the CONTRACTOR made within the 90 day period. Upon failure of the CONTRACTOR to submit his termination claim within the time allowed, the Contracting Officer may determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall thereupon pay to the CONTRACTOR the amount so determined.
- 14.4.4 The CONTRACTOR and the Contracting Officer may agree upon whole or any part of the amount or amounts to be paid to the CONTRACTOR by reason of the total or partial termination of Work pursuant to this section. The Contract shall be amended accordingly, and the CONTRACTOR shall be paid the agreed amount.

In the event of the failure of the CONTRACTOR and the Contracting Officer to agree in whole or in part, as provided heretofore, as to the amounts with respect to costs to be paid to the CONTRACTOR in connection with the termination of the Work the Contracting Officer shall determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall pay to the CONTRACTOR the amount determined as follows:

- a. All costs and expenses reimbursable in accordance with the Contract not previously paid to the CONTRACTOR for the performance of the Work prior to the effective date of the *Notice of Termination*;
 - b. So far as not included under "a" above, the cost of settling and paying claims arising out of the termination of the Work under subcontracts or orders which are properly chargeable to the terminated portions of the Contract;
 - c. The reasonable costs of settlement with respect to the terminated portion of the Contract heretofore, to the extent that these costs have not been covered under the payment provisions of the Contract.
- 14.4.5 The CONTRACTOR shall have the right of appeal under the DEPARTMENT's claim procedures, as defined in Article 15, for any determination made by the Contracting Officer, except if the CONTRACTOR has failed to submit his claim within the time provided and has failed to request extension of such time, CONTRACTOR shall have no such right of appeal.

In arriving at the amount due the CONTRACTOR under this section, there shall be deducted:

- a. All previous payments made to the CONTRACTOR for the performance of Work under the Contract prior to termination;
 - b. Any claim for which the DEPARTMENT may have against the CONTRACTOR;
 - c. The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the CONTRACTOR or sold pursuant to the provisions of this section and not otherwise recovered by or credited to the DEPARTMENT; and,
 - d. All progress payments made to the CONTRACTOR under the provisions of this section.
- 14.4.6 Where the Work has been terminated by the DEPARTMENT said termination shall not affect or terminate any of the rights of the DEPARTMENT against the CONTRACTOR or his Surety then existing or which may thereafter accrue because of such default. Any retention or payment of monies by the DEPARTMENT due to the CONTRACTOR under the terms of the Contract shall not release the CONTRACTOR or his Surety from liability.

Unless otherwise provided for in the Contract Documents, or by applicable statute, the CONTRACTOR, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the DEPARTMENT at all reasonable times at the office of the CONTRACTOR, all its books, records, documents, and other evidence bearing on the cost and expenses of the CONTRACTOR under his Contract and relating to the Work terminated hereunder.

ARTICLE 15 - CLAIMS AND DISPUTES

15.1 Notification:

In addition to the notice requirements set out elsewhere in this Contract, if the CONTRACTOR becomes aware of any act or occurrence which may form the basis of a claim by the CONTRACTOR for additional compensation or an extension of time for performance, or if any dispute arises regarding a question of fact or interpretation of the Contract, the CONTRACTOR shall immediately inform the Project Manager. If the matter cannot be resolved by agreement within 7 days, the CONTRACTOR shall, within the next 14 days, submit an "Intent to Claim" in writing to the Project Manager.

The claim, if not resolved, shall be presented to the Project Manager, in writing, within 60 days following receipt of the "Intent to Claim". Receipt of the claim will be acknowledged in writing by the Project Manager.

The CONTRACTOR agrees that unless these written notices are provided, the CONTRACTOR will have no entitlement to additional time or compensation for such act, event or condition. The CONTRACTOR shall in any case continue diligent performance of the Contract.

15.2 Presenting Claim:

The claim shall specifically include the following:

- 15.2.1 The act, event or condition giving rise to the claim.
- 15.2.2 The Contract provisions which apply to the claim and under which relief is provided.
- 15.2.3 The item or items of Contract Work affected and how they are affected.
- 15.2.4 The specific relief requested, including Contract Time if applicable, and the basis upon which it was calculated.

15.3 Claim Validity, Additional Information, and Project Manager's Actions:

The claim, in order to be valid, must not only show that the CONTRACTOR suffered damages or delay but that those conditions were actually a result of the act, event or condition complained of and that the Contract provides entitlement to relief to the CONTRACTOR for such act, event, or condition. The Project Manager reserves the right to make written request to the CONTRACTOR at any time for additional information which the CONTRACTOR may possess relative to the claim. The CONTRACTOR agrees to provide the Project Manager such additional information within 30 days of receipt of such a request. Failure to furnish such additional information may be regarded as a waiver of the claim. The Claim, if not resolved by agreement within 60 days of its receipt, will automatically be forwarded to the Contracting Officer for formal written decision.

15.4 Contracting Officer's Decision:

The CONTRACTOR will be furnished the Contracting Officers decision within the next 90 days, unless additional information is requested by the Contracting Officer. The Contracting Officer's decision is final and conclusive unless fraudulent as to the claim or unless, within 14 days of receipt of the decision, the CONTRACTOR delivers a written Notice of Appeal to the Appeals Officer. Procedures for appeals and hearings are covered under AS 36.30.625 and AS 36.30.630.

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SECTION 00800
SUPPLEMENTARY CONDITIONS
MODIFICATIONS TO THE GENERAL CONDITIONS
(STATE FUNDED CONTRACTS)

The following supplements modify, change, delete from, add to the "General Conditions of the Construction Contract for Buildings", revised December, 1987 (c) 4/96. Where any article of the General Conditions is modified, or and Paragraph, Subparagraph, or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph, of Clause shall remain in effect.

SC-1-DEFINITIONS

At General Conditions Article 1, add the following definitions:

“APPROVED. ‘Approved’ or ‘Approval’ as used in this contract document shall mean that the Department has received a document, form or submittal from the contractor and that the Department has taken “No exceptions” to the item submitted. Unless the context clearly indicates otherwise, approved or approval shall not mean that the Department approves of the methods or means, or that the item or form submitted meets the requirements of the contract or constitutes acceptance of the Contractor’s work. Where approved or approval means acceptance, then such approval must be set forth in writing and signed by the contracting officer or his designee.

ARCHITECT. Where used in the contract documents, “ARCHITECT” shall mean the DEPARTMENT’S ENGINEER.

ARCHITECT/ENGINEER. Where used in the contract documents, “ARCHITECT/ENGINEER” shall mean the DEPARTMENT’S ENGINEER.

ENGINEER. The DEPARTMENT’S authorized representative of the Contracting Officer, as defined in the DEPARTMENT’S *delegation of authority letter* to be issued after notice-to-proceed, who is responsible for administration of the contract.

EQUIPMENT. All machinery together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the work.

FURNISH. To procure, transport, and deliver to the project site materials, labor, or equipment, for installation or use on the project.

INSPECTOR. The Engineer's authorized representative assigned to make detailed observations relating to contract performance.

INTERIM WORK AUTHORIZATION. A written order by the Engineer initiating changes to the Contract, within its general scope, until a subsequent Change Order is executed.

LABORATORY. The official testing laboratories of the DEPARTMENT or such other laboratories as may be designated by the Engineer or identified in the contract documents.

MATERIALS. Any substances specified for use in the construction of the project.

PRECONSTRUCTION CONFERENCE. A meeting between the CONTRACTOR and the Engineer, and other parties affected by the construction, to discuss the project before the CONTRACTOR begins work.

QUALITY ASSURANCE (QA). Where referred to in the technical specifications (Divisions 2 through 16), Quality Assurance refers to measures to be provided by the CONTRACTOR as specified.

QUALITY CONTROL (QC). Tests and inspections by the CONTRACTOR to insure the acceptability of materials incorporated into the work. QC test reports are used as a basis upon which to determine whether the Work conforms to the requirements of the Contract Documents and to determine its acceptability for payment.

TRAFFIC CONTROL PLAN (TCP). A drawing of one or more specific plans that detail the routing of pedestrian, and/or vehicular traffic through or around a construction area.

UTILITY. The privately, publicly or cooperatively owned lines, facilities and systems for producing, transmitting or distributing communications, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, storm water not connected with highway or street drainage, and other similar commodities, including publicly owned fire and police signal systems, street lighting systems, and railroads which directly or indirectly serve the public or any part thereof. The term "utility" shall also mean the utility company, inclusive of any wholly owned or controlled subsidiary."

At General Conditions Article 1, definition of **Contract Time**, last sentence, Replace "...Final Completion..." with:

"...Substantial Completion..."

At General Conditions Article 1, definition of **Conditions of the Contract**: Delete the text of this definition in its entirety.

At General Conditions Article 1, definition of **Contract Time**: Delete the text of this definition and replace with the following:

"The number of Calendar Days following issuance of Notice-to-Proceed in which the project shall be rendered Substantially Complete, or if specified as a calendar date, the Substantial Completion date specified in the Contract Documents."

At General Conditions Article 1, definition of **Controlling Item**: Delete the text of this definition and replace with the following:

"Any feature of the Work on the critical path of a network schedule."

At General Conditions Article 1, definition of **Defective**: Delete the text of this definition and replace with the following:

"Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents."

At General Conditions Article 1, definition of **Effective Date of the Contract**: Delete the text of this definition in its entirety.

At General Conditions Article 1, definition **Shop Drawings**: Add the following text:

"Where used in the Contract Documents, "Shop Drawings" shall also mean "Submittals"."

At General Conditions Article 1, second paragraph: Delete this paragraph in its entirety and replace with the following:

"The titles and headings of the articles, sections, and subsections herein are intended for convenience of reference."

At General Conditions Article 1, third paragraph starting with “Whenever used in the Specifications....”, Delete this paragraph in its entirety.

At General Conditions Article 1, fourth paragraph, last sentence: Revise it to read as follows:

“Words defined in Article 1 are to be interpreted as defined.”

SC-2.1-AUTHORITIES AND LIMITATIONS

At General Conditions Article 2.1.1, delete this paragraph in its entirety and replace with the following:

“The Contracting Officer alone, shall have the power to bind the DEPARTMENT and to exercise the rights, responsibilities, authorities and functions vested in the Contracting Officer by the Contract Documents. The Contracting Officer shall have the right to designate in writing authorized representatives to act for him. Wherever any provision of the Contract Documents specifies an individual or organization, whether governmental or private, to perform any act on behalf of or in the interest of the DEPARTMENT that individual or organization shall be deemed to be the Contracting Officer’s authorized representative under this Contract but only to the extent so specified. “

At General Conditions Article 2.1.4 starting with “The term of “Contracting Officer” when used...”, delete this article in its entirety.

SC-2.4-VISITS TO SITE/PLACE OF BUSINESS

At General Conditions Article 2.4, delete this article in its entirety.

SC-4.1-AVAILABILITY OF LANDS

At General Conditions Article 4.1, add the following:

“The CONTRACTOR shall provide all waste and disposal areas, including disposal areas for hazardous or contaminated materials, at no additional cost to the DEPARTMENT.”

SC-4.3-EXPLORATIONS AND REPORTS

At General Conditions Article 4.3, add the following text:

“A copy of the geotechnical reports and addendum that were used in the preparation of these contract documents (See Section 00300 , Information Available to Bidders) is provided to all planholders listed with the DEPARTMENT as General Contractors, and is available to other planholders upon request. While referenced by or provided with the Contract Documents; the recommendations, engineering details, and other information contained in these reports of explorations shall not be construed to supercede or constitute conditions of the Contract Documents.”

SC-4.7-SURVEY CONTROL

At General Conditions Article 4.7, delete the third sentence and substitute the following text:

"Copies of all survey notes shall be provided to the DEPARTMENT at an interval determined by the Project Manager. The Project Manager may request submission on a weekly or longer period at his discretion. Any variations between the Contract Documents and actual field conditions shall be identified in the survey notes."

SC-5.2-BONDS

At General Condition Article 5.2, delete the second, third, fourth, fifth, and sixth paragraphs in their entirety.

SC-5.4.2-INSURANCE REQUIREMENTS, GENERAL

At General Condition Article 5.4.2, revise the first sentence to read as follows:

"The CONTRACTOR shall maintain in force at all times during the performance of the work under this agreement the following policies and minimum limits of liability."

SC-5.4.2a-WORKMANS COMPENSATION INSURANCE

At General Condition Article 5.4.2a, replace paragraph "a" in its entirety and replace it with the following:

- "a. Workers' Compensation Insurance: The Contractor shall provide and maintain, for all employees of the Contractor engaged in work under this contract, Workers' Compensation Insurance as required by AS 23.30.045. The Contractor shall be responsible for Workers' Compensation Insurance for any subcontractor who provides services under this contract, to include:
1. Waiver of subrogation against the State and Employer's Liability Protection in the amount of \$500,000 each accident/\$500,000 each disease.
 2. If the Contractor directly utilizes labor outside of the State of Alaska in the prosecution of the work, "Other States" endorsement shall be required as a condition of the contract.
 3. Whenever the work involves activity on or about navigable waters, the Workers' Compensation policy shall contain a United States Longshoreman's and Harbor Worker's Act endorsement, and when appropriate, a Maritime Employer's Liability (Jones Act) endorsement with a minimum limit of \$1,000,000."

SC-5.4b-COMPREHENSIVE GENERAL LIABILITY INSURANCE

At General Conditions Article 5.4b, delete minimum limits of liability items 1 and 2 in their entirety and substitute the following text:

- "1. If the CONTRACTOR carries a *Comprehensive General Liability* policy, the limits of liability shall not be less than a Combined Single Limit for bodily injury, property damage and Personal Injury Liability of:
- \$1,000,000 each occurrence
 - \$2,000,00 aggregate
2. If the CONTRATOR carries a *Commercial General Liability* policy, the limits of liability shall not be less than:

\$1,000,000 each occurrence (Combined Single Limit for bodily injury and property damage)
\$1,000,000 for Personal Injury Liability

\$2,000,000 aggregate for Products-Completed Operations
\$2,000,000 general aggregate

The State of Alaska, DEPARTMENT of Health & Social Services shall be named as an "Additional Insured" under all liability coverages listed above."

SC-5.4.2d-BUILDERS RISK INSURANCE (SUBCONTRACTORS)

At General Condition Article 5.4.2d, revise the last sentence to read as follows:

"Builders Risk Insurance will only be required of subcontractors if so stated in the Supplementary Conditions."

SC-5.4.3-INSURANCE REQUIREMENTS, EVIDENCE OF INSURANCE

At General Conditions Article 5.4.3, delete this subsection and replace with the following:

"In addition to providing the above coverages the Contractor shall, in any contract or agreement with subcontractors performing work, require that all indemnities and waivers of subrogation it obtains, and that any stipulation to be named as an additional insured it obtains, also be extended to waive rights of subrogation against the State of Alaska and to add the State of Alaska as additional named indemnitee and as additional insured.

Evidence of insurance shall be furnished to the Department prior to the award of the contract. Such evidence, executed by the carrier's representative and issued to the Department, shall consist of a certificate of insurance or the policy declaration page with required endorsements attached thereto which denote the type, amount, class of operations covered, effective (and retroactive) dates, and dates of expiration. Acceptance by the Department of deficient evidence does not constitute a waiver of contract requirements.

When a certificate of insurance is furnished, it shall contain the following statement:
"This is to certify that the policies described herein comply with all aspects of the insurance requirements of (Project Name and Number)."

SC-6.6.1-PROGRESS SCHEDULE

At General Condition Article 6.6.1, change the phrase "Within reasonable time prior to the Pre-Construction Conference..." to read:

"Within seven days after the Pre-Construction Conference."

SC-6.6.2-SCHEDULE OF SHOP DRAWINGS AND SCHEDULE OF VALUES

At General Condition Article 6.6.2, change the phrase "Within fifteen days after the date of the Notice To Proceed,..." to read:

"Prior to submitting the CONTRACTOR's first Application for Payment..."

SC-6.9-SUBSTITUTES "OR EQUAL" ITEMS

Add the following article:

"6.9.5 - Substitutions shall be permitted during or after the bid period as allowed and in accordance with Document 00020 - Invitation for Bids, Document 00700 – General Conditions, and Document 01630 - Product Options and Substitutions."

SC-6.13.1-SUBCONTRACT PROVISIONS

At General Condition Article 6.13.1, delete the third sentence and add the following text:

"All subcontracts shall contain provisions for prompt payment, release of retainage, and interest on late payment amounts and retainage as specified in A.S. 36.90.210. Contracts between subcontractors, regardless of tier, must also contain these provisions."

SC-6.27-LOAD RESTRICTIONS

Add new General Conditions Article 6.27 as follows:

"6.27 Load Restrictions

The CONTRACTOR shall comply with all load restrictions as set forth in the "Administrative Permit Manual", and Title 17, Chapter 25, of the Alaska Administrative Code in the hauling of materials on public roads, beyond the limits of the project, and on all public roads within the project limits that are scheduled to remain in use upon completion of the project.

Overload permits may, at the discretion of the State, be issued for travel beyond the project limits for purposes of mobilization and/or demobilization. Issuance of such a permit will not relieve the CONTRACTOR of liability for damage which may result from the moving of equipment.

The operation of equipment of such weight or so loaded as to cause damage to any type of construction will not be permitted. No overloads will be permitted on the base course or surface course under construction. No loads will be permitted on a concrete pavement, base or structure before the expiration of the curing period. The CONTRACTOR shall be responsible for all damage done by his equipment."

SC-7.12-APPLICABLE ALASKA PREFERENCES

At General Condition Article 7.12.2, delete the last portion of the first sentence commencing at the words, "...when the bid documents designate..." and replace with the words:

"...when the bidder designates the use of Alaska products. The Bidder shall complete the Alaska Products Preference Worksheet per its instructions and submit it with the Bid Proposal." Continue with existing second sentence.

SC-7.13-PREFERENTIAL EMPLOYMENT

At General Condition Article 7.13, delete the text of this article in its entirety.

SC-7.14.1-CERTIFIED PAYROLLS

At General Condition Article 7.14.1, add the following text:

"Regardless of project funding source, copies of all certified payrolls supplied to the State DEPARTMENT of Labor by the CONTRACTOR shall be supplied also to the Project Manager upon request, including submittals made by, or on behalf of, subcontractors."

Add General Condition Article 7.14.3, as follows:

“Within three calendar days of award of a construction contract, the CONTRACTOR shall file a “Notice of Work” with the Department of Labor and shall pay all related fees. The Contracting Officer will not issue Notice to Proceed to the CONTRACTOR until such notice and fees have been paid to the Department of Labor. Failure of the CONTRACTOR to file the Notice of Work and pay fees within this timeframe shall not constitute grounds for an extension of contract time or adjustment of contract price.”

SC-7.16-COVENANT AGAINST CONTINGENT FEES

At General Conditions Article 7.16, delete the text of this article in its entirety.

SC-7.17-OFFICIALS NOT TO BENEFIT

At General Conditions Article 7.17, delete the text of this article in its entirety.

SC-7.18-PERSONAL LIABILITY OF PUBLIC OFFICIALS

At General Conditions Article 7.18, delete the text of this article in its entirety.

SC-9.4-CHANGE ORDER

At General Conditions Article 9.4, change the first sentence to read:

“A change in Contract Time, Contract Price, or responsibility may be made for changes within the scope of the Work by Change Order.”

At General Conditions Article 9.4, add the following sentence:

“A Change Order shall be considered executed when it is signed by the DEPARTMENT.”

SC-9.10-INTERIM WORK AUTHORIZATION

At General Conditions Article 9.10, add the following new paragraph:

“9.10 Interim Work Authorization

An Interim Work Authorization may be used to establish a change within the scope of the Work; however, only a Change Order shall establish associated changes in Contract Time and Price. Work authorized by Interim Work Authorization shall be converted to a Change Order. The basis of payment shall be as stated in the Interim Work Authorization, unless it states that the basis of payment has not been established and is to be negotiated, in which case the Cost of the Work shall be documented pursuant to Article 10.4, to establish a basis for negotiating a lump sum price for the Change Order.”

SC-10.3.2-CHANGE ORDER PRICE DETERMINATION FOR LUMP SUM CHANGE ORDERS

At General Conditions Article 10.3.2, Delete this paragraph in its entirety and replace it with the following.

“10.3.2 By mutual acceptance of a lump sum price which includes overhead and profit. The following maximum rates of cost markup (to cover both overhead and profit of the CONTRACTOR) shall be used in the negotiation of a Lump Sum Change Order:

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- a. 17% - where a cost is borne directly by prime contractor (first tier contractor).
 - b. 10% - where a cost is borne by a subcontractor (lower tier contractor).

Where the cost is borne by a subcontractor acting as a first tier contractor, the allowable overhead and profit markup for lump sum change orders shall not exceed 17%. Any lower tier subcontractors, including the CONTRACTOR in this case, for whom the first tier subcontractor performs the work, shall be allowed an overhead and profit markup that does not exceed 10%.

SC-10.4-COST OF THE WORK

At General Conditions Article 10.4.1, replace the second sentence from the end of the paragraph with the following:

“Such employees shall include manual workers up through the level of foreman but shall not include general foremen, superintendents, and non-manual employees.”

At General Conditions Article 10.4.2, replace the first sentence with the following:

“Cost of all materials and equipment furnished and incorporated or consumed in the Work, including costs of transportation and storage thereof, and Suppliers’ field services required in connection therewith.”

SC-10.4.5.c-COST OF THE WORK (SUPPLEMENTAL COSTS)

At General Condition Article 10.4.5.c, add the following:

"For any machinery or special equipment (other than small tools) which has been authorized by the Project Manager, the CONTRACTOR shall receive the rental rates in the current edition and appropriate volume of the "Rental Rate Blue Book for Construction Equipment", published by Dataquest, Inc., 1290 Ridder Park Drive, San Jose, CA 95131. Hourly rental rates shall be determined as follows:

The established hourly rental rate shall be equal to the adjusted monthly rate for the basic equipment plus the adjusted monthly rate for applicable attachments, both divided by 176, and multiplied by the area adjustment factor, plus the estimated hourly operating cost.

The adjusted monthly rate is that resulting from application of the rate adjustment formula in order to eliminate replacement cost allowances in machine depreciation and contingency cost allowances.

Attachments shall not be included unless required for the time and materials work.

For equipment not listed in The Blue Book, the CONTRACTOR shall receive a rental rate as agreed upon before such work is begun. If agreement cannot be reached, the DEPARTMENT reserves the right to establish a rate based on similar equipment in the Blue Book or prevailing commercial rates in the area.

These rates shall apply for equipment used during the CONTRACTOR's regular shift of 10 hours per day. Where the equipment is used more than 10 hours per day, either on the CONTRACTOR's normal work or on time and materials, and either on single or multiple shifts, an overtime rate, computed as follows, shall apply:

The hourly overtime rate shall be equal to the adjusted monthly rate for the basic equipment plus the adjusted monthly rate for applicable attachments, both divided by 352, and multiplied by the area adjustment factor, plus the estimated hourly operating cost.

Equipment which must be rented or leased specifically for work required under this section shall be authorized in writing by the Project Manager. The CONTRACTOR shall be paid invoice price plus 15%.

When it is necessary to obtain equipment from sources beyond the project limits exclusively for time and materials, work, the actual cost of transferring the equipment to the site of the work and return will be allowed as an additional item of expense. Where the move is made by common carrier, the move-in allowance will be limited to the amount of the freight bill or invoice. If the CONTRACTOR hauls the equipment with his own forces, the allowance will be limited to the rental rate for the hauling unit plus operator wages. In the event that the equipment is transferred under its own power, the moving allowance will be limited to one-half of the normal hourly rental rate plus operator's wages. In the event that the move-out is to a different location, payment will in no instance exceed the amount of the move-in. Move-in allowance shall not be made for equipment brought to the project for time and materials work which is subsequently retained on the project and utilized for completion of contract items, camp maintenance, or related work.

Equipment ordered to be on a stand-by basis shall be paid for at the stand-by rental rate for the number of hours in the CONTRACTOR'S normal work shift, but not to exceed 8 hours per day. The stand-by rental rate shall be computed as follows:

The hourly stand-by rate shall be equal to the adjusted monthly rate for the basic equipment plus the adjusted monthly rate for applicable attachments, both divided by 352, all multiplied by the area adjustment factor.

Time will be recorded to the nearest one-quarter hour for purposes of computing compensation to the CONTRACTOR for equipment utilized under these rates.

The equipment rates as determined above shall be full compensation, including overhead and profit, for providing the required equipment and no additional compensation will be made for other costs such as, but not limited to, fuels, lubricants, replacement parts or maintenance costs. Cost of repairs, both major and minor, as well as charges for mechanic's time utilized in servicing equipment to ready it for use prior to moving to the project and similar charges will not be allowed."

SC-10.11-DISADVANTAGED BUSINESSS ENTERPRISE PROGRAM

At General Conditions Article 10.11, Delete this paragraph in its entirety for this State Funded Contract.

SC-11.3-COMPUTATION OF CONTRACT TIME

At General Condition Article 11.3.1, third sentence, change "...the date of Final Completion..." to:

"...the date of Substantial Completion..."

At General Condition Article 11.3.2, first sentence, change "...the date of Final Completion..." to:

"...the date of Substantial Completion."

Add General Condition Article 11.3.3, to state as follows:

" The Contract Time shall be as stated on form 25D-9, Proposal."

SC-11.8-DELAY DAMAGES

At General Condition Article 11.8, add the following:

"For each calendar day that the work remains incomplete after the expiration of the Contract Time,

liquidated damages in the amount of \$500 per calendar day shall be assessed to the CONTRACTOR. If no money is due the CONTRACTOR, the DEPARTMENT shall have the right to recover said sum from the CONTRACTOR, the surety or both. The amount of these deductions is to reimburse the DEPARTMENT for estimated liquidated damages incurred as a result of the CONTRACTOR's failure to complete the work within the time specified. As liquidated damages, such deductions are not to be considered as penalties.

Permitting the CONTRACTOR to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the DEPARTMENT of any of its rights under the Contract."

SC 12-ONE YEAR CORRECTION PERIOD

At General Condition Article 12.7, in the first sentence, change the phrase " Final Completion" to:

"Substantial Completion of the relevant portion of the Work..."

SC 13.3-APPLICATION FOR PROGRESS PAYMENT

At General Conditions Article 13.3, revise the last sentence to read as follows:

"Progress payments will be made as the Work progresses on a monthly basis."

SC 13.13-FINAL COMPLETION AND APPLICATION FOR PAYMENT

At General Conditions Article 13.13, first sentence, delete the following items:

"maintenance and operating instructions
certificates of inspection
marked up record documents"

The preceding items are some of the requirements for Substantial Completion, as addressed in Section 01701.

SC 13.16-CONTRACTOR'S CONTINUING OBLIGATION

At General Condition Article 13.16, add the following paragraph:

"When it is anticipated that restarting, testing, adjusting, or balancing of systems will be required following Final Acceptance and said requirements are noted in Section(s) 01650, such Work shall constitute a continuing obligation under the Contract."

SC 14.2-DEFAULT OF CONTRACT

At General Conditions Article 4.2, delete this section in its entirety and replace with the following:

"14.2.1 The Contracting Officer may give the contractor and his surety a written Notice to Cure Default if the contractor:

- a. fails to begin work in the time specified,
- b. fails to use sufficient resources to assure prompt completion of the work,
- c. performs the work unsuitably or neglect or refuse to remove and replace rejected materials or work,
- d. stops work,
- e. fails to resume stopped work after receiving notice to do so,

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- f. becomes insolvent (except that if you declare bankruptcy, termination will be under Title 11 US Code 362 and/or 365. Your bankruptcy does not relieve the surety of any obligations to assume the Contract and complete the work in a timely manner.
 - g. Allows any final judgment to stand against him unsatisfied for period of 60 days, or
 - h. Makes an assignment for the benefit of creditors without the consent of the Contracting Officer, or
 - i. Disregards Regulatory Requirements of any public body having jurisdiction, or
 - j. Otherwise violates in any substantial way any provisions of the Contract Documents, or
 - k. fails to comply with Contract minimum wage payments or civil rights requirements, or
 - l. are party to fraud, deception, misrepresentation , or
 - m. for any cause whatsoever, fails to carry on the Work in an acceptable manner.
- 14.2.2 The Notice to Cure Default will detail the conditions determined to be in default, the time within which to cure the default and may, in the Contracting Officer's discretion, specify the actions necessary to cure the default. Failure to cure the delay, neglect or default within the time specified in the Contracting Officer's written notice to cure authorizes the Department to terminate the contract. The Contracting Officer may allow more time to cure than originally stated in the Notice to Cure Default if he deems it to be in the best interests of the Department. The Department will provide you and your surety with a written Notice of Default Termination that details the default and the failure to cure it.
- 14.2.3 If the CONTRACTOR or Surety, within the time specified in the above notice of default, shall not proceed in accordance therewith, then the DEPARTMENT may, upon written notification from the Contracting Officer of the fact of such delay, neglect or default and the CONTRACTOR's failure to comply with such notice, have full power and authority without violating the Contract, to take the prosecution of the Work out of the hands of the CONTRACTOR. The DEPARTMENT may terminate the services of the CONTRACTOR, exclude the CONTRACTOR from the site and take possession of the Work and of all the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by the CONTRACTOR (without liability to the CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the DEPARTMENT has paid the CONTRACTOR but which are stored elsewhere, and finish the Work as the DEPARTMENT may deem expedient. The DEPARTMENT may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods that in the opinion of the Contracting Officer are required for the completion of said Contract in an acceptable manner.
- 14.2.4 The Contracting Officer may, by written notice to the CONTRACTOR and his Surety or his representative, transfer the employment of the Work from the CONTRACTOR to the Surety, or if the CONTRACTOR abandons the Work undertaken under the Contract, the Contracting Officer may, at his option with written notice to the Surety and without any written notice to the CONTRACTOR, transfer the employment for said Work directly to the Surety. The Surety shall submit its plan for completion of the Work, including any contracts or agreements with third parties for such completion, to the DEPARTMENT for Approval prior to beginning completion of the Work. Approval of such contracts shall be in accordance with all applicable requirements and procedures for Approval of subcontracts as stated in the Contract Documents.
- 14.2.5 After the notice of termination is issued, the Department may take over the work and complete it by contract or otherwise and may take possession of and use materials, appliances, equipment or plant on the work site necessary for completing the work.
- 14.2.6 Rather than taking over the work itself, the Department may transfer the obligation to perform the work from the contractor to your surety. The surety must submit its plan for completion of the work, including any contracts or agreements with third parties for completion, to the
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Department for approval prior to beginning work. The surety must follow the Contract requirements for approval of subcontracts, except that the limitation on percent of work subcontracted will not apply.

- 14.2.7 On receipt of the transfer notice, the surety must take possession of all materials, tools, and appliances at the work site, employ an appropriate work force, and complete the Contract work, as specified. The Contract specifications and requirements shall remain in effect. However the Department will make subsequent Contract payments directly to the Surety for work performed under the terms of the Contract. You forfeit any right to claim for the same work or any part thereof. You are not entitled to receive any further balance of the amount to be paid under the Contract.
- 14.2.8 Upon receipt of the notice terminating the services of the CONTRACTOR, the Surety shall enter upon the premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the Work included under the Contract and employ by contract or otherwise any person or persons to finish the Work and provide the materials therefor, without termination of the continuing full force and effect of this Contract. In case of such transfer of employment to the Surety, the Surety shall be paid in its own name on estimates covering Work subsequently performed under the terms of the Contract and according to the terms thereof without any right of the CONTRACTOR to make any claim for the same or any part thereof.
- 14.2.9 If the Contract is terminated for default, the CONTRACTOR and the Surety shall be jointly and severally liable for damages for delay as provided by paragraph 11.8, and for the excess cost of completion, and all costs and expenses incurred by the DEPARTMENT in completing the Work or arranging for completion of the Work, including but not limited to costs of assessing the Work to be done, costs associated with advertising, soliciting or negotiating for bids or proposals for completion, and other procurement costs. Following termination the CONTRACTOR shall not be entitled to receive any further balance of the amount to be paid under the Contract until the Work is fully finished and accepted, at which time if the unpaid balance exceeds the amount due the DEPARTMENT and any amounts due to persons for whose benefit the DEPARTMENT has withheld funds, such excess shall be paid by the DEPARTMENT to the CONTRACTOR. If the damages, costs, and expenses due the DEPARTMENT exceed the unpaid balance, the CONTRACTOR and his Surety shall pay the difference.
- 14.2.10 If, after notice of termination of the CONTRACTOR's right to proceed under the provisions of this clause, it is determined for any reason that the CONTRACTOR was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, or that termination was wrongful, the rights and obligations of the parties shall be determined in accordance with the clause providing for convenience termination.

14.3 Rights or Remedies:

Where the CONTRACTOR's services have been so terminated by the DEPARTMENT, the termination will not affect any rights or remedies of the DEPARTMENT against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due the CONTRACTOR by the DEPARTMENT will not release the CONTRACTOR from liability.

14.4 Convenience Termination:

- 14.4.1 The performance of the Work may be terminated by the DEPARTMENT in accordance with this section in whole or in part, whenever, for any reason the Contracting Officer shall determine that such termination is in the best interest of the DEPARTMENT. Any such termination shall be effected by delivery to the CONTRACTOR of a Notice of Termination, specifying termination is for the convenience of the DEPARTMENT the extent to which performance of Work is terminated, and the date upon which such termination becomes effective.

14.4.2 Immediately upon receipt of a Notice of Termination and except as otherwise directed by the Contracting Officer, the CONTRACTOR shall:

- a. Stop Work on the date and to the extent specified in the Notice of Termination;
- b. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the Work as is not terminated;
- c. Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;
- d. With the written Approval of the Contracting Officer, to the extent he may require, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, the cost of which would be reimbursable, in whole, or in part, in accordance with the provisions of the Contract;
- e. Submit to the Contracting Officer a list, certified as to quantity and quality, of any or all items of termination inventory exclusive of items the disposition of which had been directed or authorized by the Contracting Officer;
- f. Transfer to the Contracting Officer the completed or partially completed record drawings, Shop Drawings, information, and other property which, if the Contract had been completed, would be required to be furnished to the DEPARTMENT;
- g. Take such action as may be necessary, or as the Contracting Officer may direct, for the protection and preservation of the property related to the Contract which is in the possession of the CONTRACTOR and in which the DEPARTMENT has or may acquire any interest.

The CONTRACTOR shall proceed immediately with the performance of the above obligations.

14.4.3 When the DEPARTMENT orders termination of the Work effective on a certain date, all Work in place as of that date will be paid for in accordance with Article 13 of the Contract. Materials required for completion and on hand but not incorporated in the Work will be paid for at invoice cost plus 15 % with materials becoming the property of the DEPARTMENT - or the CONTRACTOR may retain title to the materials and be paid an agreed upon lump sum. Materials on order shall be cancelled, and the DEPARTMENT shall pay reasonable factory cancellation charges with the option of taking delivery of the materials in lieu of payment of cancellation charges. The CONTRACTOR shall be paid 10% of the cost, freight not included, of materials cancelled, and direct expenses only for CONTRACTOR chartered freight transport which cannot be cancelled without charges, to the extent that the CONTRACTOR can establish them. The extra costs due to cancellation of bonds and insurance and that part of job start-up and phase-out costs not amortized by the amount of Work accomplished shall be paid by the DEPARTMENT. Charges for loss of profit or consequential damages shall not be recoverable except as provided above.

- a. The following costs are not payable under a termination settlement agreement or Contracting Officer's determination of the termination claim:
 1. Loss of anticipated profits or consequential or compensatory damages
 2. Unabsorbed home office overhead (also termed "General & Administrative Expense") related to ongoing business operations
 3. Bidding and project investigative costs
 4. Direct costs of repairing equipment to render it operable for use on the terminated work

14.4.4 The termination claim shall be submitted promptly, but in no event later than 90 days from the effective date of termination, unless extensions in writing are granted by the Contracting Officer upon written request of the CONTRACTOR made within the 90 day period. Upon

failure of the CONTRACTOR to submit his termination claim within the time allowed, the Contracting Officer may determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall thereupon pay to the CONTRACTOR the amount so determined.

- 14.4.5 The CONTRACTOR and the Contracting Officer may agree upon whole or any part of the amount or amounts to be paid to the CONTRACTOR by reason of the total or partial termination of Work pursuant to this section. The Contract shall be amended accordingly, and the CONTRACTOR shall be paid the agreed amount.
- 14.4.6 In the event of the failure of the CONTRACTOR and the Contracting Officer to agree in whole or in part, as provided heretofore, as to the amounts with respect to costs to be paid to the CONTRACTOR in connection with the termination of the Work the Contracting Officer shall determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall pay to the CONTRACTOR the amount determined as follows:
- a. All costs and expenses reimbursable in accordance with the Contract not previously paid to the CONTRACTOR for the performance of the Work prior to the effective date of the Notice of Termination;
 - b. So far as not included under "a" above, the cost of settling and paying claims arising out of the termination of the Work under subcontracts or orders which are properly chargeable to the terminated portions of the Contract;
 - c. So far as practicable, claims by the contractor for idled or stand-by equipment shall be made as follows: Equipment claims will be reimbursed as follows:
 1. Contractor-owned equipment usage, based on the contractor's ownership and operating costs for each piece of equipment as determined from the contractor's accounting records. Under no circumstance, may the contractor base equipment claims on published rental rates.
 2. Idle or stand-by time for Contractor-owned equipment, based on your internal ownership and depreciation costs. Idle or stand-by equipment time is limited to the actual period of time equipment is idle or on stand-by as a direct result of the termination, not to exceed 30 days. Operating expenses will not be included for payment of idle or stand-by equipment time.
 3. Rented equipment, based on reasonable, actual rental costs. Equipment leased under "capital leases" as defined in Financial Accounting Standard No. 13 will be considered Contractor-owned equipment. Equipment leased from an affiliate, division, subsidiary or other organization under common control with you will be considered Contractor-owned equipment, unless the lessor has an established record of leasing to unaffiliated lessees at competitive rates consistent with the rates you have agreed to pay and no more than forty percent of the lessor's leasing business, measured in dollars, is with organizations affiliated with the lessor.
- 14.4.7 The CONTRACTOR shall have the right of appeal under the DEPARTMENT's claim procedures, as defined in Article 15, for any determination made by the Contracting Officer, except if the CONTRACTOR has failed to submit his claim within the time provided and has failed to request extension of such time, CONTRACTOR shall have no such right of appeal. In arriving at the amount due the CONTRACTOR under this section, there shall be deducted:
- a. All previous payments made to the CONTRACTOR for the performance of Work under the Contract prior to termination;
 - b. Any claim for which the DEPARTMENT may have against the CONTRACTOR;
 - c. The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the CONTRACTOR or sold pursuant to the provisions of this section and not otherwise recovered by or credited to the DEPARTMENT; and,

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- d. All progress payments made to the CONTRACTOR under the provisions of this section.
- 14.4.8 Where the Work has been terminated by the DEPARTMENT said termination shall not affect or terminate any of the rights of the DEPARTMENT against the CONTRACTOR or his Surety then existing or which may thereafter accrue because of such default. Any retention or payment of monies by the DEPARTMENT due to the CONTRACTOR under the terms of the Contract shall not release the CONTRACTOR or his Surety from liability.
- 14.4.9 The contractor's termination claim may not include claims that pre dated the notice for termination for convenience. Those claims shall be prosecuted by the contractor under Article 15.
- 14.4.10 The contractor's termination claim may not exceed the total dollar value of the contract as awarded plus agreed upon change orders less the amounts that have been paid for work completed.
- a. Unless otherwise provided for in the Contract Documents, or by applicable statute, the CONTRACTOR, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the DEPARTMENT at all reasonable times at the office of the CONTRACTOR, all its books, records, documents, and other evidence bearing on the cost and expenses of the CONTRACTOR under his Contract and relating to the Work terminated hereunder.
- b. Definitions. In this Subsection 108-1.09, the term "cost" and the term "expense" mean a monetary amount in U.S. Dollars actually incurred by you, actually reflected in your contemporaneously maintained accounting or other financial records and supported by original source documentation.
- c. Cost Principles. The Department may use the federal cost principles at 48 CFR §§ 31.201-1 to 31.205-52 (or succeeding cost principles for fixed price contracts) as guidelines in determining allowable costs under this Subsection to the extent they are applicable to construction contracts and consistent with the specifications of this Contract. The provisions of this contract control where they are more restrictive than, or inconsistent with, these federal cost principles."

SC-15-CLAIMS AND DISPUTES

At General Conditions Article 15 – Claims and Disputes, delete this section in its entirety and substitute the following text:

"ARTICLE 15 - CLAIMS FOR ADJUSTMENT AND DISPUTES

15.1 Notification

- 15.1.1 The CONTRACTOR shall notify the DEPARTMENT in writing as soon as the CONTRACTOR becomes aware of any act or occurrence which may form the basis of a claim for additional compensation or an extension of Contract Time or of any dispute regarding a question of fact or interpretation of the Contract. The DEPARTMENT has no obligation to investigate any fact or occurrence that might form the basis of a claim or to provide any additional compensation or extension of Contract Time unless the CONTRACTOR has notified the DEPARTMENT in writing in a timely manner of all facts the CONTRACTOR believes form the basis for the claim.
- 15.1.2 If the CONTRACTOR believes that he is entitled to an extension of Contract Time, then the CONTRACTOR must state the contract section on which he basis his extension request, provide the DEPARTMENT with sufficient information to demonstrate that the CONTRACTOR has suffered excusable delay, and show the specific amount of time to which the CONTRACTOR is entitled. The DEPARTMENT will not grant an extension of Contract Time if the CONTRACTOR does not timely submit revised schedules under **Section 01310.**

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- 15.1.3 If the matter is not resolved by agreement within 7 days, the CONTRACTOR shall submit an Intent to Claim, in writing, to the DEPARTMENT within the next 14 days.
- 15.1.4 If the CONTRACTOR believes additional compensation or time is warranted, then he must immediately begin keeping complete, accurate, and specific daily records concerning every detail of the potential claim including actual costs incurred. The CONTRACTOR shall provide the DEPARTMENT access to any such records and furnish the DEPARTMENT copies, if requested. Equipment costs must be based on the CONTRACTOR's internal rates for ownership, depreciation, and operating expenses and not on published rental rates. In computing damages, or costs claimed for a change order, or for any other claim against the Department for additional time, compensation or both, the contractor must prove actual damages based on internal costs for equipment, labor or efficiencies. Total cost, modified total cost or jury verdict forms of presentation of damage claims are not permissible to show damages. Labor inefficiencies must be shown to actually have occurred and can be proven solely based on job records. Theoretical studies are not a permissible means of showing labor inefficiencies. Home office overhead will not be allowed as a component of any claim against the Department.
- 15.1.5 If the claim or dispute is not resolved by the DEPARTMENT, then the CONTRACTOR shall submit a written Claim to the Contracting Officer within 90 days after the CONTRACTOR becomes aware of the basis of the claim or should have known the basis of the claim, whichever is earlier. The Contracting Officer will issue written acknowledge of the receipt of the Claim.
- 15.1.6 The CONTRACTOR waives any right to claim if the DEPARTMENT was not notified properly or afforded the opportunity to inspect conditions or monitor actual costs or if the Claim is not filed on the date required.

15.2 Presenting the Claim

- 15.2.1 The Claim must include all of the following:
- a. The act, event, or condition the claim is based on
 - b. The Contract provisions which apply to the claim and provide relief
 - c. The item or items of Contract work affected and how they are affected
 - d. The specific relief requested, including Contract Time if applicable, and the basis upon which it was calculated
 - e. A statement certifying that the claim is made in good faith, that the supporting cost and pricing data are accurate and complete to the best of your knowledge and belief, and that the amount requested accurately reflects the Contract adjustment which the CONTRACTOR believes is due.

15.3 Claim Validity, Additional Information, and DEPARTMENT's Action

- 15.3.1 The Claim, in order to be valid, must not only show that the CONTRACTOR suffered damages or delay but that it was caused by the act, event, or condition complained of and that the Contract provides entitlement to relief for such act, event, or condition.
- 15.3.2 The DEPARTMENT can make written request to the CONTRACTOR at any time for additional information relative to the Claim. The CONTRACTOR shall provide the DEPARTMENT the additional information within 30 days of receipt of such a request. Failure to furnish the additional information may be regarded as a waiver of the Claim.

15.4 Contracting Officer's Decision

The CONTRACTOR will be furnished the Contracting Officer's Decision within 90 days, unless the Contracting Officer requests additional information or gives the CONTRACTOR notice that the time for issuing a decision is being extended for a specified period under AS 36.30.620. The Contracting Officer's decision is final and conclusive unless, within 14 days of receipt of the decision, the

CONTRACTOR delivers a Notice of Appeal to the Appeals Officer. Procedures for appeals are covered under AS 36.30.625 and AS 36.30.630.

15.5 Fraud and Misrepresentation in Making Claims

Criminal and Civil penalties authorized under AS 36.30.687 (including, but not limited to, forfeiture of all claimed amounts) may be imposed on the CONTRACTOR if the CONTRACTOR makes or uses a misrepresentation in support of a claim or defraud or attempt to defraud the DEPARTMENT at any stage of prosecuting a claim under this Contract.”

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SECTION 01005
ADMINISTRATIVE PROVISIONS

PART I GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Local Conditions
- B. Permits, Fees, and Inspections
- C. Alternates
- D. Preconstruction Meeting
- E. Applications for Payment
- F. Contractor Use of Premises
- G. Owner Occupancy
- H. Owner - Furnished Products
- I. Coordination
- J. Reference Standards

1.02 RELATED REQUIREMENTS

- A. General and Special Conditions

1.03 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. Failure to visit the jobsite, 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:

Craig Tallman Maintenance Foreman, 907 232-6333

1.04 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.

1.05 ALTERNATES

- A. Alternates will be exercised at the option of Owner as specified on Bid Schedule. Accepted alternates will be indicated on the Contract and included within the conformed Contract Documents.
- B. Coordinate related work and modify surrounding work affected by accepted alternates as required to complete the Work.
- C. Provide all Work as part of the Base Bid except that Work specifically indicated to be provided as part of an alternate.

1.06 PRECONSTRUCTION MEETING

- A. Attend Owner initiated preconstruction meeting.

1.07 APPLICATIONS FOR PAYMENT

- A. Submit two copies of each application under procedures of Section 01027.
- B. Content and Format: That specified for schedule of values in Section 01027.

1.08 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. Give written notice two weeks in advance of beginning of Work in any Work area.
- D. Do not smoke except in specifically designated smoking areas.
- E. 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.
- F. 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.
- G. Limit construction activities which generate noise levels in excess of NC=40 in classrooms, NC=50 in office areas, and NC=60 in other areas.
- H. Limit construction access to building to the location indicated. Keep construction access points locked at all times.
- I. Move Owner tools, equipment, shelving, stored materials, etc. as required to accomplish Work. Return to original location as soon as possible.
- J. Protect Owner tools, equipment, shelving, stored materials, and equipment, etc. from Work.
- K. In Owner occupied areas:

1. Limit use of premises for Work and for construction operations to between 8:00 a.m. and 5:30 p.m. Monday through Friday. If requested by the Contractor and approved by the Project Manager, the Contractor may work on the project outside these hours if the Contractor's activities do not interfere with owner operations.
 2. 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, VCRs, monitors, typewriters, etc. Remove protection at the end of each work day.
 3. Do not use furniture, such as countertops, desks, filing cabinets, book shelves, and tables as work surfaces or as steps to access Work.
 4. 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.
 5. At the end of each workday replace ceiling tiles removed to access Work.
 6. 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. Coordinate temporary shutdowns of any of the existing facilities' mechanical or electrical systems affecting systems in Owner occupied areas with the Contracting Officer. Schedule shutdowns for nights and weekends. Provide a minimum five-day notice.
- N. Existing systems shall be fully operational for intended purpose at the beginning of each Owner workday.

1.09 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

1.10 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. 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.

- C. 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.
- D. In finished areas, unless otherwise indicated, conceal pipes, ducts, and wiring in the construction.
- E. 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.

1.11 REFERENCE STANDARDS

- A. For products or workmanship specified by association, trades, 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.

1.12 ONE YEAR CORRECTION PERIOD

- A. If within one year after the date of Final Completion or such longer period of time as may be prescribed by Regulatory Requirements or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work, materials, or products are found to be defective, the Contractor shall promptly, without cost to the Owner and in accordance with the Contracting Officer's written instructions, either correct such defective Work, or, if it has been rejected by the Contracting Officer, remove it from the site and replace it with conforming Work.
- B. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the Owner may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect, and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) will be paid by the Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service for the benefit of the Owner before Substantial Completion of all the Work, the correction period for that item may begin on an earlier date if so provided in the Specifications of by Change Order.
- D. Provisions of this paragraph are not intended to shorten the statute of limitations for bringing an action.

Alaska Veterans & Pioneers Home
Resident Restroom Renovations
ANC 23-22C

SECTION 01005
ADMINISTRATIVE PROVISIONS

PART 2 PRODUCTS Not Used

PART 3 PARTS Not Used

END OF SECTION

SECTION 01010
SUMMARY OF WORK

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Basic Bid.
- B. Work by Others.
- C. Hazardous Materials
- D. Work Inside Facility
- E. Work Plans and Access to Facility, Individual Work Areas
- F. Shut Offs/Disruptions to Service
- G. Use of Premises.
- H. Using Agency Occupancy.
- I. Coordination
- J. Parking/Staging

1.02 RELATED REQUIREMENTS

- A. Document 00200 – Information available to bidders.
- B. Document 00700 - General Conditions: Provisions for use of site, and Using Agency occupancy. Relations of CONTRACTOR- Subcontractors.
- C. Document 00800 - Supplementary Conditions: Modifications to General Conditions.
- D. Section 01400 – Quality Control
- E. Section 01540 – Security.

1.03 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work covered by the contract documents is located
- B. The DEPARTMENT is acting for the State of Alaska.

1.04 CONTRACT METHOD

- A. Construct the Work under a single lump sum Contract.

1.05 BASIC BID

- A. That portion of the Work described within these documents (taken as a whole) as the Basic Bid scope. Basic Bid work includes all work shown on the plans and specifications.
- B. Project will be constructed under a general construction contract.

1.06 WORKS BY OTHERS

- A. Cooperate with other Contractors and the DEPARTMENT to minimize conflict with construction operation.

1.07 HAZARDOUS MATERIALS

- A. All light fixtures to be removed shall be treated as positive for containing PCBs unless proven otherwise.

- B. CONTRACTOR to be aware that other hazardous materials may be within the facility. See Section 00700 Article 4.3.

1.08 WORK INSIDE FACILITY

- A. Work within the facility shall be conducted only between the hours of 8:00 am and 5:30 pm, unless specifically approved by the Maintenance Supervisor. Requests for work outside of these hours must be submitted in writing 24 hours in advance.
- B. CONTRACTOR shall not under any circumstances leave tools or equipment unattended within the limits of the project site unless secured in a locked tool storage shed/box or vehicle. CONTRACTOR will be liable for any damages to persons and/or property resulting from unattended tools or equipment.
- C. No firearms or ammunition allowed on the grounds, to include locked vehicles.
- D. The use of powder-activated tools must be approved by the project manager. Request for such tools must be submitted to the Maintenance Supervisor in writing three (3) working days in advance.

1.09 SHUTOFFS / DISRUPTIONS TO SERVICE

- A. Work with the Maintenance Supervisor to schedule disruption for a time, which minimizes impact on facility operations. Provide the Engineer written notification of any disruption to service at least 24 hours in advance of scheduled disruption or shutoff.
- B. Plan work to minimize down time. Work with DEPARTMENT to schedule disruption for a time that minimizes impact on USING AGENCY's operations.
- C. Provide written work plan and schedule for disruptions to service that exceed one hour.
- D. Contractor must provide protection as stated in Municipal Fire Codes and Safety Codes while working on the fire protection system.

1.10 CONTRACTOR'S USE OF PREMISES

- A. Coordinate use of the premises under direction of DEPARTMENT.
- B. Assume full responsibility for protection and safekeeping of products under this Contract.
- C. Assume full responsibility for the protection of the existing facility and contents, from damage due to construction operations.

1.11 USING AGENCY OCCUPANCY

- A. The User Agency will continue operations adjacent to the site during entire construction period. Cooperate with DEPARTMENT in scheduling operations to minimize conflict and to facilitate the User Agency's operations.
- B. CONTRACTOR shall provide Material Safety Data Sheets for all products that may produce unpleasant odors.

1.12 COORDINATION

- A. Coordinate Work of the various elements of the plans to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
- B. Verify if characteristics of elements of interrelated operating equipment are compatible; coordinate Work of various trades having interdependent responsibilities for installing,

connecting to, and placing in service, such equipment.

- C. Coordinate space requirements and installation of mechanical and electrical work, which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduits, as closely as practicable; make runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs. Coordinate work with existing elements in the building. Do not locate piping, conduit or other products where they will block access to equipment or junction boxes.
- D. In finished areas except as otherwise shown, conceal pipes, ducts, and wiring in the construction. .
- E. Execute cutting and patching to integrate elements of Work, provide openings for penetrations of existing surfaces. Seal penetrations through floors, walls, partitions, and ceilings.

1.13 PARKING / STAGING

- A. CONTRACTOR to coordinate staging area with Facility Maintenance Supervisor.
- B. CONTRACTOR may use established facility parking.
- C. CONTRACTOR will be responsible for all additional required storage/staging and parking off site at no charge to the Department.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not used

END OF SECTION

SECTION 01020
INTENT OF DOCUMENTS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Explanation of intent and terminology of the Construction Documents.

1.02 RELATED REQUIREMENTS

- A. Document 00700 - General Conditions: Article 1 Definitions relating to 'Drawings' and 'Specifications'.
- B. Document 00700 - General Conditions: Article 3 Contract Documents relating to Intent, Amending, and Reuse.

1.03 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 trade jurisdiction. DEPARTMENT 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, and recorded in the Table of Contents. Section number is shown with the page number at the bottom of each page. The end of each Section of the specifications is ended by "End of Section". It is CONTRACTOR'S responsibility to verify that Contract Documents received for bidding and/or construction are complete in accordance with Table of Contents.
- C. The language employed in the Contract Documents is addressed directly to the CONTRACTOR. Imperative or indicative language is generally employed throughout and requirements expressed are the mandatory responsibility of the CONTRACTOR, even though the work specified may be accomplished by specialty subcontractors engaged by the CONTRACTOR. References to third parties in this regard shall not be interpreted in any way as to relieve the CONTRACTOR of his or her responsibility under this Contract.
- D. These Specifications are of the abbreviated or "streamlined" type, and may include incomplete sentences.
- E. 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.
- F. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the Drawings.

1.04 DRAWINGS: CONTENT EXPLANATION

- A. Drawings, Dimensions and Measurements.
 - 1. Contract Documents do not purport to describe in detail, absolute and complete construction information. In some instances drawings are diagrammatic.

2. CONTRACTOR shall provide verification of actual site conditions and shall provide complete and operational systems as specified when drawings do not provide full detail.
3. 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.
4. 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.
5. 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.
6. The figured dimensions on the Drawings or notes indicating dimensions shall be used instead of measurements of the Drawings by scale.
7. No scale measurements shall be used as a dimension to work with except on "full size" Drawings not dimensioned.

1.05 COMMON TERMINOLOGY

A. 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. Furnish: Except as otherwise defined in greater detail, the term "furnish" is used to mean "...supply and deliver to the Project site, ready for unpacking, assembly and installation..."
4. Provide: Except to the extent further defined, the term "provide" means to furnish and install, complete and ready for the intended use.
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.

1.06 CONFLICTS

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

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

SECTION - 01027
APPLICATIONS FOR PAYMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Procedures for preparation and submittal of Applications for Payment.

1.02 RELATED REQUIREMENTS

- A. Document 00510 - Construction Contract - Contract Form 06D-10a and Bid Schedule: Method of Payment and Contract Price and Amounts of Liquidated Damages.
- B. Document 00700 - General Conditions: Progress Payments, and Final Payment.
- C. Section 00800 – Supplementary Conditions to General Conditions of the Construction Contract for Buildings: SC-11.2 and SC-11.8.
- D. Section 01300 - Submittals: Procedures, Schedule of Values .
- E. Section 01700 - Contract Closeout: Closeout Procedures.

1.03 FORMAT

- A. Application for Payment form in format approved by the DEPARTMENT.

1.04 PREPARATION OF APPLICATIONS

- A. Type required information on Application for Payment form approved by DEPARTMENT.
- B. Execute certification by original signature of authorized officer upon each copy of the Application for Payment.
- C. Submit names of individuals authorized to be responsible for information submitted on application for payment.
- D. Indicate breakdown of costs for each item of the Work on accepted schedule of values. Provide dollar value in each column for each line item for portion of Work performed and for stored products.
- E. List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of Work.
- F. Prepare Application for Final Payment as specified in Section 01700.

1.05 SUBMITTAL PROCEDURES

- A. Submit two copies of each Application for Payment at times stipulated in Contract.
- B. Submit under transmittal letter specified in Section 01300.

1.06 SUBSTANTIATING DATA

- A. When DEPARTMENT requires substantiating information, submit data justifying line item amounts in question.
- B. Substantiating data required under 7.12.3 and 7.12.4 shall be submitted (or updated) when the Application for Payment includes a current request for payment on an item of Work required to include Alaska "agricultural/wood" products.
- C. Provide one copy of data with cover letter for each copy of Application. Show Application number and date, and line item by number and description.

1.07 SUBMITTALS WITH APPLICATION FOR PAYMENT

- A. Submit the following with each Application for Payment.
 - 1. Updated construction schedule as required by Section 01300 - Submittals.
 - 2. Updated Schedule of Values as required by Section 01300 – Submittals: Schedule of Values.
 - 3. The contractor's as-builts will be reviewed prior to approving each application for payment.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

SECTION 01028
CHANGE ORDER PROCEDURES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Procedures for processing Change Orders.

1.02 RELATED REQUIREMENTS

- A. Document 00312 - Bid Schedule: Total amount bid for lump sum items
- B. Document 00510 - Contract Form: Total amount of Contract Price, as awarded
- C. Document 00700 - General Conditions: Governing requirements for changes in the Work, in Contract Price, and Contract Time.
- D. Document 00800 - Supplementary Conditions: Modifications to Document 00700 - General Conditions.
- E. Section 01027 - Applications for Payment.
- F. Section 01300 - Submittals: Construction Progress Schedules, Schedule of Values.
- G. Section 01600 – Material and Equipment: Product Options, Substitutions.
- H. Section 01700 – Contract Closeout: Project Record Documents.

1.03 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 will be prepared by the DEPARTMENT.

1.04 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. Incomplete or unsubstantiated costs will be disallowed.
- B. CONTRACTOR shall submit a complete, detailed, itemized cost breakdown addressing impact on Contract Time and Contract Price with each proposal.
- 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.

1.05 PRELIMINARY PROCEDURES

- A. DEPARTMENT 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, with a stipulation of any overtime work required, 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 DEPARTMENT 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.

1.06 CONSTRUCTION CHANGE AUTHORIZATION

- A. Shall be in accordance with Article 9 - Changes: in Document 00700 - General Conditions.

1.07 FIXED PRICE CHANGE ORDER

- A. CONTRACTOR shall submit an itemized price proposal in sufficient detail to fully explain the basis for the proposal. Attach invoices and receipts for products, equipment, subcontracts and as requested by the DEPARTMENT. CONTRACTOR and the DEPARTMENT shall then negotiate an equitable price (and time adjustment if appropriate) in good faith. The Change Order will reflect the results of those negotiations. If negotiations break down CONTRACTOR may be directed to perform the work under COST OF THE WORK CHANGE ORDER.

1.08 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 Directive. Changes in Contract Price or Contract Time will be computed as specified for cost of the Work plus fee via Change Order.

1.09 COST OF THE WORK CHANGE ORDER

- A. CONTRACTOR shall submit documentation required in 1.04 on a daily basis for certification by the Project Manager. Project Manager will indicate by signature that the submitted documentation is acceptable.

- B. After completion of the change and within 14 Calendar Days, unless extended by the Project Manager, the CONTRACTOR shall submit in final form an itemized account with support data of all costs. Support data shall have been certified by the Project Manager, as required above in paragraph A.

1.10 EXECUTION OF CHANGE ORDERS

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

1.11 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, revise subschedules 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

SECTION 01040
COORDINATION

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Coordination of Work of Contract.

1.02 RELATED REQUIREMENTS

- A. Section 01010 - Summary of Work.
- B. Section 01045 – Cutting and Patching.
- C. Section 01200 – Project Meetings.
- D. Section 01600 – Material and Equipment: Substitutions.
- E. Section 10701 – Contract Closeout Procedures.

1.03 DESCRIPTION

- A. Coordinate scheduling, submittals, and work of the various sections of Specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items to be installed later.
- B. Coordinate sequence of Work to accommodate Using Agency occupancy as specified in Section 01005.

1.04 MEETINGS

- A. Coordinate sequence of Work to accommodate Using Agency occupancy as specified in Section 01005.

1.05 COORDINATION OF SUBMITTALS

- A. Schedule and coordinate submittals specified in Section 01300.
- B. Coordinate Work of various sections having interdependent responsibilities for installing connecting to, and placing in service, such equipment.
- C. Coordinated requests for substitutions to assure compatibility of space, of operating elements, and affect on Work of other sections.

1.06 COORDINATION OF SPACE

- A. Coordinate use of Project space and sequence of installation of mechanical and electrical Work which is indicated diagrammatically on Drawings. Follow routings shown for pipes, ducts, and conduits as closely as practicable, with due allowance for available physical space; make runs parallel with lines of building. Utilize space efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- B. In finished areas, except as otherwise shown, conceal pipes, ducts, and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.

1.07 COORDINATION OF CONTRACT CLOSEOUT

- A. Coordinate completion and cleanup of Work of separate sections in preparation for Substantial Completion.
- B. After Using Agency occupancy of premises, coordinate access to site by various sections for correction of Defective Work and Work not in accordance with Contract Documents, to minimize disruption of Using Agency activities.
- C. Assemble and coordinate close submittal specified in Section 01701.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

SECTION 01045
CUTTING AND PATCHING

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

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

1.02 RELATED REQUIREMENTS

- A. Section 01005 – Administrative Provisions
- B. Section 01010 - Summary of Work.
- C. Section 01600 - Materials and Equipment: Substitutions.
- D. Individual Specifications Sections:
 - 1. Cutting and patching incidental to Work of the section.
 - 2. Advance notification to other sections of openings required in Work of those sections.
 - 3. Limitations on cutting structural members.

1.03 SUBMITTALS

- A. Submit written request 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 DEPARTMENT or separate Contractor.
- B. Include in request:
 - 1. Identification of Project and DEPARTMENT'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 DEPARTMENT or separate Contractor.
 - 7. Written permission of affected separate Contractor.
 - 8. Date and time Work will be executed.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Those required for original installation.
- B. For any change in materials, submit request for substitution under provisions of Section 01600.

3.01 GENERAL

- A. Execute cutting, fitting, and patching 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.

3.02 INSPECTION

- A. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- B. Notify the Department immediately of any suspected hazardous materials.
- C. After uncovering, inspect conditions affecting performance of work.
- D. Beginning of cutting or patching means acceptance of existing conditions.

3.03 PREPARATION

- A. Provide supports to assure structural integrity of surroundings; devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering Work; maintain excavations free of water.

3.04 PERFORMANCE

- A. Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- B. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval. Cutting structural reinforcement with heat is strictly forbidden without prior written approval.
- C. Restore Work with new products in accordance with requirements of Contract Documents.
- D. Fit Work tightly to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- E. At penetrations of fire-rated wall, ceiling, or floor construction, completely seal voids with fire-rated material, full thickness of the construction element or in accordance with listed U.L. assembly requirements.
- F. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

END OF SECTION

SECTION 01073
EXPLANATIONS: DRAWINGS AND SPECIFICATIONS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

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

1.2 RELATED REQUIREMENTS

- A. Section 01005 - Administrative Provisions
- B. Section 01010 - Summary of Work
- C. Section 01020 - Intent of Documents

1.3 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.

1.4 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.

1.5 CONFLICTS

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

PART 2 **PRODUCTS**
[Not Used]

PART 3 **EXECUTION**
[Not Used]

END OF SECTION

SECTION 01090
REFERENCE STANDARDS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Quality Assurance.
- B. Applicability of Reference Standards.
- C. Provision of Reference Standards at site.
- D. Acronyms used in Contract Documents for Reference Standards. Source of Reference Standards.

1.02 RELATED REQUIREMENTS

- A. Document 00700 - General Conditions: Paragraph 3.4.2.

1.03 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. The date of the standard is that in effect as of the Project Advertisement date, or Effective Date of the Contract when there was no Advertisement, except when a specific date is specified.
- C. When required by an individual Specification section, obtain copy of standard. Maintain copy at site during submittals, planning, and progress of the specific Work, until Final Completion.
- D. Should specified reference standards conflict with Contract Documents, request clarification from the Architect/Engineer before proceeding. Local code requirements, where more stringent than referenced standards, shall govern.
- E. Neither the contractual relationship, duties, nor responsibilities of the parties in Contract nor those of the Architect/Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

1.04 SCHEDULE OF REFERENCES

AA	Aluminum Association 818 Connecticut Avenue, N.W. Washington, DC 20006
AABC	Associated Air Balance Council 1000 Vermont Avenue, N.W. Washington, DC 20005
AASHTO	American Association of State Highway and Transportation Officials 444 North Capitol Street, N.W. Washington, DC 20001
ACI	American Concrete Institute Box 19150 Reford Station Detroit, MI 48219

ADC	Air Diffusion Council 230 North Michigan Avenue Chicago, IL 60601
AGC	Associated General Contractors America 1957 E Street, N.W. Washington, DC 20006
AI	Asphalt Institute Asphalt Institute Building College Park, MD 20740
AITC	American Institute of Timber Construction 333 W. Hampden Avenue Englewood, CO 80110
AISC	American Institute of Steel Construction 400 North Michigan Avenue Eighth Floor Chicago, IL 60611
AISI	American iron and Steel Institute 1000 16th Street, N.W. Washington, DC 20036
AMCA	Air Movement and Control Association 30 West University Drive Arlington Heights, IL 60004
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
APA	American Plywood Association Box 11700 Tacoma, WA 98411
ARI	Air-Conditioning and Refrigeration Institute 1815 North Fort Myer Drive Arlington, VA 22209
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers 1791 Tullie Circle, N.E. Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017
ASPA	American Sod Producers Association Association Building Ninth and Minnesota Hastings, NE 68901

ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235
AWI	Architectural Woodwork Institute 2310 South Walter Reed Drive Arlington, VA 22206
AWPA	American Wood-Preservers' Association 7735 Old Georgetown Road Bethesda, MD 20014
AWS	American Welding Society 550 LeJeune Road Miami, FL 33135
CDA	Copper Development Association 57th Floor, Chrysler Building 405 Lexington Avenue New York, NY 10174
CLFMI	Chain Link Fence Manufacturers Institute 1101 Connecticut Avenue, N.W. Washington, DC 20036
CRSI	Concrete Reinforcing Steel Institute 933 Plum Grove Road Schaumburg, IL 60195
EJMA	Expansion Joint Manufacturers Association 707 Westchester Avenue White Plains, NY 10604
FGMA	Flat Glass Marketing Association 3310 Harrison White Lakes Professional Building Topeka, KS 66611
FM	Factory Mutual System 1151 Boston-Providence Turnpike Norwood, MA 02062
FS	Federal Specification General Services Administration Specifications and Consumer Information Distribution Section (WFSIS) Washington Navy Yard, Building 197 Washington, DC 20407

GA	Gypsum Association 1603 Orrington Avenue Evanston, IL 60201
IEEE	Institute of Electrical and Electronics Engineers 345 East 47th Street New York, NY 10017
IMIAC	International Masonry Industry All-Weather Council International Masonry Institute 815 15th Street, N.W. Washington, DC 20005
MFMA	Maple Flooring Manufacturers Association 2400 East Devon Suite 205 Des Plaines, IL 60018
MIL	Military Specification Naval Publications and Forms Center 5801 Tabor Avenue Philadelphia, PA 19120
ML/SFA	Metal Lath/Steel Framing Association Metal Manufacturers 221 North LaSalle Street Chicago, IL 60601
NAAMM	National Association of Architectural Metal Manufacturers 221 North LaSalle Street Chicago, IL 60601
NEBB	National Environmental Balancing Bureau 8224 Old Courthouse Road Vienna, VA 22180
NEMA	National Electrical Manufacturers' Association 2101 L Street, N.W. Washington, DC 20037
NFPA	National Fire Protection Association Battery March Park Quincy, MA 02269
NFPA	National Forest Products Association 1619 Massachusetts Avenue, N.W. Washington, DC 20036
NSWMA	National Solid Wastes Management Association 1120 Connecticut Avenue, N.W. Washington, DC 20036
NTMA	National Terrazzo and Mosaic Association 3166 Des Plaines Avenue Des Plaines, IL 60018

PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077
PCI	Prestressed Concrete Institute 201 North Wacker Drive Chicago, IL 60606
PS	Product Standard U.S. Department of Commerce Washington, DC 20203
RIS	Redwood Inspection Service One Lombard Street San Francisco, CA 94111
RCSHSB	Red Cedar Shingle and Handsplit Shake Bureau 515 116th Avenue Bellevue, WA 98004
SDI	Steel Deck Institute Box 3812 St. Louis, MO 63122
SDI	Steel Door Institute 712 Lakewood Center North Cleveland, OH 44107
SIGMA	Sealed Insulating Glass Manufacturers Association 111 East Wacker Drive Chicago, IL 60601
SJI	Steel Joist Institute 1703 Parham Road Suite 204 Richmond, VA 23229
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association 8224 Old Court House Road Vienna, VA 22180
SSPC	Steel Structures Painting Council 4400 Fifth Avenue Pittsburgh, PA 15213
TAS	Technical Aids Series Construction Specifications Institute 601 North Madison Street Alexandria, VA 22314
TCA	Tile Council of America, Inc. Box 326 Princeton, NJ 08540

UL Underwriters' Laboratories, Inc.
333 Pfingston Road
Northbrook, IL 60062

WCLIB West Cost Lumber Inspection Bureau
Box 23145
Portland, OR 97223

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

SECTION 01120
ALTERATION PROJECT PROCEDURES

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Procedural requirements.
- B. Rehabilitation and renovation of existing spaces and materials.

1.02 RELATED REQUIREMENTS

- A. Section 01005 - Administrative Provisions
- B. Section 01010 – Summary of Work
- C. Section 01045 - Cutting and Patching

PART 2 PRODUCTS

2.01 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

3.01 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. Conduct all operations with a minimum of noise.
- F. 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.

G. 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.

H. Locate penetrations to avoid structural members.

3.02 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.

3.03 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. Remove from site, including concealed spaces, debris and abandoned items resulting from demolition operations from the site promptly. No accumulation of debris will be permitted.

I. Prepare surfaces and remove surface finishes to provide for proper installation of new Work and new finishes.

J. 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.

3.04 INSTALLATION

A. Coordinate Work of alterations and renovations to expedite completion and to accommodate Owner occupancy. Remove, cut, and patch Work in a manner to minimize damage and to provide means of restoring products and finishes to original condition.

- B. Refinish visible existing surfaces to remain in renovated rooms and spaces with a neat transition to adjacent new finishes.
- C. In addition to specified replacement of equipment restore existing mechanical and electrical systems to full operational condition.
- D. Install products as specified in individual Specification Sections.

3.05 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.

3.06 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.

3.07 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.

3.08 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.

3.09 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.

END OF SECTION

SECTION 01126 - CONTRACTOR'S CERTIFICATION OF SUBCONTRACTS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Procedures for preparing, submitting and accepting subcontracts.

1.2 RELATED REQUIREMENTS

- A. Bidding and Contract Requirement Document 00100 - Instructions to Bidders, Requirements of Apparent Low Bidder.
- B. Bidding and Contract Requirement Document 00101 – Supplemental Information to Bidders.
- C. Bidding and Contract Requirement Document 00430 - Subcontractor List
- D. Bidding and Contract Requirement Section 00700 - General Conditions: Article 6.13 - Subcontractors.
- E. Bidding and Contract Requirement Section 00800 – Supplementary Conditions: Paragraph SC-6.13 – Replacing Subcontractors
- F. Section 01300 - Submittals: Submittal Procedures.
- G. Section 01305 – Submittal Register Form.

1.3 SUBMITTALS

- A. Submit under transmittal letter specified in Section 01300 Submittals.
- B. CONTRACTOR shall submit the initial and final Subcontractor Certification Form(s).

1.4 PREPARATION OF CERTIFICATION

- A. CONTRACTOR to prepare and sign certification forms for all subcontractors regardless of subcontract amount (see Section 00700, Paragraph 6.13.1).
- B. Submit certification form to the DEPARTMENT for approval prior to the subcontractor's start of work. Attach additional information to the certification form where required,
- C. Certification Forms: Use only forms provided by the DEPARTMENT.
- D. The DEPARTMENT will reject substitute certification forms.

1.5 CONSIDERATION OF CERTIFICATION

- A. The DEPARTMENT will review each certification form after receipt and within a reasonable period of time, for the following:
 - 1. Completeness, including the attachments.
 - 2. Proper execution (signatures), including the attachments.
 - 3. Contractor restrictions for adding subcontractors, changing subcontractors, and value of contract.
- B. The DEPARTMENT will return any submittals that are incomplete or not properly executed under a transmittal letter denoting the deficiencies found. The CONTRACTOR shall correct and resubmit according to Section 01300 Submittals.
- C. SUBCONTRACTORS NOT APPROVED BY THE DEPARTMENT SHALL NOT BE ALLOWED ON SITE.
- D. The DEPARTMENT will not process payments for work performed by a non-certified subcontractor.

1.6 ACKNOWLEDGEMENT OF CERTIFICATION

- A. Submittals examined by the DEPARTMENT and determined to be complete and properly executed shall be acknowledged as such by the DEPARTMENT on the approval line of the certification form and returned to the CONTRACTOR.

1.7 CHANGES TO APPROVED SUBCONTRACTORS LIST

- A. Deletion or replacement of subcontractors listed on approved form 06D-5, or the addition of subcontractors not listed on approved form 06D-5 shall be in accordance with Bidding and Contract Requirement Document 00101, Supplementary Information to Bidders.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

END OF SECTION 01126

STATE OF ALASKA Department of Family & Community Services FMS Facilities	SUBCONTRACTOR CERTIFICATION	
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Note: The Contractor shall provide this form for ALL subcontractors working on this project. This form is applicable to all projects, including Small Procurement Contracts, and must be completed in full.

PROJECT: Alaska Veterans & Pioneers Home – Restroom Renovations PROJ. #: ANC 23-22C

PRIME CONTRACTOR: _____

Pursuant to the Contract Documents, we hereby stipulate the following concerning the award of Work to the last Subcontractor on the following list:

1. First Tier Subcontractor: _____ DBE? **Yes** **No**
 Second Tier: _____ DBE? **Yes** **No**
 Third Tier: _____ DBE? **Yes** **No**
 Fourth Tier: _____ DBE? **Yes** **No**

2. Date of Subcontract: _____

3. Amount of Subcontract: \$ _____

4. Scope of Work: _____

5. Are the following documents kept on file by both the Contractor and the Subcontractor (check the appropriate answer)?

EEO-1 Certification (Form 25A304), federally funded projects only	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Contract Minimum Wage Schedule	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Civil Rights Representative (Form 25A302)	Yes <input type="checkbox"/>	No <input type="checkbox"/>

6. Does the Subcontract contain provisions for prompt payment, release of retainage, and interest on late payment and retainage conforming to AS 36.90.210?

Yes <input type="checkbox"/>	No <input type="checkbox"/>
-------------------------------------	------------------------------------

7. Does the Subcontract specifically bind the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the Department and does it contain waiver provisions and termination provisions as required by the Contract Documents?

Yes <input type="checkbox"/>	No <input type="checkbox"/>
-------------------------------------	------------------------------------

8. a. Does the Subcontractor have adequate insurance coverages as specified in the Contract Documents?

Yes <input type="checkbox"/>	No <input type="checkbox"/>
-------------------------------------	------------------------------------

If not, does the Contractor stipulate that the insurance limits of the Subcontractor are acceptable to the Contractor and that he has notified his insurance carrier of the reduced insurance limits?

Yes <input type="checkbox"/>	No <input type="checkbox"/>
-------------------------------------	------------------------------------

b. Does the evidence of insurance certify that the policies described thereon comply with all aspects of the insurance requirements for this project?

Yes <input type="checkbox"/>	No <input type="checkbox"/>
-------------------------------------	------------------------------------

Subcontractor Name: _____

c. Does the evidence of insurance list the Department as an "Additional Insured" or "Certificate Holder"?

Yes No

d. Does the evidence of insurance commit to providing 30 day written notice of cancellation or reduction of any coverage?

Yes No

e. Insurance Expiration dates:

Comprehensive or Commercial General Liability: _____

Automobile: _____ Workers' Compensation: _____

(Other): _____

9. Copies of the following professional certifications, licenses, and registrations are attached (circle all that apply):

Business License (mandatory)

Contractor License (mandatory)

Land Surveyor's License

Electrical Administrator's License (mandatory for electrical subs)

Mechanical Administrator's License (mandatory for mechanical subs)

Engineer/Architect

Other: _____

10. Exceptions to any of the above are explained as follows: _____

CERTIFICATION (to be completed and signed by PRIME CONTRACTOR): I certify all the above to be true and correct.

CONTRACTOR'S Signature: _____

CONTRACTOR'S Printed Name: _____

CONTRACTOR'S Company: _____

Date: _____

DEPARTMENT'S APPROVAL/DISAPPROVAL

The subject subcontract is **APPROVED**. Nothing in this approval should be construed as relieving the Prime Contractor of the responsibility for complete performance of the work or as a waiver of any right of the Department to reject defective work.

SIGNATURE: _____ **DATE:** _____
Amy Burke, Contracting Officer

The subject subcontract is **NOT APPROVED** for the following reasons:

SIGNATURE: _____ **DATE:** _____
Project Manager

SECTION 01200
PROJECT MEETINGS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. CONTRACTOR participation in preconstruction conferences.
- B. CONTRACTOR administration of progress meetings.

1.02 RELATED REQUIREMENTS

- A. Document 00120 - Supplementary Instructions to Bidders: Pre-Bid Conference.
- B. Section 01010 – Summary of Work: Coordination.
- C. Section 01300 - Submittals: Construction Progress Schedules, Shop drawings, Product data, and Samples.
- D. Section 01400 - Quality Control.
- E. Section 01700 - Contract Closeout: Project Record Documents, Operation and Maintenance Data.

1.03 PRECONSTRUCTION CONFERENCES.

- A. DEPARTMENT will administer preconstruction conference for execution of Contract and exchange of preliminary submittals and review of administrative procedures.
- B. DEPARTMENT will administer site mobilization conference at Project site for clarification of CONTRACTOR responsibilities in use of site and coordination with Using Agency for occupancy throughout the duration of the work. CONTRACTOR shall provide the detailed written work plan in preparation for this meeting.

1.04 PROGRESS MEETINGS

- A. Contractor shall schedule and administer weekly Project meetings throughout progress of the Work (unless this requirement is waived by the Project Manager), and other meetings as required to coordinate work, and preinstallation conferences.
- B. Attendance: Job superintendent, major Subcontractors and Suppliers; DEPARTMENT and Consultants as appropriate to agenda topics for each meeting.
- C. Minimum Required Agenda: Review of Work progress, status of progress schedule and adjustments thereto, Work anticipated in the next week, delivery schedules, submittals, maintenance of quality standards, pending changes and substitutions, and other items affecting progress of Work.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

SECTION 01230
ALTERNATES

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.02 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.03 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, the owner will notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 SCHEDULE OF ALTERNATES

- A. Not Applicable to this project

END OF SECTION

SECTION 01300
SUBMITTALS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

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

1.02 RELATED REQUIREMENTS

- A. Section 01010 - Summary of Work.
- B. Section 01027 - Applications for Payment.
- C. Section 01400 - Quality Control: Manufacturers' Field Services, Testing Laboratory Services.
- D. Section 01600 - Material and Equipment: Products List.
- E. Section 01700 - Contract Closeout: Closeout Procedures.

1.03 PROCEDURES

- A. Deliver submittals to DEPARTMENT as directed.
- B. Transmit each item under DEPARTMENT accepted form. Identify Project, CONTRACTOR, Subcontractor, Major Supplier, identify pertinent Drawing sheet and detail number, and Specification section number, as appropriate. Identify deviations from Contract Documents by submitting a DEPARTMENT supplied Substitution Request Form. Provide a minimum of 8 1/2" x 5 1/2" blank space on the front page for CONTRACTOR, and Consultant review stamps.
- C. Submit initial progress schedules and Schedule of Values in five copies in accordance with paragraph SC6.6 of Document 00800 - Supplementary Conditions prior to submitting first Application for Payment. Form and content shall be reviewed by the DEPARTMENT. After review by DEPARTMENT revise and resubmit as required. Submit subsequent updated schedules (10) days prior to each Application for Payment.
- D. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.
- E. After DEPARTMENT review of submittal, revise and resubmit as required, identifying changes made since previous submittal. Provide total number of submittals as required for the first submission, if 6 are required and 4 were returned for revisions, submit 6 again. The DEPARTMENT and Consultants will not return the first or revised copies of rejected submittals for re-use. DO NOT submit partial copies of submittals for incorporation into rejected submittal packages which have been kept by the DEPARTMENT and/or Consultants. Provide COMPLETE copies for each review.
- F. If drawings, product submittals, samples, mock-ups, or other required submittals are incomplete or not properly submitted, the DEPARTMENT will not review the submittal

and will immediately return submittal to CONTRACTOR. DEPARTMENT will review a submittal no more than three times (incomplete or improper submittals count as one). CONTRACTOR shall pay all review costs associated with more than three reviews, unless a resubmittal is required due to new comments addressing previously submitted information.

1.04 CONSTRUCTION PROGRESS SCHEDULES

A. Submit horizontal bar Gantt chart (see below for electronic version requirements). Schedule shall show:

1. Separate bar for each major trade or operation, identifying the duration of each activity and precedent activities.
2. Complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Show each work plan and separate work area as a separate activity or group of activities.
3. Submittal dates for required for Shop Drawings, product data, and samples, and product delivery dates, including those furnished by DEPARTMENT and those under allowances.
4. All required submittals and indicating the date for each required submittal.
5. Show projected percentages of completion for each item of Work and submittal as of time of each Application for Progress Payment. See below for electronic version requirements.
6. **ELECTRONIC VERSION: REQUIRED FOR ALL PROJECTS WHEN THE ORIGINAL CONTRACT AMOUNT IS EQUAL TO OR GREATER THAN \$500,000.00.** Submit Progress Schedule plotted on paper no larger than 24" x 36" and no smaller than 8 1/2" x 11" from the electronic program. Provide in electronic form on CD for IBM and compatible using Microsoft Project 2000 version 9.0. CD will not be returned by the DEPARTMENT.
7. Submit Progress Schedule percentages in Tracking Gantt form plotted from and in electronic form as stated above.

1.05 SCHEDULE OF VALUES

A. FORMAT

1. Form and content must be acceptable to DEPARTMENT.
2. CONTRACTOR's standard form or media-driven printout will be considered on request.
3. Follow table of contents of Project manual for listing component parts. Identify each line item by number and title of listed Specification sections.

B. CONTENT

1. List installed value of each major item of Work and each subcontracted item of Work as a separate line item to serve as a basis for computing values for progress payments. Round off values to nearest dollar.
2. For each major subcontract, list products and operations of that subcontract as separate line items.
3. Coordinate listings with progress schedule.
4. Component listings shall each include a directly proportional amount of

CONTRACTOR's overhead and profit.

5. For items on which payments will be requested for stored products, list sub-values for cost of stored products with taxes paid.
6. Specific line item Values as indicated below shall be minimum acceptable amounts and must be included on all approved Schedules of Values and Applications for Payment.
 - a. **Section 01700 - Contract Closeout. Value of all required Substantial Completion Submittals and Closeout Submittals shall be not less than 10% of the final contracted amount.**
 - b. No progress payments will be made for Substantial Completion Submittals and Closeout Submittals until **all** submittals have been submitted to and accepted by the DEPARTMENT.
7. The sum of values listed shall equal total Contract Price.

C. SUBMITTAL

1. Submit four copies of Schedule prior to submitting the CONTRACTOR's first Application for Payment. Subsequent updated Schedule of Values shall be presented for review ten days prior to each Application for Payment.
2. Transmit under DEPARTMENT accepted form transmittal letter. Identify Project by DEPARTMENT title and Project number; identify Contract by DEPARTMENT Contract number.

D. SUBSTANTIATING DATA

1. When DEPARTMENT requires substantiating information, submit data justifying line item amounts in question.
2. Provide one copy of data with cover letter for each copy of the Application for Payment. Show application number and date, and line item by number and description.

1.06 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

A. SHOP DRAWINGS:

1. Present in a clear and thorough manner. Label each Shop Drawing with DEPARTMENT's Project name and Project number; identify each element of the Shop 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: 8-1/2"x11". Larger sheets may be submitted in multiples of 8-1/2"x11".

B. PRODUCT DATA

1. Submit only pages which 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.

C. SAMPLES

1. Submit full range of manufacturer's standard finishes except when more restrictive requirements are specified, indicating colors, textures, and patterns, for DEPARTMENT selection.
2. Submit samples to illustrate functional characteristics of products, including parts and attachments.
3. Approved samples, which may be used in the Work, are indicated in the Specification section.
4. Label each sample with identification required for transmittal letter.
5. Provide field samples of finishes at Project, at location acceptable to DEPARTMENT, as required by individual Specification section. Install each sample complete and finished. Acceptable finishes in place may be retained in completed Work.

D. MANUFACTURER'S INSTRUCTIONS

1. When required in individual Specification Section, submit manufacturer's printed instructions for delivery, storage, assembly, installation start-up, adjusting, and finishing, in quantities specified for product data.
2. Manufacturer's instructions for storage, preparation, assembly, installation, start-up, adjusting, balancing, and finishing under provisions of Section 01400.

E. CONTRACTOR REVIEW

1. 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.
2. Coordinate submittals with requirements of Work and of Contract Documents.
3. Sign or initial each sheet of Shop Drawings and product data, and each sample label to certify compliance with requirements of Contract Documents. Notify DEPARTMENT in writing at time of submittal, of any deviations from requirements of Contract Documents.
4. Do not fabricate products or begin Work that requires submittals until return of submittal with DEPARTMENT acceptance.

F. SUBMITTAL REQUIREMENTS

1. Each submittal to be numbered by Specification Section and Paragraph. Revisions shall be identified by a hyphen after the paragraph, with a letter designator. Example: 1st submittal "01010 1.08A" 2nd submittal 01010 1.08A - A".
2. Transmit submittals in accordance with the required submittal schedule and in such sequence to avoid delay in the Work.
3. Provide 8 1/2" x 5 1/2" blank space on each submittal for CONTRACTOR and Consultant stamps.
4. 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.
5. Coordinate submittals into logical groupings to facilitate interrelation of the several items:

- a. Finishes which involve DEPARTMENT selection of colors, textures, or patterns.
 - b. Associated items that require correlation for efficient function or for installation.
6. Submit number of opaque reproductions of shop drawings CONTRACTOR requires, plus six that will be retained by DEPARTMENT.
 7. Submit number of copies of product data and manufacturer's instructions CONTRACTOR requires, plus three copies, which will be retained by DEPARTMENT.
 8. Submit number of samples specified in individual Specifications sections.
 9. Submit under DEPARTMENT accepted transmittal form letter. Identify Project by title and DEPARTMENT Project number; identify Contract by DEPARTMENT contract number. Identify Work and product by Specification section and Article number.
 10. Each submittal shall have as its face document a completed DEPARTMENT furnished Submittal Summary form.
 11. Each submittal shall include the manufacturer's name and address, and supplier's name, address and telephone number.

G. RESUBMITTALS

1. After DEPARTMENT review of submittal, revise and resubmit as required, identifying changes made since previous submittal. Provide total number of submittals as required for the first submission, if 6 are required and 4 were returned for revisions, submit 6 again. The DEPARTMENT and Consultants will not return the first or revised copies of rejected submittals for re-use. DO NOT submit partial copies of submittals for incorporation into rejected submittal packages which have been kept by the DEPARTMENT and/or Consultants. Provide COMPLETE copies for each review.

H. DEPARTMENT REVIEW

1. DEPARTMENT or authorized agent will review Shop Drawings, product data, and samples and return submittals within (14) working days.
2. DEPARTMENT or authorized agent will examine shop drawings for general arrangement, overall dimensions and suitability, and will return to the CONTRACTOR marked as follows;
 - "No Exceptions Taken" - denotes that the submittal generally meets the requirements of the Contract Documents. "No Exceptions Taken" does not indicate a review of the CONTRACTOR's design except for general compliance with the requirements of the Contract Documents.
 - "Make Corrections Noted" - denotes review is conditional on compliance with notes made on the submittal.
 - "Revise and Resubmit" - denotes that revisions are required in the submittal in order for the submittal to be generally consistent with the requirements of the Contract Documents. Required revisions will be

identified to the CONTRACTOR.

- "Rejected" - denotes that the submittal does not meet the requirements of the Contract Documents and shall not be used in the Work. Reasons for rejection will be identified to the CONTRACTOR.

3. Review by the DEPARTMENT of shop and erection drawings shall not be construed as a complete check, but will indicate only that the general method of construction and detailing is consistent with the requirements of the Contract Documents. Review of such drawings shall not relieve the CONTRACTOR of the responsibility for errors, dimensions, and detail design.
4. DEPARTMENT will require submittal of all required color and finish samples in order to approve any on color or finish.

I. DISTRIBUTION

1. Duplicate and distribute reproductions of Shop Drawings, copies of product data, and samples, which bear Consultant's stamp, to job site file, record documents file, Subcontractors, Suppliers, and other entities requiring information.

J. SCHEDULE OF SUBMITTALS

1. Submittal Register Form to be completed by CONTRACTOR and approved by DEPARTMENT prior to submittal of any items.
2. Submit shop drawings, product data and samples as required for each specification section.
3. Format.

a. Submittal schedule form as provided by DEPARTMENT.

1.07 FIELD SAMPLES

- A. Provide field samples of finishes at Project as required by individual Specifications section. Install sample complete and finished. Acceptable samples in place may be retained in completed Work.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

SECTION 01400
QUALITY CONTROL

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. General Quality Control.
- B. Workmanship.
- C. Manufacturer's Instructions.
- D. Manufacturer's Certificates.
- E. Mockups.
- F. Manufacturers' Field Services.
- G. Testing Laboratory Services.
- H. Departmental Inspection Services.

1.02 RELATED REQUIREMENTS

- A. Document 00700 - General Conditions: Inspection and testing required by governing authorities.
- B. Section 01010 – Summary of Work: Work Plans and Access to Facility, Individual Work Areas, and Tests required for inspection of the existing roof deck and structural members.
- C. Section 01090 - Reference Standards: Applicability of Reference Standards.
- D. Section 01300 - Submittals: Shop Drawings, Product Data, and Samples

1.03 QUALITY CONTROL, GENERAL

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

1.04 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.

1.05 MANUFACTURERS' INSTRUCTIONS

- A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with Contract Documents, request clarification from DEPARTMENT before proceeding.

1.06 MANUFACTURERS' CERTIFICATES

- A. When required by individual Specifications section, submit manufacturer's certificate, in duplicate, that products meet or exceed specified requirements.

1.07 MOCKUPS

- A. When required by individual Specifications section, erect complete, full-scale mockup of assembly at site, perform required tests, and remove mockup at completion, when approved by DEPARTMENT.

1.08 MANUFACTURERS' FIELD SERVICES

- A. When required by manufacturer or when specified in respective Specification sections, require manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to make appropriate recommendations.
- B. Require manufacturer's representative to submit written report to DEPARTMENT listing observations and recommendations.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

SECTION 01500
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Electricity, Lighting.
- B. Heat, Ventilation.
- C. Telephone Service.
- D. Water.
- E. Sanitary Facilities.
- F. Dust Control (Exterior).
- G. Construction Enclosures.
- H. Barriers.
- I. Barricades, Warnings, and Markings (Airport Operations).
- J. Protection of Installed Work.
- K. Security.
- L. Water Control.
- M. Cleaning During Construction.
- N. Removal.
- O. Waste Storage Equipment.
- P. Cleaning of the Project Area.
- Q. Disposal.
- R. Tool Control

1.02 RELATED REQUIREMENTS

- A. Section 01010 - Summary of Work: Use of Premises.
- B. Section 01010 - Summary of Work: Shutoffs and Disruptions to Service.
- C. Section 01540 - Security.
- D. Section 01700 - Contract Closeout: Final cleaning.

1.03 ELECTRICITY, LIGHTING

- A. Connect to existing service, provide branch wiring and distribution boxes located to allow service and lighting by means of construction-type power cords. DEPARTMENT will pay costs of energy used.
- B. Provide lighting for construction operations.
- C. Take precautions to conserve energy. Wasteful use of power will be back charged to the CONTRACTOR.

1.04 HEAT, VENTILATION

- A. Provide as required to maintain specified conditions for construction operations, to protect materials and finishes from damage due to temperature or humidity.
- B. Do not use permanent facilities for temporary purposes.
- C. Fully exhaust to the outside welding fumes generated from operations related to performance of the Work.
- D. Provide ventilation of enclosed areas to cure materials, to disperse humidity, and to prevent accumulations of dust, fumes, vapors, or gases.

1.05 TELEPHONE SERVICE

- A. Provide telephone service if required for construction operations.

1.06 WATER

- A. Provide service required for construction operations. Extend branch piping with outlets located so that water is available by use of hoses.
- B. The DEPARTMENT will pay for water used.
- C. Hoses or temporary piping will not be permitted in public areas where a hazard to the public may be created.

1.07 SANITARY FACILITIES

- A. Designated existing facilities may be used during construction operation; maintain in clean sanitary condition. Do not use facilities for construction for cleaning of construction equipment.

1.08 DUST CONTROL

- A. Execute Work by methods that minimize raising of dust or airborne debris from construction or demolition operations
- B. Provide positive means to prevent air-borne dust from dispersing into the atmosphere

1.09 CONSTRUCTION ENCLOSURES

- A. Provide temporary enclosures/partitions around areas inside the facility that are affected by the construction. Enclosures/partitions shall:
 - 1. Isolate construction from Using Agency and residents. Enclosure/partitions must be secured with a padlock.
 - 2. Prevent the penetration of dust and/or moisture into occupied areas. Partitions must be sealed at ceiling and floor.
 - 3. Prevent damage to existing materials, finishes, and equipment or other existing building components and contents.
 - 4. Be designed and stamped by an engineer licensed by the State of Alaska if over 12 feet high.
 - 5. Be constructed of metal studs, painted GWB, 10 mil polyethylene, and sound attenuation insulation. Enclosures/Partitions shall extend from floor to ceiling with complete closure at adjoining walls.

- B. The CONTRACTOR shall include his plan for construction enclosures in the work plan prepared under Section 01010.

1.10 BARRIERS

- A. Provide as required to prevent public entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide barriers to provide both separation and safety to adjacent building occupants..

1.11 PROTECTION OF INSTALLED WORK

- A. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
- B. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects, and storage.

1.12 SECURITY.

- A. Provide security program and facilities to protect Work, existing facilities, and Using Agency's operations from unauthorized entry, vandalism, and theft. Coordinate with DEPARTMENT security program.

1.13 WATER CONTROL

- A. Protect the interior of the facility from water and/or moisture infiltration

1.14 CLEANING DURING CONSTRUCTION

- A. In accordance with Part 2 and Part 3 of this specification.

1.15 REMOVAL

- A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary facilities.
- C. Restore existing facilities used during construction to specified, or to original, condition.

PART 2 PRODUCTS

2.01 WASTE STORAGE EQUIPMENT

- A. Provide covered containers for deposit of materials, waste materials, debris, and rubbish.

PART 3 EXECUTION

3.01 CLEANING OF THE PROJECT AREA

- A. Maintain all areas under CONTRACTOR's control free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to closing the space.
- C. Immediately clean interior areas after completion of the work to provide suitable conditions for building occupants and residents. All resident occupied areas and areas used by the general public require cleanup at the end of each shift.

- D. Broom clean interior areas prior to start of surface finishing, and continue cleaning on an as needed basis.
- E. Control cleaning operations so that dust and other particulates will not adhere to wet or newly-coated surfaces.

3.02 DISPOSAL

- A. Promptly remove waste materials, debris, and rubbish from site periodically and dispose of in accordance with all Federal, State and local regulations.

END OF SECTION

SECTION 01600
MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

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

1.02 RELATED REQUIREMENTS

- A. Section 01005 - Administrative Provisions.
- B. Section 01010 - Summary of Work.
- C. Section 01090 - Reference Standards.
- D. Section 01400 - Quality Control: Manufacturers' Certificates.
- E. Section 01700 – Contract Closeout: Closeout Procedures, Operation and Maintenance Data, Warranties, Spare Parts and Maintenance Materials.

1.03 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.

1.04 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. Immediately on delivery, inspect shipment to assure:
 - 1. Product complies with requirements of Contract Documents and reviewed submittals.
 - 2. Quantities are correct.
 - 3. Accessories and installation hardware are correct.
 - 4. Containers and packages are intact and labels legible.
 - 5. Products are protected and undamaged.

1.05 STORAGE AND PROTECTION

- A. **HANDLE AND STORE MATERIALS FOR CONSTRUCTION, PRODUCTS OF DEMOLITION, AND OTHER ITEMS TO AVOID DAMAGE TO BUILDING.**
- B. 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.
- C. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.
- D. Provide Material Safety Data Sheets (MSDS) for all products which may produce unpleasant or noxious odors. CONTRACTOR shall provide for adequate venting if needed.

1.06 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 with a Provision for Substitutions by meeting product description: Submit a request for substitution for any manufacturer not specifically named that meets the product description specifications.
- C. Products Specified by Naming One or More Manufacturers followed by the term "No Substitutions": Use only specified manufacturers, no substitutions allowed.

1.07 PRODUCTS LIST

- A. Within 7 days after date of Notice to Proceed, transmit four copies of a list of products, which are proposed for installation, including name of manufacturer.
- B. Tabulate products by Specifications section number, title, and Article number
- C. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.
- D. DEPARTMENT will reply in writing within five days stating whether there is reasonable objection to listed items. Failure to object to a listed item shall not constitute a waiver of requirements of Contract Documents.

1.08 SUBSTITUTIONS

- A. SUBSTITUTION SUBMITTAL PERIOD
 - 1. Product substitution requests will be considered only within 7 days after date established in Notice to Proceed. Subsequent requests will be considered only in case of product unavailability or other conditions beyond control of CONTRACTOR. (Submit on Substitution Request Form "B")
- B. LIMITATIONS ON SUBSTITUTIONS
 - 1. **Only one request for substitution will be considered for each product** from each Prime Bidder/CONTRACTOR. When substitution is not accepted, Prime Bidder/CONTRACTOR shall provide specified product.
 - 2. Substitutions will not be considered when indicated on Shop Drawings or product data submittals.
 - 3. Substitute products shall not be ordered or installed without written acceptance.
 - 4. DEPARTMENT will determine acceptability of substitutions.
- C. REQUESTS FOR SUBSTITUTIONS
 - 1. Submit separate request for each substitution. Document each request with

complete data substantiating compliance of proposed substitution with requirements of Contract Documents.

2. Identify product by Specification section and Article numbers. Provide manufacturer's name and address, trade name of product, and model or catalog number. List fabricators and Suppliers as appropriate.
3. Attach product data as specified in Section 01340.
4. List similar projects using product, dates of installation, and names of design Consultant(s) and owner.
5. Give itemized comparison of proposed substitution with specified product, listing variations, and reference to Specification sections and Article numbers.
6. Give quality and performance comparison between proposed substitution and the specified product.
7. Give cost data comparing proposed substitution with specified product, and amount of net change to Contract Price.
8. List availability of maintenance services and replacement materials.
9. State effect of substitution on construction schedule, and changes required in other Work or products.

D. CONTRACTOR REPRESENTATION

1. Request for substitution constitutes a representation that CONTRACTOR has investigated proposed product and has determined that it is equal to or superior in all respects to specified product.
2. CONTRACTOR will provide same warranty for substitution as for specified product.
3. CONTRACTOR will coordinate installation of accepted substitute, making such changes as may be required for Work to be complete in all respects.
4. CONTRACTOR certifies that cost data presented is complete and includes all related costs under this Contract.
5. CONTRACTOR waives claims for additional costs related to substitution which may later become apparent.

E. SUBMITTAL PROCEDURES

1. Submit five copies of complete request for Substitution Request Form. Request to include complete product information and data, color swatch board, and certification that proposed product meets or exceeds all requirements for the specified product.
2. DEPARTMENT will review CONTRACTOR's requests for substitutions within 5 days of receipt.
3. After receipt of submittal, DEPARTMENT will notify CONTRACTOR, in writing, of decision to accept or reject requested substitution within 5 days.
4. For accepted products, submit Shop Drawings, product data, and samples under provisions of Section 01300.

PART 2 PRODUCTS
PART 3 EXECUTION

Not Used
Not Used

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 REQUIREMENTS INCLUDED

- A. Closeout Procedures.
- B. Final Cleaning.
- C. Project Record Documents.
- D. Operation and Maintenance Data.
- E. Warranties.
- F. Spare Parts and Maintenance Materials.
- G. Maintenance Service.

1.02 RELATED REQUIREMENTS

- A. Document 00700 - General Conditions: Fiscal provisions, legal submittals, and other administrative requirements.
- B. Section 01010 - Summary of Work: Using Agency Occupancy.
- C. Section 01400 – Quality Control: Departmental Inspection Services.
- D. Section 01500 - Construction Facilities and Temporary Controls: Cleaning during construction.

1.03 CLOSEOUT PROCEDURES

A. Substantial Completion and Final Completion:

1. Substantial Completion:

a. Submit the following prior to requesting a Substantial Completion Inspection:

1. Evidence of Compliance with Requirements of Governing Authorities:

- I. Certificate of Occupancy.
- II. Required Certificates of Inspection.

2. Project Record Documents in accordance with sub section 1700-1.05

3. Operation and Maintenance Data in accordance with sub section 1700-1.06

4. Spare Parts and Maintenance Materials in accordance with sub section 1700-1.08

b. Substantial Completion shall be considered by the DEPARTMENT when:

- 1. Written notice is provided 7 days in advance of inspection date.
- 2. List of items to be completed or corrected is submitted.
- 3. Operation and Maintenance Manuals are submitted and approved by the DEPARTMENT.
- 4. Equipment and systems have been tested, adjusted, balanced and are fully operational.
- 5. Automated and manual controls are fully operational.
- 6. Operation of system has been demonstrated to DEPARTMENT Personnel.

7. Certificate of Occupancy is submitted.
 8. Certificates of Inspection for required inspections have been submitted.
 9. Project Record Documents for the Work or the portion of the Work being accepted are submitted and approved.
 10. Spare parts and maintenance materials are turned over to DEPARTMENT.
 11. All keys are turned over to the DEPARTMENT.
- c. Should the DEPARTMENT inspection find Work is not substantially complete, the Department will promptly notify CONTRACTOR in writing, listing observed deficiencies.
 - d. The CONTRACTOR shall remedy deficiencies and send a second written notice of Substantial Completion.
 - e. When the DEPARTMENT finds Work is substantially complete the DEPARTMENT will prepare a certificate of Substantial Completion in accordance with provisions of General Conditions
- B. FINAL COMPLETION:**
1. When CONTRACTOR considers Work is complete, submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been inspected for compliance with Contract Documents.
 - c. Work has been completed in accordance with Contract Documents, and deficiencies listed with certificate of Substantial Completion have been corrected.
 - d. Work is complete and ready for final inspection.
 2. Should the DEPARTMENT inspection find Work incomplete, DEPARTMENT will promptly notify CONTRACTOR in writing listing observed deficiencies.
 3. CONTRACTOR shall remedy deficiencies and send a second certification of Final Completion.
 4. When DEPARTMENT finds Work is complete, DEPARTMENT will consider closeout submittals.
- C. REINSPECTION FEES**
1. Should status of completion of Work require more than two re-inspections by the DEPARTMENT due to failure of Work to comply with CONTRACTOR's responsibility, the DEPARTMENT will deduct the cost of re-inspection from final payment to CONTRACTOR as provided in the Contract Documents.
 2. Re-inspection fees shall not exceed \$5,000 for any one re-inspection.
- D. CLOSEOUT SUBMITTALS**
1. Warranties and Bonds: Under provisions of Section 01700.
 2. Evidence of Payment: In accordance with Conditions of the Contract.
 3. Consent of Surety to Final Payment.
 4. Certificates of Insurance for Products and Completed Operations: In accordance with Supplementary Conditions.
 5. Certificate of Release.

E. APPLICATION FOR FINAL PAYMENT

1. Submit application for final payment in accordance with provisions of the General Conditions of the Contract.
- F. Using Agency will occupy Facility for the purpose of conduct of business, under provision stated in certificate of Substantial Completion.
- G. DEPARTMENT will issue a summary Change Order reflecting final adjustments to Contract Price not previously made by Change Order.

1.04 FINAL CLEANING

- A. Execute final cleaning prior to Substantial Completion inspection.
- 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, clean or replace filters of mechanical equipment. Clean roofs, gutters, downspouts, and drainage systems.
- C. Clean site; sweep paved areas, rake clean other surfaces.
- D. Use materials which will not create hazards to health or property, and which will not damage surfaces. Follow manufacturers' recommendations.
- E. Maintain cleaning until the DEPARTMENT issues certificate of substantial Completion.
- F. Remove waste, debris, and surplus materials from the site. Clean grounds; remove stains, spills, and foreign substances from paved areas and sweep clean. Rake clean other exterior surfaces.

1.05 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following Record Documents; record actual revisions to the Work:
 1. Drawings.
 2. Specifications.
 3. Addenda.
 4. Change Orders and other modifications to the Contract.
 5. Reviewed shop drawings, product data, and samples.
 6. Manufacturers instructions for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by DEPARTMENT.
- C. Store Record Documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. SPECIFICATIONS: Legibly mark and record at each product section description of actual products installed, including the following:
 1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and Modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction graphically to scale including:
 1. Measured depths of foundations 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 the Work.
4. Field changes of dimension and detail.
5. Details not on original Contract drawings.

1.06 OPERATION AND MAINTENANCE INSTRUCTIONS

- A. Submit data bound in 8-1/2 by 11 inch (A4) text pages, 3-D side ring binders with durable plastic covers.
- B. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are requested.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with the tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, typed on 24 pound white paper, in 3 parts as follows:
 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, CONTRACTOR, subcontractors, and major equipment suppliers.
 2. Part 2: Operations and maintenance instructions, arranged by system and subdivided by Specification Section. For each category, identify names, addresses, and telephone numbers of subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for [special] finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
 3. Part 3: Project Documents and Certificates, including the following:
 - a. Shop drawings and product data.
 - b. Certificates.
 - c. Originals of warranties and bonds.
- E. Submit one draft copy of completed volumes five working days prior to Substantial Completion inspection. This copy will be reviewed and returned, with DEPARTMENT comments. Revise content of all document sets as required prior to final submission.
- F. Submit two sets of revised final volumes and a digital copy on a CD Rom disc within ten days after Substantial Completion Inspection.

1.07 WARRANTIES

- A. As a condition precedent to Final Payment, all guaranties and warranties as specified under various sections of the Contract Documents shall be obtained by the CONTRACTOR and delivered to the OWNER, in duplicate giving a summary of guarantees attached and stating the following in respect to each:
 1. Character of Work affected.
 2. Name of Subcontractors.

3. Period of Guarantee.
 4. Conditions of Guarantee.
- B. Delivery of said guarantees and/or warranties shall not relieve the CONTRACTOR from any obligations assumed under any other provision of the Contract.
- C. If, within any guarantee period, repairs or changes are required in connection with the guaranteed Work, which in the opinion of the OWNER is rendered necessary as the result of the use of materials, equipment or workmanship, which are defective, or inferior, or not in accordance with the terms of the Contract, the CONTRACTOR shall, upon receipt of notice from the OWNER, and without expense to the OWNER, proceed within seven (7) calendar days to:
1. Place in satisfactory conditions in every particular all of such guaranteed Work, correct all defects therein, and make good all damages to the structure or site.
 2. Make good all Work or materials, or the equipment and contents of structures or site disturbed in fulfilling any such guarantee.
- D. If the CONTRACTOR, after notice, fails to comply without the terms of the guarantee, the OWNER may have the defects corrected and the CONTRACTOR and CONTRACTOR's Surety shall be liable for all expenses incurred in connection therewith, including Engineer's fees.

1.08 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.
- B. Deliver to project site and place in location as directed, obtain receipt prior to final payment.

PART 2 PRODUCTS Not Used

PART 3 EXECUTION Not Used

END OF SECTION

**STATE OF ALASKA
DEPARTMENT OF FAMILY & COMMUNITY SERVICES
ALASKA VETERANS & PIONEERS HOME
RESIDENT BATHROOM RENOVATIONS
ANC 23-22C
PALMER, ALASKA**

**PROJECT MANUAL
CONSTRUCTION DOCUMENTS**

OCTOBER 17, 2022

**OWNER:
STATE OF ALASKA
DEPARTMENT OF HEALTH AND SOCIAL SERVICES**

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625 SOUTH COBB ST., SUITE 200
PALMER, AK 99645**

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**INTERIOR DESIGN CONSULTANT:
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**ENVIRONMENTAL CONSULTANT:
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EAGLE RIVER, AK 99577**

ALASKA VETERANS & PIONEERS HOME – RESIDENT BATHROOM RENOVATIONS

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SECTION 01 23 00

ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes administrative and procedural requirements for Alternates.

1.3 DEFINITIONS

- A.** Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1.** The cost or credit for each Alternate is the net addition to or deduction from the Contract Sum to incorporate Alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A.** Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the Alternate into Project.
 - 1.** Include as part of each Alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of Alternate.
- B.** Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each Alternate. Indicate if Alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to Alternates.
- C.** Execute accepted Alternates under the same conditions as other work of the Contract.

- D.** Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each Alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ENHANCEMENTS

- A.** Alternate No. One (1) – Homestead Trail Wing
1. See Architectural, Mechanical, and Electrical Drawings and Specifications for extent of work for the Enhancement.
 2. Demolish flush valves, faucets, and light fixtures as noted at the Resident Bathrooms in the Homestead Trail wing.
 3. Provide new flush valves and faucets at the Resident Bathrooms in the Homestead Trail wing.
 4. Provide new light fixtures at the Resident Bathrooms in the Homestead Trail wing.
- B.** Alternate No. Two (2) – Raven Wing, Single Occupant Bathrooms
1. See Architectural, Mechanical, and Electrical Drawings and Specifications for extent of work for the Enhancement.
 2. Demolish finishes, tubs, flush valves, faucets, and light fixtures as noted at the Resident Bathrooms in the Raven Wing, Single Occupant Bathrooms.
 3. Provide new ADA compliant showers at the Raven Wing, Single Occupant Bathrooms
 4. Provide new flooring at the Resident Bathrooms in the Raven Wing, Single Occupant Bathrooms.
 5. Provide new flush valves and faucets at the Resident Bathrooms in the Raven Wing, Single Occupant Bathrooms.
 6. Provide new light fixtures at the Resident Bathrooms in the Raven Wing, Single Occupant Bathrooms.

END OF SECTION 01 23 00

SECTION 01 35 45

AIRBORNE CONTAMINANT CONTROL

PART 1 - GENERAL

1.01 SUMMARY:

- A.** Related sections:
1. Section 02 26 00 Hazardous Materials Assessment
 2. Section 02 41 00 Demolition
 3. Section 02 81 00 Hazardous Materials – Summary of Requirements
- B.** Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.
- C.** Notification of Child Occupied Facility: Portions of this building are classified as a Child Occupied Facility in accordance with 40 CFR 745 and lead-based paints may be present on components to be disturbed in those areas. Personnel performing work in these areas must comply with the requirements of 40 CFR 745, including training, work practices and cleaning of the work area. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of lead materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.

1.02 DEFINITIONS:

- A.** “Airborne Contaminants” are those contaminants listed in 29 CFR 1926.55 and 8 AAC 61.1100 that have the potential to become airborne due to various work activities being performed by the Contractor. Additionally, airborne contaminants include those fumes and odors that may be objectionable to personnel in Occupied Areas of the facility even though they are not listed in the reference regulations. Airborne contaminants may be broadly categorized as Pre-Existing or Activity Generated. Contaminant producing activities include, but are not limited to:
1. Demolition, removal, installation and disposal of walls, floors, ceilings, steel, and other architectural or structural materials.
 2. Disturbance or removal of existing settled and concealed dusts.

3. Demolition, relocation, installation and disposal of plumbing, mechanical and electrical systems and equipment.
 4. Finish operations such as sanding, preparation, painting, and application of special surface coatings.
 5. Any construction activity, which can generate aerosols, dust, smoke, or fumes.
 6. Temporary heat sources.
 7. Other on-site work operations not described above.
- B.** “Pre-Existing Contaminants” are those contaminants that are present in the facility prior to the start of any work. These contaminants, including asbestos and lead, are assumed to be also present in settled and concealed dust throughout the building in areas not subject to routine cleaning, including the roof and inside and on top of architectural, mechanical, electrical and structural elements. The dust generally contains several common components including, but not limited to asbestos, cellulose, cotton, fiberglass, lead, silica and other Particulates Not Otherwise Regulated. Representative dusts throughout the facility have been examined by an EPA Certified Building Inspector and determined not to be “asbestos debris” from adjacent “Asbestos-Containing Building Materials” (ACBM). Based on similar sampling from similar buildings, the inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM). Reference 40 CFR 763.83 for asbestos, and 29 CFR 1926.1153 for silica. Refer to Section 02 26 00, Hazardous Materials Assessment. Dust and debris related to adjacent damaged asbestos containing materials are addressed in Section 02 81 00 Hazardous Materials – Summary of Requirements.
- C.** “Activity Generated Contaminants” are those contaminants generated by the various demolition or construction related activities of the Contractor. Examples of typical Activity Generated Contaminants include wood dust (cellulose), cement dust (silica), gypsum dust (particulates not otherwise regulated), paint fumes, and welding fumes. A complete list of regulated air contaminants is available in 29 CFR 1926.55 and 8 AAC 61.1100.
- D.** “Work Areas”: Areas of demolition, renovation, construction, adjacent staging and storage areas, and passage areas for workers, supplies, and waste. This may include but is not limited to attic spaces, spaces above ceilings, crawl spaces, mechanical and electrical spaces, confined spaces and other spaces not normally accessed or occupied.
- E.** “Occupied Areas”: Areas as determined by Owner’s Representative and as shown on contract drawings. Typically these include areas adjacent to Work Areas or containment areas, either occupied or used for passage, as well as areas connected to construction area by mechanical system air intake, exhaust, and ductwork. Contaminant control procedures may be relaxed during periods when the building is not occupied as allowed by the Contractor’s approved work plan.
- F.** “Critical Clean Areas”: Areas inside or outside the Work Area with equipment or occupants that cannot tolerate airborne contamination, and are to be maintained under positive pressure by High-Efficiency, Particulate, Air (HEPA) filtered equipment relative to the surrounding air. These areas will be described or shown in contract documents or drawings.

- G.** “Contractor” is defined to include all trades and all subcontractors performing work on the work site.
- H.** “Negative Initial Determination” is a determination made either through air monitoring or other objective data that indicates worker exposure to regulated airborne contaminants are below or expected to be below the regulated limits.

1.03 AIRBORNE CONTAMINANT CONTROL

- A.** There is no requirement to remove Pre-Existing Contaminants from the facility. The Contractor may remove Pre-Existing Contaminants from their work areas if they determine that to be a more cost effective means of completing the work.
- B.** The Contractors shall establish and maintain control over the generation and containment of all potential airborne contaminants so that workers, facilities, staff, programs, equipment, and operations are not adversely affected, including adverse effects on air monitoring. Construction activities that disturb existing materials or create airborne contaminants must be conducted in Work Areas specifically constructed, ventilated, and/or equipped to prevent the movement of contaminants into Occupied or Critical Clean Areas.
- C.** The Contractor shall establish and maintain control over Activity Generated Contaminants within the Work Area to prevent abnormally high levels of airborne contaminants from settling on architectural, mechanical, electrical or structural components within the work areas, or interference with monitoring conducted for other work. The Contractor shall be required to clean all surfaces within a work area where abnormally high levels of Activity Generated Contaminants are deposited.
- D.** The Contractor shall ensure that all workers are aware of the Occupied and Critical Clean Areas, the potential air contaminants present and the means and methods established in the work plan to control those contaminants.
- E.** The Contractor shall ensure workers have the proper protective equipment needed for the job being performed.

1.04 TRAINING

- A.** The Contractor shall ensure that all workers/trades performing work on the project site are trained in accordance with OSHA standards for hazard communication (29 CFR 1910.1200) and proper protective equipment (29 CFR 1926), as well as engineering controls and work methods required to prevent exposure to regulated air contaminants that might be generated or encountered as a results of their work, including 29 CFR 1926.1153.

1.05 RESPONSIBILITY:

A. Owner's Responsibilities

1. The Owner shall identify in contract documents Occupied Areas and Critical Clean Areas prior to allowing the Contractor to begin work. The Contractor shall be notified of all changes to these areas as work progresses.

B. Contractor's Responsibilities:

1. Preparing proposed work plans and procedures for control of airborne contaminants during demolition and construction.
2. Identifying and implementing specific means and methods of achieving and maintaining control of airborne contaminants.
3. Controlling the generation and spread of airborne contaminants from the Contractor's Work Areas.
4. Cleaning and decontaminating all areas contaminated as the result of their operation. The Owner has the right to review and approve of any and all clean-up and decontamination procedures, chemicals, and processes.
5. Notifying Owner's Representative a minimum of 48 hours prior to starting construction activities that might be expected to produce excess levels of airborne contaminants in Work Area so that precautions may be taken.

1.06 SUBMITTALS:

A. Submittals Required: Submit the following documentation to the Owner for approval. The submittal shall be coordinated with all the Contractor's subcontractors and trades and be submitted as one submittal for all work covered by this section. **WORK SHALL NOT PROCEED UNTIL THE SUBMITTAL PACKAGE IS APPROVED, AND THE PRE-CONSTRUCTION MEETING HAS BEEN HELD.**

1. Shop Drawings: Make all shop drawings accurately and to a scale sufficiently large to show all pertinent features of the work. Shop Drawings shall show:
 - a. Boundaries of each Work Area, Occupied Areas and Critical Clean Areas.
 - b. Location of barriers, negative pressure areas, positive pressure areas, and exhaust fan units (if required).
 - c. Locations of windows, louvers, ducts and other penetrations into Occupied Areas and/or Critical Clean Areas that need to be protected from airborne contamination.
 - d. Disposal Routes.
 - e. Locations of contaminant producing operations like painting or sanding which could be moved away from Occupied Areas.
2. Work Plan: The Work Plan shall be prepared for this specific job in the form of checklists and shall include:
 - a. Work area set-up and protection procedures during occupied times.
 - b. Work area set-up and protection procedures during periods of limited occupancy (vacation and holidays).
 - c. Work procedures to minimize generation of airborne contaminants, including a written exposure control plan.
 - d. Worker protection procedures.

- e. Daily cleanup procedures and activities.
 - f. Procedures to follow if air contaminants enter Occupied or Critical Clean Areas.
 - g. Exposure assessment procedures if a “negative initial determination” has not been completed (note that negative initial determinations are not allowed related to silica exposure). A record of “negative initial determinations” shall be maintained by the Contractor and be available on the job site for review by the Owner or regulatory agencies.
3. Safety Data Sheets (SDSs): The Contractor shall maintain on the job site, at a location approved by the owner, SDSs for each encapsulant, surfactant, solvent, detergent, and other material proposed to be used.
- B.** Monitoring Results: The Contractor shall submit copies of all air monitoring and testing results to the Owner within 24 hours of receipt of results.

1.07 WORKER PROTECTION:

- A.** The Contractor shall review the SDS’s for the substances that will be used, data provided by these specifications, proposed means and methods, manufacturers data and other available data to determine the potential for worker exposure.
- B.** Conduct air monitoring of worker exposures as necessary to show that workers are not being exposed above the permissible exposure limits established by 29 CFR 1926 and 8 AAC 61.1100 (negative initial determination). Not all contaminants or substances will require exposure monitoring. All sampling by the Contractor shall be at their own cost.
- C.** In lieu of worker exposure monitoring, the Contractor may rely on objective data from recognized trade groups, manufacturer or previous exposure monitoring data that establish that worker exposure above the permissible exposure limits is not probable under conditions “closely resembling” the processes, types of materials, control methods, work practices and environmental conditions in the current job.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 WORK PRACTICES:

- A.** General: All construction/demolition work shall be isolated, either by enclosures, and/or work practices and equipment to prevent worker exposures above the permissible exposure limit(s), and prevent the migration of contaminants (dust, fumes, smoke, etc.) into Occupied Areas and Critical Clean Areas of the facility. Exposures to occupants shall be maintained at least 10 times lower than the permissible exposure limit(s) for airborne contaminants. Conduct disturbance of concrete, brick, stone, mortar, etc. in accordance with 29 CFR 1926.1153 related to crystalline silica. If the Contractor’s work practices are

not effective in controlling airborne contaminants, as evidenced by dust, fumes, smoke, odors, etc. in Occupied or Critical Clean Areas, the Contractor shall provide a sealed barrier at the perimeter of the work area and exhaust the work area to maintain a negative pressure and/or provide a filtered positive pressure to Critical Clean and Occupied areas to keep airborne contaminants out. Maintain a positive pressure of 0.05 inches of water column relative to the air outside the Critical Clean Areas, with a minimum 100 feet per minute velocity through cracks, openings, etc.

- B.** Direct exhaust from fume or smoke producing equipment away from building air intakes, windows and other penetrations into Occupied and Critical Clean Areas.
- C.** The Contractor shall provide “walk-off” mats, at all connections between Work Areas and Occupied Areas, vacuumed or changed daily when there is traffic between the Work Area and the Occupied Areas.
- D.** Enclosures, where used, shall be dust tight and withstand air pressure.
- E.** Prohibited Materials: The use or application of the following materials is prohibited:
 - 1. All cleaners and aerosol products not submitted and approved by the Owner.
 - 2. All flammable or chlorinated hydrocarbon solvents, unless approved by the Owner.
- F.** Any dust or debris tracked outside of Work Areas into Occupied Areas shall be cleaned up immediately. Contractor shall have the necessary manpower and equipment (dust and wet mops, HEPA vacuums, buckets and clean wiping rags) to keep adjacent Occupied Areas clean at all times.
- G.** Dry Sweeping is prohibited. All vacuums used for cleaning shall be equipped with HEPA filters.
- H.** Traffic between Work Areas and Occupied Areas shall be kept to a minimum. Keep doors between such areas closed at all times. Transport refuse through Occupied Areas in covered containers.
- I.** Notify the Owner’s Representative immediately of any release of airborne contaminants into Occupied Areas.

3.02 ENFORCEMENT:

- A.** The Contractor shall periodically inspect Occupied Areas at the perimeter of the work area and Critical Clean Areas to verify that airborne contaminants have not spread into those areas.
- B.** Failure to properly maintain airborne contaminant control in Work Areas, Occupied or Critical Clean Areas will result in issuance of a written warning. If the problem is not corrected immediately, the Owner will have cause to stop work.

- C. Failure of the Contractor to correct deficiencies in controlling airborne contaminants will result in corrective action taken by the Owner and deduction of all costs from the Contract.

3.03 WORK STOPPAGE:

- A. The Contractor shall stop work and notify the Owner whenever his work has caused visible dust, smoke, fumes or objectionable odors in Occupied or Critical Clean Areas.
- B. When such work stoppage occurs, the area shall be restored to its original condition by the Contractor at no expense to the Owner. The Contractor is responsible for removing dust, fumes and debris that were generated as a result of his work.

3.04 WORK COMPLETION:

- A. Provide thorough cleaning of finished surfaces that become exposed to dust or other airborne contaminants. Cleaning of Pre-Existing contaminants is not required.
- B. Removal of construction barriers and airborne contaminant control equipment shall be performed in a manner to minimize disturbance of airborne contaminants into occupied spaces. HEPA vacuum and clean all finished surfaces free of dust after the removal of barriers and equipment.

END OF SECTION 01 35 45

SECTION 02 26 00

HAZARDOUS MATERIALS ASSESSMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A.** The Hazardous Materials Assessment for the proposed construction is included with these Contract Documents.

1.02 USE OF INFORMATION

- A.** The Hazardous Materials Assessment is provided for the Contractor's information and use in the planning and performance of work in areas containing hazardous or potentially hazardous materials as outlined in Paragraph 1.3.
 - 1. The information provided in the Hazardous Materials Assessment is based on samples collected in various locations of the building. Thus, the Owner and/or its Representative cannot guarantee or warrant that actual conditions encountered might not vary from the information presented in these reports.
 - 2. The data reported in the Hazardous Materials Assessment is accurate to the best of the Owner's and its Representative's knowledge. The requirements contained in these specifications and in the relevant state and federal regulations pertaining to the performance of work in areas containing hazardous or potentially hazardous materials provide guidance for the contractor for performance of work in these areas. The Owner and its Representative disclaim all responsibility for the Contractor's erroneous conclusions regarding the information presented in these reports; the requirements contained in these specifications; and the requirements of applicable state and federal regulations pertaining to performance of work in these areas.
 - 3. The Contractor shall be responsible for obtaining additional information if Contractor deems it necessary to carry out the work.
- B.** It is highly recommended that the contractor visit the site to acquaint themselves with existing conditions.
- C.** Attached Hazardous Materials Assessment

1.03 HAZARDOUS MATERIALS NOTIFICATION:

- A.** Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or

systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.

- B.** Notification of Child Occupied Facility: Portions of this building are classified as a Child Occupied Facility in accordance with 40 CFR 745 and lead-based paints may be present on components to be disturbed in those areas. Personnel performing work in these areas must comply with the requirements of 40 CFR 745, including training, work practices and cleaning of the work area. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of lead materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

HAZARDOUS MATERIALS ASSESSMENT

**ALASKA VETERANS & PIONEER HOME
RESIDENT BATHROOM RENOVATIONS, ANC 22-37C**

PALMER, ALASKA

**Surveyed
January 11, 2022**

**Report Date
February 09, 2022**

EHS, ALASKA, INC.
ENGINEERING, HEALTH & SAFETY CONSULTANTS
11901 BUSINESS BLVD., SUITE 208
EAGLE RIVER, ALASKA 99577-7701

HAZARDOUS MATERIALS ASSESSMENT
ALASKA VETERANS & PIONEER HOME
RESIDENT BATHROOM RENOVATIONS, ANC 22-37C
PALMER, ALASKA

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Appendix A	Asbestos Bulk Field Survey Data Sheets and Lab Reports
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HAZARDOUS MATERIALS ASSESSMENT
ALASKA VETERANS & PIONEER HOME
RESIDENT BATHROOM RENOVATIONS, ANC 22-37C
PALMER, ALASKA

OVERVIEW

Portions of the Alaska Veterans & Pioneer Home located in Palmer, Alaska, was surveyed for the presence of asbestos-containing materials (ACM), and other potentially hazardous materials as a part of the design services for the Resident Bathroom Renovations Project at the building for the State of Alaska Department of Health & Social Services. The survey also provided a “good faith” inspection for hazardous materials that may be disturbed during the construction. The proposed work includes the disturbance, demolition, removal and disposal of lead-containing paints and/or lead-containing materials that is incidental to the renovation and remodeling project. Mr. John H. Lamont and Mr. Martin K. Schwan of EHS-Alaska, Inc. (EHS-Alaska) conducted the inspections in January 2022. This assessment includes data from previous inspections of the facility.

A. GENERALIZED REQUIREMENTS FOR HAZARDOUS MATERIALS

Potentially hazardous materials have been identified in the Alaska Veterans & Pioneer Home that will be affected by the proposed renovations. Those materials include asbestos, lead, and mercury. Not all materials were tested for potentially hazardous components, other potentially hazardous materials, including those exterior to the building, such as contamination from underground fuel tanks may be present, but are not part of this report.

Buildings or portions of buildings that were constructed prior to 1978 which are residences, or contain day care facilities, kindergarten classes or other activities frequently visited by children under 6 years of age are classified as *child occupied facilities*. All work which is NOT classified as “minor repair and maintenance activities” (as defined by the regulations), that takes place in the “*child occupied*” portions of facilities must comply with the requirements of 40 CFR 745. Portions of this building are classified as a *child occupied facility* and it is the Contractor’s responsibility to ensure the requirements of 40 CFR 745 are met. See lead testing results for locations of lead-based paints present in the project areas.

Only the materials that will be directly affected by this project are required to be removed. The quantities and types of materials are incorporated into the design documents for this renovation. The removal and disposal of potentially hazardous materials are highly regulated, and it is anticipated that removal and disposal of asbestos, lead and chemical hazards will be conducted by a subcontractor to the general contractor who is qualified for such removal. It is anticipated that the general contractor and other trades will be able to conduct their work using engineering controls and work practices to control worker exposure and to keep airborne contaminants out of occupied areas of the building. Refer to Section 01 35 45, Airborne Contaminant Control.

Settled and concealed dusts in areas not subject to routine cleaning are present throughout the building, including the roof, and inside and on top of architectural, mechanical, electrical, and structural elements, and those dusts are assumed to contain regulated air contaminants. This should not be read to imply that there is an existing hazard to building occupants (normal occupants of the building as opposed to construction workers working in the affected areas). However, depending on the specific work items involved and on the means and methods employed when working in the affected areas, construction workers could be exposed to regulated air contaminants from those dusts in excess of the OSHA Permissible Exposure Limits (PELs).

The settled and concealed dusts were examined by an EPA Certified Building Inspector but were not sampled. The inspector determined that the dusts are not “asbestos debris” from an asbestos-containing building material (ACBM). Based on similar sampling from similar buildings, the inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM). Reference 40 CFR 763.83.

“Awareness training” (typically 2 hours) and possibly respiratory protection will be required for all Contractor Personnel who will be disturbing the dusts. The extent of the training and protective measures will depend upon the airborne concentrations measured during air monitoring of the contractors work force, which depends on the means and methods employed to control the dusts. The air monitoring may be discontinued following a “negative exposure assessment” showing that worker exposures are below the OSHA permissible exposure limits for the type of work and means and methods employed. Previous air monitoring from similar jobs with similar conditions may be used as historical data to establish a “negative exposure assessment”.

B. BUILDING DESCRIPTION

The Alaska Veterans & Pioneer Home was originally constructed in 1971 and has had numerous renovations and additions since the original construction. Only partial as-built documentation was available for review by EHS-Alaska, and the extent of the various renovations and locations of the additions are generally unknown. The building is made up of several areas or “wings” attributed to four different eras of construction.

The original 1971 “T-shaped” construction included the following wings: Raven Wing, Cordova, Windy Way, and Homestead Trail. The construction of the Fireweed Wing was started in 1975 during which the initial portion (left side) was built followed by the off-set right side rooms being completed by 1980. Sunny Loop is believed to have been constructed in the early to mid-1980’s.

In May 2004, the Alaska Legislature approved development of the state’s first veterans’ home in the Palmer Pioneer Home and there was a remodeling and program development to meet U.S. Department of Veterans Affairs requirements which included the addition of the main entrance in 2005 on the north side of the original 1971 building. The extent of the renovation to other areas during this change was not provided. The Palmer Pioneer Home was renamed the Alaska Veterans and Pioneers Home in 2007.

This survey included a representative number of resident restrooms and bathrooms in the Sunny Loop, Homestead Trail, Raven Wing, Fireweed Wing, and Cordova Wing, and the descriptions provided below may not represent other areas of the building.

The building has a concrete slab on grade foundation with concrete perimeter walls. A utilidor was also present at the perimeters of the original building. The exterior had T1-11 wood siding, and the roof had corrugated metal roof panels.

Floors in Sunny Loop, Homestead Trail, and Raven Wing, and Cordova Wing had ceramic mosaic floor tiles. Sheet vinyl was present in the Fireweed Wing, and Homestead Trail had “tactile” rubber flooring.

Sunny Loop and Fireweed Wing have walls and ceilings finished with gypsum wall board and most walls had a fiberglass reinforced plastic (FRP) wall panel glued directly to the gypsum wall board.

Raven Wing and Cordova have walls finished with gypsum wall board and had a fiberglass reinforced plastic (FRP) wainscot with wallpaper above. Ceilings were exposed to a tongue and groove wood plank.

C. SAMPLING AND ANALYSIS

1. Asbestos-Containing Materials

The survey included sampling of suspect ACM materials that had not been sampled in prior asbestos surveys, or samples of materials where previous sampling had been inconsistent. The design has relied partially on previous sampling conducted in the building which were constructed at the same time as the renovation areas. Refer to the asbestos documentation from the Owner which is not included in this report. Additional testing of materials pertinent to the project, including asbestos and lead was conducted and is included in this report.

The samples were analyzed for the presence of asbestos using polarized light microscopy (PLM), analysis, as recommended by EPA, to determine the composition of suspected ACMs (EPA method 600/M4-82-020). Only materials containing more than 1% total asbestos were classified as “asbestos-containing” based on EPA and OSHA criteria. Samples analyzed to have less than 10% asbestos were “point-counted” by the laboratory for more accuracy. Samples listed as having a “Trace by Point Count” had asbestos fibers found in the material, but the fibers were not present at the counting grids. Table 1 in Part D below contains a summary list of the asbestos bulk samples and the applicable results.

The Bulk Asbestos samples were analyzed for asbestos content by International Asbestos Testing Laboratories (IATL), Mt. Laurel, New Jersey a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory, and previous samples used in the development of this report were analyzed by White Environmental Consultants and White Laboratories, LLC, both located in Anchorage Alaska. Both labs were NVLAP accredited at the time of analysis.

EPA regulations under 40 CFR 763 require the use of PLM to determine whether or not a material contains asbestos. While PLM analysis does a good job for most materials, it does have some limitations. Fibers may be undetectable if their small size prevents visibility under a standard optical microscope, or if they are bound in an organic matrix to the point that the fibers are obscured. At the discretion of the building inspector and the client, some types of samples may be analyzed or re-analyzed by what is called Transmission Electron Microscopy for Non-Friable Organically Bound (TEM NOB) materials. TEM NOB is the definitive method for determining if asbestos is present, but TEM NOB use is not required by the EPA. The TEM NOB samples were analyzed for asbestos content by IATL. TEM NOB analysis was not done for this project.

Field survey data sheets and laboratory reports of the bulk samples are included in Appendix A. Drawings showing sample locations are included as Appendix C.

2. Lead-Containing Materials

Nearly all surfaces in the building were coated with paint and most surfaces had been repainted. EHS-Alaska tested representative paints throughout the affected areas of the building using an Heuresis Pb200i X-Ray Fluorescence (XRF) lead paint analyzer (Serial # 1770 with software version 4.0-21). The lead testing conducted was not a Lead-Based Paint Inspection or Screening as defined by Department of Housing and Urban Development (HUD) or EPA regulations, but was done to test surfaces that may be representative of those likely to be affected by this project. If surfaces and materials other than those tested are identified, the Contractor shall test and treat appropriately. Refer to the Lead Analyzer Test Results Table in Appendix B that identifies the surfaces tested, and the results. All surfaces affected by this project may not have been tested and therefore additional sampling may be required to refute the presence of lead-containing materials regulated by 29 CFR 1926.62 or lead-based paints in child occupied facilities regulated by 40 CFR 745. The Lead Test Locations are shown in Appendix C.

EPA and HUD have defined lead-based paint as any paint or other surface coating that contains lead equal to or in excess of 1.0 milligram per square centimeter (mg/cm²) or 0.5 percent by weight. XRF results are classified as positive (lead is present at 1.0 mg/cm² or greater), negative (less than 1.0 mg/cm² of lead was present) or inconclusive (the XRF could not make a conclusive positive or negative determination). Tests that were invalid due to operator error are shown as void tests.

A Performance Characteristic Sheet (PCS) for the Heuresis Pb200i is available upon request. This PCS data provides supplemental information to be used in conjunction with Chapter 7 of the “HUD Guidelines”. Performance parameters provided in the PCS are applicable when operating the instrument using the manufacturer’s instructions and the procedures described in Chapter 7 of the “HUD Guidelines”. The instrument was operated in accordance with manufacturer’s instructions and Chapter 7 of the HUD Guidelines. No substrate correction is required for this instrument. There is no inconclusive classification for this instrument when using the 1.0 mg/cm² threshold.

D. SURVEY RESULTS

1. Asbestos-Containing Materials

The following Table 1A lists the samples taken in January 2022 in bathrooms throughout the building and the results of the laboratory analysis. Asbestos field survey data sheets and laboratory reports are included as Appendix A. Refer to Appendix C for sample locations.

TABLE 1A

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
PPH0122-A01	White joint compound	Sunny Loop: Restroom for rooms S24 and S25 on untextured, painted white gypsum wall board (GWB) wall, west side of south door, along metal corner nosing above ceramic wall tiles. Photo 305 MKS	None Detected
PPH0122-A02	Dark grey ceramic tile grout	Sunny Loop: Restroom for rooms S24 and S25: grout between ceramic cove base tiles, west side of south door on GWB. Photo 306 MKS	None Detected
PPH0122-A03	Pliable, firm white sealant	Sunny Loop: Restroom for rooms S24 and S25: east side of south door between door frame and GWB. Photo 308 MKS	None Detected
PPH0122-A04	CB-1: Beige-colored 1" x 1" ceramic cove base tile with dark grey grout and off-white mastic and dark brown mastic	Sunny Loop: Restroom for rooms S24 and S25: Ceramic cove base tile with similar grout to floor tile, east side of threshold, on untextured, GWB.	None Detected Four Layers
PPH0122-A05	White untextured gypsum wall board	Sunny Loop: Restroom for rooms S24 and S25: \ west wall, above cove base at small, damaged area.	None Detected

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
PPH0122-A06	Brown flexible mastic for fiberglass reinforced plastic wall panel, with off-white joint compound	Sunny Loop: Restroom for rooms S24 and S25: east wall, lower left corner, south of toilet bowl behind FRP on unfinished GWB.	None Detected Two Layers
PPH0122-A07	White soft rubbery sealant	Sunny Loop: Restroom for rooms S24 and S25: between wall-mounted toilet and FRP. Photo 314 MKS	None Detected
PPH0122-A08	Brittle tan and rust-colored cove base mastic of CB-1; with tan/brown joint compound	Sunny Loop: Restroom for rooms S22 and S23: base of wall, right side of door at damaged area, between ceramic tile and GWB. Photo 325 MKS	None Detected Two Layers
PPH0122-A09	White joint compound; with off-white wallpaper; with light green mastic	Sunny Loop: Restroom for rooms S22 and S23: base of wall, right side of door above damaged cove base. Photo 325 MKS	None Detected Three Layers
PPH0122-A10	CB-1: Tan ceramic cove base floor tile mastic; with tan/brown joint compound	Sunny Loop: Restroom for rooms S22 and S23: base of wall, right side of door above damaged cove base. Photo 325 MKS	None Detected Two Layers
PPH0122-A11	Dark grey floor tile grout	Sunny Loop: Restroom S20: south side of threshold to restroom, on concrete. Photo 338 MKS	None Detected
PPH0122-A12	SV-1: Beige chip pattern sheet vinyl flooring with 1/4" to 1/2" chips in white, tan, light brown, with tan mastic; with a separate clear mastic	Sunny Loop: Restroom S20: room side of threshold into restroom on concrete. Photo 339 MKS	SV- 15% Chrysotile; None Detected Other Two Layers
PPH0122-A13	White hard sealant	Sunny Loop: Restroom S20: between door frame and GWB wall. Photo 340 MKS	0.5% Chrysotile
PPH0122-A14	FT-1: 1" x 1" yellow ceramic floor tiles with black speckles, dark grey grout, tan mastic	Sunny Loop: Restroom S20: near threshold along door frame, on concrete. Photo 338 MKS	None Detected Three Layers
PPH0122-A15	Soft, pliable white sealant	Sunny Loop: Restroom S21: between painted white wood beam and GWB on ceiling. Photo 354 MKS	None Detected
PPH0122-A16	Rust-colored mastic for fiberglass reinforced plastic wall panel, white sealant, with white joint compound	Sunny Loop: Restroom S21: behind the FRP on north wall of restroom, lower west side above cove base. Photo 359 MKS	None Detected Three Layers

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
PPH0122-A17	Beige sealant, unfinished gypsum wallboard	Raven Wing: Restroom for rooms R19 and R20: back side of recessed metal soap holder in wall above tub, along edge of FRP and GWB. Photo 11 JHL	None Detected Two Layers
PPH0122-A18	Green vinyl wallpaper & contact cement, tan mastic	Raven Wing: Restroom for rooms R19 and R20: inside unused electrical box outlet in northwest FRP covered wall, between toilet fixture and north door entrance to restroom. Photo 24 JHL	None Detected Two Layers
PPH0122-A19	White joint compound	Raven Wing: Restroom for rooms R19 and R20: inside unused electrical box outlet in northwest FRP covered wall. Photo 24 JHL	2.6% Chrysotile
PPH0122-A20	CB-2: Black rubber 4" cove base, tan mastic; with white mastic	Raven Wing: Restroom for rooms R19 and R20: south FRP wall. Photo 27 JHL	None Detected Three Layers
PPH0122-A21	FT-2: Green/Blue 1" x 1" ceramic floor tile with grey grout and tan mastic	Raven Wing: Restroom for rooms R19 and R20: left end of south wall on concrete. Photo 29 JHL	None Detected Three Layers
PPH0122-A22	White pliable sealant	Raven Wing: Restroom for rooms R19 and R20: left end of south wall between FRP and tub. Photo 30 JHL	None Detected
PPH0122-A23	CB-3: Light grey vinyl cove base, white mastic	Raven Wing: room R19: North wall adjacent to metal door frame, on GWB. Photo 34 JHL	None Detected Two Layers
PPH0122-A24	White pliable sealant	Raven Wing: room R19: North wall between door frame and GWB. Photo 35 JHL	None Detected
PPH0122-A25	White painted untextured gypsum wall board and white joint compound	Raven Wing: room R19: Northwest corner, above base board heater and electrical conduit. Photo 36 JHL	GWB- None Detected; JC- 2.9% Chrysotile
PPH0122-A26	CB-4: Dark brown/black brittle cove base with black mastic	Raven Wing: room R29 single unit restroom: Southwest wall on tan vinyl wallpaper over GWB. Photo 38 JHL	None Detected Two Layers
PPH0122-A27	Tan woven textured wallpaper	Raven Wing: room R29 single unit restroom: Base of southwest wall behind cove base, on GWB. Photo 39 JHL	None Detected

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
PPH0122-A28	Brown mastic for fiberglass reinforced plastic wall panel, black mastic of CB-4	Raven Wing: room R29 single unit restroom: Northwest wall directly adjacent to blue metal door frame threshold, on top of tan wallpaper. Photo 42 JHL	None Detected Two Layers
PPH0122-A29	CB-3: Light grey vinyl cove base, cream mastic; with dark brown mastic	Raven Wing: room R17: base of north wall, right side of door on untextured white paint GWB. Photo 44 JHL	None Detected Three Layers
PPH0122-A30	FT-3: Blue 1" x 1" ceramic floor tile with brown mastic and grey grout	Raven Wing: Restroom for rooms R17 and R18: directly adjacent to bathtub on south wall on concrete. Photo 45 JHL	None Detected Three Layers
PPH0122-A31	CB-2: Black rubber 4" cove base, beige mastic	Raven Wing: Restroom for rooms R17 and R18: directly adjacent to bathtub on south wall on FRP. Photo 45 JHL	None Detected Two Layers
PPH0122-A32	White painted gypsum wall board and white joint compound	Raven Wing: room R17: Northwest angled wall, above base board heater and electrical conduit. Photo 47 JHL	GWB- None Detected; JC- 1.5% Chrysotile
PPH0122-A33	SV-2: Marbled blue-green sheet vinyl flooring, beige mastic	Fireweed: Restroom for rooms F01 and F02: at west of threshold from room F01, on concrete. Photo 49 JHL	None Detected Two Layers
PPH0122-A34	Off-white joint compound ; with white joint compound, brown mastic for fiberglass reinforced plastic wall panel	Fireweed: Restroom for rooms F01 and F02: at base of short perpendicular north wall between sink fixture and bathtub, on GWB. Photo 51 JHL	JC- 1.3% Chrysotile ; None Detected Other Two Layers
PPH0122-A35	White pliable sealant	Fireweed: Restroom for rooms F01 and F02: between bathtub fixture and FRP. Photo 53 JHL	None Detected
PPH0122-A36	White joint compound	Fireweed: Restroom for rooms F01 and F02: at base of west threshold from room F01, on metal corner nosing. Photo 55 JHL	None Detected
PPH0122-A37	SV-3: Beige wood-like textured sheet vinyl flooring; with off-white mastic	Fireweed: room F01: east threshold to restroom from room F01, on concrete. Photo 57 JHL	None Detected Two Layers
PPH0122-A38	Beige floor tile mastic from CB-1 and white joint compound	Fireweed: Restroom for rooms F09 and F10: base of wall on metal corner nosing. Photo 60 JHL	None Detected Two Layers

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
PPH0122-A39	FT-1: 1" x 1" yellow ceramic floor tiles with black speckles, dark grey grout	Fireweed: Restroom for rooms F09 and F10: at south side wall entrance to from room F09, on concrete. Photo 61 JHL	None Detected Two Layers
PPH0122-A40	White sealant	Homestead Trail: restroom between H01 and H02: white sealant on wall mounted toilet fixture, southeast wall. Photo 65 JHL	None Detected
PPH0122-A41	Brown mastic for fiberglass reinforced plastic wall panel	Homestead Trail: restroom between H01 and H02: northwest wall at door from room H01, between metal corner nosing and FRP board. Photo 63 JHL	None Detected
PPH0122-A42	White sealant	Homestead Trail: restroom for room H12: white sealant on wall mounted toilet fixture on southeast wall of restroom. Photo 67 JHL	None Detected
PPH0122-A43	Brown mastic for fiberglass reinforced plastic wall panel	Homestead Trail: restroom for room H12: brown mastic between FRP board and pipe protrusion at southeast wall of restroom. Photo 70 JHL	None Detected
PPH0122-A44	White joint compound and brown mastic for fiberglass reinforced plastic wall panel	Homestead Trail: restroom for room H09: above suspended ceiling over restroom door entrance from room H09. Photo 72 JHL	None Detected Two Layers
PPH0122-A45	CB-4: Dark brown/black brittle cove base with black mastic	Cordova: Restroom for rooms C41 and C42: base of northwest wall, on green wallpaper. Photo 74 JHL	None Detected Two Layers
PPH0122-A46	FT-4: 1" x 1" brown ceramic floor tile with brown mastic and grey grout	Cordova: Restroom for rooms C37 and C38: southeast wall at base board heater pipe on concrete. Photo 75 JHL	None Detected Three Layers
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

Table 1B includes samples taken in October 2013 in the room labeled as H15 on 2022 drawings (formerly called room N1, N4, or N28) and the results of the laboratory analysis. Note, some of these materials may have been removed by the previous project, but are included here to illustrate similar materials from the eras of construction. Asbestos field survey data sheets and laboratory reports are included in Appendix A. Refer to Appendix C for sample locations.

TABLE 1B

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
PPH1310-A01	Joint compound	South corner side bottom of column in Room N28-Photo 14	None Detected
PPH1310-A02	Tan 1/4 inch chip pattern sheet vinyl	South of column center of Room N28-Photo 16	10% Chrysotile
PPH1310-A03	Yellow dirty leveling compound with remnant carpet mastic	North of column center of Room N28-Photo 20	None Detected Two Layers
PPH1310-A04	Grayish white cove base mastic	NE bottom of column center of Room N28-Photo 19	None Detected
PPH1310-A05	Green cove base	NE bottom of column center of Room N28-Photo 18	None Detected
PPH1310-A06	Joint compound	SE corner of Room N28-Photo 23	None Detected
PPH1310-A07	Green cove base and grayish white mastic	SE corner of Room N28-Photo 22	None Detected Two Layers
PPH1310-A08	Tan 1/4 inch chip pattern sheet vinyl with remnant carpet mastic and glue	SE corner of Room N28-Photo 25	15% Chrysotile
PPH1310-A09	Tan 1/4 inch chip pattern sheet vinyl and glue with remnant carpet mastic	SW side of Room N28-Photo 27	15% Chrysotile
PPH1310-A10	Joint compound, tan cove base mastic, and brown cove base mastic	SW corner of Room N28-Photo 29	None Detected Three Layers
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

The following materials have been found to contain asbestos in this or previous surveys, or were assumed to contain asbestos.

1. Tan "1/4" chip pattern" sheet vinyl in the 1971 era (confirmed asbestos-containing) and the "Sunny Loop" and "Windy Loop" wings (assumed to have been constructed sometime between 1980-1985, confirmed asbestos-containing), and asbestos-contaminated mastics (confirmed asbestos-contaminated). Prior reports described asbestos-containing sheet vinyl in yellow and orange colors but did not describe a pattern.
2. Remnant sheet vinyl in the "Fireweed" wing (assumed asbestos-containing).
3. Vinyl asbestos tile in the 1971 era (confirmed asbestos-containing).
4. Black flooring mastic in the 1971 era (confirmed asbestos-containing) and assumed asbestos-contaminated building materials such as carpet, vinyl floor tiles, associated mastics and leveling compounds, and at the bases of walls where the mastic was originally located (assumed asbestos-contaminated).
5. Tan rubber flooring in resident restroom areas of the 1971 era "Homestead Trail" wing (assumed asbestos-containing) and associated mastics (assumed asbestos-containing).

6. Gypsum board systems (walls, ceilings, soffits, etc.) with asbestos-containing joint compound in the 1971 era and the “Fireweed” wing (assumed to have been constructed prior to 1980) (confirmed asbestos-containing).
7. Older white hard sealants around door frames in the “Sunny Loop” and “Windy Loop” wings (assumed to have been constructed sometime between 1980-1985) (sealant assumed to contain greater than 1% asbestos if analyzed by TEM NOB).
8. “Hard fitting” pipe insulation in the 1971 era (confirmed asbestos-containing).
9. Flange gaskets (confirmed asbestos-containing) and valve packings (assumed asbestos-containing) on piping systems throughout the building.
10. Other assumed asbestos-containing materials (see discussion below).

The effects of the above asbestos-containing materials on the proposed renovation are discussed below.

Sheet Vinyl and Mastics

A beige “1/4” chip” pattern sheet vinyl was found to contain asbestos in the original 1971 era construction and in the “Sunny Loop” and “Windy Loop” wings which were assumed to have been constructed sometime between 1980-1985. Prior surveys identified asbestos-containing sheet vinyl in yellow and orange colors in the “Sunny Loop” and “Windy Loop” wings, but the sample descriptions did not have a pattern. The asbestos-containing sheet vinyl was in good condition where observed and not friable, however, the paper-like backing of the sheet vinyl is assumed to become friable during removal. No asbestos-containing sheet vinyl is scheduled for disturbance in these areas, but the sheet vinyl is directly adjacent to areas receiving new floor finishes and may require minor disturbance at those locations.

Remnant Sheet Vinyl

Restrooms in the “Fireweed” wing had a newer sheet vinyl which did not contain asbestos, however, this wing is assumed to have been constructed prior to 1980, and therefore, is assumed to have had asbestos-containing flooring materials. Asbestos-containing sheet vinyl has been previously identified in the building under carpet, and it is assumed that remnants of an asbestos-containing sheet vinyl are present under the newer sheet vinyl in the “Fireweed” wing. Those remnants are assumed to have contaminated the original sheet vinyl mastics and all replacement sheet vinyl, mastics, leveling compounds, and related flooring components. The remnants are assumed to be friable and will be removed from select restrooms in the “Firewood” wing by this project.

Vinyl Asbestos Tile

A previous survey identified an off-white vinyl asbestos tile in the 1971 era in room “Wash Rack L02” of unknown size or pattern. No vinyl asbestos tile was observed in the current project areas. The vinyl asbestos tile also had asbestos-containing black flooring mastic discussed below. The vinyl asbestos tile is assumed to be in good condition and not friable and is unlikely to be disturbed by this project.

Black Flooring Mastic and Contaminated Materials

A previous survey identified a black flooring mastic that was used with the vinyl asbestos tile discussed above. The asbestos-containing black flooring mastic is assumed to be in other areas of the building, and may be present under newer floor finishes, walls, cabinetry, or other components. Where present, the black flooring mastic is assumed to have contaminated all replacement flooring materials, mastics, leveling compounds, and related flooring components, including at the bases of walls where the black flooring mastic was originally located. No black flooring mastic was found in the current project areas. The black flooring mastic is assumed to be in good condition and not friable and is unlikely to be disturbed by this project.

Tan Rubber Flooring and Mastic

A tan rubber flooring material was found in the “Homestead Trail” wing, and that rubber flooring material is assumed to contain asbestos. The mastics associated with this flooring are also assumed to contain

asbestos. The tan rubber flooring was in good condition and not friable, and the mastics are assumed to be in good condition and not friable. Neither material is scheduled for disturbance by this project.

Joint Compound

Asbestos-containing joint compound has been identified in the original 1971 era and in the “Fireweed” wing which is assumed to have been constructed prior to 1980. No asbestos has been found in the joint compound of the “Sunny Loop” and “Windy Loop” wings which were assumed to have been constructed sometime between 1980-1985. No asbestos has been found in the gypsum board in any era at this building. The joint compound was typically in good condition with isolated areas of damage. Joint compound is not typically friable but may become friable during removal or if damaged. The asbestos-containing joint compound will require partial removal by this project.

Older Door Frame Sealants

An older white sealant was found between the door frame and gypsum wall board in “Sunny Loop” and “Windy Loop” wings which were assumed to have been constructed sometime between 1980-1985. The sealant contained less than 1% asbestos when analyzed by standard PLM analysis, but the sealant is assumed to contain greater than 1% asbestos if analyzed by TEM NOB. The sealant was in good condition and not friable and is unlikely to be disturbed by this project.

“Hard Fitting” Pipe Insulation

Previous surveys have found asbestos-containing “hard fitting” insulation on older piping in the 1971 era. No “hard fitting” insulation was observed during the January 2022 survey but is assumed to be present throughout the facility, typically in concealed areas or areas which have not been renovated, including inside of the resident bathroom pipe chases. The “hard fitting” insulation is assumed to be in good condition with isolated areas of damage and is friable. No “hard fitting” pipe insulation is scheduled for disturbance by this project.

Flange Gaskets and Valve Packings

Previous surveys have identified asbestos-containing flange gaskets in the 1971 era. Flange gaskets and valve packings on piping throughout all eras of the building are assumed to contain asbestos. The flange gaskets and valve packings are assumed to be in good condition and not friable, although they may become friable during removal. No flange gaskets or valve packings are scheduled for disturbance by this project.

Other Assumed Asbestos-Containing Materials

The January 2022 inspections were focused only on those materials anticipated to be affected by the Resident Bathroom Renovation Project. A comprehensive survey of the entire building was not performed, and many other materials are likely to contain asbestos at this building. Examples of these materials include, but are not limited to: various patterns and colors of 9” x 9” or 12” x 12” vinyl floor tiles; sheet vinyl; black flooring mastics; remnant flooring materials under newer non-asbestos-containing flooring materials; cement asbestos board insulated sandwich panels above and below exterior windows; miscellaneous colors and textures of construction mastics and sealants on interior and exterior components such as mirrors, ceramic floor and wall tiles, windows, doors, etc.; various colors of rubber cove bases and mastics; grey-green duct seam sealants; sealants and putties used on refrigeration equipment; undercoatings and putties of older drinking fountains; gaskets and sealants on high-temperature mechanical equipment such as the boilers and water heaters; manufacturer-installed sealants and gaskets on air handling units and similar mechanical equipment; insulating materials inside of fire doors and transoms; insulating materials inside of high-temperature kitchen equipment such as ovens and stoves; amongst others. Materials installed after the year 2000 are presumed to not contain asbestos, but these materials, and other materials such as those assumed asbestos-containing materials discussed above, are still required to be sampled prior to any disturbance of the materials. Additionally,

all prior renovations may have covered or otherwise concealed older building materials, including both confirmed and assumed asbestos-containing materials.

2. Asbestos in Dusts

The settled and concealed dusts were examined by an EPA Certified Building Inspector but no samples for asbestos in dusts were authorized for this project. Based on their visual inspection and experience from similar buildings, the inspector determined that the typical settled and concealed dusts are not “asbestos debris” from an asbestos-containing building material (ACBM). Based on similar sampling from similar buildings, the inspector also determined that the dusts are unlikely to contain more than one percent (1%) asbestos by weight, and therefore are not an asbestos-containing material (ACM).

3. Lead-Containing Materials

Lead-Testing

EHS-Alaska tested paint and other materials throughout the affected areas of the building using a Heuresis XRF lead paint analyzer. Lead in paints tested varied from a trace amount to 0.3 mg/cm². Lead in other materials tested varied from a trace amount to 26.2 mg/cm². Refer to the Lead Analyzer Test Results Table in Appendix B that identifies the surfaces tested, and the results. The Lead Test Locations are shown in the Drawings in Appendix C.

Paints

There were varying lead contents found in the paints, based on what surfaces they are on, with most surfaces containing little lead (but are still classified as lead-containing materials by OSHA). Only trace amounts of lead were identified in painted surfaces tested.

Lead based paints (paint containing more than 1.0 mg/cm² of lead) were not identified in the project, however, it is anticipated that other components which are hidden, concealed, or otherwise not tested may be painted with lead-based paint. Lead was detected at very low levels in most of the painted floor, wall and ceiling surfaces. XRF testing is not able to “prove” that “no” lead exists in the paint. Low levels of lead found by XRF testing does not mean that the paints are free of lead, the paints may contain lead. At least an initial exposure determination of potential worker exposures for all disturbance of lead-containing materials is required unless laboratory analysis shows that there is zero detectable lead in the materials being disturbed (which requires special analysis). However, these paints may not present a hazard to occupants or workers performing renovation or demolition if lead-safe work practices are followed.

Ceramic Wall Tile and Glazing

Relatively high concentrations of lead were found in the glazing of tubs in the 1971 era “Raven” wing and “Cordova” wing, as well as the tub in the “Fireweed” wing. The concentrations of lead in ceramic glazing compounds should not be compared to lead-based paint criteria, as the glazing is inherently less likely to cause lead to be present in dusts or on surfaces, where it can be ingested. Lead in ceramic glazing may not pose a hazard to occupants, or workers performing renovation or demolition if lead-safe work practices are followed. All ceramic fixtures in the facility should be assumed to contain lead.

Plastic Components

Only trace amounts of lead were found in plastic components tested, such as the fiberglass reinforced wall paneling. The concentrations of lead in plastic compounds should not be compared to lead-based paint criteria. Lead in plastic compounds may have surface deterioration and if not cleaned regularly, lead may be present in dusts or on surfaces, where it can be ingested. Lead in plastic compounds may not pose a hazard to occupants, or workers performing renovation or demolition if good work practices are followed.

Metallic Lead in Batteries and Pipe Solder

Metallic lead items identified in the building included lead solder at copper piping which is assumed to contain lead, poured lead sealants at bell and spigot joints of waste and vent piping, and lead acid batteries in emergency lights and other battery backup equipment. If removed during renovation or demolition they should be recycled or disposed of as hazardous waste.

Lead Dusts

The settled and concealed dusts were examined but no samples for lead in dusts were authorized for this project. Based on their visual inspection and similar sampling from similar buildings, the inspector also determined that the dusts are likely to have measurable concentrations of lead in the dusts.

4. PCB-Containing Materials

Light Ballasts

Older fluorescent lights typically have PCB-containing ballasts. PCB-containing ballasts in fluorescent lights were banned in 1978, but manufacturers were allowed to use up existing stocks, and lights may have been reused from other facilities. The survey included examination of what were considered to be representative light fixtures, but not all fixtures were able to be accessed. All lights shall be inspected during removal or relocation. Unless ballasts were marked “No PCBs,” they must be assumed to contain PCBs and must be disposed of as a hazardous waste when removed for disposal. Only fluorescent light fixtures marked “No PCBs” were found in the building. The fluorescent light fixtures will be replaced as shown on the drawings.

Older HID lights may have PCB-containing ballasts. Due to height restrictions and sealed ballast enclosures, the HID fixtures were not able to be accessed. All HID lights shall be inspected during removal or relocation. If ballasts are not marked “No PCBs,” we suggest contacting the manufacturer of the lights to determine if the ballasts contain PCB’s, or assume that they contain PCB’s and be disposed of as a hazardous waste. The HID light fixtures are unlikely to be disturbed by this project.

Bulk Products

Some older paints, sealants and other building materials may contain measurable amounts of PCB’s. PCB use in paints and sealants was supposed to have been discontinued in 1979. The EPA does not require the sampling of bulk products, and no sampling of “Bulk Products” were authorized for this project.

5. Mercury-Containing Materials

Fluorescent Lamps

Fluorescent lamps use mercury to excite the phosphor crystals that coat the inside of the lamp. These lamps contain from 15 to 48 milligrams of mercury depending on their age and manufacturer. Fluorescent light fixtures will be replaced as shown on the drawings.

High Intensity Discharge Lamps

High Intensity Discharge (HID) lamps use mercury and sodium vapors in the lamp, and also typically have lead-containing solders at the bases. These lamps contain varying amounts of mercury depending on their age and manufacturer. No HID light fixtures are scheduled to be replaced by this project.

All mercury-containing items being removed by this project are required to be disposed of as hazardous waste or recycled.

6. Other Hazardous Materials

Soil Contamination

The scope of work for EHS-Alaska, Inc. did not include investigation of soils for petroleum or other contaminations.

Heat Transfer Fluids

The existing heating system is assumed to contain heat transfer fluids, including glycol or other boiler treatment chemicals. Any heat transfer fluids removed from the heating system shall be recovered and properly disposed of or recycled. The heating system is unlikely to be disturbed by this project.

E. REGULATORY CONSTRAINTS

1. Asbestos-Containing Materials

The Federal Occupational Safety and Health Administration (29 CFR 1926.1101) and the State of Alaska Department of Labor (8 AAC 61) have promulgated regulations requiring testing for airborne asbestos fibers; setting allowable exposure limits for workers potentially exposed to airborne asbestos fibers; establishing contamination controls, work practices, and medical surveillance; and setting worker certification and protection requirements. These regulations apply to all workplace activities involving asbestos-containing materials.

The EPA regulations, issued as Title 40 of the Code of Federal Regulations, Part 61 (40 CFR 61), Subpart M under the National Emission Standards for Hazardous Air Pollutants (NESHAP), established procedures for handling ACM during asbestos removal and waste disposal. It is recommended that clearance sampling which complies with the EPA's Asbestos Hazard Emergency Response Act (AHERA) protocol be required following removal of asbestos-containing materials to document that the asbestos has been properly removed.

The EPA regulations require an owner (or the owner's contractor) to notify the EPA of asbestos removal operations and to establish responsibility for the removal, transportation, and disposal of asbestos-containing materials.

The disposal of asbestos waste is regulated by the EPA, the Alaska Department of Environmental Conservation, and the disposal site operator. Wastes being transported to the disposal site must be sealed in leak tight containers prior to disposal and must be accompanied by disposal permits and waste manifests.

2. Dusts with Asbestos

Settled and concealed dusts above ceilings, and at other areas that are not routinely cleaned (such as inside ducts and at roofs, etc.) are assumed to have measurable concentrations of asbestos. Based on sampling of similar settled and concealed dusts at similar buildings, those dusts are assumed to contain less than 1 percent asbestos. Normal settled and concealed dusts are distinct and treated differently from debris resulting from damaged asbestos-containing materials.

Background levels of asbestos in dusts for a particular location will depend on many factors, including whether or not asbestos occurs naturally in soils in the area.

Likely sources of asbestos in dusts include natural occurrences of asbestos

The types of asbestos found in settled and concealed dusts often contain actinolite, anthophyllite and

tremolite forms of asbestos which are not commonly found in bulk samples taken of materials from buildings. Those forms of asbestos may come from natural occurrences of asbestos in an outside source, such as rock or ore deposits, which appear to be common in Alaska.

Because the type of disturbance, concentration of asbestos in the dusts, cohesiveness of the dusts and room sizes will change, the airborne asbestos levels expected during the project will depend on the contractor's means and methods of conducting the work. The mere presence of asbestos in the dusts does not necessarily imply that a "hazard" exists which would require the use of specially trained workers to "abate" the "hazard". All dusts will likely be required to be removed from the areas where asbestos-containing materials are being removed (abatement areas) in order to achieve clearances. The dusts in the other areas are to be controlled so as to limit worker exposures and prevent contamination of occupied areas of the building.

There is no established correlation between settled or adhered dusts with measurable concentrations of asbestos and airborne concentrations. The definition in the OSHA regulations of asbestos-containing materials as those materials that contain 1 percent or more asbestos by weight, apply to cohesive materials and not to dusts. The OSHA regulations are essentially "performance based", if workers are exposed above the permissible exposure limits, then all of the requirements in the regulations become effective.

3. Lead-Containing Materials

The EPA Standard 40 CFR 745, Lead-Based Paint Poisoning Prevention in Certain Residential Structures, defines lead-based paint hazards and regulates lead based paint activities in target housing and child-occupied facilities. The requirements of this regulation include training certification, pre-work notifications, work practice standards and record keeping. Areas typically classified as child occupied facilities may include but are not limited to: day care facilities, preschools, kindergarten classrooms, restrooms, multipurpose rooms, cafeterias, gyms, libraries and other areas routinely used by children under 6 years of age. Training requirements for Firms (Contractors) and Renovators (Workers) became effective on April 22, 2010.

The requirements apply to renovation, repair or painting activities that are NOT classified as "minor repair and maintenance activities" (as defined by the regulations), which take place in the "child occupied" portions of facilities. It is anticipated that only small amounts of lead based paint (if present) will be required to be disturbed for this renovation work, and the work would be classified as minor repair and maintenance activities, therefore most requirements of 40 CFR 745 do not apply.

Federal OSHA (29 CFR 1926.62) and the State of Alaska (8 AAC Chapter 61) have promulgated regulations that apply to all construction work where employees may be exposed to lead. The disturbance of any surfaces painted with lead-containing paint requires lead-trained personnel, personnel protective procedures, and air monitoring until exposure levels can be determined. If initial monitoring verifies that the work practices being used are not exposing workers, monitoring and protection procedures may be relaxed. Experience has shown that some paints in most buildings will contain low concentrations of lead and disturbance of those paints are still regulated under the OSHA lead standard, 29 CFR 1926.62. Low levels of lead found by XRF testing does not mean that the paints are free of lead, the paints may contain lead, and OSHA regulations apply anytime measurable amounts of lead are present in paints.

Settled and concealed dust above ceilings, and at other areas that are not routinely cleaned are assumed to have measurable concentrations of lead. Background levels of lead in dusts for a particular location will depend on many factors, including whether or not engines utilizing leaded gasoline were run in or near a building, and upon the age of the building, and thus the age of the dusts. Because the type of

disturbance, quantity of lead dusts, cohesiveness of the dusts and room sizes will change, the airborne lead levels expected during the project will depend on the contractor's means and methods of conducting the work. The mere presence of lead in the dusts does not necessarily imply that a "hazard" exists which would require the use of specially trained workers to "abate" the "hazard".

There is no established correlation between settled or adhered lead dust concentrations and airborne concentrations. The OSHA regulations are essentially "performance based", if workers are exposed above the permissible exposure limits, then all of the requirements in the regulations become effective.

The EPA requires that actual construction or demolition debris that contains lead or lead-containing paint or other heavy metals be tested using the TCLP test to determine if the waste must be treated as hazardous waste. All federal, state and local standards regulating lead and lead-containing wastes are required to be followed during the renovation or demolition of portions of this building.

If the TCLP tests done on the waste stream(s) that are produced by the contractor are found to be classified as hazardous wastes, then those waste stream(s) will have to be packaged for shipping and disposal in accordance with hazardous waste and transportation regulations. Because there are no hazardous waste landfills in Alaska, this report assumes that any hazardous waste disposal will take place in Seattle or elsewhere in the Pacific Northwest.

4. PCB-Containing Materials

The EPA has promulgated regulations (40 CFR Part 761) that cover the proper handling and disposal of PCB-containing materials. If any PCB-containing equipment is discovered and if they will be removed, those materials are required to be disposed of at fully permitted hazardous waste facilities. The EPA regulates liquid PCBs differently from non-liquid materials. Workers who remove or handle PCB-containing or PCB-contaminated materials or who transport or dispose of PCB wastes must be trained and certified in hazardous waste operations and emergency response (HAZWOPER) as required by 29 CFR 1910.120 and the State of Alaska Department of Labor (8 AAC 61). The Department of Transportation under 49 CFR Parts 100-199 regulates the marking, packaging, handling and transportation of hazardous materials. All federal, state and local standards regulating PCBs and PCB waste must be followed during this project.

5. Mercury-Containing Materials

Thermostats and mercury-containing lamps are classified by the EPA as Universal Wastes. The EPA encourages that all Universal Wastes be recycled in accordance with 40 CFR 273. Mercury and mercury-containing products are considered hazardous waste if TCLP testing of the waste for mercury confirms the mercury content to be greater than the EPA criteria of 0.2 mg/l.

6. Other Hazardous Materials

Chemical Hazards

The EPA has promulgated regulations (40 CFR Parts 260 to 299 amongst others) that cover the proper handling and disposal of waste chemicals, including listed wastes, which are ignitable, corrosive, reactive, toxic, or an acute hazardous waste or wastes that exhibit the characteristics of toxicity. All construction workers who are required to remove or handle chemical hazards or to transport or dispose of chemical wastes shall be trained and certified as required by the U.S. Department of Labor (29 CFR 1910.120) and the State of Alaska Department of Labor (8 AAC 61). Transportation of chemical hazards are regulated by Department of Transportation regulations under 49 CFR Parts 171 to 178 amongst others.

Waste heat transfer fluids (such as used heating/cooling system glycol or other circulating heating/cooling fluids) are a potentially hazardous waste and are required to be TCLP tested prior to disposal to determine if the fluids are classified as hazardous or non-hazardous waste per the EPA's RCRA regulations governing hazardous wastes. According to a study performed by the University of Northern Iowa, standard TCLP analysis using ICP SW 6010 testing procedures commonly report levels of Arsenic and Selenium over regulatory thresholds due to interferences in the matrix. That report concluded that additional analysis should be performed to refute the presence of Arsenic or Selenium over the regulatory levels by either mass spectrometry using method SW 6020, or by graphite furnace using method SW 7060. Some heat transfer fluids may also contain potentially hazardous additives that modify the properties of the fluids for use in a particular system. It is recommended that the contractor consult with the persons responsible for maintaining the system to determine if any additives that may be potentially hazardous were used in the system to further determine disposal requirements.

F. RECOMMENDATIONS

1. Asbestos-Containing Materials

The asbestos-containing materials identified in the building are typically in intact condition and are classified as both friable and non-friable ACM. All asbestos-containing materials that will be disturbed by the planned renovation work are required to be removed by trained asbestos workers. Refer to Section 02 81 00 Hazardous Materials – Summary of Requirements.

2. Dusts with Asbestos

Dusts with measurable concentrations of asbestos are assumed to be present, but are not classified as asbestos-containing materials, or as debris from asbestos-containing materials. Workers disturbing dusts are required to have hazard communication training in accordance with OSHA regulations, but are not required to receive 40 hours of training, which is required for asbestos workers. The contractor will need to choose means and methods to control worker exposures to airborne contaminants. At least an initial exposure assessment or data from previous air monitoring is needed to show that worker exposures are maintained below the OSHA permissible exposure limits (PELs). Refer to Section 01 35 45 Airborne Contaminant Control.

3. Lead-Containing Materials

Federal OSHA (29 CFR 1926.62) and the State of Alaska (8 AAC Chapter 61) have promulgated regulations that apply to all construction work where employees may be exposed to lead, including disturbance of paints with low concentrations of lead.

The EPA Standard 40 CFR 745, Lead-Based Paint Poisoning Prevention in Certain Residential Structures, defines lead-based paint hazards and regulates lead based paint activities in target housing and child-occupied facilities. Contractors disturbing lead-based paints in target housing and child occupied facilities must comply with 40 CFR 745.

Worker exposure to lead may be able to be controlled below the OSHA permissible exposure limit if proper engineering controls and procedures are used during renovation. Lead is a potentially hazardous waste and the EPA requires that all wastes that contains lead be tested to determine if they must be treated as hazardous waste. A TCLP test of the waste stream(s) produced by the Contractor's means and methods are required to be performed to determine if those wastes will be classified as hazardous or non-hazardous. Refer to Section 01 35 45 Airborne Contaminant Control and Section 02 81 00 Hazardous Materials – Summary of Requirements.

4. PCB-Containing Materials

If any PCB-containing ballasts are discovered, and they are removed or replaced, they will need to be removed, handled, packaged and disposed of in accordance with all regulations. Refer to Section 02 81 00 Hazardous Materials – Summary of Requirements.

5. Mercury-Containing Materials

Mercury-containing materials scheduled for removal or replacement will need to be removed, handled, packaged and disposed of in accordance with all regulations. If mercury-containing lamps and thermostats are handled and disposed of in accordance with the Universal Waste Regulations, no TCLP test is required. If the Contractor chooses to perform a TCLP test of fluorescent lamps, the test shall be conducted in accordance with the requirements of ANSI/NEMA Standard Procedure for Fluorescent Lamp Sample Preparation and Toxicity Characteristic Leaching Procedure, C78.LL 1256-2003 or latest version. Refer to Section 02 81 00 Hazardous Materials – Summary of Requirements.

6. Other Hazardous Materials

If any heat transfer fluids are removed or replaced, they will need to be removed, handled, packaged and disposed of in accordance with all regulations. Refer to Section 02 81 00 Hazardous Materials – Summary of Requirements.

G. LIMITATIONS

The conclusions and recommendations contained in this report are based upon professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted environmental consulting and engineering standards and practices and are subject to the following inherent limitations:

1. Accuracy of Information

The laboratory reports utilized in this assessment were provided by the accredited laboratories cited in this report. Although the conclusions, opinions, and recommendations are based in part, on such information, our services did not include the verification of accuracy or authenticity of such reports. Should such information provided be found to be inaccurate or unreliable, EHS-Alaska, Inc. reserves the right to amend or revise its conclusions, opinions, and/or recommendations.

2. Site Conditions

This limited survey did not include investigation of the entire site and may not be valid outside the survey area. The intent of this survey was to identify common hazardous materials that may be disturbed during the planned Resident Bathroom Renovations Project. This survey is not intended to be utilized as the sole design document for abatement. This survey was conducted while the site was occupied. All inspections were performed with furniture, equipment and/or stored items in place. The scope of work for this survey did not include identification of all potentially hazardous materials that may be present at this site, and was limited to the scope of work agreed upon with our client. Although a concerted effort was made to identify those common hazardous materials likely to be affected by this project, some hazardous materials may have been hidden by furniture, equipment or stored items and may not have been identified. The survey investigated representative materials and items, such as lights and mechanical components. Variations may occur between materials and items that appear to be the same, but are actually of different construction or materials. Other asbestos-containing or potentially hazardous

materials may be present in the facilities that were concealed by structural members, walls, ceilings or floor coverings, or in materials where testing was not conducted.

3. Changing Regulatory Constraints

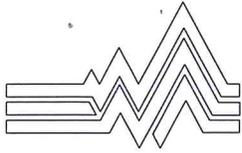
The regulations concerning hazardous materials are constantly changing, including the interpretations of the regulations by the local and national regulating agencies. Should the regulations or their interpretation be changed from our current understanding, EHS-Alaska, Inc. reserves the right to amend or revise its conclusions, opinions, and/or recommendations.

APPENDIX A

Asbestos Bulk Sample Field Survey Data Sheets and Laboratory Reports

RECEIVED

FEB 07 2022



EHS-ALASKA, INC.
EHS ALASKA
 INCORPORATED

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PROJECT NO: 7898-01	PROJECT NAME: Palmer Pioneer Home Rest. Remod.	FACILITY: Palmer Veterans and Pioneers Home	COLLECTION DATE: 1/11/22
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CHAIN OF CUSTODY RECORD

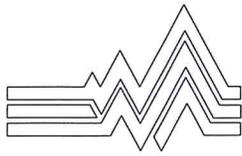
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	<input type="checkbox"/> LEAD DUST	<input type="checkbox"/> LEAD TCLP	<input type="checkbox"/> LEAD PPM	<input checked="" type="checkbox"/> ASBESTOS	5 DAYS	NORMAL	46
	<input type="checkbox"/> TEM MICROVAC DUST (ASTM 5756)			<input type="checkbox"/> LEAD			

COLLECTED BY (signature) John H. Lamont PRINTED NAME 20220011 / TA40-1021-15908 CERT# / AHERA# FedEx SHIPPING METHOD 7757-8413-70321 COURIER (signature) DATE/TIME	IATL RECEIVED SELECTED LABORATORY h SAMPLES ACCEPTED BY JAN 21 2022 DATE/TIME ANALYST'S SIGNATURE - BV DATE	SPECIAL INSTRUCTIONS / COMMENTS: LAB: RETURN A SIGNED COPY OF THIS FORM WITH THE FINAL REPORT TO EHS-ALASKA, INC. See sample location drawing for more detailed explanation of exact locations.
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CR
1/27/22

FIELD SURVEY DATA ND = NONE DETECTED

EHS SAMPLE NO. LAB ID NO	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS FOR EHS-ALASKA USE ONLY
PPH0122-A01 7347951	White joint compound	Sunny Loop: Restroom for rooms S24 and S25 on untextured, painted white gypsum wall board (GWB) wall, west side of south door, along metal corner nosing above ceramic wall tiles. Photo 305 MKS	ND
PPH0122-A02 7347952	Dark grey ceramic tile grout	Sunny Loop: Restroom for rooms S24 and S25: grout between ceramic cove base tiles, west side of south door on GWB. Photo 306 MKS	ND
PPH0122-A03 7347953	Pliable, firm white sealant	Sunny Loop: Restroom for rooms S24 and S25: east side of south door between door frame and GWB. Photo 308 MKS	ND
PPH0122-A04 7347954	CB-1: Beige-colored 1x1 ceramic cove base tile with dark grey grout and off-white mastic	Sunny Loop: Restroom for rooms S24 and S25: Ceramic cove base tile with similar grout to floor tile, east side of threshold, on untextured, GWB. Photo 310 MKS	ALL LAYERS = ND
PPH0122-A05 7347955	White untextured gypsum wall board	Sunny Loop: Restroom for rooms S24 and S25: west wall, above cove base at small, damaged area. Photo 311 MKS	ND
PPH0122-A06 7347956	Brown flexible FRP mastic, untextured gypsum wallboard	Sunny Loop: Restroom for rooms S24 and S25: east wall, lower left corner, south of toilet bowl behind FRP on unfinished GWB. Photo 313 MKS	BOTH LAYERS = ND
PPH0122-A07 7347957	White soft rubbery sealant	Sunny Loop: Restroom for rooms S24 and S25: between wall-mounted toilet and FRP. Photo 314 MKS	ND
PPH0122-A08 7347958	Brittle tan and rust-colored cove base mastic of CB-1	Sunny Loop: Restroom for rooms S22 and S23: base of wall, right side of door at damaged area, between ceramic tile and GWB. Photo 325 MKS	BOTH LAYERS = ND



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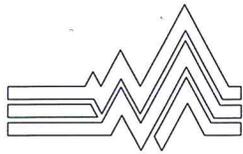
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PROJECT NO:	PROJECT NAME:	FACILITY:	COLLECTION DATE:
7898-01	Palmer Pioneer Home Rest. Remod.	Palmer Veterans and Pioneers Home	1/11/22
FIELD SURVEY DATA ND = NONE DETECTED			
EHS SAMPLE NO. LAB ID NO	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS FOR EHS-ALASKA USE ONLY
PPH0122-A09 7347059	White joint compound	Sunny Loop: Restroom for rooms S22 and S23: base of wall, right side of door above damaged cove base. Photo 325 MKS	ND
PPH0122-A10 7347060	CB-1: Tan ceramic cove base floor tile mastic, GWB	Sunny Loop: Restroom for rooms S22 and S23: base of wall, right side of door above damaged cove base. Photo 325 MKS	BOTH LAYERS = ND
PPH0122-A11 7347061	Dark grey floor tile grout	Sunny Loop: Restroom S20: south side of threshold to restroom, on concrete. Photo 338 MKS	ND
PPH0122-A12 7347062	SV-1: Beige chip pattern sheet vinyl flooring with ¼ to 1/2" chips in white, tan, light brown, with tan mastic	Sunny Loop: Restroom S20: room side of threshold into restroom on concrete. Photo 339 MKS	SHEET VINYL = 15% CHRYSOTILE
PPH0122-A13 7347063	White hard sealant	Sunny Loop: Restroom S20: between door frame and GWB wall. Photo 340 MKS	.5% CHRYSOTILE
PPH0122-A14 7347064	FT-1: 1x1 yellow ceramic floor tiles with black speckles, dark grey grout, tan mastic	Sunny Loop: Restroom S20: near threshold along door frame, on concrete. Photo 338 MKS	ALL LAYERS = ND
PPH0122-A15 7347065	Soft, pliable white sealant	Sunny Loop: Restroom S21: between painted white wood beam and GWB on ceiling. Photo 354 MKS	ND
PPH0122-A16 7347066	Rust-colored FRP mastic, white sealant, untextured white GWB	Sunny Loop: Restroom S21: behind the FRP on north wall of restroom, lower west side above cove base. Photo 359 MKS	ALL LAYERS = ND
PPH0122-A17 7347067	Beige sealant, unfinished gypsum wallboard	Raven Wing: Restroom for rooms R19 and R20: back side of recessed metal soap holder in wall above tub, along edge of FRP and GWB. Photo 11 JHL	BOTH LAYERS = ND
PPH0122-A18 7347068	Green vinyl wallpaper & contact cement, tan mastic	Raven Wing: Restroom for rooms R19 and R20: inside unused electrical box outlet in northwest FRP covered wall, between toilet fixture and north door entrance to restroom. Photo 24 JHL	BOTH LAYERS = ND
PPH0122-A19 7347069	White joint compound	Raven Wing: Restroom for rooms R19 and R20: inside unused electrical box outlet in northwest FRP covered wall. Photo 24 JHL	2.6% CHRYSOTILE
PPH0122-A20 7347070	CB-2: Black rubber 4" cove base, tan mastic	Raven Wing: Restroom for rooms R19 and R20: south FRP wall. Photo 27 JHL	BOTH LAYERS = ND
PPH0122-A21 7347071	FT-2: Green/Blue 1x1 ceramic floor tile with grey grout and tan mastic	Raven Wing: Restroom for rooms R19 and R20: left end of south wall on concrete. Photo 29 JHL	ALL LAYERS = ND
PPH0122-A22 7347072	White pliable sealant	Raven Wing: Restroom for rooms R19 and R20: left end of south wall between FRP and tub. Photo 30 JHL	ND



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PROJECT NO: 7898-01	PROJECT NAME: Palmer Pioneer Home Rest. Remod.	FACILITY: Palmer Veterans and Pioneers Home	COLLECTION DATE: 1/11/22
FIELD SURVEY DATA ND = NONE DETECTED			
EHS SAMPLE NO. LAB ID NO	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS FOR EHS-ALASKA USE ONLY
PPH0122-A37 7347007	SV-3: Beige wood-like textured sheet vinyl flooring	Fireweed: room F01: east threshold to restroom from room F01, on concrete. Photo 57 JHL	BOTH LAYERS = ND
PPH0122-A38 7347008	Beige floor tile mastic from CB-1 and white joint compound	Fireweed: Restroom for rooms F09 and F10: base of wall on metal corner nosing. Photo 60 JHL	BOTH LAYERS = ND
PPH0122-A39 7347009	FT-1: 1x1 yellow ceramic floor tiles with black speckles, dark grey grout, tan mastic	Fireweed: Restroom for rooms F09 and F10: at south side wall entrance to from room F09, on concrete. Photo 61 JHL	BOTH LAYERS = ND
PPH0122-A40 7347090	White sealant	Homestead Trail: restroom between H01 and H02: white sealant on wall mounted toilet fixture, southeast wall. Photo 65 JHL	ND
PPH0122-A41 7347001	Brown FRP mastic	Homestead Trail: restroom between H01 and H02: northwest wall at door from room H01, between metal corner nosing and FRP board. Photo 63 JHL	ND
PPH0122-A42 7347002	White sealant	Homestead Trail: restroom for room H12: white sealant on wall mounted toilet fixture on southeast wall of restroom. Photo 67 JHL	ND
PPH0122-A43 7347003	Brown FRP mastic	Homestead Trail: restroom for room H12: brown mastic between FRP board and pipe protrusion at southeast wall of restroom. Photo 70 JHL	ND
PPH0122-A44 7347004	White joint compound and brown FRP mastic	Homestead Trail: restroom for room H09: above suspended ceiling over restroom door entrance from room H09. Photo 72 JHL	BOTH LAYERS = ND
PPH0122-A45 7347005	CB-4: Dark brown/black brittle cove base with black mastic	Cordova: Restroom for rooms C41 and C42: base of northwest wall, on green wallpaper. Photo 74 JHL	BOTH LAYERS = ND
PPH0122-A46 7347006	FT-4: 1x1 brown ceramic floor tile with brown mastic and grey grout	Cordova: Restroom for rooms C37 and C38: southeast wall at base board heater pipe on concrete. Photo 75 JHL	ALL LAYERS = ND
END	END	END	

APPENDIX B

Lead Analyzer Test Results

LEAD ANALYZER TEST RESULTS

Heuresis Pb200i, Serial No. 1770

NO.	SITE	INSPECTOR	FLOOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	RESULTS		
											LBP	mg/cm ²	+/- ERROR
1	PALMER PIONEER HOME	SCHWAN	-	-	CALIBRATION	-	-	GREEN	5	1/11/22 11:15:29	POSITIVE	1	0.2
2	PALMER PIONEER HOME	SCHWAN	-	-	CALIBRATION	-	-	GREEN	5	1/11/22 11:16:02	POSITIVE	1	0.2
3	PALMER PIONEER HOME	SCHWAN	-	-	CALIBRATION	-	-	GREEN	5	1/11/22 11:16:37	POSITIVE	1	0.2
4	PALMER PIONEER HOME	SCHWAN	FIRST	S25	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:29:56	NEGATIVE	0.3	0.3
5	PALMER PIONEER HOME	SCHWAN	FIRST	S25	WALL	FRP	INTACT	BEIGE	2	1/11/22 11:30:38	NEGATIVE	0.3	0.3
6	PALMER PIONEER HOME	SCHWAN	FIRST	S25	TOILET	CERAMIC	INTACT	WHITE	2	1/11/22 11:31:25	NEGATIVE	0.1	0.3
7	PALMER PIONEER HOME	SCHWAN	FIRST	S25	FLOOR	CERAMIC	INTACT	BEIGE	2	1/11/22 11:31:59	NEGATIVE	0.2	0.3
8	PALMER PIONEER HOME	SCHWAN	FIRST	S25	COVE BASE	CERAMIC	INTACT	TAN	2	1/11/22 11:32:39	NEGATIVE	-0.3	0.3
9	PALMER PIONEER HOME	SCHWAN	FIRST	S25	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:34:23	NEGATIVE	0.2	0.3
10	PALMER PIONEER HOME	SCHWAN	FIRST	S25	SINK	CERAMIC	INTACT	WHITE	2	1/11/22 11:35:00	NEGATIVE	0.1	0.3
11	PALMER PIONEER HOME	SCHWAN	FIRST	S22	SINK	CERAMIC	INTACT	WHITE	2	1/11/22 11:36:48	NEGATIVE	0.2	0.3
12	PALMER PIONEER HOME	SCHWAN	FIRST	S22	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:37:24	NEGATIVE	0.2	0.3
13	PALMER PIONEER HOME	SCHWAN	FIRST	S22	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:37:41	NEGATIVE	0.2	0.3
14	PALMER PIONEER HOME	SCHWAN	FIRST	S22	WALL	FRP	INTACT	BEIGE	2	1/11/22 11:38:41	NEGATIVE	0.2	0.3
15	PALMER PIONEER HOME	SCHWAN	FIRST	S22	FLOOR	CERAMIC	INTACT	BEIGE	2	1/11/22 11:39:25	NEGATIVE	0.3	0.3
16	PALMER PIONEER HOME	SCHWAN	FIRST	S22	DOOR FRAME	WOOD	INTACT	GREEN	2	1/11/22 11:40:14	NEGATIVE	0.2	0.3
17	PALMER PIONEER HOME	SCHWAN	FIRST	S22	DOOR FRAME	WOOD	INTACT	ORANGE	2	1/11/22 11:40:42	NEGATIVE	0.1	0.3
18	PALMER PIONEER HOME	SCHWAN	FIRST	S22	MECHANICAL EQUIP	METAL	INTACT	LT BROWN	2	1/11/22 11:43:25	NEGATIVE	0.1	0.3
19	PALMER PIONEER HOME	SCHWAN	FIRST	S22	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:44:11	NEGATIVE	0.2	0.3
20	PALMER PIONEER HOME	SCHWAN	FIRST	S22	DOOR FRAME	METAL	INTACT	GREEN	2	1/11/22 11:44:47	NEGATIVE	0.1	0.3
21	PALMER PIONEER HOME	SCHWAN	FIRST	S22	PIPE	METAL	INTACT	WHITE	2	1/11/22 11:46:09	NEGATIVE	0.2	0.3
22	PALMER PIONEER HOME	SCHWAN	FIRST	S22	BEAM	WOOD	INTACT	WHITE	2	1/11/22 11:46:59	NEGATIVE	0	0.3
23	PALMER PIONEER HOME	SCHWAN	FIRST	S20	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:50:17	NEGATIVE	0.2	0.3
24	PALMER PIONEER HOME	SCHWAN	FIRST	S20	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:50:33	NEGATIVE	0.1	0.3
25	PALMER PIONEER HOME	SCHWAN	FIRST	S20	WALL	FRP	INTACT	BEIGE	2	1/11/22 11:51:12	NEGATIVE	0.3	0.3
26	PALMER PIONEER HOME	SCHWAN	FIRST	S20	FLOOR	CERAMIC	INTACT	BEIGE	2	1/11/22 11:52:23	NEGATIVE	0.3	0.3
27	PALMER PIONEER HOME	SCHWAN	FIRST	S20	DOOR	WOOD	INTACT	VARNISH	2	1/11/22 11:53:36	NEGATIVE	0.1	0.3
28	PALMER PIONEER HOME	SCHWAN	FIRST	S20	DOOR FRAME	WOOD	INTACT	GREEN	2	1/11/22 11:54:18	NEGATIVE	0.1	0.3
29	PALMER PIONEER HOME	SCHWAN	FIRST	S18	DOOR FRAME	WOOD	INTACT	GREEN	2	1/11/22 11:56:05	NEGATIVE	0.2	0.3
30	PALMER PIONEER HOME	SCHWAN	FIRST	S18	DOOR FRAME	METAL	INTACT	ORANGE	2	1/11/22 11:56:59	NEGATIVE	0.1	0.3
31	PALMER PIONEER HOME	SCHWAN	FIRST	S18	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 11:58:20	NEGATIVE	0.2	0.3
32	PALMER PIONEER HOME	SCHWAN	FIRST	S18	COVE BASE	CERAMIC	INTACT	TAN	2	1/11/22 11:59:21	NEGATIVE	0.2	0.3
33	PALMER PIONEER HOME	SCHWAN	FIRST	S16	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 12:01:53	NEGATIVE	0.2	0.3
34	PALMER PIONEER HOME	SCHWAN	FIRST	S16	WALL	FRP	INTACT	BEIGE	2	1/11/22 12:03:02	NEGATIVE	0.3	0.3
35	PALMER PIONEER HOME	SCHWAN	FIRST	S16	WALL	FRP	INTACT	BEIGE	2	1/11/22 12:05:14	NEGATIVE	0.2	0.3
36	PALMER PIONEER HOME	SCHWAN	FIRST	S16	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 12:05:44	NEGATIVE	0.2	0.3
37	PALMER PIONEER HOME	SCHWAN	FIRST	R19	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 12:14:21	NEGATIVE	0.2	0.3
38	PALMER PIONEER HOME	SCHWAN	FIRST	R19	FLOOR	CERAMIC	INTACT	GREEN	2	1/11/22 12:24:59	NEGATIVE	0.4	0.3
39	PALMER PIONEER HOME	SCHWAN	FIRST	R19	TUB	CERAMIC	INTACT	WHITE	2	1/11/22 12:25:35	POSITIVE	21.7	0.3
40	PALMER PIONEER HOME	SCHWAN	FIRST	R19	WALL	VINYL	INTACT	GREEN	2	1/11/22 12:29:12	NEGATIVE	0.2	0.3
41	PALMER PIONEER HOME	SCHWAN	FIRST	R29	WALL	VINYL	INTACT	LT BROWN	2	1/11/22 12:32:48	NEGATIVE	0.2	0.3
42	PALMER PIONEER HOME	SCHWAN	FIRST	R29	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 12:34:00	NEGATIVE	0.2	0.3
43	PALMER PIONEER HOME	SCHWAN	FIRST	R29	FLOOR	CERAMIC	INTACT	BROWN	2	1/11/22 12:35:07	NEGATIVE	0.3	0.3
44	PALMER PIONEER HOME	SCHWAN	FIRST	R29	TUB	CERAMIC	INTACT	WHITE	2	1/11/22 12:35:49	POSITIVE	24.2	0.3
45	PALMER PIONEER HOME	SCHWAN	FIRST	R29	WALL	FRP	INTACT	BEIGE	2	1/11/22 12:39:23	NEGATIVE	0.2	0.3
46	PALMER PIONEER HOME	SCHWAN	FIRST	R17	WALL	FRP	INTACT	BEIGE	2	1/11/22 12:51:31	NEGATIVE	0.3	0.3
47	PALMER PIONEER HOME	SCHWAN	FIRST	R17	WALL	VINYL	INTACT	BLUE	2	1/11/22 12:51:59	NEGATIVE	0.2	0.3

LEAD ANALYZER TEST RESULTS

NO.	SITE	INSPECTOR	FLOOR	ROOM	COMPONENT	SUBSTRATE	CONDITION	COLOR	DURATION	TIME	RESULTS		
											LBP	mg/cm ²	+/- ERROR
48	PALMER PIONEER HOME	SCHWAN	FIRST	R17	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 12:52:34	NEGATIVE	0.2	0.3
49	PALMER PIONEER HOME	SCHWAN	FIRST	R17	TUB	CERAMIC	INTACT	WHITE	2	1/11/22 12:54:02	POSITIVE	24.1	0.3
50	PALMER PIONEER HOME	SCHWAN	FIRST	R17	SINK	CERAMIC	INTACT	WHITE	2	1/11/22 12:54:54	NEGATIVE	-0.2	0.3
51	PALMER PIONEER HOME	SCHWAN	FIRST	R17	TOILET	CERAMIC	INTACT	WHITE	2	1/11/22 12:55:21	NEGATIVE	0	0.3
52	PALMER PIONEER HOME	SCHWAN	FIRST	R17	FLOOR	CERAMIC	INTACT	BLUE	2	1/11/22 12:56:11	NEGATIVE	0.3	0.3
53	PALMER PIONEER HOME	SCHWAN	FIRST	R17	DOOR FRAME	METAL	INTACT	GREEN	2	1/11/22 12:57:59	NEGATIVE	0.3	0.3
54	PALMER PIONEER HOME	SCHWAN	FIRST	F01	DOOR FRAME	METAL	INTACT	GREEN	2	1/11/22 14:54:38	NEGATIVE	0.1	0.3
55	PALMER PIONEER HOME	SCHWAN	FIRST	F01	DOOR FRAME	METAL	INTACT	WHITE	2	1/11/22 14:55:09	NEGATIVE	0.2	0.3
56	PALMER PIONEER HOME	SCHWAN	FIRST	F01	WALL	DRYWALL	INTACT	GREEN	2	1/11/22 14:55:54	NEGATIVE	0.1	0.3
57	PALMER PIONEER HOME	SCHWAN	FIRST	F01	WALL	DRYWALL	INTACT	GREEN	2	1/11/22 14:56:45	NEGATIVE	0.3	0.3
58	PALMER PIONEER HOME	SCHWAN	FIRST	F01	TUB	CERAMIC	INTACT	WHITE	2	1/11/22 14:59:14	POSITIVE	25.3	0.3
59	PALMER PIONEER HOME	SCHWAN	FIRST	F01	WALL	FRP	INTACT	BEIGE	2	1/11/22 14:59:51	NEGATIVE	0.1	0.3
60	PALMER PIONEER HOME	SCHWAN	FIRST	F03	WALL	CERAMIC	INTACT	BEIGE	2	1/11/22 15:10:53	NEGATIVE	-0.4	0.3
61	PALMER PIONEER HOME	SCHWAN	FIRST	F03	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 15:11:27	NEGATIVE	0.1	0.3
62	PALMER PIONEER HOME	SCHWAN	FIRST	F13	CEILING	WOOD	INTACT	BROWN	2	1/11/22 15:15:41	NEGATIVE	0	0.3
63	PALMER PIONEER HOME	SCHWAN	FIRST	F13	PIPE	METAL	INTACT	WHITE	2	1/11/22 15:16:32	NEGATIVE	0.1	0.3
64	PALMER PIONEER HOME	SCHWAN	FIRST	F13	FLOOR	CERAMIC	INTACT	GREEN	2	1/11/22 15:17:48	NEGATIVE	0.2	0.3
65	PALMER PIONEER HOME	SCHWAN	FIRST	HT1	WALL	FRP	INTACT	WHITE	2	1/11/22 15:41:44	NEGATIVE	0.3	0.3
66	PALMER PIONEER HOME	SCHWAN	FIRST	HT1	TOILET	CERAMIC	INTACT	WHITE	2	1/11/22 15:42:22	NEGATIVE	0.1	0.3
67	PALMER PIONEER HOME	SCHWAN	FIRST	R42	TOILET	CERAMIC	INTACT	WHITE	2	1/11/22 16:34:30	NEGATIVE	0.1	0.3
68	PALMER PIONEER HOME	SCHWAN	FIRST	R42	SINK	CERAMIC	INTACT	WHITE	2	1/11/22 16:34:56	NEGATIVE	0	0.3
69	PALMER PIONEER HOME	SCHWAN	FIRST	R42	TUB	CERAMIC	INTACT	WHITE	2	1/11/22 16:35:23	POSITIVE	26.2	0.3
70	PALMER PIONEER HOME	SCHWAN	FIRST	R42	WALL	VINYL	INTACT	BLUE	2	1/11/22 16:37:01	NEGATIVE	0.2	0.3
71	PALMER PIONEER HOME	SCHWAN	FIRST	R42	WALL	DRYWALL	INTACT	WHITE	2	1/11/22 16:37:44	NEGATIVE	0.2	0.3
72	PALMER PIONEER HOME	SCHWAN	FIRST	R42	FLOOR	CERAMIC	INTACT	BLUE	2	1/11/22 16:38:53	NEGATIVE	0.3	0.3
73	PALMER PIONEER HOME	SCHWAN	FIRST	R42	WALL	FRP	INTACT	BEIGE	2	1/11/22 16:39:33	NEGATIVE	0.2	0.3
74	PALMER PIONEER HOME	SCHWAN	FIRST	R42	DOOR FRAME	METAL	INTACT	ORANGE	2	1/11/22 16:43:51	NEGATIVE	0.2	0.3
75	PALMER PIONEER HOME	SCHWAN	FIRST	R42	DOOR FRAME	METAL	INTACT	GREEN	2	1/11/22 16:44:14	NEGATIVE	0.2	0.3
76	PALMER PIONEER HOME	SCHWAN	-	-	CALIBRATION	-	-	GREEN	5	1/11/22 16:57:57	NEGATIVE	0.9	0.2
77	PALMER PIONEER HOME	SCHWAN	-	-	CALIBRATION	-	-	GREEN	5	1/11/22 16:58:32	POSITIVE	1	0.2
78	PALMER PIONEER HOME	SCHWAN	-	-	CALIBRATION	-	-	GREEN	5	1/11/22 16:59:05	POSITIVE	1	0.2

Table Heading Descriptions:

Duration: This is the nominal time in "source" seconds that each sample was analyzed.

LBP: Results are shown as positive (POS ≥ 1.0 mg/cm²) or negative (NEG < 1.0 mg/cm²). Positive results are shown in bold print.

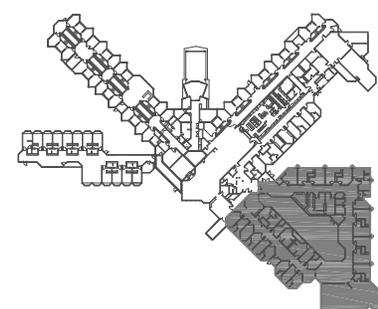
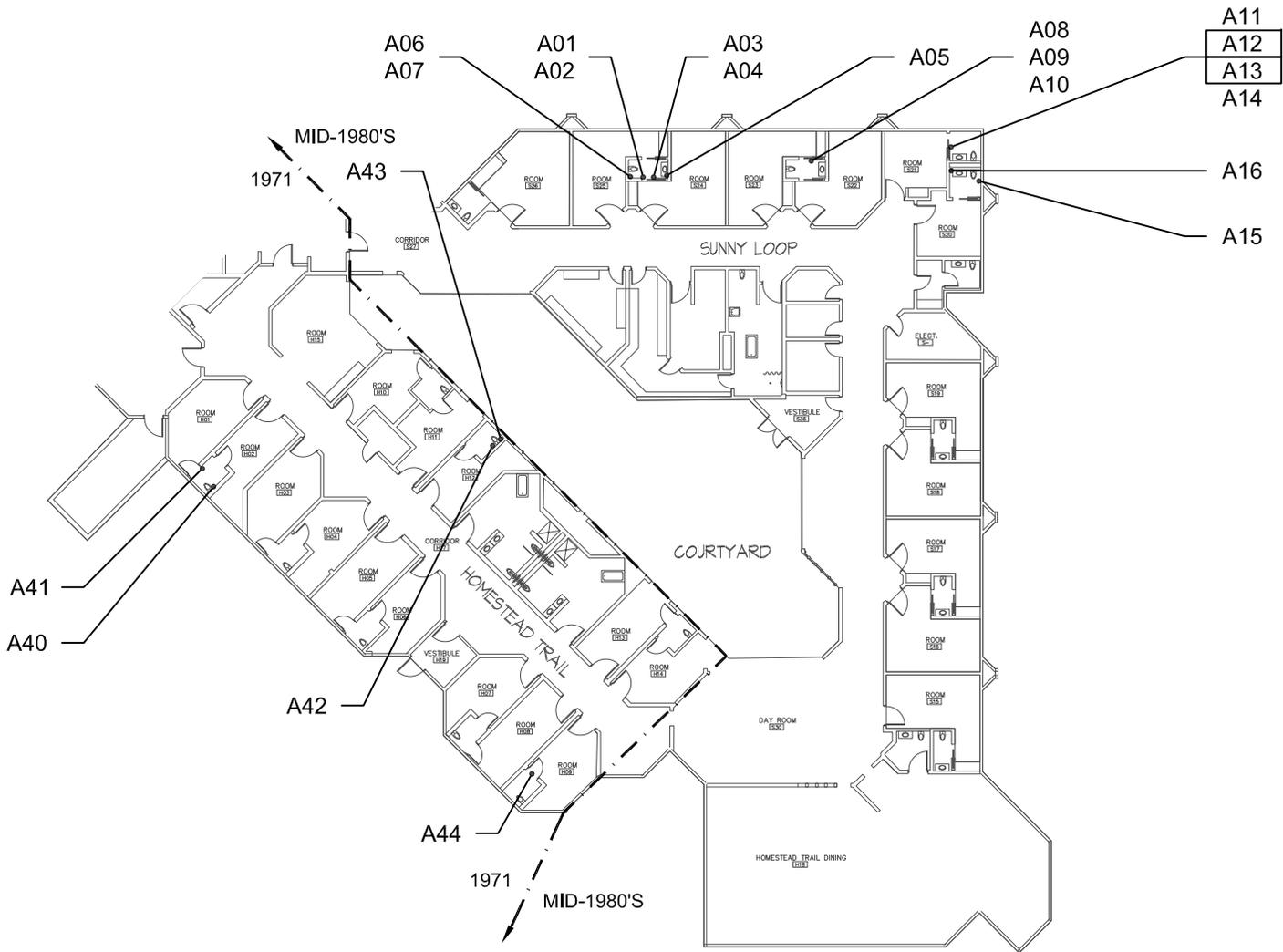
mg/cm²: This is the testing results produced by the Heuresis Pb200i instrument in milligrams of lead per square centimeter (mg/cm²). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm² or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm²) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined. <LOD indicates that the lead present was less than the limits of detection of the instrument (very little or no lead present).

VOID: This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).

Substrate: Where ceramic is shown as a substrate, lead content is typically from the glazing on the tile unless the tile is painted.

APPENDIX C

Drawings of Sample Locations



1
C-1

SUNNY LOOP & HOMESTEAD TRAIL

NTS

N

LEGEND

— AXX ASBESTOS TEST LOCATION

— AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

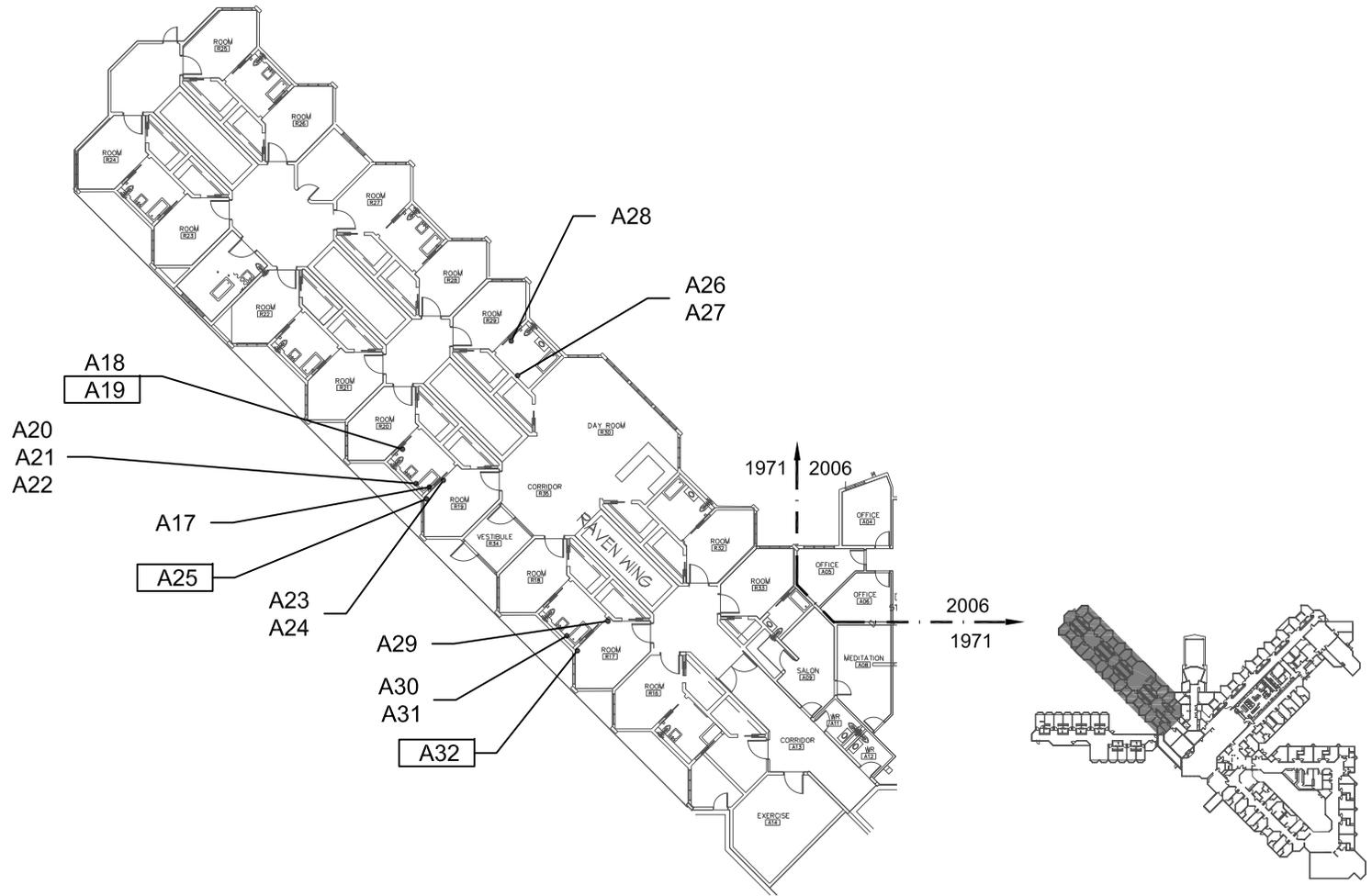
REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE PPH0122- PREFIX.

STATE OF ALASKA
DEPT. OF HEALTH AND
SOCIAL SERVICES

VETERANS & PIONEERS HOME
PALMER, ALASKA
ASBESTOS SAMPLE LOCATIONS



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FILE #:	C-1
7898-SL	



1
C-2

RAVEN WING
NTS



LEGEND

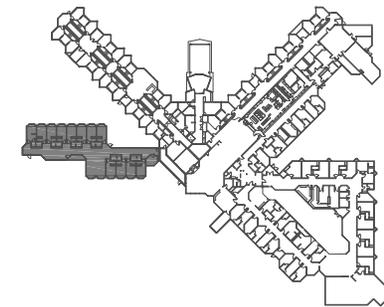
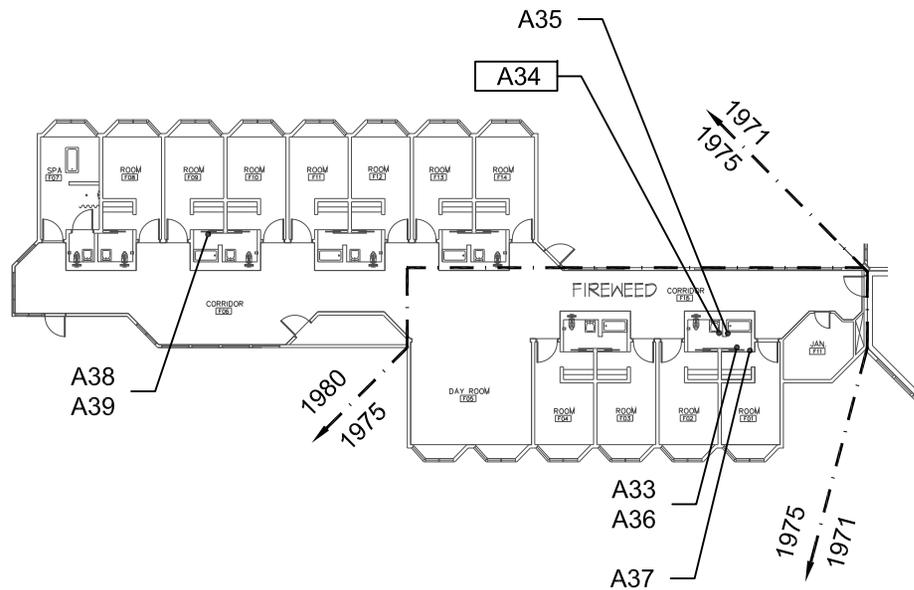
- AXX ASBESTOS TEST LOCATION
 - AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE PPH0122- PREFIX.

STATE OF ALASKA
DEPT. OF HEALTH AND
SOCIAL SERVICES

VETERANS & PIONEERS HOME
PALMER, ALASKA
ASBESTOS SAMPLE LOCATIONS



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FILE #: 7898-SL	



1
C-3

FIREWEED WING
NTS



LEGEND

- AXX ASBESTOS TEST LOCATION
- AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS

REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE PPH0122- PREFIX.

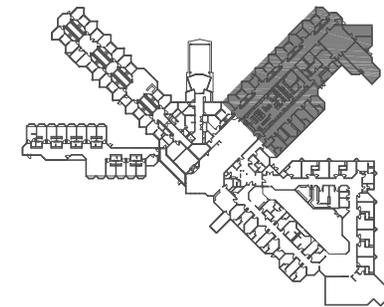
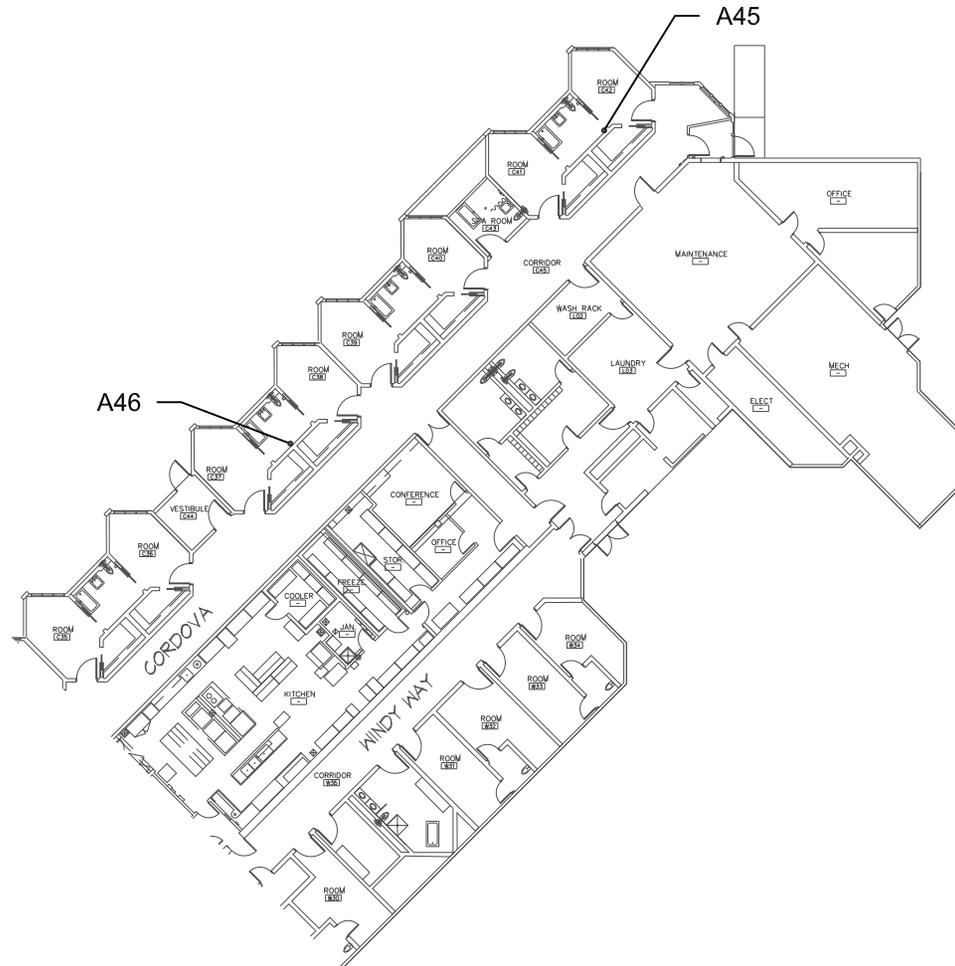
STATE OF ALASKA
DEPT. OF HEALTH AND
SOCIAL SERVICES

VETERANS & PIONEERS HOME
PALMER, ALASKA
ASBESTOS SAMPLE LOCATIONS



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01/11/2022
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C-3



1
C-4

CORDOVA WING
NTS



LEGEND

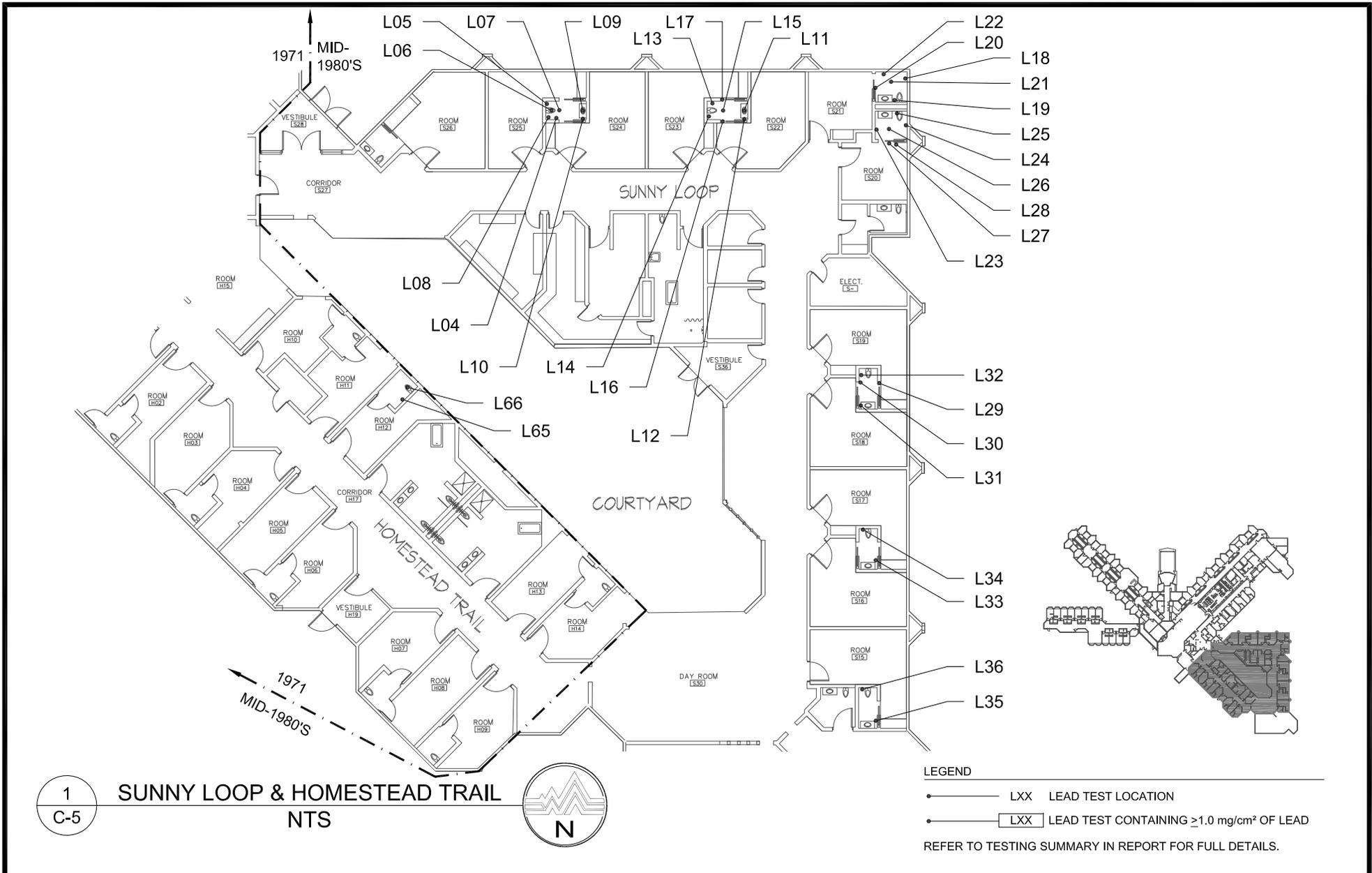
- AXX ASBESTOS TEST LOCATION
 - AXX LAB TEST RESULTS POSITIVE FOR ASBESTOS
- REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS. ALL SAMPLES HAVE PPH0122- PREFIX.

STATE OF ALASKA
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PALMER, ALASKA
ASBESTOS SAMPLE LOCATIONS



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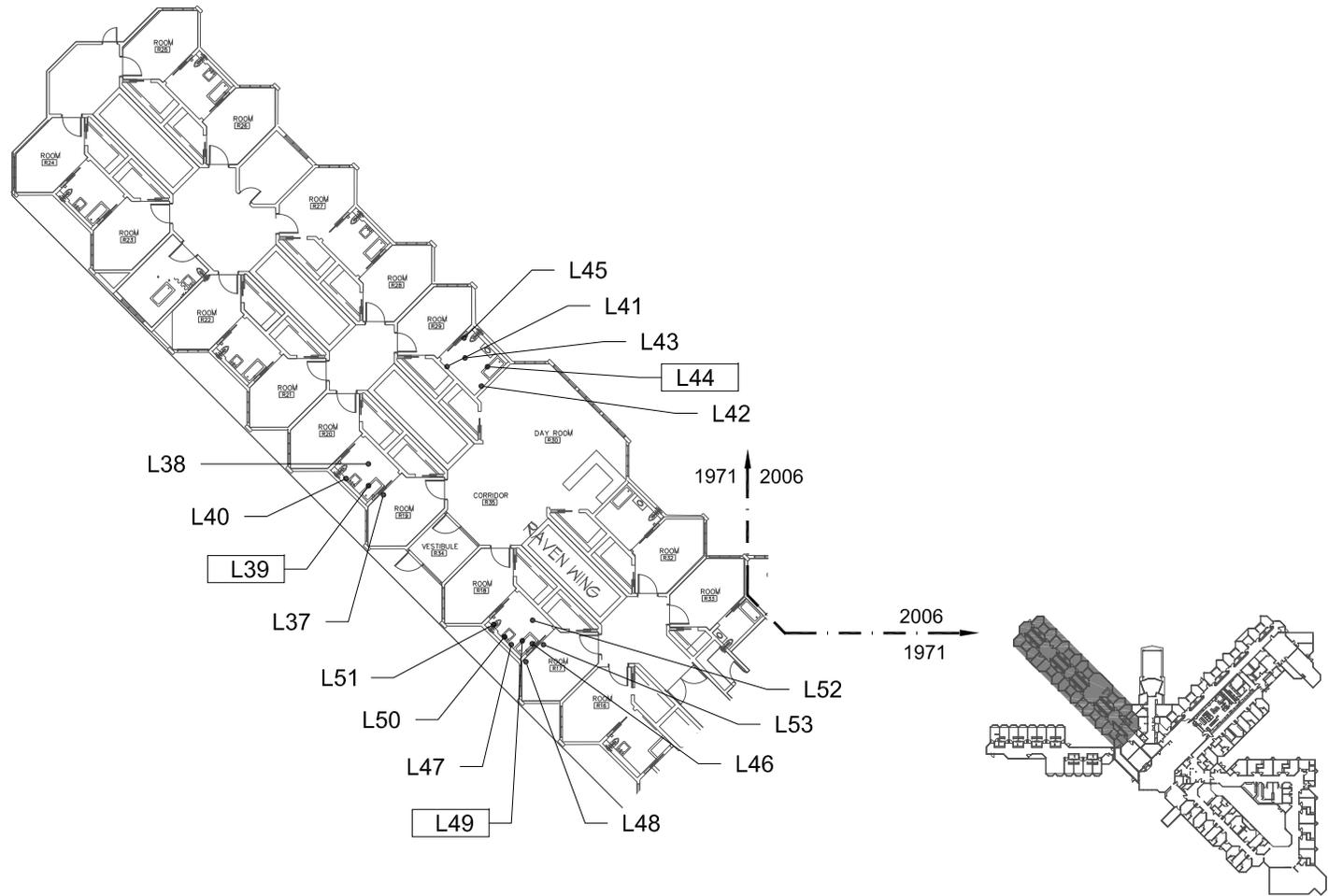
STATE OF ALASKA
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VETERANS & PIONEERS HOME
PALMER, ALASKA
LEAD SAMPLE LOCATIONS



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7898-SL

DATE:
01/11/2022
DWG.NO:
C-5



1
C-6

RAVEN WING
NTS



LEGEND

- LXX LEAD TEST LOCATION
- LXX LEAD TEST CONTAINING ≥ 1.0 mg/cm² OF LEAD

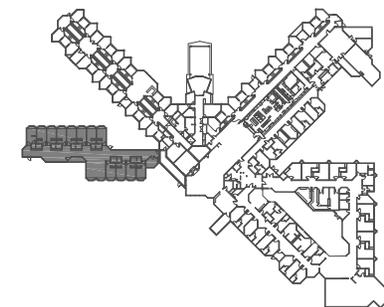
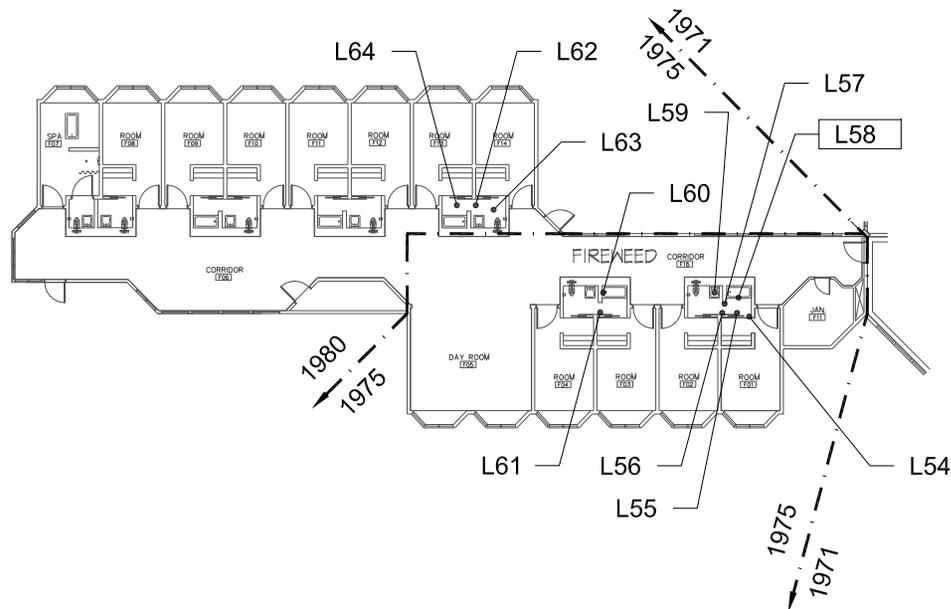
REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

STATE OF ALASKA
DEPT. OF HEALTH AND
SOCIAL SERVICES

VETERANS & PIONEERS HOME
PALMER, ALASKA
LEAD SAMPLE LOCATIONS



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FILE #:	C-6
7898-SL	



1
C-7

FIREWEED WING
NTS

LEGEND

- LXX LEAD TEST LOCATION
- LXX LEAD TEST CONTAINING ≥ 1.0 mg/cm² OF LEAD

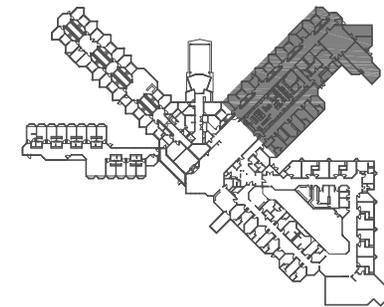
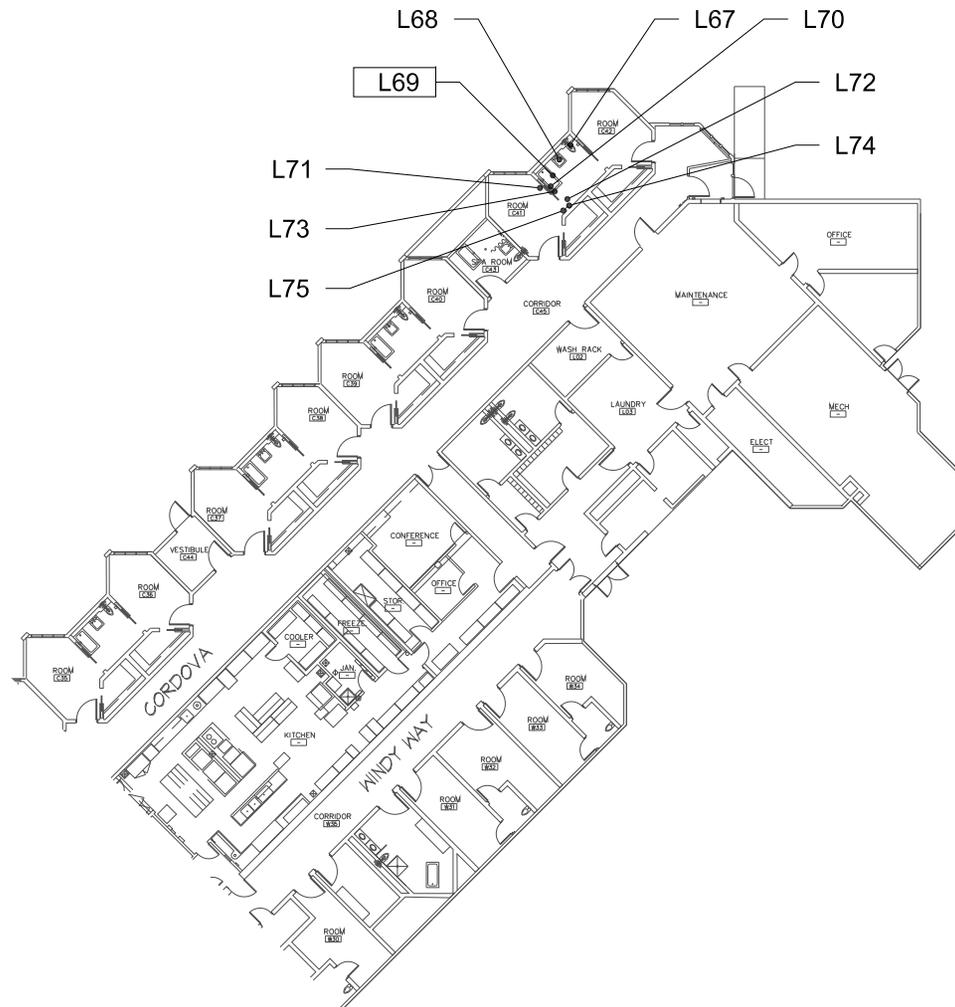
REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

STATE OF ALASKA
DEPT. OF HEALTH AND
SOCIAL SERVICES

VETERANS & PIONEERS HOME
PALMER, ALASKA
LEAD SAMPLE LOCATIONS

EHS ALASKA
INCORPORATED
ENGINEERING, HEALTH & SAFETY CONSULTANTS

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1
C-8

CORDOVA WING
NTS



LEGEND

- LXX LEAD TEST LOCATION
- LXX LEAD TEST CONTAINING ≥ 1.0 mg/cm² OF LEAD

REFER TO TESTING SUMMARY IN REPORT FOR FULL DETAILS.

STATE OF ALASKA
DEPT. OF HEALTH AND
SOCIAL SERVICES

VETERANS & PIONEERS HOME
PALMER, ALASKA
LEAD SAMPLE LOCATIONS



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SECTION 02 41 19

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes the following:
 - 1.** Demolition and removal of selected portions of building or structure.
 - 2.** Salvage of existing items to be reused or recycled.
- B.** Related Sections include the following:
 - 1.** Division 1 Section per DHSS.

1.3 DEFINITIONS

- A.** Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B.** Remove and Salvage: Detach items from existing construction and deliver them to Owner
- C.** Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- D.** Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A.** Items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.

1.5 QUALITY ASSURANCE

- A.** Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B.** Standards: Comply with ANSI A10.6 and NFPA 241.

1.6 PROJECT CONDITIONS

- A.** Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
 - 1.** Comply with requirements specified in Division 1 Section "Summary."
- B.** Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C.** Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D.** Hazardous Materials: Hazardous materials are known to be present in buildings and structures to be selectively demolished. See Hazardous Materials and Abatement Drawings and Specifications.
 - 1.** Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
 - 2.** Owner will provide material safety data sheets for suspected hazardous materials that are known to be present in buildings and structures to be selectively demolished because of building operations or processes performed there.
- E.** Storage or sale of removed items or materials on-site is not permitted.
- F.** Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1.** Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- B. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.
- E. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 1 Section "Summary."
- B. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated mechanical/electrical systems serving areas to be selectively demolished.
 - 1. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - 2. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
 - a. Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.
- C. Piping and Ductwork Removed: Drawings do not show all existing piping which is to be removed. Unless indicated otherwise, where existing equipment has been removed, or its use replaced by new equipment, remove connecting piping back to the branch in the main so that there will be no dead ends or unused pipe lines in mechanical spaces at completion.
- D. Wiring and Conduit Removed: Drawings do not show all existing conduit and wire which is to be removed. Unless indicated otherwise, where existing equipment has been removed, or its use replaced by new equipment, remove connecting conduit and wire back to the source of supply or nearest point in the circuit where equipment to

remain is connected from so that there will be no unused conduit or wire in project area at completion.

3.3 PREPARATION

- A.** Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.

3.4 SELECTIVE DEMOLITION, GENERAL

- A.** General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 5. Maintain adequate ventilation when using cutting torches.
 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 9. Dispose of demolished items and materials promptly.
- B.** Reuse of Building Elements: Project has been designed for reuse of building elements as indicated in the Contract Documents. Do not demolish building elements beyond what is indicated on Drawings without Architect's or Owner's approval.

C. Removed and Salvaged Items:

1. Clean salvaged items.
2. Store items in a secure area until delivery to Owner.
3. Transport items to Owner's storage area designated by Owner.
4. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Protect items from damage during transport and storage.
3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Division 1 Section "Construction Waste Management."

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

D. Flourescent Bulbs, Ballasts and old Thermostats: Remove and dispose of with a verified acceptance location for fluorescent bulbs, ballasts and mercury-containing thermostats.

- 1) Flourescent bulbs – both linear and compact bulbs are to be packaged and disposed or with a location that accepts fluorescent bulbs for reclame.
- 2) Ballasts – ballasts containing PCBs shall be disposed of with an agency registered for EPA approved PCB storage and disposal. Note that if a ballast does not have a note stating “No PCBs”, it should be assumed to have PCBs.
- 3) Thermostats – older dial thermostats that contain mercury shall be disposed of with an agency registered for EPA approved storage and disposal.

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 01732

SECTION 02 81 00

HAZARDOUS MATERIALS – SUMMARY OF REQUIREMENTS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A.** The hazards abatement portion of this project includes the disturbance and/or removal and disposal of selected asbestos-containing materials, lead-containing materials and/or other hazardous materials in the portions of the buildings being renovated. The Contractor shall remove or disturb hazardous materials as coordinated with other trades, as specified and/or indicated on the drawings and as required to complete the work. The work may fall under the requirements of 40 CFR 745 (Lead-based Paint Poisoning Prevention Act) and the Contractor shall determine if the project is subject to the Renovation, Repair and Painting regulations, and take all measures to comply. Refer to the Contractor's approved work plan for hazardous materials removal, disturbance and disposal procedures.
- B.** Quantities of asbestos-containing materials (ACM) and hazardous materials shown in this specification, under Paragraph 1.2 A below, are based on a comprehensive survey of the building and take-offs from scale drawings. The Hazardous Material Assessment and quantities provided are considered a baseline for bid purposes. It is the contractor's responsibility to remove and dispose of all ACMs affected by the project from the site in accordance with applicable regulations. The contractor shall immediately notify the owner if other ACM or additional quantities are discovered. Quantities of materials removed shall be documented on a daily basis and shall include all materials removed and locations, in the units used in this specification. Unit pricing shall be provided in the bid for all identified hazardous material in case additional quantities are discovered
- C.** Notification of Potential Hazards: Asbestos, lead and other potentially hazardous materials are present in the building that may impact the work of all trades. Regulated air contaminants, including asbestos and lead, are also present in settled and concealed dust in and on architectural, structural, mechanical and electrical components or systems throughout the building. All trades shall coordinate with other trades and conduct their work to prevent worker exposure or site contamination. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of these materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.
- D.** Notification of Child Occupied Facility: Portions of this building are classified as a Child Occupied Facility in accordance with 40 CFR 745 and lead-based paints may be present on components to be disturbed in those areas. Personnel performing work in these areas must comply with the requirements of 40 CFR 745, including training, work

practices and cleaning of the work area. Refer to Specification Divisions 0, 1 and 2 for specific information concerning disturbing, removing and disposing of lead materials and the installation of new materials or components. This notification is provided in accordance with EPA and OSHA requirements.

1.2 ASBESTOS-CONTAINING MATERIALS

- A.** The following asbestos-containing materials are known or assumed to be present, and are likely to be disturbed by this project. Some materials likely to be affected by this project are assumed to contain asbestos. If any bulk sampling is conducted to disprove any assumed ACM, that sampling shall be conducted by EPA certified Building Inspectors in full compliance with 40 CFR 763, and the results submitted to the Owner. At least 24 hour notice to the Owner shall be submitted prior to any bulk sampling. Submit all results of any sampling of bulk materials to Owner within 24 hours of receipt of results. Bulk sample submittal shall consist of field data sheets, the analytical laboratory's results, and sketch of sample locations.
1. Tan "1/4" chip pattern" sheet vinyl in the 1971 era (confirmed asbestos-containing) and the "Sunny Loop" and "Windy Loop" wings (assumed to have been constructed sometime between 1980-1985, confirmed asbestos-containing), and asbestos-contaminated mastics (confirmed asbestos-contaminated). Prior reports described asbestos-containing sheet vinyl in yellow and orange colors but did not describe a pattern.
 - a. **50 square feet to be removed.**
 2. Remnant sheet vinyl in the "Fireweed" wing (assumed asbestos-containing).
 - a. **325 square feet to be removed.**
 3. Gypsum board systems (walls, ceilings, soffits, etc.) with asbestos-containing joint compound in the 1971 era and the "Fireweed" wing (assumed to have been constructed prior to 1980) (confirmed asbestos-containing).
 - a. **200 square foot allowance.**
- B.** The following asbestos-containing materials are known or assumed to be present, BUT are NOT currently anticipated to be disturbed by this project.
1. Vinyl asbestos tile in the 1971 era (confirmed asbestos-containing).
 2. Black flooring mastic in the 1971 era (confirmed asbestos-containing) and assumed asbestos-contaminated building materials such as carpet, vinyl floor tiles, associated mastics and leveling compounds, and at the bases of walls where the mastic was originally located (assumed asbestos-contaminated).
 3. Tan rubber flooring in resident restroom areas of the 1971 era "Homestead Trail" wing (assumed asbestos-containing) and associated mastics (assumed asbestos-containing)
 4. Older white hard sealants around door frames in the "Sunny Loop" and "Windy Loop" wings (assumed to have been constructed sometime between 1980-1985) (sealant assumed to contain greater than 1% asbestos if analyzed by TEM NOB).
 5. "Hard fitting" pipe insulation in the 1971 era (confirmed asbestos-containing).
 6. Flange gaskets (confirmed asbestos-containing) and valve packings (assumed asbestos-containing) on piping systems throughout the building.

7. Other assumed asbestos-containing materials. Examples of these materials include, but are not limited to: various patterns and colors of 9" x 9" or 12" x 12" vinyl floor tiles; sheet vinyl; black flooring mastics; remnant flooring materials under newer non-asbestos-containing flooring materials; cement asbestos board insulated sandwich panels above and below exterior windows; miscellaneous colors and textures of construction mastics and sealants on interior and exterior components such as mirrors, ceramic floor and wall tiles, windows, doors, etc.; various colors of rubber cove bases and mastics; grey-green duct seam sealants; sealants and putties used on refrigeration equipment; undercoatings and putties of older drinking fountains; gaskets and sealants on high-temperature mechanical equipment such as the boilers and water heaters; manufacturer-installed sealants and gaskets on air handling units and similar mechanical equipment; insulating materials inside of fire doors and transoms; insulating materials inside of high-temperature kitchen equipment such as ovens and stoves; amongst others. Materials installed after the year 2000 are presumed to not contain asbestos, but these materials, and other materials such as those assumed asbestos-containing materials discussed above, are still required to be sampled prior to any disturbance of the materials. Additionally, all prior renovations may have covered or otherwise concealed older building materials, including both confirmed and assumed asbestos-containing materials

1.3 LEAD-CONTAINING MATERIALS

- A. The following lead-containing materials are known or assumed to be present, and may be disturbed by this project. Due to the age of the portion of the building being renovated it is recommended that painted surfaces be assumed to have lead-based paint, and the work shall comply with 40 CFR 745. The disturbance of lead-containing materials (not just lead-based paint) is subject to compliance with OSHA regulations under 29 CFR 1926.62. The Contractor may conduct testing of painted or other materials to determine the lead content in order to determine if 40 CFR 745 applies. At least 24 hour notice to the Owner shall be submitted prior to any lead testing.
 1. Painted interior and exterior surfaces.
 2. Painted windows, doors and frames.
 3. Painted mechanical and electrical equipment.
 4. Lead-containing dust in and on architectural, structural, mechanical, and electrical components.
 5. Lead-acid batteries for exit and emergency lights, and other equipment.
 6. Lead caulking in bell and spigot pipe joints.
 7. Lead in pipe solder at copper pipe fittings.
 8. Painted structural and miscellaneous steel.

1.4 CHEMICAL HAZARDS

- A.** The following chemicals are known or assumed to be present, and are unlikely to be disturbed by this project. Items to be removed may include, but are not limited to:
1. Mercury and mercury compounds in mercury switches in mechanical and electrical equipment and fluorescent light fixtures.
 2. PCB containing ballasts and light fixture components contaminated with PCB-containing oil.
 3. Electrical equipment and building components containing or contaminated with PCB-containing oil. Note: Where the ballasts have previously been replaced, fixtures and all components may be contaminated with PCB-Containing Oils, and shall either be decontaminated or disposed of as PCB contaminated equipment.
 4. Heating system components with glycol.
 5. Radioactive components in smoke detectors and self-illuminating exit signs.
 6. Ozone Depleting Substances (ODS) in refrigeration equipment.
 7. Lead-acid batteries for exit and emergency lights, and other equipment.

1.5 SUBMITTALS

- A.** Pre-Work Submittal: Submit the following work plan documentation to the Owner for review, approval or rejection. Work shall not begin until submittals are approved. The hazardous materials work plan shall be signed by an EPA certified Project Designer.
1. Shop drawings.
 2. Work area set-up and protection.
 3. Work plan with procedures for all materials affected by the work.
 4. Worker protection and decontamination procedures.
 5. Alaska Department of Labor & Workforce Development Notification.
 6. EPA NESHAP notification, if required.
 7. Lead Training certifications and EPA lead notification plan, if required.
 8. Schedule.
 9. Copy of Project Designer certification.
 10. Current qualifications of Independent testing laboratory and laboratory personnel.
 11. Sampling plan, including number and locations of samples, tests, etc.
 12. Waste transporter and disposal site designations.
- B.** Close-Out Submittal: Contractor to submit the following documents to the Owner at completion of project for review and approval:
1. EPA and DOL notification.
 2. Copies of worker and IH technician certifications.
 3. Copies of worker refresher course certifications.
 4. Waste manifests and disposal receipts.
 5. Final, signed copies of air monitoring results.
 6. Copies of any bulk sampling or lead testing results.
 7. Signed copies of all field data sheets.
 8. Signed copies of all visual inspection forms.
 9. Sketches of all sample locations.
 10. Daily logs with worker sign-in sheets.

11. Drawings documenting the materials and locations of all materials removed by this project.

PART 2 - PRODUCTS

- 2.1 **EQUIPMENT, MATERIALS, DECONTAMINATION UNITS, DANGER AND WARNING SIGNS, HEPA FILTRATION, PRESSURE DIFFERENTIAL MONITORING EQUIPMENT, CHEMICALS, ETC:** The Contractor shall provide standard commercial quality materials and equipment as required to prepare and complete the work, and as required by regulation. Maintain Safety Data Sheets (SDSs) for all chemical materials brought onto the work-site.

PART 3 - EXECUTION

3.1 ESTIMATED SCOPE AND WORK PRACTICES

- A. All asbestos work shall be conducted using wet methods, HEPA vacuums, and prompt cleanup.
- B. It is anticipated that the remnant asbestos-containing sheet vinyl in the “Fireweed Wing”, which is assumed to have contaminated the original sheet vinyl mastics and all replacement sheet vinyl, mastics, leveling compounds, and related flooring components, will be removed using Class I Asbestos Work protocols in a negative pressure enclosure system with an attached three-stage decontamination. The remnant sheet vinyl is assumed to be friable and shall be disposed of as a Regulated Asbestos-Containing Material.
- C. It is anticipated that the asbestos-containing sheet vinyl adjacent to flooring being replaced in the “Sunny Loop” and “Windy Loop” wings will require partial disturbance to accommodate the replacement of the flooring materials. It is anticipated that this work will be conducted using Class II Asbestos Work protocols using a negative pressure glovebag with an adjacent decontamination area for decontamination of employees, equipment, and waste containers. Where disturbed, the cut edges shall have encapsulant applied which is compatible with the replacement flooring materials. The sheet vinyl is assumed to be friable and shall be disposed of as a Regulated Asbestos-Containing Material.
- D. The removal and disturbance of gypsum board systems with asbestos-containing joint compound in the original 1971 era and the “Fireweed Wing” is anticipated to be required only as necessary to accommodate the work. It is anticipated that this work will be conducted using Class II Asbestos Work protocols using a negative pressure glovebag with an adjacent decontamination area for decontamination of employees, equipment, and waste containers. Where disturbed, the cut edges shall have encapsulant applied. The gypsum wall board with asbestos-containing joint compound is not classified as an asbestos-containing material by the EPA, unless that material has become friable or composite sampling shows the “wall system” to contain greater than 1% asbestos, but

shall be disposed of as a non-regulated asbestos-containing waste (or RACM if friable) or as otherwise required by the disposal site operator, whichever requirement is more stringent shall be used.

- E.** The Contractor shall notify the Alaska Department of Labor. Notification to the EPA is required.
- F.** The Contractor shall identify the presence, locations and quantities of asbestos and other hazardous materials that will be affected by this project, and conduct all removal and disposal operations in full compliance with Local, State, Federal and all other applicable regulations whether or not they are referenced herein.
- G.** All paints in the building are assumed to have detectable concentrations of lead, and therefore, the work is subject to the requirements of 29 CFR 1926.62 and 40 CFR 745. It is the contractor's responsibility to review the "trigger tasks" and other requirements of 29 CFR 1926.62 and 40 CFR 745 to determine which portions apply, if any, to each unique work task required by this project. Similarly, all lead-containing wastes shall be TCLP tested to determine disposal requirements. Alternatively, the contractor may elect to have their designated IH Technician collect bulk samples of each affected paint to determine if "detectable levels of lead" are present in the paints. Any results which indicate lead above the limits of detection shall be considered as having "detectable levels of lead" and therefore subject to both the monitoring and testing requirements of this specification.
- H.** The Contractor shall document the location and quantities of hazardous materials removed, including sketches showing precise locations.

3.2 MONITORING

- A.** All monitoring shall be performed by fully trained industrial hygiene technicians. Asbestos air samples shall be analyzed by a laboratory currently rated as proficient in the National Institute of Occupational Safety and Health (NIOSH) Proficiency in Analytical Testing (PAT) program or by microscopists listed in the American Industrial Hygiene Association (AIHA) Asbestos Analyst Registry (AAR). AAR Certification is required if analysis is done on-site. Lead air and dust wipe samples shall be analyzed by a laboratory currently rated as proficient as determined by ELPAT or ELLAP performance for NIOSH Method 7082 and/or NIOSH Method 7105 analytical method for the determination of lead in air and lead in paint chip, soil, and dust wipe samples. For renovation work that is regulated by 40 CFR 745, comply with any additional cleaning, inspection and testing standards of that regulation.
- B.** The Contractor shall conduct asbestos worker exposure monitoring in accordance with 29 CFR 1926.1101. Personnel sampling shall include a minimum of at least three samples per 8 hour shift per employee being monitored. Employees shall be monitored at the rate of at least one employee for every six people performing each task in each work areas. Persons performing separate tasks or in separate work areas shall be sampled separately. The Contractor shall take a minimum of 3 air samples per day

inside the work area, and 3 air samples in adjacent areas, plus at least 1 sample outside of the entrance to the work area. Take 2 waste load-out samples for the full duration of the operation, one taken inside the wash-down station and one taken on the clean side of the wash-down station, in addition to the daily work area and environmental samples, (no samples are necessary if no load-out operation is performed). The Contractor shall take one air sample at the exhaust of the HEPA Filtration Unit(s), rotating between units so that each unit is monitored every 3 days.

- C.** For interior work, the Contractor shall conduct lead dust wipe sampling for each lead work area without a negative initial determination. Include at least one dust sample immediately outside the entrance to the work area daily. For all work affecting paints or other lead-containing materials, the Contractor shall take personnel air samples in accordance with 29 CFR 1926.62. Personnel sampling shall include a minimum of at least two samples per 8 hour shift per employee being monitored. Employees shall be monitored at the rate of at least one employee for every six people performing each task in each work area. Persons performing separate tasks or in separate lead work areas shall be sampled separately. Take a minimum of two lead-in-air samples inside the work area, and two lead-in-air samples in adjacent areas.
- D.** Post-abatement visual inspections are required anytime asbestos is removed, regardless if the removal work occurred indoors or outdoors. Asbestos work area clearance air monitoring is required for all interior work, and shall be conducted by the Contractor's Independent Testing Laboratory subcontractor. The Independent Testing Laboratory may not be hired by the Abatement Subcontractor to perform visual inspections and clearance air monitoring. Owner approval is required before a work area is released to unprotected workers. The Contractor is responsible for all costs associated with clearance and scheduling of visual inspection and clearance air monitoring. The maximum acceptable level of airborne asbestos fibers for work area clearance is as published in 40 CFR 763 for PCM analysis. A minimum of five aggressive clearance samples are required for each work area, regardless of the type of analysis. PCM analysis shall be used unless Transmission Electron Microscopy (TEM) analysis is required by 40 CFR 763 due to quantities of materials removed. The Contractor has the option, at its expense and at no cost to the Owner, of re-cleaning the work area and repeating the clearance air monitoring procedures or of having failed phase contrast microscopy (PCM) sample media sent to his/her NVLAP accredited laboratory for TEM analysis by NIOSH Method 7402.
- E.** For small-scale, short-duration work, such as minor penetrations of gypsum wall board with asbestos-containing joint compound, gasket removal, or similar work, that work may be requested to be "cleared" on the basis of a minimum of 5 air samples taken inside the work area during the work, immediately adjacent to where removal is taking place, and where each of those air samples have fiber counts of less than 0.01 f/cc. These alternative "clearance" sampling protocols will only be allowed if fully outlined in the contractor's work plan, with specific pre-approval by the Owner. Visual inspections are required for all removal work, including small-scale, short-duration work.
- F.** Lead work area clearance testing by the Contractor is required for each lead control area where the lead action level has been exceeded, or for work in child occupied

facilities covered by 40 CFR 745. Clearance testing shall be performed only after a visual inspection report by the IH Technician has documented that the work area is clean and that all lead disturbance required by the contract has been completed. Clearance testing shall include the following:

1. A visual inspection report by the Contractor's IH Technician (or by the "Certified Renovator" if the work is covered by 40 CFR 745) verifying that all lead disturbance required by the contract has been completed and that all visible dust and debris subject to disturbance by the planned work under this contract have been removed and the area HEPA vacuumed, wet mopped or wet wiped.
2. If the portion of the building is NOT classified as a child-occupied facility, three (3) lead wipe and/or lead soil sample results are required from within each lead control area per the Contractor's approved work plan and in accordance with NIOSH method 9100. Clearance levels shall be 200 µg/ft² for wipes or 400 ppm in soil.
3. If the portion of the building IS classified as a child-occupied facility, where lead-based paints have been disturbed, clearances shall be performed by an EPA certified lead inspector, risk assessor or certified dust sampling technician in accordance with 40 CFR 745. Dust clearance levels shall be below 10 µg/ft² for floors, 100 µg/ft² for interior window sills and 400 µg/ft² for window troughs. Soil clearance levels shall be below 400 parts per million (ppm) for play areas and 800 ppm for bare soil in non-play areas.

G. All sampling by the Contractor shall be at their own cost.

3.3 DISPOSAL

- A.** The Contractor shall determine current waste handling, storage, transportation, and disposal requirements for the chosen waste disposal facilities. Contractor must comply fully with these requirements and all U. S. Department of Transportation and EPA regulations.
- B.** Asbestos wastes shall be disposed of in an EPA and DEC permitted asbestos landfill.
- C.** Lead-containing wastes shall be TCLP tested by the Contractor to determine if they are classified as hazardous waste. TCLP's shall be analyzed by a lab with demonstrated proficiency in performing analyses according to Method 1311 TCLP, corresponding to the current version of Test Methods for Evaluating Solid Wastes (Chemical Physical Methods), SW-846. Evidence may include successful participation in a recognized inter-laboratory quality control program such as a laboratory certified by the California Health and Welfare Agency, Department of Health Services, or a more informal inter-laboratory quality control program.
- D.** PCB and other chemical hazard wastes shall be disposed of in an EPA permitted hazardous waste disposal site as required by 40 CFR 260, 40 CFR 761 and 40 CFR 763, the Contractor's approved plan, and the disposal site operator. Comply with

current waste disposal, handling, labeling, storage, and transportation requirements of the waste disposal facility, U.S. Department of Transportation, and EPA regulations. Fluorescent, mercury vapor, metal halide and high pressure sodium lamps are classified by the EPA as hazardous mercury waste under the Universal Waste Rule under 40 CFR 273. Mercury and mercury-containing products are considered hazardous waste unless TCLP testing of the waste for mercury confirms the mercury content to be less than the EPA criteria of 0.2 mg/l. If the Contractor chooses to perform a TCLP test of fluorescent lamps, the test shall be conducted in accordance with the requirements of ANSI/NEMA Standard Procedure for Fluorescent Lamp Sample Preparation and Toxicity Characteristic Leaching Procedure, C78.LL 1256-2003 or latest version.

- E.** Dispose of radioactive materials and equipment in accordance with the manufacturer's recommendations, the disposal site's requirements and 10 CFR 20, Subpart K. Provide list of manufacturer name and serial numbers for all removed radioactive exit signs to owner.
- F.** Refrigerants in refrigeration and cooling systems in the building contain ODS components that, if disturbed or removed, must be recovered and recycled or disposed of in accordance with 40 CFR 82. Personnel decommissioning or removing ODS refrigerants shall hold appropriate EPA training and certificate for handling and recovering these materials.
- G.** If the project requires their disturbance, heating systems containing glycol shall be drained and all glycol collected in appropriate waste containers for recycling or disposal. Glycol shall be tested for heavy metals using the Toxicity Characteristics Leaching Procedure (TCLP). Glycol that failed the TCLP shall be packaged for disposal as hazardous waste.

END OF SECTION 02 81 00

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** Section Includes:
 - 1. Framing with dimension lumber.
 - 2. Installation of Pressure Treated wood
 - 3. Wood blocking, cants, and nailers.
 - 4. Wood furring
 - 5. Plywood backing panels.

1.3 DEFINITIONS

- A.** Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.
- B.** Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NeLMA: Northeastern Lumber Manufacturers' Association.
 - 2. NLGA: National Lumber Grades Authority.
 - 3. WCLIB: West Coast Lumber Inspection Bureau.
 - 4. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

- A.** Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
 - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
3. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
 1. Wood-preservative-treated wood.
 2. Powder-actuated fasteners.

1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
 1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 3. Provide dressed lumber, S4S, unless otherwise indicated.

- B. Maximum Moisture Content of Lumber: 15 percent unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
 - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat items indicated on Drawings, all wood in the facility is required to be fire retardant treated. Wood exposed or used on the building envelope is required to be fire retardant treated and pressure treated with wood preservative. Wood included in this section includes the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 - 3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
 - 4. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 DIMENSION LUMBER FRAMING

- A. Non-Load-Bearing Interior Partitions: Standard, Stud, or No. 1 grade.
 - 1. Application: Interior partitions not indicated as load-bearing.
 - 2. Species:
 - a. Northern species; NLGA.

2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
 2. Nailers.
 3. Cants.
 4. Furring.
 5. Grounds.
- B.** For items of dimension lumber size, provide Standard, Stud, or No. 3 grade lumber and any of the following species:
1. Northern species; NLGA.
 2. Eastern softwoods; NeLMA.
- C.** For concealed boards, provide lumber with 15 percent maximum moisture content and the following species and grades:
1. Hem-fir or hem-fir (north); Standard or No. 3 Common grade; NLGA, WCLIB, or WWPA.
- D.** For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
- E.** For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
- F.** For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.5 PLYWOOD BACKING PANELS

- A.** Equipment Backing Panels: DOC PS 1, Exterior, AC, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2-inch nominal thickness.
1. Plywood shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.6 FASTENERS

- A.** General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).

2.7 MISCELLANEOUS MATERIALS

- A. Sill-Sealer Gaskets: Closed-cell neoprene foam, 1/4 inch (6.4 mm) thick, selected from manufacturer's standard widths to suit width of sill members indicated.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Install sill sealer gasket to form continuous seal between sill plates and foundation walls.
- D. Do not splice structural members between supports unless otherwise indicated.
- E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
 - 1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.
- F. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:
 - 1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches (2438 mm) o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
 - 2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches (2438 mm) o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal- (38-mm actual-) thickness.
 - 3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.

4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet (6 m) o.c.
- G. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- H. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
 1. Use inorganic boron for items that are continuously protected from liquid water.
 2. Use copper naphthenate for items not continuously protected from liquid water.
- I. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
 2. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.
- J. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- D. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches (38 mm) wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.3 WOOD FURRING INSTALLATION

- A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.
- B. Furring to Receive Plywood or Hardboard Paneling: Install 1-by-3-inch nominal- (19-by-63-mm actual-) size furring at 24 inches o.c.

3.4 WALL AND PARTITION FRAMING INSTALLATION

- A. General: Provide single bottom plate and double top plates using members of 2-inch nominal (38-mm actual) thickness whose widths equal that of studs, except single top plate may be used for non-load-bearing partitions. Fasten plates to supporting construction unless otherwise indicated.
 - 1. For exterior walls, provide 2-by-6-inch nominal- size wood studs spaced 16 inches o.c. unless otherwise indicated.
 - 2. For interior partitions and walls, provide 2-by-4-inch nominal- size wood studs spaced 16 inches o.c. unless otherwise indicated.
 - 3. Provide continuous horizontal blocking at midheight of partitions more than 96 inches (2438 mm) high, using members of 2-inch nominal (38-mm actual) thickness and of same width as wall or partitions.
- B. Construct corners and intersections with three or more studs, except that two studs may be used for interior non-load-bearing partitions.
- C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.
 - 1. For non-load-bearing partitions, provide double-jamb studs and headers not less than 4-inch nominal (89-mm actual) depth for openings 48 inches (1200 mm) and less in width, 6-inch nominal (140-mm actual) depth for openings 48 to 72 inches (1200 to 1800 mm) in width, 8-inch nominal (184-mm actual) depth for openings 72 to 120 inches (1800 to 3000 mm) in width, and not less than 10-inch nominal (235-mm actual) depth for openings 10 to 12 feet (3 to 3.6 m) in width.
 - 2. For load-bearing walls, provide double-jamb studs for openings 60 inches (1500 mm) and less in width, and triple-jamb studs for wider openings. Provide headers of depth indicated.

3.5 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 06 10 00

SECTION 07 21 00

BUILDING INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Batt Fiberglass at exterior walls.
 - 2. Acoustic Insulation at interior partitions.
 - 3. Vapor retarders.
- B. Related Sections include the following:
 - 1. Division 9 Section "Gypsum Board Assemblies" for installation in metal-framed assemblies of insulation.
 - 2. Division 9 Section "Gypsum Board Assemblies" for Fiberglass faced gypsum
 - 3. Division 15 Section "Mechanical Insulation."
- C. Minimum Thermal Resistance values of construction assemblies (R value)
 - 1. Provide a minimum of R-38 batt insulation at soffit assemblies unless shown otherwise.
 - 2. Provide a minimum of R-21 batt insulation in Exterior Wall Assemblies- fill entire void where shown on Wall Assemblies, Sections and Details.
 - 3. Provide a minimum of R-45 Rigid Insulation at all Roof Assemblies.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Layout showing orientation of laminated composite polystyrene wall panels to metal stud framing, windows, thicknesses, fastener spacings, and patterns for mechanically fastening panels.
 - 1. Delegated design submittal to include structural calculations for wall panels accounting for wind loading pressure values in structural drawings

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of building insulation through one source from a single manufacturer.

- B. Fire-Test-Response Characteristics: Provide insulation and related materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.
 - 1. Surface-Burning Characteristics: ASTM E 84.
 - 2. Fire-Resistance Ratings: ASTM E 119.
 - 3. Combustion Characteristics: ASTM E 136.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect insulation materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
 - 2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 GLASS-FIBER BLANKET INSULATION

- A. Basis of Design: Knauf Insulation, EcoBatt

- B. Other Acceptable Manufacturers:
 - 1. CertainTeed Corporation.
 - 2. Guardian Building Products, Inc.
 - 3. Johns Manville.
 - 4. Owens Corning.

- C. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.
 - 1. Provide wall insulation full-thickness of stud cavity unless indicated otherwise.

2.3 ACOUSTIC GLASS-FIBER BLANKET INSULATION

- A. Basis of Design: Knauf Insulation, EcoBatt
- B. Other Acceptable Manufacturers:
 - 1. CertainTeed Corporation.
 - 2. Guardian Building Products, Inc.
 - 3. Johns Manville.
 - 4. Owens Corning.
- C. Unfaced, Glass-Fiber Blanket Insulation: ASTM C 665, Type I; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.
- D. Unfaced, Glass-Fiber Board Insulation (Theatre Board): For mounting behind metal acoustical wall panels
 - 1. ASTM C423, Type A Mounting; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively, per ASTM E 84; passing ASTM E 136 for combustion characteristics.
 - 2. 3.0 PCF, 1" Thickness

2.4 VAPOR RETARDERS

- A. Polyethylene Vapor Retarders:
 - 1. Covered applications at Walls and Roof: ASTM D 4397, 6 mils thick, with maximum permeance rating of 0.13 perm.
 - 2. Exposed applications at walls and soffits: 6 mil, laminated, fire retardant. ASTM E 1745, Class A Flame spread, ASTM E 84, meets or exceeds NFPA 701, White.
- B. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.
- C. Single-Component Nonsag Urethane Sealant: ASTM C 920, Type I, Grade NS, Class 25, Use NT related to exposure, and Use O related to vapor-barrier-related substrates.
- D. Adhesive for Vapor Retarders: Product recommended by vapor-retarder manufacturer and has demonstrated capability to bond vapor retarders securely to substrates indicated.

2.5 AUXILIARY INSULATING MATERIALS

- A.** Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by insulation manufacturers for sealing joints and penetrations in vapor-retarder facings.
- B.** Adhesive for Bonding Insulation: Product with demonstrated capability to bond insulation securely to substrates indicated without damaging insulation and substrates.
- C.** Mechanical Fasten

PART 3 - EXECUTION

3.1 EXAMINATION

- A.** Examine substrates and conditions, with Installer present, for compliance with requirements of Sections in which substrates and related work are specified and for other conditions affecting performance.
 - 1.** Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A.** Clean substrates of substances harmful to insulation or vapor retarders, including removing projections capable of puncturing vapor retarders or of interfering with insulation attachment.

3.3 INSTALLATION, GENERAL

- A.** Comply with insulation manufacturer's written instructions applicable to products and application indicated.
- B.** Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow.
- C.** Extend insulation in thickness indicated to envelop entire area to be insulated. Blow In Insulation tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- D.** Water-Piping Coordination: If water piping is located within insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.

- E. For preformed insulating units, provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Apply single layer of insulation units to produce thickness indicated unless multiple layers are otherwise shown or required to make up total thickness.

3.4 INSTALLATION OF GENERAL BUILDING INSULATION

- A. Apply insulation units to substrates by method indicated, complying with manufacturer's written instructions. If no specific method is indicated, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
- B. Set vapor-retarder-faced units with vapor retarder to warm side and in locations indicated within construction, unless other directed otherwise.
 - 1. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to surrounding construction to ensure airtight installation.
- C. Install batt insulation in cavities formed by framing members according to the following requirements:
 - 1. Completely fill cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
 - 2. When installing acoustic glass fiber blanket insulation, place insulation in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
 - 3. Maintain 3-inch(76-mm) clearance of insulation around recessed lighting fixtures.
 - 4. Install eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
 - 5. For metal-framed wall cavities where cavity heights exceed 96 inches(2438 mm), support unfaced blankets mechanically and support faced blankets by taping stapling flanges to flanges of metal studs.

3.5 INSTALLATION OF VAPOR RETARDERS

- A. General: Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place with adhesives, sealants, or other anchorage system as indicated. Extend vapor retarder to cover miscellaneous voids in insulated substrates, including those filled with loose-fiber insulation.
 - 1. Extend vapor retarder into window, door, vent and any other penetrations in exterior envelope and lap under air infiltration barrier. Seal vapor retarder against framing.
 - 2. Lap vapor retarder a minimum of 6" with continuous sealant at lap joint.
- B. Before installing vapor retarder, apply urethane sealant to flanges of metal framing including runner tracks, metal studs, and framing. Seal overlapping joints in vapor

retarders with vapor-retarder tape or sealant according to vapor-retarder manufacturer's written instructions. Seal butt joints with vapor-retarder tape. Locate all joints over framing members or other solid substrates.

- C. Firmly attach vapor retarders to metal framing and solid substrates with vapor-retarder fasteners as recommended by vapor-retarder manufacturer.
- D. Seal joints caused by pipes, conduits, electrical boxes, and similar items penetrating vapor retarders with vapor-retarder tape to create an airtight seal between penetrating objects and vapor retarder. For penetrations that are concealed, provide manufactured gaskets or fill penetration with approved fire stopping.
- E. Repair tears or punctures in vapor retarders immediately before concealment by other work. Cover with vapor-retarder tape or another layer of vapor retarder. Contractor to call for inspection / review of vapor retarder and insulation a minimum of 24 hours prior to installation of gwb.

3.6 PROTECTION

- A. Protect installed insulation and vapor retarders from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

END OF SECTION 07 21 00

SECTION 07 92 00

JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes joint sealants for the following applications:
 - 1.** Interior joints in the following vertical surfaces and horizontal non traffic surfaces:
 - a.** Vertical joints on exposed surfaces of walls and partitions.
 - b.** Perimeter joints between interior wall surfaces and frames of interior doors windows.
 - c.** Joints between plumbing fixtures and adjoining walls, floors, and counters.
 - d.** Other joints as indicated.
- B.** Related Sections include the following:
 - 1.** Division 9 Section "Gypsum Board Assemblies" for sealing perimeter joints of gypsum board partitions to reduce sound transmission.

1.3 PERFORMANCE REQUIREMENTS

- A.** Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B.** Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.4 SUBMITTALS

- A.** Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.3 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Single-Component Non sag Polysulfide Sealant :
 - 1. Products:
 - a. Pacific Polymers, Inc.; Elastoseal 230 Type I (Gun Grade).
 - b. Polymeric Systems Inc.; PSI-7000.
 - 2. Type and Grade: S (single component) and NS (nonsag).

3. Class: 25.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: galvanized steel, wood.

C. Multicomponent Nonsag Neutral-Curing Silicone Sealant:

1. Products:
 - a. Dow Corning Corporation; 756 H.P.
2. Type and Grade: M (multicomponent) and P (pourable).
3. Class: 50.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: galvanized steel.

D. Single-Component Mildew-Resistant Neutral-Curing Silicone Sealant:

1. Products:
 - a. Pecora Corporation; 898.
 - b. Tremco; Tremsil 600 White.
2. Type and Grade: S (single component) and NS (nonsag).
3. Class: 25.
4. Use Related to Exposure: NT (nontraffic).
5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O.
 - a. Use O Joint Substrates: galvanized steel.

E. Multi-component Non sag Urethane Sealant:

1. Products:
 - a. Sika Corporation, Inc.; Sikaflex - 2c NS TG.
 - b. Sonneborn, Division of ChemRex Inc.; NP 2.
 - c. Tremco; Vulkem 227.
 - d. Tremco; Vulkem 322 DS.
2. Type and Grade: M (multicomponent) and NS (nonsag).
3. Class: 25.
4. Uses Related to Exposure: T (traffic) and NT (nontraffic).
5. Uses Related to Joint Substrates: M, G, A, and, as applicable to joint substrates indicated, O Joint Substrates: (galvanized steel, wood).

2.4 LATEX JOINT SEALANTS

- A.** Latex : Comply with ASTM C 834, Type P, Grade NF.
- B.** Products:

1. Pecora Corporation; AC-20+.
2. Sonneborn, Division of ChemRex Inc.; Sonolac.
3. Tremco; Tremflex 834.

2.5 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

2.6 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.

2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 3. Remove laitance and form-release agents from concrete.
 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
- B. Joint Priming:** Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape:** Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General:** Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard:** Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealants using proven techniques that comply with the following and at the same time backings are installed:**
 1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

- D.** Tooling of Non sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.

3.4 CLEANING

- A.** Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

- A.** Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 07 92 00

SECTION 08 83 00

MIRRORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** Section includes the following types of silvered flat glass mirrors:
 - 1.** Annealed monolithic glass mirrors.
 - 2.** Tempered glass mirrors qualifying as safety glazing.
- B.** Related Requirements:
 - 1.** Section 102800 "Toilet, Bath, and Laundry Accessories" for metal-framed mirrors.

1.3 ACTION SUBMITTALS

- A.** Product Data: For each type of product.
 - 1.** Mirrors. Include description of materials and process used to produce each type of silvered flat glass mirror specified that indicates sources of glass, glass coating components, edge sealer, and quality-control provisions.

1.4 INFORMATIONAL SUBMITTALS

- A.** Product Certificates: For each type of mirror and mirror mastic.

1.5 CLOSEOUT SUBMITTALS

- A.** Maintenance Data: For mirrors to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.

1.7 PRECONSTRUCTION TESTING

- A. Preconstruction Mirror Mastic Compatibility Test: Submit mirror mastic products to mirror manufacturer for testing to determine compatibility of mastic with mirror backing.
 - 1. Testing is not required if data are submitted based on previous testing of mirror mastic products and mirror backing matching those submitted.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect mirrors according to mirror manufacturer's written instructions and as needed to prevent damage to mirrors from moisture, condensation, temperature changes, direct exposure to sun, or other causes.
- B. Comply with mirror manufacturer's written instructions for shipping, storing, and handling mirrors as needed to prevent deterioration of silvering, damage to edges, and abrasion of glass surfaces and applied coatings. Store indoors.

1.9 FIELD CONDITIONS

- A. Environmental Limitations: Do not install mirrors until ambient temperature and humidity conditions are maintained at levels indicated for final occupancy.

1.10 WARRANTY

- A. Special Warranty: Manufacturer agrees to replace mirrors that deteriorate within specified warranty period. Deterioration of mirrors is defined as defects developed from normal use that are not attributed to mirror breakage or to maintaining and cleaning mirrors contrary to manufacturer's written instructions. Defects include discoloration, black spots, and clouding of the silver film.
 - 1. Warranty Period: Five years from date of Substantial Completion

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: Model 782 Series Float Glass Mirrors
 - 1. Satin Finish Stainless Steel Frame
 - 2. ADA Adjustable Tilt Mounting

3. Welded Corners

- B. Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Avalon Glass and Mirror Company.
 2. Binswanger Glass.
 3. Donisi Mirror Company.
 4. D & W Incorporated.
 5. Gardner Glass Products, Inc.
 6. Glasswerks LA, Inc.
 7. Guardian Industries Corp.
 8. Independent Mirror Industries, Inc.
 9. Lenoir Mirror Company.
 10. National Glass Industries.
 11. Trulite Glass & Aluminum Solutions.
 12. Virginia Mirror Company, Inc.
 13. Walker Glass Co., Ltd.
- C. Source Limitations for Mirrors:** Obtain mirrors from single source from single manufacturer.
- D. Source Limitations for Mirror Accessories:** Obtain mirror glazing accessories from single source.

2.2 SILVERED FLAT GLASS MIRRORS

- A. Mirrors, General:** ASTM C 1503;
- B. Annealed Monolithic Glass Mirrors:** Mirror Select Quality, clear
1. Nominal Thickness: 6.0 mm
- C. Tempered Glass Mirrors:** All mirrors to be of tempered glazing. Mirror Glazing Quality for blemish requirements and complying with ASTM C 1048 for Kind FT, Condition A, tempered float glass before silver coating is applied; clear.
1. Nominal Thickness: 6.0 mm
- D. Large Wall Mounted Mirrors** to be included in the work are indicated in the drawings and are located in all toilet rooms.
1. See Contract Documents for size and locations of mirrors.
 2. Typical 24"x36" Lavatory Sink Mirrors

2.3 MISCELLANEOUS MATERIALS

- A. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- B. Edge Sealer: Coating compatible with glass coating and approved by mirror manufacturer for use in protecting against silver deterioration at mirrored glass edges.
- C. Mirror Mastic: An adhesive setting compound, asbestos-free, produced specifically for setting mirrors and certified by both mirror and mastic manufacturer as compatible with glass coating and substrates on which mirrors will be installed.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Franklin International.
 - b. Laurence, C. R. Co., Inc.
 - c. Liquid Nails Adhesive.
 - d. Palmer Products Corporation.
 - 2. Adhesive shall have a VOC content of 70 g/L or less.
 - 3. Adhesive shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services') "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

2.4 FABRICATION

- A. Fabricate mirrors in the shop to greatest extent possible.
- B. Fabricate cutouts for notches and holes in mirrors without marring visible surfaces. Locate and size cutouts so they fit closely around penetrations in mirrors.
- C. Mirror Edge Treatment: Flat polished
 - 1. Seal edges of mirrors with edge sealer after edge treatment to prevent chemical or atmospheric penetration of glass coating.
 - 2. Require mirror manufacturer to perform edge treatment and sealing in factory immediately after cutting to final sizes.
- D. Film-Backed Safety Mirrors: Apply film backing with adhesive coating over mirror backing paint, as recommended in writing by film-backing manufacturer, to produce a surface free of bubbles, blisters, and other imperfections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, over which mirrors are to be mounted, with Installer present, for compliance with installation tolerances, substrate preparation, and other conditions affecting performance of the Work.
- B. Verify compatibility with and suitability of substrates, including compatibility of existing finishes or primers with mirror mastic.
- C. Proceed with installation only after unsatisfactory conditions have been corrected and surfaces are dry.

3.2 PREPARATION

- A. Comply with mastic manufacturer's written installation instructions for preparation of substrates, including coating substrates with mastic manufacturer's special bond coating where applicable.

3.3 INSTALLATION

- A. General: Install mirrors to comply with mirror manufacturer's written instructions and with referenced GANA publications. Mount mirrors accurately in place in a manner that avoids distorting reflected images.
 - 1. GANA Publications: "Glazing Manual" and "Mirrors, Handle with Extreme Care: Tips for the Professional on the Care and Handling of Mirrors."
- B. Provide a minimum airspace of 1/8 inch between back of mirrors and mounting surface for air circulation between back of mirrors and face of mounting surface.
- C. Install mirrors with mastic and mirror hardware. Attach mirror hardware securely to mounting surfaces with mechanical fasteners installed with anchors or inserts as applicable. Install fasteners so heads do not impose point loads on backs of mirrors.
 - 1. Frameless Installation: Install mirror to wall with adhesive, but mirrors edge to edge ensure mirrors are plumb and level.
 - 2. Mirror Clips: Place a felt or plastic pad between mirror and each clip to prevent spalling of mirror edges. Locate clips so they are symmetrically placed and evenly spaced.
 - 3. Install mastic as follows:
 - a. Apply barrier coat to mirror backing where approved in writing by manufacturers of mirrors and backing material.
 - b. Apply mastic to comply with mastic manufacturer's written instructions for coverage and to allow air circulation between back of mirrors and face of mounting surface.
 - c. After mastic is applied, align mirrors and press into place while maintaining a minimum airspace of 1/8 inch between back of mirrors and mounting surface.

3.4 CLEANING AND PROTECTION

- A.** Protect mirrors from breakage and contaminating substances resulting from construction operations.
- B.** Do not permit edges of mirrors to be exposed to standing water.
- C.** Maintain environmental conditions that prevent mirrors from being exposed to moisture from condensation or other sources for continuous periods of time.
- D.** Clean exposed surface of mirrors not more than four days before date scheduled for inspections that establish date of Substantial Completion. Clean mirrors as recommended in writing by mirror manufacturer.

END OF SECTION 08 83 00

SECTION 09 22 00

NON-LOAD-BEARING STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes non-load-bearing steel framing members for the following applications:
 - 1. Interior framing systems (e.g., supports for partition walls, framed soffits, furring, etc.)

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Delegated Design for wall framing in excess of 6' in height requiring seismic support.

1.4 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

PART 2 - PRODUCTS

2.1 NON-LOAD-BEARING STEEL FRAMING, GENERAL

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
 - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
 - 2. Protective Coating: ASTM A 653/A 653M, G40(Z120) ASTM A 653/A 653M, G60(Z180) Coating with equivalent corrosion resistance of ASTM A 653/A 653M, G40(Z120)], hot-dip galvanized, unless otherwise indicated.

2.2 STEEL FRAMING FOR FRAMED ASSEMBLIES

- A. Steel Studs and Runners: ASTM C 645.
 - 1. Minimum Base-Metal Thickness: 0.0312 inch(0.79 mm).
 - 2. Depth: As indicated on Drawings.
 - 3. Coordinate with structural drawings for additional requirements.

- B. Slip-Type Head Joints: Where indicated, provide one of the following:
 - 1. Double-Runner System: ASTM C 645 top runners, inside runner with 2-inch-(50.8-mm-) deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.
 - 2. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.
 - a. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Steel Network Inc. (The); VertiClip SLD Series.

- C. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
 - 1. Minimum Base-Metal Thickness: 0.0312 inch.

- D. Cold-Rolled Channel Bridging: 0.0538-inch bare-steel thickness, with minimum 1/2-inch-(12.7-mm-) wide flanges.
 - 1. Depth: 1-1/2 inches(38.1 mm).
 - 2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches0.068-inch- thick, galvanized steel.

2.3 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards.
 - 1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.
2. Ensure procedures to maximize sound isolation are utilized in the construction of acoustical wall assemblies. Avoid direct mechanical fastening pathways of sound isolation system as indicated by manufacturer installation data and assembly testing requirements.

3.2 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754, except comply with framing sizes and spacing indicated.
 1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.3 INSTALLING FRAMED ASSEMBLIES

- A. Install studs so flanges within framing system point in same direction.
- B. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
 1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 2. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
- C. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch(3 mm) from the plane formed by faces of adjacent framing.

END OF SECTION 09 22 00

SECTION 09 29 00

GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes the following:
 - 1.** Interior gypsum board.
 - 2.** Water Resistant gypsum board for walls and ceilings.
- B.** Related Sections include the following:
 - 1.** Division 7 Section "Building Insulation" for insulation and vapor retarders installed in assemblies that incorporate gypsum board.
 - 2.** Division 7 Section "Joint Sealants" for acoustical sealants installed in assemblies that incorporate gypsum board.
 - 3.** Division 9 Section "Non-Load-Bearing Steel Framing" for non-structural framing and suspension systems that support gypsum board.
 - 4.** Division 9 painting Sections for primers applied to gypsum board surfaces.

1.3 SUBMITTALS

- A.** Product Data: For each type of product indicated.
- B.** Samples: For the following products:
 - 1.** Textured Finishes: 3 samples 12" by 12" for each textured finish indicated and on same backing indicated for Work for approval by Architect. (Very light orange peel) Substrate to be examined and accepted by Architect prior to spraying texture)

1.4 QUALITY ASSURANCE

- A.** Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

1.5 STORAGE AND HANDLING

- A.** Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.6 PROJECT CONDITIONS

- A.** Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B.** Do not install interior products until installation areas are enclosed and conditioned.
- C.** Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
 - 1.** Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2.** Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PANELS, GENERAL

- A.** Size: Provide in maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.2 INTERIOR GYPSUM BOARD

- A.** General: Complying with ASTM C 36/C 36M or ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent.
 - 1.** Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a.** American Gypsum Co.
 - b.** BPB America Inc.
 - c.** G-P Gypsum.
 - d.** Lafarge North America Inc.
 - e.** National Gypsum Company.
 - f.** PABCO Gypsum.
 - g.** USG Corporation.

- h. Substitutions allowed in accordance with Division 1 product substitution requirements.

B. Type X:

- 1. Thickness: 3/8" (multiple Layer) and 5/8 inch (15.9 mm).
- 2. Long Edges: Tapered.

C. Moisture- and Mold-Resistant Type: With moisture- and mold-resistant core and surfaces.

- 1. Core: 5/8 inch (15.9 mm), Type X.
- 2. Long Edges: Tapered.

2.3 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

- 1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.
- 2. Shapes:
 - a. Metal Cornerbead.
 - b. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - c. Expansion (control) joint.

B. Aluminum Trim: Extruded accessories of profiles and dimensions indicated.

- 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Fry Reglet Corp.
 - b. Gordon, Inc.
 - c. Pittcon Industries.
 - d. Substitutions allowed in accordance with Division 1 product substitution requirements.
 - e. Expansion Joint Trim – Fry Reglet CRM50-50-2-PC
- 2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221 (ASTM B 221M), Alloy 6063-T5.
- 3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified

2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 - 1. Interior Gypsum Wallboard: Paper.
 - 2. Exterior Gypsum Soffit Board: Paper.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Prefilling: At open joints, and damaged surface areas, use setting-type taping compound.
 - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping or drying-type, all-purpose compound.
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
 - 3. Fill Coat: For second coat, use setting-type, sandable topping or drying-type, all-purpose compound.
 - 4. Finish Coat: For third coat, use setting-type, sandable topping or drying-type, all-purpose compound.

2.5 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
- C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 - 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
 - 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.
- D. Thermal Insulation: As specified in Division 7 Section "Building Insulation."
- E. Vapor Retarder: As specified in Division 7 Section "Building Insulation."

2.6 TEXTURE FINISHES

- A. Primer: As recommended by textured finish manufacturer.
- B. Unaggregated Finish: Water-based, job-mixed, unaggregated, drying-type texture finish for spray application.
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - a. G-P Gypsum; Georgia-Pacific ToughRock Wall and Ceiling Texture.
 - b. USG Corporation; SHEETROCK Wall and Ceiling Spray Texture (Unaggregated).
 - c. Substitutions allowed in accordance with Division 1 product substitution requirements.
 - 2. Texture: Very light orange peel finish

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than **1/16 inch (1.5 mm)** of open space between panels. Do not force into place.
- C. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

- D. Form control and expansion joints with space between edges of adjoining gypsum panels.
- E. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than **8 sq. ft. (0.7 sq. m)** in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow **1/4- to 3/8-inch- (6.4- to 9.5-mm-)** wide joints to install sealant.
- F. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide **1/4- to 1/2-inch- (6.4- to 12.7-mm-)** wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- G. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- H. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members, or provide control joints to counteract wood shrinkage.

3.3 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Regular Type: Vertical surfaces, unless otherwise indicated.
 - 2. Type X: As indicated on drawings and where required for fire-resistance-rated assembly.
 - 3. Special Type X: As indicated on Drawings and where required for specific fire-resistance-rated assembly indicated.
 - 4. Moisture- and Mold-Resistant Type: Located at all food preparation areas, Toilet room areas, and as indicated on drawings.
- B. Single-Layer Application:
 - 1. On partitions/walls, apply gypsum panels either vertically (parallel to framing) or horizontally (perpendicular to framing), unless specifically indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.

- B.** Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture free of starved spots or other evidence of thin application or of application patterns.
- C.** Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written recommendations.

3.7 PROTECTION

- A.** Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- B.** Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - 1.** Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2.** Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 09 29 00

SECTION 09 65 16

RESILIENT FLOOR COVERINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes sheet vinyl floor coverings, with backings.

1.3 SUBMITTALS

- A.** Samples for Initial Selection: For each type of floor covering indicated.
 - 1.** Include similar Samples of installation accessories involving color selection.
- B.** Maintenance Data: For floor coverings to include in maintenance manuals.
- C.** Warranty: 10 year minimum

1.4 DELIVERY, STORAGE, AND HANDLING

- A.** Store floor coverings and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F(10 deg C) or more than 90 deg F(32 deg C). Store rolls upright.

1.5 PROJECT CONDITIONS

- A.** Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F(21 deg C) in spaces to receive floor tile during the following time periods:
 - 1.** 48 hours before installation.
 - 2.** During installation.
 - 3.** 48 hours after installation.
- B.** After post installation period, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F(13 deg C)
- C.** Close spaces to traffic during floor covering installation.

- D. Close spaces to traffic for 48 hours after floor covering installation.
- E. Install floor coverings after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 SLIP RESISTANT SHEET VINYL FLOOR COVERING

- 1. Products: Basis of Design Product: Mohawk Healthy Environments Resilient collection – Medella
 - 1) SV-1 – See Finish Schedule
 - 2. Substitutions: Any manufacturer meeting the product specification criteria with final approval from Owner.
- B.** Vinyl Sheet Floor Covering with Backing: ASTM F 1303.
- 1. Type (Binder Content): Type II.
 - 2. Wear-Layer Thickness: Grade 1.
 - 3. Overall Thickness: .08”.
 - 4. Classification: Exceeds ASTM F1913
 - 5. Finish: Enhanced Urethane
- C.** Wearing Surface: Embossed with embedded abrasives.
- D.** Sheet Width: 6'-6" roll
- E.** Seaming Method: Heat welded.
- F.** Installation Method: Glue Down (utilize manufacturer recommended adhesive with approval from Owner).
- G.** Colors and Patterns: As selected by Architect from full range of industry colors-see Finish Schedule.

2.2 INSTALLATION MATERIALS

- A.** Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement based formulation or approved by manufacturer for applications indicated.
- B.** Adhesives: Water-resistant type recommended by manufacturer to suit vinyl floor covering and substrate conditions indicated.

- C. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of floor coverings, and in maximum available lengths to minimize running joints.
- D. Seamless Installation Accessories:
 - 1. Heat-Welding Bead: Manufacturer's solid strand product for heat welding seams in color to match floor covering.
- E. Integral Flash-Cove Base Accessories: Metal edge strips:
 - 1. Cove Strip: 1 inch radius provided or approved by manufacturer.
 - 2. Cap Strip: Square metal, vinyl, or rubber cap provided or approved by manufacturer.
 - 3. Corners: Metal inside and outside corner and end stops provided or approved by manufacturer.
- F. Metal edge strips:
 - 1. stainless steel with lip to extend under floor finish, shoulder flush with top of adjacent floor finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances, moisture content, and other conditions affecting performance.
 - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor coverings.
 - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare substrates according to manufacturer's written recommendations to ensure adhesion of floor coverings.
- B. Remove substrate coatings and other substances that are incompatible with floor covering adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- C. Moisture Testing: Perform test recommended by manufacturer. Proceed with installation only after substrates pass testing.

1. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
 2. Perform relative humidity test using in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.
- D.** Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
- E.** Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
- F.** Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates.
- G.** Move floor coverings and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
1. Do not install floor coverings until they are same temperature as space where they are to be installed.
- H.** Sweep and vacuum clean substrates to be covered by floor coverings immediately before installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, and dust. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 INSTALLATION

- A.** Unroll sheet vinyl floor coverings and allow them to stabilize before cutting and fitting.
- B.** Lay out sheet vinyl floor coverings as follows:
1. Maintain uniformity of floor covering direction.
 2. Minimize number of seams; place seams in inconspicuous and low-traffic areas, at least 6 inches(152 mm) away from parallel joints in floor covering substrates.
 3. Match edges of floor coverings for color shading at seams.
 4. Avoid cross seams.
- C.** Scribe and cut floor coverings to butt neatly and tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings.
- D.** Seamless Installation:

1. Heat-Weld Seams: Comply with ASTM F 1516. Rout joints and use welding bead to permanently fuse sections into a seamless floor covering. Prepare, weld, and finish seams to produce surfaces flush with adjoining floor covering surfaces.
- E. Integral Flash-Cove Base: Cove floor coverings 6 inches up vertical surfaces. Support floor coverings at horizontal and vertical junction by cove strip. Butt at top against cap strip. Install metal corners at inside and outside corners.
- F. Extend floor coverings into toe spaces, door reveals, closets, and similar openings.
- G. Maintain reference markers, holes, or openings that are in place or marked for future cutting by repeating on floor coverings as marked on substrates. Use chalk or other nonpermanent marking device.
- H. Install floor coverings on covers for telephone and electrical ducts and similar items in installation areas. Maintain overall continuity of color and pattern with pieces of floor coverings installed on covers. Tightly adhere floor covering edges to substrates that abut covers and to cover perimeters.
- I. Adhere floor coverings to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
- J. At Drains: Wrap floor covering into drain body and under drain cover plate as recommended by manufacturer's installation instructions.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after completing floor covering installation:
 1. Remove adhesive and other blemishes from floor covering surfaces.
 2. Sweep and vacuum floor coverings thoroughly.
 3. Damp-mop floor coverings to remove marks and soil.
 - a. Do not wash floor coverings until after time period recommended by manufacturer.
- B. Protect floor coverings from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods recommended in writing by manufacturer.
 1. Apply protective floor polish to surfaces that are free from soil, visible adhesive, and blemishes if recommended in writing by manufacturer.

2. Cover floor coverings with undyed, untreated building paper until Substantial Completion.
3. Do not move heavy and sharp objects directly over floor coverings. Place plywood or hardboard panels over floor coverings and under objects while they are being moved. Slide or roll objects over panels without moving panels.

END OF SECTION 09652

SECTION 09 72 00

WALL COVERINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** Section Includes:
 - 1.** Rigid vinyl wall covering.

1.3 PREINSTALLATION MEETINGS

- A.** Preinstallation Conference: Conduct conference at Project site

1.4 ACTION SUBMITTALS

- A.** Product Data: For each type of product.
 - 1.** Include data on physical characteristics, durability, fade resistance, and fire-test-response characteristics.

1.5 INFORMATIONAL SUBMITTALS

- A.** Qualification Data: For testing agency.
- B.** Product Test Reports: For each wall covering, for tests performed by a qualified testing agency.

1.6 CLOSEOUT SUBMITTALS

- A.** Maintenance Data: For wall coverings to include in maintenance manuals.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Wall-Covering Materials: For each type, color, texture, and finish.

1.8 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install wall coverings until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above ceilings is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at levels intended for occupants after Project completion during the remainder of the construction period.
- B. Lighting: Do not install wall covering until lighting that matches conditions intended for occupants after Project completion is provided on the surfaces to receive wall covering.
- C. Ventilation: Provide continuous ventilation during installation and for not less than the time recommended by wall-covering manufacturer for full drying or curing.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Low-Emitting Materials: Wall-covering system shall comply with the testing and product requirements of the California Department of Public Health's (formerly, the California Department of Health Services) "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Fire-Test-Response Characteristics: As determined by testing identical wall coverings applied with identical adhesives to substrates according to test method indicated below by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.
 - b. Fire Rating: Class A
 - 2. Fire-Growth Contribution: No flashover and heat and smoke release according to **NFPA 265**

2.2 VINYL WALL COVERING

- A.** Manufacturers: Subject to compliance with requirements of Section 01600 by a manufacturer of a comparable product:
 - 1.** Basis-of-Design Product: Subject to compliance with requirements, provide Palladium rigid vinyl as manufacture by Inpro Corporation.
 - 2.** Thickness: .060" nominal thickness
 - 3.** Size: 4' roll (Provide roll goods to reduce/eliminate vertical seems.)
 - 4.** Color: 0151 Graystone
 - 5.** Trim: J-trim at top. Color Matching.
 - 6.** Extra Materials: Provide 10% extra FRP material to the Owner for ongoing maintenance and repairs.

2.3 SNAP ON CORNER GUARDS

- A.** Manufacturers: Subject to compliance with requirements of Section 01600 by a manufacturer of a comparable product:
 - 1.** Basis-of-Design Product: Subject to compliance with requirements, provide Inpro Corporation
 - 2.** Color: Match FRP as noted in finish schedule
 - 3.** Location: As required for outside corners.

PART 3 - EXECUTION

3.1 EXAMINATION

- A.** Examine substrates and conditions, with Installer present, for compliance with requirements for levelness, wall plumbness, maximum moisture content, and other conditions affecting performance of the Work.
- B.** Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A.** Comply with manufacturer's written instructions for surface preparation.
- B.** Clean substrates of substances that could impair bond of wall covering, including dirt, oil, grease, mold, mildew, and incompatible primers.
- C.** Prepare substrates to achieve a smooth, dry, clean, structurally sound surface free of flaking, unsound coatings, cracks, and defects.
 - 1.** Moisture Content: Maximum of 5 percent on new plaster, concrete, and concrete masonry units when tested with an electronic moisture meter.

2. Plaster: Allow new plaster to cure. Neutralize areas of high alkalinity. Prime with primer recommended in writing by primer/sealer manufacturer and wall-covering manufacturer.
 3. Metals: If not factory primed, clean and apply primer recommended in writing by primer/sealer manufacturer and wall-covering manufacturer.
 4. Gypsum Board: Prime with primer as recommended in writing by primer/sealer manufacturer and wall-covering manufacturer.
 5. Painted Surfaces: Treat areas susceptible to pigment bleeding.
- D. Check painted surfaces for pigment bleeding. Sand gloss, semigloss, and eggshell finish with fine sandpaper.
- E. Remove hardware and hardware accessories, electrical plates and covers, light fixture trims, and similar items.
- F. Acclimatize wall-covering materials by removing them from packaging in the installation areas not less than 24 hours before installation.

3.3 CLEANING

- A. Remove excess adhesive at seams, perimeter edges, and adjacent surfaces.
- B. Use cleaning methods recommended in writing by wall-covering manufacturer.
- C. Replace strips that cannot be cleaned.

END OF SECTION 09 72 00

SECTION 09 90 12

INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Gypsum board.

1.3 SUBMITTALS

- A. Samples for Verification: For each type of paint system and in each color and gloss of topcoat indicated.

1. Submit Samples on rigid backing, 8 inches(200 mm) square.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.
5. Paint samples to be applied to surface similar to surface to be painted.

1.4 QUALITY ASSURANCE

- A. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
3. Employ an independent testing agency to test and verify the thickness of Intumescent Paint.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F(7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F(10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F(3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Benjamin Moore & Co.
 2. Bennette Paint Mfg. Co., Inc.
 3. Color Wheel Paints & Coatings.
 4. Columbia Paint & Coatings.
 5. Davis Paint Company.
 6. Diamond Vogel Paints.
 7. General Paint.
 8. ICI Paints.
 9. Kelly-Moore Paints.
 10. No-Burn Inc.
 11. Rodda Paint Co.
 12. Sherwin-Williams Company (The).
 13. Spectra-Tone.
 14. Safe-Coat
 15. 3M

2.2 PAINT, GENERAL

- A. Material Compatibility:
 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. Chemical Components of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24) and the following chemical restrictions; these requirements do not apply to primers or finishes that are applied in a fabrication or finishing shop:

1. Flat Paints and Coatings: VOC content of not more than 50 g/L.
2. Nonflat Paints and Coatings: VOC content of not more than 150 g/L.
3. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
4. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.
 - g. Di (2-ethylhexyl) phthalate.
 - h. Di-n-butyl phthalate.
 - i. Di-n-octyl phthalate.
 - j. 1,2-dichlorobenzene.
 - k. Diethyl phthalate.
 - l. Dimethyl phthalate.
 - m. Ethylbenzene.
 - n. Formaldehyde.
 - o. Hexavalent chromium.
 - p. Isophorone.
 - q. Lead.
 - r. Mercury.
 - s. Methyl ethyl ketone.
 - t. Methyl isobutyl ketone.
 - u. Methylene chloride.
 - v. Naphthalene.
 - w. Toluene (methylbenzene).
 - x. 1,1,1-trichloroethane.
 - y. Vinyl chloride.

C. Colors: As selected by Architect from manufacturer's full range.

2.3 INTERIOR PAINT SCHEDULE

A. See Interior Finish Key on Room Finish Schedule Sheet for interior finishes and colors

- B.** Systems and glass levels are found in the MPI, APSM. All work is Premium Grade.
- C.** Toilet Rooms, Showers: Epoxy Finish: Int. 9.2F, Water Base Epoxy. Gloss Level 5.
- D.** Gypsum WallBoard: Int. 9.2M, Latex Low Odor/VOC. Gloss Level E4 in utility spaces; 2 on ceilings; and 4 in corridors except where subjected to strong natural light at oblique angles.

PART 3 - EXECUTION

3.1 EXAMINATION

- A.** Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B.** Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - 1.** Gypsum Board: 12 percent.
- C.** Clean surfaces of grease, dirt, or other debris.
- D.** Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
 - 1.** Verify with Intumescent Paint Manufacturer acceptable primer for Structural Steel (Steel Deck and Steel Beams). Submit primer specification to Architect for review.
- E.** Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 1.** Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A.** Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B.** Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C.** Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D.** Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- E.** Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- F.** Aluminum Substrates: Remove surface oxidation.
- G.** Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.

3.3 APPLICATION

- A.** Apply paints according to manufacturer's written instructions.
1. Use applicators and techniques suited for paint and substrate indicated.
 2. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- B.** Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat. Notify Owners Representative between each coat of paint, prior to application of successive coat of paint.
- C.** If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D.** Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E.** Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:

1. Mechanical Work:
 - a. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
2. Electrical Work:
 - b. Electrical equipment that is indicated to have a factory-primed finish for field painting.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION 09 90 12

SECTION 10 21 13

TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A.** This Section includes solid-polymer units as follows:
 - 1.** Toilet Enclosures Door
- B.** Related Sections include the following:
 - 1.** Division 6 Section "Rough Carpentry" for blocking.
 - 2.** Division 10 "Toilet and Bath Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories.

1.3 SUBMITTALS

- A.** Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B.** Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
 - 1.** Show locations of cutouts for compartment-mounted toilet accessories.
- C.** Samples for Initial Selection: For each type of unit indicated.

1.4 QUALITY ASSURANCE

- A.** Comply with requirements in CID-A-A-60003, "Partitions, Toilets, Complete."

1.5 PROJECT CONDITIONS

- A.** Field Measurements: Verify actual locations of walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication and indicate measurements on Shop Drawings.
 - 1.** Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating toilet compartments without field measurements. Coordinate wall, floor, ceilings, and other contiguous construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.1 SOLID-POLYMER UNITS

- A.** Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1.** Accurate Partitions Corporation.
 - 2.** Ampco.
 - 3.** Bradley Corporation; Mills Partitions.
 - 4.** Capitol Partitions, Inc.
 - 5.** Comtec Industries.
 - 6.** General Partitions Mfg. Corp.
 - 7.** Global Steel Products Corp.
 - 8.** Metpar Corp.
 - 9.** Santana Products, Inc.
 - 10.** Sanymetal; a Crane Plumbing Company.
 - 11.** Weis-Robart Partitions, Inc.
- B.** Door, Panel, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch(25 mm) thick, seamless, with eased edges, and with homogenous color and pattern throughout thickness of material.
 - 1.** Color and Pattern: One color and pattern in each room as selected by Architect from manufacturer's full range of colors and patterns.
- C.** Brackets (Fittings):
 - 1.** Full-Height (Continuous) Type: Manufacturer's standard design; Stainless Steel
- D.** Heat-Sink Strip: Manufacturer's standard continuous, extruded-aluminum strip fastened to exposed bottom edges of solid-polymer components to prevent burning.

2.2 ACCESSORIES

- A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.
 - 1. Material: Stainless steel.
- B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match hardware, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use hot-dip galvanized or other rust-resistant, protective-coated steel.

2.3 FABRICATION

- A. Doors: Unless otherwise indicated, provide 24-inch-(610-mm-) wide in-swinging doors for standard toilet compartments and 36-inch-(914-mm-) wide out-swinging doors with a minimum 32-inch-(813-mm-) wide clear opening for compartments indicated to be accessible to people with disabilities.
 - 1. Hinges: Manufacturer's standard self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees.
 - 2. Latch and Keeper: Manufacturer's standard recessed latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with accessibility requirements of authorities having jurisdiction at compartments indicated to be accessible to people with disabilities.
 - 3. Lock: Provide with key lock function for maintenance personal access only. Verify keying with Owner.
 - 4. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.
 - 5. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with accessibility requirements of authorities having jurisdiction. Provide units on both sides of doors at compartments indicated to be accessible to people with disabilities.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
 - 1. Maximum Clearances:
 - a. Pilasters and Panels: 1/2 inch(13 mm).

- b. Panels and Walls: 1 inch(25 mm).

3.2 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doorstop return doors to fully closed position.

END OF SECTION 10 21 13

SECTION 10 28 13

TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Washroom accessories.
 - 2. Under lavatory guards.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include the following:
 - 1. Construction details and dimensions.
 - 2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 - 3. Material and finish descriptions.
 - 4. Features that will be included for Project.
 - 5. Manufacturer's warranty.

1.4 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Coordinate and install required blocking in wall.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.0359-inch(0.9-mm) minimum nominal thickness.
- B. Galvanized Steel Sheet: ASTM A 653/A 653M, with G60(Z180) hot-dip zinc coating.
- C. Galvanized Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.
- D. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.
- E. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).
- F. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.
- G. ABS Plastic: Acrylonitrile-butadiene-styrene resin formulation.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. American Specialties, Inc.
 - 2. Bobrick Washroom Equipment, Inc.
 - 3. Bradley Corporation.
 - 4. Confirm with Owner regarding all OFCI (Owner Furnished Contractor Installed) items listed below.
- B. Toilet Tissue (Roll) Dispenser
 - 1. Basis of Design: Bobrick Single Toilet Tissue Dispenser
 - a. One roll
 - b. Color: Stainless Steel
 - c. Mounting: Surface mounted.
- C. Paper Towel Dispenser
 - 1. U-Line Model H-7556
 - 2. Description: Wall Mounted Towel Dispenser
 - 3. Mounting: Surfaced Mounted
 - 4. Size 16x11x4"
 - 5. Material and Finish: Stainless Steel
- D. Liquid-Soap Dispenser
 - 1. Basis of Design: Deb ProLine Curve Dispenser (Item no. 750615)
 - 2. Description: Designed for dispensing soap in liquid or lotion form.
 - 3. Mounting: Horizontally oriented, surface mounted.

4. Capacity: 1L
5. Materials: Plastic

E. Grab Bar

1. Basis of Design: American Specialties 3700P series
2. Mounting: Flanges with fasteners.
3. Material: Stainless steel, 0.05 inch(1.3 mm) thick.
 - a. Finish: Smooth, No. 4, satin finish on ends and slip-resistant texture in grip area.
4. Outside Diameter: 1-1/2 inches(38 mm)].
5. Configuration and Length:
 - a. As illustrated on drawings
6. Provide eschuteon plates at end of bars.

F. Shower Rod

- a. Basis of Design: 1-1/4" Stainless Steel

G. Robe Hook

- a. Basis of Design: Bradley 9114 (1) at each shower unit Stainless steel

2.3 UNDERLAVATORY GUARDS

- A. Manufacturers:** Subject to compliance with requirements, provide products by one of the following:

1. Plumberex Specialty Products, Inc.
2. TCI Products.
3. Truebro, Inc.

B. Under-lavatory Guard :

1. Description: Insulating pipe covering for supply and drain piping assemblies, that prevent direct contact with and burns from piping, and allow service access without removing coverings.
2. Material and Finish: Antimicrobial, molded-plastic, white.

2.4 FABRICATION

- A. General:** Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

PART 3 - EXECUTION

3.1 INSTALLATION

- A.** Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- B.** Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F 446.

3.2 ADJUSTING AND CLEANING

- A.** Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B.** Remove temporary labels and protective coatings.
- C.** Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 10 28 13

GENERAL PROVISIONS (DIVISION 21,22,23)

SCOPE OF WORK

This project is generally described as providing the heating, ventilation, air conditioning, piping, plumbing, fire protection and control systems to the maple springs anchorage senior housing facility. It includes the addition of equipment and systems to serve the heating, ventilation, air conditioning, piping, plumbing, fire protection and control functions in the facility.

INTENT OF DRAWINGS AND SPECIFICATIONS

The intent of the contract documents is for the contractor to include all work necessary for complete mechanical systems, tested and ready for operation. By submitting a proposal, the contractor represents they have made a thorough examination of the site, of the work and all existing conditions and limitations, and they have determined the documents are adequate and satisfactory for the completion of the work.

Mechanical drawings do not attempt to show all aspects of building construction, which will affect the installation of mechanical systems. The mechanical drawings are diagrammatic and are not intended to show all offsets, fittings and accessories that may be required for a complete installation.

CODES AND STANDARDS

Provide all work in compliance with applicable local codes and standards. Applicable codes and standards shall include, but not be limited to the following:

1. 2018 UNIFORM PLUMBING CODE
2. 2018 INTERNATIONAL MECHANICAL CODE
3. 2018 INTERNATIONAL FUEL GAS CODE
4. 2018 INTERNATIONAL FIRE CODE
5. 2018 INTERNATIONAL BUILDING CODE
6. 2018 INTERNATIONAL ENERGY CONSERVATION CODE
7. REQUIREMENTS OF OSHA AND EPA
8. NATIONAL FIRE PROTECTION ASSOCIATION CODES, LATEST EDITIONS
9. ASME CODES FOR BOILER AND PRESSURE VESSELS, LATEST EDITIONS
10. SMACNA HVAC DUCT CONSTRUCTION STANDARDS, LATEST EDITIONS
11. ALL LOCAL AND STATE AMENDMENTS
12. REQUIREMENTS OF ALL AGENCIES HAVING JURISDICTIONAL AUTHORITY OVER INSTALLATION

COORDINATION AND SCHEDULING

Provide all administrative and supervisory requirements for the coordination and scheduling of the work. The mechanical contractor shall coordinate their work with the work of other contractors, subcontractors, suppliers and the owner.

Review all project drawings including, but not limited to, architectural, structural and electrical drawings.

Plan and execute work in cooperation with all other trades. Every reasonable effort shall be made to provide all concerned with timely notice of work affecting other trades to prevent conflicts or interference as to space requirements, dimensions, openings, block-outs, sleeving or other matters which will cause delays or necessitate work-around methods.

CONTRACTOR RESPONSIBILITY

The contractor shall be required to maintain complete control of the constructed project, such that the complete project shall be free of defects and in conformance with the project documents.

The contractor shall utilize procedures that assure quality construction throughout, with use of the best industry standards for the specific process used. Remove and replace any work found defective or not complying with requirements of the contract documents, at no additional cost to the owner.

WORKMANSHIP

All work to be done by workmen skilled in and regularly employed at that trade.

Provide all materials, products and equipment in strict accordance with all governing codes and ordinances. They must be of first quality and in line with the best current practices.

Cutting and patching shall be kept to a minimum. All patching to match existing finish work. Do not cut structural members.

Contractor shall field verify prior to bidding. Verify space availability prior to fabrication and installation of any work. Verify exact distances between points shown on drawings by actual measurement at site.

Remove all waste materials and rubbish from the site, thoroughly clean all surfaces of work, and leave ready for occupancy by the owner. The owner will verify the completion and/or correction of the items above.

SUBMITTALS

Submit technical data and required information on equipment and materials as follows:

1. Product data: submit manufacturer's product data for the items listed in the individual specification sections. Product data shall demonstrate compliance with all specified features and requirements.
2. Shop drawings: submit contractor prepared drawings of contractor fabricated mechanical systems. Drawings shall be prepared at 1/4" scale using computer aided software unless indicated otherwise. Drawings shall show exact location of equipment, piping and ductwork, each section of shop fabricated duct or pipe and location of field joints, supports and building attachments.
3. Reports and certificates: indicate and interpret test results for compliance with performance requirements. Provide performance certificates.
4. Equipment and materials seismic restraint: contractor to provide structural and seismic calculations plus fastening details for all applicable equipment and materi-

als to include engineer's stamp and signature, for structural review on a deferred submittal basis.

PERMITS, INSPECTIONS AND FEES

Contractor shall arrange and pay for all permits, fees, and inspections required in connection with this installation. The contractor shall present the owner with properly signed certificates of final inspection before the work will be accepted.

Contractor shall call for all inspections by local building officials when they become due and shall not cover any work until approved by these governing authorities.

Contractor shall make all arrangements with utility companies for water, steam, gas and drainage services, etc., associated with the work and include required payments for meters, piping, services, connection charges and materials furnished and installed by utility companies. Work and materials shall be in strict accordance with rules of respective authorities.

FINAL CHECKOUT AND PROJECT CLOSEOUT

The owner has full authority to see that the work is performed in accordance with the contract documents.

The owner will require a complete final inspection of all parts of the work. Work shall include, but not be limited to the following: plumbing, piping, equipment, ductwork, wiring, and finish work.

The owner will require a written guaranty that all materials and workmanship that prove defective within one year after date of acceptance will be replaced.

OPERATION AND MAINTENANCE MANUAL

Include warranty certificates for all equipment where extended warranties are either offered or required; provide supplier contact information.

SECTION 22 00 00

COMMON WORK RESULTS FOR PLUMBING

Plumbing equipment shall be provided in conformance with mechanical drawing schedules. Any substitutions must be an approved equal.

Plumbing accessories including valves, fittings and appurtenances shall be selected for the specific service and system used.

Firestopping: penetrations through fire-rated assemblies shall be fire stopped with ul listed fire-stopping systems installed in accordance with ul listing for assembly penetration.

SECTION 22 11 00

DOMESTIC WATER PIPING

Domestic water pipe: type I hard drawn copper tubing, wrought solder type fittings, lead free silver solder or cross-linked polyethylene (PEX A) pipe, fittings, and manifold systems suitable for domestic water systems.

Pipe insulation: fiberglass pipe insulation with factory applied all-service jacket; factory pre-molded PVC fitting and valve covers. Thermal conductivity $K=0.24$ at 100°F mean temperature. Thickness: 1.0-inch. Insulate exposed W, HW and CW lines below lavatories and sinks noted as “barrier free” with insulation kits.

Plastic pipe markers: factory fabricated, flexible, semi-rigid plastic, performed to fit around pipe or pipe covering.

Water hammer arrestors: provide ASSE 1010 certified water hammer arrestors on the cold and hot water pipes serving each plumbing fixture, sized and installed per PDI WH-201.

Dielectric unions: provide at each joint between dissimilar-metals.

Exterior piping: PEX piping with cfc-free polyurethane foam insulation and corrugated pe outer jacket and electrofusion fittings.

Test the domestic water systems at 100 psi with no pressure drop over a four-hour period, with system stabilized at design temperature. Observe system for leaks, faulty circulation, expansion and contraction, and repair any deficiencies.

Flush and sterilize the domestic water systems as follows: pressure flush the domestic water piping systems to remove particulate from the system, several times at each restroom group and at the completion of each building wing; flush with clean water. Exercise proper care dur-

PLUMBING
22 00 00-4

ing cleaning and flushing of system to ensure no damage is done to any equipment, valves, or fittings.

SECTION 22 13 00

SANITARY WASTE AND VENT PIPING

Soil/waste/vent: cast iron with hubless pipe and fittings conforming to ASTM A74, ASTM A888, and CISPI 301 or threaded fittings conforming to ASME B16.12, or DWV ABS schedule 40 pipe conforming to ASTM D2661 (solid core) or ASTM F628 (co-extruded cellular core) with fittings conforming to ASTM D2661 and NSF 14. DWV ABS cannot be used in exposed areas or return air plenums. Minimum slope of 1/4" per foot unless noted otherwise for 4" and larger pipes. Install underground abs piping per ASTM D2321.

Indirect drain piping: copper drainage tube; wrought copper, solder-joint drainage fittings; and soldered joints.

Test the soil, waste, and vent systems per the UPC.

SECTION 22 40 00

PLUMBING FIXTURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B.** Related Sections: The following Sections contain requirements that relate to this Section:
 - 1.** Division 23 Section "General-Duty Valves for Mechanical Piping" for general-duty valves used as supply stops.
 - 2.** Division 22 Section "Water Distribution Piping Specialties" for backflow preventers and other specialties not specified in this Section.
 - 3.** Division 23 Section "Pipe Insulation for Mechanical Systems" for piping.
 - 4.** Division 22 Section "Drainage and Vent Piping" for pipe and fittings.
 - 5.** Division 22 "Water Distribution Piping" for pipe and fittings.
 - 6.** Division 26 "Electrical" for wiring for electrical appurtenances.

1.2 SUMMARY

PLUMBING
22 00 00-5

- A. This Section includes plumbing fixtures and trim, faucets, other fittings, and related components.

1.3 DEFINITIONS

- A. Accessible: Plumbing fixture, building, facility, or portion thereof that can be approached, entered, and used by physically handicapped, disabled, and elderly people.
- B. Fitting: Device that controls flow of water into or out of plumbing fixture. Fittings specified in this Section include supplies and stops, faucets and spouts, showerheads and tub spouts, drains and tailpieces, traps and waste pipes. Pipe fittings, tube fittings, and general-duty valves are included where indicated.

1.4 SUBMITTALS

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 01 Specification Sections.
- B. Product Data for each plumbing fixture category and type specified. Include selected fixture, trim, fittings, accessories, appliances, appurtenances, equipment, and supports. Indicate materials and finishes, dimensions, construction details, and flow-control rates.
- C. Wiring diagrams from manufacturer for electrically operated units.
- D. Maintenance data for plumbing fixtures and components to include in the operation and maintenance manuals specified in Division 01.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain plumbing fixtures, faucets, and other components of each category from one source and by a single manufacturer.
 - 1. Exception: Where fixtures, faucets, or other components are not available from a single manufacturer, obtain similar products from other manufacturers specified for this category.
- B. Regulatory Requirements: Comply with requirements of CABO A117.1, "Accessible and Usable Buildings and Facilities"; Public Law 90-480, "Architectural Barriers Act"; and Public Law 101-336, "Americans with Disabilities Act"; regarding plumbing fixtures for physically handicapped people.
- C. Energy Policy Act Requirements: Comply with requirements of Public Law 102-486, "Energy Policy Act," regarding water flow rate and water consumption of plumbing fixtures.

- D. Backflow Prevention Requirements: Comply with the requirements of Washington State Department of Health regulation for "Backflow Prevention Assemblies Approved for Installation in Washington State".
- E. Listing and Labeling: Provide electrically operated fixtures and components specified in this Section that are listed and labeled.
 - 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
 - 2. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" (NRTL) as defined in OSHA Regulation 1910.7.
- F. Select combinations of fixtures and trim, faucets, fittings, and other components that are compatible.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver plumbing fixtures in manufacturer's protective packing, crating, and covering.
- B. Store plumbing fixtures on elevated platforms in dry location.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Coordinate roughing-in and final fixture locations and verify that plumbing fixtures can be installed to comply with original design and referenced standards.

PART 2 - PRODUCTS

2.1 PLUMBING FIXTURE STANDARDS

- A. Comply with applicable standards below and other requirements specified.
 - 1. Electric Water Coolers: ARI 1010 and UL 399.
 - 2. Emergency Equipment: ANSI Z358.1.
 - 3. Enameled, Cast-Iron Fixtures: ASME A112.19.1M.
 - 4. National Sanitation Foundation Construction: NSF 2.
 - 5. Plastic Laundry Trays: ANSI Z124.6.
 - 6. Plastic Mop-Service Basins: ANSI Z124.6.
 - 7. Plastic Shower Enclosures: ANSI Z124.2 and ANSI Z124.2a.
 - 8. Slip-Resistant Bathing Surfaces: ASTM F 462.
 - 9. Stainless-Steel Fixtures Other than Service Sinks: ASME A112.19.3M.
 - 10. Vitreous-China Fixtures: ASME A112.19.2M.
 - 11. Water-Closet, Flush Valve, Tank Trim: ASME A112.19.5.
 - 12. Water-Closet, Flushometer Tank Trim: ASSE 1037.

13. Whirlpool Bathtub Fittings: ASME A112.19.8M.

2.2 LAVATORY/SINK FAUCET STANDARDS

- A. Comply with ASME A112.18.1M and other requirements specified for lavatory, sink, and similar-type-fixture faucet fittings. Include hot- and cold-water indicators; **2.5-gpm-** maximum flow rate; and polished, chrome-plated finish; except where otherwise indicated. Coordinate faucet inlets with supplies and fixture holes and outlet with spout and fixture receptor.
1. Diverter Valves for Faucets with Hose Spray: ASSE 1025.
 2. Faucet Hose: ASTM D 3901.
 3. Hose-Connection Vacuum Breakers: ASSE 1011.
 4. Hose-Coupling Threads: ASME B1.20.7.
 5. Integral, Atmospheric Vacuum Breakers: ASSE 1001.
 6. Pipe Threads: ASME B1.20.1.
 7. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
 8. Sink Spray Hoses: ASTM D 3573.

2.3 BATHTUB/SHOWER FAUCET STANDARDS

- A. Comply with ASME A112.18.1M and other requirements specified for bathtub and shower faucet fittings. Include hot- and cold-water indicators; **2.5-gpm-** maximum flow rate; and polished, chrome-plated finish; except where otherwise indicated. Coordinate faucet inlets with supplies and outlet with diverter valve; tub spout; and shower head, arm, and flange.
1. Combination, Pressure-Equalizing- and Thermostatic-Control, Antiscald Faucets: ASSE 1016.
 2. Hand-Held Showers: ASSE 1014.
 3. High-Temperature-Limit Controls for Thermal-Shock-Preventing Devices: ASTM F 445.
 4. Hose-Coupling Threads: ASME B1.20.1 or ASME B1.20.7.
 5. Manual-Control Antiscald Faucets: ASTM F 444.
 6. Pipe Threads: ASME B1.20.1.
 7. Pressure-Equalizing-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.
 8. Sensor-Actuated Faucets and Electrical Devices: UL 1951.
 9. Thermostatic-Control Antiscald Faucets: ASTM F 444 and ASSE 1016.

2.4 MISCELLANEOUS FITTING STANDARDS

- A. Comply with ASME A112.18.1M and other requirements specified for fittings, other than faucets. Include polished, chrome-plated finish, except where otherwise indicated. Coordinate fittings with other components and connectors.

1. Atmospheric Vacuum Breakers: ASSE 1001.
2. Automatic Flow Restrictors: ASSE 1028.
3. Brass and Copper, Supplies and Tubular Brass: ASME A112.18.1M.
4. Fixed Flow Restrictors: ASSE 1034.
5. Manual-Operation Flushometers: ASSE 1037.
6. Sensor-Operation Flushometers: ASSE 1037 and UL 1951.

2.5 MISCELLANEOUS COMPONENT STANDARDS

- A. Comply with applicable standards below and other requirements specified for components for plumbing fixtures, equipment, and appliances.
1. Disposers: ASSE 1008 and UL 430.
 2. Hose-Coupling Threads: ASME B1.20.7.
 3. Hot-Water Dispensers: ASSE 1023 and UL 499.
 4. Pipe Threads: ASME B1.20.1.
 5. Plastic Shower Receptors: ANSI Z124.2 and ANSI Z124.2a.
 6. Plastic Toilet Seats: ANSI Z124.5.
 7. Supply and Drain Insulation Kits: CABO A117.1.
 8. Supports: ASME A112.6.1M.
 9. Whirlpool Bathtub Equipment: UL 1795.

2.6 FITTINGS

- A. Fittings for Equipment Specified in Other Sections: Fittings include the following:
1. Supply Inlets: Brass pipe or copper tube, size required for final connection.
 2. Supply Stops: Chrome-plated brass, angle or straight; compression, **[loose-key type][wheel-handle type]**; same size as supply inlet and with outlet matching supply riser.
 3. Supply Risers: flexible copper tube with knob end. Use chrome-plated tube for exposed applications.
 4. Traps: **[0.045-inch thick tubular brass][Cast Brass]**, slip-joint inlet, cleanout, wall flange, escutcheons, and size to match equipment. Use chrome-plated tube for exposed applications.
 5. Continuous Waste: Tubular brass with slip-joint inlet, and size to match equipment.
 6. Indirect Waste: Tubular brass size to match equipment.

2.7 FIXTURE LISTING

- A. Refer to plumbing fixture schedule specification 3.8 for fixtures and callouts.

PART 3 - EXECUTION

PLUMBING
22 00 00-9

3.1 EXAMINATION

- A. Examine roughing-in for potable, hot- and cold-water supply piping systems; soil, waste, and vent piping systems; and supports. Verify that locations and sizes of piping and locations and types of supports match those indicated, before installing and connecting fixtures. Use manufacturer's roughing-in data when roughing-in data are not indicated.
- B. Examine walls, floors, and cabinets for suitable conditions where fixtures are to be installed.
- C. Do not proceed until unsatisfactory conditions have been corrected.

3.2 APPLICATIONS

- A. Include supports for plumbing fixtures according to the following:
 - 1. For wall hung water closets, urinals, lavatories, sinks, drinking fountains, and electric water coolers where indicated.
 - 2. Reinforcement: For floor-mounted lavatories and sinks that require securing to wall and recessed, box-mounted, electric water coolers.
 - 3. Fabricate reinforcement from **2-by-4-inch** or **1/4-by-6-inch** steel plates attached to studs, in wall construction, to secure fixtures to wall. Include length that will extend beyond ends of fixture mounting bracket and attach to at least 2 studs.
- B. Include fitting insulation kits for accessible fixtures according to the following:
 - 1. Lavatories: Cover **[hot- and cold-water][tempered water]**supplies, stops and handles, drain, trap, and waste to wall.
 - 2. Sinks: Cover hot- and cold-water supplies, stops and handles, drain, trap, and waste to wall.
 - 3. Fixtures with Offset Drain: Cover hot- and cold-water supplies, offset drain, trap, and waste to wall.
 - 4. Other Fixtures: Cover exposed fittings below fixture.

3.3 PLUMBING FIXTURE INSTALLATION

- A. Assemble plumbing fixtures and trim, fittings, faucets, and other components according to manufacturers' written instructions.
- B. Install fixtures level and plumb according to manufacturers' written instructions, roughing-in drawings, and referenced standards.
- C. Install floor-mounted, floor-outlet water closets with closet flanges and gasket seals.
- D. Install floor-mounted, back-outlet water closets with fittings and gasket seals.

- E.** Install wall-hanging, back-outlet water closets with support manufacturer's tiling frame or setting gage.
- F.** Install toilet seats on water closets.
- G.** Install wall-hanging, back-outlet urinals with gasket seals.
- H.** Install flushometer valves for accessible water closets and urinals with handle mounted on wide side of compartment. Install other actuators in locations that are easy for handicapped people to reach.
- I.** Install tanks for accessible, tank-type water closets with lever handle mounted on wide side of compartment.
- J.** Fasten wall-hanging plumbing fixtures securely to supports attached to building substrate when supports are specified, and to building wall construction where no support is indicated.
- K.** Fasten floor-mounted fixtures to substrate. Fasten fixtures having holes for securing fixture to wall construction, to reinforcement built into walls.
- L.** Fasten recessed, wall-mounted fittings to reinforcement built into walls.
- M.** Fasten wall-mounted fittings to reinforcement built into walls.
- N.** Fasten counter-mounting plumbing fixtures to casework.
- O.** Secure supplies to supports or substrate within pipe space behind fixture.
- P.** Set shower receptors and mop basins in leveling bed of cement grout.
- Q.** Install individual stop valve in each water supply to fixture. Use gate or globe valve where specific stop valve is not specified.
 - 1.** Exception: Omit stop valves on supplies to emergency equipment, except when permitted by authorities having jurisdiction. When permitted, install valve chained and locked in OPEN position.
- R.** Install water-supply stop valves in accessible locations.
- S.** Install faucet, laminar-flow fittings with specified flow rates and patterns in faucet spouts when faucets are not available with required rates and patterns. Include adapters when required.
- T.** Install supply, flow-control fittings with specified flow rates in fixture supplies at stop valves.

- U.** Install faucet, flow-control fittings with specified flow rates and patterns in faucet spouts when faucets are not available with required rates and patterns. Include adapters when required.
- V.** Install shower, flow-control fittings with specified maximum flow rates in shower arms.
- W.** Install traps on fixture outlets. Omit traps on fixtures having integral traps. Omit traps on indirect wastes, except where otherwise indicated.
- X.** Install disposers in sink outlets. Install switch where indicated, or in wall adjacent to sink if location is not indicated.
- Y.** Install hot-water dispensers in back top surface of sink or in counter with spout over sink.
- Z.** Install hose bibs with integral or field-installed vacuum breaker.
- AA.** Install wall hydrants with integral or field-installed vacuum breaker.
- BB.** Install escutcheons at wall, floor, and ceiling penetrations in exposed, finished locations and within cabinets and millwork. Use deep-pattern escutcheons where required to conceal protruding pipe fittings.
- CC.** Seal joints between fixtures and walls, floors, and counters using sanitary-type, 1-part, mildew-resistant, silicone sealant according to sealing requirements specified in Division 07 Section "Joint Sealants." Match sealant color to fixture color.
- DD.** Coordinate exact location and mounting height of all fixtures with the architectural drawings.

3.4 CONNECTIONS

- A.** Piping installation requirements are specified in other Division 22 Sections. Drawings indicate general arrangement of piping, fittings, and specialties. The following are specific connection requirements:
 - 1.** Install piping connections between plumbing fixtures and piping systems and plumbing equipment specified in other Division 22 Sections.
- B.** Supply and Waste Connections to Plumbing Fixtures: Refer to plumbing fixture schedule on drawings for fitting sizes and connection requirements for each plumbing fixture.
- C.** Supply and Waste Connections to Equipment Specified in Other Sections: Connect equipment with supply inlets, supply stops, supply risers, and traps specified in this Section. Use fitting sizes required to match connected equipment. Connect fittings to plumbing piping.
- D.** Ground equipment.

1. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

- E. Arrange for electric-power connections to fixtures and devices that require power. Electric power is specified in Division 26 Sections.

3.5 FIELD QUALITY CONTROL

- A. Verify that installed fixtures are categories and types specified for locations where installed.
- B. Check that fixtures are complete with trim, faucets, fittings, and other specified components.
- C. Inspect installed fixtures for damage. Replace damaged fixtures and components.
- D. Test installed fixtures after water systems are pressurized and demonstrate proper operation. Replace malfunctioning fixtures and components, then retest. Repeat procedure until units operate properly.

3.6 ADJUSTING AND CLEANING

- A. Operate and adjust faucets and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.
- B. Operate and adjust disposers, hot-water dispensers, and controls. Replace damaged and malfunctioning units and controls.
- C. Adjust water pressure at drinking fountains, electric water coolers, faucets, shower valves, and flushometer valves having controls, to produce proper flow and stream.
- D. Replace washers and seals of leaking and dripping faucets and stops.
- E. Clean fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials. Include the following:
 1. Remove faucet spouts and strainers, remove sediment and debris, and reinstall strainers and spouts.
 2. Remove sediment and debris from drains.

3.7 PROTECTION

- A. Provide protective covering for installed fixtures and fittings.

- B. Do not allow use of fixtures for temporary facilities, except when approved in writing by Owner.

3.8 PLUMBING FIXTURE SCHEDULE

- A. Water Closets P-1: Provide wall mount ADA Barrier Free flush valve water closets to meet owner's standards for repetition in facility. Provide with Sloan Regal flush valve and DV-100 bedpan diverter. All exposed water supply piping shall be rigid stainless steel.
- B. Lavatories P-2: Provide wall mount ADA Barrier Free porcelain fixtures with concealed arm supports and single handle faucets by Zurn, model number Z83100-XL and stainless steel grid strainer. At supply water lines for hot water, provide and install an ASSE 1070 compliant point of use mixing valve.
- C. Lavatories P-3: Provide counterset mount porcelain fixtures with single handle faucets by Zurn, model number Z83100-XL and stainless steel grid strainer. At supply water lines for hot water, provide and install an ASSE 1070 compliant point of use mixing valve.
- D. Shower P-4: Provide a 3' wide x 5' long ADA Barrier Free fiberglass shower pan and surround. Shower shall be supplied with a phenolic seat, grab bars, and a hand held shower spray and valve.
- E. Fixture basis of design is to meet the existing facility basis of design with final approval from owner.
- F. Provide all options and accessories as indicated.

Addendum#1 November 9,2022

END OF SECTION 22 40 00

PLUMBING
22 00 00-14

1 ADDENDUM #1 NOVEMBER 4,2022

SECTION 23 34 00

FANS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A.** Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B.** Related Sections: The following Sections contain requirements that relate to this Section:
 - 1.** Division 07 for roof curbs and equipment supports not provided with units.
 - 2.** Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment" for vibration and seismic restraints.
 - 3.** Division 23 Section "Common Motor Requirements for HVAC Equipment" for fan motor requirements.
 - 4.** Division 23 Section "Variable Frequency Drives" for variable frequency, variable speed drives.
 - 5.** Division 23 Section "Instrumentation and Control for HVAC" for control devices.
 - 6.** Division 26 sections for power supply wiring, field installed disconnects, electrical devices, and motor controllers.

1.2 SUMMARY

- A.** This Section includes the following:
 - 1.** Cabinet Fans.
- B.** Products furnished, but not installed, under this Section include roof curbs for roof-mounted exhaust fans.

1.3 PERFORMANCE REQUIREMENTS

- A.** Project Altitude: Base air ratings on actual site elevations.
- B.** Operating Limits: Classify according to AMCA 99.
- C.** Fan Schedule: The following information is described in an equipment schedule on the Drawings.

1. Fan performance data including capacities, outlet velocities, static pressures, sound power characteristics, motor requirements, and electrical characteristics.
2. Fan arrangement including wheel configuration, inlet and discharge configurations, and required accessories.

1.4 SUBMITTALS

- A. General: See Section 15050 for general requirements of Product Data, Shop Drawings, Reports and Certificates, and Operation and Maintenance data submittals.
- B. Product Data: Provide submittals of the following:
 1. Ceiling and Wall Cabinet Fans.
- C. Shop Drawings: None required.
- D. Reports and Certificates: Provide submittals of the following:
 1. Factory authorized service representative report.

1.5 QUALITY ASSURANCE

- A. Electrical Component Standard: Provide components that comply with NFPA 70 and that are listed and labeled by UL.
- B. Listing and Labeling: Provide electrically operated fixtures specified in this Section that are listed and labeled by UL.
 1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
- C. AMCA Compliance: Provide products that meet performance requirements and are licensed to use the AMCA Seal.
- D. NEMA Compliance: Provide components required as part of fans that comply with applicable NEMA standards.
- E. Testing Requirements: The following factory tests are required as indicated:
 1. Sound Power Level Ratings: Comply with AMCA 301, "Methods for Calculating Fan Sound Ratings From Laboratory Test Data." Test fans according to AMCA 300, "Reverberant Room Method for Sound Testing of Fans." Label fans with the AMCA Seal.
 2. Fan Performance Ratings: Establish flow rate, pressure, power, air density, speed of rotation, and efficiency by factory tests and ratings according to AMCA 210, "Laboratory Methods of Testing Fans for Rating."

1.6 PROJECT CONDITIONS

- A.** Field Measurements: Verify dimensions by field measurements. Verify clearances.
- B.** Do not operate fans until ductwork is clean, filters are in place, bearings are lubricated, and fans have been commissioned.

1.7 COORDINATION AND SCHEDULING

- A.** Coordinate the size and location of structural steel support members.
- B.** Coordinate the installation of roof curbs, equipment supports, and roof penetrations. Roof specialties are specified in Division 07 Sections.

1.8 EXTRA MATERIALS

- A.** Furnish one set of belts for each belt-driven fan that match products installed, are packaged with protective covering for storage, and are identified with labels clearly describing contents.

1.9 DELIVERY, STORAGE, AND HANDLING

- A.** Deliver fans as factory-assembled units, to the extent allowable by shipping limitations, with moisture proof protective crating and covering.
- B.** Lift and support units with the manufacturer's designated lifting or supporting points.
- C.** Fans shall not be exposed to moisture or dust during construction or storage.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A.** Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1.** Ceiling and Wall Cabinet Fans:
 - a.** ACME Engineering & Mfg. Corp.
 - b.** Cook (Loren) Co.
 - c.** Greenheck Fan Corp.
 - d.** Jenn Industries Inc.
 - e.** Penn Ventilation.
 - f.** Twin City.

2. Cabinet Fans:

- a. ACME Engineering & Mfg. Corp.
- b. Cook (Loren) Co.
- c. Greenheck Fan Corp.
- d. Penn Ventilation.
- e. Chicago Blower Corp.
- f. Joy Mfg. Corp.
- g. Wood.
- h. Greenheck Fan Corp.
- i. Twin City.

3. Centrifugal Fans:

- a. ACME Engineering & Mfg. Corp.
- b. Aerovent.
- c. Barry Blower.
- d. Cook (Loren) Co.
- e. Greenheck Fan Corp.
- f. Trane Co. (The).
- g. Twin City.

- B.** Fan Variable-Speed Controller: Solid-state control to reduce speed from 100 percent to 50 percent, mount [**under fan housing**][**as indicated on plans**].
2. Damper: Counterbalanced, parallel-blade, backdraft dampers mounted in curb base; factory set to close when fan stops.
 3. Grease Trough: Continuously welded aluminum trough and removable lid.
 4. Roof Curbs: Provide roof curbs that are compatible with the roof type. Refer to general construction drawings and specifications for roof types. Minimum 0.08-inch aluminum, welded corners, rigid fiberglass insulation, minimum [**12**][**18**]-inch, and wood nailer. Size as required to suit roof opening and fan base.
 5. Vent Extension: Provide vent extension for minimum 40-inch discharge height.

2.2 WALL EXHAUST FANS

- A.** Description: Belt-driven or direct-drive centrifugal fans as indicated, consisting of housing, wheel, fan shaft, bearings, motor, drive assembly, curb base, and accessories.
- B.** Construction: Minimum 16-gauge, spun-aluminum, two-piece cap including windband, wall flange; inlet cone, and integral conduit chase.
- C.** Description: Centrifugal fans designed for installing in ceiling or wall applications.
- D.** Construction: 22-gauge galvanized steel lined with acoustical insulation, complete with backdraft damper.
- E.** Fan Wheel: Centrifugal forward curved wheel directly mounted on motor shaft. Fan shrouds, motor, and fan wheel shall be removable for service.

- F. Motor: Open drip proof type with permanently lubricated sealed bearings and include impedance or thermal overload protection.
- G. Grille: Aluminum, coated with baked enamel, white.
- H. Accessories: The following items are required as indicated:
 - 1. Variable Speed Controller: Solid-state control to reduce speed from 100 percent to 50 percent, mount **[on fan housing][as indicated on plans]**.
 - 2. Roof or Wall Caps: Complete with integral flashing, backdraft damper, and bird-screen. Refer to general construction drawings and specifications for roof and wall types.
 - 3. Insulated Housing: Fan housing and motor cover lined with fiberglass duct liner.
 - 4. Inlet/Discharge Guards: Minimum 16-gauge 1/2-inch by 1-inch screen, complete with mounting frame.
 - 5. Backdraft Damper: Aluminum blades in aluminum frame, interlocked blades with nylon bearings.
 - 6. Motor-Side Back Guard: Steel, conforming to OSHA specifications, removable for maintenance.
 - 7. Wall Sleeve: Steel to match fan and accessory size.
 - 8. Weathershield Hood: Steel to match fan and accessory size.
 - 9. Weathershield Front Guard: Steel with expanded metal screen.
 - 10. Variable-Speed Controller: Solid-state control to reduce speed from 100 percent to 50 percent, mount **[on fan housing][as indicated on plans]**.

2.3 CABINET FANS

- A. Description: Duct mounted, belt-driven centrifugal cabinet fans as indicated, consisting of housing, wheel, fan shaft, bearings, drive assembly, motor, mounting brackets, and accessories.
- B. Construction: Minimum 18-gauge galvanized steel with integral duct collars, two removable access panels, and mounting brackets.
- C. Fan Wheel: Steel scroll fan, double-width, double-inlet (DWDI), forward curved centrifugal type mounted on internal vibration isolators.
- D. Motor: Heavy duty type with permanently lubricated sealed ball bearings.
 - 1. **[Open drip proof][Guarded drip proof]**.
- E. Bearings: Permanently lubricated, sealed ball type, minimum L50 life in excess of 200,000 hours.
- F. Drives: Precision machined cast iron type, sized for 150 percent of motor horsepower.
- G. Belts: Oil and heat resistant, nonstatic type.

- H. Finish: **[Baked polyester powder coating, electrostatically applied][Air dried phenolic resin]**.
- I. Accessories: The following accessories are required as indicated:
1. Variable-Speed Controller: Solid-state control to reduce speed from 100 percent to 50 percent, mount **[on fan housing][as indicated on plans]**.
 2. Insulated Housing: Fan housing and motor cover lined with 1/2-inch fiberglass duct liner.
 3. Inlet/Discharge Guards: 1/2 by 1/2-inch galvanized welded wire on a galvanized frame.
 4. Belt Guards: Fabricate of steel for motors mounted on the outside of the fan cabinet.
 5. Motor Mount: Adjustable base.
- J. Controllable Pitch Blades: Designed to automatically change pitch while fan is running. Pitch control actuator contained in machined aluminum rotor.
- K. Finish: **[Baked polyester powder coating, electrostatically applied][Air dried phenolic resin]**.
- L. Accessories: The following accessories are required as indicated:
1. Companion Flanges: Rolled-steel flanges.
 2. Inlet and Outlet Screens: Wire mesh screen on fans not connected to ductwork.
 3. Flow Measurement Port: Pressure measurement taps installed in the inlet of the fan to detect and signal airflow readings to temperature-control systems. Control devices and sequence of operation are specified in other Division 23 Sections.
 4. Forward Curved: Black-enameled or galvanized steel construction with inlet flange, back plate, shallow blades with inlet and tip curved forward in direction of airflow, mechanically secured to flange and back plate; cast-steel hub swaged to back plate and fastened to shaft with set screws.
 5. Airfoil Wheel: Steel construction with smooth curved inlet flange; heavy back plate; hollow die-formed airfoil-shaped blades continuously welded at tip flange and back plate; cast-iron or cast-steel hub riveted to back plate and fastened to shaft with set screws.
- M. Motor: Heavy duty type with permanently lubricated sealed ball bearings.
1. **[Open drip proof][Guarded drip proof]**.
- N. Shafts:
1. Statically and dynamically balanced and selected for continuous operation at the maximum rated fan speed and motor horsepower (HP), with final alignment and belt adjustment made after installation.
 2. Turned, ground, and polished hot-rolled steel with keyway. Ship with a protective coating of lubricating oil.

3. Designed to operate at no more than 70 percent of the first critical speed at the top of the fan's speed range.
- O. Bearings: Heavy duty regreasable ball type, pillow block cast iron housing, minimum L50 life in excess of 200,000 hours.
- P. Belt Drives: Factory mounted, with final alignment and belt adjustment made after installation.
1. Service Factor Based on Fan Motor: 1.5.
 2. Fan Pulleys: Cast iron or cast steel with split, tapered bushing, dynamically balanced at factory.
 3. Motor Pulleys: Adjustable pitch for use with motors through 5 HP; fixed pitch for use with motors larger than 5 HP. Select pulley so pitch adjustment is at the middle of the adjustment range at fan design conditions.
 4. Belts: Oil resistant, nonsparking, and nonstatic; matched sets for multiple belt drives.
 5. Belt Guards: Fabricate to comply with OSHA and SMACNA requirements; 0.1046-inch- thick, 3/4-inch diamond-mesh wire screen welded to steel angle frame or equivalent, prime coated. Secure to fan or fan supports without short circuiting vibration isolation. Include provision for adjustment of belt tension, lubrication, and use of tachometer with guard in place.
 6. Motor Mount: Adjustable for belt tensioning.
- Q. Finish: [**Baked polyester powder coating, electrostatically applied**][**Air dried phenolic resin**].
- R. Accessories:
1. Scroll Access Doors: Shaped to conform to scroll, with quick-opening latches and gaskets.
 2. Companion Flanges: Galvanized steel, for duct connections.
 3. Fixed Inlet Vanes: Steel, with fixed cantilevered vanes welded to inlet bell.
 4. Variable Inlet Vanes: Steel, with blades supported at both ends with 2 permanently lubricated bearings. Variable mechanism terminating in single control lever with control shaft for double-width fans.
 5. Adjustable Inlet Vanes: Steel, with blades cantilevered with 2 permanently lubricated bearings. Variable mechanism out of air stream terminating in single control lever with control shaft for double-width fans.
 6. Discharge Dampers: Heavy-duty steel assembly with [**parallel**][**opposed**] blades constructed of 2 plates formed around and welded to shaft, channel frame, sealed ball bearings, with blades linked out of air stream to single control lever.
 7. Inlet Screens: Galvanized steel welded grid screen, mounted inside shaft bearings.
 8. Scroll Drain Connection: 1-inch steel pipe coupling welded to low point of fan scroll.
 9. Shaft Cooler: Metal disk between bearings and fan wheel, designed to dissipate heat from shaft.

- 10. Spark-Resistant Construction: AMCA 99 construction, as indicated.
 - 11. Shaft Seals: Airtight seals installed around shaft on drive side of single-width fans.
 - 12. Weather Cover: Heavy-gage steel sheet with ventilation slots, bolted to housing.
 - 13. Brackets suitable for horizontal or vertical mounting.
- S. Fan Wheel: Aluminum airfoil wheel welded to spun aluminum dome, bolted to aluminum hub assembly, hub keyed and locked to fan shaft.
- T. Motor: Heavy duty type with permanently lubricated sealed ball bearings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions for compliance with requirements of installation tolerances and other conditions affecting performance of the fans. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install fans according to manufacturer's written instructions.
- B. Support units using the external vibration-control devices as indicated. Vibration-control devices are specified in Division 23 Section "Vibration and Seismic Controls for HVAC Piping and Equipment."
- 1. Support floor mounted fans on concrete housekeeping bases or roof supports using housed spring isolators. Secure units to anchor bolts installed in housekeeping base.
 - 2. Secure roof-mounted fans to roof curbs with cadmium-plated hardware.
 - a. Installation of roof curbs is specified in Division 07 Sections.
 - 3. Suspend units from structural steel support frame using threaded steel rods and vibration isolation springs.
 - 4. Ceiling Units: Suspend units from structure using steel wire or metal straps.
- C. Install units with clearances for service and maintenance.
- D. Label units according to requirements specified in Division 23 Section "Identification for HVAC Piping and Equipment."

3.3 HOUSEKEEPING BASES

- A. Coordinate size of housekeeping bases with actual unit sizes provided.

3.4 CONNECTIONS

- A. Duct installation and connection requirements are specified in other Division 23 Sections. Drawings indicate the general arrangement of ducts and duct accessories. Make final duct connections with flexible connectors.
- B. Electrical: Conform to applicable requirements in Division 26 Sections.
- C. Grounding: Ground equipment. Tighten electrical connectors and terminals, including grounding connections, according to manufacturer's published torque-tightening values. Where manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Provide services of a factory-authorized service representative to supervise the field assembly of components and installation of fans, including duct and electrical connections, and to report results in writing.

3.6 ADJUSTING

- A. Adjust damper linkages for proper damper operation.
- B. Adjust belt tension.
- C. Lubricate bearings.

3.7 CLEANING

- A. After completing installation, inspect exposed finish. Remove burrs, dirt, and construction debris, and repair damaged finishes including chips, scratches, and abrasions.
- B. Clean fan interiors to remove foreign material and construction debris. Vacuum clean fan wheel and cabinet.

3.8 START-UP PROCEDURES

- A. Final Checks before Startup: Perform the following operations and checks before startup:
 1. Verify that shipping, blocking, and bracing are removed.

2. Verify that unit is secure on mountings and supporting devices and that connections for piping, ducts, and electrical components are complete. Verify that proper thermal-overload protection is installed in motors, starters, and disconnects.
 3. Perform cleaning and adjusting specified in this Section.
 4. Disconnect fan drive from motor, verify proper motor rotation direction, and verify fan wheel free rotation and smooth bearing operation. Reconnect fan drive system, align and adjust belts, and install belt guards.
 5. Lubricate bearings, pulleys, belts, and other moving parts with factory-recommended lubricants.
 6. Verify that manual and automatic volume control and fire and smoke dampers in connected ductwork systems are in the fully open position.
 7. Disable automatic temperature-control operators.
- B.** Starting procedures for fans are as follows:
1. Energize motor; verify proper operation of motor, drive system, and fan wheel. Adjust fan to indicated RPM.
 2. Measure and record motor voltage and amperage.
- C.** Shut unit down and reconnect automatic temperature-control operators.
- D.** Refer to Division 23 Section "Testing, Adjusting, and Balancing for HVAC" for procedures for air-handling-system testing, adjusting, and balancing.
- E.** Replace fan and motor pulleys as required to achieve design conditions.

3.9 DEMONSTRATION

- A.** Train Owner's maintenance personnel on procedures and schedules related to startup and shutdown, troubleshooting, servicing, and preventive maintenance.
- B.** Review data in the operation and maintenance manuals. Refer to Division 01 Section "Closeout Procedures."
- C.** Schedule [4][8][16] hours training with Owner, through Architect, with at least 7 days' advance notice.
- D.** Demonstrate operation of fans. Conduct walking tour of the Project. Briefly identify location and describe function, operation, and maintenance of each power ventilator.

END OF SECTION 23 34 00

SECTION 26 05 00

COMMON WORK RESULTS FOR ELECTRICAL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A.** General Requirements specifically applicable to Division 26, in addition to Division 01 provisions.
- B.** The electrical system equipment and installation shall comply with all provisions and requirements of this specification, as well as any and all applicable national, state and local codes and standards.

1.2 WORK SEQUENCE

- A.** Construct Work in sequence under provisions of Division 01.

1.3 COORDINATION

- A.** Coordinate the Work specified in this Division under provisions of Division 01.
- B.** Prepare drawings showing proposed rearrangement of Work to meet job conditions, including changes to Work specified under other Sections. Obtain permission of Architect prior to proceeding.
- C.** Review all drawings and specifications in the Contract Documents associated with this Project for a complete understanding of the Project requirements. Contract Documents are issued in their entirety, not as discrete sets by trade or discipline, and it is necessary for all trades to coordinate work requirements noted throughout the drawings and specifications.

1.4 REFERENCES

- A.** ANSI/NFPA 70 - National Electrical Code, latest adopted edition including all state and local amendments.
- B.** NECA - Standard of Installation.
- C.** NETA ATS – Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.
- D.** Electrical Reference Symbols: The Electrical "Legend" on drawings is standardized version for this project. All symbols shown may not be used on drawings. Use legend as reference for symbols used on plans.
- E.** Electrical Drawings: Drawings are diagrammatic; complimentary to the Architectural drawings; not intended to show all features of work. Install material not dimensioned on

drawings in a manner to provide a symmetrical appearance. Do not scale drawings for exact equipment locations. Review Architectural, Structural, and Mechanical Drawings and adjust work to conform to conditions shown thereon. Field verification of dimensions, locations and levels is directed.

1.5 REGULATORY REQUIREMENTS

- A.** Conform to ANSI/NFPA 70.
- B.** Conform to the latest adopted edition of the International Building Code and the International Fire Code including all state and local amendments thereto.
- C.** Obtain electrical permits, plan review, and inspections from authority having jurisdiction.

1.6 SUBMITTALS

- A.** Submit inspection and permit certificates under provisions of Division 01.
- B.** Include certificate of final inspection and acceptance from authority having jurisdiction.
- C.** Submittal review is for general design and arrangement only and does not relieve the Contractor from any requirements of Contract Documents. Submittal not checked for quantity, dimension, fit or proper operation. Where deviations of substitute product or system performance have not been specifically noted in the submittal by the Contractor, provisions of a complete and satisfactory working installation is the sole responsibility of the Contractor.
- D.** In addition to requirements referenced in Division 01, the following is required for work provided under this division of the specification.
 - 1.** Provide material and equipment submittals containing complete listings of material and equipment shown on Electrical Drawings and specified herein. Separate from work furnished under other divisions.
 - 2.** Submittals shall be provided in PDF format with each section indexed in the PDF document. Submittals for Division 26 shall be complete and submitted at one time. Unless given prior approval, partial submittals will be returned unreviewed.
 - 3.** Clearly identify all material and equipment by item, name or designation used on drawings and in specifications.
 - 4.** Submit only pages which are pertinent; mark catalog sheets to identify pertinent products, referenced to Specification Section and Article number. Show reference standards, performance characteristics, and capacities; wiring diagrams and controls; component parts; finishes; dimensions; and required clearances.
 - 5.** 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.

6. Coordinate submittals with requirements of work and of Contract Documents.
7. Certify in writing that the submitted shop drawings and product data are in compliance with requirements of Contract Documents. Notify Architect/Engineer in writing at time of submittal, of any deviations from requirements of Contract Documents.
8. Do not fabricate products or begin work which requires submittals until return of submittal with Architect/Engineer acceptance.
9. Equipment scheduled by manufacturer's name and catalog designations, manufacturer's published data and/or specification for that item, in effect on bid date, are considered part of this specification. Approval of other manufacturer's item proposed is contingent upon compliance therewith.

1.7 SUBSTITUTIONS

- A. In accordance with the General Conditions and the General Requirements, Substitution and Product Options, all substitute items must fit in the available space, and be of equal or better quality including efficiency performance, size, and weight, and must be compatible with existing equipment.

1.8 DIMENSIONS

- A. Before ordering any material or doing any work, the Contractor shall verify all dimensions, including elevations, and shall be responsible for the correctness of the same. No extra charge or compensation will be allowed on account of differences between actual dimensions and measurements indicated on the drawings.
- B. Any differences, which may be found, shall be submitted to the Engineer for consideration before proceeding with the work.

1.9 MANUFACTURER'S DIRECTIONS

- A. All manufactured articles shall be applied, installed and handled as recommended by the manufacturer, unless specifically called out otherwise in the plans. Advise the owner of any such conflicts before installation.

1.10 COOPERATION AND CLEANING UP

- A. The Contractor for the work under each section of the specifications shall coordinate his work with the work described in all other sections of the specifications to the end that, as a whole, the job shall be a finished one of its kind, and shall carry on his work in such a manner that none of the work under any section of these specifications shall be handicapped, hindered or delayed at any time.
- B. At all times during the progress of the work, the Contractor shall keep the premises clean and free of unnecessary materials and debris. The Contractor shall, on direction at any time from the Owner, clear any designated areas or area of materials and debris. On completion of any portion of the work, the Contractor shall remove from the premises all

tools and machinery and all debris occasioned by the work, leaving the premises free of all obstructions and hindrances.

1.11 PROJECT RECORD DRAWINGS

- A.** Maintain project record drawings in accordance with Division 01.
- B.** In addition to the other requirements, mark up a clean set of drawings as the work progresses to show the dimensioned location and routing of all electrical work which will become permanently concealed. Show routing of work in permanently concealed blind spaces within the building. Show complete routing and sizing of any significant revisions to the systems shown.
- C.** Record drawing field mark-ups shall be maintained on-site and shall be available for examination of the Owner's Representative at all times.

1.12 OPERATION AND MAINTENANCE MANUALS

- A.** Provide operation and maintenance manuals for training of Owner's Representative in operation and maintenance of systems and related equipment. In addition to requirements referenced in Division 01, the following is required for work provided under this section of the specifications.
- B.** Manuals shall be separate from work furnished under other divisions. Prepare a separate chapter for instruction of each class of equipment or system. Index and clearly identify each chapter and provide a table of contents.
- C.** Unless otherwise noted in Division 01, provide one copy of all material for approval.
- D.** The following is the suggested outline for operation and maintenance manuals and is presented to indicate the extent of items required in manuals.
 - 1.** Provide the following items in sequence for each chapter shown in Table of Contents:
 - a.** Describe the procedures necessary for personnel to operate the system including start-up, operation, emergency operation and shutdown.
 - 1)** Give complete instructions for energizing equipment and making initial settings and adjustments whenever applicable.
 - 2)** Include test results of all tests required by this and other sections of the specifications.
 - b.** Maintenance Instructions:
 - 1)** Provide instructions and a schedule of preventive maintenance, in tabular form, for all routine cleaning and inspection with recommended lubricants if required.

- 2) Provide instructions for minor repair or adjustments required for preventive maintenance routines, limited to repairs and adjustments which may be performed without special tools or test equipment and which requires no special training or skills.
- 3) Provide manufacturers' descriptive literature including approved shop drawings covering devices used in system, together with illustrations, exploded views, etc. Also include special devices provided by the Contractor.
- 4) Provide any information of a maintenance nature covering warranty items, etc., which have not been discussed elsewhere.
- 5) Include list of all equipment furnished for project, where purchased, technical representative if applicable and a local parts source with a tabulation of descriptive data of all electrical-electronic spare parts and all mechanical spare parts proposed for each type of equipment or system. Properly identify each part by part number and manufacturer.

1.13 DEMONSTRATION OF ELECTRICAL SYSTEMS

A. During substantial completion inspection:

1. Conduct operating test for approval under provisions of Division 01.
2. Demonstrate installation to operate satisfactorily in accordance with requirements of Contract Documents.
3. Should any portion of installation fail to meet requirements of Contract Documents, repair or replace items failing to meet requirements until items can be demonstrated to comply.
4. Have instruments available for measuring light intensities, voltage and current values, and for demonstration of continuity, grounds, or open circuit conditions.
5. Provide personnel to assist in taking measurements and making tests.

1.14 WARRANTY

- A.** In addition to the requirements of Division 01, or as specified in other sections. Warrant all materials, installation and workmanship for one (1) year from date of acceptance.
- B.** Copies of manufacturer product warranties for all equipment shall be included in the operation and installation manuals.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A.** All Materials and Equipment shall be new.

- B. All Materials and Equipment shall be listed by Underwriter's Laboratories or equivalent third party listing agency for the use intended.
- C. Materials and Equipment shall be acceptable to the authority having jurisdiction as suitable for the use intended when installed per listing and labeling instructions.
- D. No materials or equipment containing asbestos in any form shall be used. Where materials or equipment provided by this Contractor are found to contain asbestos such items shall be removed and replaced with non-asbestos containing materials and equipment at no cost to the Owner.
- E. In describing the various items of equipment, in general, each item will be described singularly, even though there may be numerous similar items.

PART 3 - EXECUTION

3.1 WORKMANSHIP

- A. Install Work using procedures defined in NECA Standard of Installation and/or the manufacturer's installation instructions.

3.2 TESTS

- A. Notify the Owner's representative at least 72 hours prior to conducting any tests.
- B. Perform additional tests required under other sections of these specifications.
- C. Perform all tests in the presence of the Owner's representative.
- D. The Contractor shall provide written notification to the Owner's representative and the State Electrical Inspector thirty days in advance of requests for rough-in and substantial completion inspections.

3.3 PENETRATIONS OF FIRE BARRIERS

- A. Related information to this section appears in Division 07, Fire Stopping.
- B. All holes or voids created to extend electrical systems through fire rated floors, walls or ceiling shall be sealed with an asbestos-free intumescent fire stopping material capable of expanding 8 to 10 times when exposed to temperatures 250°F or higher.
- C. Materials shall be suitable for the fire stopping of penetrations made by steel, glass, plastic and shall be capable of maintaining an effective barrier against flame, smoke and gases in compliance with the requirements of ASTM E814 and UL 1479.
- D. The rating of the fire stops shall be the same as the time-rated floor, wall or ceiling assembly.
- E. Install fire stopping materials in accordance with the manufacturer's instructions.

- F. Unless protected from possible loading or traffic, install fire stopping materials in floors having void openings of four (4) inches or more to support the same floor load requirements as the surrounding floor.

END OF SECTION 26 05 00

SECTION 26 05 05

SELECTIVE DEMOLITION FOR ELECTRICAL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Electrical Demolition.

1.2 RELATED SECTIONS

- A. Division 01 - Alteration Project Procedures.
- B. Division 02 - Minor Demolition for Remodeling.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Materials and equipment for patching and extending work: As specified in individual Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify field measurements and circuiting arrangements are as shown on Drawings.
- B. Verify that abandoned wiring and equipment serve only abandoned facilities.
- C. Demolition Drawings are based on a non-destructive walkthrough. Report discrepancies to Owner before disturbing existing installation.
- D. Beginning of demolition means installer accepts existing conditions.

3.2 PREPARATION

- A. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.
- B. Provide temporary wiring and connections to maintain existing systems in service during construction. When work must be performed on energized equipment or circuits, use personnel experienced in such operations.
- C. Existing Electrical Service: Maintain existing system in service.
- D. Existing Fire Alarm System: Maintain existing system in service.
- E. Existing Telephone System: Maintain existing system in service.

3.3 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- A.** Demolish and extend existing electrical work under provisions of Division 01, Division 02, and this Division.
- B.** Remove, relocate, and extend existing installations to accommodate new construction.
- C.** Remove abandoned wiring to source of supply.
- D.** Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces.
- E.** Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed.
- F.** Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.
- G.** Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.
- H.** Repair adjacent construction and finishes damaged during demolition and extension work.
- I.** Maintain access to existing electrical installations which remain active.
- J.** Extend existing installations using materials and methods as specified.
- K.** Where materials or equipment are to be turned over to Owner or reused and installed by the Contractor, it shall be the Contractor's responsibility to maintain condition of materials and equipment equal to the existing condition of the equipment before the work began. Repair or replace damaged materials or equipment at not additional cost to the Owner.

3.4 CLEANING AND REPAIR

- A.** Clean and repair existing materials and equipment which remain or are to be reused.

3.5 INSTALLATION

- A.** Install relocated materials and equipment under the provisions of Division 01.

3.6 DISPOSAL

- A.** Dispose of all hazardous waste in accordance with all local, State and Federal requirements.

END OF SECTION 26 05 05

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Building Wire.
- B. Cable.
- C. Wiring Connections and Terminations.

1.2 RELATED SECTIONS

- A. Section 26 05 53 – Identification for Electrical Systems.

1.3 REFERENCES

- A. ANSI/NEMA WC 70-2009 – Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy.
- B. NETA ATS – Acceptance testing specifications for Electrical Power Distribution and Systems.
- C. NFPA 70 – National Electrical Code.
- D. NFPA 262 – Standard Method of test for flame travel and smoke of wires and cables for use in air-handling spaces.
- E. UL 62 – Flexible Cords and Cables.
- F. UL 83 – Thermoplastic Insulated Wire and Cable.
- G. UL 1479 – Standard for Fire Tests of Through Wall Penetration Fire Stops.
- H. UL 1569 – Standard for Metal Clad Cable.
- I. UL 1581 – Reference Standard for Electrical Wires, Cables and Flexible Cords.

1.4 SUBMITTALS

- A. Submittals are not requested for this section.

1.5 QUALITY ASSURANCE

- A. Provide wiring materials located in plenums with peak optical density not greater than 0.5, average optical density not greater than 0.15, and flame spread not greater than 5 feet (1.5m) when tested in accordance with NFPA 262.

PART 2 - PRODUCTS

2.1 BUILDING WIRE

- A. Thermoplastic-insulated Building Wire: NEMA WC 70.
- B. Branch Circuits 10 AWG and Smaller: Copper conductor, 600 volt insulation, THHN/THWN or XHHW-2, solid or stranded conductor.
- C. Branch Circuit Wire Color Code:
 - 1. Color code wires by line or phase as follows:
 - a. Black, red, blue and white for 120/208V systems.
 - 2. For conductors 6 AWG and smaller, insulation shall be colored.
 - 3. Grounding conductors 6 AWG and smaller shall have green colored insulation.
- D. Control Circuits: Copper, stranded conductor 600 volt insulation, THHN/THNN or XHHW-2.

2.2 METAL CLAD CABLE

- A. UL 83, 1063, 1479, 1569, and 1581 listed, meets Federal Specification A-A-59544 (formerly J-C-30B). UL rated for installation in cable trays and environmental air handling spaces. Fire wall rated for 1, 2, and 3-hour through penetrations.
- B. Type MC Cable, Size 12 Through 10 AWG: Solid copper conductor, 600 volt thermoplastic insulation, rated 90° C dry, 75° wet, insulated green grounding conductor, and galvanized steel or aluminum armor over mylar.
- C. All metal clad cable shall be provided with color-coded insulation on all ungrounded conductors in accordance with NEC 210.5(C) and Part 3 of this section.

2.3 REMOTE CONTROL AND SIGNAL CABLE

- A. Control Cable for Class 1 Remote Control and Signal Circuits: Copper conductor, 600 volt insulation, rated 90° C, individual conductors twisted together, shielded, and covered with an overall PVC jacket; UL listed.
- B. Control Cable for Class 2 or Class 3 Remote Control and Signal Circuits: Copper conductor, 300 volt insulation, rated 90° C, individual conductors twisted together, shielded or unshielded (as required), and covered with a PVC jacket; UL listed.

- C. Plenum Cable for Class 2 or Class 3 Remote Control and Signal Circuits: Copper conductor, 300 volt insulation, rated 90° C, individual conductors twisted together, shielded or unshielded (as required), and covered with a nonmetallic jacket; UL listed for use in air handling ducts, hollow spaces used as ducts, and plenums.

2.4 WIRING CONNECTIONS AND TERMINATIONS

- A. For conductors 8 AWG and smaller:
 - 1. Dry interior areas: Spring wire connectors, pre-insulated “twist-on” rated 105 degrees C per UL 468C. Where stranded conductors are terminated on screw type terminals, install crimp insulated fork or ring terminals. Thomas & Betts Sta-Kon or equal.

PART 3 - EXECUTION

3.1 GENERAL WIRING METHODS

- A. Use no wire smaller than 12 AWG for power and lighting circuits, and no smaller than 18 AWG for control wiring.
- B. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- C. Wiring in lighting fixture channels shall be rated for 90° C minimum.
- D. Do not share neutral conductors. Provide a dedicated neutral conductor for each branch circuit that requires a neutral.

3.2 WIRING INSTALLATION IN RACEWAYS

- A. Pull all conductors into a raceway at the same time. Verify that raceway is complete and properly supported prior to pulling conductors.
- B. Install wire in raceway after all mechanical work likely to injure conductors has been completed.
- C. Conductors shall be carefully inspected for insulation defects and protected from damage as they are installed in the raceway. Where the insulation is defective or damaged, the cable section shall be repaired or replaced at the discretion of the Owner and at no additional cost to the Owner.
- D. When two or more neutrals are installed in one conduit, identify each with the proper circuit number in accordance with Section 26 05 53.

3.3 CABLE INSTALLATION

- A. Provide protection for exposed cables where subject to damage.

- B. Support cables above accessible ceilings; do not rest on ceiling tiles. Use spring metal clips or cable ties to support cables from structure. Do not support cables from ceiling suspension system. Include bridle rings or drive rings.
- C. Use suitable cable fittings and connectors.

3.4 WIRING CONNECTIONS AND TERMINATIONS

- A. Stranded wire shall not be wrapped around screw terminals.
- B. Splice only in accessible junction boxes.
- C. Thoroughly clean wires before installing lugs and connectors.
- D. Make splices, taps and terminations to carry full ampacity of conductors without perceptible temperature rise.
- E. Control systems wiring in conjunction with mechanical, electrical or miscellaneous equipment to be identified in accordance with wiring diagrams furnished with equipment.
- F. Do not exceed manufacturer's recommended pull tensions.

3.5 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Division 01 and Section 26 01 26.
- B. Inspect wire and cable for physical damage and proper connection.
- C. Torque conductor connections and terminations to manufacturer's recommended values.

3.6 WIRE AND CABLE INSTALLATION SCHEDULE

- A. All Locations: Building wire and/or remote control and signal cable in raceways. Metal clad cable.

END OF SECTION 26 05 19

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Power System Grounding.
- B. Electrical Equipment and Raceway Grounding and Bonding.

1.2 RELATED SECTIONS

- A. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 01 General Requirements, Section 26 05 00 – Common Work Results for Electrical.
- B. Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables.

1.3 REFERENCE STANDARDS

- A. ANSI/NFPA 70 – National Electrical Code.
- B. ASTM B 3 – Standard Specification for Soft or Annealed Copper Wire.
- C. IEEE Std 142 – Recommended Practice for Grounding of Industrial and Commercial Power System.
- D. UL 467 – Standard for Grounding and Bonding Equipment.

1.4 SYSTEM DESCRIPTION

- A. Provide a complete grounding system for services and equipment as required by State and Local Codes, NEC, applicable portions of other NFPA codes, and as indicated herein.

1.5 SUBMITTALS

- A. Submittals are not requested for this section.

1.6 COORDINATION

- A. Division 01 – Administrative Requirements: Requirements for Coordination.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Grounding Conductors: Copper conductor bare or green insulated.
- B. Mechanical Grounding and Bonding Connectors: Non-reversible crimp type lugs only. Use factory made compression lug for all terminations.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Provide a separate, insulated equipment-grounding conductor in all branch circuits. Terminate each end on a grounding lug, bus, or bushing. Multiple conductors on single lug not permitted. Each grounding conductor shall terminate on its own terminal lug.
- B. Bond together exposed non-current carrying metal parts of electrical equipment, metal raceway systems, grounding conductor in raceways and cables, receptacle ground connectors, and plumbing systems.
- C. Grounding conductors for branch circuits shall be sized in accordance with NEC, except minimum size grounding conductor shall be No. 12 AWG.
- D. Grounding conductor is in addition to neutral conductor and in no case shall neutral conductor serve as grounding means.

3.2 FIELD QUALITY CONTROL

- A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.
- B. Continuity Test: Continuity test shall be performed on all power receptacles to ensure that the ground terminals are properly grounded to the facility ground system.

END OF SECTION 26 05 26

SECTION 26 05 29

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A.** Section included hangers and supports for Power Systems.
- B.** Conduit Supports.
- C.** Spring Steel Clips.
- D.** Sleeves.
- E.** Mechanical Sleeve Seals.

1.2 RELATED SECTIONS

- A.** The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 01 General Requirements, and Section 26 05 00 – Common Work Results for Electrical.

1.3 REFERENCES

- A.** International Building Code (IBC), Chapter 16 – Structural Design.

1.4 SUBMITTALS

- A.** Division 01: Requirements for submittals.
- B.** Product Data: Submit product data for specialty supports.

1.5 QUALITY ASSURANCE

- A.** Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.
- B.** Perform Work in accordance with State of Alaska Standard Specifications.

PART 2 - PRODUCTS

2.1 CONDUIT SUPPORTS

- A.** Hanger Rods: Threaded high tensile strength galvanized carbon steel with free running threads.

- B. Beam Clamps: Malleable Iron, with tapered hole in base and back to accept either bolt or hanger rod. Set screw: hardened steel.
- C. Conduit clamps - general purpose: One-hole malleable iron for surface mounted conduits.
- D. Cable Ties: High strength nylon temperature rated to 185 degrees F. self-locking.

2.2 SLEEVES

- A. Sleeves Through Non-fire Rated Beams, Walls, Footings, and Potentially Wet Floors: Steel pipe or 18 gage thick galvanized steel.
- B. Sleeves Through Fire Rated and Fire Resistive Floors and Walls, and Fire Proofing: Prefabricated fire rated sleeves including seals, UL listed.
- C. Fire-stopping Insulation: Glass fiber type, non-combustible.

2.3 MECHANICAL SLEEVE SEALS

- A. Product Description: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between object and sleeve, connected with bolts and pressure plates causing rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Division 01: Verification of existing conditions before starting work.
- B. Verify openings are ready to receive sleeves.

3.2 PREPARATION

- A. Obtain permission from Owner's Representative before using powder-actuated anchors.
- B. Obtain permission from Owner's Representative before drilling or cutting structural members.

3.3 INSTALLATION - GENERAL

- A. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using beam clamps, or spring steel clips.
- B. Use toggle bolts or hollow wall fasteners in hollow masonry partitions and walls; self-drilling anchors on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.

- C. Do not fasten supports to piping, ductwork, mechanical equipment, conduit, or ceiling suspension system.
- D. Do not penetrate by drilling or screwing into metal roof decking. All penetrations into metal roof decking must be approved by the Project Manager in writing.
- E. Securely fasten fixtures and equipment to building structure in accordance with manufacturer's recommendations and to provide necessary earthquake anchorage.

3.4 INSTALLATION - SLEEVES

- A. Conduit penetrations not required to be watertight: Sleeve and fill with silicon foam.
- B. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.
- C. Where conduit or raceway penetrates floor, ceiling, or wall, close off space between conduit or raceway and adjacent work with fire stopping insulation and caulk airtight. Provide close fitting metal collar or escutcheon covers at both sides of penetration.
- D. Install stainless steel escutcheons at finished surfaces.

END OF SECTION 26 05 29

SECTION 26 05 33

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Metal Conduit.
- B. Flexible Metal Conduit.
- C. Electrical Metallic Tubing.
- D. Fittings and Conduit Bodies.
- E. Wall and Ceiling Outlet Boxes.

1.2 RELATED SECTIONS

- A. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 01 - General Requirements and Section 26 05 00 – Common Work Results for Electrical.
- B. Division 07 - Thermal and Moisture Protection.
- C. Division 08 - Openings: Access Doors and Frames.
- D. Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables.
- E. Section 26 05 26 – Grounding and Bonding for Electrical Systems.
- F. Section 26 05 29 – Hangers and Supports for Electrical Systems.
- G. Section 26 05 53 – Identification for Electrical Systems.
- H. Section 26 27 26 – Wiring Devices.

1.3 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI C80.3 - Electrical Metallic Tubing, Zinc Coated.
- B. American Society for Testing and Materials (ASTM):
 - 1. ASTM A 123 – Specification for Zinc Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars and Strip.

C. National Electrical Manufacturers Association (NEMA):

1. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.
2. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports.
3. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

D. Underwriters Laboratory (UL):

1. UL 514B – Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies.

E. National Fire Protection Association (NFPA):

1. NFPA 70 - National Electrical Code.

F. International Building Code (IBC):

1. IBC chapters 16 and 17 seismic requirements.

1.4 RACEWAY AND BOX INSTALLATION SCHEDULE

A. Raceway Minimum Size:

1. Provide 1/2 inch minimum, unless otherwise noted.

B. In or through CMU walls:

1. Raceway: EMT conduit may penetrate through CMU walls where the EMT is installed in a sleeve and does not come in direct contact with the CMU.
2. Boxes and Enclosures: Provide concrete tight cast and sheet metal steel metal boxes.

C. Concealed Dry Locations:

1. Raceway: Provide electrical metallic tubing.
2. Boxes and Enclosures: Provide sheet-metal boxes.
3. Fittings: Provide galvanized malleable iron and steel.

D. Exposed Dry Locations:

1. Raceway: EMT conduit may be used where exposed conduit is allowed and where it is not subject to physical damage or where installed on the ceiling or a minimum of ten feet above the floor.

2. Boxes and Enclosures: Provide sheet-metal boxes with raised steel covers.

3. Fittings: Provide galvanized malleable iron and steel.

E. Equipment Connections: Provide short extensions (three feet maximum) of flexible metal conduit for connections to light fixtures, motors, or equipment that requires removal for maintenance or replacement.

1.5 DESIGN REQUIREMENTS

A. Raceway Minimum Size:

1. Line Voltage Circuits: Raceway is sized on the drawings for copper conductors with 600-Volt type XHHW insulation, unless otherwise noted. Where a raceway size is not shown on the drawings, it shall be calculated to not exceed the percentage fill specified in the NEC Table 1, Chapter 9 using the conduit dimensions of the NEC Table 4, Chapter 9 and conductor properties of the NEC Table 5, Chapter 9.

B. Box Minimum Size: Provide all boxes sized and configured per NEC Article 370 and as specified in this section.

C. Seismic Support: Provide support in accordance with section 26 05 29 – Hangers and Supports for Electrical Systems.

1.6 SUBMITTALS

A. Submittals are not requested for this section.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

PART 2 - PRODUCTS

2.1 FLEXIBLE METAL CONDUIT (FMC)

A. Product Description: UL 1; galvanized or zinc-coated flexible steel, full or reduced-wall thickness.

B. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel or malleable iron with insulated throat bushings. Die cast zinc or threaded inside throat fittings are not acceptable.

2.2 ELECTRICAL METALLIC TUBING (EMT)

A. Product Description: ANSI C80.3, UL 797; galvanized steel tubing.

- B. Fittings and Conduit Bodies: ANSI/NEMA FB 1; steel or malleable iron, compression type with insulated throat bushings. Zinc die cast, set screw, or indenter fittings are not acceptable.

2.3 RIGID NONMETALLIC CONDUIT (RNC)

- A. Not approved for use on this project.

2.4 HIGH DENSITY POLYETHYLENE CONDUIT (HDPE)

- A. Not approved for use on this project.

2.5 ELECTRICAL NONMETALLIC TUBING (ENT)

- A. Not approved for use on this project.

2.6 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, UL514A galvanized steel, with plaster ring where applicable.

1. Minimum Size: 4 inches square or octagonal, 1-1/2 inches deep, unless otherwise noted.
2. Luminaire and Equipment Supporting Boxes: Rated for weight of equipment supported; furnish 1/2 inch male fixture studs where required. Minimum Size: 4 inches square or octagonal, 2-1/8 inches deep.
3. Concrete and Masonry: Concrete type with field installed tape cover to prevent concrete entry to raceway system. Minimum Size: 4 inches square, 2-1/8 inches deep.
4. Cut-In Boxes: Minimum size 2" x 3" x 2-1/2" deep. Provide cut-in outlet boxes where required for installation in existing walls.

- B. Vapor Barrier Boxes: Airtight box with vapor barrier flange and integral wire entry seal. Lessco, Nutek, Enviroseal, or approved equal.

- C. Wall Plates: As specified in Section 26 27 26.

2.7 EXPANSION FITTINGS

- A. Galvanized malleable iron, galvanized with grounding bond jumper.

2.8 BUSHINGS

- A. Non-grounding: Threaded impact resistant plastic.
- B. Grounding: Insulated galvanized malleable iron/steel with hardened screw bond to raceway and conductor lug.

2.9 LOCKNUTS

- A.** Threaded Electro Zinc Plated Steel designed to cut through protective coatings for ground continuity.

PART 3 - EXECUTION

3.1 INSTALLATION

- A.** Ground and bond raceway and boxes in accordance with Section 26 05 26.
- B.** Provide seismic support and fasten raceway and box supports to structure and finishes in accordance with Section 26 05 29.
- C.** Identify raceway and boxes with origin and destination in accordance with Section 26 05 53.
- D.** Unless otherwise noted, do not inter-mix conductors from separate panelboards or any other system in the same raceway system or junction boxes.

3.2 INSTALLATION - GENERAL RACEWAY

- A.** Install raceway for all systems, unless otherwise noted.
- B.** Install an equipment grounding conductor inside of all raceways containing line voltage conductors.
- C.** Provide raceways concealed in construction unless specifically noted otherwise, or where installed at surface cabinets, motor and equipment connections and in Mechanical and Electrical Equipment rooms. Do not route conduits on roofs, outside of exterior walls, or along the surface of interior finished walls unless specifically noted on the plans.
- D.** Raceway routing and boxes are shown in approximate locations unless dimensioned. Where raceway routing is not denoted, field-coordinate to provide complete wiring system.
- E.** Do not route raceways on floor. Arrange raceway and boxes to maintain a minimum of 6 feet 6 inches of headroom and present a neat appearance. Install raceways level and square to a tolerance of 1/8" per 10 feet. Route exposed raceways and raceways above accessible ceilings parallel and perpendicular to walls, ceiling, and adjacent piping.
- F.** Maintain minimum 6-inch clearance between raceway and mechanical and piping and ductwork. Maintain 12-inch clearance between raceway and heat sources such as flues, steam pipes, heating pipes, heating appliances, and other surfaces with temperatures exceeding 104 degrees F.

- G.** Do not install raceway imbedded in spray applied fire proofing. Seal raceway penetrations of fire-rated walls, ceilings, floors in accordance with the requirements of Section 26 05 00 and Division 07.
- H.** Route raceway through roof openings for piping and ductwork where possible; otherwise, route through roof jack with pitch pocket. Coordinate all requirements with Division 07 of these specifications.
- I.** Where raceway penetrates fire-rated walls and floors, provide mechanical fire-stop fittings with UL listed fire rating equal to wall or floor rating, seal opening around conduit with UL listed firestop sealant or intumescent firestop, preserving the fire time rating of the construction. Install in accordance with Section 07 84 00 Firestopping.
- J.** Raceways and boxes penetrating vapor barriers or penetrating areas from cold to warm shall be taped and sealed with a non-hardening duct sealing compound to prevent the accumulation of moisture, and shall include a vapor barrier on the outside.
- K.** Arrange raceway supports to prevent misalignment during wiring installation. Support raceway using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- L.** Do not attach raceway to ceiling support wires or other piping systems and do not fasten raceway with wire or perforated pipe straps. Remove all wire used for temporary raceway support during construction, before conductors are pulled. Raceway shall be installed to permit ready removal of equipment, piping, ductwork, or ceiling tiles.
- M.** Cut conduit square; de-burr cut ends. Bring conduit to the shoulder of fittings and couplings and fasten securely. Where locknuts are used, install with one inside box and one outside with dished part against box.
- N.** Install no more than the equivalent of three 90-degree bends between boxes.
- O.** Install conduit bodies to make sharp changes in direction, such as around beams. "Goosenecks" in conduits are not acceptable.
- P.** Provide protective plastic bushings or insulated throat bushings at each raceway termination not installed to an enclosure. Bushings shall be threaded to the raceway end or connector.
- Q.** Avoid moisture traps; install junction box with drain fitting at low points in raceway system.
- R.** Install fittings and flexible metal conduit to accommodate 3-axis movements where raceway crosses seismic joints.
- S.** Install fittings designed and listed to accommodate expansion and contraction where raceway crosses control and expansion joints.
- T.** Paint all exposed conduit to match surface to which it is attached or crosses. Clean greasy or dirty conduit prior to painting in accordance with paint manufacturer's

instructions. Where raceway penetrates non-rated ceilings, floors or walls, provide patching, paint and trim to retain architectural aesthetics similar to surroundings.

3.3 INSTALLATION – GENERAL BOXES

- A.** Provide electrical boxes as shown on Drawings, and as required for splices, taps, wire pulling, equipment connections, and code compliance. All electrical box locations shown on Drawings are approximate unless dimensioned.
- B.** Install pull boxes and junction boxes above accessible ceilings and in unfinished areas only. Where installation is inaccessible, install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed luminaries. Coordinate locations and sizes of required access doors with Division 08.
- C.** Coordinate layout and installation of boxes to provide adequate headroom and working clearance. Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes.
- D.** Align wall-mounted outlet boxes for switches, thermostats, and similar devices.
- E.** Use multiple-gang boxes where more than one device are mounted together; do not use sectional boxes. Provide barriers to separate wiring of different voltage systems and where normal and emergency power circuits occur in the same box.
- F.** Orient boxes to accommodate wiring devices oriented as specified in Section 26 27 26.
- G.** Locate and install boxes to maintain headroom and to present a neat appearance.
- H.** Provide knockout closures for unused openings.
- I.** Install boxes in walls without damaging wall insulation or reducing its effectiveness.
- J.** Provide recessed outlet boxes in finished areas; secure boxes to interior wall and partition studs, accurately positioning to allow for surface finish thickness. For outlet boxes in walls with combustible finished surfaces such as wood paneling or fabric wall coverings, position box to be flush with finished surface per NEC requirements.
- K.** Use stamped steel stud bridges for flush outlets in hollow stud wall, and adjustable steel channel fasteners for flush ceiling outlet boxes. Accurately position bridges to allow for surface finish thickness.
- L.** Do not install flush mounted boxes back-to-back in walls; install with minimum 6 inches separation.
- M.** Install with minimum 24 inches separation in fire rated walls. Limit penetrations in fire rated walls to 16 square inches each and a maximum total combined penetration area of 100 square inches in any given 100 square feet of wall. Where penetrations are in excess of these requirements provided UL listed fire stop wrap acceptable to Authority having Jurisdiction.

- N.** Do not fasten boxes to ceiling support wires or other piping systems.
- O.** Support boxes independently of conduit.
- P.** Clean interior of boxes to remove dust, debris, and other material and clean exposed surfaces and restore finish.
- Q.** Provide blank covers or plates for all boxes that do not contain devices.

END OF SECTION 26 05 33

SECTION 26 05 53

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Tape Labels.
- B. Wire and Cable Markers.

1.2 RELATED SECTIONS

- A. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 01 General Requirements, and Section 26 05 00 – Common Work Results for Electrical.
- B. Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables.
- C. Section 26 05 33 – Raceway and Boxes for Electrical Systems.
- D. Section 26 27 26 – Wiring Devices.

1.3 SUBMITTALS

- A. Submittals are not requested for this section.

PART 2 - PRODUCTS

2.1 TAPE LABELS

- A. Product Description: Adhesive tape labels, with 3/16 inch Bold Black letters on clear background made using Dymo Rhino series label printer or approved equal.
- B. Embossed adhesive tape will not be permitted for any application.

2.2 WIRE MARKERS

- A. Power and Lighting Description: Machine printed heat-shrink tubing, cloth or wrap-on type, for all neutrals and Phase conductors.
- B. Low Voltage System Description: Self-adhesive machine printed label with unique wire number that is shown on shop drawing for system.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION

- A. Degrease and clean surfaces to receive tape labels.
- B. Install tape labels parallel to equipment lines.

3.2 WIRE IDENTIFICATION

- A. Provide wire markers on each conductor in pull boxes, outlet and junction boxes, and at load connection. Identification shall be as follows:
 - 1. Markers shall be located within one inch of each cable end.
 - 2. Each wire and cable shall carry the same labeled designation over its entire run, regardless of intermediate terminations.
 - 3. Color code phases, neutral, and ground per NEC requirements and Section 26 05 19.
 - 4. Color-code all low-voltage system wires and cables in accordance with the individual sections in which they are specified.
 - 5. For power and lighting circuits, identify with branch circuit number.

3.3 JUNCTION BOX IDENTIFICATION

- A. Label each accessible lighting and power junction box with the panelboard name and circuit number.
- B. For junction boxes above ceilings, mark the box cover with the circuit or system designation using permanent black marker. For junction boxes in finished areas, mark the inside of the cover with the circuit or system designation using permanent black marker.

3.4 DEVICE PLATE IDENTIFICATION

- A. Label each receptacle device plate or point of connection denoting the panelboard name and circuit number.
- B. Install adhesive label on the top of each plate.

END OF SECTION 26 05 53

SECTION 26 09 23

LIGHTING AND FAN CONTROL DEVICES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A.** This Section includes stand-alone (non-networked) automatic control devices.
 - 1.** Occupancy sensors.

1.2 RELATED SECTIONS

- A.** Section 23 09 93 – Sequence of Operation for HVAC Controls.
- B.** Section 26 05 00 - Common Work Results for Electrical.
- C.** Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables.
- D.** Section 26 05 33 - Raceway and Boxes for Electrical Systems.
- E.** Section 26 27 26 – Wiring Devices: Manual Light Switches.

1.3 SUBMITTALS

- A.** Product Data: For each type of product indicated. Include installation instructions for all sensors and switches, including any detailed programming information.
- B.** Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals. Include manufacturer's installation and troubleshooting instructions.

1.4 CLOSEOUT SUBMITTALS

- A.** Operation and Maintenance Manuals: Submit manufacturer's instructions for occupancy sensor maintenance and adjustment.

1.5 COORDINATION

- A.** Coordinate layout and installation of ceiling-mounted devices with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, smoke detectors, fire-suppression system, and partition assemblies.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS – OCCUPANCY SENSORS

- A. Wattstopper.
- B. Sensor Switch.
- C. Hubbell.
- D. Leviton.
- E. Substitutions: Under provisions of Division 01.

2.2 OCCUPANCY SENSORS

- A. Ceiling-Mounted Dual-Tech Occupancy Sensor: Dual-technology PIR and ultrasonic or microphonic sensor with white housing, self-adjusting settings, automatic dual-mode operation, built-in circadian calendar for testing, red/green LEDs for indication of PIR/ultrasonic or microphonic activity, and non-volatile memory to retain automatic and manual settings during power outages. Provide specific coverage area and either 180° or 360° coverage patterns, as required in the space to prevent unintentional tripping in adjacent spaces. Sensor shall have selectable timer settings. Sensor shall retain all manually adjusted or “learned” settings in event of a power outage.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate power packs and similar devices in concealed, accessible areas.

3.2 SENSOR TESTING AND CALIBRATION

- A. Occupancy Sensors:
 1. Activate test setting on sensor. Walk past the room entrance and confirm that the sensor is not picking up unwanted motion from adjacent spaces such as hallways. Provide masking on infrared lens to restrict field of view if necessary and re-test.
 2. Walk into room and confirm that the sensor immediately picks up the motion and turns the fan ON.
 3. Walk around the room and confirm that the sensor is picking up small motion. Relocate sensor or add additional sensors as required to provide complete coverage throughout the space.
 4. Adjust the PIR and ultrasonic or microphonic sensitivity settings as required to avoid false tripping due to air movement.
 5. Confirm that the sensor is performing the control sequence of operation as noted on the Plans. Make adjustments as required until the sequence is met.

6. Put sensor back into normal mode and document the final settings on all occupancy sensors and include in the Project Record Drawings.

3.3 CONTROL SEQUENCE OF OPERATIONS

1. See Plans for control sequence for each space. Provide all programming, adjustment and field changes as required to perform the specified control sequence.
2. Where no control sequences are shown on the Plans, coordinate with the Owner to determine if the occupancy sensor default factory settings are suitable for their needs in each space and adjust accordingly.

3.4 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain control devices. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION 26 09 23

SECTION 26 27 26

WIRING DEVICES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Wall Switches.
- B. Wall Dimmers.
- C. Receptacles.
- D. Device Plates and Box Covers.

1.2 RELATED SECTIONS

- A. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 01 - General Requirements and Section 26 05 00 – Common Work Results for Electrical.
- B. Section 26 05 26 – Grounding and Bonding for Electrical Systems.
- C. Section 26 05 33 – Raceway and Boxes for Electrical Systems.
- D. Section 26 05 53 – Identification for Electrical Systems.

1.3 REFERENCE STANDARDS

- A. FS W-C-596 – Federal Specification for Electrical Power Connector, Plug, Receptacle, and Cable Outlet.
- B. FS W-S-896 – Federal Specification for Switches, Toggle (Toggle and Lock), Flush Mounted.
- C. NEMA WD 1 - General Color Requirements for Wiring Devices.
- D. ANSI/NEMA WD 6 – Wiring Devices – Dimensional Requirement.
- E. UL 20 – General-Use Snap Switches.
- F. UL 498 - Attachment Plugs and Receptacles.
- G. UL 943 – Ground-Fault-Circuit-Interrupters.

1.4 SUBMITTALS

- A. Product Data: Submit product data for all components provided that are specified in this section showing configurations, finishes, and dimensions. Each catalog sheet should be clearly marked to indicate exact part number provided, including all options and accessories.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS - WALL SWITCHES

- A. Hubbell.
- B. Leviton.
- C. Pass & Seymour.
- D. Arrow Hart
- E. Substitutions: Under provisions of Division 01.

2.2 WALL SWITCHES

- A. Wall Switches for Lighting Circuits: UL 20; NEMA WD 1; and Federal Specification FS W-S-896 AC industrial grade snap switch with toggle handle, rated 20 amperes and 120-277 volts AC. Handle: ivory nylon. Provide single-pole or 3-way switches as indicated on Plans.

2.3 ACCEPTABLE MANUFACTURERS - WALL DIMMERS

- A. Acuity Brands.
- B. Lutron.
- C. Leviton.
- D. Substitutions: Under provisions of Division 01.

2.4 WALL DIMMERS

- A. Wall Dimmers for Electronic Low Voltage (ELV) LED Circuits: NEMA WD 1; Decora-style, commercial grade preset wall dimmer switch, rated a minimum of 400 Watts and 120 volts AC. Provide circuitry designed to control the input of electronic (solid-state) low voltage ELV transformers. Provide resettable overload protection that provides automatic shut-off when dimmer capacity is exceeded. Color: Ivory. Handle: Linear slide type for dimmer adjustment. Pushbutton switch for on/off operation. Dimmer shall be fully compatible with all loads connected for smooth, flicker-free dimming operation. Provide complete with device plate.

2.5 ACCEPTABLE MANUFACTURERS - RECEPTACLES

- A. Hubbell.

- B. Leviton.
- C. Pass & Seymour.
- D. Arrow Hart
- E. Substitutions: Under provisions of Division 01.

2.6 RECEPTACLES

- A. Convenience and Straight-blade Receptacles: UL 498, NEMA WD 1 and Federal Specification FS W-C-596 industrial grade receptacle.
- B. Convenience Receptacle Configuration: NEMA WD 1; Type 5-20R, ivory nylon face.
- C. GFCI Receptacles: 20A, duplex convenience receptacle with integral class 'A' ground fault current interrupter, LED indicator lamp and integral lockout.
- D. Tamper-Resistant Receptacles: Complying with the requirements of UL 498 (section 131) and NEC 406.12-14.

2.7 DEVICE PLATES

- A. Decorative Cover Plate: Smooth 430 or 302 stainless steel with metal, counter sunk screws to match device plate.
- B. Exposed Work Cover Plate: ½ inch raised, square, pressed, galvanized or cadmium plated steel cover plate supporting devices independent of the outlet box.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install wall switches and wall dimmers 42 inches above floor, OFF position down.
- B. Install convenience receptacles 42 inches above floor, 4 inches above counters or backsplash, grounding pole on bottom.
- C. Guest Rooms and Suites: Install tamperproof receptacles at all locations.
- D. Install specific-use receptacles at heights shown on Contract Drawings.
- E. Unless otherwise noted, mounting heights are for finished floor to center line of outlet.
- F. Install decorative plates on switch, receptacle, and blank outlets in finished areas. Use midsize or jumbo plates for outlets installed in masonry walls, where required to cover up imperfections in the wall opening.
- G. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, and above accessible ceilings.

- H. Install devices and wall plates flush and level.
- I. Ground receptacles to boxes with a grounding wire. Grounding through the yoke or screw contact is not an acceptable alternate to the ground wire.
- J. Install circuit label on each new receptacle and light switch in accordance with Section 26 05 53.

END OF SECTION 26 27 26

SECTION 26 51 00

INTERIOR LIGHTING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A.** Interior Luminaires and Accessories.
- B.** Lamp Modules.
- C.** Drivers.

1.2 RELATED SECTIONS

- A.** The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under General Conditions of the Contract General Requirements, and Section 26 05 00 – Common Work Results for Electrical.
- B.** Division 09 – Finishes: Painting and Ceilings.
- C.** Section 26 05 19 – Low Voltage Electrical Power Conductors and Cables.
- D.** Section 26 05 26 - Grounding and Bonding for Electrical Systems.
- E.** Section 26 05 29 - Hangers and Supports for Electrical Systems: General Supports for Luminaires.
- F.** Section 26 05 33 – Raceway and Boxes for Electrical Systems.
- G.** Section 26 05 53 – Identification for Electrical Systems.
- H.** Section 26 27 26 – Wiring Devices.

1.3 DEFINITIONS

- A.** CCT: Correlated Color Temperature.
- B.** CRI: Color Rendering Index.
- C.** Driver: LED Power Supply.
- D.** Fixture: See "Luminaire."
- E.** IES: Illuminating Engineering Society of North America

- F. Lamp Module: Replaceable LED board array/light engine including a plug-in connector.
- G. LED: Light-emitting diode.
- H. Lumen: Measured output of lamp and luminaire, or both.
- I. Luminaire: Complete lighting unit, including lamp or lamp module, driver, reflector, and housing.
- J. THD: Total Harmonic Distortion.

1.4 REFERENCE STANDARDS

- A. NEMA SSL-7A Phase-Cut Dimming for Solid State Lighting—Basic Compatibility.
- B. IES TM-21-11 Projecting Long Term Lumen Maintenance of LED Light Sources.
- C. IES LM-80 IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules.

1.5 SUBMITTALS

- A. Product Data: Submit the following:
 - 1. Luminaires: Include manufacturer's product data sheets including outline drawings showing support points, weights, and accessory information for each luminaire type. Clearly indicate all options being provided. Arrange data for luminaires in the order of fixture designation.
 - 2. Prior to preparing submittals, coordinate with the reflected ceiling plan for ceiling finishes and provide all necessary kits, brackets, stems, trim, etc. to install the specified fixtures in the ceilings provided. Clearly note these configurations on the product data sheets.
- B. Warranty: Provide copies of manufacturer's warranty information for each luminaire. If warranty information is the same for a group of manufacturer's luminaires, provide a letter or schedule clearly indicating what warranty applies to each fixture.
- C. LED Luminaire Substitutions: The luminaires shown on the Plans in the Fixture Schedule are not intended to be sole sourced but are considered the Basis of Design.

1.6 CLOSEOUT SUBMITTALS

- A. Project Record Drawings: Update part numbers and description on the Lighting Fixture Schedule to match the actual luminaires installed. Submit under Section 26 05 00.
- B. Operation and Maintenance Manuals:

1. Provide recommended luminaire cleaning and re-lamping schedule. If any luminaire lenses require special lubricants for cleaning, include this in the schedule.
2. Provide detailed bill of materials for all items purchased in this section including distributor's contact name, phone number and pertinent information.
3. Provide luminaire manufacturer's installation instructions.
4. Provide manufacturer's step-by-step installation instructions showing how to replace the LED lamp modules and drivers for each luminaire.
5. Include any specific warranty information provided by the manufacturer for luminaires, LED boards and drivers.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site, store and protect in a clean, dry environment under provisions of General Conditions of the Contract.

1.8 EXTRA MATERIALS

- A. Provide spare parts under provisions of Division 01.
- B. Lenses: Ten percent (10%) of each size and type.
- C. Drivers: Ten percent (10%) of each size and type installed.
- D. LED Lamp Modules: Provide a minimum of ten percent (10%) of each unique type of lamp module used on the project. Ship LED lamp modules (i.e. LED board) in protective packaging and label each lamp module to indicate the fixture type that it may be installed in. (i.e. Type A or Type V2).
- E. LED Luminaire: Where the specified or substitute luminaire does not have a replaceable lamp or lamp module, provide ten percent (10%) spare luminaires per size and type installed.

PART 2 - PRODUCTS

2.1 INTERIOR LUMINAIRES AND ACCESSORIES

- A. Luminaires: Provide UL listed luminaires as scheduled on the drawings or as approved equal.
- B. Listing: Luminaires shall be listed for use in the environment in which they are installed. For example, luminaires installed in return air plenums, direct contact with insulation, or in hazardous, wet, damp, or corrosive locations shall be UL listed for such application.
- C. Accessories: Provide all mounting kits, supports, interconnecting wiring, power supplies, trim kits, gaskets, etc. for a complete installation.

D. Housing:

1. Metal parts shall be free of burrs and sharp corners and edges. Form and support to prevent warping and sagging.
2. Frames and Other Internal Access: Smooth operating, free of light leakage under operating conditions. Designed to prevent frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position.
3. Luminaires shall be factory painted and free of discoloration. Color as scheduled.

2.2 LAMP MODULES – LED

- A. All LED's shall be nominal 3000 degrees Kelvin (nominal) within a 3-step MacAdam Ellipse unless special circumstances require a different color temperature application, see Luminaire Schedule on Plans.
- B. Color Rendering: Minimum CRI as scheduled on the Plans for each fixture. Under no circumstances shall the CRI be less than 80.
- C. Lamp Life: Minimum lamp life shall be calculated in accordance with IES LM-80. Lamp life for each luminaire shall be equal or greater than scheduled on the Plans. Under no circumstances shall a luminaire have a minimum rated life (L70) less than 50,000 hours at 75 degrees F average indoor ambient temperature.
- D. Replaceable: Unless otherwise scheduled, all LED modules shall be field replaceable with quick disconnect connections.

2.3 DRIVERS - LED

- A. LED Driver: Provide UL listed power supply as recommended by the LED fixture manufacturer for operation of the specified LED lamps. Power supply shall be integral to the luminaire. Power supply shall be dual voltage (120/277V) where available or operate at the supply voltage indicated on the Plans.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Coordinate layout and installation of lighting fixtures and suspension system with other construction that penetrates ceilings or is supported by them, including but not limited to HVAC equipment, fire-suppression system, piping, and partition assemblies.
- B. Support surface-mounted luminaires directly from building structure. Install level and parallel/perpendicular with ceiling or wall surfaces.
- C. Provide luminaire disconnecting means in the wiring compartment of each luminaire. Where the luminaire is fed from a multi-wire branch circuit, provide multi-pole

disconnect to simultaneously break all supply conductors to the driver, including the grounded conductor.

3.2 RELAMPING

- A.** Replace luminaires that have failed lamps at completion of work.

3.3 ADJUSTING AND CLEANING

- A.** Align luminaires and clean lenses and diffusers at completion of work. Clean paint splatters, dirt, and debris from installed luminaires.
- B.** Touch up luminaire finish at completion of work.

END OF SECTION 26 51 00