Anchorage School District

KINCAID ELEMENTARY SCHOOL SITE IMPROVEMENTS

ITB 2027-802
ASD PROJECT No. 246002

DATE ISSUED: November 9, 2026

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INVITATION TO BID (ITB) NUMBER: 2027 - 802
Kincaid Elementary School Site Improvements

Sealed bids will be received in accordance with the time schedule shown below by the Anchorage School District, Purchasing Department, located at 4919 Van Buren Street Anchorage, Alaska 99517 for Kincaid Elementary School Site Improvements per the attached Instructions to Bidders, General Conditions, Technical Specifications, Drawings and Bid Form.

ESTIMATED CONSTRUCTION COST: Between $5,000,000 - $10,000,000

On-Site Visit:	November 17, 2026 at 3:00 p.m. Local Time
Pre-Bid Conference:	November 18, 2026 at 11:00 a.m. Local Time
Bid Opening:	December 2, 2026 at 2:00 p.m. Local Time

At the above indicated time, the bids will be opened publicly and read. Bids received by the Purchasing Department after the time fixed for opening of the bids will not be considered. Time of receipt will be as determined by the time stamp at the Purchasing Department.

DOCUMENTS:

Prospective bidders may obtain copies of bidding documents at the Anchorage School District website http://www.asdk12.org/depts/purchasing/PurchasingBids.aspx Only electronic versions of this ITB are issued.

A copy of the current plan holder's list can be viewed at:
http://apps.asdk12.org/depts/purchasing/meeting/Plan_Holders/2027/802.xlsx

NOTICE TO BIDDERS:

A bid bond in the amount of five (5%) percent of the total amount of the base bid will be required **(cash, personal or business checks are unacceptable).** The successful Contractor shall be required to furnish 100 percent performance and payment bonds.

The Anchorage School District reserves the right to reject any and all bids, and to waive any informalities or irregularities in bidding procedures.

STUDENT COMMUNITY WORKFORCE AGREEMENT

This project is subject to the Student Community Workforce Agreement per ASD Board Policy 3311.2. The awarded Contractor must review, understand and agree to Attachment A, Student Community Workforce Agreement, which will be incorporated into the contract.

ON-SITE VISIT AND PRE-BID CONFERENCE:

An On-Site Visit will be held on November 17, 2026 at 3:00 p.m. Local Time at Kincaid Elementary School, 4900 Raspberry Road, Anchorage, Alaska 99502. Please meet at the Front Office.

A Pre-Bid Conference will be held November 18, 2026 at 11:00 a.m. Local Time at Anchorage School District, Purchasing Department, located at 4919 Van Buren Street Anchorage, Alaska 99517. Prospective Bidders who wish to participate by teleconference may participate by calling (907) 742-6750. The line will be available approximately 5 minutes prior the conference start time.

All Bidders are encouraged to attend the On-site Visit and Pre-Bid Conference. Major sub-bidders are also encouraged to attend.

The Anchorage School District is committed to providing reasonable accommodations, according to applicable state and federal laws, to all individuals with a qualifying disability. If you require a reasonable accommodation in order to participate in this or any other district process, please contact the Anchorage School District's Compliance/Equal Employment Opportunity Office at (907) 742-4132.

END OF SECTION

INSTRUCTIONS TO BIDDERS

PART 1. GENERAL INFORMATION

1.01 Refer to the Invitation to Bid for information relating to time, date and place for receipt of bids and other pertinent bidding information.

1.02 Anchorage School Board Policy 3515.5 prohibits a contractor whose employees or agents may have direct or incidental contact with Anchorage School District (the District) students from sending any employee or agent to district property who has been convicted of a sex offense under federal law or the law of any state and who is required to register as a sex offender under Alaska law or by court order, or who has been convicted of child kidnapping under federal law or the law of any state and who is required under Alaska law or court order to register on the Alaska Department of Public Safety Sex Offender/Child Kidnapper Central Registry. Board Policy 3515.5 requires contractors to certify in writing the contractor's knowledge of and compliance with Board Policy 3515.5. ***Prior to executing a contract*** for this project, the selected Contractor shall verify that no employee or agent who will be on district property is registered as a sex offender or child kidnapper in Alaska [Alaska Department of Public Safety "Sex Offender/Child Kidnapper Registry"] or in any other state. In addition, the contractor shall certify that, to its knowledge, no employee or agent is a convicted sex offender or child kidnapper. The required forms of certification are included in the bid documents.

1.03 LICENSE REQUIREMENTS

A. The bidder shall include on the bid Form his current Business License number and expiration date from the State of Alaska authorizing him to engage in business to operate as a Business, Specialty or General Contractor, as well as his Federal Tax Identification number.

B. The bidder shall provide a copy of his current State of Alaska Business License and Specialty or General Contractor license when requested in writing by the Purchasing Department.

1.04 BIDS

A. The bidder shall review all of the proposed contract documents to ascertain all of the requirements of the work.

1.05 EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS AND SITE WORK

A. The bidder shall examine carefully the site of the proposed work, the proposal, plans, specifications and contract forms before submitting a proposal. The submission of a bid shall be an admission that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirement and accuracy of the plans, specifications, special provisions and terms of the contract.

B. All documents furnished to any person, under any condition, remain the property of the Anchorage School District and shall be returned immediately upon request.

C. Documents may be obtained upon the conditions set forth in the Invitation to Bid.

1.06 METHOD FOR CLARIFICATION

A. Any bidder in doubt as to the meaning of any part of the plans, specifications or other documents may submit a written request for an interpretation. The bidder submitting the

request will be responsible for its prompt delivery not less than seven (7) working days prior to the date set for opening of bids. Questions can be delivered as follows:

1. Fax: (907) 243-6293
2. Email: purchasing@asdk12.org
3. Mail: Purchasing Department
   4919 Van Buren Street
   Anchorage, Alaska 99517
4. Hours: 7:30 a.m. – 4:00 p.m.

B. A written request for an interpretation, which in the opinion of the Purchasing Department requires a reply, will be answered by issuing an addendum to all plan holders prior to the bid opening. The Owner will not be responsible for any other explanation or interpretation of the plans, specifications or other documents made or given prior to the bid opening.

1.07 PREPARATION OF BIDS

A. Preparation and Submission:

Bids must be submitted on the forms furnished or copies thereof, and must be manually signed. In order to secure consideration, the bid must be submitted and sealed in an envelope on which contract identification is plainly marked on the outside. The bid form is included in the bidding documents. The envelope shall be addressed as indicated in the Invitation to Bid.

B. Form:

The bid may provide for a quotation of a price, or prices, for one or more items which may be lump sum bids, alternate prices, scheduled items resulting in a bid on a unit of construction, or a combination thereof. Where required on the bid form, bidders must quote on all items and they are warned that failure to do so shall disqualify the bid.

If erasures or other changes appear on the forms, each such erasure or change must be initialed by the person signing the bid.

C. Alternate Bids and Qualified Bids:

Bids may be rejected if they show any omissions, alteration of the forms, additions not called for, conditional or alternate bids not called for or irregularities of any kind.

1.08 BID GUARANTEE

A. Each bid shall be accompanied by a bid bond with good and sufficient surety or sureties acceptable to the Owner. The Anchorage School District will require five percent (5%) of the total amount of the base bid as a guarantee **(cash, personal, or business checks are not acceptable)**. Bid guarantees for the three (3) low bidders will be held until the contract is executed.

B. All other bid guarantees will be returned within seven (7) days of the bid opening. Power of Attorney for the official signing of the bond for the surety company must be submitted with the bond.

1.09 ALTERNATES

A. The bidder shall include in the spaces provided on the “Bid Form” a bid for each alternate, if applicable.

B. The Owner may accept alternates in any order or number and include them in the contract award price.

1.10 UNIT PRICES

A. The bidder shall include in the spaces provided on the “Bid Form” a bid for each unit price, if applicable.

B. The Owner may accept any or all of these unit prices and include them in the contract award price.

C. In the case of discrepancy in the extended price calculation(s), the unit price(s) will prevail.

1.11 BIDDER QUALIFICATIONS (TO BE INCLUDED IF THERE IS NO 2-STEP QUALIFICATION PROCESS)

A. Before the bid is considered for award, the Owner reserves the right to request the bidder to complete within seventy-two (72) hours a bidder qualification form and/or a current financial statement prepared by a Certified Public Accountant. Bidder qualifications to be listed upon the qualification form will include, as a minimum, a listing of bidder’s previous contracts of a nature similar to that being bid upon; a listing of bidder’s staff, to include managerial, technical and laboring positions; summary of bidder’s plan and equipment available for use in the execution of the contract; and a listing of the projects to which the bidder is obligated in the near future. The Owner reserves the right to reject the bid of any bidder who fails to furnish promptly and properly all the information required in this paragraph.

B. A bidder will be deemed to be unqualified to perform the contract if, after review and verification of the representations included on the qualification form submitted by the bidder, the following conditions appear:

1. Bidder does not have sufficient prior experience (or an acceptable substitute thereof, as described below) with projects of a similar nature in technical, managerial and financial requirements to that in the present contract being bid.

a. Experience does not necessarily mean that the bidder is an established Contractor in the exact technical area for which the bid is submitted. In addition to such established contractors, newly established contractors will be considered qualified if they have shown on the bid qualification sheet form that they are staffed with sufficient technical, managerial and financial personnel with prior experience in the nature of construction for which the bids are invited, that bidder may adequately foresee and appreciate problems of such construction.

2. Bidder does not have sufficient capability to undertake the obligations of the contract. A determination in this respect will be made when the Owner, upon review of the probable cash flow needs of the Contractor for this particular contract (to include payroll, cost of material and supplies, equipment rental costs and any other direct or incidental costs of the contract), determines that the Contractor does not have sufficient financial resources to enable him to satisfy his financial obligations under the contract. The Owner will consider all other pertinent financial

data required by this clause and submitted by the Contractor. A determination that the bidder is unqualified will not be made under this paragraph unless the Owner has determined that the bidder cannot meet his financial obligations under the contract after having considered all sources of income available to the bidder.

3. The bidder does not have sufficient staff, equipment or plant available to perform the contract. The Owner's determination in this matter will be based upon that represented by the bidder in his completion of the Bidder Qualification documents discussed above.

4. The bidder has a consistent history of unsatisfactory performance of contracts of this or similar nature, regardless of whether such contracts existed between the Owner and the Contractor, or other parties and the Contractor.

   a. A determination of this nature will not be made unless the Owner, after review and verification of the contractor's previous work experience, determines that the contractor's consistent, unsatisfactory performance has resulted from the contractor's failure rather than a failure to perform by the other party. The Owner will give the Contractor an opportunity to explain such nonperformance(s) before any final determination is reached. Contract disputes which are pending resolution before any duly authorized judicial or administrative body will not be considered in reaching this determination.

   b. A determination of a "consistent failure to perform" will not be made unless the Owner is satisfied after review of the bidder's prior experience that the Contractor has repeatedly failed to satisfy his obligations under past contracts. For purposes of this clause, "consistent" will not be construed to mean in every contract, nor will it be construed to include "isolated instances" of failure to perform.

   c. In reaching any determination of this nature, the Owner may consider statements of other parties to the prior unperformed contracts, as well as the representations of the Contractor on his "Bidder Qualification" form. However, in each instance, the Owner will advise the Contractor of such other statements considered before a determination that the bidder is not qualified, as made by the Owner.

C. The bidder's representations concerning his qualifications will be construed as a covenant under the contract. Should it appear that the bidder has made a material misrepresentation on his "Bidder Qualification" form, the Owner shall have the right to terminate the contract for the Contractor's breach, and the Owner may then pursue such remedies as exist elsewhere under this contract, or as otherwise are provided at law or equity.

D. A determination that a bidder is unqualified will be made by the Owner. Such determination will be made in writing and include a thorough discussion of why the bidder is deemed unqualified. A letter will be sent to the bidder deemed unqualified, stating the reasons for such determination, and the bidder's right to request a review of this determination by appeal to the Anchorage School District Board.

E. Any bidder who is deemed to be unqualified may, as provided under existing Anchorage School District policy, appeal such determination to the Anchorage School District Board prior to contract award to another bidder.

1.12 RECEIPT AND OPENING OF BIDS

A. Time of Opening:

Bids shall be submitted prior to the time specified in the Invitation to Bid, and the exact date and time of receipt of bids will be recorded. Late bids will not be considered, but will be held unopened until the time of award and then returned to the bidder, unless other disposition is requested or agreed to by the bidder. Time of bid receipt will be determined by the time stamp at the Purchasing Department, 4919 Van Buren Street, Anchorage, Alaska 99517.

B. FAX/Telegraph/Telephonic/E-Mail Bids:

FAX/telegraphic/telephonic/e-mail bids will not be considered. Modification by FAX or telegraph of bids already submitted will be considered if received prior to the time fixed in the Invitation to Bid. FAX/telegraphic modifications shall not reveal the amount of the original or revised bid.

C. Officer's Responsibility:

No responsibility will attach to any officer or agent of the Owner for the premature opening of, or the failure to open a bid not properly addressed and identified.

1.13 WITHDRAWAL OF BIDS

A. Bids may be withdrawn on written request received from the bidders prior to the time specified for opening.

B. No bid shall be withdrawn for a period of ninety (90) days subsequent to the bid opening without the written consent of the Owner.

1.14 BIDDERS INTERESTED IN MORE THAN ONE BID

A. If more than one bid is offered by any party, by or in the name of his clerk, partner, or other person, all such bids will be rejected. 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.

1.15 BIDDERS PRESENT

A. At the time and place specified for the opening of bids, contents of the bids will be made public for the information of bidders and other parties.

1.16 REJECTION OF BIDS

A. The Owner reserves the right to reject any or all bids, and to waive any informalities or irregularities in bidding or award of the contract.

1.17 AWARD OF CONTRACT

A. Acceptance of Bid:

Following the opening and evaluation of bids, the Owner will determine the apparent low responsive bidder and, subject to its right under Paragraph 1.16 to reject all bids, decide whether to accept the apparent low responsive bid. The Owner's acceptance of the apparent low responsive bid will be through a written notice from a duly authorized

representative of the Owner, and no other act of the Owner or its representative will constitute an acceptance of a bid. The notice shall be titled “Notice of Intent to Award Contract,” and shall set forth pre-award procedures and requirements, if any, including procedures for approval and award of contract by the School Board.

B. Basis of Award

1. It is the Owner’s intention to award a contract to the lowest responsive and responsible bidder, including alternates, base bid, and quantified unit prices accepted by the Owner at the time of award, if applicable.

2. Unit prices which are not quantified will not be included in the determination of the award.

3. The Owner reserves the right to award the alternates in any combination with the base bid and include them in the total award.

4. The District reserves the right to request the lowest bidder(s) whose bids are determined to be reasonably susceptible to award to review their previous bids with consideration of any additions, clarifications or modifications, submit revised bids for Best and Final Offers (bids). If Best and Final Offers are requested, selected offerors must submit revised bids on the forms provided by the District to be considered for evaluation and award. Bidders who do not submit a Best and Final Offers (revised bids), when requested, will not be considered for evaluation and award and their bids will be rejected and considered non-responsive.

   a. For purposes of this ITB, bids that are “reasonably susceptible to award” means the three (3) lowest responsive and responsible bidders, unless, in the sole discretion of the District’s Purchasing Senior Director, one or more of the three lowest responsive and responsible bidder(s) was not within the competitive range and to remain under consideration for award when evaluated with other bids or the District received one or more additional bids that are within the competitive range of the three lowest responsive and responsible bids such that the additional bid(s) may remain under consideration when evaluated with the other bids. This is a strict mathematical evaluation and may not be challenged on that basis except in the case of obvious arithmetic errors.

C. Notification of Award to Bidders:

Following opening of bids and determination of the apparent low responsive bidder, the Administration will make public in the Purchasing Contracting Office each Notice of Intent to Award ten (10) calendar days prior to the scheduled award by the Board, except for purchases under $100,000 which is three (3) business days. Bidders may, upon request to the Purchasing Office and/or Purchasing Contracting Office, review the bid tabulation summary prior to the scheduled Board award date.

D. Amount of Contract

The amount of the contract shall be understood to be the lump sum as given in the bid form. Where prices are given on alternative items, only the amounts of the alternates accepted by the Owner will be included in the total.

E. Execution of Contract:

By the Contractor: The bidder whose bid is accepted shall execute the contract and furnish the required bonding and insurance within five (5) days after presentation of the contract for signature. The contract shall be deemed to be executed by the successful bidder when two (2) originals of the contract, signed by an authorized officer of the corporation or company, and with each separately signed the bonds and insurances required herein, are received by the Owner. Failure or neglect to execute the contract, within the time specified or such extended period, if any, that the Owner may, in its sole discretion, authorize, shall constitute a breach of the agreement affecting the acceptance of the bid. The damages to the Owner for such a breach shall include loss from interference with the general Capital Improvements Program of the Owner, and other items whose accurate amount would be difficult or impossible to compute.

The amount of the bid guarantee of the successful bidder who fails or neglects to execute the contract after proper notification of the acceptance of the bid shall be retained by the Owner as liquidated damages for such breach.

By the Owner: Upon receipt of the above-referenced two (2) Contracts executed by the Contractor, including all required bonds and insurance certificates, the properly authorized Owner representatives will execute the documents within ten (10) days. The contract shall be deemed to be completely executed when two (2) copies thereof, accompanied by the required bond, liability and other necessary insurance and signed by the Contractor, are executed by the Owner. All awards shall comply with the Anchorage School District Purchasing and Contracting Policy 3311. Awards of $500,000 or more shall be presented to the School Board for their approval.

1.18 PERFORMANCE BOND AND PAYMENT BOND

A. The successful bidder will furnish a Performance Bond and a Payment Bond in accordance with Section 00700, Paragraph 7.5.

1.19 INSURANCE

A. The successful bidder will furnish complete Certificates of Insurance, as required by the General Conditions and Supplementary Conditions, in a form acceptable to the Owner.

1.20 NOTICE TO PROCEED

A. The Owner will issue a Notice to Proceed with the work within ten (10) days following the Owner's execution of the contract. The date of commencement of the work shall be the date established in the Notice to Proceed. The Owner will not be responsible for any costs incurred by the Contractor prior to the Notice to Proceed.

1.21 AGGRIEVED BIDDERS

A. Protest:

1. An interested party may protest a solicitation or a proposed award of a contract.

a. A protest as to the specifications and/or terms and conditions of a solicitation must be received by the Purchasing Senior Director at least five (5) calendar days prior to the due date of the bid or proposal; failure to protest as provided herein constitutes a waiver of any objection to the solicitation.

b. For construction projects and architectural/engineering design services, the protest of a proposed award of a contract must be received by the Purchasing Senior Director within ten (10) calendar days after issuance of the notice of intent to award, except that for purchases under $100,000, the protest must be received within three (3) business days.

c. For goods or services, the protest of a proposed award of a contract must be received by the Purchasing Senior Director within seven (7) calendar days after issuance of the notice of intent to award, except that for purchases under $100,000, the protest must be received within three (3) business days.

d. The protest must include the name of the person submitting the protest, the name of the bidder/proposer represented by that person, the specific action or bid/request for proposal contract award which is being protested, a detailed explanation of the reasons for the protest, and the relief requested.

e. The aggrieved person must serve all other interested parties with its protest.

2. The Purchasing Senior Director shall stay the intended award of a contract unless the Purchasing Senior Director determines the award of the contract without further delay is necessary to protect the District's best interest.

3. The Purchasing Senior Director may, in his/her sole discretion, hold a hearing.

4. The rights and remedies granted by this section are not available for informal small purchases with an actual or potential value of less than twenty-five thousand dollars ($25,000).

5. Failure to protest as provided herein constitutes a waiver of any objection to the solicitation and contract award.

B. Appeal:

1. A decision by the Purchasing Senior Director may be appealed to the Anchorage School Board.

2. Any appeal shall be filed with the Superintendent within five (5) days after the decision is received by the protester and must include the name of the person submitting the appeal, the name of the bidder/proposer represented by that person, and a detailed explanation of the basis for the appeal.

3. The aggrieved bidder/proposer must serve all other interested parties with its appeal.

4. The Superintendent may obtain an independent review of the appeal issues if the Superintendent determines such review will assist consideration of the appeal.

5. The independent review shall be conducted by a not directly involved District employee or an experienced but disinterested third party from outside the District.

6. Failure to appeal to the Anchorage School Board as provided herein constitutes a waiver of any objections to the solicitation and the contract award.

C. Consideration of Appeal:

1. The decision being appealed and the findings from the independent review, if any, will be reported to the Board.

2. Upon consideration of the appeal and allowing interested parties an opportunity to address the issues on appeal, the Board may:

a. Award the contract as recommended, if applicable, indicating its reasons for rejecting the appeal;

b. Grant the appeal, indicating its reasons for granting the appeal, and determine an appropriate remedy consistent with AR3311.1(c).1 of Board Policy. The Board may award the contract at that meeting to some other bidder/proposer if it finds that a delay in making the award would adversely affect the District;

c. Stay any award of the contract to permit further consideration of the appeal, with action to be scheduled as soon as practicable, but in no event more than twenty (20) days after the stay as initiated;

d. Reject all bids/proposals.

e. Take such other action as appears appropriate and in the best interest of the District under the circumstances.

D. Frivolous Protests:

1. Signature on Protest Constitutes Certificate
The signature of an attorney or party on a request for review, protest, motion, or other document constitutes a certificate by the signer that the signer has read the document, to the best of his/her knowledge, information, and belief formed after reasonable inquiry it is well grounded in fact and is warranted by existing law or a good faith argument for the extension, modification, or reversal of existing law, and that it is not interposed for an improper purpose, such as to harass, limit competition, or to cause unnecessary delay or needless increase in the cost of the procurement or of the litigation.

2. Sanctions for Violation
If a request for review, protest, pleading, motion, or other document is filed with the Purchasing Senior Director is signed in violation of Board Policy AR3311.1(c).1, the Board, may impose upon the person who signed it, a represented party, or both, an appropriate sanction, that may include an order to pay to the other party or parties the amount of the reasonable expenses incurred because of the filing of the protest, pleading, motion, or other paper, including a reasonable attorney's fee.

1.22 GUARANTEE SECTION

A. Whether or not there appears here or elsewhere herein specific reference to guarantees of all items of material, equipment or workmanship, they nevertheless shall be so

guaranteed against defects for which the Contractor is responsible that may develop or become evident within a period of one (1) year from and after final acceptance of the work by the Owner. This guarantee shall be understood to imply prompt attention to any remedy of such defects as those mentioned above if and as they occur after the Contractor shall have written notice of their existence. If the defect, in the opinion of the Owner, is of such nature as to demand immediate repair, the Owner shall have the right to make them and the cost thereof shall be borne by the Contractor.

1.23 SUBCONTRACTORS

A. All subcontractors proposed for the work must be acceptable to the Owner.

B. The Owner reserves the right to request the proposed subcontractors to complete qualification forms and/or current financial statements prepared by a Certified Public Accountant.

1.24 MINIMUM WAGE RATES

A. Labor required for the construction of this project is subject to the minimum wage rates as provided in the General Requirements.

1.25 NON DISCRIMINATION

A. No bidder/offeror on any District contract may illegally discriminate on the basis of sex, race, color, religion, gender identity, sexual orientation, national origin, ancestry, age, marital status, changes in marital status, pregnancy, parenthood, physical or mental disability, Vietnam era veteran status, genetic information, or good faith reporting to the board on a matter of public concern in employment, provision of services, or otherwise.

B. Any bidder/offeror submitting a bid or proposal of one hundred thousand ($100,000) or more must certify that if awarded a contract on the basis of that bid or proposal, he/she as the contractor will not illegally discriminate against any member or applicant for employment because of sex, race, color, religion, gender identity, sexual orientation, national origin, ancestry, age, marital status, changes in marital status, pregnancy, parenthood, physical or mental disability, Vietnam era veteran status, genetic information, or good faith reporting to the board on a matter of public concern in employment, provision of services, or otherwise.

1. Notice of Compliance

a. All successful bidders/offerors shall insure such non-discrimination.

b. All successful bidders/offerors must agree to post in conspicuous places, available to employees and applicants for employment, notice setting forth the provisions of this non-discrimination section and this section shall be deemed to be a part of every contract entered into by the District under these policies.

2. Minority Business Enterprises

a. The District requires adherence to the Anchorage Municipal Code, relating to Minority Business Enterprises and will monitor and implement these

policies through the District's Equal Employment Opportunity Director (EEO).

b. It is the policy of the District that socially and economically disadvantaged minority businesses located within the Municipality of Anchorage be afforded an equitable opportunity to participate in District contracts.

c. Any appeal from a decision of the Equal Employment Opportunity Director shall be to the Superintendent and, if not satisfied, to the Board.

1.26 ASBESTOS FREE MATERIALS

A. The bidder, by submitting a bid on this project, thereby certifies and guarantees to the Anchorage School District that any products or materials sold, used or installed under the terms of this contract will not contain any asbestos. In the event the product sold does not conform to the above standards, the buyer may return the product for correction or replacement at the seller's option and at the seller's expense. Services performed by the seller which do not conform to the above standards must be corrected by the seller at the seller's expense or make the appropriate correction within a reasonable time.

1.27 CONFLICT OF INTEREST

A. The Contractor agrees to certify that Anchorage School District employees, School Board members, or a member of their household are not in conflict of interest with the contract and Board Policy as follows (AR3311.1(e).1 Disclosure and Waiver of Conflict of Interest):

1. No Board member, employee, or a member of their household, shall acquire, directly or indirectly, an economic interest in a District or Municipal contract, or engage in business with the District or the municipality, unless the contract is competitively solicited and other requirements of Section 3311 of Board Policy and section 1.15 of the Anchorage Municipal Code are met.

2. The following acts and circumstances shall not be deemed to be in conflict with the performance of official duties if, at the earliest opportunity after having acquired such knowledge, the Board member or employee files a disclosure pursuant to AR3311.1(e).1 or requests and obtains a waiver pursuant to Board Policy AR3311.1(e).2:

a. Such person owns a sole proprietorship, or is a partner in a partnership, or is an officer, director, major shareholder (five percent (5%) or more of the outstanding shares) or has management control in a corporation that submits a bid, proposal or quotation to the District or attempts to enter or enters into a contract with the District;

b. Such person has any significant (five percent (5%) or more) financial interest in any sale, lease or rental to the District of any service or property and such person has knowledge that the District intends to purchase, lease or rent the property or service;

c. Such person wishes to sell or receive royalties on books or materials sold to the District for use in the school system for which the employee is the author;

d. Such person is an employee who has been providing private services to a child who transfers to a new school or class or advances to a higher grade

and the child becomes a student in the class being taught/aided by his/her provider.

B. Board Members, District employees, and their household and/or immediate family members are required to comply with Board Policies and the Municipal Ethics Code by disclosing conflicts of interest.

1. When a board member, employee, or their household and/or immediate family member intends to do business with the District, the appropriate District and Municipal forms must be filed by the Board Member or District employee with the Municipal Clerk's Office and the Purchasing Department.

> Note: *Notice of Intent To Respond To Public Solicitation* shall be filed with the Municipal Clerk's office in advance to allow a minimum of **7 calendar days to elapse between electronic publication by the clerk and the final date** for submitting a response to the solicitation. The form may be obtained from the Municipality of Anchorage website, www.muni.org.
>
> District *Disclosure* and *Request for Waiver* forms and instructions may be obtained from the Purchasing Bid Information link under Quick Links on the ASD website, www.asdk12.org.

2. The responsibility for complete and timely filing rests solely with the Board Member or District employee.

C. Copies of all conflict of interest and ethics code documents should be submitted with your quote.

1.28 CONTRACT INDUCEMENTS

A. No payment, gratuity or offer of employment shall be made in connection with any contract, by or on behalf of the subcontractor to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

1.29 GOVERNANCE

A. This solicitation is an Invitation to Bid ("ITB") governed by applicable Anchorage School Board Policies, including Section 3311 of such Policies. Anchorage School Board Policies are available at
https://www.boardpolicyonline.com/?b=anchorage

Offerors should read this ITB carefully and review all instructions contained herein. Incomplete or incorrect bids may be rejected as not conforming to the essential requirements of the ITB. Bids submitted on other than the prescribed forms contained in this ITB will be rejected. Bidders may copy the forms contained in the ITB for use in their bids, but substitute forms or formats are unacceptable. Electronic copies of the forms which bidders must submit as part of any bid, if any—if not provided with this ITB—may be obtained by contacting the Anchorage School District Purchasing Department. Forms shall not be altered except to supply requested bidder information.

1.30 APPRENTICESHIP UTILIZATION COMPLIANCE

A. In order to be deemed a responsive bid/offer, bidders/offerors shall provide a signed notarized Apprenticeship Utilization Affidavit ("AUA") with their bid. ASD reserves the right

to request the signed notarized AUA to be submitted within three (3) working days after bid submission. By doing this, bidders/offerors are confirming that they understand and agree that in all trades/crafts categories in which there is an Alaskan Federally Registered Apprenticeship Program, they will ensure that 15% of the aggregate hours in those trades' categories will be worked by apprentices, as mandated by Anchorage School Board Policy 3311.1.2. This applies to both prime contractor labor hours and subcontractor labor hours. By signing the AUA, bidders/offerors are confirming their understanding and agreement that ASD will request documentation to factually demonstrate compliance with the 15% Apprenticeship Utilization Policy ("AUP"), and conduct audits. Audits for projects will be conducted every 30 days. In addition to providing documentation to ASD to confirm that 15% of the labor hours worked in trades/crafts categories that have Alaskan Federally Registered Apprenticeship Program has been done by certified apprentices enrolled in such programs, the prime contractor will provide documentation to confirm that the apprentices listed on the documentation submitted are currently in good standing in their Alaskan Federally Registered Apprenticeship Program. Attached to the solicitation will be the current version of the Federally Registered Alaskan Apprenticeship Programs, which was provided to ASD by the Federal Department of Labor.

B. Forms used to demonstrate compliance during the contract administration period are found in Section 00630 Construction Forms.

1. List of Federally Registered Alaskan Apprenticeship Programs

    a. This list from the Federal Department of Labor will provide contractors with a list of Alaskan apprenticeship programs and crafts/trades categories that are subject to ASD's AUP.

2. Apprenticeship Utilization Form

    a. The Prime Contractor will list the crafts/trades categories required to complete the project that have Alaskan Federally Registered Apprenticeship Programs. This list will include all crafts/trades categories for both the prime and subcontractors.

3. Apprenticeship Utilization Program Calculation Form

    a. This form will be submitted by the prime contractors to demonstrate compliance with the apprenticeship utilization percentage for both prime and subcontractors on the project.

    b. Audits will be performed when the hours submitted by the prime's and/or subcontractor's certified payroll exceed 500 hours. Audits will continue as per the schedule unless the prime's and the subcontractor's certified payroll does not meet the minimum threshold of 500 hours. Prime and Subcontractors will be required to submit certified payrolls during periods where very little work is being performed. This will continue until the minimum threshold of 500 hours is met and warrants an audit. Audits will be conducted from Site Available to Contractors through Final Completion on all projects awarded by the District in excess of $100,000 at the time of bid.

4. Penalty Table

a. This table lists the penalties for non-compliance with the AUP.

C. Prime Contractors are required to meet with Purchasing to discuss forms and processes of Apprentice Utilization Program prior to start of work.

END OF SECTION

PROJECT SCHEDULE MILESTONE DATES

On-Site Visit ..... November 17, 2026

Pre-Bid Conference..... November 18, 2026

Bid Opening ..... December 2, 2026

Board Meeting (anticipated)..... January 5, 2027, Non-Action, January 19, 2027, Action

Notice to Proceed (anticipated).....April 14, 2027

Site Available to Contractor..... June 3, 2027

Substantial Completion – Building .....August 13, 2027

Substantial Completion - Site.....August 13, 2027

Final Completion .....August 11, 2028

Dates of Interest:

Thanksgiving Holiday ..... November 26 – 27, 2026
Winter Break .....December 21, 2026 – January 1, 2027
Martin Luther King Holiday..... January 18, 2027
Presidents Day Holiday.....February 15, 2027
Parent Teacher Conferences .....February 24 – 25, 2027
Spring Break Week .....March 15 – 19, 2027
School Ends for Students..... May 28, 2027
Memorial Day Holiday ..... May 31, 2027
Teachers Last Day..... June 1, 2027
Juneteenth Holiday ..... June 18, 2027
Independence Day Holiday .....July 5, 2027
Teachers First Day.....August 9, 2027
Students First Day.....August 12, 2027
Labor Day Holiday..... September 6, 2027
Parent Teacher Conferences ..... October 27 – 28, 2027
Thanksgiving Holiday ..... November 25 – 26, 2027
Winter Break ..... December 20 – 31, 2027
Martin Luther King Holiday..... January 17, 2028
Presidents Day Holiday.....February 21, 2028
Parent Teacher Conferences .....February 23 – 24, 2028
Spring Break Week .....March 13 – 17, 2028
School Ends for Students..... May 23, 2028
Teachers Last Day..... May 24, 2028
Memorial Day Holiday ..... May 29, 2028
Juneteenth Holiday ..... June 19, 2028
Independence Day Holiday .....July 4, 2028
Teachers First Day.....August 8, 2028
Students First Day .....August 10, 2028
Labor Day Holiday..... September 4, 2028

The Contractor shall be required to plan, schedule, execute and complete all work under the contract in accordance with the Project Schedule Milestone Dates set forth under this Section 00200. The above listed Project Schedule Milestone Dates for Substantial Completion and Final Completion may not be altered by

the Contractor, either to schedule or to achieve early completion of the project, without the express written consent of the Owner.

The bidder's attention is drawn to the requirements of Division 1, Section 01311 of the General Requirements entitled Project Schedule and to the Phasing Drawings for associated phasing information.

END OF SECTION

Project Title: Kincaid Elementary School Site Improvements Invitation to Bid Number: 2027 – 802

TO: Anchorage School District
4919 Van Buren Street
Anchorage, Alaska 99517

FROM: _____BIDDER

_____ADDRESS

_____CITY/STATE

_____PHONE/FAX

_____EMAIL

Operating as (strike out conditions that do not apply) an individual, a company, a corporation, organized and existing under the laws of the State of _____, or a proprietorship, a partnership, or joint venture consisting of _____

_____.

1. BASE BID:

Having become completely familiar with the local conditions affecting the cost of the work at the place where work is to be executed, and having carefully examined the site and building conditions as they currently exist, and having carefully examined the proposed contract documents, together with any addenda to such contract documents as listed hereinafter, the undersigned hereby proposes and agrees to provide all labor, materials, equipment, transportation, supervision and other facilities as necessary and/or required to execute all of the work described by the aforesaid contract documents for the lump sum consideration of:

$ _____ (In Numbers)

Said amount being hereinafter referred to as the base bid, base bid proposed, or lump sum.

2. ALTERNATES:

The undersigned proposes to perform alternates for the stated resulting additions or deductions from the base bid. Additions and deductions shall include any modifications of work or additional work that the undersigned may deem to be required to perform by reason of the acceptance or rejection of any alternate, including allowances for overhead and profit, and in accordance with the Project Schedule Milestone Dates set forth under Section 00200 hereof. The Owner reserves the right to award the alternates in any order or number and include them in the contract award price.

A. None

3. UNIT PRICES:

The following unit prices will be used at the discretion of the Owner for the addition or deletion of work not reasonably implied or not included in the Contract Documents. Unit prices must include all labor, material, overhead, and profit for each unit of work. All unit price work will be processed by Request for Proposal followed by a Change Order to the Contract when quantities are verified and agreed upon.

A. None

4. ALLOWANCES / ASSIGNMENTS:

A. None

5. ADDENDA ACKNOWLEDGMENT:

The undersigned acknowledges receipt of the following addenda: (List by number and date appearing on addenda.)

_____

_____

_____

6. TIME OF COMPLETION:

The undersigned agrees to complete all work under this contract in accordance with the Project Schedule Milestone Dates set forth under Section 00200 hereof.

7. BID SECURITY:

A bid bond in the amount of five percent (5%) of the total amount of the base bid is attached in the sum of:

$ _____ (In Numbers)

which is to become the property of the Owner in the event the Performance Bond and Payment Bond are not executed within the time set forth in paragraph 10 of this section, as liquidated damages for the delay and additional work caused the Owner.

8. The undersigned agrees that upon receipt of the notice of acceptance of his bid, he will execute the formal contract, and will deliver all proper bonds and proof of insurance coverage as may be required by the contract documents.

9. The undersigned agrees to accept the Assignment of the Bid Allowance as set forth in Section 01031, Bid Allowances.

10. The undersigned further agrees to execute the formal contract within ten (10) days from the date of the notice of acceptance of this bid, and in case the undersigned fails or neglects to appear within the specified time to execute the contract, the undersigned will be considered as having abandoned the contract, and the bid bond accompanying this bid will be forfeited to the Owner by reason of such failure on the part of the undersigned.

11. The undersigned further agrees to commence with the work under the contract in accordance with the date of commencement of the Work established in the Notice to Proceed.

12. The undersigned further agrees that the bid security may be retained by the Owner and that said bid guarantee shall remain with the Owner until the contract has been executed by the Owner.

13. The undersigned has checked all of the above figures, and understands that the Owner will not be responsible for any errors or omissions on the part of the undersigned in preparing this bid.

14. In submitting this bid, it is understood that the right is reserved by the Owner to reject any or all bids and waive any informalities and irregularities in connection therewith. It is agreed that this bid may not be withdrawn for a period of forty-five (45) days from the date and time of opening.

15. The undersigned declares that the person or persons signing this Bid Form is/are fully authorized to sign on behalf of the firm listed and to fully bind the firm listed to all the conditions and provisions thereof.

16. It is agreed that no person or persons or company other than the firm listed below or as otherwise indicated has any interest whatsoever in this bid or the contract that may be entered into as a result of the bid and that in all respects the proposal is legal and firm, submitted in good faith without collusion for fraud.

17. It is agreed that the undersigned has complied or will comply with all requirements of local, state and national laws, and that no legal requirement has been or will be violated in making or accepting this bid in awarding the contract to him and/or in the prosecution of the work required.

18. CONFLICT OF INTEREST:

I certify no member of the School Board or District employee, or spouse or other member of his/her household shall have any undisclosed interest as noted in paragraph entitled Conflict Of Interest (Section 00100). By and for the bidder:

Signature: _____

19. APPRENTICESHIP UTILIZATION AFFIDAVIT (FOR BIDS OVER $100,000)

Pursuant to School Board Policy 3311.1.2, Use of Apprentices, I _____

the undersigned Principal for _____

on Solicitation _____ certify:

A. I understand that Anchorage School District (“ASD”) School Board Policy 3311.1.2 states, “For capital maintenance and construction projects with an estimated total cost of more than $100,000, the Anchorage School District shall require that no less than fifteen percent (15%) of the total hours worked on the project shall be performed by apprentices enrolled in a federally registered or State of Alaska-approved apprenticeship program. This requirement shall only apply to crafts for which an Alaskan federally registered apprenticeship program exists.”

B. I will ensure that apprentices employed by the prime and sub-contractors, in the eligible trades categories, will provide no less than fifteen percent (15%) of the aggregate labor hours of those eligible trades categories.

C. I understand that if awarded a contract in excess of $100,000, ASD will audit the prime contractor at 30-day intervals. ASD reserves the right to audit at random intervals as needed.

D. I understand ASD will conduct random site inspections to determine that employed apprentices are working at the project site.

E. I understand that if I am awarded a contract ASD will require the following specific reporting requirements during the contract performance period to ensure that the 15% apprenticeship utilization requirement is met:
   a. List of the apprentices the prime contractor intends to use to meet the utilization goal, and the Alaskan federally registered apprenticeship programs to which they belong (Apprenticeship Utilization Form);
   b. List of the subcontractors that the prime contractor will use on this project;
   c. List of the apprentices the subcontractor intends to use to meet the utilization goal required by the prime contractor, and the apprenticeship programs they belong to (Apprenticeship Utilization Form);
   d. Submission of Apprenticeship Utilization Program Calculations Form, to be submitted by the prime contractor, at 30-day intervals for contracts exceeding $100,000, consisting of a compliance spreadsheet, with supporting documents demonstrating compliance by both the prime contractor and all subcontractors, identifying the trades categories that are subject to the utilization requirement, apprentice employees used to meet the goals, and apprentice hours calculation showing compliance with the required 15% utilization when compared to total hours worked in the eligible trades categories.

F. I understand a non-compliance penalty for projects exceeding $100,000 will be assessed at each 30-day audit per the Penalty Table, if I am found to be non-compliant during the contract period.
   a. Failure to comply at 1st 30-day audit will result in a penalty per the Penalty Table, which will be deducted from the prime contractor's invoice.
   b. Failure to comply in a consecutive 2nd 30-day audit will result in a penalty per the Penalty Table, which will be deducted from the prime contractor's invoice.
   c. Failure to comply in a consecutive 3rd 30-day audit will result in a penalty per the Penalty Table, which will be deducted from the prime contractor's invoice.
   d. Failure to comply in a consecutive 4th 30-day audit will result in a penalty per the Penalty Table, which will be deducted from the prime contractor's invoice, and may result in a finding of non-responsibility on future bidding. (This penalty will repeat for any future non-compliance.)

G. <u>Application of the Penalty Table:</u>
   a. Advancement of penalties in the Penalty Table will only be assessed for consecutive non-compliance. If the contractor gets back into compliance, any future non-compliance will be assessed at the beginning step of the Penalty Table, per the applicable contract threshold category.

H. <u>Lack of Apprentice(s) availability:</u>
   a. If a contractor is awarded a contract but cannot meet the apprenticeship utilization requirement, and fail an audit, the contractor will have the opportunity to request a waiver from the apprenticeship utilization requirement. A waiver will only be granted if the contractor can factually demonstrate that the cause was from a lack of available apprentices in eligible trades categories.

I. ASD will provide the List of Alaskan Federal Registered Apprenticeship Programs, which contains the crafts/trades categories within those federally registered programs. Once per year, ASD will receive the updated List of Alaskan Federal Registered Apprenticeship Programs from the Federal Department of Labor to capture any new Alaskan Federally Registered Apprenticeship Programs that have been added, or to capture any that have been dissolved or discontinued. The List of Alaskan Federal Registered Apprenticeship Programs

provided to ASD by the Federal Department of Labor will be posted on ASD's website, as contained in the solicitation, so contractors have access to it.

J. Definitions:

a. **Alaskan Federally Registered Apprenticeship Programs** are programs approved by the Federal Department of Labor, US DOL Office of Apprenticeship.

b. **Eligible Trades Categories** are the crafts/trades categories that fall under an Alaskan Federally Registered Apprenticeship Program. Eligible Trades Categories will be the categories measured for aggregate project hours and apprentice hours to establish the apprenticeship utilization percentage.

c. **The List of Alaskan Federal Registered Apprenticeship Programs** is a current list provided by ASD to contractors that shows the Alaskan Federally Registered Apprenticeship Programs and the eligible trades categories under those programs. That current list will be the list in effect and in force during the issuance of the solicitation. Any changes to the list will affect future solicitations and will not be retroactive to prior solicitations.

d. **Random Site Inspections** are defined as non-scheduled site inspections, in which ASD's representative will visit the project site to establish if apprentices are physically on-site. ASD will provide a minimum of 24 hours' notice to contractors prior to the site inspections.

e. **Consecutive Non-Compliance** is when a contractor consecutively fails to meet the required apprenticeship utilization percentage. If a contractor fails an audit, but then passes the next audit, any future non-compliance will be addressed at the first step of the Penalty Table per the contract values in the table.

f. **The Measurement of Aggregate Apprenticeship Utilization Hours** is defined by the following. Compliance will be audited at 30-day intervals for projects exceeding $100,000. Each 30 day audit period will be measured independently for aggregate apprenticeship utilization hours. If a contractor does not meet the 15% apprenticeship utilization requirement in an audit period, a penalty will be assessed, per the penalty table. However, the deficiency in percentage of apprenticeship utilization hours, will not be carried forward from one audit period to the next. Contractors will only be required to meet the 15% apprenticeship utilization requirement in each audit period, which will be measured independently. In addition, if the aggregate hours for all audit periods for the entire project are 15% or greater, any previously assessed penalties for non-compliance in an audit period will be rescinded.

g. **Finding of non-responsibility:** If ASD determines a contractor to be non-responsible, they will not be permitted to bid on ASD projects.

IN WITNESS WHEREOF, the signature of the undersigned Contractor has been hereunto set this

_____ day of _____, 20___, at _____, Alaska.

Signature: _____

Printed Name: _____

I, _____, being first duly sworn, say that I am the agent for and executed the foregoing under authority of said company to do so; that I have read the same, know the contents thereof, and the matter set forth therein are as I truly believe.

Signature: _____

Subscribed and sworn to before me this _____ day of _____, 20___, at _____, Alaska.

Notary Public in and for: _____

My Commission Expires: _____.

20. LICENSE NUMBER(S):

Alaska Business License Number: _____

Alaska General or Specialty Contracting License Number: _____

Respectfully Submitted, this _____ day of _____, 20__.

Firm Name:_____

Federal Tax ID: _____

Address: _____

_____

Signature:_____

Name (Typed):_____

Title: _____

CORPORATE SEAL (if applicable)

ENCLOSURES:

1. Bid Guarantee (in the form and amount specified or required, include Power of Attorney For Surety)

END OF SECTION

OWNER – CONTRACTOR AGREEMENT FORM

REFERENCE:

1. The form of agreement between the Owner and the Contractor shall be the form bound herein.

2. The Agreement shall be executed in duplicate.

CONTRACT NO. XXCXXXX
SCHOOL PROJECT TITLE
ITB 202X-8XX
ASD PROJECT NO.

Board Memo No.: N/A or Number
Date of Contract: Date of Contract

Company
Address
City, State, Zip

(_) Sole Proprietorship
(_) Partnership
(_) Incorporated in the State of Alaska

OWNER: ANCHORAGE SCHOOL DISTRICT, ANCHORAGE ALASKA

CONTRACT FOR: ITB SCHOOL PROJECT TITLE

Amount of Contract: Amount of Contract in words Dollars and No Cents

Base Bid:	$xxx,xxx.xx
Additive Alternate 1:	$xxx,xxx.xx
Siemens Allowance:	$xxx,xxx.xx
Total:	$xxx,xxx.xx

Statement of Work: The Contractor shall furnish all labor, equipment and materials and perform the work above described for the amount stated in strict accordance with Contract Documents, all of which are made a part of this Contract and designated as follows:

CONTRACT DOCUMENTS

I. This Contract, consisting of two (2) pages.
II. Section 00620 Performance Bond and Payment Bond, consisting of nine (9) pages, dated (date of contract) and attached Power of Attorney for Surety.
III. Contractor signed Bid Form, Section 00300 and signed Addendum/a consisting of four (4) or five (5) pages.
IV. Alaska Sex Offender/Child Kidnapper Registry Contractor Certification consisting of one (1) page.
V. Certificates of Insurance.
VI. Invitation to Bid (number) Project Manual dated (date) and all Drawings are hereby incorporated by reference as if in full text.
VII. Student Community Workforce Agreement

In the event of a conflict between any of the Contract Documents and the provisions of any purchase order of materials or service request issued in connection with this Contract, the provisions of the Contract Documents shall prevail.

Work shall be started in accordance with the Notice to Proceed. Time being of the essence, work shall be completed in accordance with the Project Schedule Milestone Dates set forth under Section 00200 thereof.

The ASD Project Manager for this Contract is: Insert Name of Project Manager Cell (907) XXX-XXXX, Office (907) XXX-XXXX and insert email address.

SAMPLE

The attached performance and payment bond is in due form according to law, and is hereby approved.

_____ Date: _____
Anchorage School District Attorney

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of this date entered on the first page hereof.

ANCHORAGE SCHOOL DISTRICT

_____
David Whiting, Date
Senior Director of Purchasing/Warehouse

CONTRACTOR BUSINESS NAME

_____
Contractor Signature Date

_____
Contractor Print Name and Title

Corporate Seal

Account Code(s):

SAMPLE

BID BOND FORM

REFERENCE:

1. If the Bid Guarantee is submitted on Bond Form, the Bid Bond shall be the form as bound herein.

BID BOND

KNOW ALL MEN BY THESE PRESENT that we, _____ as
Contractor

PRINCIPAL, and _____,a corporation duly organized under the laws
Surety

of the State of _____, as SURETY/OBLIGOR authorized to transact surety business in the state of Alaska, are held and firmly bound unto the ANCHORAGE SCHOOL DISTRICT, as OBLIGEE, in the amount of 5% of the Base Bid Amount for payment whereof PRINCIPAL and SURETY bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these present.

WHEREAS, the PRINCIPAL is herewith submitting its proposal for _____

_____

The condition of this obligation is such that if the PRINCIPAL will, within the time required, enter into a formal contract, and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this Obligation to be void; otherwise, the PRINCIPAL and SURETY will pay unto the OBLIGEE the amount stated above.

OWNER

Anchorage School District
4919 Van Buren Street
Anchorage, Alaska 99517

CONSTRUCTION PROJECT

Solicitation No.: _____

Location: _____

_____

CONTRACTOR

Name: _____

Address: _____

City/State:_____

SURETY

Name: _____

Address: _____

City/State: _____

IN TESTIMONY WHEREOF, the parties hereunto have caused the execution of this bond on the _____ day of _____, 20____.

PRINCIPAL	**SURETY**
_____	_____
Contractor Name	Corporate Surety Name (Seal)
By: _____	By: _____
Signature	Signature
_____	_____
Typed Name and Title	Typed Name, Attorney-in-fact
_____	
WITNESS AS TO PRINCIPAL	

Note: Attach Power of Attorney for Surety Signator.

END OF SECTION

PERFORMANCE BOND AND PAYMENT BOND

REFERENCE:

1. The Performance Bond and Payment Bond shall be the forms as bound herein.

CONSTRUCTION PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENT that we, _____ as
Contractor

PRINCIPAL, and _____, a corporation duly organized under the laws
Surety

of the State of _____, as SURETY/OBLIGOR authorized to transact surety business in the state of Alaska, are held and firmly bound unto the ANCHORAGE SCHOOL DISTRICT, as OBLIGEE, in the amount

of _____

_____ Dollars

($_____), for payment whereof PRINCIPAL and SURETY bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these present.

This Construction Performance Bond ("Bond") is entered into by and between the undersigned parties to ensure the faithful performance of the Construction Contract listed below.

OWNER

Anchorage School District

4919 Van Buren Street

Anchorage, Alaska 99517

CONSTRUCTION PROJECT

Solicitation No.: _____

Location: _____

BOND

Number: _____

Date: _____

Amount: _____

CONSTRUCTION CONTRACT

Number: _____

Date: _____

Amount: _____

CONTRACTOR

Name:_____

Address:_____

City/State: _____

SURETY

Name: _____

Address: _____

City/State: _____

IN TESTIMONY WHEREOF, the parties hereunto have caused the execution hereof of two (2) original counterparts as the _____ day of _____, 20____.

PRINCIPAL	**SURETY**
_____	_____
Contractor Name	Corporate Surety Name (Seal)
_____	_____
Signature	Signature
_____	_____
Typed Name and Title	Typed Name, Attorney-in-fact

_____
WITNESS AS TO PRINCIPAL

Note: Attach Power of Attorney for Surety Signator.

CONSTRUCTION PERFORMANCE BOND TERMS AND CONDITIONS

1. The CONTRACTOR and the SURETY, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER for the complete and proper performance of the Construction Contract, which is incorporated herein by reference.

2. If the CONTRACTOR completely and properly performs all of its obligations under the Construction Contract, the SURETY and the CONTRACTOR shall have no obligation under this Bond.

3. If there is no OWNER Default, the SURETY's obligation under this Bond shall arise after:

   a. OWNER has declared a CONTRACTOR Default under the Construction Contract pursuant to the terms of the Construction Contract; and

   b. The OWNER has agreed to pay the Balance of the Contract Sum to:

      i. The SURETY in accordance with the terms of this Bond and the Construction Contract; or

      ii. A contractor selected to perform the Construction Contract in accordance with the terms of this Bond and the Construction Contract.

4. When the OWNER has satisfied the conditions of Paragraph 3, the SURETY shall promptly (within thirty (30) days) and at the SURETY's expense elect to take one of the following actions:

   a. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Construction Contract (but OWNER may withhold consent, in which case the SURETY must election option 4b, 4c or 4d, below); or

   b. Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

   c. Obtain bids from qualified contractors acceptable to OWNER for a contract for performance and completion of the Construction Contract, and, upon determination by OWNER of the lowest responsive and responsible bidder, arrange for a contract to be prepared for execution by OWNER and the contractor selected with OWNER's concurrence, to be secured with performance and payment bonds executed by a qualified SURETY equivalent to the bonds issued on the Construction Contract; and, if the SURETY's obligations defined in Paragraph 6 exceed the Balance of the Contract Sum, then the SURETY shall pay to OWNER the amount of such excess; or

   d. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and, with reasonable promptness under the circumstances and after investigation and consultation with OWNER, determine in good faith the amount for which it may then be liable to OWNER under Paragraph 6 for the performance and completion of the Construction Contract and, as soon as practicable after the amount is determined, tender payment therefore to OWNER with full explanation of the payment's calculation. If OWNER accepts the SURETY's tender under this paragraph 4.d, OWNER may still hold SURETY liable for future damages then unknown or unliquidated resulting from the CONTRACTOR Default. If OWNER disputes the amount of the SURETY's tender under this paragraph 4.d, OWNER may exercise all remedies available to it at law to enforce the SURETY's liability under paragraph 6.

5. If the SURETY does not proceed as provided in Paragraph 4, then the SURETY shall be deemed to be in default on this Bond ten (10) days after receipt of an additional written notice from OWNER to the SURETY demanding that the SURETY perform its obligations under this Bond. At all times OWNER shall be entitled to enforce any remedy available to OWNER at law or under the Construction Contract including, without limitation, and by way of example only, rights to perform work, protect work, mitigate damages, or coordinate work with other consultants or contractors.

6. The SURETY's monetary obligation under this Bond is limited by the amount of this Bond. Subject to these limits, the SURETY's obligations under this Bond are commensurate with the obligations of the CONTRACTOR under the Construction Contract. The SURETY's obligations shall include but are not limited to:

   a. The responsibilities of the CONTRACTOR under the Construction Contract for completion of the Construction Contract and correction of defective work;

   b. The responsibilities of the CONTRACTOR under the Construction Contract to pay liquidated damages, and for damages for which no liquidated damages are specified in the Construction Contract, actual damages caused by non-performance of the Construction Contract, including but not limited to, all valid and proper back charges, offsets, payments, indemnities or other damages;

   c. Additional legal, design professional and delay costs resulting from the CONTRACTOR Default or resulting from the actions or failure to act of the SURETY under Paragraph 4.

7. No right of action shall accrue on this Bond to any person or entity other than OWNER or its heirs, executors, administrators, or successors.

8. The SURETY hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, purchase orders and other obligations, including changes of time. The SURETY consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, modification, deletion, or addition to the Contract Documents, or of the work required thereunder, shall release or exonerate SURETY on this Bond or in any way affect the obligations of SURETY on this Bond.

9. Any proceeding, legal or equitable, under the Bond shall be instituted in the Superior Court for the State of Alaska, Third Judicial District.

10. Notice to the SURETY, OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the front page.

11. Any provision in this Bond conflicting with any statutory or regulatory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein.

12. Definitions.

   a. Balance of the Contract Sum: The total amount payable by OWNER to the CONTRACTOR pursuant to the terms of the Construction Contract after all proper adjustments have been made under the Construction Contract, for example, deductions for progress payments made, and increases/decreases for approved modifications to the Construction Contract.

   b. Construction Contract: The agreement between OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

c. CONTRACTOR Default: Material failure of the CONTRACTOR which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract, including but not limited to, the provisions of Article 14 of the General Conditions of the Construction Contract.

d. OWNER Default: Material failure of OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR progress payments due under the Construction Contract or to perform other material terms of the Construction Contract, if such failure is the cause of the asserted CONTRACTOR Default and is sufficient to justify CONTRACTOR termination of the Construction Contract.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENT that we, _____ as
Contractor

PRINCIPAL, and _____ a corporation duly organized under the laws
Surety

of the State of _____, as SURETY/OBLIGOR authorized to transact surety business in the state of Alaska, are held and firmly bound unto the ANCHORAGE SCHOOL DISTRICT, as OBLIGEE, in the amount

of _____ Dollars

($_____), for payment whereof PRINCIPAL and SURETY bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these present.
This Payment Bond ("Bond") is entered into by and between the undersigned parties to ensure the faithful performance of the Construction Contract listed below.

OWNER

Anchorage School District

4919 Van Buren Street

Anchorage, Alaska 99517

CONSTRUCTION PROJECT

Solicitation No.: _____

Location: _____

BOND

Number:_____

Date:_____

Amount: _____

CONSTRUCTION CONTRACT

Number: _____

Date: _____

Amount: _____

CONTRACTOR

Name:_____

Address: _____

City/State:_____

SURETY

Name: _____

Address: _____

City/State: _____

IN TESTIMONY WHEREOF, the parties hereunto have caused the execution hereof of two (2) original counterparts as the _____ day of_____, 20_____.

PRINCIPAL	**SURETY**
_____	_____
Contractor Name	Corporate Surety Name (Seal)
_____	_____
Signature	Signature
_____	_____
Typed Name and Title	Typed Name, Attorney-in-fact

_____
WITNESS AS TO PRINCIPAL

Note: Attach Power of Attorney for Surety Signator.

PAYMENT BOND TERMS AND CONDITIONS

The condition of this obligation is such that if the PRINCIPAL shall promptly make payment to all Claimants who furnish labor or materials in the prosecution of the Work provided for in the Construction Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect.

This Bond has been furnished to comply with Alaska Statute 36.25.010, and to allow enforcement rights pursuant to Alaska Statute 36.25.020. Any provisions in this Bond conflicting with said statutory requirements shall be deemed deleted herefrom and provisions conforming to such statutory requirements shall be deemed incorporated herein.

The SURETY hereby waives notice of any change, alteration or addition to the Construction Contract or to related subcontracts, purchase orders and other obligations, including changes of time. The SURETY consents to all terms of the Construction Contract, including provisions on changes to the Contract. No extension of time, change, alteration, modification, deletion, or addition to the Contract Documents, or of the work required thereunder, shall release of exonerate SURETY on this Bond or in any way affect the obligations of SURETY on this Bond.

END OF SECTION

SAMPLE FORMS AND CERTIFICATES

A. GENERAL

A.01 RELATED WORK SPECIFIED ELSEWHERE

A. Comply with the contract conditions requirements and specified administrative procedures in closing-out work.

A.02 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

A. Section 01700: Project Closeout

B. General and Supplementary General Conditions

A.03 APPLICATION AND CERTIFICATE FOR PAYMENT

A. Use Anchorage School District Form 100, 100A, 100B, and 100C attached herein.

A.04 CERTIFICATION OF SUBSTANTIAL COMPLETION

A. Use Anchorage School District Form 101 attached herein.

A.05 CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS

A. Use Anchorage School District Form 102 attached herein.

A.06 RELEASE ON CONTRACTS

A. Use Anchorage School District Form 103 attached herein.

A.07 CONSENT OF SURETY COMPANY TO FINAL PAYMENT

A. Use Anchorage School District Form 104 attached herein.

A.08 CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE

A. Use Anchorage School District Form 105 attached herein.

A.09 CERTIFICATES OF INSURANCE

A. The contractor’s Certificate of Insurance shall be on an industry standard form with, as a minimum, the categories and clauses on the Accord form with contractual clauses for contract number and description, subrogation waiver, additional insured and cancellation notification.

A.10 REQUEST FOR INFORMATION

A. Contractor’s requests for information shall be on Anchorage School District request for information forms.

A.11 PRIME CONTRACT POTENTIAL CHANGE ORDER (PCO)

A. Proposals will be executed on Anchorage School District PCO forms.

A.12 CERTIFICATE OF COMPLIANCE

A. The Contractor shall submit a notarized Certificate of Compliance, contained in this section, with his application for Final Payment.

A.13 WARRANTY OF WORK

A. The Contractor shall furnish to the Owner a notarized Warranty of Work after Final Payment, contained in this section, with his application for Final Payment.

A.14 AHERA EXCLUSION DOCUMENT

A. The Contractor shall furnish to the Owner a signed AHERA Exclusion Document, contained in this section, with his application for Final Payment.

A.15 PRIME CONTRACT CHANGE ORDER (PCCO)

A. Change Orders/Contract Modifications will be executed on Anchorage School District PCCO forms.

A.16 CONTRACTOR'S QUALITY CONTROL REPORT (CQC)

A. The Contractor shall complete the CQC Report in accordance with Section 01400.

A.17 DEPARTMENT OF LABOR NOTICE OF WORK

A. The Contractor shall furnish to the Department of Labor a Notice of Work prior to start of construction.

A.18 DEPARTMENT OF REVENUE TAX CLEARANCE REQUEST FORM

A. For projects funded through the Department of Education (debt reimbursement or DEED grants), the Contractor shall furnish to the Owner a Tax Clearance Request Form approved by the Department of Revenue, contained in this section, with his application for Final Payment.

A.19 DEPARTMENT OF LABOR TAX CLEARANCE REQUEST FORM

A. For projects funded through the Department of Education (debt reimbursement or DEED grants), the Contractor shall furnish to the Owner a Tax Clearance Request Form approved by the Department of Labor, contained in this section, with his application for Final Payment.

A.20 SUBMITTAL CONTROL FORM

A. Submittals will be executed on Anchorage School District Submittal Control Forms.

A.21 STATE OF ALASKA SEX OFFENDER/CHILD KIDNAPPER REGISTRY CONTRACTOR CERTIFICATION

A. Contractor certifies contractor is familiar with and is in compliance with Anchorage School Board Policy 3515.5, that no employee or agent of contractor who will be on district property is registered as a sex offender or child kidnapper in Alaska [Alaska Department of Public Safety "Sex Offender/Child Kidnapper Registry"] or in any other state in which the

employee or agent previously lived or worked, and that, to contractors knowledge, no employee or agent is a convicted sex offender or child kidnapper.

A.22 STATE OF ALASKA SEX OFFENDER/CHILD KIDNAPPER REGISTRY SUBCONTRACTOR CERTIFICATION

A. Subcontractor certifies subcontractor is familiar with and is in compliance with Anchorage School Board Policy 3515.5, that no employee or agent of subcontractor who will be on district property is registered as a sex offender or child kidnapper in Alaska [Alaska Department of Public Safety "Sex Offender/Child Kidnapper Registry"] or in any other state in which the employee or agent previously lived or worked, and that, to subcontractors knowledge, no employee or agent is a convicted sex offender or child kidnapper.

A.23 STATE OF ALASKA SEX OFFENDER/CHILD KIDNAPPER REGISTRY SUB-SUBCONTRACTOR CERTIFICATION

A. Sub-subcontractor certifies sub-subcontractor is familiar with and is in compliance with Anchorage School Board Policy 3515.5, that no employee or agent of sub-subcontractor who will be on district property is registered as a sex offender or child kidnapper in Alaska [Alaska Department of Public Safety "Sex Offender/Child Kidnapper Registry"] or in any other state in which the employee or agent previously lived or worked, and that, to sub-subcontractors knowledge, no employee or agent is a convicted sex offender or child kidnapper.

A.24 LIST OF FEDERALLY REGISTERED ALASKAN APPRENTICESHIP PROGRAMS

A. This list from the Federal Department of Labor will provide contractors with the list Alaskan apprenticeship programs and crafts/trades categories that are subject to ASD's AUP.

A.25 APPRENTICESHIP UTILIZATION FORM

A. The Prime Contractor will list the crafts/trades categories required to complete the project that have Alaskan Federally Registered Apprenticeship Programs. This list will include all crafts/trades categories for both the prime and subcontractors.

A.26 APPRENTICESHIP UTILIZATION PROGRAM CALCULATION FROM

A. This form will be submitted by the prime contractors to demonstrate compliance with the apprenticeship utilization percentage for both prime and subcontractors on the project.

A.27 PENALTY TABLE

A. This table lists the penalties for non-compliance with the AUP.

A.28 SCWA PRE-JOB FORM (Only Required on SCWA projects)

A. The Contractor shall complete and submit to the Project Manager prior to the SCWA Pre-Job Conference.

ANCHORAGE SCHOOL DISTRICT
APPLICATION FOR PAYMENT

Project Name: Contract #:
ITB/RFP No.: Application #:
Name of Contractor: Application date:
Address: Period to:

COMPUTATION OF PAYMENT DUE

(a) Original contract amount (ASD 100A)	$	-
(b) Net Change by Change Orders (ASD 100B)		$0.00
(c) Adjusted contract amount to date (a+b)	$	-
(d) Work Completed to Date (ASD 100B)	$	-
(e) Materials Stored (ASD 100B)	$	-
(f) Total Completed and Stored To Date (d+e)	$	-
(g) Less: amount retained in accordance with contract terms	$	-
(h) Net amount earned on contract work to date (f-g)	$	-
(i) Less: amount of previous payments (ASD 100B)		$0.00
(j) CURRENT PAYMENT DUE (h-l)	$	-
(k) Balance to Finish (c-h)	$	-

CERTIFICATION OF CONTRACTOR

According to the best of my knowledge and belief, I certify that all items and amounts shown on the face of this Application for Payment are correct; that all work has been performed and/or material supplied in full accordance with the requirements of the referenced Contract, and/or duly authorized deviations, substitutions, alterations, and/or additions; that payment has been made for all materials received and work performed for which previous pay applications were approved; that no part of the "Balance Due This Payment" has been received and that it is currently due.

_____ By _____
(Contractor) (Signature of Authorized Representative)

_____ Title: _____
Date

CERTIFICATION OF ARCHITECT

According to the best of my knowledge and belief, and based on on-site observations , I certify that the work completed as shown on ASD 100B has progressed as indicated, the quality of work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the Current Payment Due shown above.

_____ _____
Date (Signature of Architect)

APPROVED FOR PAYMENT

_____ _____
Date (ASD Project Manager)

ASD 100 (1/15)

ANCHORAGE SCHOOL DISTRICT
APPLICATION FOR PAYMENT
Summary of Original Contract, Change Orders, and Payments

Project Name:
ITB/RFP No.:
Name of Contractor:

Contract #::
Application #:
Application date:
Period to:

			Original Contract				
						Contract	
Date	No.	Description	Change Orders	Payments	Balance		Comments

ANCHORAGE SCHOOL DISTRICT
APPLICATION FOR PAYMENT
Detail of Schedule of Values and Work Completed

Project Name:
ITB/RFP No.:
Name of Contractor:

Contract #:
Application #:
Application date:
Period to:

A	B	C	D	E	F	G	H
Item	Description of Work	Scheduled Value	WORK COMPLETED		Materials Presently Stored (Not in D or E)	TOTAL Completed and Stored to Date (D+E+F)	% (G ÷ C)	Balance to Finish (C + G)
			From Prior Application (D+E)	This Period				
		$ -	$ -	$ -	$ -	$ -	#DIV/0!	$ -

ANCHORAGE SCHOOL DISTRICT
APPLICATION FOR PAYMENT
Detail of Schedule of Values and Work Completed

Project Name:
ITB/RFP No.:
Name of Contractor:

Contract #:
Application #:
Application date:
Period to:

A	B	C	D	E	F	G		H
Item	Description of Work	Scheduled Value	WORK COMPLETED		Materials Presently Stored (Not in D or E)	TOTAL Completed and Stored to Date (D+E+F)	% (G ÷ C)	Balance to Finish (C + G)
			From Prior Application (D+E)	This Period				
	TOTAL CONTRACT	$ -	$ -	$ -	$ -	$ -		$ -
						$ -	#DIV/0!	$ -
						$ -	#DIV/0!	$ -
						$ -	#DIV/0!

ANCHORAGE SCHOOL DISTRICT
APPLICATION FOR PAYMENT
Schedule of Stored Materials

Project Name:
ITB/RFP No.:
Name of Contractor:

Contract #:
Application #:
Application date:
Period to:

INVOICE #	VENDOR	DESCRIPTION	AMOUNT STORED AT END OF THIS PERIOD
		TOTAL STORED MATERIALS	$ -

ASD 100C (1/15) Continuation
Stored Material

Page # 1

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project:_____ Contract Number: _____

Contractor: _____ Contract Date: _____

Architect: _____ Date of Issuance: _____

Owner: ANCHORAGE SCHOOL DISTRICT
1301 Labar Street
Anchorage, Alaska 99515

Project Description:
The work performed under this contract has been reviewed and found to be substantially complete. The date of Substantial Completion is hereby established as: _____

Definition of Date of Substantial Completion:
The date of substantial completion of the project is the date certified by the Owner when the work is substantially complete in accordance with, and defined in the Contract Documents.

A list of items to be completed or corrected, prepared by the Owner and verified and amended by the Architect is appended hereto. The failure to include any items or such list does not alter the responsibility of the Contractor to complete the project in accordance with the Contract Documents.

The Contractor will complete or correct the work on the list of items appended hereto within 30 days from the date of substantial completion.

The responsibilities of the Owner and the Contractor for maintenance, heat, utilities, and insurance shall be as follows: _____

_____

In reliance upon the certification of the Contractor and the Architect, the Owner hereby accepts the project as substantially complete. In accordance with the Contract Documents, the Owner hereby elects to assume occupancy of _____

_____ at_____ a.m./p.m. on
_____ .

Owner: **ANCHORAGE SCHOOL DISTRICT**

By: _____ Title: _____ Date: _____

Architect: _____

By: _____ Title: _____ Date: _____

Contractor: _____

By: _____ Title: _____ Date: _____

ASD 101 (01/03)

CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS
ANCHORAGE SCHOOL DISTRICT

WHEREAS, by the terms of a contract dated entered into by the Anchorage School District, and for the construction of

The undersigned, pursuant to the General Conditions of the Contract for the construction, , hereby certifies that, except as listed below, he has paid in full or has otherwise satisied all obligations for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the District or his property might in any way be held responsible.

EXCEPTIONS:

IN WITNESS WHEREOF, the seal of the undersigned Contractor have been hereunto set this

day of

, at .

By

being first duly sworn, say that I am the agent for and executed the foregoing under authority of said company to do so; that I have read the same, know the contents thereof, and the matters set forth therein are as I truly believe.

By

Subscribed and sworn to before me this day of

, , at .

Notary Public in and for

My Commission Expires

ASDF Form 102

RELEASE ON CONTRACT
ANCHORAGE SCHOOL DISTRICT

WHEREAS, by the terms of a contract dated _____entered into by the Anchorage School District, and _____for the construction of

_____,

it is provided that:
"Neither the final payment nor the remaining retained percentage shall become due until the Contractor shall provide the Owner (1) with a waiver and release of liens, on the forms provided by the Owner, executed by the Contractor..."

NOW THEREFORE, in consideration of the premises and the payment by the Anchorage School District to the undersigned Contractor of the amounts due under the contract and any changes or modifications thereto, to wit, the sum

of $ _____ _____ Dollars,
(Numbers) (In Words)

the undersigned Contractor hereby releases and forever discharges the Anchorage School District including its property, particularly that real property known as the

_____

of the Anchorage School District, of and from all manner of debts, dues and sum or sums of money, accounts, claims, and demands whatsoever, in Law and in equity, under or by virtue of said contract, and warrants good title to all material, supplies and equipment installed or incorporated in the project and all work delivered to the premises, together with all improvements and appurtenances constructed thereon by:

_____ to the Anchorage School District free of any claims, liens or encumbrances. Neither the undersigned nor any person, firm or corporation furnishing material or labor for any work covered by this Contract has any right to a lien upon the premises nor improvement thereon, except:

_

IN WITNESS WHEREOF, the signature of the undersigned Contractor has been hereunto set this

_____day of _____, 20___, at _____, Alaska.

Signature: _____

Printed Name: _____

I, _____, being first duly sworn, say that I am the agent for and executed the foregoing under authority of said company to do so; that I have read the same, know the contents thereof, and the matters set forth therein are as I truly believe.

Signature: _____

Subscribed and sworn to before me this ___day of _____, 20___, at _____, Alaska.

Notary Public in and for _____

My Commission Expires: _____.

ASD Form 103

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

PROJECT: _____ PROJECT NUMBER: _____

CONTRACTOR: _____ CONTRACT DATE: _____

TO: Anchorage School District

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above:

_____(Surety Company)

on bond of

_____(Contractor)

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to Anchorage School District, Owner as set forth in said Surety Company's bond. Surety expressly agrees that any and all valid claims of sub-Contractors and all persons supplying labor or materials to the project will be satisfied by Contractor or Surety in a timely manner

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand this

_____ day of _____, 20___.

_____
Name of Surety Company

Attest _____
Signature of Authorized Representative

_____
Title

ASD 104

CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE
ANCHORAGE SCHOOL DISTRICT

PROJECT: **PROJECT NUMBER:**

TO: Anchorage School District **CONTRACT DATE:**

CONTRACTOR:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the:

_____ (Surety Company)

on bond of

_____ (Contractor)

HEREBY APPROVES OF THE REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE to the Contractor as follows:

The surety agrees that such reduction in or partial release of retainage to the Contractor shall not relieve the Surety of any of its obligations to **ANCHORAGE SCHOOL DISTRICT, OWNER**

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand this

day of .

_____
Name of Surety Company

Attest

_____
Signature of Authorized Representative

_____
Title

ASDF Form 105

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

PRODUCER	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	INSURERS AFFORDING COVERAGE	NAIC #
INSURED	INSURER A:	
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
		GENERAL LIABILITY				EACH OCCURRENCE	$
		COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence)	$
		CLAIMS MADE ☐ OCCUR ☐				MED EXP (Any one person)	$
						PERSONAL & ADV INJURY	$
		GEN'L AGGREGATE LIMIT APPLIES PER:				GENERAL AGGREGATE	$
		POLICY ☐ PRO-JECT ☐ LOC ☐				PRODUCTS - COMP/OP AGG	$
		AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident)	$
		ANY AUTO				BODILY INJURY (Per person)	$
		ALL OWNED AUTOS				BODILY INJURY (Per accident)	$
		SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	$
		HIRED AUTOS					
		NON-OWNED AUTOS					
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
		ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
		EXCESS / UMBRELLA LIABILITY				EACH OCCURRENCE	$
		OCCUR ☐ CLAIMS MADE ☐				AGGREGATE	$
							$
		DEDUCTIBLE					$
		RETENTION $					$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATU-TORY LIMITS / OTH-ER	
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N ☐				E.L. EACH ACCIDENT	$
		(Mandatory in NH)				E.L. DISEASE - EA EMPLOYEE	$
		If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - POLICY LIMIT	$
		OTHER					

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

CERTIFICATE HOLDER	CANCELLATION
	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL _____ DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.
	AUTHORIZED REPRESENTATIVE

ACORD 25 (2009/01)

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SAMPLE

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

This Certificate of Insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

SAMPLE

ACORD 25 (2009/01)

Anchorage School District
Facilities Maintenance
1301 Labar Street
Anchorage, Alaska 99515
Phone: (907) 348-5215
Fax: (907) 348-5227

REQUEST FOR INFORMATION
No.

TITLE: **DATE:**

PROJECT: **Project No.:**

TO:

REQUEST:

ANSWER:

Answered By: _____
Printed Name

_____ _____
Signature Date

This is not an authorization to proceed with any work involving additional cost and / or time.
Notification must be given in accordance with Contract Documents if any clarification, variation or Architects/Engineers responses cause any change to the Contract Documents.

ANCHORAGE SCHOOL DISTRICT USE ONLY:
Reviewed By:

Is this Request for Information associated with an Request for Proposal?
Yes ____ No _____

Signed: _____ **Date:** _____ **Request for Proposal #**
Project Manager

PCO #XXX

Capital Planning & Construction
1301 Labar St
Anchorage, Alaska 99515
Phone: (907) 348-5284
Fax: (907) 348-5227

Project:

Prime Contract Potential Change Order #XXX: Name

TO:	**FROM:**
PCO NUMBER/REVISION:	**CONTRACT:**
REQUEST RECEIVED FROM:	**CREATED BY:**
STATUS:	**CREATED DATE:**
REFERENCE:	**PRIME CONTRACT CHANGE ORDER:**
FIELD CHANGE:	**CHANGE ORDER REQUEST:**
LOCATION:	**ACCOUNTING METHOD:**
SCHEDULE IMPACT:	**PAID IN FULL:**
CHANGE REASON:	**TOTAL AMOUNT:**

Within seven (7) days, submit an itemized proposal.

Provide labor, material, equipment, and supervision necessary to complete changes to project as represented by the documentation indicated below. The quoted price shall include all direct and indirect costs (additive and deductive) associated with and resulting from this work, per the General Conditions of the Contract. Provide lump sum proposal properly itemized and supported by sustaining data to permit evaluation. The quoted price shall be considered full compensation and include all delay, impact, and actual cost associated with the resulting changes from this extra work.

POTENTIAL CHANGE ORDER DESCRIPTION: *(The Contract Is Changed As Follows)*

ATTACHMENTS:

APPROVAL

By:		By:	
Project Manager	Date	Contractor	Date
By:		By:	
Construction Supervisor		Senior Director of CP&C	
Date:		Date:	
Required if amount exceeds $10,000		Required if amount exceeds $50,000	

Capital Planning & Construction page 1 of 1

CERTIFICATE OF COMPLIANCE

No final payment shall be made until the Contractor shall file with the Owner, prior to acceptance of the work, a notarized Certification of Compliance in the following form:

The Contractor does hereby certify that all work has been performed and materials supplied in accordance with the Drawings, Specifications and Contract Documents for the above work, and that:

No less than the prevailing rates of wages as ascertained by the governing body of the Contracting Agency has been paid to laborers, workmen and mechanics employed on this work;

There have been no unauthorized substitutions of Subcontractors; nor have any subcontracts been entered into without prior notice having been submitted to the Owner prior to the start of such subcontracted work;

No subcontract was assigned or transferred or performed by any Subcontractor other than the original Subcontractor, without prior notice having been submitted to the Owner together with the names of all Subcontractors;

All claims for material and labor and other paid service performed in connection with these specifications have been paid;

All monies due the State Industrial Accident Fund, the State Unemployment Compensation Trust Fund, the State Tax Commission, Hospital Associations and/or others have been paid.

In WITNESS WHEREOF, the undersigned has signed and sealed this instrument this

_____ day of _____, 20__.

_____
(Firm Name)

_____
(Signature)

_____
(Title)

(Attest)

(SEAL IF BIDDER IS A CORPORATION)

As determined necessary, evidence of compliance may be required to be submitted with and made a part of this Certificate of Compliance.

WARRANTY OF WORK

Prior to Final Payment, the Contractor shall furnish to the Owner a Warranty of Work in the following form:

The Contractor does hereby warrant all work and materials to be in full and complete accordance with the Contract Documents and Agreement between Owner and Contractor, and requirements appertaining thereto; that all work and materials are free from any and all defects and imperfections, and fully suitable for the use and purposes for which each and every part is intended. The Contractor also agrees that, should any defect develop or appear which the Project Manager or Owner's Representative finds was Not caused by improper use, the Contractor shall promptly, upon demand, fully correct, substitute and make good any such defective material without any cost to the Owner and will save the Owner harmless against any claim, demand, loss or damage by reason of any breach of this warranty.

The period of this warranty shall commence on the date of Substantial Completion.

The warranty shall continue to be in full force and effect for the period of one (1) year, except for those items for which a longer period of warranty is specifically stated in the Warranties for work in Technical Sections of the Specifications.

Warranties for work stated in Technical Section shall continue in full force and effect for the respective periods expressly stated.

In WITNESS WHERE, the undersigned has signed and sealed this instrument this

_____ day of _____, 20__.

_____
(Firm Name)

_____
(Signature)

_____
(Title)

(Attest)

(SEAL IF BIDDER IS A CORPORATION)

AHERA Exclusion Document

Contractor's Verification of Asbestos-Free Construction

Project: _____ **Project Number:** _____

Contractor: _____ **Date:** _____

To: Anchorage School District
Facilities Coordinator,
AHERA LEA Designated Person

To the best of our knowledge, no asbestos-containing building materials were installed in this project.

Attest: _____
Signature of Authorized Representative

_____
Title

PCCO #XXX

Capital Planning & Construction
1301 Labar St
Anchorage, Alaska 99515
Phone: (907) 348-5264
Fax: (907) 348-5227

Project:

Prime Contract Change Order #XXX:

TO:	**FROM:**
DATE CREATED:	**CREATED BY:**
CONTRACT STATUS:	**REVISION:**
DESIGNATED REVIEWER:	**REVIEWED BY:**
DUE DATE:	**REVIEW DATE:**
CONTRACTUAL COMPLETION DATE:	
SCHEDULE IMPACT:	**EXECUTED:**
CONTRACT FOR:	**TOTAL AMOUNT:**
DESCRIPTION:	
ATTACHMENTS:	

CHANGE ORDER REQUESTS IN THIS CHANGE ORDER:

COR #	Issue	Description	Cost
		TOTAL:	$ 0.00

CHANGE ORDER LINE ITEMS: reason

Original contract sum	$
Previously authorized change orders	$
Previous contract amount	$
Current change order amount	$
New contract sum	$
Percent of original contract sum	

Contractor **DATE**

Senior Director of Purchasing/Warehouse **DATE**

Capital Planning & Construction page 1 of 1

CONTRACTOR'S QUALITY CONTROL REPORT (CQC)	DATE	REPORT NO.
CONTRACT NO. AND NAME OF CONTRACTOR	DESCRIPTION AND LOCATION OF THE WORK:	

WEATHER CLASSIFICATION:		CLASSIFICATION:
CLASS A	No interruption of any kind from weather conditions occurring on this or previous shifts.	CLASS _____
CLASS B	Weather occurred during this shift that caused a complete stoppage of all work.	TEMPERATURE: MAX_____MIN_____
CLASS C	Weather occurred during this shift that caused a partial stoppage of work.	
CLASS D	Weather overhead excellent or suitable during shift. Work completely stopped due to results of previous adverse weather.	PRECIPITATION:
CLASS E	Weather overhead excellent or suitable during shift but work partially stopped due to previous adverse manner.	INCHES_____
OTHER	Explain.	

CONTRACTOR/SUBCONTRACTORS AND AREA OF RESPONSIBILITY FOR WORK PERFORMED TODAY: (Attach list of items of equipment either idle or working as appropriate.)

a._____

b._____

c._____

d._____

e._____

f._____

g._____

h._____

1. WORK PERFORMED TODAY: (Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above.)

2. TYPE AND RESULTS OF INSPECTION: (Indicate whether P-Preparatory, I-Initial, or F-Follow-up and include satisfactory work completed or deficiencies with action to be taken.)

3. TESTS REQUIRED BY PLANS AND/OR SPECIFICATIONS PERFORMED AND RESULTS OF TESTS:
4. QUALITY CONTROL REPORTS (items requiring special inspections):
5. VERBAL INSTRUCTIONS RECEIVED: (List any instructions given by Owner on construction deficiencies, retesting required, etc., with action to be taken.)
6. REMARKS: (Cover any conflicts in plans, specification or instructions: acceptability of incoming materials; offsite surveillance activities; progress of work, delays, causes and extent thereof; days of no work with reasons for same.)
CONTRACTOR'S CERTIFICATION: I certify that the above report is complete and correct and that all material and equipment used, work performed and tests conducted during this reporting period were in strict compliance with the contract plans and specifications except as noted above. _____ CONTRACTOR'S APPROVED AUTHORIZED REPRESENTATIVE

Department of Labor and Workforce Development
Labor Standards and Safety Division
Wage and Hour Administration
www.labor.state.ak.us/lss/lss.htm

NOTICE OF WORK

Filing Fee Required

- This form must be typed or printed in ink.
- Fill in all blanks or form will be returned for correction (see back).
- Please allow a minimum of 10 working days for processing.

ENTER YOUR FAX # _____
AND LIST YOUR MAILING ADDRESS BELOW

Contractor, company or agency name, address, city, state & ZIP + 4

Project name		
Specific site description		
Contract awarding agency		
Address		
City	State	ZIP + 4
Contract awarding agency contact person		Phone #
Location and city where work is to be performed		
Date work to begin (m/d/y)	Do you intend to use subcontractors? ☐ Yes ☐ No	
Final Bid Date	Contract #	

Primary contractor (has contract with the public agency)

List all contractors & subcontractors (Attach extra sheet if necessary)	Type of work	Amount of subcontract

CERTIFICATION: I hereby certify that the above information is correct. Enclosed is the filing fee computed at 1% of the total amount of all my subcontractors on this project. This amount includes the contract value for the primary contractor. I understand that the maximum fee I am required to pay is $5,000. I further certify that all contractors shall be made aware of the requirements of AS 36.05.010 - .110 and AS 36.10.007 - .990 before working.

Total value of subcontracts	$
+ Value of work performed by primary contractor	$
Amount subject to fee	$
	Multiply by .01
Total fee enclosed =	$
ROUND FEES TO NEAREST DOLLAR	

Signature Date

Title

Fax # Phone #

For Dept. Use Only

Accepted:

By _____
Department of Labor and Workforce Development

For Dept. Use Only

Amount: _____ Check Number: _____ Cash ___
Received By: _____ Date: _____
Credit Card Confirmation _____
Visa ___ MC ___
Project Name _____
DOLWD Project # _____

Wage & Hour date-stamped copy of this form will serve as temporary receipt.

How to expedite the processing of your form:

Acceptance of this notice will be based on the information provided by the primary contractor.

ERRORS THAT CAUSE REJECTION

No fee included or incorrect amount. If total contract amount is less than $25,000 no filing fee is required. Contract amounts paid to owner/operators with no employees are exempt from the fee. **The maximum total filing fee for any one project is $5,000.00.**

Missing – Enter the "time and materials" if applicable. The exact dollar amount will be required on the Notice of Completion to be filed when the project is done.

Missing – The name of each subcontractor and the amount or estimated amount of the subcontract is required. Enter the "time and materials" if applicable. The exact dollar amount will be required on the Notice of Completion to be filed when the project is done.

Missing – Notice of Work must be signed by an authorized representative.

FILING INSTRUCTIONS

If there is not enough space to list all contractor/subcontractor information, attach additional sheets.

A Wage and Hour Administration (WH) date-stamped copy of this form will serve as a temporary receipt, while the acceptance of fees is processed. WH will mail or fax the accepted copy of this notice to the organization provided on the front of this form. Make a copy for your records. This will serve as your notice that the fees paid have been accepted by WH.

For questions call the nearest WH office:
Juneau: (907) 465-4842 Anchorage: (907) 269-4900 Fairbanks: (907) 451-2886

For more forms, see www.labor.state.ak.us/lss/lssforms.htm

Submit the notice and the appropriate filing fee to:

Alaska Department of Labor and Workforce Development
Wage and Hour Administration
P.O. Box 107021
Anchorage, AK 99510-0721

If no fee is required, you may fax the notice to (907) 269-4915

Alaska Department of Revenue
TAX CLEARANCE REQUEST FORM

Applicant's Name: _____

FIN&SSN: _____

Mailing Address: _____

City/State/Zip Code: _____

I hereby authorize the Alaska Department of Revenue to release to

_____
(Name of Department or Agency)

Departments Statute on tax clearance: _____

whose facsimile number or email address is _____,

confirmation that all taxes, penalties and interest due the Department of Revenue have been paid and that there are no outstanding amounts due.

Signed: _____

Printed Name: _____

Title*: _____

*If tax clearance is being requested on behalf of a corporation/LLC/partnership, must be signed by an officer/member/partner.

Send completed form by email to the Department of Revenue at DOR.tax.accounting@alaska.gov

DEPARTMENT USE ONLY

☐ *The above applicant is current on all taxes, penalties and interest due and is in good standing with the Alaska Department of Revenue.*

☐ *The above applicant is not current on all taxes, penalties and interest due and is not in good standing with the Alaska Department of Revenue.*

Department of Revenue Representative _____ *Date*

TaxClearanceRequestForm (Rev 2/21)

THE STATE of ALASKA
GOVERNOR MICHAEL J. DUNLEAVY

Department of Labor and Workforce Development

Division of Employment and Training Services
Employment Security Tax

P.O. Box 115509
Juneau, AK 99811-5509
Relay Alaska (in state): (800) 770-8973 or 7.1.1
Relay Alaska (out of state): (800) 770-8255
Toll free: (888) 448-2937
Phone: (907) 465-2787
Fax: (907) 465-2374

Tax Clearance Request Form for Contractors

Date of request: _____

Business name of the contractor a Tax Clearance is being requested for: _____

_____

Business address: _____

Business contact phone number: _____

Federal Identification Number: _____

Alaska Employer Account Number: _____

Specific time period a tax clearance is being requested for *(i.e. beginning and ending date of a subcontract agreement)*:

_____

Subcontract project name: _____

_____

Name and address of the person this Tax Clearance is to be returned to: _____

_____

Comments or additional information: _____

_____

For agency use only:

☐ Tax Clearance is granted

☐ Tax Clearance is not granted *(please have employer contact the department)*

☐ No account on file, liability unknown *(please have employer contact the department)*

☐ Employer has stated no employees, Tax Clearance not required.

Agency representative signature: _____ Date: _____

Agency representative title: _____

We are an equal opportunity employer/program. Auxiliary aids and services are available upon request to individuals with disabilities. labor.alaska.gov/estax

Rev. 8/2018

Submittal Control Form

Project Title:

Project No:
Contract No:

Contractor:
Address: _____
_____
Contact: _____
Telephone:
Fax: _____

Submittal No.

____ **New Submittal**
____ **Resubmittal**

Submittal is as Specified? **Yes** **No**

2. **Revision Number:** _____
3. **Submittal Control No.:**
4. **Description:** _____
_____
_____
5. **Spec. Section/Dwg Ref.:**

Number of Copies:

Remarks:

Review is for general design or arrangement only. Not for quality, dimension or fit.

Review Stamp

_____
Submitted By

_____
Date

Forwarded for Design Review: _____
Date

_____
ASD Reviewed / Forwarded By

STATE OF ALASKA SEX OFFENDER/CHILD KIDNAPPER REGISTRY CONTRACTOR CERTIFICATION

Pursuant to Board Policy 3515.5, Sex Offenders and Child Kidnappers,. I _____ the undersigned Principal for _____ on Solicitation _____, certify:

1. That I, either personally or through a person designated by me, have researched the State of Alaska Sex Offender/Child Kidnapper Registry to confirm that no employee or agent who may enter Anchorage School District property in connection with the contract is listed in the Registry.

2. That I have required all subcontractors and any of their sub-subcontractors to certify, or they will require all subcontractors and any of their sub-subcontractors to certify, that they researched the State of Alaska Sex Offender/Child Kidnapper Registry to confirm that no employee or agent who may enter district property in connection with the contract is listed in the Registry. I will provide all such certification to the district upon request.

3. To my knowledge, no any employee or agent of bidder, or any sub-contractor or sub-sub-contractor of bidder, who may enter district property in connection with the contract is: (a) listed in the sex offender/child kidnapper registry of any other state; or, (b) is a convicted sex offender or child kidnapper.

4. I have read Board Policy 3515.5 and certify that the bidder will comply with Board Policy 3515.5. Bidder will not send any employee or agent who is a sex offender or child kidnapper to District property, as that term is defined in Board Policy 3515.5.

Contractor Name:_____ Dated:_____

By: _____ _____
Signature Printed Name

Title: _____

STATE OF ALASKA SEX OFFENDER/CHILD KIDNAPPER REGISTRY SUBCONTRACTOR CERTIFICATION

Pursuant to Board Policy 3515.5, Sex Offenders and Child Kidnappers,. I _____ the undersigned Principal for _____ on Solicitation _____, certify:

1. that I, either personally or through a person designated by me, have researched the State of Alaska Sex Offender/Child Kidnapper Registry to confirm that no employee or agent who may enter Anchorage School District property in connection with the contract is listed in the Registry.

2. that I have required all subcontractors and any of their sub-subcontractors to certify, or they will require all subcontractors and any of their sub-subcontractors to certify, that they researched the State of Alaska Sex Offender/Child Kidnapper Registry to confirm that no employee or agent who may enter district property in connection with the contract is listed in the Registry. I will provide all such certification to the district upon request.

3. that if my company enters into an agreement to perform work as a Subcontractor for _____ the General Contractor for the district under Solicitation No. _____, my company will not allow any worker whose name appears on the State of Alaska Sex Offender/Child Kidnapper Registry to perform work on or at the Project site.

Subcontractor Name:_____ Dated:_____

By: _____ _____
Signature Printed Name

Title: _____

STATE OF ALASKA SEX OFFENDER/CHILD KIDNAPPER REGISTRY SUB-SUBCONTRACTOR CERTIFICATION

Pursuant to Board Policy 3515.5, Sex Offenders and Child Kidnappers,. I _____ the undersigned Principal for _____ on Solicitation _____, certify:

1. that I, either personally or through a person designated by me, have researched the State of Alaska Sex Offender/Child Kidnapper Registry to confirm that no employee or agent who may enter Anchorage School District property in connection with the contract is listed in the Registry.

2. that if my company enters into an agreement to perform work as a Subcontractor for _____ the General Contractor for the district under Solicitation No. _____, my company will not allow any worker whose name appears on the State of Alaska Sex Offender/Child Kidnapper Registry to perform work on or at the Project site.

Sub-SubContractor Name:_____ Dated:_____

By: _____ _____
Signature Printed Name

Title: _____

ANCHORAGE SCHOOL DISTRICT'S
LIST OF
ALASKAN FEDERALLY REGISTERED APPRENTICESHIP PROGRAMS

Program Number	Program Name	Program Status	Address	Occupation Title
AK00090003	*ABC of Alaska, Inc.*	*Registered*	*301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518*	*CARPENTER*
AK00030002	ALASKA ACOUSTICAL	Registered	902 Warren Street KETCHIKAN AK 99901	CARPENTER
AK00053003	*Alaska Carpenters Training Trust*	*Registered*	*8751 King Street Anchorage AK 99515*	*CARPENTER*
AK00108688	Collins Construction, Incorporated	Suspended	1151 W. Nugget Avenue Wasilla AK 99654	CARPENTER
AK00125897	Finished Works, LLC	Registered	P.O. Box 521791 Big Lake AK 99652	CARPENTER
AK00128017	H Construction, LLC	Registered	15581 Teeling Circle Palmer AK 99645	CARPENTER
AK00170010	ICE SERVICES, INCORPORATED	Registered	2606 C STREET, SUITE 2B ANCHORAGE AK 99503	CARPENTER
AK00088120	Woodwright Construction, Inc.	Registered	P.O. Box 6235 Ketchikan AK 99901	CARPENTER
AK00030009	YUKON-KUSKOKWIM DELTA APPRENTICESHIP PROGRAM	Registered	P.O. BOX 869 BETHEL AK 99559	CARPENTER
AK00053004	*Alaska Carpenters Training Trust*	*Registered*	*8751 King Street Anchorage AK 99515*	*CARPENTER, INTERIOR SYSTEMS (Alternate Title: Interior Systems Carpenter)*
AK00053001	*Alaska Carpenters Training Trust*	*Registered*	*8751 King Street Anchorage AK 99515*	*CARPENTER, PILEDRIVER*
AK00078017	*Alaska Trowel Trades JATC*	*Registered*	*825 East 8th Avenue, Suite 10 Anchorage AK 99501*	*CEMENT MASON*
2019-AK-73685	Rady Concrete Construction, LLC	Registered	P.O. Box 82061 Fairbanks AK 99708	CEMENT MASON
AK00099003	*ABC of Alaska, Inc.*	*Registered*	*301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518*	*CONSTRUCTION CRAFT LABORER*
AK01940006	*Alaska Laborers JATC*	*Registered*	*17805 OLD GLENN HWY CHUGIAK AK 99567*	*CONSTRUCTION CRAFT LABORER*
2017-AK-497	Rock-n-Road Construction, Inc.	Registered	P.O. Box 1388 Petersburg AK 99833	CONSTRUCTION CRAFT LABORER
AK00147681	Wolverine Supply, Inc.	Registered	5099 E. Blue Lupine Drive Wasilla AK 99654	CONSTRUCTION CRAFT LABORER
AK00135904	Yukon River Towing, LLC	Registered	P.O. Box 128 Emmonak AK 99581	CONSTRUCTION CRAFT LABORER
AK00090007	*ALASKA TEAMSTER-EMPLOYER SERVICE TRAINING TRUST*	*Registered*	*520 East 34th Avenue, Suite 201 ANCHORAGE AK 99503*	*CONSTRUCTION DRIVER*
2017-AK-497	Rock-n-Road Construction, Inc.	Registered	P.O. Box 1388 Petersburg AK 99833	CONSTRUCTION DRIVER
AK00109514	After Hours Truck & Fleet	Registered	998 Deere Street Fairbanks AK 99709	DIESEL MECHANIC
2017-AK-69477	Holland America Princess Alaska - Yukon	Registered	459 Ocean Dock Road Anchorage AK 99501	DIESEL MECHANIC
AK00102666	Peak Oilfield Service Company - Bristol Bay Industrial	Registered	5015 Business Park Blvd., Suite 4000 Anchorage AK 99503	DIESEL MECHANIC
2017-AK-469	RL Trucking, LLC.	Registered	1221 East 71st Avenue Anchorage AK 99518	DIESEL MECHANIC
2017-AK-497	907 Electric	Registered	11134 June Agnes Circle Eagle River AK 99577	ELECTRICIAN
AK00090003	*ABC of Alaska, Inc.*	*Registered*	*301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518*	*ELECTRICIAN*
AK00108586	AC Electric, LLC	Registered	P.O. Box 1761 Seward AK 99664	ELECTRICIAN
AK00145734	Access Electric & General Trades, LLC	Registered	P.O. Box 670856 Chugiak AK 99567	ELECTRICIAN
AK00167701	Agape Electric	Registered	P.O. Box 7601 Nikiski AK 99635	ELECTRICIAN
AK00078015	*ALASKA JOINT ELECTRICAL APPRENTICESHIP & TRAINING TRUST*	*Registered*	*5800 B ST ANCHORAGE AK 99518*	*ELECTRICIAN*
AK00113542	Alaska Native Tribal Health Consortium, Division of Environmental Health & Engineerir	Registered	4500 Diplomacy Drive, Suite 454 Anchorage AK 99508	ELECTRICIAN
AK00102776	Alaska's Wiremen	Registered	39535 Fox Trail Road Soldotna AK 99669	ELECTRICIAN
AK00145920	Ala-Wa, Inc.	Registered	P.O. Box 385 Unalaska AK 99685	ELECTRICIAN
AK00125243	Alpine Electric	Registered	13901 East Mayen Ruelle Court Palmer AK 99645	ELECTRICIAN
AK00080238	Amped Electric, Inc.	Registered	3400 International Street Fairbanks AK 99701	ELECTRICIAN
AK01040003	ANCHOR ELECTRIC	Registered	5362 COMMERCIAL DRIVE JUNEAU AK 99801	ELECTRICIAN
AK00157693	Anderson Brothers Electric, LLC	Registered	16300 Ocean View Drive Juneau AK 99801	ELECTRICIAN
2019-AK-72630	Arctic Fox Electric, LLC	Registered	3351 Eastwind Court Anchorage AK 99516	ELECTRICIAN
AK00106013	AUKE BAY ELECTRIC	Registered	P.O. BOX 210194 AUKE BAY AK 99821	ELECTRICIAN
AK01040025	BEAR ELECTRIC, INCORPORATED	Registered	2008 Perkins Drive FAIRBANKS AK 99709	ELECTRICIAN
2018-AK-71428	Bering Straits Development Company	Registered	P.O. Box 1008 Nome AK 99762	ELECTRICIAN
AK00145915	Bootleg Electric, LLC	Registered	P.O. Box 871301 Wasilla AK 99687	ELECTRICIAN
AK00103401	Brickwell, Incorporated	Registered	11425 Avion Street ANCHORAGE AK 99516	ELECTRICIAN
AK00080231	Bruness Electric, LLC	Registered	P.O. Box 66 Wrangell AK 99929	ELECTRICIAN
AK00135727	Cache Maintenance	Registered	1295 Aloha Street North Pole AK 99705	ELECTRICIAN
AK00145732	Capstone Electric, LLC	Registered	22356 Whispering Birch Drive Chugiak AK 99567	ELECTRICIAN
AK00050009	CHANNEL ELECTRIC, INC.	Registered	1155 COPPER RIDGE LANE KETCHIKAN AK 99901	ELECTRICIAN
AK00060008	CITY & BOROUGH OF SITKA, ENVIRONMENTAL DEPT.	Registered	100 LINCOLN STREET SITKA AK 99835	ELECTRICIAN
AK00108011	CNS, Inc.	Registered	1285 Overhill Drive Fairbanks AK 99709	ELECTRICIAN
AK00102662	DRS Electric, LLC	Registered	18207 Stillwater Drive Eagle River AK 99577	ELECTRICIAN
AK00279210	Eberline Building and Supply	Registered	35775 Walker Street North Soldotna AK 99669	ELECTRICIAN
AK00168016	Encore Electric, LLC	Registered	5640 B Street Anchorage AK 99518	ELECTRICIAN
AK00147686	Evans Electric	Registered	P.O. Box 1343 Kotzebue AK 99752	ELECTRICIAN
AK00103517	Facility Contractors, LLC	Registered	P.O. Box 2034 Cordova AK 99574	ELECTRICIAN
AK00158004	Frontier Electrical Services, LLC	Registered	P.O. Box 3030 Valdez AK 99686	ELECTRICIAN
AK00103398	Fuchs Electric, Incorporated	Registered	9400 Vanguard Drive, Suite A Anchorage AK 99507	ELECTRICIAN
AK00158000	G2 Construction, Inc.	Registered	P.O. Box 10690 Fairbanks AK 99701	ELECTRICIAN
AK00114703	Glacier Electric	Registered	P.O. Box 112002 Anchorage AK 99511	ELECTRICIAN
AK00157696	GRS Controls	Registered	P.O. Box 56469 North Pole AK 99705	ELECTRICIAN
2017-AK-748	Hanson Construction, Incorporated	Registered	38050 Nenana Avenue Sterling AK 99672	ELECTRICIAN
AK00091957	Heda Greens Creek Mining Company	Registered	P.O. Box 32199 Juneau AK 99801	ELECTRICIAN
2017-AK-68590	Hometown Connection, Inc.	Registered	P.O. Box 439 Skagway AK 99840	ELECTRICIAN
2019-AK-73036	Huffer Electric, Inc.	Registered	P.O. Box 2229 Soldotna AK 99669	ELECTRICIAN
AK00170010	ICE SERVICES, INCORPORATED	Registered	2606 C STREET, SUITE 2B ANCHORAGE AK 99503	ELECTRICIAN
AK00109697	Icicle Seafoods, Incorporated	Registered	4111 N. Nordic Drive Petersburg AK 99833	ELECTRICIAN
AK00060009	INLET ELECTRICAL CONTRACTORS, LLC	Registered	P.O. BOX 202109 ANCHORAGE AK 99520	ELECTRICIAN
AK00158001	Integrated Communication Designs, Inc.	Registered	P.O. Box 111551 Anchorage AK 99511	ELECTRICIAN
AK00125899	Integrity Electric, Inc.	Registered	35955 Ryan Lane Soldotna AK 99669	ELECTRICIAN

ANCHORAGE SCHOOL DISTRICT'S
LIST OF
ALASKAN FEDERALLY REGISTERED APPRENTICESHIP PROGRAMS

Program Number	Program Name	Program Status	Address	Occupation Title
AK001103402	Intelligent Design, LLC	Registered	11741 Timberlane Drive Anchorage AK 99515	ELECTRICIAN
AK001070022	JH ELECTRIC, INCORPORATED	Registered	P.O. BOX 3123 SOLDOTNA AK 99669	ELECTRICIAN
AK001060015	Kaktovik Holdings	Registered	2000 E. 88TH AVENUE ANCHORAGE AK 99507	ELECTRICIAN
AK001135729	KO Electric, LLC	Registered	P.O. Box 3556 Homer AK 99603	ELECTRICIAN
AK001125337	Laker Electric, Incorporated	Registered	11901 Industry Way Anchorage AK 99511	ELECTRICIAN
AK000157998	Livewire Electric, LLC	Registered	1534 Toyon Way A Kenai AK 99611	ELECTRICIAN
AK001135718	Maddox Electric	Registered	P.O. Box 2226 Seward AK 99664	ELECTRICIAN
2018-AK-70830	Mainline Electric	Suspended	P.O. Box 212602 Anchorage AK 99521	ELECTRICIAN
2019-AK-73263	Marathon Electric, LLC	Registered	P.O. Box 927 Seward AK 99664	ELECTRICIAN
AK001147461	Mark IV Enterprises	Registered	951 E. Creekside Drive, #9 Wasilla AK 99654	ELECTRICIAN
AK000070010	MAT-SU MECHANICAL, INC.	Registered	1265 EAST LOLLY CIRCLE WASILLA AK 99654	ELECTRICIAN
2019-AK-73045	Mattingly Electric, LLC	Registered	P.O. Box 783 Petersburg AK 99833	ELECTRICIAN
AK000990007	MIDNIGHT SUN ELECTRIC	Registered	267 West Rodwell Avenue SOLDOTNA AK 99669	ELECTRICIAN
AK001060018	MIRANDA ELECTRIC, INCORPORATED	Registered	P.O. Box 56031 North Pole AK 99705	ELECTRICIAN
AK001145924	Morse Construction	Registered	7362 West Parks Highway, #189 Wasilla AK 99623	ELECTRICIAN
AK001125637	Nordic Electric, LLC	Registered	805 S. Nordic Drive Petersburg AK 99833	ELECTRICIAN
AK001050016	North Wire, LLC	Registered	1120 E. Huffman Road, Suite 24, Box 695 Anchorage AK 99515	ELECTRICIAN
2017-AK-69477	Peak Oilfield Service Company - Bristol Bay Industrial	Registered	5015 Business Park Blvd., Suite 4000 Anchorage AK 99503	ELECTRICIAN
AK000060232	PITCHER ELECTRIC, INC.	Registered	P.O. BOX 877871 WASILLA AK 99687	ELECTRICIAN
AK001125710	Power & Light, Incorporated	Registered	7721 Schoon Street, Suite 1 Anchorage AK 99518	ELECTRICIAN
AK001125704	Premier Electric	Registered	P.O. Box 874362 Wasilla AK 99687	ELECTRICIAN
AK001113407	Prism Design & Construction	Registered	P.O. Box 870162 Wasilla AK 99654	ELECTRICIAN
AK001113539	Puffin Electric, Inc.	Registered	3808 Ben Walters Lane Homer AK 99603	ELECTRICIAN
AK000080232	Ray Electric, Inc.	Registered	P.O. Box 55007 North Pole AK 99705	ELECTRICIAN
2018-AK-70871	Renewable Energy Systems	Registered	1698 Airport Way Fairbanks AK 99701	ELECTRICIAN
AK001040007	RISING SON ELECTRIC SERVICES, LLC	Registered	36784 Eklutna Lake Road Chugiak AK 99567	ELECTRICIAN
AK001113405	Safe-T-Way Electric, Incorporated	Registered	6208 Mackay Street Anchorage AK 99518	ELECTRICIAN
2019-AK-72765	Salmon River Electric	Registered	P.O. Box 118 Gustavus AK 99826	ELECTRICIAN
AK000059009	SITKA ELECTRIC COMPANY	Registered	1314 SAWMILL CREEK ROAD SITKA AK 99835	ELECTRICIAN
AK001108397	Sourdough Specialty Contractors	Registered	145 Shady Lane, #4 Soldotna AK 99669	ELECTRICIAN
AK001157697	Spectrum Services	Registered	35867 Driftnetter Street Kenai AK 99611	ELECTRICIAN
2017-AK-69038	Stevens Electric	Registered	9630 Muskeball Circle Anchorage AK 99507	ELECTRICIAN
2018-AK-70651	Steve's Electrical	Registered	2741 Engineers Cutoff Road Juneau AK 99801	ELECTRICIAN
AK001070008	SUMNER ELECTRICAL ENTERPRISE, LLC	Registered	6801 Hollywood Road Wasilla AK 99654	ELECTRICIAN
AK000168009	TDX Power Services, LLC	Registered	815 East 82nd Avenue, Suite 200 Anchorage AK 99518	ELECTRICIAN
AK001010001	TEC PRO, LTD.	Registered	816 Whitney Road ANCHORAGE AK 99501	ELECTRICIAN
AK000080228	Tesla Electric, LLC.	Registered	1760 Abbott Road Anchorage AK 99507	ELECTRICIAN
AK001103508	The Electrician, LLC	Registered	607 Old Steese Highway, Suite B, PMB 402 Fairbanks AK 99701	ELECTRICIAN
AK001145917	Thomas and Sons Electric	Registered	P.O. Box 955 Craig AK 99921	ELECTRICIAN
AK001113408	Trident Seafoods Corporation	Registered	P.O. Box 220427 Anchorage AK 99522	ELECTRICIAN
AK001147888	Trinity Electric, LLC	Registered	801 E. 82nd Avenue, B-14 Anchorage AK 99518	ELECTRICIAN
AK001080192	Zone Electric	Registered	329 Driveway Street, Suite 2 Fairbanks AK 99701	ELECTRICIAN
AK000990003	***ABC of Alaska, Inc.***	***Registered***	***301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518***	***ELECTRONIC SYSTEMS TECHNICIAN***
AK001010001	TEC PRO, LTD.	Registered	816 Whitney Road ANCHORAGE AK 99501	ELECTRONIC SYSTEMS TECHNICIAN
AK000330004	***INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS LOCAL 19 JAC***	***Registered***	***2264 15th Avenue West SEATTLE WA 98119***	***ELEVATOR CONSTRUCTOR MECHANIC***
AK001030005	GRAND PROSPECT CORPORATION	Suspended	P.O. BOX 520858 BIG LAKE AK 99652	FLOOR LAYER
AK000490001	***International Union of Painters and Allied Trades Local 1959 JATC***	***Registered***	***5821 Arctic Boulevard, Unit B ANCHORAGE AK 99518***	***FLOOR LAYER***
AK001145918	The Great Alaskan Flooring, Inc.	Registered	2017 Mill Bay Road Kodiak AK 99615	FLOOR LAYER
AK000990003	***ABC of Alaska, Inc.***	***Registered***	***301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518***	***GLAZIER***
AK000490001	***International Union of Painters and Allied Trades Local 1959 JATC***	***Registered***	***5821 Arctic Boulevard, Unit B ANCHORAGE AK 99518***	***GLAZIER***
AK000092469	Vanney Electric	Registered	5007 W. Reliance Rd. Wasilla AK 99623	ELECTRICIAN
AK000950017	WESTERN POWER ENGINEERING	Registered	P.O. BOX 920557 DUTCH HARBOR AK 99692	ELECTRICIAN
AK001060009	WESTWARD SEAFOODS, INCORPORATED	Registered	P.O. BOX 920608 DUTCH HARBOR AK 99692	ELECTRICIAN
AK001125365	Will Curtis	Registered	1465 Richardson Hwy Valdez AK 99686	ELECTRICIAN
AK001050002	WOODWORTH ELECTRIC	Registered	1200 Quests Circle HOMER AK 99603	ELECTRICIAN
AK000030009	YUKON-KUSKOKWIM DELTA APPRENTICESHIP PROGRAM	Registered	P.O. BOX 869 BETHEL AK 99559	ELECTRICIAN
AK001080192	Zone Electric	Registered	329 Driveway Street, Suite 2 Fairbanks AK 99701	ELECTRICIAN
AK000990003	***ABC of Alaska, Inc.***	***Registered***	***301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518***	***HEATING & AIR-CONDITIONER INSTALL/SERVICER***
AK001010001	TEC PRO, LTD.	Registered	816 Whitney Road ANCHORAGE AK 99501	ELECTRONIC SYSTEMS TECHNICIAN
AK000990003	***ABC of Alaska, Inc.***	***Registered***	***301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518***	***HEATING & AIR-CONDITIONER INSTALL/SERVICER***
AK000500001	***ALASKA SC/SE SHEET METAL WORKERS JATC***	***Registered***	***1307 E. 75TH AVENUE, #4 ANCHORAGE AK 99518***	***HEATING & AIR-CONDITIONER INSTALL/SERVICER***
AK000490002	***ANCHORAGE ALASKA AREA PIPE TRADES LOCAL #367 JATC***	***Registered***	***617 WEST POTTER DRIVE ANCHORAGE AK 99518***	***HEATING & AIR-CONDITIONER INSTALL/SERVICER***
AK000730004	***ALASKA OPERATING ENGINEERS/EMPLOYERS TRAINING TRUST***	***Registered***	***P.O. BOX 0980 PALMER AK 99645***	***HEAVY DUTY MECHANIC (Alternate Title: Heavy Construction Equipment Mechanic)***
AK001930012	TECK ALASKA, INC.	Registered	3105 LAKESHORE DR, BUILDING A, STE 301 ANCHORAGE AK 99	HEAVY EQUIPMENT MECHANIC
AK000990003	***ABC of Alaska, Inc.***	***Registered***	***301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518***	***INSULATION WORKER***
AK000710003	***AK HEAT & FROST INSULATORS & ALLIED WORKERS JATC***	***Registered***	***P.O. Box 203212 Anchorage AK 99520***	***INSULATION WORKER***
AK000010003	Alaska Industrial Insulation & Fireproofing, Incor	Registered	2505 Barrow Street ANCHORAGE AK 99503	INSULATION WORKER
AK000550001	***Alaska Carpenters Training Trust***	***Registered***	***8751 King Street Anchorage AK 99515***	***LATHER (Alternate Title: Lathing Specialist)***
AK000990003	***ABC of Alaska, Inc.***	***Registered***	***301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518***	***LINE ERECTOR (POWER-LINE DISTRIBUTION ERECTOR)***

ANCHORAGE SCHOOL DISTRICT'S
LIST OF
ALASKAN FEDERALLY REGISTERED APPRENTICESHIP PROGRAMS

Program Number	Program Name	Program Status	Address	Occupation Title
AK00078001S	ALASKA JOINT ELECTRICAL APPRENTICESHIP & TRAINING TRUST	Registered	5800 B ST ANCHORAGE AK 99518	LINE MAINTAINER (Alternate Title: Line Worker)
AK00073004	ALASKA OPERATING ENGINEERS/EMPLOYERS TRAINING TRUST	Registered	P.O. BOX 0988 PALMER AK 99645	LINE MAINTAINER (Alternate Title: Line Worker)
AK00010980	Alaska Power & Telephone	Registered	P.O Box 34195 Juneau AK 99803	LINE MAINTAINER (Alternate Title: Line Worker)
AK00040002	Alaska Village Electric Cooperative, Inc.	Registered	4831 Eagle Street Anchorage AK 99503	LINE MAINTAINER (Alternate Title: Line Worker)
AK00870008	CITY & BOROUGH OF SITKA - ELECTRICAL DEPARTMENT	Registered	105 JARVIS STREET SITKA AK 99835	LINE MAINTAINER (Alternate Title: Line Worker)
AK00135905	City of Unalaska	Registered	P.O. Box 610 Unalaska AK 99685	LINE MAINTAINER (Alternate Title: Line Worker)
AK00106005	CITY OF WRANGELL-WRANGELL LIGHT & POWER	Registered	1064 Case Avenue WRANGELL AK 99929	LINE MAINTAINER (Alternate Title: Line Worker)
AK00170010	ICE SERVICES, INCORPORATED	Registered	2606 C STREET, SUITE 2B ANCHORAGE AK 99503	LINE MAINTAINER (Alternate Title: Line Worker)
AK00180978	North Slope Borough Power & Light	Registered	P.O. Box 350 Barrow AK 99723	LINE MAINTAINER (Alternate Title: Line Worker)
AK00147462	Nushagak Electric & Telephone Cooperative, Inc.	Registered	P.O. Box 350 Dillingham AK 99576	LINE MAINTAINER (Alternate Title: Line Worker)
AK00073004	ALASKA OPERATING ENGINEERS/EMPLOYERS TRAINING TRUST	Registered	P.O. BOX 0988 PALMER AK 99645	LUBRICATION SERVICER MATERIAL DISPOSAL TECHNICIAN
AK00078001S	ALASKA JOINT ELECTRICAL APPRENTICESHIP & TRAINING TRUST	Registered	5800 B ST ANCHORAGE AK 99518	MAINTENANCE MECHANIC, TELEPHONE
AK00000006	ALASKA WORKS PARTNERSHIP, INC.	Registered	1413 HYDER ST ANCHORAGE AK 99501	MAINTENANCE REPAIRER, BUILDING
AK00012589	Goose Creek Correctional Center	Registered	P.O. Box 877790 Wasilla AK 99687	MAINTENANCE REPAIRER, BUILDING
AK00012589	Hiland Mountain Correctional Center	Registered	9101 Hesterberg Road Eagle River AK 99577	MAINTENANCE REPAIRER, BUILDING
AK00900006	SPRING CREEK CORRECTIONAL CENTER	Registered	P.O. BOX 2106 SEWARD AK 99664	MAINTENANCE REPAIRER, BUILDING
AK00900010	Wildwood Correctional Center	Registered	BLDG 10, CHUGACH AVENUE KENAI AK 99611	MAINTENANCE REPAIRER, BUILDING
AK00910012	TECK ALASKA, INC.	Registered	3105 LAKESHORE DR., BUILDING A, STE 101 ANCHORAGE AK 99	MECHANIC, INDUSTRIAL TRUCK
AK00055001	Alaska Carpenters Training Trust	Registered	8751 King Street Anchorage AK 99515	MILLWRIGHT
AK00910012	TECK ALASKA, INC.	Registered	3105 LAKESHORE DR., BUILDING A, STE 101 ANCHORAGE AK 99	MILLWRIGHT
AK00090003	ABC of Alaska, Inc.	Registered	301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518	OPERATING ENGINEER
AK00073004	ALASKA OPERATING ENGINEERS/EMPLOYERS TRAINING TRUST	Registered	P.O. BOX 0988 PALMER AK 99645	OPERATING ENGINEER
AK00147691	Wolverine Supply, Inc.	Registered	5099 E. Blue Lupine Drive Wasilla AK 99654	OPERATING ENGINEER
AK00090003	ABC of Alaska, Inc.	Registered	301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518	PAINTER (Construction)
AK00090003	ABC of Alaska, Inc.	Registered	301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518	PAINTER (Construction)
AK00055001	International Union of Painters and Allied Trades Local 1959 JATC	Registered	5821 Arctic Boulevard, Unit B ANCHORAGE AK 99518	PAINTER (Construction)
AK00090003	ABC of Alaska, Inc.	Registered	301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518	PIPE FITTER (Construction)
AK00045002	ANCHORAGE ALASKA AREA PIPE TRADES LOCAL #367 JATC	Registered	617 WEST POTTER DRIVE ANCHORAGE AK 99518	PIPE FITTER (Construction)
AK00151002	Fairbanks Area Plumbers & Pipefitters JATC	Registered	1978 BURGESS AVENUE FAIRBANKS AK 99709	PIPE FITTER (Construction)
AK00066001	JUNEAU PLUMBERS JATC	Registered	1751 ANKA STREET JUNEAU AK 99801	PIPE FITTER (Construction)
AK00078001	Alaska Trowel Trades JATC	Registered	825 East 8th Avenue, Suite 10 Anchorage AK 99501	PLASTERER
AK00192770	907 Heating and Plumbing	Registered	P.O. Box 220032 Anchorage AK 99522	PLUMBER
AK00090003	ABC of Alaska, Inc.	Registered	301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518	PLUMBER
AK00125246	Ace Heating, Inc.	Registered	2780 N. Heatherway Circle Wasilla AK 99654	PLUMBER
AK00103507	Al Fish Plumbing, LLC	Registered	11805 Gregory Road Anchorage AK 99516	PLUMBER
AK00125896	Alaska Clearwater Mechanical, LLC	Registered	P.O. Box 709 Willow AK 99688	PLUMBER
AK00113542	Alaska Native Tribal Health Consortium, Division of Environmental Health & Engineerir	Registered	4500 Diplomacy Drive, Suite 454 Anchorage AK 99508	PLUMBER
AK00150011	ALASKA PLUMBING & HEATING	Registered	P.O. Box 210240 Auke Bay AK 99821	PLUMBER
AK00103393	All American Plumbing & Heating	Registered	9509 Antler Way Juneau AK 99801	PLUMBER
AK00135908	All-Star Plumbing & Heating, LLC	Registered	11330 Bearpaw Street Anchorage AK 99516	PLUMBER
AK00107007	ALWAYS ON CALL MOUNTAIN MECHANICAL CORPORATION	Registered	8427 MENTRA STREET ANCHORAGE AK 99518	PLUMBER
AK00157999	Ameresco, Inc.	Registered	6643 Brayton Drive Anchorage AK 99507	PLUMBER
AK00045002	ANCHORAGE ALASKA AREA PIPE TRADES LOCAL #367 JATC	Registered	617 WEST POTTER DRIVE ANCHORAGE AK 99518	PLUMBER
AK00070016	ANCHORAGE PLUMBING & HEATING, INC.	Registered	7640 King Street ANCHORAGE AK 99518	PLUMBER
AK00105001S	APEX PLUMBING & HEATING SERVICES, LLC	Registered	19087 E. Jessica Ann Street Sutton AK 99674	PLUMBER
AK00081112	Arctic Chain Plumbing & Heating, Inc.	Registered	1200 East 76th Avenue, Unit 1220 Anchorage AK 99518	PLUMBER
2017-AK-68854	Arctic Plumbing & Heating, LLC	Registered	2125 Richardson Highway, Suite #2 North Pole AK 99705	PLUMBER
2019-AK-73300	Beckley Mechanical Company	Registered	2125 Richardson Highway North Pole AK 99705	PLUMBER
AK00146922	Blades Mechanical	Registered	148 Hillcrest Avenue, #2 Soldotna AK 99669	PLUMBER
AK00146921	Boilerman Plumbing & Heating, Inc.	Registered	6800 Lonesome Drive Palmer AK 99645	PLUMBER
AK00104013	BOWMAN MECHANICAL CONTRACTORS, INC	Registered	11701 Toy Drive ANCHORAGE AK 99515	PLUMBER
AK00125712	Central Mechanical, Incorporated	Registered	311 N. Sitka Street Anchorage AK 99501	PLUMBER
AK00092207	Circle Plumbing and Heating, Inc.	Registered	2317 Raspberry Road Anchorage AK 99502	PLUMBER
AK00135717	D.H. Plumbing & Heating, Incorporated	Suspended	7741 King Street Anchorage AK 99518	PLUMBER
AK00167700	Daleco Plumbing	Registered	6452S PITZMAN AVE Homer AK 99603	PLUMBER
AK00147690	Dawson Construction, Incorporated	Registered	4220 Cambria Drive west Ketchikan AK 99901	PLUMBER
AK00870004	DENALI MECHANICAL, INC.	Registered	995 RILEY COURT FAIRBANKS AK 99701	PLUMBER
AK00167702	Discount Mechanical, LLC	Registered	P.O. Box 233694 Anchorage AK 99523	PLUMBER
AK00080585	Eays Plumbing & Heating, LLC	Registered	1208 Lakeshore Drive Homer AK 99603	PLUMBER
AK00104029	ENCORE MECHANICAL, INC.	Registered	P.O. BOX 1788 PALMER AK 99645	PLUMBER
AK00135726	Extreme Heating & Air, Incorporated	Registered	16805 Farm Avenue Eagle River AK 99577	PLUMBER
AK00151002	Fairbanks Area Plumbers & Pipefitters JATC	Registered	1978 BURGESS AVENUE FAIRBANKS AK 99709	PLUMBER
AK00045926	Fedor's Plumbing & Heating, LLC	Registered	5902 Cordova Street Anchorage AK 99518	PLUMBER
AK00125892	Funk Services	Registered	P.O. Box 672188 Chugiak AK 99567	PLUMBER
AK00125249	Glacier Point Services	Registered	P.O. Box 61237 Fairbanks AK 99706	PLUMBER
AK00135912	H and M Plumbing & Heating, Inc.	Registered	P.O. Box 222225 Anchorage AK 99522	PLUMBER
AK00040027	HARDROK PLUMBING AND HEATING, LLC	Registered	4740 E. FATTIC DRIVE WASILLA AK 99654	PLUMBER
AK00105000	HEATCO, LLC	Registered	17141 N. EAGLE RIVER LOOP ROAD EAGLE RIVER AK 99577	PLUMBER
2019-AK-72458	Homer Plumbing and Heating	Registered	581 Mountain View Drive Homer AK 99603	PLUMBER

ANCHORAGE SCHOOL DISTRICT'S
LIST OF
ALASKAN FEDERALLY REGISTERED APPRENTICESHIP PROGRAMS

Program Number	Program Name	Program Status	Address	Occupation Title
AK00019805	Hunter Mechanical International Corporation	Registered	337 East 4th Avenue, Suite 1 Anchorage AK 99501	PLUMBER
AK00170010	ICE SERVICES, INCORPORATED	Registered	2606 C STREET, SUITE 2B ANCHORAGE AK 99503	PLUMBER
AK00108010	Icy Strait Plumbing and Heating	Registered	8382a Garnet Street Juneau AK 99801	PLUMBER
AK00108402	Intelligent Design, LLC	Registered	11741 Timberlane Drive Anchorage AK 99515	PLUMBER
2018-AK-72080	IOLA Enterprises dba Runstrom Plumbing & Heating	Registered	HC 89 Box 8182 Talkeetna AK 99676	PLUMBER
AK00108636	JGH Plumbing & Heating, Incorporated	Registered	P.O. Box 3385 Palmer AK 99645	PLUMBER
2018-AK-69772	John White's Plumbing & Heating	Registered	5327 Kenai Spur Highway Kenai AK 99611	PLUMBER
AK00092650	John's Heating Service, Inc.	Registered	1311 Mill Bay Road Kodiak AK 99615	PLUMBER
AK00060005	JOURNEYMAN PLUMBING & HEATING, INC.	Registered	51315 SEA QUEST DRIVE KENAI AK 99611	PLUMBER
AK00066000I	***JUNEAU PLUMBERS JATC***	***Registered***	***1751 ANKA STREET JUNEAU AK 99801***	***PLUMBER***
2017-AK-69607	Kasilof Plumbing & Heating	Registered	26547 S. Cohoe Loop Kasilof AK 99610	PLUMBER
AK00115769B	Kiwi Mechanical	Registered	Box 2132 Cordova AK 99574	PLUMBER
AK00105001Z	KNIK PLUMBING & HEATING	Registered	4915 W. 94TH AVENUE ANCHORAGE AK 99502	PLUMBER
AK00060017	LARRY'S PLUMBING & HEATING	Registered	P.O. BOX 4148 KODIAK AK 99615	PLUMBER
AK00147687	Larry's Quality Heating & Plumbing, Inc.	Registered	2531 Barrett Avenue Juneau AK 99801	PLUMBER
AK00080234	Lewis Mechanical, Inc.	Registered	13240 View Heights Way Anchorage AK 99516	PLUMBER
AK00052011	M&J PLUMBING & HEATING, INC.	Registered	34360 Business Park Frontage Road SOLDOTNA AK 99669	PLUMBER
AK00070010	MAT-SU MECHANICAL, INC.	Registered	1265 EAST LOLLY CIRCLE WASILLA AK 99654	PLUMBER
2017-AK-68589	Monkey Wrench Mechanical	Registered	P.O. Box 73441 Fairbanks AK 99707	PLUMBER
AK00113541	Moore Heating & Air Conditioning	Registered	1801 East Dowling Road Anchorage AK 99507	PLUMBER
AK00114890	Mr. Rooter Plumbing of Fairbanks	Registered	875 Old Richardson Highway FAIRBANKS AK 99701	PLUMBER
AK00106001O	PLEASANTS PLUMBING & HEATING	Registered	P.O. BOX 33051 JUNEAU AK 99803	PLUMBER
AK00167705	Pollard Construction	Suspended	P.O. Box 32811 Juneau AK 99803	PLUMBER
AK00092200	Portwinde Plumbing and Heating, Inc.	Registered	1500 Alaska Way Fairbanks AK 99709	PLUMBER
AK00100394	Premier Mechanical, LLC	Registered	2011 Millbay Road, #2 Kodiak AK 99615	PLUMBER
AK00167700	Red Hot Mechanical, Incorporated	Registered	11723 Old Glenn Highway, Suite 107 Eagle River AK 99577	PLUMBER
AK00146735	River City Plumbing & Heating	Registered	863 6th Avenue Fairbanks AK 99701	PLUMBER
AK00177707	Rock Solid Plumbing & Heating	Registered	P.O. Box 874416 Wasilla AK 99687	PLUMBER
2017-AK-652	S.E. Plumbing, Incorporated	Registered	86 Garland Court Ketchikan AK 99901	PLUMBER
AK00168008	Scottie's Plumbing	Registered	P.O. Box 72789 Fairbanks AK 99707	PLUMBER
AK00080237	Scott's Heating & Plumbing Services, Inc.	Registered	P.O. Box 3132 Kodiak AK 99615	PLUMBER
AK01040017	STATEWIDE MECHANICAL, LLC	Registered	22750 MCMANUS DRIVE CHUGIAK AK 99567	PLUMBER
AK00088122	Sundance Construction Company, Inc.	Registered	P.O. Box 561 Kasilof AK 99610	PLUMBER
AK00092651	Superior Mechanical, Inc.	Registered	P.O. Box 82409 Fairbanks AK 99708	PLUMBER
2018-AK-71943	Tauman Mechanical Plumbing & Heating, LLC	Registered	730 W. 88th Avenue Anchorage AK 99515	PLUMBER
AK00107002I	VALLEY MECHANICAL CONTRACTING, INCORPORATED	Registered	6673 E TEX-AL DRIVE WASILLA AK 99654	PLUMBER
AK00112570T	Waterworks Plumbing & Heating	Registered	P.O. Box 1974 Soldotna AK 99669	PLUMBER
2019-AK-73100	Wolf Pack Mechanical, LLC	Registered	P.O. Box 521118 Big Lake AK 99652	PLUMBER
AK00030009	YUKON-KUSKOKWIM DELTA APPRENTICESHIP PROGRAM	Registered	P.O. BOX 869 BETHEL AK 99559	PLUMBER
AK00092654	Ketchikan Indian Community	Registered	615 Stedman Street Ketchikan AK 99901	RESIDENTIAL CARPENTER
AK00113537	Nicholas Construction, LLC	Registered	P.O. Box 599 Ward Cove AK 99901	RESIDENTIAL CARPENTER
AK00135904	Yukon River Towing, LLC	Registered	P.O. Box 128 Emmonak AK 99581	RESIDENTIAL CARPENTER
AK00055004	A & K ELECTRIC	Registered	1545 CROSSON AVENUE FAIRBANKS AK 99701	RESIDENTIAL WIREMAN
AK00078001S	***ALASKA JOINT ELECTRICAL APPRENTICESHIP & TRAINING TRUST***	***Registered***	***5800 B ST ANCHORAGE AK 99518***	***RESIDENTIAL WIREMAN***
2017-AK-472	Big M Electric, LLC	Registered	P.O. Box 84044 Fairbanks AK 99708	RESIDENTIAL WIREMAN
AK00145927	Bristol Bay Housing Authority	Registered	P.O. Box 50 Dillingham AK 99576	RESIDENTIAL WIREMAN
AK00103513	Dependable Services	Registered	P.O. Box 4357 Palmer AK 99645	RESIDENTIAL WIREMAN
AK00135907	Elegant Homes	Registered	P.O. Box 875769 Wasilla AK 99687	RESIDENTIAL WIREMAN
AK00103511	Fonov Construction and Electric, LLC	Registered	2155 North Biltmore Court Wasilla AK 99654	RESIDENTIAL WIREMAN
AK00146733	Gardner Electric Company, LLC	Registered	4383 Aspen Avenue Juneau AK 99801	RESIDENTIAL WIREMAN
AK00040014	INTERIOR REGIONAL HOUSING AUTHORITY	Registered	828 27TH AVENUE FAIRBANKS AK 99701	RESIDENTIAL WIREMAN
AK00147692	Marty Wise Electrical	Registered	1634 Sterling Highway Homer AK 99603	RESIDENTIAL WIREMAN
2017-AK-69670	*New Hope Apprenticeship Training*	*Registered*	*2471 West Tropline Drive Wasilla AK 99654*	*RESIDENTIAL WIREMAN*
AK00106000	Pacific North Construction	Registered	P.O. Box 872963 Wasilla AK 99687	RESIDENTIAL WIREMAN
AK00060013	PITCHER ELECTRIC, INC.	Registered	P.O. BOX 877871 WASILLA AK 99687	RESIDENTIAL WIREMAN
AK00104000	RISING SON ELECTRIC SERVICES, LLC	Registered	36794 Ekutna Lake Road Chugiak AK 99567	RESIDENTIAL WIREMAN
AK00103400	Solid Ground Electric	Registered	13811 Savage Drive Eagle River AK 99577	RESIDENTIAL WIREMAN
AK00055000I	***Alaska Carpenters Training Trust***	***Registered***	***8751 King Street Anchorage AK 99515***	***SCAFFOLD ERECTOR***
AK00059000I	***ABC of Alaska, Inc***	***Registered***	***301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518***	***SHEET METAL WORKER***
AK00056000I	***ALASKA SC/SE SHEET METAL WORKERS JATC***	***Registered***	***1307 E 75TH AVENUE, #4 ANCHORAGE AK 99518***	***SHEET METAL WORKER***
AK00187000I	DENALI MECHANICAL, INC.	Registered	995 RILEY COURT FAIRBANKS AK 99701	SHEET METAL WORKER
AK00153000I	***FAIRBANKS AREA SHEET METAL WORKERS JATC***	***Registered***	***1260 AURORA DRIVE FAIRBANKS AK 99709***	***SHEET METAL WORKER***
AK00180587	Valley Mechanical Contractors, Inc.	Registered	6673 E. Tex-Al Drive Wasilla AK 99654	SHEET METAL WORKER

ANCHORAGE SCHOOL DISTRICT'S
LIST OF
ALASKAN FEDERALLY REGISTERED APPRENTICESHIP PROGRAMS

Program Number	Program Name	Program Status	Address	Occupation Title
AK00059003	*ABC of Alaska, Inc.*	*Registered*	*301 Arctic Slope Avenue, Suite 100 ANCHORAGE AK 99518*	*SPRINKLER FITTER (Existing Title: Pipe Fitter)*
AK00049002	*ANCHORAGE ALASKA AREA PIPE TRADES LOCAL #367 JATC*	*Registered*	*617 WEST POTTER DRIVE ANCHORAGE AK 99518*	*SPRINKLER FITTER (Existing Title: Pipe Fitter)*
AK00151002	*Fairbanks Area Plumbers & Pipefitters JATC*	*Registered*	*1978 BURGESS AVENUE FAIRBANKS AK 99709*	*SPRINKLER FITTER (Existing Title: Pipe Fitter)*
AK00078016	*ALASKA IRONWORKERS JATC*	*Registered*	*8141 SCHOON STREET ANCHORAGE AK 99518*	*STRUCTURAL STEEL WORKER (Alternate Titles: Ironworker or Structural Ironworker)*
AK00000007	*ALASKA TEAMSTER-EMPLOYER SERVICE TRAINING TRUST*	*Registered*	*520 East 34th Avenue, Suite 201 ANCHORAGE AK 99503*	*SURVEYOR ASSISTANT INSTRUMENT*
AK00940001	*ALASKA JOINT ELECTRICAL APPRENTICESHIP & TRAINING TRUST*	*Registered*	*5800 B STREET ANCHORAGE AK 99518*	*TREE TRIMMER (Line Clearance)*
AK00000007	*ALASKA TEAMSTER-EMPLOYER SERVICE TRAINING TRUST*	*Registered*	*520 East 34th Avenue, Suite 201 ANCHORAGE AK 99503*	*TRUCK DRIVER, HEAVY*
2017-NH-68810	River Valley Workforce Institute, Inc.	Registered	325 Mount Support Road Lebanon NH 03766	WELDER, COMBINATION
AK00190012	TECK ALASKA, INC.	Registered	3305 LAKESHORE DR, BUILDING A, STE 301 ANCHORAGE AK 99	WELDER, COMBINATION

Multiple-employer apprenticeship sponsors.

ANCHORAGE SCHOOL DISTRICT
APPRENTICE UTILIZATION FORM

Project Name: _____

Solicitation Number: _____

Contractor: _____

Prime Contractors

1. Please list crafts/trades that will be used to complete this project and have Alaskan Federally Registered Apprenticeship programs.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2. Please list the apprentices and corresponding apprenticeship programs that will be used by the prime contractor to complete this project. If more space is needed, please attach supplemental sheets.

APPRENTICE'S NAME	APPRENTICESHIP PROGRAM
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

3. Please list the subcontractors that will be used on the project.

4. Please list the apprentices and corresponding apprenticeship programs that will be used by the subcontractors to complete this project. If more space is needed, please attach supplemental sheets.

APPRENTICE'S NAME	APPRENTICESHIP PROGRAM

ANCHORAGE SCHOOL DISTRICT
APPRENTICESHIP UTILIZATION PROGRAM CALCULATIONS FORM

CONTRACTOR NAME:		CHECK APPROPRIATE BOX	AUDIT PERIOD
CONTRACTOR ADDRESS:		Contractor ☐ Check Box 3 Sub-contractor ☐ Check Box 2	

LIST OF POTENTIAL ELIGIBLE TRADES CATEGORY	NUMBER OF AGGREGATE HOURS WORKED BY ALL WORKERS ON THE PROJECT IN TRADES-CRAFTS CATEGORY	NUMBER OF AGGREGATE APPRENTICE HOURS WORKED BY ALL WORKERS ON THE PROJECT IN TRADES-CRAFTS CATEGORY
CAPENTERS		
CEMENT MASONS		
ELECTRICIANS		
ELEVATOR WORKERS		
INSULATION WORKER		
LABORERS		
MILWRIGHTS		
OPERATING ENGINEERS		
PAINTERS		
PLUMBERS		
SHEET METAL WORKER		
SPRINKLER FITTER		
SURVEYORS		
TRUCK DRIVER		
TOTAL AGGREGATE HOURS		

ELIGIBLE TRADES CATEGORY	ALASKAN FEDERALLY REGISTERED APPRENTICESHIP PROGRAM	APPRENTICE'S NAME	DATE RANGE OF APPRENTICE GOOD STANDING STATUS START DATE	DATE RANGE OF APPRENTICE GOOD STANDING STATUS END DATE	NUMBER OF HOURS WORKED THIS AUDIT PERIOD BY APPRENTICE

PENALTY TABLE

$100,001 TO $500,000

1ST NON-COMPLIANCE (30-DAY)	$500.00	
2ND CONSECUTIVE NON-COMPLIANCE (30-DAY)	$750.00	
3RD 30-DAY CONSECUTIVE NON-COMPLIANCE	$1,000.00	
4TH CONSECUTIVE NON-COMPLIANCE (30-DAY)	$1,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING
FURTHER CONSECUTIVE NON-COMPLIANCE EXCEEDING 4TH NON-COMPLIANCE (30-DAY)	$1,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING

$500,001 TO $1,000,000

1ST NON-COMPLIANCE (30-DAY)	$750.00	
2ND CONSECUTIVE NON-COMPLIANCE (30-DAY)	$1,500.00	
3RD CONSECUTIVE NON-COMPLIANCE (30-DAY)	$2,500.00	
4TH CONSECUTIVE NON-COMPLIANCE (30-DAY)	$5,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING
FURTHER CONSECUTIVE NON-COMPLIANCE EXCEEDING 4TH NON-COMPLIANCE (30-DAY)	$5,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING

$1,000,001 TO $3,000,000

1ST NON-COMPLIANCE (30-DAY)	$1,000.00	
2ND CONSECUTIVE NON-COMPLIANCE (30-DAY)	$2,500.00	
3RD CONSECUTIVE NON-COMPLIANCE (30-DAY)	$5,000.00	
4TH CONSECUTIVE NON-COMPLIANCE (30-DAY)	$7,500.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING
FURTHER CONSECUTIVE NON-COMPLIANCE EXCEEDING 4TH NON-COMPLIANCE (30-DAY)	$7,500.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING

$3,000,001 TO $5,000,000

1ST NON-COMPLIANCE (30-DAY)	$1,500.00	
2ND CONSECUTIVE NON-COMPLIANCE (30-DAY)	$3,000.00	
3RD CONSECUTIVE NON-COMPLIANCE (30-DAY)	$7,500.00	
4TH CONSECUTIVE NON-COMPLIANCE (30-DAY)	$10,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING
FURTHER CONSECUTIVE NON-COMPLIANCE EXCEEDING 4TH NON-COMPLIANCE (30-DAY)	$10,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING

OVER $5,000,000

1ST NON-COMPLIANCE (30-DAY)	$2,500.00	
2ND CONSECUTIVE NON-COMPLIANCE (30-DAY)	$5,000.00	
3RD CONSECUTIVE NON-COMPLIANCE (30-DAY)	$8,000.00	
4TH CONSECUTIVE NON-COMPLIANCE (30-DAY)	$10,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING
FURTHER CONSECUTIVE NON-COMPLIANCE EXCEEDING 4TH NON-COMPLIANCE (30-DAY)	$10,000.00	AND FINDING OF NON-RESPONSIBILITY IN FUTURE BIDDING

ANCHORAGE SCHOOL DISTRICT
Pre-Job Conference Form
Student Community
Workforce Agreement

Please fill out the following pages. Be as thorough as possible. Please contact the SCWA Administrator with questions.

Contractor information					
General Contractor Name					
Pre-Job Meeting Date			Time:		
Project Name/Contract#					
Contract Dollar Amount			Intent#		
Office Contact:		Phone:		Email:	
Superintendent:		Phone:		Email:	
Safety Representative		Phone:		Email:	
Scope of Work (Describe the scope of work to be Performed)					
General Contractor Self Performed Work					
Will you be subcontracting to additional sub-contractors? If yes, list sub-contractors and work description:			Yes ☐ No ☐		

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Page 1 of 5

ANCHORAGE SCHOOL DISTRICT
Pre-Job Conference Form
Student Community
Workforce Agreement

Sub-Contractor Company Name	
Work Description	
Sub-Contractor Company Name	
Work Description	
Sub-Contractor Company Name	
Work Description	
Sub-Contractor Company Name	
Work Description	
Sub-Contractor Company Name	
Work Description	

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Project Craft Workforce Estimates			
Craft	**Peak**	Average	Apprentices
Asbestos Workers			
Boiler Makers			
Brick/Stone/Marble/Tile Setters/Terrazzo			
Carpenters			
Carpet, Lino & Soft Tile Layers Cement			
Masons			
Drywall Hanger/Metal Stud Framer			
Drywall Finishers			
Electrical Workers			
Elevator Constructors			
Glaziers			
Heat and Frost Insulators			
Iron Workers (Structural/Rebar)			
Iron Workers (Ornamental/Architectural)			
Laborers			
Millwrights			
Operating Engineers			
Painters			
Pile Drivers/Diver			
Plumbers & Pipefitters			
Plasterers/Fire Proofers			
Roofers			
Sheet Metal Workers			
Sign Makers/Painters			
Sprinkler Fitters			
Teamsters			

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Initial Trade Assignment

Contractor shall submit this form identifying the Initial Trade Assignments to Building Trades Council at the Pre-Job Conference.

Pre-Job Meeting Date General		Form submittal Date	
Contractor for Project		Project Name	
Contractor Company Name		Contract#	
Submitting Contractor Business Address		Submitting Contractor Phone	
		Submitting Contractor Email	

This is notification of the Trade Assignment(s) under the included scope(s) of work and fulfills contractor responsibility under the Student Community Workforce Agreement (SCWA) to make Initial Trade Assignments prior to the Pre-Job conference. Unions not in agreement with the Final Trade Assignments may avail themselves of the jurisdictional resolution process specified in the SCWA Jurisdictional Disputes section. This provision allows for competing Unions to pursue their claims without disrupting work.

The following is the Initial Trade Assignment for each task.

Sub-Contractor & Scope of Work	Union Assigned to	Challenged by

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Final Trade Assignments

Final Trade Assignments will be resolved after the Pre-Job Conference and prior to the start of work

Sub-Contractor & Scope of work	Union Final Trade Assignment

Contractor Representative Signature:

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END OF SECTION

GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

REFERENCE:

The General Conditions shall be GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, ANCHORAGE SCHOOL DISTRICT, ANCHORAGE, ALASKA, bound herein.

SUPPLEMENTS:

Supplements may modify, change, delete, or add to these General Conditions. Where any article of the General Conditions is modified or any paragraph deleted, or any subparagraph or clause thereof is modified, or deleted by supplements, the unaltered provisions of such article, paragraph, subparagraph or clause shall remain in effect. The General Conditions and the Supplementary General Conditions are applicable to all of the Work under this Contract and shall apply to the Contractor and all Subcontractors, Sub-subcontractors, and Material Suppliers and Vendors.

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ARTICLE 1

CONTRACT DOCUMENTS

1.1 DEFINITIONS

1.1.1 The following terms as used in this Contract are defined as follows:

"Architect / Engineer or A/E": The design consultant of the Owner.

"Construction Manager": Supervises the construction phase of construction projects for the Anchorage School District Facilities Department.

"Contract": The Agreement between Owner and Contractor and the referenced Contract Documents stated therein.

"Contractor": The person, firm, or corporation contractually responsible to the Owner to provide the services called for by this Contract. Such entity may also be referred to as Managing General Contractor, General Contractor, or Prime Contractor.

"Days": Calendar days unless otherwise noted.

"Direct Cost": A direct cost is any cost that can be identified specifically with a particular final cost objective, i.e., with this contract, or an item of extra work, or change order under the contract.

"Senior Director of Capital Planning & Construction": Manages the Operations of the Anchorage School District Capital Planning & Construction Department.

"Furnish": Supply and deliver to the project including the cost to supply and deliver.

"Indirect Cost": An indirect cost, collectively called overhead, is any cost not directly identified with a single, final cost objective, but identified with two or more final cost objectives or an intermediate cost objective.

"Install": Build into the Work, ready to use in a complete, finished, and operable system, including the cost to install.

"Owner": The Anchorage School District, its Anchorage School Board of Education, the Superintendent of the Anchorage School District, and its employees.

"Project Manager": The person designated by the Senior Director of Capital Planning & Construction as the Owner's representative for this Contract, responsible for the day-to-day coordination between the Owner and the Contractor.

"Provide": Furnish and install for a complete, finished, and operable system.

"Reasonable Cost": A cost is reasonable if, in its nature or amount, it does not exceed that which would be incurred in a competitive market.

"Shop Drawings, Setting Drawings, Manufacturer's Printed Information and Submittal (collectively known as "Submittals")": The Contractor's information consisting of drawings, catalogs, illustrations, calculations, and other data delivered to the Owner for the purpose of assuring the Owner, prior to execution of that part of the Work, that the prescriptive element, component, subsystem, or service to be provided generally conforms with the

Contract. The Contractor is responsible to the Owner for the accuracy and completeness of the Submittals.

"Subcontractor": A person, firm, or entity who has a direct contract with the Contractor to perform any of the work.

"Work" or "Project": The finished product required by the Contract Documents together with the means and methods as determined, by the Contractor, to achieve the finished product.

1.1.2 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Owner-Contractor Agreement, the Drawings, the Project Manual, and all Addenda issued prior to and all Modifications issued after execution of the Contract. A Modification is (1) a directive for change in the work pursuant to Section 12.1.2 or (2) a change order pursuant to Section 12.2.6.

1.1.3 THE CONTRACT

The Contract is the sum of all the Contract Documents. This Contract represents the entire and integrated agreement between the Owner and the Contractor and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification as defined in Subparagraph 1.1.2.

1.1.4 THE WORK

The Work comprises the completed construction required by the Contract Documents and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.5 THE PROJECT

The Project is the total construction, of which the Work performed under the Contract documents may be the whole or a part.

1.1.6 SCHOOL BOARD

Board of Education of the Anchorage School District, Anchorage, Alaska.

1.1.7 BIDDER

Any individual, firm, partnership, corporation or combination thereof, formally submitting a bid for the work contemplated, or any portion thereof, acting directly or through an authorized representative.

1.1.8 MUNICIPALITY

Municipality of Anchorage, Alaska.

1.1.9 PROPOSAL

1.1.9.1 BID PROPOSAL

The written proposal of the Bidder on the form furnished by the Owner for the Work contemplated, and which is required to be signed by the Bidder.

1.1.9.2 REQUEST FOR PROPOSAL (RFP)

The offer of the Contractor submitted on the prescribed form from the Project Manager to perform the work and furnish labor, material and all other costs at the prices quoted by the Contractor for proposed changes in the work.

1.1.10 SPECIFICATIONS

The products, directions, requirements, explanations, terms and provisions pertaining to the various features of the Work to be done and the manner and method of performance. The specifications include such directions, requirements and explanations as appear on the drawings and as may otherwise be defined.

1.1.11 PROJECT SITE

The geographic location of the Project as indicated on the Drawings.

1.1.12 PROJECT MANUAL

The Project Manual includes the Bidding and Contract Requirements, Project Schedule Milestone Dates, General and Supplementary Conditions, Wage Rates, the Specifications and project drawings incorporated by reference.

1.1.13 REQUEST FOR INFORMATION

Request for Information. Written interpretations necessary for the proper execution or progress of the Work, in the form of drawings or otherwise, will be issued with reasonable promptness by the Project Manager. The Contractor may make written request to the Project Manager for such interpretations. Such interpretations will be consistent with and reasonably inferable from the Contract Documents.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 The Contract shall be signed in doubles by the Owner and Contractor, each of which shall be deemed an original, but all or which shall constitute one and the same instrument.

1.2.2 By executing the Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.

1.2.3 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work. Except as otherwise specifically provided, the Contractor shall furnish all labor, tools, implements, machinery, supplies, materials, and incidentals, and shall do all things necessary to perform and to complete the Work. The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not covered in the Contract Documents will not be required unless it is consistent therewith and is reasonable inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings unless otherwise specifically defined herein.

1.2.4 The organization of the Specifications into division, sections and articles, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by a trade.

1.2.5 If any portion of the Contract Documents shall be in conflict with any other portion, the

various documents comprising the Contract Documents shall govern in the following order of precedence:

1.2.5.1 The Owner-Contractor Agreement;
1.2.5.2 Modifications;
1.2.5.3 Addenda;
1.2.5.4 Section 00800 - Supplementary General Conditions;
1.2.5.5 Section 00700 - General Conditions of the Contract for Construction;
1.2.5.6 Specifications - embodying all other sections in the Project Manual;
1.2.5.7 Drawings: as between schedules and information given on Drawings, the schedules shall govern; as between written dimensions given on Drawings and scaled measurements, the written dimensions shall govern; as between large-scale Drawings and small-scale Drawings, the larger scale shall govern;
1.2.5.8 Performance Bond, Labor and Material Payment Bond;
1.2.5.9 Bid/Proposal Form;
1.2.5.10 Instructions to Bidders/Proposers;
1.2.5.11 Invitation to Bid/Request for Proposal;
1.2.5.12 Student Community Workforce Agreement

All such conflicts shall be reported, in writing, to the Project Manager. Schedules, lists, indexes, tables, inventories, written instruction, written descriptions, summaries, statements, classifications, specifications, written selections, or written designations, although appearing on the Drawings, are deemed to be and are “Specifications” as defined by this Subparagraph 1.2.5. The principles as set forth herein shall not alter the provisions of Subparagraph 1.2.3.

In the event there is a conflict between or among any provisions within one of the component parts of the Contract Documents, the higher standard or more stringent requirement shall govern.

1.2.6 The Contractor agrees that nothing contained in the Contract Documents or any contract between the Owner and the Architect shall create any contractual relationship between the Architect and the Contractor, any Subcontractors, Sub-subcontractors, Material Suppliers or Vendors. The Contractor acknowledges and agrees that this Contract is not intended to create, nor shall any provision be interpreted as creating, any contractual relationship between the Owner or Contractor or any third parties.

1.2.7 Any material or operation specified by reference to published specifications of a manufacturer, a society, an association, a code, or other published standard, shall comply with requirements of the listed document and project specifications; or as between referenced documents, the more stringent code or performance requirements shall govern. The Contractor, if requested, shall furnish an affidavit from the manufacturer certifying that the materials or products delivered to the Project meet the requirement specified.

1.3 OWNERSHIP AND USE OF DOCUMENTS

1.3.1 All Drawings, Specifications and copies thereof furnished by the Owner are and shall remain its property. They are to be used only with respect to this Project and are not to be used on any other project.

1.3.2 The Owner will provide conformed drawings and specifications incorporating Addenda items into the Contract Documents. A reasonable number of reproduced sets will be provided to the contractor without charge.

END OF ARTICLE 1

ARTICLE 2

ARCHITECT

2.1 DEFINITION

2.1.1 The Architect is the person or organization lawfully licensed to practice architecture, or an entity lawfully practicing architecture identified as such in the Owner-Contractor Agreement, and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Architect means the Architect and his engineers, whether under contract or within his own organization, or his authorized representative.

2.1.2 The term Architect is interchangeable with the term Project Architect, and is exclusive of the services of the Asbestos Abatement Architect.

2.1.3 The Asbestos Abatement Architect is not a part of the Architect's organization.

2.2 SERVICES OF THE ARCHITECT

2.2.1 The Architect will provide certain services as hereinafter described.

2.2.2 Should errors, omissions, or conflicts in the Drawings, Specifications, or other Contract Documents provided by the Architect be discovered, the Architect will prepare such amendments or supplementary documents and provide consultation as may be required.

2.2.3 The Architect and his consulting engineers (including but not limited to the structural, mechanical, and electrical disciplines) will visit the site at intervals appropriate to the stage of construction to familiarize themselves generally with the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Contract Documents. Unless otherwise provided in the Owner-Architect Agreement, the Architect and his consulting engineers will not be required to make exhaustive or continuous on-site inspection or observations to check the quality or quantity of the Work, but they shall make as many on-site inspections and observations as may reasonably be required to fulfill their obligations to the Owner. On the basis of such on-site observation, the Architect and his consulting engineers shall endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor.

2.2.4 The Architect will render written field reports to the Project Manager in the form required by the Project Manager relating to the periodic visits and inspections of the Project required by Subparagraph 2.2.3.

2.2.5 The Architect will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and he will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Architect will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other persons performing any of the work.

2.2.6 The Architect shall at all times have access to the Work wherever it is in preparation or progress. The Contractor shall provide safe facilities for such access so the Architect may perform his functions under the Contract Documents.

2.2.7 The Project Manager will consult with the Architect regarding the Contractor's Applications for Payment and both shall sign the Applications for Payment as provided in Subparagraph

9.4.

2.2.8 As required, the Architect will render to the Project Manager interpretations necessary for the proper execution or progress of the Work, with reasonable promptness and in accordance with any time limit agreed upon.

2.2.9 All communications, correspondence, submittals, and documents exchanged between the Architect and the Contractor in connection with the Project shall be through or in the manner prescribed by the Project Manager.

2.2.10 All interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents.

2.2.11 The Architect's decision in matters relating to artistic effect will be final if consistent with the intent of the Contract Documents and approved by the Project Manager.

2.2.12 If the Architect observes any Work that does not conform to the Contract Documents, the Architect shall promptly report in writing this observation to the Project Manager. The Architect will prepare and submit to the Project Manager punchlists of the Contractor's Work which is not in conformance with the Contract Documents. The Project Manager will transmit such punchlists to the Contractor.

2.2.13 The Architect will review and take appropriate action upon Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for conformance with the design concept of the Work and for general compliance with the Contract Documents. Such action shall be taken in no more than twenty-one (21) days of receipt unless otherwise authorized by the Project Manager.

2.2.14 The Project Manager will establish with the Architect procedures to be followed for review and processing of all Shop Drawings, catalog submittals, project reports, test reports, maintenance manuals, and other necessary documentation, as well as requests for changes and applications for extensions of time.

2.2.15 The Architect will prepare technical documentation for Change Orders when directed by the Project Manager.

2.2.16 The Architect and the Project Manager will conduct inspections to determine the dates of Substantial Completion and Final Completion, and will issue a final Certificate of Substantial Completion.

2.2.17 Unless otherwise provided in the Contract Documents, or the Owner-Architect Agreement, the Architect will prepare a set of reproducible record prints of Drawings showing significant changes in the Work made during the construction process, based on neatly and clearly marked-up prints, Drawings, and other data furnished by the Contractor.

2.2.18 In case of the termination of the employment of the Architect, the Owner may appoint an architect against whom the Contractor makes no reasonable objection whose status under the Contract Documents shall be that of the former architect, or the Owner may have the Project Manager assume all of the services of the Architect thereafter.

2.3 ASBESTOS ABATEMENT ARCHITECT

2.3.1 Solely with regards to asbestos abatement, the Asbestos Abatement Architect shall be afforded the same rights and authority as hereinbefore allowed the Architect.

2.3.2 The Architect is not a part of the Asbestos Abatement Architect's organization.

2.4 SEPARATE ARCHITECT, ENGINEER OR ARCHITECT/ENGINEER

2.4.1 Unless otherwise noted in the Contract Documents, the Separate Architect, Engineer or Architect/Engineer, as defined by the Supplementary General Conditions, Document 00800, shall be afforded the same rights and authority as hereinbefore allowed the Architect.

2.4.2 The Contract Documents, when applicable, shall define the portion of the Work relating to the services of the Separate Architect, Engineer or Architect/Engineer.

END OF ARTICLE 2

ARTICLE 3

OWNER

3.1 DEFINITIONS

3.1.1 The Owner is the Anchorage School District acting through its legally constituted officials, officers, employees, or agents and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Owner means the Owner or its authorized representative or agent.

3.1.2 The Asbestos Abatement Consultant is under separate Agreement with the Owner. Communications protocol between the Contractor and the Asbestos Abatement Architect shall be as established by the Project Manager.

3.2 PROJECT MANAGER

3.2.1 The Project Manager will be the Owner's representative and agent to the Contractor with respect to the Project during construction and until the issuance of the final Certificate for Payment. The term Project Manager is referred to throughout the Contract Documents as if singular in number and masculine in gender. The Owner's communications with the Contractor and the Architect will be through the Project Manager, who will have full authority to act on behalf of the Owner with regard to all aspects of the Project except that the Owner must approve all Change Orders and payments to the Contractor. The Project Manager's actions with regard to this project will be as an agent and representative of the Owner.

3.2.2 The Project Manager is not authorized to revoke, alter, change, relax, or release any requirements of the Contract, nor to approve or accept any portion of the Work not executed in accordance with, nor to issue instructions contrary to, the Contract Documents.

3.2.3 Nothing contained within the Contract Documents shall create any contractual relationship between the Project Manager and the Contractor.

3.3 INFORMATION, SERVICES AND RIGHTS OF THE OWNER

3.3.1 The Owner, through the Project Manager, will provide administration of the Contract as hereinafter described.

3.3.2 The Owner and the Project Manager shall at all times have access to the Work whenever it is in preparation or progress. The Contractor shall provide safe facilities for such access.

3.3.3 The Owner and the Project Manager shall not be responsible for or have control or charge of the construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work and will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Project Manager will not be responsible for the acts or omissions of the Contractor, any Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

3.3.4 The Project Manager shall have authority on behalf of the Owner to condemn or reject Work when, in the Project Manager's opinion the Work does not conform to the Contract Documents. Whenever, in the Project Manager's reasonable opinion, it is considered necessary or advisable to insure the proper implementation of the intent of the Contract Documents, the Project Manager shall have the authority to require special inspection or

testing of any Work in accordance with the provisions of the Contracts Documents, whether or not such Work be then fabricated, installed, or completed.

3.3.5 The Project Manager will have authority to require additional inspection or testing of the Work in accordance with Subparagraph 7.7.3, whether or not such Work be then fabricated, installed, or completed. However, neither the Project Manager's authority to act under Subparagraphs 3.3.4 and 3.3.5, nor any decision made by the Project Manager in good faith either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Project Manager to the Contractor, any Subcontractor, any of their agents or employees, or any other persons performing any of the work.

3.3.6 The Project Manager shall have the authority and discretion to call, schedule, and conduct job meetings to be attended by the Contractor, and representatives of his Subcontractors, and Material Suppliers, and Vendors and the Architect, to discuss such matters as procedures, progress, changes, problems, claims and scheduling.

3.3.7 The Project Manager will establish procedures to be followed for processing all Shop Drawings, catalogs, and other project reports, and other documentation, test reports, and maintenance manuals.

3.3.8 The Project Manager will review all requests for changes and shall implement the processing of Change Orders, including applications for extension of the Contract time.

3.3.9 Project scheduling shall occur as set forth in Division 1, Section 01311 of the General Requirements, entitled "Schedules and Reports". The Owner and the Project Manager will not be responsible for the failure of the Contractor to plan, schedule, and execute the Work in accordance with the Contractor's accepted schedule or the failure of the Contractor to meet the Project Schedule Milestone Dates as set forth under Section 00200 hereof or the failure of the Contractor to schedule and coordinate the Work of his own trades and Subcontractors, and Material Suppliers and Vendors, or the failure of the Contractor to coordinate and cooperate with other separate contractors.

3.3.10 The Project Manager, in consultation with the Architect, will review and process all Applications for Payment by the Contractor, including the final Application for Payment.

3.3.11 The Owner and the Project Manager will not be responsible for the acts or omissions of the Contractor, or any Subcontractor, or Material Supplier and Vendor, or any contractor's, subcontractor's or Material Supplier's and Vendor's agents or employees, or any other persons performing any of the Work.

3.3.12 The Owner shall, if requested by the Contractor, furnish all existing and available surveys describing the physical characteristics, legal limitations and utility locations for the site of the Project.

3.3.13 Except as otherwise provided in the Contract Documents, the Owner shall pay for necessary easements required for permanent structures or for permanent changes in existing facilities. The Contractor shall be responsible for obtaining all necessary permits and coordinating the securing of easements, inspections and approvals for permanent structures and all associated work.

3.3.14 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.

3.3.15 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, all copies of Drawings and Specifications, and such supplemental

documents as are reasonably necessary for the execution of the Work.

3.3.16 The foregoing rights are in addition to other rights of the Owner enumerated herein and those provided by law.

3.4 OWNER'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS

3.4.1 The Owner reserves the right to perform other work at the project site(s) with his own forces, and to award separate contracts in connection with portions of other work on the site.

3.4.2 The Contractor shall afford the Owner and separate Contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their Work, and shall coordinate his Work with theirs as required by the Contract Documents.

3.4.3 A pre-construction conference will be held with the Contractor, Project Manager, and other contractors performing work at the project site, for the purpose of coordinating work in areas where more than one contractor may be working. The time of the meeting will be established by the Owner's Representative prior to the Contractor commencing his work.

3.4.4 The Contractor shall attend additional coordination meetings, as requested by the Owner's Representative.

3.5 OWNER'S RIGHT TO STOP OR TO SUSPEND THE WORK

3.5.1 If the Contractor fails to correct defective Work as required by Paragraph 13.2 or fails to carry out the Work or supply labor and materials in accordance with the Contract Documents, the Owner, through the Project Manager, by a written order 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 Project Manager to stop the Work on behalf of the Owner shall not give rise to any duty on the part of the Project Manager to exercise this right for the benefit of the Contractor or any other person or entity.

3.5.2 The Project Manager may order the Contractor in writing to suspend, delay, or interrupt all or any part of the Work for such period of time as he may determine to be appropriate for the convenience of the Owner.

3.5.3 Upon receipt of any such suspension order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize incurring costs allocated to the Work covered by the order during the period of Work suspension.

3.5.4 If the performance of all or any part of the Work is suspended, or delayed, or interrupted by the Owner or the Project Manager pursuant to Subparagraph 3.5.2, the Contractor may make application for an adjustment in contract time and contract sum pursuant to Paragraph 12.2, and Division 1, Section 01311, Paragraph 2.03, respectively. No such adjustment shall be made if the performance of the Work is suspended by the Owner pursuant to Subparagraph 3.5.1.

3.6 OWNER'S RIGHT TO CARRY OUT THE WORK

3.6.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within seven (7) days after receipt of written notice from the Project Manager to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, after seven (7) days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy he may have,

make good such deficiencies and may further elect to complete all Work thereafter through such means as the Owner may select, including the use of a new Contractor. In such a case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including additional Owner administrative and legal costs, and compensation for the Architect's and the Project Manager's additional services made necessary by such default, neglect or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

3.7 AUDIT

3.7.1 The Owner shall have access to the Contractor's books, accounts, records, invoices and other records and documents pertaining to the Project at all reasonable times for the purpose of inspecting and auditing such. The Contractor shall provide to the Owner his daily manpower and equipment reports for all Subcontractors and any and all information requested or required by the Owner to validate or verify an Application for Payment, claim for cost or a requisition. The Contractor shall have no right to additional compensation or time in the event a requisition is delayed due to the inability of the Owner to validate or verify an Application for Payment due to the failure or refusal of the Contractor to allow such inspection or audit or to provide such requested information.

3.7.2 The Contractor shall maintain all data and records pertinent to the Work performed under this Contract in accordance with generally accepted accounting principles, and shall preserve and make available all data and records until the expiration of three (3) years from the date of final payment under this Contract, or for such longer period, if any, as is required by applicable statute, pending litigation, or by other articles of this Contract. The Owner and its authorized representatives shall have access to all such data and records for such time period to inspect, audit and make copies thereof during normal business hours.

3.7.3 The Contractor covenants and agrees that it shall require that any Subcontractor and any Sub-Subcontractor utilized in the performance of this Contract shall permit the authorized representatives of the Owner to similarly inspect and audit all data and records of said Subcontractors and Sub-Subcontractors relating to the performance of said Subcontractors and Sub-Subcontractors under this Contract for the same time period specified above.

END OF ARTICLE 3

ARTICLE 4

CONTRACTOR

4.1 DEFINITION

4.1.1 The Contractor is the person or organization identified as such in the Owner-Contractor Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative, who shall have the authority to bind the Contractor in all matters pertinent to this Contract.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 Before placing his proposal to the Owner, and continuously after execution of the Contract, the Contractor shall carefully study and compare the Contract Documents and shall at once report to the Owner, through the Project Manager, any error, inconsistency or omission he may discover, including any requirement which may be contrary to any law, ordinance, rule, regulation or order of any public authority bearing on the performance of the Work. By submitting his proposal or bid for the Contract and the Work under it, the Contractor agrees that the Contract Documents appear accurate, consistent, and complete insofar as can reasonably be determined. If the Contractor has reported in writing an error, inconsistency or omission, has promptly stopped the affected work until otherwise instructed, and has otherwise followed the instructions of the Owner, the Contractor shall not be liable to the Owner for any damage resulting from any such errors, inconsistencies or omissions in the Contract Documents. The Contractor shall perform no portion of the Work at any time without Contract Documents and, where required, approved Shop Drawings, Product Data or Samples for such portion of the Work.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for and have control over all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors, and Material Suppliers and Vendors, and their agents and employees, and other persons performing any of the work.

4.3.3 The Contractor shall not be relieved from his obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of the Architect or the Project Manager in their administration of the Contract, or by inspections, tests or approvals (or the lack thereof) required or performed under Paragraph 7.7 by persons other than the Contractor.

4.3.4 Independent of this Contract, the Owner has undertaken a long term asbestos abatement program by which the Owner intends to properly document the existence of asbestos-contained materials and the lawful removal of ACM by qualified asbestos abatement contractors or subcontractors in accordance with the Asbestos Hazard Emergency Response Act (AHERA) and the Asbestos School Hazard Abatement Reauthorization Act (ASHARA). As part of this asbestos abatement program, the Owner has employed a private consultant to locate asbestos-containing materials present in the Owner's facilities. A copy of the AHERA report as it relates to the facility which is involved in this Contract can be obtained from the Owner by contacting the Project Manager.

4.3.4.1 Before starting the Work or any Section of the Work, the Contractor shall inspect or, if using a Subcontractor for a Section of the Work, shall cause his Subcontractor to inspect all preparatory work, including that performed prior to the commencement of the Work under this Contract, for the presence of suspected asbestos-containing materials.

4.3.4.2 If the Contractor or his Subcontractor encounters any asbestos-containing material or suspected asbestos-containing material -- whether such material is identified in the AHERA report or the private consultant's report or not -- the Contractor shall bring it to the immediate attention of the Project Manager by timely written notice. Such notification shall be considered timely if received by the Project Manager within two (2) days after the discovery of the asbestos-containing material or suspected asbestos-containing material by the Contractor or by a Subcontractor if the Contractor uses a Subcontractor to perform that Section of the Work. If the Contractor does not give timely notice of the presence of asbestos-containing material or suspected asbestos-containing material, the Contractor will not receive additional compensation for delay caused by the necessity of the Owner to stop work and abate asbestos-containing material during the course of the Work. Failure of a Subcontractor to report the presence of asbestos-containing material or suspected asbestos-containing material to the Contractor shall not relieve the Contractor of his responsibilities hereunder.

4.3.4.3 If the Contractor, or his employees, agents or subcontractors intentionally or negligently disturbs or removes, or causes to be disturbed or removed, all or a portion of asbestos-containing material, the Contractor shall indemnify, hold harmless and defend the School District and the Project Manager from and against any claims, damages, losses and expenses, and alleged claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from any cleanup/decontamination work, medical treatment, or legal action arising or resulting from said intentional or negligent disturbance or removal of asbestos-containing material.

4.3.5 The Contractor shall make all necessary arrangements and so conduct the Work that all parts of the same will be carried out simultaneously and harmoniously and that the work of installing the various sections or items of same shall not interfere with or retard the progress of other Work.

4.3.6 If it becomes necessary at any time during the progress of the Work to move materials and/or equipment which have been temporarily located or stored, the Contractor shall move them or cause them to be moved, at his expense. Care shall be taken that no part of the Work shall be overloaded at any time.

4.3.7 The Contractor shall furnish all required information to ensure continuity between various sections of the Work and to avoid delay and obviate defects on any part of the whole Work, all as approved by the Owner.

4.3.8 Any damage caused by the handling or installation of materials or equipment, or the carrying out of any portion of the Work must also be made good by the Contractor to the satisfaction of the Project Manager.

4.3.9 The Contractor shall compare all the various drawings, and shall install Work in a manner to provide for all clearances and finishes indicated thereon. Work under each trade shall be arranged to clear piping, equipment, etc., of all other trades.

4.3.10 The Contractor shall inform himself fully regarding any peculiarities and limitations of the

space available for the installation of the material. He shall see that all equipment, such as valves, or other appliances necessary to be reached from time to time for operations and maintenance are made readily accessible.

4.3.11 The construction of the Work may develop conditions that render impracticable the location of equipment as shown or noted. In such cases, before installing his Work, the Contractor shall call the condition to the attention of the Project Manager for resolution.

4.3.12 It shall be the Contractor's sole responsibility to so coordinate the Work that chases or other recesses in walls shall be provided where required, and that reasonable clearance between the work of various trades shall be maintained. The layout for openings and chases through walls, floors, and partitions, etc., shall be arranged in advance of the actual construction and the work carried out without unnecessary and superfluous cutting, etc., after the Work has been completed.

4.3.13 Dimensions shall be verified by the measurements of the buildings and the property, and the Contractor shall be responsible for all of his work fitting in place in a satisfactory and workmanlike manner.

4.3.14 The Contractor has carefully examined, in detail, all of the Drawings and Specifications and the time established for completion of the Work, and he accepts them as adequate to meet the requirements specified.

4.3.15 The Contractor shall be responsible for coordinating the work performed by any artist in connection with the project's ornamentation with the construction of this project, so that there shall be no unnecessary delay or interference in connection with said construction.

4.3.16 The Contractor shall coordinate and generally supervise the Work of this Contract and shall coordinate his Work with Work performed under Separate Contracts by mutual arrangement and agreement with the Contractors for those Contracts and the Project Manager. Unresolved disputes will be finally resolved by the Project Manager, subject to approval of the Owner, and the dispute resolution provisions of Subparagraph 12.5.

4.4 LABOR AND MATERIALS

4.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the execution and completion of the Work in accordance with the Contract Documents, and any applicable building permit, conditional and final certificate(s) of occupancy, code or statute, whether specifically required by the Contract Documents or whether their provision may reasonably be inferred as necessary to produce the intended results, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

4.4.2 The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the Work any unfit person or anyone not skilled in the task assigned to him. The Project Manager may, by notice in writing, require the Contractor to promptly remove from the site of the Work any employee or worker the Project Manager deems incompetent, careless or otherwise objectionable including violation of District Policies relating to alcohol, illegal drugs, or firearms on District property.

4.4.3 The Contractor shall be responsible for ensuring that the Work is completed in a skillful and workmanlike manner.

4.5 WARRANTY

4.5.1 The Contractor warrants to the Owner and the Architect that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not conforming to these requirements, including substitutions not properly approved and authorized, is defective. If required by the Project Manager or the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. This warranty is not limited by the provisions of Paragraph 13.2.

4.5.2 The warranties set forth in this Paragraph 4.5 and elsewhere in the Contract Documents shall survive final acceptance under Paragraph 9.9.

4.6 TAXES

4.6.1 The Contractor shall pay all sales, consumer, use and other similar taxes for the Work or portions thereof provided by the Contractor which are legally enacted at the time bids are received, whether or not yet effective.

4.7 PERMITS, FEES AND NOTICES

4.7.1 Except as specifically provided in Subparagraph 3.3.13 the Contractor shall secure and pay for (1) all permits and governmental fees, licenses and inspections necessary for the proper execution of the Work which are legally required at the time the bids are received, and (2) all permits and governmental fees, licenses and inspections from any agency or department of the Municipality of Anchorage that would be necessary for the proper execution of the Work or legally required at the time bids are received just as if the Work were performed and the Project located within the Municipality of Anchorage. The Municipality of Anchorage shall be considered a “public authority bearing on the performance of the Work” and a “public authority having jurisdiction” for purposes of this Contract.

4.7.1.1 The Anchorage School District has paid for the Municipality of Anchorage’s Building Plan Review and Building Fee Permit. Contractor shall obtain permit upon notice from Project Manager.

4.7.2 The Contractor shall give all notices and comply with all such laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work.

4.7.3 If the Contractor performs any Work knowing it to be contrary to any such laws, ordinances, rules, regulations or orders of any public authority bearing on the performance of the Work, and does so without reasonable notice to the Project Manager, the Contractor shall assume full responsibility therefore and shall bear all costs attributable thereto.

4.7.4 Notification, coordination and completion of the installation of all required utilities, whether temporary or permanent, is the sole responsibility of the Contractor. The Owner shall not be responsible for any damage or delay caused by any party’s inability to perform installations in the time frame desired by the Contractor.

4.8 ALLOWANCES

4.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by these allowances shall be supplied for such amounts and by such persons as the Owner may direct, but the Contractor will not be required to employ persons against whom he makes a reasonable objection.

4.8.2 Unless otherwise provided in the Contract Documents:

4.8.2.1 These allowances shall cover the cost to the Contractor, less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and all applicable taxes;

4.8.2.2 The Contractor's costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowances;

4.8.2.3 Whenever the cost is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order, the amount of which will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses.

4.9 SUPERINTENDENT

4.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance full-time at the Project Site during the progress of the Work. The superintendent shall represent the Contractor, and all communications given to the superintendent shall be as binding as if given to the Contractor. If requested by the Project Manager, the Contractor shall provide a management chart and a list of personnel in a number stipulated by the Project Manager which shall comprise the superintending staff. In such event, all references to the superintendent elsewhere in the Contract Documents shall mean the superintending staff.

4.9.2 The superintendent shall be in attendance at the Project Site not less than eight (8) hours per day, five (5) days per week, unless the job is closed down due to a general strike or conditions beyond the control of the Contractor or until termination of the Contract in accordance with the Contract Documents. The superintendent shall not be employed on any other project during the course of the Work.

4.9.3 In the event any of the following conditions shall exist, the Contractor shall require that his superintendent be at the Project Site not less than ten (10) hours per day, six (6) days per week:

4.9.3.1 Should Substantial Completion not be accomplished on schedule.

4.9.3.2 Should Final Completion not be accomplished on schedule.

4.9.3.3 Should the Contractor's progress schedule indicate the Contractor to be fourteen (14) or more days behind schedule at any time during construction up until thirty (30) days prior to scheduled Substantial Completion.

4.9.3.4 Should the Contractor's progress schedule indicate the Contractor to be seven (7) or more days behind schedule at any time during the last thirty (30) days prior to scheduled Substantial Completion.

4.10 CONSTRUCTION SCHEDULE

4.10.1 The Contractor shall prepare and submit to the Project Manager for the Owner's review and acceptance a construction schedule pursuant to and in accordance with Division 1, Section 01311 of the General Requirements entitled "Project Schedule."

4.11 DOCUMENTS AND SAMPLES AT THE SITE

4.11.1 The Contractor shall maintain at the site for the Owner one record copy of all Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record all changes made during construction, and approved Shop Drawings, Product Data and Samples. These shall be available to the Project Manager and the Architect and shall be delivered to the Project Manager upon substantial completion of the Work.

4.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

4.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

4.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, diagrams, and other information furnished by the Contractor to illustrate a material, product or system for some portion of the Work.

4.12.3 Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

4.12.4 The Contractor shall review, approve and submit using the ASD Procore Construction Management Program, with reasonable promptness and in such sequence as to cause no delay in the Work or in the work of the Owner or any separate contractor, all Shop Drawings, Product Data and Samples required by the Contract Documents, or subsequently by the Project Manager. The Contractor's Shop Drawings, Product Data, and Samples submissions shall be coordinated and consistent with the Contractor's Project Scheduling obligations under Division 1, Section 01311 of the Contract Documents. Shop Drawings and Samples shall be properly identified as specified, or as the Project Manager may require. At the time of submission, the Contractor shall inform the Architect in writing of any deviation in the Shop Drawings or Samples from the requirements of the Contract Documents.

4.12.5 By approving and submitting Shop Drawings, Product Data and Samples, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. The Contractor shall adhere to any supplementary processing and scheduling instruction pertaining to Shop Drawings which may be issued by the Project Manager.

4.12.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Architect's approval and Project Manager's review of Shop Drawings, Product Data or Samples under Subparagraph 2.2.14 unless the Contractor has specifically informed the Architect and Project Manager in writing of such deviation at the time of submission and the Architect and Project Manager have given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omission in the Shop Drawings, Product Data or Samples by the Architect's approval of or Project Manager's review thereof.

4.12.7 The Contractor shall promptly make corrections required by the Architect and shall resubmit the required number of corrected copies of Shop Drawings or new Product Data or Samples. The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by the

Architect on previous submittals. Resubmittals necessitated by required corrections due to Contractor's errors or omissions, or less than complete submittals as required by the specifications, shall not be cause for extension of Contract Time.

4.12.8 The Contractor shall keep on the job at all times copies of approved Shop Drawings, Product Data or Samples which bear the review stamp of the Architect/Engineer.

4.12.9 The review of Shop Drawings, Product Data or Samples by the Architect and Project Manager shall not relieve the Contractor from his responsibility to coordinate the work of the Subcontractors.

4.12.10 The review of Shop Drawings, Product Data or Samples by the Architect and the Project Manager shall not relieve the Contractor of his responsibilities to construct the work in accordance with the Contract Documents.

4.12.11 The review of Shop Drawings, Product Data or Samples by the Architect shall not be construed as an approval of the quantities of materials or confirmation of dimensions.

4.12.12 In preparing a schedule for delivery of materials the Contractor shall allow reasonable time for the approval, including resubmissions due to Contractor's errors and omissions, of Shop Drawings, Product Data or Samples.

4.12.13 When Shop Drawings, Cuts, or Brochures are forwarded to the Architect by the Contractor for approval, a copy of the Contractor's letter of transmittal with project name, Contractor's name, number of drawings, title and other pertinent data covering each transaction is to be mailed to the Project Manager. The Architect and his consulting Engineers shall follow the same procedure when it is necessary for them to return or transfer Shop Drawings, Cuts or Brochures either between themselves or to the Contractor for changes, corrections or resubmittal, so that the Project Manager can record and follow procedure for each transaction to finality.

4.12.13.1 Pursuant to and consistent with the Contractor's Project Schedule development obligations under Division 1, Section 01311 of the Contract Documents, the Contractor shall submit Shop Drawings, Product Data and Sample submission schedule information to the Architect and Project Manager. The Contractor shall submit, and the Architect and Project Manager will review, the Contractor's submittals in accordance with the Contractor's accepted Preliminary and Detailed Project Schedules, as required under Division 1, Section 01311 of the Contract Documents. The Contractor shall submit no Shop Drawings, Product Data or Samples which do not comply with the Contract Documents.

4.12.13.2 No portion of the Work requiring a Shop Drawing, Product Data or Sample submission shall be commenced until such submission has been reviewed, and approved, by the Architect in accordance with Subparagraph 2.2.13. All such portions of the Work shall be in accordance with approved submittals.

4.12.13.3 No claim for delay shall be allowed the Contractor on account of failure of the Architect to furnish drawings or approval of Shop Drawings and Samples until at least twenty-one (21) days after submission to the Architect.

4.12.14 Shop Drawings, Product Data, and Samples shall be dated and shall bear the name of the Project; a description or the names of equipment, materials and items; and complete identification of locations at which materials or equipment are to be installed.

4.12.15 In submitting for approval the use of any material or device as the equal of some other material or device specified by name, the Contractor shall submit a sample of the material specified and also a sample of the material proposed to be submitted as the equal thereof, together with any supporting data necessary to reasonably allow the Architect and the Project Manager to review the material.

4.12.16 In case of devices, samples of which cannot readily be submitted, catalogs and other data, shall be submitted.

4.12.17 Any material or device proposed to be substituted shall not be deemed acceptable except by written communication from the Architect and Project Manager.

4.12.18 All Work for which samples are required to be submitted and approved shall be executed and performed in conformity with the said approved samples.

4.13 USE OF SITE

4.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits and the Contract Documents and shall not unreasonably encumber the building or site with any materials or equipment.

4.13.2 The Contractor shall coordinate all of his operations with and secure approval from the Project Manager before using any portion of the site.

4.13.3 All Work or materials of every description subject to injury during the course of the Work shall be fully protected from damage from any source. In any event, should any Work or materials under this Contract, become damaged in any way or manner the Contractor shall repair and perfect the same at his own expense, and when the entire Contract is completed, the building and premises shall be delivered to the Owner without defects. Any damage which may be caused by the installation of any portion of the Work covered by these specifications and conditions, or by the Contractor shall be satisfactorily made good and repaired by the Contractor without cost to the Owner.

4.13.4 The Contractor shall provide and maintain all lights, footways, guards, fences, gates, etc., for the proper protection of the public, and shall comply with all municipal rules, regulations, ordinances and laws, relating to the prosecution of his work.

4.13.5 The Contractor shall properly and carefully shore up or otherwise support all live water, sewer and gas pipes, electric wires, free-standing walls, conduit, etc., which may be encountered.

4.13.6 The Contractor shall furnish for his use, throughout the entire construction all scaffolding, ladders, decking or runways as needed to perform the Work under this Contract.

4.13.7 The Contractor shall construct elevators, cranes and other rigging, concrete lifts, etc., as required for his Work.

4.13.8 All such construction shall be carried out as required by the code or authority having jurisdiction. No cranes or other heavy equipment shall be located or moved in such manner as to damage or strain the framework or any part(s) of the proposed building and/or existing building.

4.13.9 As construction proceeds, the Project Manager may deem it necessary to have the Contractor move trailers, fences, stored materials, etc., to facilitate the construction. Upon written notice from the Project Manager, this will be done without additional cost to the

Owner.

4.13.10 When school is in session the Contractor will be restricted to the areas which do not interfere with school operations. These areas shall be safety and security fenced to not impact school operations. Additional areas may be utilized upon concurrence of the Project Manager. The Contractor shall minimize his impact on the educational program while his work is in progress. Workers must stay out of school while school is in session. All work in the existing school can only take place during the hours approved by the Project Manager

4.13.11 The Contractor must maintain interior building fire exits through the construction areas and maintain these exits during all school operation hours, to the satisfaction of the Authorities having Jurisdiction. These exit routes may not be modified without concurrence of the Project Manager and the School Principal.

4.13.12 The Contractor must maintain fire equipment access routes open to site and buildings. According to UFC 10.502 fire equipment access and water supplies shall be installed and made serviceable prior to and during the time of construction. This is the Contractor's responsibility to coordinate.

4.13.13 The Contractor shall keep the boilers operational while the average outside temperature is below 60° F while the school program is in operation or at any time temperature is below 40° F, to protect facility utility systems.

4.14 CUTTING AND PATCHING OF WORK

4.14.1 The Contractor shall be responsible for all cutting, fitting or patching that may be required to complete the Work or to make its several parts fit together properly.

4.14.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or any separate contractors by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any separate Contractor except with the written consent of the Owner and of such separate Contractor. The Contractor shall not unreasonably withhold, from the Owner, or any separate contractor his consent to cutting or otherwise altering the Work.

4.14.3 Existing structures and facilities including but not limited to building, utilities, topography, streets, curbs, walks, etc., that are damaged or removed due to required excavations or other construction work, shall be patched, repaired or replaced by the Contractor to the satisfaction of the Project Manager, the owner of such structures and facilities, and authorities having jurisdiction. In event the local jurisdictional authorities require that such repairing and patching be done with their own labor and materials, the Contractor shall abide by such regulations and pay for such work.

4.14.4 Whenever, for the convenience of work, an oversized opening has been provided, it shall be the responsibility of the Contractor requesting and requiring such opening to eventually fill unused portions of such openings with the appropriate material and with special attention to penetrations of firewalls. Such repair shall be in accordance with Paragraph 4.14.1.

4.15 CLEANING UP

4.15.1 The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project as well as all his

tools, construction equipment, machinery and surplus materials.

4.15.2 If the Contractor fails to clean up during or at the substantial or final completion of his Work, the Owner may do so as provided in Paragraph 6.3 and the costs thereof shall be charged to the Contractor.

4.16 COMMUNICATIONS

4.16.1 The Contractor shall forward all communications to the Architect or the Owner through the Project Manager, except as described under Paragraph 4.12.13.

4.17 ROYALTIES AND PATENTS

4.17.1 The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular design, process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Project Manager.

4.18 INDEMNIFICATION

4.18.1 To the fullest extent permitted by law, the Contractor shall, at his sole cost and expense, indemnify, hold harmless and defend the Owner, the Municipality of Anchorage and their Board or Assembly members, administrators, representatives, and employees, and the Project Architect and its agents, representatives, and employees from and against all claims, actions, judgments, costs, liabilities, penalties, damages, losses and expenses, including but not limited to attorneys' fees, which arise out of or result from the performance of the Work, and which are:

4.18.1.1 Attributable to bodily injury, sickness, disease or death, or to injury to, pollution of, or destruction of property (other than the Work itself) including the loss of use resulting therefrom; and

4.18.1.2 Caused by the default of the Contractor, or by any act, whether negligent or wrongful, or omission of the Contractor, any Subcontractor, Material Supplier or Vendor, anyone directly or indirectly employed by any of them or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

4.18.2 In any and all claims against the Owner or the Municipality of Anchorage or their Board or Assembly members, administrators, representatives or employees, and the Project Architect and its agents, representatives, and employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Paragraph 4.18 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor and Subcontractor under worker's compensation acts, disability benefit acts or other employee benefit acts.

4.19 PERSONS AUTHORIZED TO SIGN DOCUMENTS

4.19.1 The Contractor, within five (5) days after the Notice to Proceed shall file with the Project Manager a list of all persons who are authorized to sign documents such as contracts,

modifications, schedules, certificates, and affidavits on behalf of the Contractor and to fully bind the Contractor to all the Conditions and provisions of such documents, except that in the case of a corporation he shall file with the Project Manager a certified copy of a resolution of the Board of Directors of the corporation in which are listed the names and titles of corporation personnel who are authorized to sign documents on behalf of the corporation and to fully bind the corporation to all the conditions and provisions of such documents. This person, or at least one of these persons, shall be available to meet in Anchorage, Alaska, with the Owner or his representative(s) to discuss, negotiate and/or resolve any Change Order or other Modification to the Contract or any other matter needing resolution by the parties as determined at the sole discretion of the Owner within forty-eight (48) hours after receipt of written notice, at no additional cost to the Owner.

4.20 CONDITIONS AFFECTING THE WORK

4.20.1 The Contractor shall be responsible for taking all steps necessary to ascertain the nature and location of the Work and the general and local conditions which can affect the Work or the cost thereof. Failure by the Contractor to fully acquaint himself with conditions which may affect the Work, including, but not limited to conditions relating to transportation, handling, storage of materials, availability of labor, water, roads, weather, topographic and subsurface conditions, multi-prime contract conditions, applicable provisions of law, and the character and availability of equipment and facilities needed prior to and during the execution of the Work, shall not relieve the Contractor of his responsibilities under the Contract Documents and shall not constitute a basis for an adjustment in the Contract Sum or the Contract Time under any circumstances. The Owner assumes no responsibility for any understanding or representation about conditions affecting the Work made by any of his officers, employees, representatives, or agents prior to the execution of the Contract, unless such understandings or representations are expressly stated in the Contract Documents.

4.20.2 Until final acceptance by the Owner, the Contractor shall be in complete control of and fully responsible for the Work.

4.20.3 The Contractor shall give to the proper authorities all required notices relating to the Work in his charge, and shall be responsible for all acts and events which are violations of the law or which would be violations of the law had the Work been performed or the Project located within the Municipality of Anchorage.

4.20.4 Wherever herein mention is made of any article, material or workmanship to be in accordance with the laws, ordinances, building code, Underwriter’s Code, and A.S.T.M. Specifications or similar expressions, the requirement of these laws, ordinances, etc., shall be construed as the minimum requirements of these Specifications, and all articles, materials and workmanship required by these laws, ordinances, etc., shall be provided by the Contractor without any additional cost to the Owner.

4.20.5 Where the requirements of the laws, ordinances, etc., are mandatory, they shall govern.

4.20.6 Where the requirements of the Specifications call for higher grade or are not in conflict with the laws, ordinances, etc., the Specifications shall govern.

4.20.7 In case of any apparent conflict between the Specifications and such laws, ordinances, etc., the Contractor shall immediately call the attention of the Project Manager (in writing) to such conflict for decision, before proceeding with any work which may involve such conflict.

END OF ARTICLE 4

ARTICLE 5

SUBCONTRACTORS

5.1 DEFINITION

5.1.1 A Subcontractor is a person, organization or entity who has a direct contract with the Contractor to perform any of the Work. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his subcontractors.

5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform any of the Work. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.

5.1.3 Nothing contained in the Contract Documents is intended to, nor shall it create, any contractual relationship between the Owner, the Project Manager, the Architect, or any of their agents, employees, or representatives and any Subcontractor or Sub-subcontractor.

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

5.2.1 The Contractor, in compliance with the requirements of the Contract Documents, shall furnish to the Project Manager in writing the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. The Project Manager will within ten (10) days of receipt of such information reply to the Contractor in writing stating whether or not the Owner, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Project Manager to reply within a reasonable time shall constitute notice of no reasonable objection. The Contractor understands and agrees that no contractual agreement exists for any part of the Work under this Contract between the Owner and any of the Contractor's Subcontractors or Sub-subcontractors. Further, the Contractor understands and agrees that he alone is responsible to the Owner for all of the Work under this Contract and that any review of Subcontractors or Sub-subcontractors by the Owner or Project Manager will not in any way make the Owner responsible to any Subcontractor or Sub-subcontractor, nor responsible for the actions or failures of any Subcontractor or Sub-subcontractor.

5.2.1.1 Within ten (10) days after the Notice to Proceed, the Contractor shall furnish to the Project Manager, in writing, for acceptance by the Owner, a list of names of the Subcontractors, Sub-subcontractors, and Material Suppliers and Vendors, proposed for the principal portions of the Work.

5.2.1.2 Within thirty-five (35) days after Notice to Proceed, the Contractor shall submit to the Project Manager, copies of Purchase Orders or other satisfactory evidence of purchase for all major materials.

5.2.2 The Contractor shall not contract with any such proposed person or entity to whom the Project Manager has made reasonable objection under the provisions of this Subparagraph.

5.2.2.1 The Contractor shall not be required to contract with anyone to whom he has a reasonable objection. There shall be no entitlement to additional compensation based upon the Project Manager's reasonable objection made

under this Section.

5.2.3 If the Project Manager has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Project Manager has no reasonable objection.

5.2.4 The Contractor shall make no substitution for any Subcontractor, person or entity previously selected if the Project Manager makes reasonable objection to such substitution.

5.2.5 During the course of the Project the Contractor must notify the Project Manager in writing regarding any changes in any Work by any Subcontractor, Sub-subcontractor, Material Supplier or Vendor.

5.3 SUBCONTRACTUAL RELATIONS

5.3.1 By an appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these Documents, assumes toward the Owner. Said agreement shall preserve and protect the rights of the Owner under the Contract Documents with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by these Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the Subcontract, copies of the Contract Documents to which the Subcontractor will be bound by this Paragraph 5.3, and identify to the Subcontractor any terms and conditions of the proposed Subcontract which may be at variance with the Contract Documents. Each Subcontractor shall similarly make copies of such Documents available to his Sub-subcontractors, Material Suppliers or Vendors.

5.3.2 In addition to Sub-Contractual agreement in Paragraph 5.3.1, the Contractor shall allow the Subcontractor, Sub-subcontractor, Material Supplier or Vendor to notify the Project Manager due to failure of payment, unwarranted retainage or deductions of payment or unwarranted lateness of payment.

5.3.3 As a condition precedent to the acceptance of the Contractor’s proposed Preliminary and Detailed Project Schedules by the Project Manager, each major Subcontractor shall in writing, with the submission of said schedules by the Contractor, confirm that they have reviewed the Contractor’s proposed Project Schedules, and that each concurs with the activity breakdowns, durations, cost loading, and logic as relates to each major Subcontractor’s scope of the Work and the incorporation of said Work into the Contractor’s proposed Preliminary and Detailed Project Schedules, as prescribed under Division 1, Section 01311 of the General Requirements of the contract documents.

5.4 PREPARATORY WORK

5.4.1 Before starting work, the responsible Subcontractor shall carefully examine all preparatory Work that has been executed to receive his Work. He shall check carefully, by whatever means are required, to ensure that his work and adjacent related Work will finish to proper contours, planes, and levels. He shall promptly notify the Contractor and the Project

Manager of any defects or imperfections in preparatory Work which will, in any way, affect satisfactory completion of his Work. Absence of such notification will be construed as an acceptance of preparatory work and later claims of defects therein will not be recognized.

5.4.2 Each Subcontractor is required to follow the provisions of 4.3.4 relating to asbestos abatement.

5.5 PAYMENTS TO SUBCONTRACTORS, SUB-SUBCONTRACTORS, AND MATERIAL SUPPLIERS AND VENDORS

5.5.1 If the Project Manager withholds a Certificate for Payment for any cause which is the fault of the Contractor and not the fault of a particular Subcontractor, Sub-subcontractor, and Material Supplier and Vendor, the Contractor shall pay that Subcontractor, Sub-subcontractor, Material Supplier and Vendor on demand, made at any time after the Certificate for Payment should otherwise have been issued, for his work to the extent completed, less any retained percentage.

5.5.2 The Contractor shall pay each Subcontractor, Sub-subcontractor, and Material Supplier and Vendor a just share of any insurance monies received by the Contractor, and he shall require each Subcontractor to make similar payments.

END OF ARTICLE 5

ARTICLE 6

WORK BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OWNER'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS

6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and to award separate contracts in connection with other portions of the Project or other work on the site under these or similar Conditions of the Contract.

6.1.2 When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

6.1.3 Upon transfer of such separate contracts to a General Contractor, if the Owner so desires to transfer such contracts, the Contractor shall be obligated to the conditions as outlined by Paragraph 6.3. of these Conditions.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and separate Contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their Work, and shall connect and coordinate his Work with theirs as required by the Contract Documents.

6.2.2 If any part of the Contractor's Work depends for proper execution or results upon the Work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Owner any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor to so inspect and report in writing to the Owner shall constitute an acceptance of the Owner's or separate contractors' work as fit and proper to receive his Work, except as to defects which may subsequently become apparent in such work by others.

6.2.2.1 In addition to inspection as to defect, the Contractor, if so deemed necessary by the Contractor, shall measure or inventory work already in place or stored and shall at once report, in writing, to the Project Manager any conflicts between the executed Work and the Contract Documents the Contractor has signed his name thereto.

6.2.2.2 Upon notification from the Owner that a part of the Work furnished under this Contract is not in accordance with the Contract Documents, the Contractor shall immediately initiate action to correct the Work.

6.2.2.3 If the Contractor fails to install his Work in a timely manner, the Owner through the Project Manager may authorize other Contractor(s) to perform their Work out of proper sequence. All extra Work necessary to properly interface with the other Contractor(s)' Work will be accomplished by this Contractor at no additional cost to the Owner.

6.2.3 Any costs caused by defective or ill-timed work shall be borne by the Contractor.

6.2.4 Should the Contractor wrongfully cause damage to the Work or property of the Owner, or to other Work on the site, the Contractor shall promptly remedy such damage as provided in Subparagraph 10.2.5.

6.2.5 Should the Contractor wrongfully cause damage to the work or property of any separate contractor, the Contractor shall upon due notice promptly attempt to settle with such other Contractor by agreement; or otherwise to resolve the dispute. If such separate Contractor sues or initiates a proceeding against the Owner, the Project Manager and/or the Architect on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings at his own expense, and if any judgment or award against the Owner, the Project Manager, and/or the Architect arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner, the Project Manager and/or the Architect for all attorneys' fees and court or other costs which the Owner, the Project Manager and/or the Architect have incurred.

6.2.6 In the event there is more than one contractor engaged on the Project, each such contractor shall be responsible to the other for damages to work, injury to any person or persons, or for any loss, cost, claims, or damages arising out of or in connection with the Work required by this Contract or any loss, cost, expense, or damage caused by the Contractor's neglect or failure to finish or satisfactorily complete his part of the Work within the time prescribed. In all events, the provisions of Paragraph 4.18 shall be applicable.

6.2.7 Whenever the Contractor receives items from another Contractor or from the Owner for storage, erection or installation, the Contractor receiving such items shall give receipt for items delivered, and thereafter will be held responsible for care, storage and any necessary replacing of item or items received.

6.2.8 The separate contractors shall establish and maintain communication throughout the course of their Work to assure maximum coordination of the Work performed by each. This includes the approvals of the Work of each as required by proper coordination.

6.3 OWNER'S RIGHT TO PERFORM DISPUTED WORK

6.3.1 If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up as required by Paragraph 4.15 or for accomplishing coordination or doing required cutting, filling, excavating or patching as required by Paragraph 4.14, the Owner may carry out such Work and charge the cost thereof to the contractors responsible therefor as the Owner shall determine to be just.

6.4 EQUIPMENT OR WORK NOT IN CONTRACT (NIC)

6.4.1 When certain items of equipment and other work are indicated as "NIC" (Not In Contract), or to be furnished and installed under other contracts, any requirements for preparation of openings, provision of backing, etc., for receipt of such "NIC" work, information will be furnished upon written request of the Contractor who shall properly form and otherwise prepare his Work in a satisfactory manner to receive such "NIC" work.

6.5 CUTTING AND PATCHING UNDER SEPARATE CONTRACTS

6.5.1 Each Contractor shall be responsible for any cutting, fitting and patching that may be required to complete his Work except as otherwise provided in the Contract Documents. The Contractor shall not endanger any human life or portion of the Work performing any cutting, excavating or otherwise altering the Work or any part thereof.

END OF ARTICLE 6

ARTICLE 7

MISCELLANEOUS PROVISIONS

7.1 GOVERNING LAW

7.1.1 Unless otherwise provided in the Contract Documents, the Contract shall be governed by the law of the place where the Project is located.

7.2 SUCCESSORS AND ASSIGNS

7.2.1 The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto and to the partners, successors, assigns and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contractor shall not assign the Contract or sublet it as a whole without the written consent of the Owner, nor shall the Contractor assign any monies due or to become due to him hereunder, without the previous written consent of the Owner.

7.3 WRITTEN NOTICE

7.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm or entity or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

7.4 CLAIMS FOR DAMAGES

7.4.1 Should the Contractor suffer injury or damage to person or property because of any act or omission of the Owner or of any of his employees, agents or others for whose acts he is legally liable, claim shall be made in writing to the Owner, through the Project Manager, within twenty (20) days after the first observance of such injury or damage; otherwise, the Contractor shall have waived any and all rights he may have against the Owner, the Project Manager, the Architect, or their employees, representatives or agents.

7.4.2 Decisions of the Project Manager shall be rendered as provided for under the Contract Documents, but no decision of the Project Manager shall deprive the Owner or the Contractor of any form of redress which may be available under the laws of the State. Any decision of the Project Manager shall be final and binding on the Contractor in the absence of written notice of protest from the Contractor received by the Owner by registered mail, within fifteen (15) days of the date of the decision of the Project Manager. The Owner shall have sixty (60) days from the date of receipt of a formal protest within which to investigate and make reply.

7.5 PERFORMANCE BOND AND PAYMENT BOND

7.5.1 Prior to the execution of the Contract, the Contractor shall furnish to the Owner, on forms acceptable to the Owner, surety bonds in the amounts and for the purposes provided in this Paragraph 7.5. Each bond must be signed by both the Contractor and the Surety. The current power of attorney for the person who signs for the surety company, indicating the monetary limit of such powers, must be attached to the bonds. The Contractor shall pay all premiums and cost thereof and incidental thereto. Such bonds shall be made payable to the Owner. The surety (or sureties) shall be corporate surety(ies) licensed to transact business in Alaska and acceptable to the Owner. Each bond shall be in an amount equal to the Contract Sum. The effective date of the bond shall be on the execution date of the

contract.

7.5.2 The “Performance Bond” shall be so conditioned as to assure the faithful performance by the Contractor of all Work under said Contract, within the time limits prescribed, including any maintenance provisions, in a manner that is satisfactory and acceptable to the Owner; that all materials and workmanship supplied by him will be free from original or developed defects; and that should original or developed defects or failures appear within a period of one year from the date of final acceptance of the Work by the Owner, the Contractor shall, at his own expense, make good such defects and failures and make all replacements and adjustments required, within a reasonable time after being notified by the Owner to do so. This bond shall be maintained by the Contractor in full force and effect during the performance of the Work of the Contractor and for a period of two (2) years after the date of final acceptance of the Work by the Owner.

7.5.3 The “Payment Bond” shall be so conditioned as to inure to the benefit of persons furnishing materials for or performing labor upon the Work. This bond shall be maintained by the Contractor in full force and effect until the Work is completed and finally accepted by the Owner, and until all claims for materials, labor and subcontracts are paid.

7.5.4 Should any surety or sureties upon said bonds become insufficient or be disqualified from doing business in Alaska, the Contractor shall renew said bond or bonds with good and sufficient sureties, acceptable to the Owner, within ten (10) work days after receiving notice that the surety or sureties are insufficient and/or disqualified. Should any surety or sureties be deemed unsatisfactory at any time by the Owner, notice will be given the Contractor to that effect, and he shall forthwith substitute a new surety or sureties satisfactory to the Owner. No further payment shall be deemed due or will be made under this Contract until the new sureties shall qualify and be accepted by the Owner.

7.5.5 In the event of any change order resulting in the performance of additional work in connection with the Work, the amounts of such bonds shall be increased by the cost of such additional work or materials or fixtures to be incorporated into the Project.

7.6 RIGHTS AND REMEDIES

7.6.1 The Contractor’s duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

7.6.2 Except as may be specifically agreed in writing, the failure of the Owner, the Project Manager, or the Architect to insist in any one or more instances upon the strict performance of any one or more of the provisions of this Contract, or to exercise any right herein contained or provided by law, shall not be construed as a waiver or relinquishment of the performance of such provision or right(s) or of the right to subsequently demand such strict performance or exercise such right(s), and the rights shall continue unchanged and remain in full force and effect.

7.6.3 The Contractor agrees that he can be adequately compensated by money damages for any breach of this Contract which may be committed by the Owner and hereby agrees that no default, act, or omission of the Owner, the Project Manager or the Architect, except for unauthorized failure to make payments as required by the Contract Documents, shall constitute a material breach of the Contract entitling the Contractor to cancel or rescind the provisions of this Contract or (unless the Owner shall so consent or direct in writing) to suspend or abandon performance of all or any part of the Work. The Contractor hereby waives any and all rights and remedies to which he might otherwise be or become entitled, save only his right to money damages.

7.7 TESTS

7.7.1 If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested, or approved, the Contractor shall give the Architect and Project Manager timely notice, but not less than seventy-two (72) hours, of its readiness so the Architect and the Project Manager may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests or approvals except as provided in subparagraph 7.7.2. Notification, coordination and execution of all inspections and tests required by the Contract Documents or by the governing building department shall be the sole responsibility of the Contractor. The Owner shall not be responsible for any damage or delay caused by any Party's inability to make required inspections in the time frame desired by the Contractor.

7.7.2 Special Inspection and testing as required in accordance with IBC section 1704 shall be coordinated by the Contractor and the Owner shall bear all costs of Special Inspections or approvals. The Special Inspector, designated by the Owner, shall observe the Work assigned for conformance with the approved design drawings and specifications. The Project Manager may order additional Special Inspections, testing, or approval, as required by the authority having jurisdiction by providing notice to the Contractor. The Contractor shall provide notification and coordination for additional Special Inspections as provided in subparagraph 7.7.1. If such special inspection or testing reveals a failure of the Work to comply (1) with the requirements of the Contract Documents, or (2) with respect to the performance of the Work, with laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, the Contractor shall bear all costs thereof, including compensation of the Owner's administrative and legal expenses, and for the Architect's, the Project Manager's, and the Special Inspector's additional services made necessary by such failure.

7.7.3 Inspections and Tests required to establish compliance with the Contract Documents, as provided for in the Contract Documents, will be made by a qualified, independent testing agency approved by the Owner. The cost of the services of such agency will be paid by the Contractor, unless otherwise provided in the Contract Documents. When the initial tests indicate non-compliance with the Contract Documents, any subsequent retesting occasioned by non-compliance shall be performed by the same agency and the costs thereof borne by the Contractor. The Contractor shall provide facilities for such access to the Work in order that the agency may properly perform its functions. Representatives of the testing agency shall have access to the Architect, Project Manager, or Owner at all times.

7.7.4 Inspections or testing performed exclusively for the Contractor's convenience shall be the sole cost and responsibility of the Contractor.

7.7.5 The independent testing agency, employed as specified in the Technical portion of these specifications, shall prepare the test reports, logs, and certificates applicable to the specific inspections and tests and shall deliver, immediately or within forty-eight (48) hours, as applicable, the specified number of copies of same to the designated parties. Other required certificates of inspection, testing or approval shall be secured by the Contractor and delivered by him to the Project Manager and the Architect, in such time as to not delay progress of the Work or final payment therefor.

7.7.6 If the Architect, the Project Manager or the Special Inspector is to observe the inspections, tests or approvals required by the Contract Documents, laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction or that are required to establish compliance with the Contract Documents, he will do so promptly and, where

practicable, at the normal place of testing.

7.7.7 Unless otherwise stipulated in the Contract Documents, the Contractor shall pay for all utilities required for testing of installed equipment of all of his Work and work of each Subcontractor furnishing equipment. Labor and supervision required for making such tests shall be provided at no additional cost to the Owner.

7.7.8 Owner may provide Quality Assurance testing. Contractor shall provide knowledgeable support personnel and cooperate fully with Owner's designated representative in conducting all Quality Assurance tests. If project fails tests, Contractor shall make all necessary corrections to meet test criteria and pay the Owner for all costs associated with additional tests.

7.8 ALTERNATES

7.8.1 Alternates may be either additive or deductive.

7.8.2 Alternates, if taken, may be taken in any sequence.

7.8.3 The Contractor shall include in his bid, or bid proposal, a bid for all alternates listed in the Bid Form. These alternates shall include the Contractor's net cost of the labor, materials, overhead and profit, and equipment necessary to perform or delete, the Work as outlined by such alternates.

7.9 UNENFORCEABILITY OF ANY PROVISION

7.9.1 If any provision of the Contract is held as a matter of law to be unenforceable, the remainder of the Contract shall be enforceable without such provision.

7.10 NO WAIVER BY OWNER

7.10.1 The failure of the Owner in any one or more instances to insist upon the strict performance of any of the terms of this Contract or to exercise any option herein conferred, shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon such terms or option on any future occasion.

7.11 ASSIGNMENT OF CONTRACT

7.11.1 The Contractor shall not assign the responsibilities of this Contract, either as a whole or in part, nor assign any monies due or to become due to it hereunder, without previous written consent of the Owner.

END OF ARTICLE 7

ARTICLE 8

TIME

8.1 DEFINITIONS

8.1.1 Unless otherwise provided, the Contract Time is the period of time allotted in the Contract Documents for Substantial and Final Completion of the Work as defined in Subparagraph 8.1.3, including authorized adjustments thereto.

8.1.2 The date of execution of the Contract Agreement between the Owner and Contractor shall be subsequent to School Board Approval and the Contractor's satisfactory submittals to the Owner of the Certificate of Insurance, the Performance Bond and the Payment Bond as noted in the Invitation to Bidders. The Owner will issue a Notice to Proceed no later than ten (10) days from execution of the Owner-Contractor Agreement by both Owner and Contractor. The date of commencement of the Work shall be the date established by the Notice to Proceed. The Owner shall not be responsible for any costs incurred by the Contractor prior to the Notice to Proceed.

8.1.3 The Date of Substantial Completion of the Work or designated portion thereof is the Date certified by the Project Manager and Architect when the Work or a designated portion thereof is sufficiently complete, in accordance with the Contract Documents, so the Owner can fully occupy and utilize the Work or designated portion thereof for the use for which it is intended, with all of the Project's parts and systems cleaned and operable as required by the Contract Documents. Only incidental corrective work and any final cleaning beyond that needed for the Owner's full use may remain for Final Completion.

8.1.4 The term day as used in the Contract Documents shall mean calendar day unless otherwise specifically designated. All dates shall mean 12:01 a.m. of the indicated day unless otherwise stipulated.

8.1.5 The term "working day" as may be used in the Contract Documents shall mean any day not otherwise defined herein as a non-working day.

8.1.6 The term non-working day as may be used in the Contract Documents shall mean Sunday, a recognized holiday, a day on which the Contractor is specifically required to suspend construction operations or a day on which a suspension order is in effect. Recognized holidays shall be: New Year's Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Eve (half day), and Christmas Day. When any of the above days fall on a Saturday, the preceding Friday shall be counted as a holiday. When any of the above days fall on a Sunday, the following Monday shall be counted as a holiday.

8.1.7 The term "Beneficial Occupancy" is interchangeable with the term Substantial Completion.

8.2 PROGRESS AND COMPLETION

8.2.1 All times stated in the Contract Documents are of the essence of the Contract.

8.2.2 The Contractor shall begin the Work on the date of commencement as defined in Subparagraph 8.1.2. He shall carry the Work forward expeditiously with adequate forces and shall achieve Substantial Completion and Final Completion in accordance with the Project Schedule Milestone Dates set forth under Section 00200 hereof.

8.2.3 Attention is directed to the fact that the Work is urgently needed by the Owner and that time is of the essence; for this reason, it shall be agreed that the Contractor shall

substantially complete all Work under the Contract in accordance with the Project Schedule Milestone Dates set forth under Section 00200 hereof and, that he will complete the contract in all its details for final acceptance as specified after Substantial Completion.

8.3 DELAYS AND EXTENSIONS OF TIME

8.3.1 The Contractor shall be entitled to extensions in the time required for performance of the Work as specifically provided in the Contract. Except as otherwise specifically provided under Paragraph 3.4., 12.1, or 8.3.5, the Contractor shall not be entitled to payment or compensation of any kind from the Owner for direct, indirect, impact or consequential damages, including but not limited to costs of acceleration because of hindrance or delay or loss of labor or equipment efficiency or productivity arising out of any hindrance, interference, obstruction, disruption or delay from any source or cause whatsoever, whether such hindrance, interference, obstruction, disruption or delays be reasonable or unreasonable, foreseeable or unforeseeable, or avoidable or unavoidable.

8.3.2 The Contract Time may be adjusted only for changes pursuant to Paragraph 12.1, suspension of Work pursuant to Paragraph 3.4. and delays pursuant to Subparagraph 8.3.3.

8.3.3 Types of delay shall be defined as follows:

8.3.3.1 Actions or inactions of the Owner, or events for which the Owner has assumed contractual responsibility, which would independently delay the date of Substantial Completion beyond the current contractually established date of Substantial Completion shall be designated as Compensable delays.

8.3.3.2 Events which are outside the control of, and without the fault or negligence of either the Owner or the Contractor, which would independently delay the date of Substantial Completion beyond the current Contract Completion Date shall be designated as Excusable delays, as follows:

8.3.3.2.1 Labor disputes and strikes (including strikes affecting transportation), that do, directly and critically affect the progress of the Work; however, any extension of Contract Time on account of an individual labor strike shall not exceed the number of days of said strike.

8.3.3.2.2 Acts of God, tornado, fire, hurricane, blizzard, earthquake, typhoon, or flood that damage completed work or stored materials.

8.3.3.2.3 The Contract Time will not be extended due to normal inclement weather. Unless the Contractor can substantiate to the satisfaction of the Owner that the weather actually encountered by the Contractor was unusually severe considering the full term of the Contract Time using a ten (10) year average of accumulated record mean values from climatological data compiled by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration for the locale of the Project and that such alleged substantially greater than normal inclement weather actually delayed the Work or portions thereof which had an effect upon the Contract Time, the Contractor shall not be entitled to an extension of time.

8.3.3.2.4 Acts of the public enemy, acts of the state, federal or local government in its sovereign capacity, and acts of another contractor in the performance of a contract with the Owner relating to the Project.

8.3.3.3 Actions or inactions of the Contractor, or events for which the Contractor has assumed contractual responsibility, which would independently delay the date of Substantial Completion beyond the current Contract Completion Date shall be designated as Non-excusable delays.

8.3.3.4 Concurrent delay is any combination of the above three types of delay occurring on a calendar date, except in cases where the combination consists of two or more instances of the same type of delay occurring on a calendar date.

A delay to the Contractor caused by the acts of another contractor under contract to the Owner will be classified as a compensable delay to the extent said delay meets the requirements of compensable delay as set forth under Subparagraph 8.3.3.1. Also, it is the Owner's belief that the definitions of delay as included in this paragraph comply with all applicable law in the State of Alaska.

8.3.4 Any claim for extension of time shall be made in writing to the Project Manager not more than seven (7) calendar days after commencement of the delay; otherwise it shall be waived. The Contractor shall also provide an estimate of the probable effect of such delay on the progress of the Work. In the case of a continuing delay only one claim is necessary. Any event, action, inaction, or other cause which may give rise to a delay shall constitute a basis for adjustment in:

8.3.4.1 Contract Time, only if it can be demonstrated that the date of Substantial Completion will be delayed beyond the current Contract Completion Date and that the delay is classified as only a Compensable, Excusable, or Concurrent Delay. The Contract Time shall be adjusted by Change Order pursuant to the requirements of Paragraph 8.3 and Division 1, Section 01311; or

8.3.4.2 Contract Amount, only if it can be demonstrated that the Contractor's time-related costs to complete the Work will be increased and the delay is classified as only a Compensable Delay. The Contract Sum shall be adjusted by Change Order pursuant to the requirements of Subparagraphs 8.3 and 12.3.

8.3.5 All time limits stated in the Contract Documents are of the essence of this Contract. The failure of the Contractor to complete the Work in conformance with the Contract shall result in damages suffered by the Owner due to delays in completion of the Work.

8.3.5.1 If the Contractor fails to substantially complete the Work in conformance with the Contract Documents and the Owner nevertheless permits the Contractor to continue performance of the Work, such permission shall neither modify nor waive the Owner's right to assess and collect, and the Contractor's obligation to pay liquidated damages.

8.3.5.2 The Owner shall be entitled to claim against the Contractor for any liquidated damages incurred. The Owner cannot anticipate at this time what liquidated damages may occur or what the per diem cost of these damages might be. Determination of liquidated damage details will be a matter of proof should the issue arise.

8.3.5.3 The Owner shall recover said liquidated damages by deducting the amount thereof from any monies due or that may become due the Contractor. In the event the remaining balance due the Contractor is insufficient to cover the full amount of assessed damages, then the Contractor or his Surety shall pay the amount due and the Owner shall be entitled to any and all rights and remedies available to it in law or equity to recover same.

8.4 RESPONSIBILITY FOR COMPLETION

8.4.1 The Contractor shall furnish such manpower, materials, facilities and equipment and shall work such hours, including night shifts, overtime operations and Sundays and holidays, as may be necessary to insure the progress and completion of the Work in accordance with the accepted and currently updated progress schedule. If Work actually in place falls behind the currently updated and accepted progress schedule and it becomes apparent from the current schedule that the Work will not be completed in accordance with the Contract Time, the Contractor agrees that he will, as necessary, take some or all of the following actions at no additional cost to the Owner, as required to substantially eliminate the schedule slippage deficiency:

8.4.1.1 Increase manpower in such quantities and crafts as will substantially eliminate in the opinion of the Project Manager the schedule slippage deficiency;

8.4.1.2 Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of equipment, or any combination of the foregoing sufficiently to substantially eliminate, in the opinion of the Project Manager the schedule slippage deficiency; and,

8.4.1.3 Reschedule activities to achieve maximum practical concurrence of accomplishment of activities.

8.4.2 The Project Manager may require the Contractor to submit a recovery schedule in accordance with Section 01311 of the Specifications, demonstrating his program and proposed plan to make up the slippage in scheduled progress and to ensure completion of the Work in accordance with the requirements of the Contract. If the Project Manager finds the proposed plan not acceptable, he may require the Contractor to submit a new plan. If the actions taken by the Contractor or the second plan proposed are not satisfactory, the Project Manager may require the Contractor to take any of the actions set forth in this Paragraph 8.4 without additional cost to the Owner, to make up the slippage in scheduled progress.

8.4.3 Failure of the Contractor to substantially comply with the requirements of this Paragraph 8.4 may be considered grounds for a determination by the Owner, pursuant to Clause 14.1, that the Contractor is failing to prosecute the Work with sufficient diligence to ensure its in accordance with the Project Milestone Dates set forth under Section 00200 hereof.

END OF ARTICLE 8

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is stated in the Owner-Contractor Agreement and, including authorized adjustments thereto, is the total amount payable by the Owner to the Contractor for the performance of the Work under the Contract Documents.

9.2 SCHEDULE OF VALUES

9.2.1 Before the first Application for Payment, the Contractor shall submit to the Owner, through the Project Manager, a schedule of values allocated to the various portions of the Work, as set forth in Division 1, Section 01370 of the General Requirements entitled “Schedule of Values” and supported by such data to substantiate its accuracy as the Architect, Project Manager and the Owner may require. This schedule, unless objected to by the Architect, Owner, or Project Manager, may be used as a basis for the Contractor’s Applications for Payment except as otherwise noted under Division 1, Section 01311. The Schedule of Values shall be prepared in such a manner that each major item of work and each subcontracted item of work is shown as a single item on the Application and Certificate of Payment.

9.3 APPLICATIONS FOR PAYMENT

9.3.1 Prior to the date for each progress payment established in the Contract Documents, the Contractor, in accordance with Division 1, Section 01311 of the General Requirements entitled “Project Schedule,” shall submit to the Project Manager an itemized Application for Payment, notarized if required, supported by such data substantiating the Contractor’s right to payment as the Project Manager and the Architect may require, and reflecting retainage, if any, as provided elsewhere in the Contract Documents. The form of Application for Payment shall be Anchorage School District Forms 100, 100A, 100B and 100C and the computer-produced Cost Report updated in accordance with Division 1, Section 01311.

9.3.2 If the Project Manager finds that satisfactory progress is not being made, he may require retainage of up to 10% of the total amount earned on all subsequent progress payments. This retainage may be released at such time as the Project Manager finds that satisfactory progress is being made.

9.3.3 Payments may be authorized by the Project Manager at his discretion, on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site by the Contractor. Payments for materials or equipment stored on the site shall only be considered upon submission by the Contractor of satisfactory evidence that he has acquired title to such material, that it will be utilized on the Work under this Contract and that it is satisfactorily stored, protected, and insured or that other procedures satisfactory to the Project Manager that will protect the Owner’s interests have been taken.

9.3.4 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests or encumbrances, hereinafter referred to in this Article 9 as “liens”; and that no Work, materials or equipment covered by an Application for Payment will have been acquired by the Contractor, or by any other person performing Work at the site or furnishing materials and equipment for the Project, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise

imposed by the Contractor or such other person.

9.4 APPROVAL OF PAY APPLICATION

9.4.1 The Project Manager will, after receipt of the Contractor's Application for Payment, and within the time set forth in Division 1, Section 01311 of the General Requirements entitled "Project Schedule," either approve the Application for its full amount or notify the Contractor in writing of his reasons for withholding approval, in whole or in part, as provided in Subparagraph 9.6.1.

9.4.2 The submission and acceptance of the Contractor's Preliminary and Detailed Progress Schedules and monthly updates thereof as required by Division 1, Section 01311 of the General Requirements entitled "Project Schedule," shall be an integral part and basic element of the application upon which progress payments shall be made. If in the judgment of the Project Manager the Contractor fails or refuses to provide information required to accomplish a complete Project Schedule Update or revision thereto as specified under Division 1, Section 01311 of the General Requirements, the Contractor shall be deemed to have not provided the information necessary to enable the Project Manager and the Architect to properly evaluate the Contractor's progress, and shall not be entitled to progress payments until it has furnished the information necessary for a complete Project Schedule Update or revision thereto as specified herein to the satisfaction of the Project Manager.

9.4.3 The signing of an Application for Payment will constitute a representation by the Project Manager and the Architect, based on their observations at the site and the data comprising the Application for Payment, that the Work has progressed to the point indicated; that, to the best of their knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to completion, and to any specific qualifications stated in their Certificate); and that the Contractor is entitled to payment in the amount certified. However, by approving an Application for Payment, the Project Manager and the Architect shall not thereby be deemed to represent that either has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work or that either has reviewed the construction means, methods, techniques, sequences or procedures, or that either has made an examination to ascertain how or for what purpose the Contractor has used the monies previously paid on account of the Contract Sum.

9.5 PROGRESS PAYMENTS

9.5.1 After an Application for Payment has been approved, the Owner shall make payment within thirty (30) calendar days.

9.5.2 The Contractor shall promptly pay each Subcontractor (including suppliers, laborers, and material-men) performing labor or furnishing material for the Work, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's Work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's Work. The Contractor shall, by an appropriate agreement with each Subcontractor, also require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

9.5.3 The Owner may, on request and at his discretion, furnish to any Subcontractor, Sub-subcontractor, or Material Supplier and Vendor, if practicable information regarding the

percentages of completion or the amounts applied for by the Contractor and the action taken thereon by the Project Manager on account of Work done by such Subcontractor, Sub-subcontractor, or Material Supplier or Vendor.

9.5.4 Neither the Owner, the Project Manager, nor the Architect shall have any obligation to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law.

9.5.5 No approval for a progress payment, nor any progress payment, nor any partial or entire use of occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

9.5.6 The Contractor agrees to keep the Work and the site(s) on which Work is to be performed free and clear of all liens and claims of liens on materials furnished pursuant to the Contract Documents. Contractor hereby waives any right it may have in connection with the Work to file any liens, mechanics or otherwise. Notwithstanding anything to the contrary contained in the Contract Documents, if any such lien is filed or there is any reason to believe that any lien may be filed at any time during the progress of the Work or within the duration of this Contract, the Owner may refuse to make any payment otherwise due to Contractor or withhold from any payment due the Contractor a sum sufficient in the opinion of the Owner to pay all obligations and expenses necessary to satisfy such lien or claim and completely indemnify the Owner against any such lien or claim unless and until Contractor shall thereof, if any, has been satisfied, discharged and released of record or that the Contractor has caused such lien to be released or record if and as provided by law pending the resolution of any dispute between Contractor and the person filing such lien; and if such evidence is not furnished by Contractor to the Owner within a period of five (5) days after demand to do so, the Owner may discharge such indebtedness and deduct the amount required therefore, together with any and all losses, costs, damages and attorney's fees suffered or incurred by the Owner from any sum payable to Contractor under the Contract Documents. Final payment to Contractor may be withheld until the Work and the site(s) on which the Work is to be performed are free and clear of any and all liens for rights thereto arising because of Work performed or materials furnished under the Contract Documents. This Subparagraph 9.5.6 shall be specifically included in all subcontracts and purchase orders entered into by Contractor.

9.5.7 No reference to a claim or claims of lien or to the Owner's right to withhold payments to the Contractor or to discharge the Contractor's debts to Subcontractors, in Subparagraph 9.5.6, or elsewhere in the Contract Documents, shall be interpreted as a waiver of the Owner's right to exemption pursuant to AS 09.38.015(c) or any requirements with regard to the filing of claims of lien as set forth in AS 34.35.

9.6 PAYMENTS WITHHELD

9.6.1 The Architect and the Project Manager may decline to approve an Application for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in their opinion they are unable to make representations to the Owner as provided in Subparagraph 9.4.3. If the Project Manager and the Architect are unable to make representations to the Owner as provided in Subparagraph 9.4.3 and to certify payment in the amount of the Application, they will notify the Contractor as provided in Subparagraph 9.4.1.

If the Contractor, Project Manager and the Architect cannot agree on a revised amount, the Project Manager will promptly approve the Application for Payment for the amount for which he is able to make such representations to the Owner. The Project Manager may also decline to certify payment or, because of subsequently discovered evidence or

subsequent observations, he may nullify the whole or any part of any approval of an Application for Payment previously issued to such extent as may be necessary in his opinion to protect the Owner from loss because of:

9.6.1.1 Defective work not remedied,

9.6.1.2 Third-party claims filed or reasonable evidence indicating probable filing of such claims,

9.6.1.3 Failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment,

9.6.1.4 Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum,

9.6.1.5 Damage to the Owner or another contractor,

9.6.1.6 Reasonable evidence that the Work will not be completed within the Contract Time,

9.6.1.7 Failure or refusal of the Contractor to carry out the Work in accordance with the Contract Documents, including scheduling, project management, or coordination requirements,

9.6.1.8 Liens filed for any portion of the Work, or

9.6.1.9 Failure or refusal of the Contractor to fully comply with Division 1, Section 01311 of the General Requirements entitled “Schedules and Reports”.

9.6.2 When the above grounds in Subparagraph 9.6.1 are removed, payment shall be made for amounts withheld because of them.

9.7 FAILURE OF PAYMENT

9.7.1 If the Owner does not pay the Contractor within seven (7) days after the date established in the Contract Documents any amount certified by the Architect and the Project Manager, then the Contractor may, upon seven (7) additional days’ written notice to the Owner and the Architect, stop the Work until payment of the amount not in dispute has been received. The Contractor shall not refuse or fail to diligently proceed with the Work pending the resolution of any amount(s) in dispute unless agreed to by the Owner.

9.8 SUBSTANTIAL COMPLETION

9.8.1 When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is substantially complete as defined in Subparagraph 8.1.3, the Contractor shall prepare for submission to the Project Manager a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Architect and the Project Manager on the basis of an inspection jointly determine that the Work or designated portion thereof is substantially complete, the Architect will then prepare a Certificate of Substantial Completion which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, correction of punchlist items and damage to the Work, and insurance, and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall

commence on the Date of Substantial Completion of the work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall be submitted to the Owner and the Contractor for their written acceptance of the responsibilities assigned to them in such Certificate.

9.8.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Project Manager and the Architect, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents.

9.8.3 The acceptance of Substantial Completion payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the Application for Payment for Substantial Completion, and except for the retainage sums due at final acceptance if any.

9.9 FINAL COMPLETION AND FINAL PAYMENT

9.9.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect and the Project Manager will promptly make such inspection and, when they find the Work acceptable under the Contract Documents and the Contract fully performed, they will jointly issue a final Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, as noted in said final Certificate, is due and payable. The final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractor's being entitled to final payment as set forth in Subparagraph 9.8.2 have been fulfilled.

9.9.2 Neither the final payment nor the remaining retained percentage shall become due until the Work is free and clear of any and all liens and the Contractor submits to the Owner (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety, if any, to final payment and (3), if required by the Project Manager, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Project Manager. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify him against any loss. If any such lien or claim remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such lien or claim, including all costs and reasonable attorney's fees. The Owner may withhold from the final payment any sum that the Owner has reason to believe may be needed to satisfy any lien, claim or threat of lien arising from the Work. The Owner may deduct from the final payment an amount equal to any costs, expenses and attorneys' fees incurred by the Owner in removing or discharging any liens arising from the Work.

9.9.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor, or by the issuance of change orders affecting final completion, and the Owner so confirms, the Owner shall, upon application by the Contractor and certification by the Project Manager and the Architect, 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 for Work not fully completed or corrected is less than the retainage stipulated in the Contract Documents, and if bonds have been furnished as provided in Paragraph 7.5, 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 Project Manager prior to certification of 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.

9.9.4 The making of final payment shall constitute a waiver of all claims by the Owner against the Contractor except those arising from:

9.9.4.1 Unsettled liens, and claims against the Owner, the Project Manager, or the Architect, or their employees, agents, or representatives,

9.9.4.2 Faulty or defective Work appearing after Substantial Completion,

9.9.4.3 Failure of the Work to comply with the requirements of the Contract Documents,

9.9.4.4 Terms of any warranties contained in or required by the Contract Documents,

9.9.4.5 Liquidated damages due the Owner for the Contractor's delay in completion, or

9.9.4.6 Damages incurred by the Owner resulting from lawsuits brought against the Owner, the Project Manager, the Architect, or their agents, employees or representatives because of failures or actions on the part of the Contractor, his Subcontractors, Sub-subcontractors, Material Suppliers and Vendors, or any of their employees, agents or representatives.

9.9.5 The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Application for Payment.

9.9.6 Final Completion includes, but is not limited to, the Contractor obtaining an unconditional Certificate of Occupancy from the governing building official.

9.10 OWNER'S RIGHT TO OCCUPY INCOMPLETE WORK

9.10.1 Should the Project, or any portion thereof, be incomplete for Beneficial Occupancy or Final Completion at the scheduled date or dates, the Owner shall have the right to occupy any portion of the Project. In such an event, the Contractor shall not be entitled to any extra compensation on account of said occupancy by the Owner or by the Owner's normal full use of the Project, nor shall the Contractor interfere in any way with said normal full use of the Project. Further, in such an event, the Contractor shall not be entitled to any extra compensation on account of the Owner's occupancy and use of the Project, nor shall the Contractor be relieved of any responsibilities of the Contract including the required times of completion. Such occupancy by the Owner would not, in itself, constitute Beneficial Occupancy nor Final Completion.

9.10.2 If the Owner exercises his rights under the foregoing and occupies the full project, then there shall be no liquidated damages due to delay on account of failure on the Contractor's part to provide Beneficial Occupancy from that date forward. This provision does not affect, however, any damages due to delay that would be assessed for any period of time between the scheduled date of Beneficial Occupancy and the date of any such actual occupancy. Further, this provision would have no effect on actual damages assessed on account of late Final Completion.

9.11 RETENTION AND INSPECTION OF RECORDS

9.11.1 Inspection.

The Anchorage School District, or any of its duty authorized representatives, shall have the right to examine all project records and documents, including without limitation, all books, correspondence, reports, analyses, instructions drawings, receipts, vouchers, memoranda, and all financial and accounting books, records, and data and all other documents of both the Contractor and the Contractors, Subcontractors and any Sub-subcontractors which are directly pertinent to this specific Contract for the purpose of making an audit, examination, reproduction, excerpts, or transcriptions. All required records shall be retained by the Contractor and its first tier Subcontractors for three (3) years after the Owner makes final payments and all other pending matters are closed.

9.11.2 Retention and Maintenance.

The Contractor shall keep and maintain in safe condition full and accurate records of all costs incurred and items billed and all other project records and documents relating to performance, communications, and correspondence in connection with the performance of the Work under this Contract, which records and documents shall be open to review, examination or audit by the Owner or its authorized representatives during performance of the Work and until three (3) years after Final Payment and all other pending matters are closed.

9.11.3 Subcontractor Records.

The Contractor shall make it a condition of all subcontracts and sub-subcontracts relating to the Work under this Contract that any and all Subcontractors and sub-subcontractors will keep accurate records of costs incurred and items billed in connection with their work and that such records shall be open to review, examination, reproduction or audit by the Owner or its authorized representatives during performance of the Work and until three (3) years after Final Payment under the subcontract and all other pending matters are closed.

9.11.4 Availability.

The Contractor shall make available at its business office upon request at all reasonable times the materials described in this Article including materials of both the Contractor and its first tier Subcontractors, for review, examination reproduction or audit for a period of three (3) years after Final Payment under this Contract and all other pending matters are closed.

9.11.5 Termination.

If this Contract is completely or partially terminated, the records relating to the Work terminated shall be made available for three (3) years after any resulting final termination settlement.

9.11.6 Claims and Appeals.

Records pertaining to any settlement, mediation, arbitration, litigation or appeals of claim submitted pursuant to Paragraphs 12.4 or 12.5 or otherwise arising from or relating to the performance of Work under this Contract shall be made available until such settlement, mediation, arbitration, litigation, or appeals are finally concluded. Such documents or records shall be made available to the Anchorage School District or its duty authorized representatives within thirty (30) days of the Anchorage School District's request.

9.11.7 Subcontracts.

The Contractor shall include the provisions of this Article in all first tier Subcontracts so as to be binding on all first tier Subcontractors.

9.11.8 Cost or Pricing Data.

If the Contractor has submitted cost or pricing data in connection with the pricing of any change order or modification to this Contract - unless the pricing was based on–

9.11.8.1 adequate price competition, or
9.11.8.2 established catalog or market price of commercial items sold in substantial quantities to the general public; or
9.11.8.3 prices set by law or regulation -

the Anchorage School District or a representative who is an employee of the Anchorage School District, shall have the right to examine and audit all books, records, documents, and other data of the Contractor, including computations and projections, related to negotiating, pricing, or performing the change order or modification, in order to evaluate the accuracy, completeness, and currency of the cost or pricing data.

END OF ARTICLE 9

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 The Owner, the Project Manager, the Architect, or their agents, employees or representatives are not responsible for the means, methods, techniques, sequences or procedures utilized by the Contractor, or for safety precautions and programs in accordance with the Work. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

10.2.1.1 All employees on the Work and all other persons who may be affected thereby;

10.2.1.2 All the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of his Subcontractors or Sub-subcontractors; and

10.2.1.3 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.

10.2.2 The Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the safety of persons or property or their protection from damage, injury or loss.

10.2.2.1 The Contractor shall contact the State Historic Preservation Office (907-269-8700) immediately, should cultural or paleontological resources be discovered as a result of performing the Work.

10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

10.2.4 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.2.5 The Contractor shall promptly remedy all damage or loss to any property referred to in paragraphs 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub-subcontractor, any Material Supplier or Vendor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and for which the Contractor is responsible under paragraphs 10.2.1.2 and 10.2.1.3, except damage or loss attributable to the acts or omissions of the Owner, Project Manager or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to his obligations under Paragraph 4.18.

10.2.6 The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner through the Project Manager.

10.2.7 The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.

10.2.8 Following the Notice to Proceed, the Contractor is required to obtain facility keys and the security system access code from ASD Operations Department and obtain the facility keys by contacting the Project Manager.

10.2.8.1 A unique security code will be assigned to the Contractor. The ASD Operations office, 1301 Labar, will assign the code and provide access training.

10.2.8.2 The Contractor's signature on the key receipt acknowledges liability for the Owner's loss or damage due to unauthorized access with the facility key(s) and/or access code issued to the Contractor. The Contractor's Superintendent is solely responsible for the opening and closing of the facility.

10.2.8.3 Lost or stolen key(s) issued to the Contractor are to be reported immediately to the Project Manager. A written report shall be required for each incident.

10.2.8.4 If a FOB is issued, instead of keys, and is lost or stolen, the Contractor is required to immediately report the loss to the Project Manager. Notice is to be completed, in writing, within 12 hours or there will be a $500 fine.

10.2.8.5 Upon completion of the Project and prior to final payment, the Contractor will return all key(s) to the Project Manager. A maximum per facility charge of up to $10,000 may apply to any key not returned to the Project Manager.

10.2.8.6 Do not put any identifying tags or markers on the keys that would identify them as ASD building keys.

10.3 EMERGENCIES

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 8 for Time, and Article 12 for Changes in the Work.

END OF ARTICLE 10

ARTICLE 11

INSURANCE

11.1 GENERAL

11.1.1 Before signing this Contract, or commencing work on any project or allowing any Subcontractor to commence work, the Contractor shall obtain all insurance required under this section. The Contractor shall maintain this insurance until Final Acceptance. Proof of Insurance will be required prior to performing work under the warranty. The Contractor shall file with Owner as verification of insurance, an original signed certificate of insurance showing the type and amounts of insurance, the policy number, and expiration date. The Contractor shall provide copies of each insurance policy if requested by the Owner. The Contractor shall purchase insurance from companies reasonably acceptable to the Owner and authorized to do business in the State of Alaska, possessing a Best's policyholder's rating of A- or better and a financial rating of not less than VII.

11.2 WORKERS' COMPENSATION INSURANCE

11.2.1 The Contractor shall purchase and maintain during the life of this Contract, Workers' Compensation Insurance for all employees who will work on this project and if any work is sublet, the Contractor shall require the Subcontractor to provide similar Workers' Compensation Insurance for employees. Such workers' compensation insurance shall meet the statutory requirements of the State of Alaska.

11.3 PUBLIC AND EMPLOYER LIABILITY INSURANCE

11.3.1 The Contractor and his Subcontractors, if any, shall purchase and maintain such Public and Employer Liability Insurance as will protect the Contractor against loss which may result from claims for damages from operations under this Contract, whether such operations be those of the Contractor, a Subcontractor, or any person directly or indirectly employed by them. Such liability insurance shall have a scope of coverage at least as broad as the current ISO form # CG 0001 (occurrence version) for General Liability and the current ISO form # CA 0001 for Automobile Liability, and in minimum limits specified in Paragraph 11.3.2.

11.3.2 Public and Employer Liability Insurance Requirements

11.3.2.1 Commercial General Liability

Combined Single Limit $1,000,000
Annual Aggregate $2,000,000

11.3.2.2 Comprehensive Auto Liability

Including all owned, hired and non-owned vehicles.
Combined Single Limit $1,000,000 each accident

11.3.2.3 Employer's Liability Insurance
$1,000,000 limit

11.3.3 Umbrella Liability

11.3.3.1 The Contractor shall maintain an umbrella liability policy according to the following:

Projects < $10 million construction cost – $5,000,000 per occurrence and annual aggregate.

Projects > $10 million construction cost – $10,000,000 per occurrence and annual aggregate.

This requirement does not apply to Subcontractors.

11.3.3.2 Umbrella liability insurance shall be maintained in effect until final acceptance by the Owner of the completed construction, and for products liability and completed operations liability, a minimum of two years thereafter.

11.4 BUILDERS RISK INSURANCE

11.4.1 The Contractor shall purchase and maintain an all risk Builder's Risk policy on all construction projects. The Builders Risk coverage shall be in an amount equal to the initial contract, plus any contract modifications, and the cost of materials supplied or installed by others. Perils insured must be all physical loss and will include earthquake, flood, testing and startup, resultant damage from errors in design, plans or specifications, and transit and offsite storage.

11.4.2 A loss insured under Subparagraph 11.4.1 shall be adjusted by the Insurer, or by the Contractor as Fiduciary, and made payable to the Contractor as Fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Subparagraph 11.4.5. The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require each Subcontractor to make payments to his Sub-subcontractors in similar manner.

11.4.3 The Owner and Contractor shall waive all rights against each other for damages caused by fire or other perils to the extent covered by insurance obtained pursuant to this Paragraph 11.4 or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by the Contractor as Fiduciary. The Contractor shall require, by appropriate agreement, written where legally required for validity, similar waivers in favor of the Owner and the Contractor by Subcontractors and Sub-subcontractors. With respect to the waiver of rights of recovery, the term Owner shall be deemed to include, to the extent covered by property insurance applicable thereto, his consultants, employees, agents and representatives, including the Project Manager. The Contractor waives as against any separate Contractor described in Article 6 all rights for damages caused by fire or other perils in the same manner as is provided above as against the Owner. The Owner shall require, by appropriate agreement, written where legally required for validity, similar waivers in favor of the Contractor by any separate Contractor and his Subcontractors and Sub-subcontractors.

11.4.4 If required in writing by any party in interest, the Contractor as Fiduciary shall, upon the occurrence of an insured loss, give bond for the proper performance of his duties. He shall deposit in a separate account any money so received, and he shall distribute it in accordance with a court order or award. If after such loss no other special agreement is made, replacement of damaged work shall be covered by an appropriate Change Order.

11.4.5 The Contractor as Fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five (5) days after the occurrence of loss to the Owner's exercise of this power, and if such objection is made, the matter shall be decided by a court of competent jurisdiction or as parties in interest otherwise agree. The Contractor as Fiduciary shall, in that case, make settlement with the insurers accordingly.

11.4.6 If the Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion thereof, such occupancy shall not commence prior to a time mutually agreed to by the Owner and Contractor and to which the insurance company or companies providing the property insurance have consented by endorsement of the policy or policies. This insurance shall not be canceled or lapsed on account of such partial occupancy. Consent of the Contractor and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.

11.5 CERTIFICATE OF INSURANCE REQUIREMENTS

11.5.1 Each insurance policy required in this section will be evidenced by a certificate of insurance which contains the following:

11.5.1.1 Notice of cancellation to the Anchorage School District in accordance with Alaska Statutes 21.36.220 and .260.

11.5.1.2 Contract number.

11.5.1.3 Project location.

11.5.1.4 Waiver of Subrogation. All policies, except where prohibited, will include a Waiver of Subrogation in favor of the District.

11.5.1.5 Additional Insured. All policies except Workers Compensation and professional liability will note the District as an additional insured.

11.6 OWNER'S RIGHT TO INSURE

11.6.1 In the event Contractor neglects, refuses, or fails to provide the insurance required under the Contract Documents, or if such insurance is canceled for any reason, the Owner shall have the right, but not the duty to procure the same, and the costs thereof shall be deducted from monies then due or thereafter to become due the Contractor.

11.7 ADDITIONAL INSURANCE

11.7.1 If not covered by the above insurance, the Contractor must obtain additional Insurance for items stored off-site or in transit. Payments for materials stored off-site will not be made unless Contractor provides documentation of valid insurance coverage for same.

11.8 ASBESTOS ABATEMENT SUBCONTRACTOR'S CERTIFICATE OF INSURANCE

11.8.1 After the Intent to Award Notification, the low bidder shall submit an insurance binder of insurance certificate provided by the proposed asbestos abatement subcontractor's insurance company stating that upon execution of the Contract the types and amount of insurance required elsewhere in these specifications will immediately become effective.

The asbestos abatement subcontractor is required to carry a minimum of $1,000,000 of General Public Liability Insurance with no exclusion for asbestos abatement.

11.8.2 Comprehensive General Liability Minimum Limits

Bodily Injury and Property Damage $2,000,000 per occurrence
Premises Operations
Independent Contractors
Products - Completed Operations
Contractual Liability
Broad Form Property Damage - Lloyds Form
Explosion, Collapse, and Underground
Personal Injury

11.8.3 Comprehensive Auto Liability

Including all owned, hired, and non-owned vehicles
Combined single limit per accident $1,000,000

END OF ARTICLE 11

ARTICLE 12

CHANGES IN THE WORK AND CONTRACT SUM AND TIME

12.1 CHANGES IN THE WORK

12.1.1 The Owner may, at any time, without notice to the sureties, make any change in the Work within the general scope of the Contract, including, but not limited to changes:

12.1.1.1 In the Specifications or Drawings;

12.1.1.2 In the method or manner of performance of the Work;

12.1.1.3 In the Owner-furnished facilities, equipment, materials, services or site; or

12.1.1.4 Directing acceleration in the performance of the Work for reasons other than delays caused by the Contractor.

12.1.2 All such changes in the Work shall be performed under the applicable conditions of the Contract Documents and shall be authorized in one of the following manners:

12.1.2.1 Field Directive. The Project Manager may issue a written Field Directive to the Contractor that directs a change in the Work. If the Contractor believes that the requested change will increase the Contract Time or Contract Sum, he must notify the Project Manager in writing prior to implementing the change.

12.1.2.2 Information Bulletin. The Architect may issue an Information Bulletin to the Contractor that clarifies or modifies the plans or specifications. If the Contractor believes that the clarification or modification of plans or specifications will increase the Contract Time or Contract Sum, he must notify the Project Manager in writing prior to implementing the change.

12.1.2.3 Request for Information (RFI). The Contractor may submit a RFI to the Project Manager or Architect using the ASD Procore Construction Management Program to request clarification of plans or specifications or to point out areas of apparent conflict or other concerns relating to the Work. The response to the RFI by the Architect or Project Manager may clarify or modify the plans or specifications. If the Contractor believes that the clarification or modification of plans or specifications will increase the Contract Time or Contract Sum, he must notify the Project Manager in writing prior to implementing the change.

12.1.2.4 Request for Proposal (RFP). The Owner may issue an RFP to the Contractor that directs a change in the Work and requests the Contractor’s evaluation of the impact of the change on Contract Time or Contract Sum. If the Contractor believes that the Work required by the RFP will increase the Contract Time or Contract Sum, he must notify the Project Manager in writing prior to implementing the changes.

12.1.3 Except as provided in Subparagraph 12.1.2, no order, statement or conduct of the Owner, Project Manager or Architect shall be treated as a change or entitle the Contractor to an equitable adjustment hereunder. No oral agreement of any kind shall be construed as a Change Order.

12.2 AMENDING CONTRACT SUM OR TIME

12.2.1 If any change under Paragraph 12.1 causes an increase or decrease in the Contractor's cost or the time required for the performance of any part of the Work under the Contract, including Work not affected directly by the change, an equitable adjustment shall be processed and approved following the provisions of Division 1, Section 01311, Project Schedule for any adjustment to time. Adjustments to Contract Sum shall be determined in one or more of the following ways:

12.2.1.1 By mutual acceptance of a lump sum price properly itemized in accordance with Subparagraph 12.2.2 and supported by sufficient data to permit evaluation;

12.2.1.2 In the event that unit prices are included in the bid and accepted by the Owner, payment for the Work performed shall be at the unit price amount for each item of Work accepted by the Owner and conforming to the contract requirements. Such prices shall be additive and deductive and include all costs necessary to complete the Work, inclusive of overhead costs and profit.

12.2.1.3 If prior to the commencement of the Work the Contractor has not provided a lump sum price, or the Contractor and the Owner have not agreed on a lump sum price as described in Subparagraph 12.2.1.1 above, the price shall be established in one of the following ways, as determined by the Project Manager;

1. on a lump sum basis following completion of the Work. The lump sum price shall be properly itemized in accordance with Subparagraph 12.2.2. and supported by sufficient data to permit evaluation;

2. on a time and materials basis, with or without a maximum not-to-exceed price, at the discretion of the Project Manager. Costs will be accumulated on a time and materials basis as described in Subparagraph 12.2.3 and presented daily (the day after the Work is performed) for approval by the Owner on the forms provided by the Owner. The daily report will be signed by the Contractor and the Owner.

12.2.2 For Work proceeding on a lump sum basis. In accordance with Subparagraph 12.2.1.1 or 12.2.1.3.1, the Contractor shall provide a detailed breakdown of the costs as described herein and submit the costs and substantiating data in a proposal to the Owner:

12.2.2.1 Direct Costs: Direct costs shall be limited to the following: cost of materials, including sales tax and cost of delivery to the project; cost of labor (from apprentice level up through and including the general foreman classification) comprising of the base wage plus fringe benefits, including burden (Social Security, Worker's Compensation, and Unemployment Insurance, etc.); rental rate including fuel and maintenance for any power tools valued at over $3,000 and equipment as described below, under "Equipment Rates;" bond premiums and additional cost of Builder's Risk Insurance, at rates equal to the amount billed for the base contract or the actual rate as supported by an invoice.

12.2.2.1.1 Equipment Rates: 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 K-III Directory Corp., 10 Lake Drive, Highstown, NJ 08520-5397.

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 costs. 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 Owner 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.

12.2.2.1.2 Equipment which must be rented or leased specifically for Work required under this section shall be authorized in writing by the Project Manager.

12.2.2.1.3 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.

12.2.2.1.4 Equipment ordered to be on 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-half hour for purposes of computing compensation to the Contractor for equipment utilized under these rates.

The equipment Direct Cost determination covers all costs for providing 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.

12.2.2.2 Overhead: Overhead shall include the following: the Contractor's management staff; supervision; superintendence; wages of timekeepers; watchmen and clerks; small tools; incidentals; costs of preparing and responding to Request for Proposals, including estimating; schedule revisions, software costs and clerical expenses; general home and field office expenses; including any financial/financing costs; legal costs; and/or accounting costs; temporary facilities; temporary utilities (power, water, sewer, telephone, etc.) And any utilities used by the Contractor during the construction period; and all other expenses not specifically defined in Subparagraph 12.2.2.1 as direct costs. Unless specifically required or requested, any travel and associated costs from outside of the Municipality of Anchorage is considered as part of the Contractor's project overhead and will not be paid by the Owner.

12.2.2.3 The Contractor shall apply a combined percentage rate to the direct costs to compensate it for additional Overhead and Profit associated with the change. The combined rate to the Owner of any change shall not exceed the rates set forth in the following schedule:

For the Contractor, for Work performed by his own forces, up to fifteen percent (15%) of direct costs;

For each Subcontractor involved, for Work performed by the Subcontractor's forces, up to fifteen percent (15%) of direct costs;

For the Contractor, for Work performed by Subcontractors, up to ten percent (10%) of the Subcontractor's direct costs;

For the Subcontractor, for Work performed by the multiple-tier-contractors up to ten percent (10%) of direct costs;

The total Contractor and all-subcontractors overhead allowance shall not exceed twenty-five percent (25%) of direct costs.

12.2.3 For Work proceeding on a time and material basis in accordance with Subparagraph 12.2.1.3.2, the Contractor shall be compensated for its costs in accordance with the following:

12.2.3.1 Direct Costs: Direct Costs shall be as defined in Subparagraph 12.2.2.1.

12.2.3.2 Overhead: Overhead shall be as defined in Subparagraph 12.2.2.2.

12.2.3.3 Overhead and Profit combined included in the total costs to the Owner of any change shall not exceed the rates set forth in the following schedule:

For the Contractor, for Work performed by his own forces, up to ten percent (10%) of direct costs;

For each Subcontractor involved, for Work performed by the Subcontractor's forces, up to ten percent (10%) of direct costs;

For the Contractor, for Work performed by Subcontractors, up to five percent (5%) of the Subcontractor's direct cost.

For the Subcontractor, for Work performed by multiple-tier-contractors up to five percent (5%) of direct costs;

The total Contractor and multiple-tier-contractor overhead allowances shall not exceed twenty percent (20%) of direct costs.

12.2.4 If the net value of a change results in a credit from the Contractor, Subcontractor, or Material Suppliers or Vendors, the credit given shall be the net cost without overhead or profit. The costs as used herein shall include all items of labor, materials, plant and equipment. Credit changes shall include a percentage of the direct costs for overhead and profit at fifty percent (50%) of the rates defined in Subparagraph 12.2.2.3.

12.2.5 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if the quantities originally contemplated are so changed in the proposed Change Order that application of the agreed unit prices to the quantities of Work proposed will cause substantial inequity to the Owner or the Contractor, the applicable unit prices shall be equitably adjusted.

12.2.6 The Contract Sum, the Contract Time, and the date required for performance of any part of the Work may be changed only by a Change Order to the Contract. Each Change Order will be identified at the bottom of each approved RFP, with a heading of "Change Order Authorization." Change Orders executed pursuant to this article constitute full and final settlement of all aspects of cost and time related to and/or occasioned by the Work (or event) described therein. Costs are defined to include all direct labor costs; all direct materials and equipment expenses; any and all overhead, profit, and commission; any and all impact costs related to and/or occasioned by the Work described herein; as well as all taxes and insurance. All Change Orders shall be approved by the Project Manager and signed by the Owner and Contractor.

12.2.7 For accounting purposes, the Change Orders identified in Subparagraph 12.2.6 will be accumulated on a monthly basis or more frequently and summarized in a Summary Change Order. The Summary Change Order shall be approved by the Project Manager and signed by the Owner and Contractor. No claim by the Contractor for or on account of any Change Order shall be due nor shall any such claim appear on an Application for Payment or demand for final payment until the Summary Change Order has been fully executed by the Contractor and the Owner.

12.2.8 The Superintendent of Schools and/or the Senior Director of Capital Planning and Construction are authorized to make contract modifications or to execute orders up to one hundred thousand dollars ($100,000) that are within the project's budget. The Superintendent is authorized to make contract modifications in excess of one hundred thousand dollars ($100,000) but not-to-exceed two hundred fifty thousand dollars ($250,000) that are within the project's budget. All contract modifications or change orders

above two hundred fifty thousand dollars ($250,000) shall be recommended by the Superintendent to the School Board for its approval.

12.2.9 No claim by the Contractor for an equitable adjustment hereunder shall be allowed if asserted after final payment or more than six months after the date of substantial completion, whichever is earlier.

12.2.10 Nothing in this Article shall excuse the Contractor from proceeding with the Contract as changed.

12.3 DIFFERING CONDITIONS

12.3.1 The Contractor shall promptly, and before the conditions are disturbed, give written notice to the Owner of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this Contract, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract.

12.3.2 The Owner shall investigate the site conditions promptly after receiving notice. Work shall not proceed at the affected site, except at the Contractor's risk, until the Owner has provided written instructions to the Contractor. If the conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performing any part of the Work under this Contract, whether or not changed as a result of the conditions, an adjustment shall be made under this Article and the Contract modified in writing accordingly.

12.3.3 No request by the Contractor for an adjustment to the Contract under this Article shall be allowed unless the Contractor has given the written notice required.

12.3.4 No claim by the Contractor for an adjustment hereunder shall be allowed if asserted after final payment or more than six months after the date of substantial completion, whichever is earlier.

12.4 CLAIMS FOR ADDITIONAL COST OR TIME

12.4.1 If the Contractor claims that additional cost is involved because of, but not limited to (1) any written interpretation pursuant to Subparagraph 2.2.8; (2) any order by the Owner to stop the Work pursuant to Paragraph 3.4 where the Contractor was not at fault; or (3) any other impacts related to the Work, the Contractor shall make such claim as provided in Subparagraph 12.4.2.

12.4.2 If the Contractor wishes to make a claim for an increase in the Contract Sum, and such claim is not barred under Paragraph 8.3, he shall deliver to the Project Manager written notice thereof within fourteen (14) days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Paragraph 10.3. No such claim shall be valid unless so made. The written notice shall state:

12.4.2.1 the date, nature and circumstances of the conduct regarded as a change;

12.4.2.2 the name, function and activity of each Contractor official, agent or employee involved in or knowledgeable about such conduct;

12.4.2.3 the identification of any documents and the substance of any communication

involved in such conduct;

12.4.2.4 in the instance of alleged acceleration of scheduled performance or delivery, the basis upon which it arose;

12.4.2.5 the particular elements of Contract performance for which the Contractor may seek an equitable adjustment under this Paragraph, including:

12.4.2.5.1 what Contract Drawings or Specification have been or may be affected by the alleged change;

12.4.2.5.2 what labor or materials or both have been or may be added, deleted or wasted by the alleged change;

12.4.2.5.3 to the extent practicable, what delay and disruption in the manner and sequence of performance and effect on continued performances have been or may be caused by the alleged change in accordance with Division1, Section 01311, “Project Schedule;”

12.4.2.5.4 what adjustments to the Contract Sum and other provisions of the Contract affected by the alleged change are estimated; and

12.4.2.6 the Contractor’s estimate of the time by which the Project Manager and Architect must respond to the Contractor’s notice to minimize cost, delay or disruption of performance in accordance with Division 1, Section 01311, “Project Schedule.”

12.4.3. After receipt of a Contractor’s claim, the Project Manager may visit the site, schedule an informal review hearing, or request additional information in order to fully evaluate the issues of the claim. The Project Manager has thirty (30) calendar days to review the claim and to send a written decision to the Contractor. If the Project Manager agrees with the Contractor that the issues presented in the Contractor’s claim justify a change in the Contract Sum or the Contract Time, the Project Manager and the Contractor shall negotiate the amount of the adjustment in the Contract.

If the Project Manager determines that the claim does not justify a change in the Contract Sum or Contract Time, of if the Project Manager cannot reach agreement with the Contractor on the amount of the adjustment in the Contract Sum or Contract Time, the amount shall be determined in accordance with Paragraph 12.5

12.4.4 In no event shall the Contractor slow or stop the Work while such determination is pending and the Owner shall continue to make payment in accordance with the Contract Documents except as to the amount in dispute. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

12.5 RESOLUTION OF DISPUTED CLAIMS

12.5.1 All disputed claims arising from this contract shall be resolved according to the process identified in this section 12.5. This includes any interpretations of the contract documents, claims for increase in the Contract Sum or Contract Time, or any other issues of equitable adjustment.

12.5.2 Disputes between the Owner and the Contractor will be processed through the appeal process described in 12.5.3 and/or through the use of Alternative Dispute Resolution (ADR) procedures described in 12.5.4.

12.5.3 Appeal Process

12.5.3.1 If the Contractor does not agree with the decision of the Project Manager, the Contractor may, within ten (10) calendar days of receipt of the decision, file a notice of appeal with the Chief Operating Officer. The Chief Operating Officer will then have sixty (60) calendar days to review the appeal and send a written decision to the Contractor.

12.5.3.2 If the Contractor does not agree with the final decision rendered by the Chief Operating Officer, it may pursue litigation.

12.5.4 ADR Process

12.5.4.1 Either the Owner or the Contractor may request, prior to litigation, that a dispute be submitted to mandatory mediation.

12.5.4.2 The parties shall jointly select and compensate a third party mediator.

12.5.4.3 Both parties shall attend joint mediation sessions and make a good faith effort to reach agreement through this process.

12.5.4.4 There is no obligation for either of the parties to accept any agreement during the mediation process.

12.5.5 The Contractor shall diligently carry on the Work and maintain the progress schedule during any dispute resolution proceedings, unless otherwise agreed in writing.

END OF ARTICLE 12

ARTICLE 13

UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If any portion of the Work should be covered contrary to the request of the Owner, Project Manager or the Architect or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Project Manager, be uncovered for his observation and shall be replaced at the Contractor's expense.

13.1.2 If any other portion of the Work has been covered which the Architect or the Project Manager has not specifically requested to observe prior to being covered, either may request to see such Work and it shall be uncovered by the Contractor. If such Work be found in accordance with the Contract Documents, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to the Owner. If such work be found not in accordance with the Contract Documents, the Contractor shall pay such costs unless it be found that this condition was caused by the Owner or a separate contractor as provided in Article 6, in which event the Owner shall be responsible for the payment of such costs.

13.2 CORRECTION OF WORK

13.2.1 The Contractor shall promptly correct all Work rejected by the Project Manager as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed or completed. The Contractor shall bear all costs of correcting such rejected Work, including additional Owner Administrative and legal expenses, and additional compensation for the Architect's and/or Project Manager's additional services made necessary thereby.

13.2.2 If, within one (1) year after the Date of Substantial Completion of the Work or designated portion thereof or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner through the Project Manager to do so unless the Owner through the Project Manager has previously given the Contractor a written acceptance of such condition. This obligation shall survive the provisions of Subparagraph 9.5.5 and termination of the Contract. The Owner shall give such notice promptly after discovery of the condition.

13.2.3 The Contractor, unless removal is waived by the Owner, shall remove from the site all portions of the Work which are defective or non-conforming, or if permitted or required, he shall correct such Work in place by and at the expense of the Contractor promptly after receipt of notice, and such rejected Work shall not thereafter be tendered for acceptance unless the former rejection or requirement for correction is disclosed.

13.2.4 If the Contractor does not proceed with the correction of such defective or non-conforming Work within a reasonable time fixed by written notice from the Owner, through the Project Manager, the Owner may either:

13.2.4.1 by separate contract or otherwise replace or correct such Work and charge the Contractor the cost occasioned the Owner thereby and remove and store the materials or equipment at the expense of the Contractor, or

13.2.4.2 terminate this Contract for default as provided in Paragraph 14.1. If the Contractor does not pay the cost of such replacement or correction and the

removal and storage within ten (10) days thereafter, the Owner may upon ten (10) additional days' written notice sell such Work at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for the Owner's administrative and legal expenses, and additional services of the Architect and the Project Manager made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

13.2.5 The Contractor shall bear the cost of making good all Work of the Owner or separate contractors destroyed or damaged by such correction or removal.

13.2.6 Nothing contained in this Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5. thereof. The establishment of the time period of one (1) year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any warranty required by the Contract Documents relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which his obligation to comply with the Contract documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to his obligations other than specifically to correct the Work.

13.3 ACCEPTANCE OF DEFECTIVE OR NONCONFORMING WORK

13.3.1 If the Owner prefers to accept defective or nonconforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable, or the Owner may elect to accept payment in materials or services, in lieu of a reduction in the Contract Sum. If the amount of a reduction is determined after final payment, it shall be paid to the Owner directly by the Contractor.

END OF ARTICLE 13

ARTICLE 14

TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE OWNER

14.1.1 If the Contractor:

14.1.1.1 is adjudged bankrupt; or

14.1.1.2 makes a general assignment for the benefit of his creditors; or

14.1.1.3 has a receiver appointed on account of his insolvency; or

14.1.1.4 if he refuses or fails to commence the Work within the time required by this Contract; or

14.1.1.5 refuses or fails to prosecute the Work or any separable part with the diligence that will ensure its completion within the time specified in this Contract, including any extension; or

14.1.1.6 refuses or fails to provide sufficient and properly skilled workmen or proper materials or equipment to complete the Work in an acceptable manner and without delay; or

14.1.1.7 refuses or fails to complete the Work in accordance with the Project Schedule Milestone Dates set forth under Section 00200 hereof; or

14.1.1.8 fails to make prompt payment to Subcontractors or for materials or labor, or

14.1.1.9 persistently disregards laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction; or

14.1.1.10 fails or refuses to comply with the requirements of Division 1, Section 01311, “Project Schedule” of the Contract Documents; or

14.1.1.11 otherwise is guilty of a substantial violation of a provision of the Contract Documents,

then the Owner, may, without prejudice to any right or remedy and after giving the Contractor and his surety, if any, seven (7) days’ written notice, terminate the employment of the Contractor and take possession of the site and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. Such an event of termination shall at the option of the Owner result in the automatic assignment to the Owner of all of the Contractor’s subcontracts, and the Owner may thereafter enforce such subcontracts in the prosecution of the Work in the same manner and to the same extent as the Contractor.

14.1.2 If the cost of finishing the Work exceeds the unpaid portion of the Contract Sum, the Contractor or his assigns, heirs or sureties shall pay the difference to the Owner. This obligation shall survive the termination of the Contract.

14.1.3 Nothing contained in this Article 14 shall impair any of the obligations of the surety.

14.2 TERMINATION FOR CONVENIENCE

14.2.1 The performance of the Work under this Contract may be terminated by the Owner in whole, or from time to time in part, whenever the Owner shall determine that such termination is in the best interest of the Owner. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.

14.2.2 After receipt of a Notice of Termination, and except as otherwise directed by the Owner, the Contractor shall:

14.2.2.1 stop Work under the Contract on the date and to the extent specified in the Notice of Termination;

14.2.2.2 place no further orders or subcontracts for materials, services or equipment, except as may be necessary for completion of such portion of this Work under the Contract as is not terminated;

14.2.2.3 terminate all orders and subcontractors to the extent that they relate to the performance of Work terminated by the Notice of Termination;

14.2.2.4 assign to the Owner, in the manner, at the times, and to the extent directed by the Owner, all of the right, title, and interest of the Contractor under the orders and subcontracts so terminated, in which case the Owner shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

14.2.2.5 settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the Owner, to the extent he may require, which approval of ratification shall be final for all the purposes of this clause;

14.2.2.6 transfer title and deliver to the Owner, in the manner, at the times, and to the extent, if any, directed by the Owner, (A) the fabricated or unfabricated parts, Work in process, completed Work, supplies, and other material produced as a part of, or acquired in connection with the performance of, the Work terminated by the Notice of Termination, and (B) the completed or partially completed plans, drawings, information, and the property which, if the Contract has been completed, would have been required to be furnished to the Owner;

14.2.2.7 use his best efforts to sell, in the manner, at the time, to the extent and at the price or prices directed or authorized by the Owner, any property of the types referred to in Subparagraph 14.2.2.6 above, provided, however, that the Contractor (A) shall not be required to extend credit to any purchase, and (B) may acquire any such property under the conditions prescribed by and at a price or prices approved by the Owner, and provided further, that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Owner to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work covered by this Contract or paid in such other manner as the Owner may direct;

14.2.2.8 complete performance of such part of the Work as shall not have been

terminated by the Notice of Termination and may incur obligations as are necessary to do so; and

14.2.2.9 take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Owner has or may acquire an interest.

14.2.3 The Contractor may submit to the Owner a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorized by the Owner, and may request the Owner to remove such items or enter into a storage agreement covering them. Not later than fifteen (15) days thereafter, the Owner will accept title to such items and remove them or enter into a storage agreement covering the same; provided that the list submitted shall be subject to verification by the Owner upon removal of all items, or if the items are stored within forty-five (45) days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

14.2.4 After receipt of a Notice of Termination, the Contractor shall submit to the Owner his termination claim, in the form and with certification prescribed by the Owner. Such claim shall be submitted promptly but in no event later than six (6) months from the effective date of termination. Upon failure of the Contractor to submit his termination claim within the time allowed, the Owner 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.

14.2.5 Subject to the provisions of Subparagraph 14.2.4 above, the Contractor and the Owner may agree upon the 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 paragraph, which amount or amounts may include a reasonable allowance of profit on Work done; provided that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total Contract Sum as reduced by the amount of payments otherwise made and as further reduced by the Contract Sum attributable to that portion of Work not terminated. The Contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. Nothing in Subparagraph 14.2.6 below, prescribing the amount to be paid to the Contractor in the event of failure of the Contractor and the Owner to agree upon the whole amount to be paid to the Contractor by reason of the termination of Work pursuant to this clause, shall be deemed to limit, restrict, or otherwise determine or affect the amount or amounts which may be agreed upon to be paid to the Contractor pursuant to this Subparagraph 14.2.5.

14.2.6 In the event of the failure of the Contractor and the Owner to agree, as provided in Subparagraph 14.2.5 above, upon the whole amount to be paid to the Contractor by reason of the termination of Work pursuant to this paragraph, the Owner shall pay to the Contractor the amounts determined by the Owner as follows, but without duplication of any amounts agreed upon in accordance with Subparagraph 14.2.5:

14.2.6.1 with respect to all Contract Work performed prior to the effective date of the Notice of Termination, the total (without duplication of any items) of:

14.2.6.1.1 the cost of such Work;

14.2.6.1.2 the cost of settling and paying claims arising out of the termination of Work under subcontracts or orders as provided in Subparagraph 14.2.2.5 above exclusive of the amounts paid or

payable on account of supplies or materials delivered or services furnished by the Subcontractor prior to the effective date of the Notice of Termination Work under this Contract, which amounts shall be included in the cost on account of which payment is made under Subparagraph 14.2.6.1 above; and

14.2.6.1.3 a sum as profit on Subparagraph 14.2.6.1.1 above, determined by the Owner to be fair and reasonable; and

14.2.6.2 the reasonable cost incidental to termination of Work including:

14.2.6.2.1 accounting, legal, clerical and other expenses reasonably necessary for the preparation of termination settlement proposals and supporting data;

14.2.6.2.2 the termination and settlement of subcontracts (excluding the amounts of such settlements); and storage, transportation and other costs incurred (pursuant to Subparagraph 14.2.2.9), reasonably necessary for the preservation, protection or disposition of the termination inventory.

14.2.6.3 The total sum to be paid to the Contractor under Subparagraph 14.2.6.1 above shall not exceed the total Contract Sum as reduced by the portion of the Contract Sum attributable to that portion of Work not terminated. Except for normal spoilage, and except to the extent that the Owner shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor under Subparagraph 14.2.6.1, the fair value, as determined by the Owner, of property which is destroyed or lost, stolen, or damaged so as to become undeliverable to the Owner, or to a buyer pursuant to Subparagraph 14.2.2.7.

14.2.7 In arriving at the amount due the Contractor under this paragraph, there shall be deducted (1) all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this Contract, (2) any claim which the Owner may have against the Contractor in connection with this Contract, and (3) 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 paragraph and not otherwise recovered by or credited to the Owner.

14.2.8 If the termination hereunder be partial, the Contractor may file with the Owner a claim for an equitable adjustment of the price or prices specified in the Contract relating to the continued portion of the Contract (the portion not terminated by the Notice of Termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices. Any claim by the Contractor for an equitable adjustment under this clause must be asserted within ninety (90) days from the effective date of the termination.

14.2.9 The Owner may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this Contract whenever in the opinion of the Owner the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payments is in excess of the amount finally agreed or determined to be due under this paragraph, such excess shall be payable by the Contractor to the Owner upon demand, together with interest computed at the legal prevailing rate, for the period from the date such excess payment is received by the Contractor to the date on which such excess is repaid to the Owner, provided, however,

that no interest shall be charged with respect to any such excess payment, attributable to a reduction in the Contractor's claim by reason of retention or other disposition of termination inventory until ten (10) days after the date of such retention or disposition, or such later date as determined by the Owner by reason of the circumstances.

14.2.10 Unless otherwise provided for in this Contract, or by applicable statue, the Contractor shall - from the effective date of termination until the expiration of three (3) years after final settlement under this Contract - preserve and make available to the Owner at all reasonable times at the office of the Contractor but without direct charge to the Owner, all his books, records, documents and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the Work terminated hereunder, or, to the extent approved by the Project Manager, photographs, microphotographs, or other authentic reproductions thereof.

END OF ARTICLE 14

END OF SECTION

SUPPLEMENTARY GENERAL CONDITIONS TO THE CONTRACT FOR CONSTRUCTION

REFERENCE:

1. **GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION ANCHORAGE SCHOOL DISTRICT, ANCHORAGE, ALASKA**, constitutes the General Conditions of this Contract, and is further revised and supplemented by the provisions of these Supplementary General Conditions. The General Conditions and the Supplementary General Conditions are applicable to all of the work under this Contract and shall apply to the Contractor and all Subcontractors, Sub-subcontractors, and Material Suppliers and Vendors.

SUPPLEMENTS:

1. The following supplements modify, change, delete, or add to the General Conditions. Where any article of the General Conditions is modified or any paragraph deleted, subparagraph or clause thereof is modified, or deleted by these supplements, the unaltered provisions of such article, paragraph, sub-paragraph or clause shall remain in effect.

ARTICLE 1

Add the following new Paragraph 1.2.5.12:

1.2.5.12 Student Community Workforce Agreement

ARTICLE 4

Add the following new Paragraphs 4.7.1.2 & 4.7.1.3:

4.7.1.2 Unless otherwise authorized by the Project Manager, successfully obtaining the necessary permits shall be the responsibility of the Contractor and shall constitute a requirement for the issuance of the Notice to Proceed by the Owner.

4.7.1.3 Contractor shall submit Fire Alarm shop drawings to the Municipality of Anchorage Building Safety Office.

4.7.1.3.1 Contractor shall pay for the Municipality of Anchorage Fire Alarm permits.

4.7.1.3.2 Contractor shall obtain the permits upon approval.

Add the following new Paragraph 4.21, Construction Management Software:

4.21 CONSTRUCTION MANAGEMENT SOFTWARE

4.21.1 The Contractor shall fully utilize the Owner provided construction management software, currently Sage Procore Construction Management for communications, Submittals, Requests for Information, for submission of construction record documents and photographs, and other purposes as directed by the Project Manager.

4.21.2 The contractor shall designate a minimum of two (2) people from their internal project staff to access the Construction Management Software. It is incumbent upon the Contractor to ensure these individuals familiarize themselves and become proficient in the use of the Construction Management software utilizing the manuals, help files, training videos, forums and other support services provided by the Construction Management Software.

ARTICLE 7

Add the following new Paragraph 7.12, Fire Alarm System:

7.12 FIRE ALARM SYSTEM

7.12.1 Before beginning any work that may result in a fire alarm transmission, the contractor shall call both the Anchorage Fire Department dispatcher at (907) 522-1122 and the local fire station which would respond to an alarm and let them know you will be working on the system and for approximately how long. Second the contractor shall call Guardian Security at (907) 277-1975 and notify the dispatcher that you have called the Fire Department, what type of work you are planning to do, and approximately how long before you expect to be completed. After the contractor is completed with your work, you must reverse the process by notifying the Fire Department dispatcher and the ASD Dispatcher that you are finished.

7.12.2 The Contractor shall be held responsible for all charges incurred from false fire alarms. Currently the Anchorage Fire Department charges seven hundred fifty dollars and no cents ($750.00) per false alarm, or current rate charged.

Add the following new Paragraph 7.13, Apprenticeship Utilization Requirements for Contracts:

7.13 APPRENTICESHIP UTILIZATION REQUIREMENTS FOR CONTRACTS

7.13.1 Once awarded a contract by ASD, the prime contractor will be responsible to gather and submit all documentation to ASD to confirm compliance with the Apprenticeship Utilization Policy (“AUP”) mandated by Anchorage School Board Policy 3311.1.2. The Prime contractor will provide documentation to ASD to confirm that 15% of the labor hours worked in trades/crafts categories that are included in the Alaskan Federally Registered Apprenticeship Program has been executed by certified apprentices enrolled in those programs, and will provide documentation to confirm that the apprentices listed on the documentation submitted are currently in good standing with their Alaskan Federally Registered Apprenticeship Program. ASD will provide several forms which the prime contractor will be required to fill out in addition to submitting their certified payroll documents. Also, ASD will audit the prime contractor’s documentation on the following schedule. Audits for projects will be conducted every 30 days. In addition, ASD will conduct on-site audit at non-scheduled intervals to ensure that the apprentices listed on the written documentation are physically on-site. ASD will give a reasonable notice of 24 hours prior to on-site inspections.

7.13.2 The prime contractor will be required to submit the following, at the intervals requested by ASD:

- Certified Payroll for prime and subcontractors.
- Apprenticeship Utilization Form for prime and subcontractors.
- Apprenticeship Utilization Calculation form for prime and subcontractors, which demonstrates labor hours worked by apprentices in applicable crafts/trades categories, and reports status as to whether the apprentices listed are in good standing with their Alaskan Federally Registered Apprenticeship Program.

Add the following new Paragraph 7.14, Preference for Alaska Forest Products:

7.14 PREFERENCE FOR ALASKA FOREST PRODUCTS

7.14.1 **Preference for Alaska Forest and Agricultural Products**
This project is funded by state money in which the use of timber, lumber, and manufactured lumber products are required, and, therefore, only timber, lumber, and manufactured lumber products originating in this state from local forest products shall be used whenever practical.

Pursuant to AS 36.15.050 and AS 36.30.322, agricultural and timber, lumber and manufactured lumber 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. The Contractor shall maintain records which establish the type and extent of Alaska agricultural/wood products utilized. When such products are not utilized, the Contractor shall document the efforts the Contractor made towards obtaining agricultural/wood products harvested in Alaska and include in this documentation a written statement that the Contractor 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 shall complete this documentation at a time determined by the district's project manager.

The Department of Commerce and Economic Development's list of suppliers of Alaska forest products is available at:
http://www.commerce.state.ak.us/ded/dev/prodpref/fppproduct.cfm

The Contractor's use of agricultural/wood products that fail to meet the requirements of this section shall be removed and replaced in accordance with **Division 0, Section 00700, paragraph 13.3** of the contract. In addition, pursuant to AS 36.15.050(d), the district may withhold payment until the Contractor complies with this section.

To clarify, the actions required by the successful bidder awarded the contract are as follows:

- For all lumber items required under the contract the Contractor will contact all applicable suppliers of Alaska forest products to determine availability and cost.
- Contractor must use lumber from the suppliers of Alaska forest products unless the cost of the Alaska forest products that are of like quality is seven percent higher than non-Alaska produced forest products, or the Alaska forest products are not available.
- Contractor must maintain records showing efforts made in using Alaska forest products or evidence of Alaska forest products not being available or reasonably competitive.
- The records showing compliance with the Alaska forest products preference must be provided to Owner during the submittal process (Division 1, Section 01300).
- Per AS 36.15.010 if the Contractor fails to provide evidence regarding proper sourcing and comparison of Alaska forest products, the District shall withhold payment until the Contractor complies.

Add the following new Paragraph 7.15, Student Community Workforce Agreement:

7.15 STUDENT COMMUNITY WORKFORCE AGREEMENT

7.15.1 Bidders are hereby notified that this project is subject to the Student Community Workforce Agreement (SCWA).

A Template of the SCWA has been provided in this solicitation. Bidders may direct questions to purchasing@asdk12.org for consideration or submission to the SCWA Committee.

No portion of the attached Student Community Workforce Agreement may be changed without agreement of the SCWA Committee and the Trades Council.

7.15.2 As part of the Award process, the successful low bidder will comply with Board Policy 3311.2 Student Community Workforce Agreement (SCWA). The completed and approved SCWA documents will be incorporated into the District Contract of Award.

7.15.3 As stated in Article 11 (11.1 through 11.4) of the Community Workforce Agreement Pre-Job Cooperation is required. Per Article 11.2 ***"Information about the scope of work and specific and detailed craft assignments will be presented by the Contractor or subcontractor so that all Parties can review proposed work assignments prior to the start of construction. The Contractor and subcontractors shall present all information available regarding the start date and duration of the Project, estimated peak employment periods, and any other information necessary to help ensure a successful, dispute-free Project."*** It is a requirement to submit the above noted information on the Pre-Job Form provided in this solicitation in Section 00630 to the ASD Project Manager prior to the Pre-Job Conference. In addition to the Pre-Job Form, the Contractor is required prior to the Pre-Job Conference to submit completed Letters of Assent and Core Employee Rosters (with supporting documentation) for Subcontractors in compliance with Article 14.6.

ARTICLE 9

Add the following new Paragraph 9.12, Liquidated Damages:

9.12 LIQUIDATED DAMAGES

9.12.1 Should the Contractor fail to substantially complete the Work on or before any date stipulated for Substantial Completion (or such later date as may result from extension of time granted by the Owner), he shall pay the Owner, as liquidated damages, the sum of one thousand dollars and no cents ($1,000.00) for each consecutive calendar day that terms of the contract remain unfulfilled beyond the date allowed by the Contract, which sum is agreed upon as a reasonable and proper measure of damages which the Owner will sustain per day by failure of the Contractor to complete work within time as stipulated; it being recognized by the Owner and to the Contractor that the injury to the Owner which could result from a failure of the Contractor to complete on schedule is uncertain and cannot be computed exactly. In no way shall costs for liquidated damages be construed as a penalty on the Contractor.

9.12.2 For each consecutive calendar day that the Work remains incomplete after the date established for Final Completion, the Owner will retain from the compensation otherwise to be paid to the Contractor the sum of one thousand dollars and no cents ($1,000.00). This amount is the minimum measure of damages the Owner will sustain by failure of the Contractor to complete all remedial work, correct deficient work, clean up the project

and miscellaneous tasks as required to complete all work specified.

9.12.3 In no instance shall more than one thousand dollars and no cents ($1,000.00) a day are assessed for liquidated damages for work, which remains incomplete.

ARTICLE 10

Add the following new Paragraph 10.4, Compliance:

10.4 COMPLIANCE

10.4.1 When the school is in session the Contractor will be restricted to the areas, which do not interfere with school operations. These areas shall be safety and security fenced to not impact school operations. Additional areas may be utilized upon concurrence of the Project Manager. The Contractor shall minimize his impact on education while his work is in progress. Workers must stay out of school while school is in session. All renovation work in the existing school, including sprinklers, must be performed while school is not in session. If scheduling pushes this work into the school session, then the work must be performed on nights and weekends.

10.4.2 The Contractor must maintain interior building fire exits through the construction areas and maintain these exits during all school operation hours. These exit routes may not be modified without concurrence of the Project Manager and the School Principal.

ARTICLE 11

Remove and replace Section 11.3.3.1 with the following:

11.3.3.1 The Contractor shall maintain an umbrella liability policy according to the following:

Projects < $2 million construction cost - $1,000,000 per occurrence and annual aggregate.

Projects < $10 million construction cost – $5,000,000 per occurrence and annual aggregate.

Projects > $10 million construction cost – $10,000,000 per occurrence and annual aggregate.

This requirement does not apply to Subcontractors.

ARTICLE 12

Article 12, 12.5.2: Delete this section in its entirety and replace with the following:

Disputes between the Owner and the Contractor will be processed through the appeal process described in 12.5.3.

Article 12, 12.5.3: Delete this section in its entirety and replace with the following:

12.5.3 Appeal Process

12.5.3.1 The contractor will submit in writing the issue(s) being claimed and the Project Manager will review. The Project Manager may visit the site, schedule a review hearing, or request additional information in order to fully evaluate the issues of the claim. The Project Manager will send the written decision to the Contractor within ten (10) days of receipt of claim.

12.5.3.2 If the Contractor does not agree with the decision of the Project Manager, within ten (10) days from the receipt of the written decision by the Project Manager, the Contractor may request an appeal of the decision to the Senior Director of Capital Planning & Construction. The Senior Director of Capital Planning & Construction will then have ten (10) days to review the issue(s) and send a written decision to the Contractor.

12.5.3.3 If the Contractor does not agree with the decision of the Senior Director of Capital Planning & Construction, within ten (10) days from the receipt of the written decision by the Senior Director of Capital Planning & Construction, the Contractor may request an appeal of the decision to the Chief Operating Officer. The Chief Operating Officer will then have ten (10) days to review the issue(s) and send a written decision to the Contractor.

12.5.3.4 If the Contractor does not agree with the final decision rendered by the Chief Operating Officer, it may pursue litigation.

12.5.3.5 The Contractor may bring no action on claims unless the claims have been properly raised in accordance with all notice provisions of the conditions and considered in the above dispute-resolution procedures.

12.5.3.6 The Contractor shall diligently carry on the Work and maintain the progress schedule during any dispute-resolution proceedings, unless otherwise agreed in writing.

12.5.3.7 Any step in the process identified above can be waived only by explicit written waiver by both parties.

Article 12, 12.5.4: Delete this section in its entirety.

END OF SECTION

WAGE RATES

I. GENERAL

A. STATE OF ALASKA PREVAILING WAGE SCALE AND ALASKA HIRE

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the Contract. Among other things, the requirements of Alaska's Little Davis Bacon Act (AS 36.05.010) are applicable to this project. Each bidder must inform himself/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of the Contract.

State Labor Wage and Hour Administration Pamphlets No. 600 for Laborers' and Mechanics' are updated on April 1, and September 1. It is the responsibility of the bidder to obtain the new labor wage and hour rates when available from the State of Alaska Department of Labor, and to use the Prevailing wage scale and hiring requirements when formulating your bid.

For copies of this pamphlet, contact the nearest office of the Division of Labor Standards and Safety, Wage and Hour office or visit the internet site at:

http://labor.state.ak.us/lss/pamp600.htm

END OF SECTION

GENERAL REQUIREMENTS RELOCATION

PART 1. GENERAL

1.01 SCOPE OF WORK

A. GENERAL

1. Relocation of all Anchorage School District personal property in areas of construction shown on the drawings during the time specified herein.
2. Personal property is defined as all items not attached to the building.
3. The Anchorage School District personal property shall be moved within the building prior to the construction phase of the contract and after substantial completion
4. All personal property shall be identified by an inventory control system. A copy shall be provided to the Project Manager.
5. All work shall be coordinated with the Project Manager and Building Administrator.
6. The Owner will remove earthquake restraints from all personal property. Personal property to be moved after packing is completed.
7. The Owner will move copiers and telephones.
8. Contractor shall provide a spotter person for public safety when operating machinery.
9. Contractor shall be required to furnish all permits related to this contract, including a current Alaska Transportation Commission (A.T.C.), Common Carrier permit which allows the contractor to perform all duties as called for in this specification.
10. Contractor drivers shall be required to have the appropriate Commercial Drivers License (CDL).
11. Contractor shall abide by all laws pertaining to transportation, parking, fire lanes and safety.

B. TEMPORARY STORAGE

1. ASD property shall be placed in temporary storage.
    a. The Owner will provide temporary storage on site.
    b. Property placed in temporary storage shall be identified by location of origin.
    c. Upon substantial completion the contractor will advise the Project Manager that items in storage are ready to be moved to their permanent location. The Contractor will give the Owner 48-hours notice.

C. DELAY IN UNPACKING

1. After the removal and movement of all items to destination locations, there shall be a delay for the unpack until the return of District personnel.

D. IMPLEMENTATION MEETING

1. Prior to commencement of work under this specification section there will be an implementation meeting to discuss contract interfaces and to identify any problem areas apparent to ASD or the contractor.

2. The contractor shall bring to that meeting a list of key personnel who will be responsible for the execution of the packing/move, including a copy of driver's Commercial Drivers Licenses (CDL's) if materials are located off premises.

3. The Project Manager will coordinate the meeting with the building staff and the contractor.

E. SITE CONDITIONS

1. For bidding purposes the following site conditions exist.

a.	Hours of operation:	Unoccupied.
b.	Loading access:	Main doors.
c.	Fire Lanes:	Fire lane is to remain clear around the perimeter of the building.
d.	Handicaps Access:	Keep access available during entire move.

PART 2. PRODUCTS

2.01 PACKING MATERIALS

A. All packing materials, (boxes, tape, pallets, wrap, dividers, etc.) shall be provided by the contractor.

2.02 SPECIAL MOVING LIBRARY BOOKS

A. Books shall be transferred to and from original shelves using moving racks/shelves or boxes provided by the contractor.

B. Boxed books shall be labeled by shelf number and location. Contractor shall provide shop drawings indicating layout of books to coordinate box labels with bookshelf numbers and labels.

C. Contactor shall move empty shelves to the storage location.

D. Books shall be stored back on original shelving at the storage location or in boxes.

E. Books shall be returned to their original shelf location and order. (Dewey Decimal Classification)

F. Contactor shall coordinate packing and unpacking of books with the school librarian.

PART 3. EXECUTION

3.01 EQUIPMENT AND MANPOWER

A. All equipment and manpower necessary for the move shall be provided by the contractor, including vehicles, hand trucks, furniture dollies, blankets, and other necessary items required for this contract.

3.02 IDENTIFICATION OF MATERIAL BEING MOVED

A. All furniture, boxes, and other items packed by the contractor will be labeled with building destination and room number.

3.03 PACKING CONTENTS

A. The contractor shall be responsible to pack items from bookshelves, storage cabinets, file cabinets, storage rooms, as appropriate.

B. The Owner may box and labeled some property which contractor will move to destination site.

C. Computers

1. The Owner will properly shut down computers and unplug all cords.
2. The contractor shall provide packing and transporting of the computers.

3.04 PLACEMENT OF FURNITURE

A. Contractor shall place and position furniture in each office/classroom into its original location.

3.05 UNPACKING

A. Contractor will be responsible for unpacking of contents packed by the contractor and for placement of contents in original location.

B. The Owner will set up computers once unpacked by the contractor.

3.06 PACKING, TRANSPORTATION, STORAGE, UNPACKING

A. The contractor shall provide all necessary supervision, labor, materials, tools, equipment, supplies, transportation, security, protection from inclement weather and all related requirements not mentioned to perform all service contemplated during the term of the contract in an orderly, timely, and efficient manner for the package, removal, limited storage, and reinstall at designated locations.

B. Contractor shall pack and/or guarantee the safety of all material and equipment against loss or damage during the contract term (except for property in ASD temporary storage).

C. Contractor shall reassemble all property disassembled during the move.

3.07 PROTECTION OF FINISHES

A. Contractor shall be responsible for damage to buildings, installed equipment, walls, floors, doors, door jams, and elevators.

B. Contractor shall provide protective floor coverings for carpeted areas and a minimum of 3/8 OSB in the gym and multipurpose floors.

C. Contractor shall provide protective moving pads for elevators.

END OF SECTION

SUMMARY OF WORK

PART 1. GENERAL

1.01 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.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of this Contract comprises the general construction of the facility identified in the Solicitation including all noted site improvements.

B. Definition of Site: Wherein the term Site is used in the contract documents, it shall mean the areas where work is to be performed; located as identified in the Solicitation and on the Contract Drawings.

C. Acceptance of Site: The Contractor shall fully inform himself of the areas in which work is to be processed, material delivered, and limitation in working conditions, and access to work areas.

D. Existing Conditions: The drawings may not show all arrangements and condition of the site as they now exist. The Contractor shall be responsible for a complete visual inspection.

1.03 CONTRACT

A. Construct the work under a single fixed price contract as bound herein.

B. It is the intent of these documents to require all work for a complete facility and plant with only minor owner-furnished items to be incorporated. See technical sections for specifics.

1.04 WORK FURNISHED AND INSTALLED BY OWNER

A. Equipment and furniture as noted in documents. Other Contractors or ASD Maintenance personnel may be performing work at this facility concurrent with this project. See Section 1.07 below for requirements concerning coordination with Contractor's work.

1.05 GENERAL PROJECT DESCRIPTION

A. General Description: Provide all labor, materials, equipment, testing, tools and supervision as required to complete the site improvements as indicated in the project documents. The coordination and quality control of these efforts will be entirely the contractor's responsibility. Kincaid ES is located at 4900 Raspberry Rd, Anchorage, Alaska 99502.

B. Construction: Construction work is anticipated to be over two summer construction seasons around the classroom schedule during 2027 and 2028. A laydown area shall be identified with the approval of an ASD Project Manager. No restroom privileges are permitted within the school for the contractors' work forces. The contractor is responsible for providing any separation required to protect the public accessing school fields and playground from the construction effort – see 1.06.A.4 under this section.

Contractor's entirety of work includes, but is not limited to:

1. Geotechnical addition for structural sections on asphalt and concrete in areas shown on project record documents.

2. Civil changes for driving lanes, pick up and drop off, parking, loading area, bus loop, snow storage, fire access, bicycle amenities, and site grading in areas as shown in project record documents.

3. Playground upgrade for equipment, asphalt in areas, playground curb, and surfacing as shown in project record documents.

4. Storm Drain improvements and system change.

5. Landscape improvements.

6. New Site Lighting System and heat trace if required.

7. Utilities will be relocated due to site changes as shown on project record documents.

8. Any other work as required to support the project.

C. Sequence the start, conduct and completion of Work as required in Section 00200, Project Schedule Milestone Dates.

1. Construction Phase will be summer of 2027 and 2028.

2. Prior to Students First Day of class in 2027 and 2028, project site must be clear of construction activities, materials and debris to ensure there is no impact to school operation.

1.06 CONTRACTOR'S USE OF PREMISES

A. Limit use of premises for work and for storage to allow for:

1. Area of site indicated on Contract Drawings.
2. Owner occupancy of existing building.
3. Public use.
4. Coordinated use of premises under direction of Project Manager.
5. Full responsibility for protection and safekeeping of products under this Contract stored at Site.
6. Moving any stored products, under Contractor's control, which interfere with operations of Owner or separate Contractor.

1.07 OWNER'S USE OF PREMISES

A. During the regular school year, conduct operations to minimize interference with normal school operations.

B. Schedule any work which could interfere with school operations during summer vacation or when the school is not in session during the regular year.

C. Cooperate with Project Manager in conducting operations to minimize conflict with and to facilitate Owner usage as established by the Project Manager.

D. Schedule work to maintain Owner's continuous operation. Include in contract sum sufficient funds as may be required for any "after-hours" work caused by this requirement. No additional payment to Contractor will be authorized because of Contractor's failure to anticipate required "after-hours" work.

E. At all times conduct operation as to ensure the least inconvenience to students, staff, visitors, and the general public.

F. The contractor shall provide advance notice at least 72 hours prior to any utility outages or other operations anticipated to inconvenience the school activities. The Project Manager will review and evaluate the request. The contractor may have to reschedule the operations to another time that will not impact school activities.

G. The Contractor shall be responsible for maintaining power to the Fire Alarm, Security and Network systems to ensure they are in proper working order throughout the project. If the systems must be off-line during the project, the Contractor shall obtain written approval from the Project Manager. During any time in which the fire alarm or security system is not operational, the Contractor shall provide a fire watch and security watch 24 hours a day, 7 days a week, for the entire period of the shutdown at no additional cost to ASD. The Contractor shall notify the ASD Project Manager of the intended method 72 hours prior to the shutdown.

1. An acceptable method of maintaining power to the fire alarm and security panels includes maintaining power during the entire period of the Electrical Utility Shutdown.

H. While school is occupied by students and the general public the contractor must keep operational the emergency egress lighting.

1.08 COORDINATION OF NOISE, DUST AND FUMES

A. Contain noise, dust and fumes within work area. Notify Project Manager at least 24 hours prior to any necessary excessive noise, dust or fumes. Comply with the Project Manager's instructions.

1.09 PRODUCTS FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR

A. Owner's Responsibilities:

1. Arrange for and deliver necessary shop drawings, product data, and samples to Contractor.
2. Arrange and pay for product delivery to Site in accordance with construction schedule.
3. Deliver supplier's bill of materials to Contractor.
4. Inspect deliveries jointly with Contractor
5. Submit claims for Transportation damage.
6. Arrange for replacement of damaged, defective, missing or otherwise unacceptable items.
7. Arrange for manufacturer's warranties, bonds, service, and inspections as required.

B. Contractor's Responsibilities:

1. Designate delivery date for each product in construction schedule.

2. Receive and unload products at Site.
3. Promptly inspect products jointly with Owner, record shortages, damaged or defective items.
4. Handle products at Site, including uncrating and storage.
5. Protect products against damage and discoloration.
6. Assemble, install, connect, adjust, and finish products, as stipulated in respective Specification Sections.
7. Clean, repair, or replace items damaged by Contractor.

1.10 SALVAGE RIGHTS

A. Except where noted otherwise on contract documents, existing equipment which is removed as a part of the work shall become the property of the Contractor to dispose of as he sees fit.

B. Remove scheduled materials and equipment without damaging items. Store items in protected environment. Coordinate with Owner for pick up and/or delivery to the owner. If delivered to the owner include project name and school for easy identification.

1.11 USE OF OWNER'S PROPERTY AND EQUIPMENT

A. Use of Owner’s property or equipment such as tools, ladders, furniture, janitorial equipment and supplies, etc., is strictly prohibited.

1.12 PERMITTING

A. Contractor shall obtain all necessary building permits required to complete the scope of work identified in the contract documents. These include any/all subcontractor or specialty permits.

B. Contractor shall ensure all required Municipal inspections, in accordance with the aforementioned permits, are requested and conducted prior to covering, closing or concealing the work in the field. Understanding and adhering to all MOA inspection requirements is mandatory. The Owner is not liable for re-inspection or rework costs associated with non-conforming or prematurely concealed work.

C. Contractor shall maintain an inspection log and retain copies of all inspection reports, on site, for review by inspection officials and district project representatives.

D. The District will be requiring preconstruction meeting with municipality building safety department.

END OF SECTION

PROJECT COORDINATION

PART 1. GENERAL

1.01 GENERAL CONTRACTOR

A. Coordinate work of his own employees and subcontractors and coordinate his work with that of other contractors and Owner.

B. Expedite his work to assure compliance with schedules.

C. Comply with orders and instructions of the Project Manager.

D. Monitor and control the use of site:

1. Supervise field engineering and site layout.
2. Allocate space for each subcontractor's use for field offices, sheds, work and storage areas.
3. Establish access, traffic, parking allocations, and regulations.

1.02 GENERAL AND SUBCONTRACTORS SHALL DILIGENTLY COMPLY WITH THE FOLLOWING:

A. Cooperate in planning and layout of the work well in advance of operations. Inform other contractors of requirements at proper time to prevent delay or revisions.

B. Be informed of the requirements of other contractors and check own work for conflicts with the work of others.

C. Ensure delivery of materials and performance of work on coordinated schedule with other contractors.

D. Be responsible for proper layout of the work, and for all lines and measurements for all of the work executed under the contract documents. Verify the figures shown on the drawings before laying out the work and report any inaccuracies in writing to the Project Manager before commencing work. The Owner, Architect or their representative will in no case assume the responsibility for layout of the work.

E. The mechanical and electrical trades shall be responsible for the layout of the ductwork, piping and conduits based on the reference lines established.

1.03 COORDINATING UTILITIES

A. Cooperate and coordinate work with all utilities to be installed for service to Project. Utilities may include, but are not limited to water, sewer, natural gas, telephone, electrical, and cable television. Contractor shall maintain communication with utilities in order to coordinate time and requirements of utilities' installation.

B. Contractor shall provide all work necessary to comply with requirements of Contract Documents for Utility work that does not meet Contract Document requirements, or for work that is disturbed by utility installation.

1.04 OWNER NOTIFICATION/REIMBURSEMENT

A. Provide the Owner forty-eight (48) hours advance notice of his intention to work overtime,

nights, Sundays or holidays, or anytime outside the usual working hours. In no case will the Contractor do any such work without first notifying the Owner to permit arrangements for proper inspection. Unless of an emergency nature, work performed in violation of this paragraph will not be paid for.

B. Reimburse the additional cost to the Owner for inspection work on Sundays or recognized holidays. Such reimbursement shall include all additional costs to the Owner.

C. Reimbursement for inspection or observation required of the Project Manager or the Engineer on Sundays or recognized holidays shall be at the rate of One Hundred Fifty dollars ($150.00) per man-hour of work.

D. The contractor shall reimburse the additional cost to the owner, architect and consultants for inspection work beyond a first substantial of first final completion inspections. The contractor is expected to be virtually complete at time of substantial completion inspection with only minor punchlist items remaining. Should punchlist items remain at time of final inspection and should subsequent inspections be required, the contractor shall pay all costs for all.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

CUTTING AND PATCHING

PART 1. GENERAL

1.01 DESCRIPTION OF WORK

A. Cutting and patching is defined to include, but is not necessarily limited to, the cutting and patching of nominally completed work, and is defined to exclude integral cutting and patching during the manufacturing, fabricating, erecting, and installing process for individual units of work.

B. Contractor shall be responsible for all cutting, fitting, and patching required to complete the work or to:

1. Accommodate the coordination of work.
2. Provide for installation of other work.
3. Remove and replace defective work.
4. Remove and replace work not conforming to requirements of Contract Documents.
5. Uncover other work for access or inspection.
6. Obtain samples for testing or similar purposes.
7. Provide routine penetrations of nonstructural surfaces for installation of piping and electrical conduit.

1.02 RELATED REQUIREMENTS

A. Section 00700 Article 4.14.

B. Section 01010 - Summary of Work.

C. Individual Specification 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. Ten (10) days prior to beginning any demolition activities, the Contractor shall provide written notification to EPA, in accordance with NESHAP regulations, with copy to Project Manager. Notice shall indicate asbestos containing materials are or are not anticipated to be encountered. If no asbestos is anticipated, a negative declaration is made addressing 40CFR61.146 (a), (b) and (c,1-5).

B. 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 Owner or separate contractor.

C. Include in Request:

1. Identification of Project.
2. Location and description of affected work.
3. Necessity for cutting and alteration.

4. Description of proposed work. Designate:

   a. Scope of cutting and patching.
   b. Contractor and trades to execute work.
   c. Products proposed to be used.
   d. Extent of refinishing.

5. Date and time work will be executed.

PART 2. PRODUCTS

2.01 MATERIALS

A. For replacement of work removed, comply with specifications for type of work to be done, unless otherwise noted.

B. Provide materials for cutting and patching which will result in equal to or better than the work being cut and patched in terms of performance characteristics and visual effect where applicable.

PART 3. EXECUTION

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 or correct ill-timed Work.
3. Remove and replace defective and non-conforming Work.
4. Remove samples of installed Work for testing.
5. Provide openings in elements of Work for penetrations of mechanical and electrical work.
6. Repair surfaces damaged by removal or relocation of surface mounted or built-in items.

3.02 INSPECTION

A. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

B. Do not cut and patch work which is exposed to view in a manner resulting in a reduction of visual qualities or resulting in substantial evidence of the cut and patch work. Remove and replace work judged by Project Manager to be visually unsatisfactory.

C. After uncovering, inspect conditions affecting performance of work.

D. Beginning of cutting or patching means acceptance of existing conditions.

3.03 PREPARATION

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by cutting and patching operations, as directed. Return adjacent areas to condition existing prior to start of work.

B. Provide supports to assure structural integrity of surroundings; devices and methods to

protect other portions of Project from damage.

C. Provide protection from elements for areas which may be exposed by uncovering work; maintain openings 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. Restore work with new products in accordance with requirements of Contract Documents.

C. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Maintain all fire assembly rating wall or area separation construction in accordance with applicable codes.

D. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

END OF SECTION

MECHANICAL AND ELECTRICAL COORDINATOR

PART 1. GENERAL

1.01 DESCRIPTION

A. Mechanical and electrical coordinator.

B. Submittals.

C. Coordination required.

D. Coordination documents.

E. Coordination of submittals.

F. Coordination of substitutions and modifications.

G. Observation of Work.

H. Documentation.

I. Inspection and acceptance of equipment.

J. Equipment start-up.

1.02 RELATED SECTIONS

A. Section 01010 - Summary of Work.

B. Section 01300 - Submittals: Shop drawings, product data, and samples.

C. Section 01650 - Starting of Systems: Starting of systems. Testing, Adjusting, and Balancing of Systems. Systems Demonstration.

D. Section 01700 - Project Closeout: Project closeout procedures, project record documents, operation and maintenance data, warranties, and spare parts and maintenance materials.

1.03 MECHANICAL AND ELECTRICAL WORK COORDINATOR

A. The Contractor shall employ a person, technically qualified and administratively experienced in field coordination for the mechanical and electrical work required for this Project, for the duration of the Work.

1.04 SUBMITTALS FOR REVIEW

A. Submit coordination drawings and schedules prior to submitting shop drawings, product data, and samples.

1.05 COORDINATION REQUIRED

A. Coordinate work of Division 26 and with work of other divisions.

B. Coordinate progress schedules, including dates for submittals and for delivery of Products.

C. Participate in progress meetings. Report on progress of Work to be adjusted under coordination requirements, and any required changes in schedules. Transmit minutes of meetings and Reports to concerned parties.

1.06 COORDINATION DOCUMENTS

A. Prepare coordination drawings to organize installation of Products for efficient use of available space, for proper sequence of installation, and to identify potential conflicts.

B. Identify electrical power characteristics and control wiring required for each item of equipment.

C. Maintain documents for the duration of the Work, recording changes due to site instructions, modifications or adjustments.

D. After the Anchorage School District's review of original and revised documents, reproduce and distribute copies to concerned parties.

1.07 COORDINATION OF SUBMITTALS

A. Review Shop Drawings, Product Data, and Samples for compliance with Contract Documents and for coordination with work of the Project Manual. Transmit for review, copy reviewed documents to the Anchorage School District.

B. Check field dimensions and clearances and relationship to available space and anchors.

C. Check compatibility with equipment and Work of other sections, electrical characteristics, and operational control requirements.

D. Check motor voltages and control characteristics.

E. Coordinate controls, interlocks, wiring of pneumatic switches, and relays.

F. Coordinate wiring and control diagrams.

G. Review the effect of any changes on work of other sections.

H. Verify information and coordinate maintenance of record documents.

1.08 COORDINATION OF SUBSTITUTIONS AND MODIFICATIONS

A. Review proposals and requests from Subcontractors.

B. Verify compliance with Contract Documents and for compatibility with Work and Products of other sections. Submit with recommendation for action.

1.09 OBSERVATIONS OF WORK

A. Observe Work for compliance with Contract Documents.

B. Maintain a list of observed deficiencies and defects; promptly submit a written report bi-weekly.

1.10 DOCUMENTATION

A. Observe and maintain a record of tests. Record:

1. Specification section number.
2. Product and name of Subcontractor.
3. Name of testing agency and name of inspector.
4. Name of manufacturer's representative present.
5. Date, time, and duration of tests.
6. Type of test, and results. Retesting required.
7. Submit copies of documentation to the Anchorage School District.

1.11 EQUIPMENT START-UP

A. Verify utilities, connections, and controls are complete and equipment is in operable condition as required by Section 01650.

B. Observe start-up and adjustments; record time and date of start-up, and results.

C. Observe equipment demonstrations to Owner; record times and additional information required for operation and maintenance manuals.

1.12 INSPECTION AND ACCEPTANCE OF EQUIPMENT

A. Prior to inspection, verify that equipment is tested, operational, clean, and ready for operation.

B. Assist the Anchorage School District with review. Prepare list of items to be completed and corrected.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

FIELD ENGINEERING

PART 1. GENERAL

1.01 REQUIREMENTS INCLUDED

A. Provide and pay for field engineering services required for project, i.e., civil, structural, or other professional engineering services required to execute Contractor's construction methods.

1.02 RELATED REQUIREMENTS

A. Section 00700, General Conditions of the Contract for Construction and Section 00800 Supplementary General Conditions to the contract for Construction.

B. Section 01010: Summary of Work.

C. Section 01700: Project Closeout.

1.03 QUALIFICATIONS OF SURVEYOR AND ENGINEER

A. Provide Qualified Professional Engineer and Registered Land Surveyor with current Alaska license and acceptable to Contractor and Owner.

1.04 SURVEY REFERENCE POINTS

A. Locate and protect bench marks, monuments, and other control points prior to starting site work, preserve all permanent points during construction.

1. Make no changes or relocations without prior written notice to Project Manager.
2. Report to Project Manager when any reference point is lost, destroyed or required relocation because of necessary changes in grades or locations.
3. Require Surveyor to replace project control points which may be lost or destroyed and establish replacements based on original survey control.

1.05 PROJECT SURVEY REQUIREMENTS

A. Establish a minimum of two permanent bench marks on site, referenced to data established by survey control points.

B. Record locations, with horizontal and vertical data, on Project Record Documents.

C. Establish and identify lines, levels, contours, and datum by instrumentation or similar appropriate means for:

1. Stakes for grading, fill, and topsoil placement.
2. Utility slopes and invert elevations.
3. Batter boards for structures.
4. Building foundation, column locations, and floor levels.
5. Controlling lines and levels required for mechanical and electrical trades.

D. From time to time, verify layouts by same methods.

1.06 RECORDS

A. Maintain a complete, accurate log of all control and survey work as it progresses.

1.07 SUBMITTALS

A. Submit name and address of Surveyor and Professional Engineer to Project Manager.

B. On request of Project Manager, submit documentations to verify accuracy of field engineering work.

C. Submit certificate signed by Registered Engineer and Surveyor certifying that elevations and locations of improvements are in conformance with Contract Documents in the form of an “As-Built” survey.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

REGULATORY REQUIREMENTS

PART 1. GENERAL

1.01 BUILDING CODES

A. Construction which is not governed by a local building code or the Contract Specifications will be governed by the more stringent provisions of the latest published edition of Statute adopted edition with MOA local amendments, of the following applicable codes and regulations:

1. International Building Code (IBC)
2. International Existing Building Code (IEBC)
3. International Energy Conservation Code (IECC)
4. International Fuel Gas Code (IFGC)
5. International Mechanical Code (IMC)
6. International Fire Code (IFC)
7. National Electrical Code (NEC)
8. Uniform Plumbing Code (UPC)
9. ASHRAE 90-75 as applicable to Alaska
10. National Fire Code, Volumes 1-10
11. National Electrical Safety Code
12. NFPA Life Safety Code
13. NFPA National Fire Code
14. ADA Guidelines
15. Accessible and Useable Buildings and Facilities (ICC/ANSI A117.1)

1.02 APPLICABLE STANDARDS

A. Where indicated, comply with the requirements and recommendations of the standards and other publications, except to the extent more detailed or more stringent requirements are indicated, including those of applicable codes and governing regulations.

B. Where two or more standards or recommendations of trade associations apply to the same quality control requirement for the work, comply with the most stringent. Refer uncertain instances to the Project Manager for a decision.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

ABBREVIATIONS AND DEFINITIONS

PART 1. GENERAL

1.01 ABBREVIATIONS

A. References in the contract documents to publications and recommendations by either name or abbreviation thereof include but are not necessarily limited to the following trade associations, technical societies, government agencies, recognized authorities and standards.

AAMA	Architectural Aluminum Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AGA	American Gas Association
AGC	The Associated General Contractors of America
AI	The Asphalt Institute
AIA	The American Institute of Architects
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ANSI	American National Standards Institute
APA	American Plywood Association
ASAHC	American Society of Architectural Hardware Consultants
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWPB	American Wood-Preservers' Bureau
AWS	American Welding Society, Inc.
CPSC	Consumer Product Safety Commission
CRA	California Redwood Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard of NBS (U.S. Department of Commerce)
CSI	The Construction Specifications Institute, Inc.
EPA	Environmental Protection Agency
FM	Factory Mutual Engineering Corp.
FGMA	Flat Glass Marketing Association
FS	Federal Specification (General Services Administration)
GA	Gypsum Association
HPMA	Hardwood Plywood Manufacturers Association
IBC	International Building Code
MFMA	Maple Flooring Manufacturers Association
MLMA	Metal Lath/Manufacturers Association
NAAMM	The National Association of Architectural Metal Manufacturers
NBFU	National Board of Fire Underwriters
NBHA	National Builders Hardware Association
NBS	National Bureau of Standards (U.S. Department of Commerce)
NEC	National Electrical Code by NFPA
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
N.F.P.A.	National Forest Products Association
NRCA	National Roofing Contractors Association

NSF	National Sanitation Foundation
NWMA	National Woodwork Manufacturers Association, Inc.
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
RIS	Redwood Inspection Service (Grading Rules)
SDI	Steel Deck Institute
S.D.I.	Steel Door Institute
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association, Inc.
SPR	Simplified Practice Recommendation of NBS
SSPC	Steel Structures Painting Council
TCA	Tile Council of America, Inc.
UL	Underwriters' Laboratories, Inc.
WCLA	West Coast Lumbermen's Association
WCLB	West Coast Lumber Inspection Bureau (Grading Rules)
WRI	Wire Reinforcing Institute
WWPA	Western Wood Products Association (Grading Rules)
W.W. P.A.	Woven Wire Products Association

B. Refer to individual sections for other names and abbreviations of trade associations and standards applicable to specific portions of the work. In particular, refer to Division 26 for names and abbreviations applicable to mechanical and electrical work.

1.02 SPECIFICATION EXPLANATION

A. The specifications are divided into divisions and sections for the convenience of writing and using. The titles of these are not intended to imply a particular meaning nor to fully describe the work of each division or section, nor to define the limits of any subcontract.

B. These specifications are of the abbreviated, or "streamlined" type, and may include incomplete sentences.

C. Omissions of words or phrases such as "the Contractor shall", "in conformity therewith", "shall be", "as noted on the drawings", "according to the plans", "a", "an", "the", and "all" are intentional.

D. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the drawings.

1.03 DEFINITIONS

A. Certain terms used generally throughout the specifications (and drawings) are hereby defined as follows:

1. Indicated: 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", "scheduled", and "specified" are used in lieu of "indicated", 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 the Contractor or his Subcontractor or Sub-subcontractor for the performance of a particular unit or 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 delivery 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.

1.04 DRAWINGS, DIMENSIONS AND MEASUREMENTS

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, and 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, and shall be strictly complied with.

E. No scale measurements shall be used as a dimension to work with except on “full size” drawings not dimensioned.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

REFERENCED SPECIFICATIONS AND STANDARDS

PART 1. GENERAL

1.01 QUALITY ASSURANCE

A. For products or workmanship specified by Referenced Specification or Standard, comply with requirements of the specification or standard, except when more rigid requirements are specified or are required by governing codes.

B. Except where a specific date is specified, the date of the referenced specification standard is that in effect as of the bid date.

C. Obtain a copy of all Referenced Specifications and Standards, and maintain at Jobsite during the specific work until Substantial Completion of the Project.

1.02 SCHEDULE OF REGULATORY AGENCY REFERENCES

A.	AASHTO	American Association of State Highway and Trans. Officials 444 North Capitol Street, N.W. Washington, DC 20001
B.	AAC	Anchorage Administrative Code (and Local Amendments) Municipality of Anchorage 4700 Elmore Rd Anchorage, AK 99507
C.	ADA	Americans with Disabilities Act The Disabilities Rights Section Civil Rights Division P.O. Box 66738 Washington, DC 20035-6738
D.	ANSI	American National Standards Institute 1430 Broadway New York, NY 1018
E.	ASA	American Standards Association Now known as ANSI (See above)
F.	ASTM	American Society for Testing Materials 1916 Race Street Philadelphia, PA 19103
G.	ATBCB	The U.S. Architectural and Transportation Barrier Compliance Board Suite 1000, 131 F St. NW Washington, DC 20004-1111
H.	CS	Commercial Standards of the Commodities Division of the Department of Commerce Washington, DC 20006
I.	FM	Factory Mutual Engineering and Research Corporation P. O. Box 688 Norwood, MA 02062
J.	F.S.	Federal Specifications of the United States General Services Administration Specifications and Consumer Information Distribution Section (WFSIS)

Washington, DC 20407

K. IBC — International Building Code published by the International Code Council (ICC)
4051 West Flossmoor Road
Country Club Hills, IL 60478-5795

L. IEBC — International Existing Building Code
Published by ICC (See IBC above)

M. ICC/ANSI A117.1-2003
Accessible and Usable Buildings and Facilities
Published by ICC (See IBC above)

N. IECC — International Energy Conservation Code
Published by ICC (See IBC above)

O. IFC — International Fire Code
Published by ICC (See IBC above)

P. IFGC — International Fuel Gas Code
Published by ICC (See IBC above)

Q. IMC — International Mechanical Code
Published by ICC (See IBC above)

R. MOA — Municipality of Anchorage MASS Specifications
Public Works Dept.
4700 Elmore Rd
Anchorage, AK 99507

S. NBFU — National Bureau of Fire Underwriters
85 John Street
New York, NY 10017

T. NEC — National Electric Code published by the National Fire Protection Association
(See NFPA below)

U. NFPA — National Fire Protection Association
Battery March Park
Quincy, MA 02269

V. PS — Product Standards of the Commodities
Division of the Department of Commerce
Washington, DC 20203

W. UPC — Uniform Plumbing Code
Published by IAPMO
5001 East Philadelphia Street
Ontario, CA 91761-2816

X. UL — Underwriter's Laboratories
333 Kingston Road
Northbrook, IL 60062

Y. State of AK — State of Alaska Amendments
Fire and Life Safety Regulations
Juneau, AK

1.03 TRADE ASSOCIATION REFERENCES

A. See specific specification sections.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

ALTERATION PROCEDURES

PART 1. GENERAL

1.01 DESCRIPTION OF WORK

A. Part of alteration work may expose portions of the building to the elements. During such periods Contractor shall take all necessary precautions to protect building elements to remain. Any damage due to negligence shall be repaired at no cost to the Owner.

B. In addition to Cutting and Patching (Section 01045) and cut, move, or remove items as necessary to provide access or to allow alterations and new work to proceed. Include such items as:

1. Repair or removal of hazardous or unsanitary conditions.
2. Removal of abandoned items and items serving no useful purpose such as abandoned piping, conduit, and wiring.
3. Removal of unsuitable or extraneous materials not marked for salvage, such as abandoned furnishings and equipment, and debris such as rotted wood, rusted metals, and deteriorated concrete.
4. Cleaning of surfaces, and removal of surface finishes as needed to install new work and finishes.

1.02 RELATED REQUIREMENTS

A. Section 00700 - General Conditions of the Contract for Construction and 00800 – Supplementary General Conditions to the Contract for Construction.

B. Section 01045 - Cutting and Patching.

C. Section 01300 - Submittals.

1.03 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various Sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. 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 are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

D. In finished areas, except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

E. Coordinate completion and cleanup of Work of separate sections in preparation for Substantial Completion.

F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of

Owner's activities.

PART 2. PRODUCTS

2.01 ALTERATION PROJECT PROCEDURES

A. Materials: As specified in Product Sections; match existing Products and work for patching and extending work.

B. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.

C. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to specified condition.

D. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes.

E. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patched Work to match existing adjacent Work in texture and appearance.

F. 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 for Project Manager review and approval.

G. Where a change of plane of 1/8 inch or more occurs, submit recommendation for acceptable transition for Project Manager review and approval.

H. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.

I. Finish surfaces as specified in individual Product Sections.

PART 3. EXECUTION (NOT USED)

END OF SECTION

PROJECT MEETINGS

PART 1. GENERAL

1.01 DESCRIPTION

A. Work Included:

1. In general, project meetings will be held weekly at the job site in accordance with a mutually acceptable schedule. The Project Manager will conduct project meetings throughout the construction period.
2. The purpose of the project meetings is to enable orderly review of progress during construction and to provide for systematic discussion and analysis of problems that might arise between the Owner, Project Architect, Project Manager and/or Contractor relative to execution of the work.

B. Related Work described elsewhere:

1. The Contractor's relations with his subcontractors and material suppliers, and discussions relative thereto, are the Contractor's responsibility as described in the General Conditions and are not part of project meetings content.
2. Section 01400 describes the requirements for quality control meetings that will be held in addition to the requirements of this section.

1.02 AUTHORITY DESIGNATION

A. Persons designated by the Contractor to attend and participate in project meetings shall have all required authority to commit the Contractor to solutions as agreed upon in the project meetings.

1.03 SUBMITTALS

A. Agenda Items:

To the maximum extent possible, advise the Project Manager forty-eight (48) hours in advance of the project meeting regarding all agenda items to be discussed, including tours in advance of the meeting.

1.04 AGENDA

A. Preconstruction Meeting

1. The Project Manager will conduct this meeting within fifteen (15) days after date of Notice to Proceed.
2. Location:

   Anchorage School District
   Capital Planning & Construction
   1301 Labar Street
   Anchorage, Alaska 99515
   (907) 348-5190

3. Attendance:

   a. ASD Construction Supervisor
   b. ASD Project Manager

c. Architect and his Professional Consultants
d. Contractor's Project Manager and Superintendent
e. Major Subcontractors, as appropriate
f. Major Suppliers, as appropriate
g. Others as appropriate

4. Agenda items will include, but not be limited to:

a. Designation of responsible personnel
b. Distribution (by Contractor) and discussion of list of major Subcontractors and Suppliers with addresses and telephone numbers
c. Project coordination
d. Procedures and processing of:

(1) Field decisions
(2) Submittals
(3) Proposal requests
(4) RFI's Change Orders
(5) Applications for Payment
(6) Schedules and Reports

e. Discussion of initial Project Schedule
f. Critical work sequencing
g. Major equipment deliveries and priorities
h. Adequacy of Contract Documents distribution
i. Procedures for maintaining Record Documents
j. Use of premises:

(1) Office, work, and storage area
(2) Owner's requirements

k. Construction facilities, controls, and construction aids
l. Temporary utilities
m. Safety and first-aid procedures
n. Security procedures
o. Housekeeping procedures

B. Progress Meetings:

1. The Project Manager will conduct weekly meetings as required, at the Project Site to coordinate the work, answer questions, and resolve problems.
2. Meeting Agenda will include but not be limited to:

a. Attendees:
List of attendees and company they represent
b. Minutes Review:
Corrections, additions, and/or deletions to previous minutes
c. Outstanding Action Items:
Review of items not resolved from previous meeting
d. Submittal status
e. Request for Information status
f. Request for Proposal Status
g. Schedule Review:
h. Project job concerns
i. Next meeting
j. Summarize and Review of all Action Items:

3. All items to be discussed shall be addressed at the time scheduled on the agenda. All attendees shall familiarize themselves with the agenda and be prepared in

advance with their items for discussion.

C. Special Meetings:

The Project Manager may call special meetings at the project site or the office of the Project Manager to coordinate the work, answer questions, and resolve problems.

1.05 MINUTES

A. The Project Manager will compile minutes of each project meeting and will distribute copies to all interested parties within seven (7) calendar days after the meeting. Items in the minutes shall be numbered consecutively and grouped under divisions and sections. Each item shall be carried forward until resolved.

B. The minutes compiled by the Project Manager will be the official record minutes and all clarifications and/or corrections shall be transmitted in writing to the Project Manager within fourteen (14) days of date of receipt of the minutes or unless noted during the next scheduled meeting under the appropriate agenda item. Transmitted corrections shall be legibly submitted on company letterhead.

C. At least one (1) bound volume of all minutes shall be maintained by the Contractor in the job office until project completion.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

SUBMITTALS

PART 1. GENERAL

1.01 REQUIREMENTS INCLUDED

A. Procedures

B. Construction Progress Schedules

C. Schedule of Values

D. Shop Drawings

E. Product Data

F. Samples

G. Manufacturer’s Instructions

H. Manufacturer’s Certificates

1.02 RELATED REQUIREMENTS

A. Section 01010 - Summary of Work

B. Section 01311 - Project Schedule

C. Section 01340 - Shop Drawings, Product Data and Samples

D. Section 01370 - Schedule of Values

E. Section 01400 - Quality Control

F. Section 01630 - Substitution and Product Options

G. Section 01700 - Project Closeout

H. Section 01710 - Cleaning

I. Section 01720 - Project Record Documents

J. Section 01730 - Operating and Maintenance Data

K. Section 01750 - Closeout Forms

1.03 PROCEDURES

A. Deliver submittal documents to the Project Manager using the ASD Procore Construction Management Program. Number each submittal with the section number, dash, numerical order of the submittal, example 03300-1. Add an alpha to each resubmittal, example, 03300-1A. Deliver samples to the Project Manager or Architect as directed to the address listed on the cover of the project manual.

B. Transmit each item with company submittal. Identify Project, Contractor, subcontractor, major supplier; identify pertinent Drawing sheet and detail number and specification section number, as appropriate. Identify deviations from Contract Documents. Provide space for Contractor and Architect/Engineer review stamps.

C. Submit initial progress schedules and schedule of values in duplicate prior to issuance of Notice to Proceed. After review by the Architect/Engineer, revise and resubmit as required. Submit revised schedules with each application for payment, reflecting changes since previous submittal.

D. Comply with progress schedule for submittals related to work progress. Coordinate submittal of related items.

E. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions. Review with subconsultants/suppliers any inability to meet requirements of project. Find solutions with subconsultants/suppliers making conformance with documents possible. Review solutions with owner and architect for acceptance prior to proceeding with work.

1.04 CONSTRUCTION PROGRESS SCHEDULES

A. Submit Project Schedule as called for in Section 01311, Project Schedule.

1.05 SCHEDULE OF VALUES

A. Submit Schedule of Values as called for in Section 01370, Schedule of Values.

1.06 SHOP DRAWINGS, PRODUCT DATA & SAMPLES

A. Submit in the form as called for in Section 01340.

1.07 MANUFACTURERS' INSTRUCTIONS

A. When required in individual specification section, submit manufacturers printed instructions for delivery, storage, assembly, installation adjusting and finishing, in quantities specified for product data.

1.08 FIELD SAMPLES

A. Provide field samples of finishes at project site as required by individual specification sections. Install sample complete and finishes. Acceptable samples in place may be retained in completed work.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

PROJECT SCHEDULE

PART 1. GENERAL

1.01 GENERAL REQUIREMENTS

A. The work under this Section consists of Project Schedule ("Schedule") requirements including the preparation of a Schedule and Schedule Revisions. The Schedule shall be developed by the Contractor and shall be in accordance with the requirements of this Section 01311. No direct payment will be made to the Contractor for performing and complying with the requirements of this Section 01311.

B. The Schedule will be prepared by the Contractor for this Project and made available to the Owner. It is intended that the Schedule will reflect the Contractor's actual construction plan. The existence of schedules, networks, vector charts or any other charts or services, shall in no way relieve the Contractor of the responsibility of the Contract Document including, but not limited to the responsibility of completing the Work within the contract time and the responsibility of planning, scheduling and coordinating the Work.

C. The Schedule shall be in the form of a bar chart or other format approved by the project manager.

1.02 REFERENCES

A. Associated General Contractors of America, "Construction Planning & Scheduling," Copyright January 1994 (AGC's Manual), also referred to as AGC Publication No. 1107.1. The general principles stated in the AGC's Manual shall be used in preparing and updating the Project Schedule, except that the requirements of this Section shall govern.

B. Related Requirements:

1. Section 00200 - Project Schedule Milestones Dates
2. Section 00700 and 00800 - General Conditions and Supplementary General Conditions of the Contract for Construction
3. Section 01370 - Schedule of Values

PART 2. PRODUCTS

2.01 PROJECT SCHEDULE

A. Within fourteen (14) calendar days following the Notice to Proceed, the Contractor shall submit for the Project Manager's review, comment and acceptance, a Project Schedule ("Schedule"). The Schedule shall show the activities of work in sufficient detail to demonstrate that the Contractor has a reasonable and workable plan to complete the Project in accordance with the Project Schedule Milestone Dates set forth under Section 00200 of the Contract Documents. The Contractor shall submit two (2) prints of the Schedule, which shall be neatly organized and time scaled from left to right on 11 in. x 17 in. sheets, or 24 in. x 36 in. sheets, at the Contractor's discretion.

B. Within five (5) calendar days of receipt of the Schedule, the Project Manager shall meet face to face with the Contractor to review the plan and to determine if there are any concerns regarding the Contractor's plan to execute the work. If a resubmittal of the Schedule is required by the Project Manager, the Contractor shall revise and resubmit the Schedule incorporating the Project Manager's comments within seven (7) calendar days after this review meeting. Progress payments will be withheld until the Contractor submits

an approvable Schedule.

C. Revisions to the Schedule shall be done in accordance with paragraph 2.02.

2.02 PROJECT SCHEDULE REVISIONS

A. Should the Contractor, after acceptance of the Schedule, desire to change his plan of construction, he shall submit his proposed revisions to the Project Manager, along with a written rationale for the revisions. Only the requested changes accepted by the Project Manager will be incorporated into the Schedule in the next reporting period.

2.03 TIME IMPACT ANALYSIS FOR CONTRACT MODIFICATIONS, CHANGES OR DELAYS

A. If the Contractor believes that a change under Article 12 Paragraph 12.1 causes an increase or decrease in the Contractor's time for completing the Work, he shall complete a Time Impact Analysis that demonstrates how the Contractor proposes to incorporate or has incorporated the Change into the Schedule and the time impact, if any, on the Schedule Milestone Dates set forth under Section 00200 of the Contract Documents.

1. The Time Impact Analysis shall demonstrate the time impact based upon the date the Change in Work is directed by the Project Manager; the status of construction at that point in time; and the event time computations of all affected activities. The event times used in the Time Impact Analysis shall be those set forth in the update of the Schedule in effect at the time the Change in Work is directed by the Project Manager.
2. The Time Impact Analysis is based on an "as-planned" to "as-built" comparison of the event times. In developing an as-built schedule of performance, the Contractor shall utilize actual daily performance data from Schedule Updates and the Contractor's daily construction reports to graphically depict the sequence and manner in which the Contractor actually performed the Work under the Contract.

B. Activity delays shall not automatically mean that an extension of the Contract Time is warranted or due the Contractor. It is possible that a modification, change or delay will not affect projected or as-built critical activities or cause non-critical activities to become critical. A modification, change or delay may result in only absorbing a portion of the available total float that may exist within an activity chain of the Schedule, thereby not causing any effect on the Contract Time.

C. Each Time Impact Analysis shall be submitted as follows:

1. Within fourteen (14) calendar days after receipt of a written order designated or indicated to be a change in accordance with Article 12, Changes in the Work;
2. Within fourteen (14) calendar days after the furnishing of written notice by the Contractor;
3. Within fourteen (14) calendar days from the commencement of a delay related to unforeseeable conditions; provided the Contractor complies with the requirements of the Contract Documents regarding said condition.

D. In cases where the Contractor does not submit a written request for extension of time and Time Impact Analysis within the time stated above in Paragraph 2.03, it is mutually agreed that the Change in the Work does not require an extension of the Contract Time.

E. Acceptance or rejection of each Time Impact Analysis which requests an extension of the Contract Time shall be made by the Project Manager within fourteen (14) calendar days after receipt of each Time Impact Analysis, unless subsequent meetings and negotiations

are necessary. Upon acceptance, the Time Impact Analysis shall be incorporated into the Schedule.

F. Time Impact Analysis related to requests for an extension of the Contract Time and/or Change Order work shall be incorporated into and attached to the applicable Change Order(s).

G. No revision to any Schedule Milestone Date or contractually mandated schedule provisions will be permitted without authorization from the Project Manager.

2.04 COMPLIANCE WITH THE SCHEDULE

A. The Contractor shall furnish sufficient labor and equipment resources, offices, and facilities, and shall work such hours, including night shift and overtime operations as necessary, to ensure the prosecution of the Work in accordance with the Schedule. If the Contractor falls behind in meeting the Schedule, the Contractor shall take such steps as may be necessary to improve its progress. If the Contractor fails to take such steps, the Project Manager may require the Contractor to increase the hours of work, the number of shifts, overtime operations, the number of workers and/or the amount of construction plant and equipment without additional cost to the Owner. The provisions of this subsection shall not be construed as prohibiting work on Saturdays, Sundays, and holidays, if the Contractor so elects and gives 24 hours' notice to the Project Manager.

B. Failure of the Contractor to comply with the requirements of this Subsection 2.04 shall be a basis for determination by the Project Manager that the Contractor is not prosecuting the Work with such diligence as will ensure completion of the Work in accordance with the requirements of the Contract Documents. Upon such determination, the Project Manager may terminate the Contractor's right to proceed with the Work or any separable part thereof, in accordance with the clause entitled "Termination of Contract" of the Contract Documents, or may take such other actions as he may deem appropriate.

PART 3. EXECUTION (NOT USED)

END OF SECTION

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1. GENERAL

1.01 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.

1.02 DESCRIPTION

A. Prepare and submit to the Project Manager with the Construction Schedule, a separate schedule listing dates for submission and of review for shop drawings, product data, and samples, refer to General Conditions 4.12.13.1. Include installing Subcontractors name responsible for that portion of the Work

B. Submit Shop Drawings, Product Data, and Samples as may be required, whether mentioned specifically in Contract Documents or not.

C. Individual submittals shall not include material covering more than one section of the specifications.

D. Products fabricated and/or installed prior to approval of submittals are subject to demand for removal and replacement with approved products by the Contractor at no additional cost to the Owner.

E. Shop drawing submittal cannot be used for product substitution submittal. See Section 01630 for required procedure.

1.03 RELATED REQUIREMENTS

A. Section 01311: Project Schedule

B. Section 01630: Substitution and Product Options

C. Section 01720: Project Record Documents

1.04 SHOP DRAWINGS

A. Prepare original drawings (by Contractor, subcontractor, manufacturer, supplier, or distributor), which illustrate some portion of the work; showing fabrication, layout, setting or erection details.

B. Prepare shop drawings for this particular project. Drawings prepared for other projects and revised for this project will be rejected.

C. When necessary, base shop and setting drawings upon actual measurements taken at site and other job conditions. Show any variations and revisions to Contract Documents that are necessary for proper installation of work. Fabrication or installation of work shall not be started until shop or setting drawings have been reviewed and returned by Architect, with his stamp and comments.

D. Identify details by reference to sheet and detail, schedule or room numbers shown on Contract Drawings.

E. Minimum sheet size: 8 ½" x 11". Note: Submit fill-size sheet submittals. Use of 8 ½ " x 11" format subject to readability and approval of architect.

1.05 PRODUCT DATA

A. Manufacturer's standard schematic drawings:

1. Modify drawings to delete information which is not applicable to project.
2. Supplement standard information to provide additional information applicable to project.

B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data.

1. Clearly mark each copy and identify pertinent materials, products or models.
2. Show dimensions and clearances required.
3. Show performance characteristics and capacities.
4. Show wiring diagrams and controls.
5. Catalog cuts and descriptive data sheets shall include a complete listing of repair and replacement parts for all equipment and the name and address of a source of supply for parts and service.

1.06 SAMPLES

A. Physical examples to illustrate materials, equipment or workmanship and to establish standards by which completed work is judged.

B. Office Samples: Of sufficient size and quantity to clearly illustrate:

1. Functional characteristics of product or material, with integrally related parts and attachment devices.
2. Full range of color, texture and pattern.

C. Field Samples and Mock-Ups:

1. Erect at project site at location acceptable to Project Manager.
2. Construct each sample or mock-up complete, including work of all trades required in finished work.
3. After review, samples may be used in construction of Project.

1.07 SUBMITTAL REQUIREMENTS

A. Make all submittals far enough in advance of scheduled dates for installation to provide all required time for review, for securing necessary approvals, for possible revision and resubmittals and for placing orders and securing delivery. Submission of all shop drawings shall be through the General Contractor.

B. The contractor shall allow at least 14 days for review of original submittals or resubmittals except as follows:

1. Structural steel shop drawings shall be broken down into separate submittal packages for most efficient review and delivered at least two weeks apart.
2. Division 26

a. Special Systems shop drawings - 21 days

C. Submit one (1) reproducible unfolded transparency print of shop drawing. Upon Architects approval, Contractor shall provide five (5) opaque prints for owners use. Transparency will be returned to Contractor for printing and distribution as needed. Additional copies will be returned without review or mark-ups.

D. Submit four (4) each of samples.

E. Unless otherwise specifically permitted by the Project Manager, make all submittals in groups containing all associated items. Partial submittals may be rejected.

F. Accompany submittals with transmittal letter, in duplicate, containing:

1. Date
2. Project Title and number
3. Contractor's name and address
4. The number of each shop drawing, product data and sample submitted

G. Submittals shall include:

1. Date and revision dates
2. Project title and number
3. The name of:
    a. Architect
    b. Contractor
    c. Subcontractor
    d. Supplier
    e. Manufacturer
    f. Separate detailer when pertinent
4. Identification of product or material
5. Relation to adjacent structure or materials
6. Field dimensions, clearly identified as such
7. Specification section number
8. Applicable standards, such as ASTM number or Federal Specifications.
9. A blank space, for Architect’s review stamp

1.08 CONTRACTOR RESPONSIBILITIES

A. Review shop drawings, product data, and samples prior to submission.

B. Include noted and required corrections and indicate by stamp and signature that submittal is acceptable to Contractor. Submittals without stamp and signature will be rejected.

C. Verify:

1. Field measurements.
2. Field Construction criteria.
3. Conformance with specifications.

D. Coordinate each submittal with requirements of work and Contract Documents.

E. Contractor’s responsibility for errors and omissions in submittals is not relieved by Architect's review and approval.

F. Contractor’s deviations in submittal requirements shall not relieve Contractor from completing Contract requirements.

G. The submittal documents shall be transmitted using the ASD Procore Construction Management Program. Number the submittals with the CSI Section then a dash then the numerical order (01650-1). Resubmittals shall have the same number with an alpha at the end. (01650-1A).

H. Contractor shall update the Procore Submittal Log on a weekly basis until Submittal Process is complete.

1.09 RESUBMITTAL REQUIREMENTS

A. Revise initial drawings as required and resubmit as specified for initial submittal.

B. Indicate on drawings any changes which have been made other than those requested by the Architect.

C. Project data and samples: Submit new data and samples as required for initial submittal.

1.10 ARCHITECT'S DUTIES

A. Review submittals with a turn-around time for review of original or resubmittal of no more than fourteen (14) calendar days, except as indicated in paragraph 1.07 B above.

B. The review will be for conformance to the design concept and compliance with information given in the Contract Document. The Architect will make notations directly on the reproducible.

C. The review is intended to foresee unacceptable products to avoid the possibility of their rejection at the site. The review shall not be construed as:

1. Permitting a departure from the Contract Documents, unless specifically so noted.
2. Relieving the Contractor of the responsibility for errors or omissions.
3. Acceptance of an assembly in which an approved item is a part.
4. Approval of variations from previously approved items.
5. Approval of dimensions.

D. The Architect will review all samples. Such review will be for appearance only. Compliance with all other requirements is the responsibility of the Contractor.

E. Affix stamps and initials or signatures certifying the review of submittal.

F. Where the Contract Documents require the design of the structural, mechanical, or electrical systems or components of systems by a supplier, such systems or components shall be designed by a registered professional engineer and all calculations submitted to the Architect for his records, prior to starting fabrication or installation of the work. The Architect will not be responsible for the designs of such other Professionals.

1.11 VARIATIONS FROM CONTRACT DOCUMENTS

A. See Section 01630 for procedure.

B. If the Contractor fails to mention variations from the Contract Documents, he will not be relieved of the responsibility for executing the work in accordance with the Contract Documents.

1.12 SUBMITTALS FOR COLOR SELECTION

A. The Contractor shall take particular note that color selections cannot be made for the project until such time as all items requiring color selection have been submitted. After such submittal has been made, the Architect with Owner’s concurrence will within fourteen (14) days, make a complete color selection for the entire project.

B. It will be the contractor's responsibility to review the Contract Documents completely to determine items requiring color selection, obtain color samples from the manufacturer and submit to the Architect at the earliest possible date.

1.13 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

A. Contractor shall distribute copies of shop drawings and product data which carry Architect's stamp, to:

1. Contractor's file (required)
2. Job-site file (required)
3. Record Documents file (required)
4. Other prime Contractors (as required)
5. Subcontractors (as required)
6. Supplier (as required)
7. Fabricator (as required)
8. Others (as required)

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

AIRBORNE CONTAMINANT CONTROL

PART 1. GENERAL

1.01 SUMMARY:

A. Related sections:

1. Section 02 41 16 Demolition

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.

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 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 and previously sampled 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 do not 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.

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 school is not in session 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, students, staff, educational 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 result 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

SCHEDULE OF VALUES

PART 1. GENERAL

1.01 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.

1.02 REQUIREMENTS INCLUDED

A. Procedures for preparation and submittal of Schedule of Values.

1.03 RELATED REQUIREMENTS

A. Section 00700 - General Conditions and Section 00800 Supplementary General Conditions of the Contract for Construction.

B. Section 01311 – Project Schedule.

1.04 FORMAT

A. Schedule of Values shall be submitted on ASD Form 100B.

1.05 CONTENT

A. 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.

B. For each major subcontract, list products and operations of that subcontract as separate line items.

C. Include work allowances within line item of work.

D. Coordinate listings with progress schedule.

E. Component listings shall each include a directly proportional amount of Contractor’s overhead and profit.

F. For items on which payments will be requested for stored products, list the cost of stored products.

G. The sum of values listed shall equal total contract sum.

H. In addition to the above, values shall be listed for the following close out items.

1. As-builts.
2. O & M Manuals.
3. Warranties.
4. Landscape Maintenance Warranty.
5. Owner Training.
6. Demobilization (If mobilization is itemized).
7. Project close-out must retain a minimum of $25,000.00.

1.06 SUBMITTAL

A. Transmit under transmittal letter. Identify project by title and contract number.

1.07 SUBSTANTIATING DATA

A. When the Project Manager requires substantiating information, submit data justifying line item amounts in question.

B. Provide one copy of data with cover letter for each copy of application. Show application number, date and line item by number and description.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

CONSTRUCTION PHOTOGRAPHS

PART 1. GENERAL

1.01 REQUIREMENTS INCLUDED

A. Construction Photographs.

B. Submittals.

1.02 RELATED REQUIREMENTS

A. Section 01720 - Project Record Documents

1.03 PHOTOGRAPHY

A. Provide photographs of construction throughout progress of work.

B. Take photographs prior to covering completed work.

C. Take photographs at beginning and completion of elements of construction.

1. Asbestos Abatement process indicating the phases of abatement including:

    a. Existing Conditions
    b. Preparation Prior to Start of Work
    c. Work in Progress
    d. Completed Work
    e. Equipment used for Abatement Processes

2. Roof demolition

    a. Repairs
    b. Documentation of interim building protection measures
    c. Work in Progress
    d. Completed work
    e. Include roof designation and locations

3. Air infiltration and/or vapor barrier installation

4. Insulation installation

5. Final completion.

D. The Contractor, on a daily basis, shall photograph the demolition and abatement process. For their own use and distribution, the Project Manager shall on a regular basis, direct photographs and/or video recordings of construction operations and work in progress.

1.04 IMAGES

A. Digital images to be uploaded to the ASD Procore Construction Management Program Project Folder daily.

B. Photo file name to include location, item photographed and orientation of view.

1.05 TECHNIQUE

A. Provide factual presentation.

B. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field and minimum distortion.

C. The Contractor shall furnish access, labor and facilities to assist photographer(s). Photographs shall be taken with a Digital type camera with flash attachment in working order.

1. Furnish the Project Manager with a quantity equal to minimum ten (10) photographs per work area per day ISO appropriate to lighting conditions.

1.06 VIEWS

A. Consult with Project Manager for instructions on views required.

B. Locations of photos. It is preferred to have similar angles and locations of existing conditions, in progress and complete photos.

1.07 SUBMITTALS

A. All photos to be loaded in Procore and labelled.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

QUALITY CONTROL

PART 1. GENERAL

1.01 RELATED REQUIREMENTS

A. Section 00700 - General Conditions of the Contract for Construction and Section 00800 – Supplemental Conditions to the Contract for Construction.
B. Section 01090 - Referenced Specifications and Standards.
C. Section 01300 - Submittals.
D. Section 01410 - Testing Laboratory Services.
E. Section 01420 - Special Inspections.

1.02 GENERAL REQUIREMENTS

A. The contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with this section. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all construction operations, both onsite and offsite, and shall be keyed to the proposed construction sequence.

1.03 QUALITY CONTROL PLAN

A. The Contractor shall furnish for review by the Owner, not later than 30 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of this section. The plan shall identify personnel, procedures, control, instructions, tests, records, and forms to be used.

1. Content of the CQC Plan: The CQC Plan shall include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including the name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function, including the person assigned responsibility of CQC manager.
b. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Owner.)
c. Procedures for tracking preparatory and follow-up control phases, verification, and acceptance tests, including documentation.
d. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures shall establish verification that identified deficiencies have been corrected.
e. Reporting procedures, including proposed reporting formats.
f. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section.

2. Acceptance of Plan: Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Owner reserves the right to require the Contractor to make changes in the CQC Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3. Notification of Changes: After acceptance of the CQC Plan, the Contractor shall notify the Owner in writing of any proposed change. Proposed changes are subject to acceptance.

1.04 COORDINATION MEETING

A. After the Preconstruction Conference and before start of construction, the Contractor shall meet with the Project Manager to discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 15 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship with the Owner's special inspection personnel. Minutes of the meeting shall be prepared by the Contractor and signed by both the Contractor and the Project Manager.

1.05 QUALITY CONTROL ORGANIZATION

A. CQC Manager: The Contractor shall identify as CQC Manager an individual within the onsite work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC Manager shall be a person with a minimum of ten (10) years' experience in construction with a minimum of three (3) years' experience in Quality Control Management or Construction Inspection, preferably with some formal Quality Control training. This CQC Manager shall be on the site at all times during construction and shall be employed by the prime Contractor.

B. CQC Personnel: In addition to CQC personnel specified elsewhere in the contract, the Contractor shall provide as part of the CQC organization specialized personnel to assist the CQC Manager for the following areas: electrical, mechanical, structural, and architectural. Each of these individuals must have either an engineering degree in their respective field and two years of experience or five (5) years of related experience. These individuals are to be responsible to the CQC Manager; be physically present at the construction site during work on their areas of responsibility; have the necessary education and/or experience in accordance with this section. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan.

C. ASD CQC Testing Requirements: See Attachment 1 below.

ASD CQC TESTING REQUIREMENTS Attachment 1

MATERIAL TESTED	CHARACTERISTIC TESTED	SAMPLE FREQUENCY	SAMPLING POINT	REPORT DUE
CLASSIFIED FILL MATERIAL AND BACKFILL (TYPE II, TYPE IIA, BLENDED, ETC.)	GRADATION	1 PER SOIL TYPE AND NOTABLE CHANGE IN CHARACTERISTICS	PRIOR TO PLACEMENT	BEFORE USE ON PROJECT
	MOISTURE DENSITY (PROCTOR)			
	COMPACTION/DENSITY	STRUCTURAL = 1 PER LIFT & PER 500 S.F. TRENCHES = 1 PER LIFT & PER 150 L.F. FLATWORK = 1 PER LIFT & PER 5000 S.F.	IN PLACE	PRIOR TO NEXT LIFT
LEVELING COURSE (D-1, RAP, ETC.)	GRADATION	1 PER SOIL TYPE AND NOTABLE CHANGE IN CHARACTERISTICS	PRIOR TO PLACEMENT	BEFORE USE ON PROJECT
	MOISTURE DENSITY (PROCTOR)			
	COMPACTION/DENSITY	FLATWORK = 1 PER LIFT & PER 5000 S.F.	IN PLACE	PRIOR TO NEXT LIFT
STRUCTURAL IN-SITU BASE OF EXCAVATION (BOTTOM OF HOLE)	GRADATION	1 PER IN-SITU STRUCTURAL BOTTOM OF HOLE AND NOTABLE CHANGE IN CHARACTERISTICS	PRIOR TO PLACEMENT	BEFORE BUILDING UPON
	MOISTURE DENSITY (PROCTOR)			
	COMPACTION/DENSITY	BASE OF EX. = 1 PER FOUNDATION AREA	IN PLACE	BEFORE BUILDING UPON
STRUCTURAL CONCRETE	SAMPLING	1 MINIMUM PER PLACEMENT, PER DAY (1-25 C.Y.), 1 EVERY 50 C.Y. THEREAFTER. 1 AFTER EACH ADDITION OF ADMIXTURE OR WATER (SLUMP AND AIR ONLY AFTER ADDING ONLY WATER)	POINT OF PLACEMENT (NOT @ TRUCK)	REPORT-24 HRS VERBAL-TIME OF TEST
	SLUMP			
	AIR CONTENT			
	TEMPERATURE			
	COMP. STRENGTH			7 & 28 DAYS
ARCHITECTURAL & CIVIL CONCRETE	SAMPLING	1 MINIMUM PER PLACEMENT, PER DAY (1-25 C.Y.), 1 EVERY 100 C.Y. THEREAFTER.	POINT OF PLACEMENT OR TRUCK CHUTE	REPORT-24 HRS VERBAL-TIME OF TEST
	SLUMP			
	AIR CONTENT			
	TEMPERATURE			
	COMP. STRENGTH			7 & 28 DAYS
STRUCTURAL GROUT (BASEPLATES, CMU, ETC.)	SAMPLING	1 PER PLACEMENT, PER DAY	BATCH POINT (ENSURE BATCH CONFORMS TO MFR SPECS)	REPORT-24 HRS VERBAL-TIME OF TEST
	SLUMP			
	AIR CONTENT			
	TEMPERATURE			
	COMP. STRENGTH			7 & 28 DAYS

<table>
<tr><th>MATERIAL TESTED</th><th>CHARACTERISTIC TESTED</th><th>SAMPLE FREQUENCY</th><th>SAMPLING POINT</th><th>REPORT DUE</th></tr>
<tr><td rowspan="4">AC PAVING</td><td>GRADATION</td><td rowspan="2">1 PER PLACEMENT, PER DAY AND EVERY 700 TONS THEREAFTER.</td><td rowspan="2">BEHIND PAVER & PRIOR TO COMPACTION</td><td rowspan="4">REPORT-24 HRS VERBAL-TIME OF TEST OR OBSERVATION</td></tr>
<tr><td>CONTENT</td></tr>
<tr><td>COMPACTION/DENSITY</td><td>1 PER 5000 S.F.</td><td>AFTER FINAL ROLL</td></tr>
<tr><td>VISUAL</td><td>OBSERVE & DOCUMENT DEPTH, AGGREGATE SIZE, VOIDS IN AGGREGATE, OIL POOLING, ETC. VERIFY BATCH TICKET MIX DESIGN & PROJECT</td><td>DURING PLACEMENT</td></tr>
<tr><td colspan="5">CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCURRED FOR RETESTS, REINSPECTIONS, REPLACEMENT OF NON-CONFORMING PRODUCTS.
OWNER EMPLOYED SPECIAL INSPECTION VERIFICATION AND TESTING IS IN ADDITION TO THE CONTRACTOR'S QUALITY CONTROL TESTING. SPECIAL INSPECTION IN NO WAY DIMINISHES OR REDUCES THE CONTRACTOR'S QUALITY CONTROL OBLIGATIONS.</td></tr>
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1.06 CONTROL

A. Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least two phases of control shall be conducted by the CQC Manager for each definable feature of work as follows:

1. Preparatory Phase: This phase shall be performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved, and after copies are at the work site. This phase shall include:

   a. A review of each paragraph of applicable specifications, reference codes, and standards. A copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field shall be made available by the Contractor at the preparatory inspection. These copies shall be maintained in the field and available for use by the Owner until final acceptance of the work.
   b. A review of the contract drawings.
   c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
   d. Review of provisions that have been made to provide required control inspection and testing.
   e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
   f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
   g. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Documentation of construction tolerances and workmanship standards for that feature of work.
   h. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Project Manager.

i. Discussion of the initial control phase.
j. The Owner shall be notified at least 48 hours in advance of beginning the preparatory control phase. This phase shall include a meeting conducted by the CQC Manager and attended by the Superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

2. Follow-up Phase: Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted, and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon nor conceal non-conforming work.

1.07 TESTS

A. Testing Procedure: The Contractor shall provide inspections, tests, and similar quality control services, specified in individual Specification Sections, and required by governing authorities, (Costs for these services shall be included in the Contract Sum). Upon request, the Contractor shall furnish to the Owner duplicate samples of test specimens for possible testing by the Owner. Testing includes operation and/or acceptance tests when specified. The Contractor shall perform the following activities and record and provide the following data:

1. Verify that testing procedures comply with contract requirements.
2. Verify that facilities and testing equipment are available and comply with testing standards.
3. Check test instrument calibration data against certified standards.
4. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
5. Results of all tests taken, both passing and failing, shall be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test shall be given. If approved by the Project Manager, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an offsite or commercial test facility shall be provided directly to the Project Manager. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

B. Retesting: The Contractor is responsible for retesting where results of required inspections, tests, or similar services prove unsatisfactory and do not indicate compliance with Contract Document requirements, regardless of whether the original test was the Contractor's responsibility. Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

C. Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests, and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include but are not limited to:

1. Providing access to the Work, approved plans, and furnishing incidental labor and facilities necessary to facilitate inspections and tests.
2. Providing facilities for storage of all special inspection reports at the Project site and make available for review by the authorities having jurisdiction.
3. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
4. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
5. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
6. Security and protection of samples and test equipment at the Project site.

D. Correction of Work: The Contractor shall bear all costs of correcting all Work identified as defective or as failing to conform to the Contract Documents, including any additional Owner Inspection Costs, and additional compensation for the Architect's and/or Project Manager's additional services made necessary thereby.

E. Qualification for Laboratory Agencies: Engage inspection and testing service agencies, including independent testing laboratories free of conflict on interests with the General Contractor, which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specialize in the types of inspections and testing to be performed.

1. Each independent inspection and testing agency engaged on the Project shall be authorized by the authorities having jurisdiction to operate in the State of Alaska and the Municipality of Anchorage.
2. The Owner reserves the right to direct the specific location or area of work to be tested in accordance with contract requirements.

1.08 SPECIAL INSPECTIONS

A. The Owner will provide Special Inspections, tests, and similar quality control services as identified in Section 01420, "Special Inspections". Costs for the Special Inspection services are not included in the Contract Sum.

B. Duties of the Testing Agency: The independent testing agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Specification Sections shall cooperate with the Owner's Representative and Contractor in performance of its duties and shall provide qualified personnel to perform required inspections and tests.

1. The agency shall notify the Project Manager, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.
3. Special Inspection agency shall not perform any duties of the Contractor, nor be under contract to perform testing services required of the Contractor.

C. Coordination: The Contractor and each agency engaged to perform inspections, tests, and similar services shall coordinate the sequence of activities to accommodate required services. In addition, the Contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.
2. The Contractor shall notify the Owner's Special Inspectors, and the Owner, in writing 72 hours prior to required special inspection and coordinate with these inspectors so there are no additional project costs, schedule impacts or delays. The Contractor shall also be responsible to coordinate with the special inspectors and the Owner to identify on the construction schedule when these inspections shall occur.

1.09 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 in positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

1.10 MANUFACTURER'S INSTRUCTIONS

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

1.11 MANUFACTURER'S FIELD SERVICE

A. When required by individual Specifications Section, submit manufacturer's certificate, signed by responsible officer of the Manufacturer, that products meet or exceed specified requirements.

B. When required by manufacturer, have manufacturer provide qualified representative to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment as applicable. Manufacturer Field Representative shall make a written report of observations and recommendations to the Project Manager.

1.12 SAMPLE PANELS AND MOCK-UPS

A. Sample panels and/or mock-ups shall be used to establish uniform level of workmanship and finish color and texture. Accepted sample or mock-up shall serve as minimum standard of quality for subsequent work.

B. Work on any Section requiring a sample panel or mock-up shall be approved in writing by the Owner.

C. Sample panels or mock-ups may be requested by the Owner even though not specifically required of Specification Section to clarify level of workmanship, color, or texture.

D. Tests shall be performed in accordance with Section 01410 and this section.

1.13 OBSERVATION

The following stages of construction specifically require observation by the Architect, Owner, and other Authorities having jurisdiction. Provide the indicated notice to the Project Manager prior to

commencing work on the phase or upon completion as appropriate:

A. Stages that require two day notice include:

1. Completion of utility trench excavation prior to placement of bedding.
2. Completion of utility pipe installation prior to backfill.
3. Completion of subdrain system's drainage mat and perforated pipe prior to backfill.
4. Completion of driveway, parking lot and sidewalk excavation, installation of geotextile fabric and backfill prior to placement of pavement.
5. Completion of asphalt concrete pavement placement.
6. Completion of portland cement concrete pavement placement.
7. Completion of building excavation, geotextile fabric installation, and backfill prior to placement of concrete floor slab.
8. Completion of excavation forming prior to concrete placement.
9. Completion of concrete masonry, as damp-proofing work is beginning.
10. Wall framing and sheathing completed, observation of shear wall fastening and connections.
11. Mechanical and electrical rough-in and wall blocking, prior to cover.
12. Insulation and vapor barrier installation prior to cover, observation required as work progresses, notify as phases are complete.
13. Completion of mock-ups and finishes as mock-ups and areas are completed.
14. Prior to beginning roofing.

B. Stages that require five day notice include:

1. Substantial Completion.
2. Operational instructions.
3. Final Completion.

1.14 COMPLETION INSPECTION

A. Punch-Out Inspection: Near the end of the work, or any increment of the work established by a time stated in the specifications, the CQC Manager shall conduct an inspection of the work. A punch list of items which do not conform to the approved drawings and specifications shall be prepared and included in the CQC documentation, as required by Section 01400, paragraph 1.15 A.4. The list of deficiencies shall include the estimated date by which the deficiencies will be corrected. The CQC Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, the Contractor shall notify the Owner that the facility is ready for the Owner Substantial inspection.

B. Final Inspection: The Contractor’s Quality Control Inspection personnel shall be in attendance at the final inspection.

1.15 DOCUMENTATION

A. The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

1. Contractor/Subcontractor and area of responsibility.
2. Operating equipment with hours worked, idle, or down for repair.
3. Work performed each day, giving location, description, and by whom.
4. Test and/or control activities performed with results and references to

specifications/drawings requirements. The control phase shall be identified. List of deficiencies noted, along with corrective action.

5. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawing requirements.
6. Offsite surveillance activities, including actions taken.
7. Instructions given/received and conflicts in plans and/or specifications.
8. Any other remarks impacting quality control.
9. Contractor's verification statement.

B. These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Owner on a weekly basis within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. Reports shall be signed and dated by the CQC Manager. The report from the CQC Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

1.16 NOTIFICATION OF NONCOMPLIANCE

A. The Project Manager will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Project Manager may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

TESTING LABORATORY SERVICES

PART 1. GENERAL

1.01 REQUIREMENTS INCLUDED

A. Contractor will employ and pay for the services of an independent testing laboratory, free of conflict of interests with the General Contractor, to perform specified testing.

B. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the work of the contract.

C. Inspection, sampling and testing required as called for in the following technical sections.

D. The Contractor shall pay for re-inspections and re-testing required because of defective work or ill-timed notices.

1.02 RELATED REQUIREMENTS

A. Article 7.7, Section 00700 - General Conditions of the Contract for Construction.

B. Inspections and testing required by laws, ordinances, rules, regulations, orders, project Contract Documents, or approvals of public authorities.

C. Certification of Products: Respective Sections of Specifications.

D. Test, Adjust, and Balance of Equipment: Respective Sections of Specifications.

E. Each Specification Section Listed: Laboratory test required, and standards for testing.

1.03 QUALIFICATIONS OF LABORATORY

A. Independent laboratory acceptable to Owner, Architect and Building Official.

B. Meet “Recommended Requirements for Independent Laboratory Qualification” latest edition, published by American Council of Independent Laboratories, 1300 “I” Street N.W., Washington, D.C. 20005.

C. Meet ASTM E-329 latest edition, "Standards of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as used in Construction."

1.04 LABORATORY’S DUTIES

A. Laboratory authorized to operate in Alaska, with a full-time engineer registered in Alaska on staff to review services.

B. Ascertain and certify compliance with Contract Documents.

C. Promptly submit, unless otherwise indicated, written Inspection and Test Report to each of the following within forty-eight hours of inspection:

1. Owner: Two (2) copies
2. Architect: Two (2) copies
3. Contractor: Two (2) copies or as required

D. Include the following on Test Reports:

1. Date issued.
2. Project title and location.
3. Testing Laboratory name and address.
4. Inspector's name.
5. Date of inspection or sampling.
6. Record of temperature and weather.
7. Date of test.
8. Identification of product tested.
9. Test location in Project.
10. Type of inspection or test.
11. Observations regarding compliance with Contract Documents.

E. Laboratory is not authorized to:

1. Release, revoke, alter, or enlarge on Contract Document requirements.
2. Approve or accept any portion of work.
3. Assume any duties of Contractor.
4. Stop Work.

1.05 CONTRACTOR'S DUTIES

A. Cooperate with laboratory personnel, provide access to work, and to Manufacturer's operations.

B. Secure and deliver to the laboratory adequate quantities of representation samples of materials proposed to be used and which require testing.

C. Provide to the laboratory the preliminary design mix proposed to be used for concrete, and other materials mixes which require control by the testing laboratory.

D. Furnish copies of products test reports as required.

E. Furnish incidental labor and facilities:

1. To provide access to work to be tested.
2. To obtain and handle samples at the project site or at the source of the project to be tested.
3. To facilitate inspections and tests.
4. For storage and curing of test samples.

F. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests. Twenty-four hour minimum notification.

1. When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred due to Contractor's negligence.

G. Notify Architect and Owner a minimum twenty-four hours in advance of any testing.

H. Repair test holes to match original conditions.

I. Quality Control is the responsibility of the General Contractor. The General Contractor should employ a testing firm to provide testing as required to monitor and maintain his own

quality control program, as well as satisfy the specific requirements of the Contract Documents.

1.06 OWNER'S TESTING LABORATORY SERVICES

A. The Owner may also employ and pay for the services of an Independent Testing Laboratory to perform specified testing as indicated in the Supplementary General Conditions and in this section. This testing service will be employed for Quality Assurance Only. QUALITY CONTROL IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

B. The Contractor shall cooperate with the Owner's laboratory to facilitate the execution of its services.

C. A copy of the Owner's laboratory written report of each test will be distributed to the Contractor.

D. When initial tests indicate work does not comply with the Contract Document, all additional tests required, until tests pass, shall be at the expense of the Contractor.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

SPECIAL INSPECTIONS

PART 1. GENERAL

1.01 REQUIREMENTS INCLUDED

A. Purpose

B. Types of Work

C. Owner Responsibilities

D. Engineer or Architect of Record Responsibilities

E. Contractor Responsibilities

F. Special Inspector Responsibilities

1.02 RELATED REQUIREMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division - 1 Specification Sections, apply to this Section.

1. Section 00700 - General Conditions of the Contract for Construction and Section 00800 – Supplementary General Conditions to the Contract for Construction.
2. Section 01090 - Referenced Specifications and Standards
3. Section 01300 - Submittals
4. Section 01400 - Quality Control Services

1.03 REFERENCES

A. International Building Code (IBC) - SECTION 1704 - SPECIAL INSPECTIONS

B. Uniform Administrative Code (UAC) - SECTION 306 - SPECIAL INSPECTIONS

1.04 PURPOSE OF SPECIAL INSPECTIONS

A. In accordance with IBC Section 1704.1 General “In addition to the inspections required by Section 109, the owner or the engineer or architect of record acting as the Owner’s agent shall employ one or more special inspectors who shall provide inspections during construction on the types of work listed under 1704.”

1.05 TYPES OF WORK

A. Except as provided in IBC Section 1704, the types of work listed below shall be inspected by a Special Inspector.

1. Concrete.
2. Bolts installed in concrete.
3. Reinforcing steel in concrete.
4. Structural welding.
5. High-strength bolting.
6. Structural masonry.
7. Spray-applied fireproofing.
8. Special grading, excavation, and filling.

B. Continuous and Periodic Special Inspection and Approved Fabricators shall be a part of the Special Inspection requirements.

1.06 OWNER RESPONSIBILITIES

A. The Owner or the Engineer or Architect of Record acting as the Owner's agent shall employ one or more Special Inspectors who shall provide inspections during construction on the types of work listed.

B. The Owner shall be responsible for providing a full set of drawings and specifications to each Special Inspector.

1.07 ENGINEER OR ARCHITECT OF RECORD

A. The Engineer or Architect of Record, under the Owner's direction, may be required to employ one or more Special Inspectors who shall provide inspections during construction on the types of work listed under IBC Section 1704.

B. The Engineer or Architect of Record, under the Owner's direction, may be responsible for coordinating the Pre-Construction Meeting, with the Contractor, to include Special Inspectors for the purpose of reviewing the Special Inspection Program and responsibilities of each member.

C. The Engineer or Architect of Record is responsible for clearly indicating the design parameters and material selection on the project plans and/or specifications.

D. The Engineer or Architect of Record shall determine when and where Special Inspection is necessary in order to meet requirements of the Code.

E. It shall be the responsibility of the Architect or Engineer of Record to prepare a typewritten Special Inspection Program for submittal to the Building Official for review and approval (UAC 302.5). Such approval shall be obtained prior to issuance of a Building Permit.

F. Design changes required to correct non-conforming work already incorporated into the completed construction, shall be identified to the Building Official for review and approval as a Change Order. Such Changes shall be generated by the Engineer or Architect of Record.

1.08 CONTRACTOR RESPONSIBILITIES

A. The Contractor shall be responsible for calling a Pre-Construction meeting to review Special Inspection requirements as they pertain to the project. Attendees shall include the Contractor's Construction Supervisor, ASD Project Manager, the Engineer or Architect of Record, the Building Safety Division Inspector assigned to the project, all Special Inspectors, and any subcontractors who will actually be constructing items requiring Special Inspection. This meeting shall not be considered a substitute for any pre-construction meeting held between the Contractor and the Owner and Engineer or Architect of Record although they may coincide.

B. The Contractor shall be responsible for notifying the Special Inspector or special inspection firm regarding required special inspections. Notice shall be a minimum of 24 hours in advance.

C. The Contractor shall have on site at all times, an approved set of plans and construction documents available to the Special Inspector for the purpose of reference or clarification.

D. The Contractor shall be responsible for retaining, on site, a copy of all Special Inspection records submitted by the Special Inspector.

1.09 SPECIAL INSPECTOR RESPONSIBILITIES

A. The Special Inspector shall observe the work assigned for conformance with the approved design drawings and specifications.

B. Special Inspectors requiring certification by an agency such as ICBO, ACI, or AWS shall carry current certification with them while performing the Work on site.

C. The Special Inspector shall remain on site at all times when work requiring Special Inspection is in progress.

D. The Special Inspector shall immediately bring all nonconforming items of work or material to the immediate attention of the Contractor for correction.

E. The Special Inspector or Inspection Firm shall submit required written reports to the Building Official (two copies), the Owner, and the Engineer or Architect of Record within 48 hours of inspection.

F. Special Inspectors or Inspection Firms shall submit a final signed report to the Building Safety Division stating that all items requiring Special Inspection were, to the best of their knowledge, in conformance with the approved design drawings, specifications, approved change orders and the applicable workmanship provided in the International Building Code. Items not in conformance, unresolved items, and any discrepancies in inspection coverage shall be specifically itemized in the final report.

G. Special Inspectors shall meet all certification requirements stated in the Special Inspection Program and required by the Municipality of Anchorage Building Safety Division and shall maintain certification at all times throughout the project.

END OF SECTION

STRUCTURAL OBSERVATION

PART 1. GENERAL

1.01 REQUIREMENT INCLUDED

A. Purpose

B. Types of Work

C. Owner Responsibilities

D. Engineer or Architect of Record Responsibilities

E. Contractor Responsibilities

F. Structural Observer Responsibilities

1.02 REFERENCES

A. International Building Code (IBC)–Section 1709 STRUCTURAL OBSERVATION.

1.03 PURPOSE OF STRUCTURAL OBSERVATION

A. In accordance with IBC Section 1709, the purpose of Structural Observation is as defined in IBC Section 1702.1: Visual observation of the structural system, for general conformance to the approved plans and specifications, at significant construction stages and at completion of structural system. Structural Observation does not include or waive the responsibility for the inspections required by other sections of the IBC.

1.04 TYPES OF WORK

A. The Design Structural Engineer or another engineer designated by the Design Structural engineer shall perform Structural Observation.

B. Observed deficiencies shall be reported in writing to the Owner's Representative, Special Inspector, Contractor, and the Building Official.

C. The Structural Observer shall submit to the Building Official a written statement that the site visits have been made and identifying any reported deficiencies that, to the best of the Structural Observer's knowledge, have not been resolved.

1.05 OWNER'S RESPONSIBILITIES

A. The Owner or the Engineer or Architect of Record acting as the Owner's Agent shall employ one or more Structural Observers who shall provide structural observation during construction on the types of work identified under IBC Section 1709.

1.06 ENGINEER OR ARCHITECT OF RECORD

A. The Engineer or Architect of Record, under the Owner's direction, may be required to employ one or more Structural Observers who shall provide inspections during construction on the types of work defined under IBC Section 1709.

B. The Engineer or Architect of Record, under the Owner's direction, with the Structural

Observer, will review with the Contractor the Structural Observer Program and responsibilities of each member.

C. The Engineer or Architect of Record is responsible for clearly indicating the design parameters and material selection on the project plans and/or specifications.

D. The Engineer or Architect of Record shall determine when and where Structural Observation is necessary in order to meet requirements of the Code.

E. Design changes required to correct non-conforming work already incorporated into the completed construction, shall be identified to the Building Official for review and formal approval. Such changes shall be generated by the Engineer or Architect of Record.

1.07 CONTRACTOR RESPONSIBILITIES

A. The Contractor shall be responsible for calling a Structural Observation Organizational meeting to review the Structural Observation requirements as they pertain to the project. Attendees shall include the Contractor's Construction Supervisor, ASD Project Manager, the Engineer or Architect of Record, the Building Safety Division Inspector assigned to the project, all Structural Observers, and any subcontractors who will actually be constructing items requiring Structural Observation. This meeting shall not be considered a substitute for any pre-construction meeting held between the Contractor and the Owner and Engineer or Architect of Record although they may coincide.

B. The Contractor shall have on site at all times, an approved set of plans and construction documents available to the Structural Observer for the purpose of reference or clarification.

C. The Contractor shall be responsible for retaining, on site, a copy of all Structural Observation records submitted by the Structural Observer.

1.08 STRUCTURAL OBSERVER RESPONSIBILITIES

A. The Structural Observer shall observe the work assigned for conformance with the approved design drawings and specifications.

B. The Structural Observer shall remain on site at all times when work requiring Structural Observation is in progress.

C. The Structural Observer shall immediately bring all nonconforming items of work or material to the immediate attention of the Contractor for correction.

D. The Structural Observer shall submit required written reports to the Building Official (two copies), the Owner, and the Engineer or Architect of Record within 48 hours of inspection.

E. The Structural Observers shall submit a final signed report to the Building Safety Division stating that all items requiring Structural Observation were, to the best of their knowledge, in conformance with the approved design drawings, specifications, approved change orders and the applicable workmanship provided in the International Building Code. Items not in conformance, unresolved items, and any discrepancies in inspection coverage shall be specifically itemized in the final report.

END OF SECTION

MAINTENANCE OF TRAFFIC

PART 1. GENERAL

1.01 DESCRIPTION OF WORK

A. When working adjacent to school playgrounds, provide flagmen. Payment for such flagging and protective flagmen services shall be borne by Contractor.

B. Contractor shall retain responsibility for traffic operations and protective measures to assure safe flow of traffic. Contractor shall cooperate with Owner so that traffic flow is minimally impeded by execution of work under this Contract.

1.02 SUBMITTALS

A. Prior to starting any work, Contractor shall submit to the Authority having Jurisdiction and the Project Manager, detailed plan of his proposed method for controlling traffic at each affected location. Proposed traffic control plan shall show and describe proposed locations and time durations covering the following:

1. Vehicular traffic routing including School Buses.
2. Traffic blockage anticipated to be caused by work under this contract.
3. Address conflicts between Pedestrian and vehicular traffic.

1.03 TRAFFIC MAINTENANCE FACILITIES

A. Other than as shown on approved traffic control plans, at no time shall Contractor’s operations interfere with safe and orderly operation of school. Encroachment by Contractor’s operations will not be permitted.

B. For duration of Contract, Contractor shall immediately repair or replace any and all appurtenances damaged or destroyed in performance of work included herein.

C. Upon completion of work, temporary traffic maintenance items furnished by Contractor shall remain his property and shall be removed from site by Contractor.

D. Contractor shall utilize dust control methods to control dust on access streets and project site to satisfaction of the Project Manager.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

TEMPORARY TREE AND PLANT PROTECTION

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD-OCCUPIED FACILITY

A. Portions of this building are classified as a child-occupied facility in accordance with 40 CFR 745, and lead-based paint has been identified 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 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 RELATED DOCUMENTS

A. Drawings.

B. Refer to Specification Divisions 0 and 1 for project general requirements.

1.03 SUMMARY

A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.

1.04 DEFINITIONS

A. Caliper: Diameter of a trunk measured at 6 inches above the ground for trees up to, and including, 4-inch size; and 12 inches above the ground for trees larger than 4-inch size.

B. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.

C. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.

D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.05 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification: For each type of the following:

1. Organic Mulch: 1-quart volume of organic mulch; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch.
2. Rock Mulch: 2 lb. of each mineral mulch required, in sealed plastic bags labeled with source of mulch. Sample shall be typical of the lot of material to be delivered and installed on the site; provide an accurate indication of color, texture, and makeup of the material.
3. Protection-Zone Fencing: Assembled Sample.
4. Protection-Zone Signage: Full-size Samples of each size and text, ready for installation.

C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.

D. Qualification Data: For qualified arborist and tree service firm.

E. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.

F. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

G. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.

1. Use sufficiently detailed photographs or videotape.
2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

1.06 QUALITY ASSURANCE

A. Arborist Qualifications: Licensed arborist in jurisdiction where Project is located.

B. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.

C. Preinstallation Conference: Conduct conference at Project site.

1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:

a. Enforcing requirements for protection zones.
b. Arborist's responsibilities.
c. Field quality control.

D. Construction schedule. Verify availability of materials, personnel, and equipment needed to make progress and avoid delays.

1.07 PROJECT CONDITIONS

A. The following practices are prohibited within protection zones:

1. Storage of construction materials, debris, or excavated material.
2. Parking vehicles or equipment.
3. Foot traffic.
4. Erection of sheds or structures.
5. Impoundment of water.
6. Excavation or other digging unless otherwise indicated.
7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.

B. Do not direct vehicle or equipment exhaust toward protection zones.

C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

PART 2. PRODUCTS

2.01 MATERIALS

A. Protection-Zone Fencing: Fencing fixed in position and meeting the following requirements.

1. Plastic Protection-Zone Fencing: Plastic construction fencing constructed of high-density extruded and stretched polyethylene fabric with 2-inch maximum opening in pattern and weighing a minimum of 0.4 lb/ft.; remaining flexible from minus 60 to plus 200 deg F; inert to most chemicals and acids; minimum tensile yield strength of 2000 psi and ultimate tensile strength of 2680 psi; secured with

plastic bands or galvanized-steel or stainless-steel wire ties; and supported by tubular or T-shape galvanized-steel posts spaced not more than 8 feet apart.

a. Height: 4 feet.
b. Color: High-visibility orange, nonfading.

B. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes pre-punched and reinforced; legibly printed with nonfading lettering.

PART 3. EXECUTION

3.01 EXAMINATION

A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.

B. For the record, prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

3.02 PREPARATION

A. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

B. Tree-Protection Zones: Mulch areas inside tree-protection zones and other areas indicated.

1. Apply 4-inch average thickness of organic mulch. Do not place mulch within 6 inches of tree trunks.

3.03 TREE- AND PLANT-PROTECTION ZONES

A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin in a manner that will prevent people and animals from easily entering protected area except by entrance gates. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation.

B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Landscape Architect. Install one sign spaced approximately every 35 feet on protection-zone fencing, but no fewer than four signs with each facing a different direction.

C. Maintain protection zones free of weeds and trash.

D. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Landscape Architect.

E. Maintain protection-zone fencing and signage in good condition as acceptable to Landscape Architect and remove when construction operations are complete and equipment has been removed from the site.

3.04 EXCAVATION

A. General: Excavate at edge of protection zones and for trenches indicated within protection zones according to requirements in Section 31 00 00 "Earthwork."

B. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or

pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.

C. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately 3 inches back from new construction and as required for root pruning.

D. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

3.05 ROOT PRUNING

A. Prune roots that are affected by temporary and permanent construction. Prune roots as follows:

1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.
2. Cut Ends: Coat cut ends of roots more than 1-1/2 inches in diameter with an emulsified asphalt or other coating formulated for use on damaged plant tissues and that is acceptable to arborist.
3. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
4. Cover exposed roots with burlap and water regularly.
5. Backfill as soon as possible according to requirements in Section 31 00 00 "Earthwork "

B. Root Pruning at Edge of Protection Zone: Prune roots flush with the edge of the protection zone, by cleanly cutting all roots to the depth of the required excavation.

C. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

3.06 CROWN PRUNING

A. Prune branches that are affected by temporary and permanent construction. Prune branches as follows:

1. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
2. Pruning Standards: Prune trees according to ANSI A300 (Part 1).
3. Cut branches with sharp pruning instruments; do not break or chop.
4. Do not apply pruning paint to wounds.

B. Chip removed branches and dispose of off-site.

3.07 REGRADING

A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

B. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.

C. Minor Fill within Protection Zone: Where existing grade is 2 inches or less below elevation of finish grade, fill with planting soil. Place planting soil in a single uncompacted layer and hand grade to required finish elevations.

3.08 FIELD QUALITY CONTROL

A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

3.09 REPAIR AND REPLACEMENT

A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Landscape Architect.

B. Trees: Remove and replace trees indicated to remain that are more than 66 percent dead or in an unhealthy condition or are damaged during construction operations that Landscape Architect determines are incapable of restoring to normal growth pattern.

1. Provide new trees of same size and species as those being replaced for each tree that measures 4 inches or smaller in caliper size.
2. Provide two new tree(s) of 4-inch caliper size for each tree being replaced that measures more than 4 inches in caliper size.

C. Soil Aeration: Where directed by Landscape Architect, aerate surface soil compacted during construction. Aerate 10 feet beyond drip line and no closer than 36 inches to tree trunk. Drill 2-inch diameter holes a minimum of 12 inches deep at o.c. Backfill holes with an equal mix of augered soil and sand.

3.10 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

END OF SECTION

PROJECT SIGN

PART 1. GENERAL

1.01 DESCRIPTION OF WORK

A. Furnish, install, and maintain project identification sign.

B. Project sign must be approved and permitted, prior to erections. Allow no other signs to be displayed.

1.02 PROJECT IDENTIFICATION

A. Painted sign of 32 sf. area with painted graphic, or printed vinyl sign, content to include:

1. Title of project
2. Name of Owner.
3. Names of professional consultants
4. Prime contractor.
5. Major subcontractors.
6. An area 18" square for Owner logo.

B. Graphic design, style of lettering, and colors: As shown in this section.

C. Erect on the site at a lighted location of high public visibility as approved by Project Manager.

1.03 QUALITY ASSURANCE

A. Sign Painter: Professional experience in type of work required.

B. Finishes, Painting: Adequate to resist weathering and fading during scheduled construction period.

PART 2. PRODUCTS

2.01 SIGN MATERIALS

A. Structure and Framing: may be new or used, wood or metal, in sound condition structurally adequate to work and suitable for specified finish.

B. Sign Surfaces: Exterior softwood plywood with medium density overlay, standard large sizes to minimize joints. Thickness as required by standards to span framing members, to provide even, smooth surface without waves or buckles.

C. Rough Hardware: Galvanized.

D. Paint: Exterior quality semi-gloss Alkyd, as specified in painting specification.

E. Vinyl Lettering and Graphics may be considered upon submittal to Project Manager.

PART 3. EXECUTION

3.01 PROJECT SIGN

A. Paint exposed surfaces of supports, framing, and surface material; one coat of primer and one coat of exterior paint.

B. Paint graphics in styles, sizes and colors selected.

3.02 MAINTENANCE

A. Maintain sign and supports in a neat, clean condition; repair damages to structure, framing or sign.

3.03 REMOVAL

A. Remove sign, framing, supports, and foundations at completion of the project.



END OF SECTION

MATERIALS AND EQUIPMENT

PART 1. GENERAL

1.01 DESCRIPTION

A. Materials and Equipment incorporated into Work shall:

1. Conform to applicable specifications and standards.
2. Comply with size, make, type, and quantity specified, unless otherwise approved in writing.

B. Manufactured and Fabricated Products:

1. Manufacture like parts of duplicate units to standard size and gauges, and to be interchangeable.
2. Two or more items of same kind shall be identical, and by same Manufacturer.
3. Products shall be suitable for service conditions.
4. Equipment shall comply with capacity, sizes, and dimensions shown or specified, unless otherwise approved in writing.

C. Do not use materials or equipment for any purpose other than that for which designed or specified.

1.02 RELATED REQUIREMENTS

A. Section 01010: Summary of Work

B. Section 01340: Shop Drawing, Product Data, and Samples.

C. Section 01630: Substitution and Product Options

D. Section 01710: Cleaning

1.03 CONTRACTOR'S OPTIONS

A. For products specified only by reference standard, select any product meeting standard.

B. For products specified by naming several products, select any of such products.

C. For products specified by naming one or more products and "or approved", select any one specified product or submit request for substitution as specified.

1.04 INAPPROPRIATE PRODUCTS AND METHODS

A. If Contractor believes that any specified product, method, or system is inappropriate for use, he shall, if possible, so notify the Project Manager at least ten (10) working days prior to bid opening, and if not possible, such notice shall be given before performing work in question. If notice of objection is not received within the specified time limits, it will be assumed that Contractor agrees that specified products, methods, and systems are not inappropriate for use.

B. No asbestos containing materials are to be incorporated into the project. Certification signed by the General Contractor shall state that Asbestos Containing materials have not been installed under this project. Turn certification in to Project Manager no later than first

payment application submittal. Recertify to Owner at substantial completion inspection.

1.05 PRODUCT SUBSTITUTIONS

A. Refer to Section 01630.

1.06 NUMBER OF PRODUCTS REQUIRED

A. Whenever in specifications a product is referred to in singular number, such reference shall include as many such products as are shown on Drawings are required to complete the Work.

1.07 PRODUCTS LIST

A. Submit to Project Manager complete list of major products proposed for use; Specification Section, include proprietary product name, manufacturer's name, and installing Subcontractor's name in accordance with requirement of Section 01340 Shop Drawing, Product Data, and Samples.

1.08 MANUFACTURER'S INSTRUCTIONS

A. Perform work in accordance with Manufacturer's instructions.

B. Do not omit preparatory or installation procedures required by Manufacturer, unless specifically modified by Contractor Documents.

C. When Contract Documents require Work to comply with Manufacturer's instruction, obtain and distribute such instructions to parties performing work, including copies to Architect and Project Manager. Maintain one set at job site during installation and until acceptance.

D. Handle, install, connect, clean, condition, and adjust products in strict accord with such instructions and in conformance with specified requirements.

E. Should job conditions or specified requirements conflict with Manufacturer's instructions, consult Project Manager for further instructions.

F. Do not proceed with work without clear instructions.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

DELIVERY, STORAGE, AND HANDLING

PART 1. GENERAL

1.01 DESCRIPTION OF WORK

A. Provide for expeditious transportation and delivery of products to project site undamaged, on schedule to avoid delay of the Work.

B. Providing equipment and personnel at site to unload and handle products in manner to avoid damage to products.

C. Provide secure storage and protection for products to be incorporated into the Work, and maintenance and protection for products after installation and until completion of the Work.

1.02 DELIVERY

A. Arrange deliveries of products in accord with construction schedules and in ample time to facilitate inspection prior to installation.

B. Coordinate deliveries to avoid conflict with work and conditions at site. Contractor deliveries must not conflict with:

1. Work of other Contractors, or Owner.
2. Limitations of storage space.
3. Availability of equipment and personnel for handling products.
4. Owner's use of premises.

C. Deliver products in undamaged condition in original containers or packaging, with identifying labels intact and legible.

D. Partial deliveries of component parts of equipment shall be clearly marked to identify equipment, to permit easy accumulation of parts and to facilitate assembly.

E. Immediately upon delivery, inspect shipment to assure:

1. Product complies with requirements of contract documents and reviewed submittals.
2. Quantities are correct.
3. Containers and packages are intact, labels are legible.
4. Products are protected and undamaged. Minor damages may be repaired, provided finish items are equivalent in all respects to new work.

1.03 PRODUCT HANDLING

A. Provide equipment and personnel necessary to handle products, including those provided by Owner, by methods to prevent soiling or damage to products or packaging.

B. Provide additional protection during handling as necessary to prevent scraping, marring, or otherwise damaging products or surrounding surfaces.

C. Handle products by methods to prevent bending or over-stressing.

D. Lift heavy components only at designated lifting points.

1.04 STORAGE

A. Store products immediately on delivery and protect until installed in the Work. Store in accord with manufacturer's instructions, with seals and labels intact and legible.

B. Store products subject to damage by elements in substantial weather-tight enclosures.

1. Maintain temperatures with ranges required by manufacturer's instructions.
2. Provide humidity control for sensitive products, as required by manufacturer's instructions.
3. Store unpacked products on shelves, in bins, or in neat piles, accessible for inspection.

C. Exterior Storage

1. Provide substantial platforms, blocking, or skids to support fabricated products 4" above ground, prevent soiling or staining.
2. Cover products, subject to discoloration or deterioration from exposure to elements, with impervious sheet coverings. Avoid use of non-vented plastic or canvas shelters which could create humidity chambers. Provide adequate ventilation to avoid condensation.
3. Store loose granular materials in solid surfaces such as paved areas or provide plywood or sheet materials to prevent mixing with foreign matter.

a. Provide surface drainage to prevent flow or ponding of rainwater.
b. Prevent mixing of refuse or chemically injurious materials or liquids.

4. Provide exterior storage area within Contractor Secure area.

D. Arrange storage in manner to provide easy access for inspection.

1.05 MAINTENANCE OF STORAGE

A. Maintain periodic system of inspection of stored products on scheduled basis to assure that:

1. State of storage facilities is adequate to provide required conditions.
2. Required environmental conditions are maintained on continuing basis.
3. Surfaces of products exposed to elements are not adversely affected. Any weathering of products, coatings, and finishes is not acceptable under requirements of contract documents.

B. Mechanical and electrical equipment which requires servicing during long-term storage shall have complete manufacturer's instructions for servicing accompanying each item, with notice of enclosed instructions shown on exterior of package.

1.06 PROTECTION AFTER INSTALLATION

A. Provide protection of installed products to prevent damage from subsequent operations, usage or vandalism. Remove when no longer needed, prior to completion of work.

B. Control traffic to prevent damage to equipment and surfaces.

C. Provide coverings to protect finished surfaces from damage.

1. Cover projections, wall corners, jambs, sills, and soffits of openings, in areas used for traffic and for passage of products in subsequent work.
2. Protect finished floors and stairs from dirt and damage.

    a. In areas subject to foot traffic, secure heavy paper, sheet goods, and other materials in place.
    b. For movement of heavy products, lay planking or similar materials in place.
    c. For storage of product, lay tight wood sheathing in place.

D. Waterproofed and Roofing Surfaces

1. Prohibit use of surface for traffic and any kind, or for storage of any products.
2. When some activity must take place in order to carry out Contract, obtain recommendations from installer for protection of surface.

    a. Install recommended protection, remove on completion of that activity.
    b. Restrict use of adjacent unprotected areas.

1.07 DAMAGED PRODUCTS

A. Remove damaged or deteriorated materials from the premises. Replace materials which have been damaged.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

SUBSTITUTION AND PRODUCT OPTIONS

PART 1. GENERAL

1.01 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.

1.02 DESCRIPTION OF WORK

A. Contractor's options in selection of products.

B. Requests for substitution of products.

1.03 RELATED REQUIREMENTS

A. Section 00100 - Instruction to Bidders.

B. Section 00700 and 00800 - General Conditions and Supplementary General Conditions.

C. Section 01340 - Shop Drawings, Product Data, and Samples.

1.04 CONTRACTOR’S OPTIONS

A. Reference to any equipment, material, article, or patented process by trade name, make or catalog number shall be regarded as establishing a standard of quality and characteristics of products that will be satisfactory and shall not be construed as limiting competition.

B. Whether or not specifically named equipment or material is followed by the term “equivalent" or “equivalent product" or “approved equal", it shall not exclude other manufacturer's equipment or materials from consideration, unless "NO SUBSTITUTIONS" called out in the specification sections. In this usage, the terms "equivalent" and "equal" or "approved equal" are interchangeable though a product or method considered for substitution may be equivalent to a specified product or method without actually being equal, by virtue of performance, appearance, and meeting specified or implied criteria.

C. No item will be considered for substitution prior to the bid opening. Consequently, the Bidder shall make its own determination if a substituted item will be equivalent to or better than that specified or indicated in regard to quality, workmanship, finish, space requirements, electrical requirements, performance and guarantees or warranties. Any change in bid and/or contract amount due to any subsequent rejection of product found "not equivalent" will not be considered.

D. After the Notice to Proceed the Contractor shall submit sufficient data in accordance with this Section to establish equality. The Owner’s Representative shall be the sole judge of equality and acceptability.

E. Acceptance of substitute materials will not relieve the Contractor of the responsibility for any changes in the Contractor's own work or in the work of other trades caused by the substitution. Any additional costs resulting from substitutions are the responsibility of the Contractor.

1.05 SUBSTITUTION PROCEDURE

A. Requests for substitutions of products will be considered only within 90 calendar days after Notice to Proceed. Subsequent requests will be considered only when judged to be in the best interest of the Owner.

B. Substitutions will not be considered when indicated on shop drawings or product data submittals without separate formal request, when requested directly by subcontractor or supplier, or when acceptance will require substantial revision of Contract Documents.

C. Substitute products shall not be ordered or delivered without written acceptance.

D. Submit separate request for each substitution. Document each request with complete data substantiating compliance of proposed substitution with requirements of Contract Documents.

E. Identify products by specifications 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.

F. Attach product data as specified in Section 01340 and the following:

1. Give itemized comparison of proposed substitution with specified product and listing variations.
2. Give quality and performance comparison between proposed substitution and specified product.
3. List availability of maintenance services and replacement materials.
4. State effect of substitution on construction schedule, and changes required in other work or products.

G. If no requests for substitutions have been received within time frame stated above, it will be assumed that construction will proceed with equipment, materials and products called for in Contract Documents.

If this is subsequently found not to be the case, the Owner reserves the right to demand that unapproved item be removed and replaced with specified item.

1.06 CONTRACTOR REPRESENTATION

A. 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.

B. Contractor shall provide same warranty or bonds for substitution as for specified product.

C. Contractor shall coordinate installation of accepted substitute, making such changes as may be required for work to be complete in all respects, specifically including any related redesign costs.

D. Contractor waives claims for additional cost caused by substitution which may subsequently become apparent.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

(Except for “Substitution Request Form,” 1 page)

SUBSTITUTION REQUEST FORM

TO: _____

PROJECT: _____

We hereby submit for your consideration the following product instead of the specified item for the above project:

Section_____Page_____Paragraph_____Specified Item_____

Proposed Substitution: _____

Attach complete Product description, drawings, photographs, performance and test data, and other information necessary for evaluation.

Will changes be required to building design in order to properly install proposed substitution? Yes____ No ____ If Yes, explain: (Add second sheet).

Will the undersigned pay for changes to the building design, including engineering and drawing costs, caused by requested substitution? Yes____ No ____.

What differences exist between proposed substitution and specified item?

Does substitution affect Drawing dimension? Yes____ No ____ If Yes, explain: (Add second sheet.)

What affect does substitution have on other trades?

Does Manufacturer's warranty of proposed substitution differ from that specified?
Yes____ No ____ If Yes, explain: (Add second sheet.)

Will substitution affect Progress Schedule? Yes____ No ____ If Yes, explain: (Add second sheet.)

Will substitution cost more than specified Product? Yes____ No ____ If Yes, explain: (Add second sheet.)

Do substitutions affect the Commissioning process and checklists included in Division 17? Yes____ No ____ If any, attach a marked-up copy of the appropriate Checklist(s) from Division 17 for Owner's approval.

Will maintenance and service parts be locally available for substitution? Yes____ No ____ If Yes, explain: (Add second sheet.)

Submitted by:

Signature:_____

Firm:_____

Address:_____

City:_____

Date:_____

For Owner's Representative's Use Only:

Accepted ( ) Accepted as Noted ( )
Not Accepted ( ) Received Too Late ( )

By:_____

Date:_____

Remarks:_____

Phone:_____

STARTING OF SYSTEMS

PART 1. GENERAL

1.01 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.

1.02 SECTION INCLUDES

A. Starting systems.

B. Demonstration and instructions.

C. Testing, adjusting, and balancing.

1.03 RELATED SECTIONS

A. Section 01730 - Operating and Maintenance Data.

1.04 STARTING SYSTEMS

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Owner seven days prior to start-up of each item.

C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or for other conditions which may cause damage.

D. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

E. Verify wiring and support components for equipment are complete and tested.

F. Execute start-up under supervision of applicable manufacturer’s representative in accordance with manufacturers’ instructions.

G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

1.05 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of Products to Owner’s personnel two weeks prior to date of Substantial Completion.

B. In a classroom environment located at the Project site, demonstrate, and provide instruction for the Project equipment by a manufacturer’s representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within nine months.

D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at equipment location.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

1.06 TESTING, ADJUSTING, AND BALANCING

A. The independent firm will perform services specified in Section 01410 and 01651.

B. Reports will be submitted by the independent firm to the Owner indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

SYSTEM COMMISSIONING

PART 1. GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of contract, including General and Supplementary Conditions and other Divisions of these Specifications, apply to work of this section.

1.02 DEFINITION

A. Building Commissioning work is a joint team effort to ensure that all equipment and systems have been completely and properly installed and put into services. The commissioning work will begin only after all systems are 100% complete and functional. The factory start-up of all equipment must have been carried out as well as control system completion and start-up and balancing. The team is made up of representatives from the owner's Engineer and Contractor's organizations.

B. The Contractor shall schedule system commissioning. The trades represented during the commissioning include sheet metal, piping and fitting, refrigeration, controls and balancing. The lead tradesmen for each trade who actually performed the work is to be present. All trades are to be present as scheduled during the commissioning session. The balancing and control contractors may be released when their portions of work have been completed. The Contractor will submit a schedule of activities for commissioning at least 30 days prior to beginning commissioning. A suggested schedule outline is as follows:

1. Day One (Monday) Owner and Engineer; Mechanical Contractor optional.
2. Day Two (Tuesday) Owner, Engineer, Balancing Contractor, Control Contractor and Mechanical Contractor.
3. Day Three (Wednesday) Owner, Engineer, Balancing Contractor, Control Contractor, Mechanical Contractor including Sheet Metal Contractor and Fitter.
4. Day Four (Thursday) Owner, Engineer, Mechanical Contractor, Sheet Metal Contractor, Fitter and Refrigeration Contractor.
5. Day Five (Friday) Refrigeration Contractor and all parties from day four to complete tasks not completed previously.

1.03 DOCUMENTS

A. The following documents shall be assembled and bound into the operating and maintenance manuals and delivered according to Section 01730, Operating and Maintenance Data.

1. Plumbing sanitization certified.
2. Certificates of Completion from the following Contractors:

    a. Sheet Metal
    b. Plumbing and Piping
    c. Automatic Temperature Control
    d. Refrigeration
    e. Fire Protection

3. Balancing report including duct pressure test.
4. Boiler startup certificate, including stack gas test.
5. Hydronic system water analysis report.
6. Steam boiler water analysis report.

7. All operating and maintenance data as described in Section 01730.

B. Record Drawings will be submitted to District according to Section 01700, Project Closeout.

1.04 SCOPE OF WORK

A. The work included under this section includes a complete and thorough investigation of all systems in order to ensure proper installation and operation of all components and systems. The following systems will be evaluated:

1. Automatic temperature controls.
2. Instrumentation (gauges, thermometers, etc.)
3. Air handling equipment.
4. Air Distribution and exhaust systems.
5. Boilers.
6. Hydronic heating and steam distribution systems.
7. Refrigeration equipment.
8. Fire protection.
9. Labeling, marking and color coding.

PART 2. PRODUCTS

2.01 VALVE TAGS

A. Tag all valves with round, numbered, brass tags. Fasten to valve stem with beaded chain. In boiler room and fan room provide a framed, typewritten directory under glass. Directory shall list all valve tag numbers, service of valve, system valve is located in, location of valve and whether valve is normally open or closed. Provide a separate tag sequence for each service. Each service prefix to be abbreviation used for that service (sprinkles, S-1, S-2, etc.; Air, A-1, A-2, etc.)

2.02 EQUIPMENT LABELS

A. Label all equipment with heat resistant, laminated plastic labels having engraved lettering 1/2-inch high and fastened in place with rivets, screws or pressure sensitive, double sided tape, on back of label. Examples “Pump P-1,” “Water Heater No. 1,” “Exhaust Fan Ref-2,” Air Handling Unit AHU-1,” etc.

2.03 PIPING LABELS

A. Label all service piping with adhesive backed, flexible, vinyl labels, sealed in clear polyester film. Secure labels with directional flow adhesive vinyl banding tape. Labels and tape to comply with ANSI A13.1-1982 for color and size.

B. Manufacturer: Baker, Emed, Setmark, Seton.

2.04 WATER TREATMENT CHEMICALS

A. Obtain the services of a professional water treatment firm for testing the steam boiler water and prescribing the treatment chemicals.

B. Provide a one-year supply of treatment chemicals to maintain the boiler water at or below the following conditions.

1. Neutralized specific conductance.
2. Total alkalinity 600 ppm.
3. Suspended solids 250 ppm.
4. Silica 90 ppm.

The treatment will include a filming amine additive for protection of the condensate piping.

C. Supply materials are to be based on boiler operation of 10 hours per week at 50% to 100% of capacity with 50% of condensate being returned to system.

PART 3. EXECUTION

3.01 SYSTEM COMMISSIONING

A. The following procedures will be verified during the commissioning process. All procedures are to be checked and carried out by the contractor prior to commissioning.

3.02 PRELIMINARY WALK THROUGH

A. A preliminary walk through to provide a visual check of the various systems to verify that all components are properly installed. The following items will be observed.

B. Air Distribution:

1. Mounting and support of equipment.
2. Noise, vibration, air and water leaks.
3. Air filtration, presence of dampers, diffusers, grilles, fire dampers and access doors.
4. Presence of thermostats and other adjustable temperature control devices.
5. Presence of smoke sensors and other safety devices.
6. Instrumentation, gauges, thermometers, flow measuring devices.
7. Hoods and exhaust systems.

C. Plumbing and Piping Systems:

1. Mounting support of equipment.
2. Noise, vibration and leaks.
3. Strainers, values fixtures and instrumentation and flow measuring or control.

D. Heating and Cooling Equipment:

1. General installation and service access.
2. Proper cycling.
3. Excessive noise, vibration or leads.
4. Fuel storage, distribution instrumentation and filtration.
5. Presence of safety devices and controls.

E. Refrigeration Systems:

1. Compressor operation and lubrication.
2. Unit cooler operation.
3. Cooling fluid flow and control.
4. Temperature maintenance and instrumentation.
5. Vibration, excessive noise and leaks.

F. Fire Protection System:

1. General installation and compliance with approved shop drawings and design drawings.
2. Head locations.
3. Proper functioning of alarms.
4. NFPA certification - Chapter 13.
5. Locate spare heads, wrench and NFPA 13A manual.

G. Any discrepancies or deficiencies are to be noted for further investigation during the detailed evaluation.

H. Verify that all cleaning has been completed.

I. Verify that all touch-up painting has been completed.

3.03 DETAILED EVALUATION

A. Air distribution systems:

1. Spot checks of approximately 10% of air outlets will be made. Engineer will select outlets and air balancer will demonstrate a reading of that outlet. Where appropriate, the thermostat will be adjusted to simulate full cooling, full heating, hood operation, etc.
2. Air balancer will demonstrate total air flow at each air handler at simulated full cooling and/or maximum fresh air.
3. Air balancer will demonstrate proper air flow at each fume hood, based on previously marked sash positions.
4. Air balancer will demonstrate proper air flow at each process hood.
5. Demonstrate proper room static pressure with respect to adjacent space(s).
6. Motor HP draw will be demonstrated at selected fan motors.
7. Discrepancies between balancing report and spot check results will be dealt with to correct any deficiencies. In the event that significant deficiencies are detected, the entire balancing procedures may be required to be repeated.
8. Any noted drafts or noisy air distribution devices will be evaluated and corrective action taken.
9. Any balancing related problems identified during the Preliminary Walk Through will be addressed and corrected.

B. Heat Transfer and Hydronic Systems:

1. Contractor will demonstrate that strainers have been cleaned by team observation of approximately 5 strainers selected by the Engineer. If significant debris is found in selected strainers, all strainers will be cleaned.
2. Balancer will demonstrate fluid flows at approximately 10% of flow control devices.
3. Selected pumps will have amp draws demonstrated.
4. Fluid temperatures and pressures will be observed at each system, and compared with design values.
5. Glycol concentration will be measured for compliance with design specifications.
6. Any noted deficiencies between the sample evaluations and the balancing report will be dealt with to correct any deficiencies. In the event that significant deficiencies are detected, the entire balancing procedures may be required to be repeated.
7. Any balancing related problems identified during the Preliminary Walk Through will be addressed and corrected.

C. HVAC Control Systems:

1. The Control Contractor will demonstrate the proper function of each control system, and instruct Owner's operating personnel in the proper operation of the systems. The balancing contractor will be present to correct flows and assist in fine tuning system.
2. Control Contractor will demonstrate the proper functioning of the following devices:

    a. Each thermostat to adequately control heating and cooling.
    b. Each automatic damper and valve.
    c. Fresh air and return air dampers.
    d. Economizer operation.
    e. Boiler, chiller and pump starting and stopping from program control.
    f. Exhaust fan and air handler start and stop.
    g. Variable air volume control of VAV air handlers, and tracking of associated return fan.
    h. Variable air volume control of VAV exhaust fans
    i. Freeze prevention control.

3. Control Contractor will point out proper labeling of each control device.
4. Control Contractor and Balancing Contractor will coordinate efforts as required until all functions of air distribution and hydronic systems have been fully demonstrated and have been accepted by the District and the Engineer.

D. Sheet Metal Contractor will demonstrate the following:

1. Proper voltage, overload heater size and rotation of each motor driven fan or air handling device.
2. Proper belt tension and drive alignment.
3. Proper clearance and deflection of spring isolation of fans and drives.
4. Proper installation of flexible connections.
5. Sealing of all ductwork per specification.
6. Complete insulation of ductwork and plenums and sound attenuation where required.
7. Completion of any deficiencies pointed out during balancing and control system commissioning.
8. Marking and labeling of each air handling device.
9. Proper shutdown of air handling systems in the event of presence of smoke or products of combustion.
10. Monitor bearings for heat buildup or noise.
11. Demonstrate that heating and cooling coil fins are straight.
12. Demonstrate operation and maintenance of humidification equipment.
13. Sheet Metal Contractor will correct any deficiencies noted during Preliminary Walk Through and Detailed Evaluation.
14. Correct any deficiencies discovered during Preliminary Walk Through and Detailed Investigation.

E. Each Contractor will explain any special features or intricacies of system operation to the building operating personnel. Items covered should include safety features, hazards to be aware of, precautions to be observed to avoid damage to equipment and any necessary seasonal adjustments which are required. Generally discuss service frequency of devices such as bearings, belt drives, filters, strainers, etc. Show maintenance and operating personnel where additional information can be found in the Operating and Maintenance Manuals.

F. Plumbing and Piping Contractor will demonstrate and explain the following:

1. The cleaning, degreasing and flushing of piping systems.
2. The proper filling of hydronic and chilled water systems.
3. Proper glycol concentration and Ph of hydronic and chilled water systems.
4. Piping and valve marking.
5. Equipment labeling.
6. Demonstrate proper operation of fuel supply system.
7. Demonstrate proper operation of sewage lift pump.
8. Demonstrate proper operation of sump pumps.
9. Tour facility and demonstrate proper installation and operation of plumbing fixtures and piping systems.
10. Demonstrate and explain chemical feed equipment.
11. Demonstrate operation of air compressor, deionized water equipment and other process equipment.
12. Correct any deficiencies discovered during Preliminary Walk through and Detailed Investigation.

G. Refrigeration Contractor will instruct equipment operators and demonstrate and explain the following:

1. Proper charging and lubrication of each refrigeration system.
2. Vibration isolation of equipment.
3. Proper piping insulation.
4. Adequate air flow at cold diffusers.
5. Proper connection of piping.
6. Proper coolant flow and temperature.
7. Defrost of cold diffusers.
8. Maintenance of required temperature in cold boxes.
9. Proper maintenance and cleaning.
10. Labeling of equipment and control devices.
11. Verify proper voltage, rotation and overload heater sizing.
12. Correct any deficiencies noted during Preliminary Walk Through and Detailed Investigation.

3.04 CERTIFICATION

A. The following certificate will be signed by each trade listed, indicating that all commissioning work has been completed and that all systems are installed according to the contract documents and manufacturer's installation instructions. The Contractors further certify that all adjustment, lubrication, alignment and startup procedures have been carried out.

B. Individual Contractor Certifications: (see next page)

CERTIFICATE OF COMPLETION

(Building) _____

(Address) _____

_____

1. Mechanical Contractor _____
(firm)

_____ _____ _____
(signature) (title) (date)

2. Sheet Metal _____
(firm)

_____ _____ _____
(signature) (title) (date)

3. Plumbing _____
(firm)

_____ _____ _____
(signature) (title) (date)

4. Fitting _____
(firm)

_____ _____ _____
(signature) (title) (date)

5. Balancing _____
(firm)

_____ _____ _____
(signature) (title) (date)

6. Controls _____
(firm)

_____ _____ _____
(signature) (title) (date)

7. Refrigeration _____
(firm)

_____ _____ _____
(signature) (title) (date)

8. Insulation _____
(firm)

_____ _____ _____
(signature) (title) (date)

9. Fire Protection _____
(firm)

_____ _____ _____
(signature) (title) (date)

10. Refrigeration _____
(firm)

_____ _____ _____
(signature) (title) (date)

11. Refrigeration _____
(firm)

_____ _____ _____
(signature) (title) (date)

12. Refrigeration _____
(firm)

_____ _____ _____
(signature) (title) (date)

The engineer of record has observed the commissioning process and acknowledges that it was carried out according to the contract documents.

_____ _____
(firm) (date)

_____
(signature)

The District has observed the commissioning and acknowledges that it was carried out to his satisfaction. The District acknowledges receipt of the following documents and services:

1. Operating and Maintenance Manuals
2. As-built Drawings
3. All Certificates
4. Operator Instruction

_____ _____
(organization) (date)

_____ _____ _____
(signature) (title) (date)

3.05 SYSTEM WARRANTY

A. The one-year warranty period which begins with beneficial use of the systems is the responsibility of the Contractor. It is the Contractor's responsibility to repair, adjust or replace any defective material and equipment during the warranty period. It is the Owner's responsibility to notify the Contractor of any deficiencies immediately.

B. During the warranty period, the Owner and building operators should not make any system adjustments, alterations of repairs without first contacting the Contractor. Adjustment of room thermostats may be made at building occupant's discretion without first contacting the Contractor. The Contractor should be contacted as soon as possible so that a permanent repair can be carried out. The MAINTENANCE/ REPAIR REQUEST FORM (see example at the end of this section) should be used to report and document system malfunctions. Requests must be signed by building superintendent.

C. Emergency repairs and adjustments may be made to prevent system or building components without first contacting the Contractor. Emergency procedures would include items such as repairing leaks, adjusting controls to prevent building freeze-up or other similar adjustments to prevent the building from becoming uninhabitable or unsafe.

D. Maintenance procedures which are the responsibility of the building Owner during the warranty period include:

1. Replacement of air filters.
2. Replacement of repair of any items which are broken or damaged by building users.
3. Replacement of water softener salt.
4. Replacement (if required) acid neutralization marble.
5. Cleaning of oil separators or grease traps.

E. Maintenance / Repair Request:

1. The form on the next page is to be used by the Owner and building occupants to document and report any malfunctions in mechanical systems.

MAINTENANCE / REPAIR REQUEST

Reported by _____ Phone (_____) _____ Date _____

Building Superintendent Signature _____

Describe Malfunction _____

_____

_____

Location (i.e. room number/above ceiling/etc.) _____

_____

Describe any Temporary Adjustments or Repairs _____

_____

_____

What is the Urgency of Repair _____

_____

Has this Been Reported by Telephone _____ to Whom _____

Name _____ Firm _____ Phone (___) _____

Date _____ Time _____ Action Promised _____

_____

Repairs Made _____

_____

_____

by _____ Firm _____ Date _____

Contractor's Comments _____

_____

_____

_____

_____

Certification that repairs have been satisfactorily completed

(Building Superintendent) _____ Date _____ Time_____

Send one copy of this form to Contractor. Place one copy of this form in the Building Operating and Maintenance Manual under the appropriate tab.

END OF SECTION

PROJECT CLOSEOUT

PART 1. GENERAL

1.01 GENERAL CONDITIONS

A. Definitions: Close-out is hereby defined to include general requirements near the end of contract time, in preparation for final acceptance, final payment, normal termination of contract, occupancy by Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in sections of Division 2 through 33. Time of Closeout is directly related to “Substantial Completion”.

1.02 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

A. Section 00700 and 00800 General and Supplementary General Conditions of the Contract for Construction

B. Section 01750: Warranty of Work after Final Payment

C. Section 01750: Certificate of Compliance

1.03 SUBSTANTIAL COMPLETION

A. When Contractor considers work substantially complete as defined in contract conditions, he shall submit to the Project Manager:

1. Written notice that work, or designated portion thereof, is substantially complete.
2. List of items to be completed or corrected.
3. Conditional Certificate of Occupancy from governing authorities.
4. Project Records and Contract Record Drawings.

B. Project Manager will at the mutually agreed time, make inspection to determine completion status.

1. Should Project Manager determine that work is not substantially complete:

   a. Project Manager will promptly notify Contractor, in writing, giving reasons therefore.
   b. Contractor will remedy work deficiencies, and send second notice of substantial completion to Project Manager.
   c. Project Manager will re-inspect work, with his cost and/or expense for such to be the Contractor's responsibility.

2. When Project Manager concurs that work is substantially complete, the Architect will:

   a. Prepare Certificate of Substantial Completion accompanied with Contractor’s list of items to be completed or corrected, as verified and amended by the Project Manager and Architect.
   b. Submit certificate to Owner and Contractor for their written acceptance of the responsibilities assigned to them in the certificate.

1.04 FINAL INSPECTION

A. When Contractor considers work complete, he shall submit written certification that:

1. Contract documents have been reviewed.

2. Contractor has inspected work for compliance with contract documents.
3. Work has been completed in accordance with contract documents.
4. Equipment and systems have been tested and operated in presence of Owner's representative and are operational.
5. Copy of substantial completion punch lists stating that each item has been completed or otherwise resolved for acceptance.

B. Project Manager will, at the mutually agreed time, inspect the work to verify completion status.

1. Should the Project Manager consider work incomplete or defective:

a. Project Manager will promptly notify Contractor in writing of any incomplete or defective work.
b. Contractor shall immediately remedy deficiencies, and send written certification to Project Manager that work is complete.
c. Project Manager will re-inspect work.

2. When Project Manager finds the work acceptable under contract documents, he will request Contractor to make closeout submittals.

1.05 RE-INSPECTION FEES

A. Should Project Manager and or Engineer be required to make more than one substantial and/or final inspection due to Contractor's failure to correct specified deficiencies, the Contractor shall bear all costs made necessary by such additional inspections.

1.06 SUBMITTALS

A. Record Drawings

1. Prior to Final Completion of the Project, the Contractor and/or Subcontractors under his direction, shall submit records of changes on prints to Project Manager.
2. Accompany submittal with transmittal letter, to Project Manager, containing:

a. Date
b. Project title and number
c. Contractor's name and address
d. Title and number of each record document
e. Certification that each document as submitted is complete and accurate.
f. Signature of Contractor, or his authorized representative.

3. Provide drawings and special system drawings on CD in AutoCad format.

B. Project Record Documents

C. Operating and Maintenance Data

D. Building Official's Certificate of Occupancy (MUST BE RECEIVED IN TIME TO ALLOW OCCUPANCY ON DATE REQUIRED IN CONTRACT DOCUMENTS).

E. Warranty of Work after Final Payment Section 01750

F. Certificate of Compliance Section 01750

G. AHERA Exclusion document Section 01750

H. Department of Revenue Tax Clearance Section 01750

I. Department of Labor Tax Clearance Section 01750

J. Department of Labor Notice of Completion of Public Works Section 01750

K. Certificate of Domestic water disinfection.

L. Evidence of Payments and Release of Liens

1. Contractor's Affidavit of Payment of Debt and Claims.
2. Contractor's Affidavit of Release of Liens including the following:

    a. Consent of Contractor's Surety to Final Payment.
    b. Contractor's Release of Waiver of Liens.
    c. Separate releases of Waivers of Lien for each subcontractor, supplier, and others with lien rights against Owner’s property.

M. Storm Water Pollution Prevention Plan (SWPPP) and associated documents.

1. A copy of the Notice of Intent (NOI) and the plan review location notice shall be posted in the project office on site.
2. A copy of the SWPPP shall be retained in the project office during construction.
3. All records relating to the SWPPP, as well as the Plan, the NOI, and NOT shall be retained by the Contractor and the Municipality of Anchorage for three years after the NOT is issued.
4. Copies of all SWPPP documents are to be delivered to the Municipality of Anchorage and the Anchorage School District upon completion of the project and before final closeout.

N. Closeout Checklist Section 01750

1. A closeout checklist is provided for convenience in tracking the necessary documentation and deliverables for project closure. This checklist should be updated and submitted with each closeout deliverable.

1.07 FINAL APPLICATION FOR PAYMENT

A. Follow procedures specified in General and Special Conditions, and also note miscellaneous prerequisites for final payment noted in this section.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

CLEANING

PART 1. GENERAL

1.01 DESCRIPTION

A. Execute cleaning, during progress of the work, and at completion of the work.

1.02 DISPOSAL REQUIREMENTS

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

PART 2. PRODUCTS

2.01 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

PART 3. EXECUTION

3.01 DURING CONSTRUCTION

A. Execute periodic cleaning to keep the work, the site, and adjacent areas free from accumulations of waste materials, rubbish, and debris, resulting from construction operations.

B. Provide on-site containers for the collection of waste materials, debris, and rubbish.

C. Remove waste materials, debris, and rubbish from the site periodically and dispose of.

3.02 DUST CONTROL

A. Clean interior spaces prior to the start of finishing painting and continue cleaning on an as-needed basis until painting is finished.

B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.

3.03 FINAL CLEANING

A. Employ skilled workmen for final cleaning.

B. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

C. Prior to final completion, or Owner occupancy, the Contractor shall conduct an inspection of sight-exposed interior surfaces and all work areas to verify that the entire work is clean.

END OF SECTION

PROJECT RECORD DOCUMENTS

PART 1. GENERAL

1.01 REQUIREMENTS INCLUDED

A. Maintenance of record documents and samples.

B. Submittal of record documents and samples.

1.02 RELATED REQUIREMENTS

A. Document 00700 - General Conditions of the Contract for Construction.

B. Section 01300 - Submittals.

C. Section 01340 - Shop Drawings, Product Data, and Samples.

D. Section 01700 - Project Closeout.

E. Individual Specifications Sections: Manufacturer's certificates and certificates of inspection.

1.03 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. In addition to requirements in General Conditions, maintain at the job site for Owner's use one record copy of:

1. Contract Drawings.
2. Specifications.
3. Addenda.
4. Change orders and other modifications to the Contract.
5. Reviewed shop drawings, product data and samples.
6. Field test records.
7. Inspection certificates.
8. Manufacturer's certificates.
9. Request for Information (RFI)
10. Request for Proposal (RFP)
11. Current Construction Network.

B. Store record documents and samples in the field office apart from the documents used for construction.

C. Label and file record documents and samples in accordance with Section number listings in Table of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.

D. Maintain record documents in a clean, dry and legible condition. Do not use record documents for construction purposes.

Keep record documents and samples available for inspection by the Project Manager.

1.04 RECORDING

A. From the copies of Contract Documents to be furnished by Project Manager, the Contractor and/or Subcontractors shall record on a set of clean, new prints each and every change that is made, at time it is made, in red. This includes any changes that are made in partitions, doors, or otherwise in arrangement of construction of buildings as well as a complete record of exact manner in which electrical and mechanical work, piping, etc., are installed. All Change Orders, RFI's, and Information Bulletins shall be incorporated. Dimensions shall be included where necessary to accurately locate piping and other items that will be concealed underground or in finished building that may later be necessary to service.

B. Contract Drawings: Legibly mark to record actual construction.

1. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
2. Field changes of dimensions and detail.
3. Changes made by Change Order and other modifications.
4. Details not on original contract drawings.
5. References to related shop drawings and modifications.

C. Shop Drawings: Maintain as record documents, legibly annotate appropriate drawings to record changes made after review.

D. Specifications and Addenda: Legibly mark up each section to record:

1. Changes made by Change Order.
2. Manufacturer, trade name and catalog number of each product actually installed, particularly optional items and substitute items.
3. Changes made by addenda and modifications.
4. Other matters not originally specified.

E. Label each document "PROJECT RECORD" in printed letters.

F. Keep record documents current. No progress payments will be made until record documents are verified by the Project Manager as being current.

G. Do not permanently conceal any work until required information has been recorded.

H. Methodology:

1. Changes to Work are described by source documents, including, but not limited to, Field Directives (FD), Information Bulletins (IB), Requests for Information (RFI), and Requests for Proposals (RFP), and their attachments. (Reference Section 00700, Article 12.)
2. Project Record drawings are to completely and clearly reflect all Changes to Work by graphically showing actual changes to dimensions, locations, materials, assemblies, and other conditions; by graphically deleting conditions replaced by such changes; and by indicating applicable source document's reference number. Such reference number shall not be the sole representation of Changes to Work shown on Project Record drawings.
3. Where A/E furnishes supplemental drawings, Project Record drawings are to show both the A/E's supplemental drawing reference number and the source document's reference number at the affected location.

1.05 SUBMITTAL

A. Prior to Final Completion of the Project, the Contractor and/or Subcontractors under his direction, shall submit records of changes on prints to Project Manager.

B. Accompany submittal with transmittal letter, to Project Manager, containing:

1. Date
2. Project title and number
3. Contractor's name and address
4. Title and number of each record document
5. Certification that each document as submitted is complete and accurate.
6. Signature of Contractor, or his authorized representative.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

OPERATING AND MAINTENANCE DATA

PART 1. GENERAL

1.01 SECTION INCLUDES

A. Format and content of manuals.

B. Instruction of Owner's personnel.

C. Schedule of submittals.

1.02 RELATED SECTIONS

A. Section 01300 - Submittals

B. Section 01400 - Quality Control

C. Section 01410 - Testing Laboratory Services

D. Section 01420 - Special Inspections

E. Section 01600 - Materials and Equipment

F. Section 01700 - Project Closeout

G. Section 01750 - Closeout Forms

H. Individual Specifications Sections: Specific requirements for operation and maintenance data.

1.03 QUALITY ASSURANCE

A. Prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.04 FORMAT

A. Prepare data in the form of an instructional manual.

B. Electronic: Optical Character Recognition (OCR) formatted pdf document.

C. Cover: Identify each pdf with a title “OPERATION AND MAINTENANCE INSTRUCTIONS”; identify title of Project; identify subject matter of contents.

D. Provide bookmarked pdf for each separate product and system, with typed description of product and major component parts of equipment.

E. Text: Manufacturer’s printed or typewritten data.

F. Drawings: Provide with O&M documents.

G. Contents: Prepare a Table of Contents for each volume, with each Product or System description identified, in three 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: Operation and maintenance instructions arranged by 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 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. Air and water balance reports.
    c. Certificates.
    d. Photocopies of warranties and bonds.

1.05 CONTENTS, EACH VOLUME

A. Table of Contents: Provide title of Project; names, addresses, and telephone numbers of Architect/Engineer, Subconsultants, and Contractor with name of responsible parties; schedule of products and systems, indexed to content of the volume.

B. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.

C. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.

D. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.

E. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer’s instructions specified in Section 01400.

F. Warranties and Bonds: Bind in copy of each.

1.06 MANUAL FOR MATERIALS AND FINISHES

A. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. (Provide information for re-ordering custom manufactured Products.)

B. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

C. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.

D. Additional Requirements: As specified in individual Product specification sections.

E. Provide a listing in Table of Contents for design data.

1.07 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

B. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

C. Include color coded wiring diagrams as installed.

D. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shutdown, and emergency instructions. Include summer, winter, and any special operating instructions.

E. Maintenance Requirements: Include routine procedures and guide for troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

F. Provide servicing and lubrication schedule, and list of lubricants required.

G. Include manufacturer's printed operation and maintenance instructions.

H. Include sequence of operation by controls manufacturer.

I. Provide original manufacturer’s parts list, illustrations, assembly drawings, and diagrams required for maintenance.

J. Provide control diagrams by controls manufacturer as installed.

K. Provide Contractor’s coordination drawings, with color-coded piping diagrams as installed.

L. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

M. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

N. Include test and balancing reports as specified.

O. Additional Requirements: As specified in individual Product specification sections.

P. Provide a listing in Table of Contents for design data, with tabbed (fly sheet indexed) and space for insertion of data.

1.08 MANUALS

A. Operating and Maintenance Manuals: Submit electronic manual for each identified category.

1. Air Balance Report
2. Building Commissioning Reports
3. Materials and Finishes Manual
4. Equipment and Systems Manual
5. Digital and Pneumatic Controls Manual
6. Fire Systems Manual

B. Warranty and Special Warranty Manual: Submit electronic manuals.

1.09 INSTRUCTION OF OWNER PERSONNEL

A. Before final inspection, instruct Owner's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems, at agreed upon times.

B. For equipment requiring seasonal operation, provide instructions for all seasons

C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

D. Prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.10 SUBMITTALS

A. Submit copies of preliminary draft or proposed formats and outlines of contents before start of Work. Project Manager will review draft and return copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit advance copy of documents within ten days after acceptance. Include same information within final Operations and Maintenance documents.

C. Submit draft copy of completed volumes 60 days following acceptance of Project Submittals. Allow 20 days for Architect review and return to Contractor. Provide Contractor resubmittal within 14 days. Allow 14 days for Architect review of resubmittal. Revise content of all document sets as required prior to final submission.

D. Submit fully approved volumes within 115 days after acceptance of Submittals or 10 days prior to Substantial Completion, whichever occurs first.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

CLOSEOUT FORMS

PART 1. GENERAL

1.01 The following forms are to be submitted by the Contractor prior to final project closeout.

1.02 CERTIFICATION OF SUBSTANTIAL COMPLETION

A. Use Anchorage School District Form 101 attached herein.

1.03 CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS

A. Use Anchorage School District Form 102 attached herein.

1.04 RELEASE ON CONTRACTS

A. Use Anchorage School District Form 103 attached herein.

1.05 CONSENT OF SURETY COMPANY TO FINAL PAYMENT

A. Use Anchorage School District Form 104 attached herein.

1.06 CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE

A. Use Anchorage School District Form 105 attached herein.

1.07 CERTIFICATE OF COMPLIANCE

A. The Contractor shall submit a notarized Certificate of Compliance, contained in this section, with his application for Final Payment.

1.08 WARRANTY OF WORK AFTER FINAL PAYMENT

A. The Contractor shall furnish to the Owner a notarized Warranty of Work after Final Payment, contained in this section, with his application for Final Payment.

1.09 AHERA EXCLUSION DOCUMENT

A. The Contractor shall furnish to the Owner a signed AHERA Exclusion Document, contained in this section, with his application for Final Payment.

1.10 DEPARTMENT OF LABOR NOTICE OF COMPLETION OF PUBLIC WORKS

A. The Contractor shall furnish to the Owner a Notice of Completion of Public Works form approved by the Department of Labor with his application for Final Payment.

1.11 DEPARTMENT OF REVENUE TAX CLEARANCE REQUEST FORM

A. For projects funded through the Department of Education (debt reimbursement or DEED grants), the Contractor shall furnish to the Owner a Tax Clearance Request Form approved by the Department of Revenue with his application for Final Payment.

1.12 DEPARTMENT OF LABOR TAX CLEARANCE REQUEST FORM

A. For projects funded through the Department of Education (debt reimbursement or DEED

grants), the Contractor shall furnish to the Owner a Tax Clearance Request Form approved by the Department of Labor, with his application for Final Payment.

1.13 CLOSEOUT CHECKLIST

A. The closeout checklist is designed to assist the contractor and project manager in the process of completing the project.

CERTIFICATE OF SUBSTANTIAL COMPLETION

Project: _____ Contract Number: _____

Contractor: _____ Contract Date: _____

Architect: _____ Date of Issuance: _____

Owner: ANCHORAGE SCHOOL DISTRICT
1301 Labar Street
Anchorage, Alaska 99515

Project Description:

The work performed under this contract has been reviewed and found to be substantially complete. The date of Substantial Completion is hereby established as: _____

_____

Definition of Date of Substantial Completion:
The date of substantial completion of the project is the date certified by the Owner when the work is substantially complete in accordance with, and defined in the Contract Documents.

A list of items to be completed or corrected, prepared by the Owner and verified and amended by the Architect is appended hereto. The failure to include any items or such list does not alter the responsibility of the Contractor to complete the project in accordance with the Contract Documents.

The Contractor will complete or correct the work on the list of items appended hereto within 30 days from the date of substantial completion.

The responsibilities of the Owner and the Contractor for maintenance, heat, utilities, and insurance shall be as follows: _____

_____

In reliance upon the certification of the Contractor and the Architect, the Owner hereby accepts the project as substantially complete. In accordance with the Contract Documents, the Owner hereby elects to assume occupancy of _____ _____

_____ at _____ a.m./p.m. on
_____ .

Owner: **ANCHORAGE SCHOOL DISTRICT**

By: _____ Title: _____ Date: _____

Architect:

By: _____ Title: _____ Date: _____

Contractor:
By: _____ Title: _____ Date: _____
ASD 101 (01/03)

CONTRACTOR'S AFFIDAVIT OF PAYMENT OF DEBTS AND CLAIMS
ANCHORAGE SCHOOL DISTRICT

WHEREAS, by the terms of a contract dated entered into by the Anchorage School District, and for the construction of

The undersigned, pursuant to the General Conditions of the Contract for the construction, , hereby certifies that, except as listed below, he has paid in full or has otherwise satisied all obligations for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the District or his property might in any way be held responsible.

EXCEPTIONS:

IN WITNESS WHEREOF, the seal of the undersigned Contractor have been hereunto set this day of , at .

By

being first duly sworn, say that I am the agent for and executed the foregoing under authority of said company to do so; that I have read the same, know the contents thereof, and the matters set forth therein are as I truly believe.

By

Subscribed and sworn to before me this _____ day of , , at _____.

Notary Public in and for

My Commission Expires _____

ASDF Form 102

RELEASE ON CONTRACT
ANCHORAGE SCHOOL DISTRICT

WHEREAS, by the terms of a contract dated_____entered into by the Anchorage School District,

and_____for the construction of_____

_____, it is provided that:
"Neither the final payment nor the remaining retained percentage shall become due until the Contractor shall provide the Owner (1) with a waiver and release of liens, on the forms provided by the Owner, executed by the Contractor..."

NOW THEREFORE, in consideration of the premises and the payment by the Anchorage School District to the undersigned Contractor of the amounts due under the contract and any changes or modifications thereto, to wit, the sum

of $_____Dollars,
(Numbers)
(In Words)
the undersigned Contractor hereby releases and forever discharges the Anchorage School District including its property, particularly that real property known as:
_____ of the Anchorage School District, of and from all manner of debts, dues and sum or sums of money, accounts, claims, and demands whatsoever, in Law and in equity, under or by virtue of said contract, and warrants good title to all material, supplies and equipment installed or incorporated in the project and all work delivered to the premises, together with all improvements and appurtenances constructed thereon by:

_____to the Anchorage School District free of any claims, liens or encumbrances. Neither the undersigned nor any person, firm or corporation furnishing material or labor for any work covered by this Contract has any right to a lien upon the premises nor improvement thereon, except:
_____.

IN WITNESS WHEREOF, the signature of the undersigned Contractor has been hereunto set this

_____day of _____, 20_, at _____, Alaska.

Signature: _____

Printed Name: _____

I, _____, being first duly sworn, say that I am the agent for and executed the foregoing under authority of said company to do so; that I have read the same, know the contents thereof, and the matters set forth therein are as I truly believe.

Signature: _____

Subscribed and sworn to before me this _____day of _____, 20_, at _____, Alaska.

Notary Public in and for _____

My Commission Expires: _____. ASD Form 103

CONSENT OF SURETY COMPANY
TO FINAL PAYMENT

PROJECT:_____ **PROJECT NUMBER:**_____

TO: Anchorage School District **CONTRACT DATE:**_____

CONTRACTOR:_____

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above:

_____
(Surety Company)

on bond of

_____
(Contractor)

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to **Anchorage School District, Owner** as set forth in said Surety Company's bond. Surety expressly agrees that any and all valid claims of sub-Contractors and all persons supplying labor or materials to the project will be satisfied by Contractor or Surety in a timely manner

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand this

day of _____, 20_.

_____
Name of Surety Company

Attest

_____
Signature of Authorized Representative

_____
Title

ASD 104

CONSENT OF SURETY TO REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE
ANCHORAGE SCHOOL DISTRICT

PROJECT: **PROJECT NUMBER:**

TO: Anchorage School District **CONTRACT DATE:**

CONTRACTOR:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the:

_____ (Surety Company)

on bond of

_____ (Contractor)

HEREBY APPROVES OF THE REDUCTION IN OR PARTIAL RELEASE OF RETAINAGE to the Contractor as follows:

The surety agrees that such reduction in or partial release of retainage to the Contractor shall not relieve the Surety of any of its obligations to **ANCHORAGE SCHOOL DISTRICT, OWNER**

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand this

day of .

_____
Name of Surety Company

Attest

_____
Signature of Authorized Representative

_____
Title

ASDF Form 105

CERTIFICATE OF COMPLIANCE

No final payment shall be made until the Contractor shall file with the Owner, prior to acceptance of the work, a notarized Certification of Compliance in the following form:

****

The Contractor does hereby certify that all work has been performed and materials supplied in accordance with the Drawings, Specifications and Contract Documents for the above work, and that:

No less than the prevailing rates of wages as ascertained by the governing body of the Contracting Agency has been paid to laborers, workmen and mechanics employed on this work;

There have been no unauthorized substitutions of Subcontractors; nor have any subcontracts been entered into without prior notice having been submitted to the Owner prior to the start of such subcontracted work;

No subcontract was assigned or transferred or performed by any Subcontractor other than the original Subcontractor, without prior notice having been submitted to the Owner together with the names of all Subcontractors;

All claims for material and labor and other paid service performed in connection with these specifications have been paid;

All monies due the State Industrial Accident Fund, the State Unemployment Compensation Trust Fund, the State Tax Commission, Hospital Associations and/or others have been paid.

In WITNESS WHEREOF, the undersigned has signed and sealed this instrument this

_____ day of _____, 20__.

_____
(Firm Name)

_____
(Signature)

_____
(Title)

(Attest)

(SEAL IF BIDDER IS A CORPORATION)

As determined necessary, evidence of compliance may be required to be submitted with and made a part of this Certificate of Compliance.

WARRANTY OF WORK

Prior to Final Payment, the Contractor shall furnish to the Owner a Warranty of Work in the following form:

****

The Contractor does hereby warrant all work and materials to be in full and complete accordance with the Contract Documents and Agreement between Owner and Contractor, and requirements appertaining thereto; that all work and materials are free from any and all defects and imperfections, and fully suitable for the use and purposes for which each and every part is intended. The Contractor also agrees that, should any defect develop or appear which the Project Manager or Owner's Representative finds was Not caused by improper use, the Contractor shall promptly, upon demand, fully correct, substitute and make good any such defective material without any cost to the Owner and will save the Owner harmless against any claim, demand, loss or damage by reason of any breach of this warranty.

The period of this warranty shall commence on the date of Substantial Completion.

The warranty shall continue to be in full force and effect for the period of one (1) year, except for those items for which a longer period of warranty is specifically stated in the Warranties for work in Technical Sections of the Specifications.

Warranties for work stated in Technical Section shall continue in full force and effect for the respective periods expressly stated.

In WITNESS WHERE, the undersigned has signed and sealed this instrument this

_____ day of _____, 20___.

(Firm Name) _____

(Signature) _____

(Title _____

(Attest) _____

(SEAL IF BIDDER IS A CORPORATION)

AHERA Exclusion Document

Contractor's Verification of Asbestos-Free Construction

Project: _____ **Project Number:** _____

Contractor: _____ **Date:** _____

To: Anchorage School District
Facilities Coordinator,
AHERA LEA Designated Person

To the best of our knowledge, no asbestos-containing building materials were installed in this project.

Attest: _____
Signature of Authorized Representative

_____
Title

Department of Labor and Workforce Development
Labor Standards and Safety Division
Wage and Hour Administration
www.labor.state.ak.us/lss/lss.htm

NOTICE OF COMPLETION OF PUBLIC WORKS

- This form must be typed or printed in ink.
- Fill in all blanks or form will be returned for correction (see back).
- Please allow a minimum of 30 working days for processing.

ENTER YOUR FAX # _____
AND LIST YOUR MAILING ADDRESS BELOW

Contractor, company or agency name, address, city, state & ZIP + 4

Additional Filing Fee May Be Required

Project Name		Contract #
Contract awarding agency		
Address		
City	State	ZIP + 4
Contract awarding agency contact person		Phone #
Location and city where work was performed		
DOLWD Project #		
Project Completion Date	/ /	

Primary contractor (has contract with the public agency)

IF YOU HAVE ALREADY PAID $5,000 IN FEES FOR THIS PROJECT, OR IF YOU PREVIOUSLY PAID ALL FEES DUE AND DID NOT HAVE ANY INCREASES IN CONTRACT AMOUNTS ENTER "NONE" AND, SKIP TO CERTIFICATION. OTHERWISE, DESCRIBE ADDITIONAL WORK.

Description of additional contract/subcontract work performed	Name of contractor who performed this work	Amount of subcontract

CERTIFICATION: I hereby certify that the above information is correct. Enclosed is the additional filing fee computed at 1% of the total amount of all new contracts on this project, including the contract price of new work performed by the primary contractor not previously reported on the Notice of Work, up to a maximum of $5,000. I also certify that all contractors who worked on this project complied with prevailing wage requirements as described in AS 36.05.010- .110 and AS 36.10.007- .990.

Total value of additional subcontracts	$
Additional value of work performed by primary contractor +	$
Amount subject to fee	$
	Multiply by .01
Supplemental fee enclosed =	$
ROUND FEES TO NEAREST DOLLAR	

Signature Date

Title

Fax # Phone #

For Dept. Use Only

T-36 Clearance Approved

By_____
Department of Labor and Workforce Development

For Dept. Use Only

Amount: _____ Check Number: _____ Cash ___
Received By: _____ Date: _____
Credit Card Confirmation _____
Visa ___ MC____
Project Name_____
DOLWD Project #

Wage & Hour date-stamped copy of this form will serve as temporary receipt.

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How to expedite the processing of your form:

ERRORS THAT CAUSE REJECTION

No fee included or incorrect amount. If total contract amount is less than $25,000 no filing fee is required. Contract amounts paid to owner/operators with no employees are exempt from the fee. **The maximum total filing fee for any one project is $5,000.00.**

Missing - Value of work performed by primary contractor.

Missing – The name of each **NEW** subcontractor and the amount of the contract OR the name of existing subcontractors and the amount of any **NEW** work not previously reported on the Notice of Work.

Missing – Notice of Completion of Public Works must be signed by an authorized representative.

FILING INSTRUCTIONS

Additional fees are required for any increase in contract value, unless the maximum fee ($5,000) has been paid.

If there is not enough space to list all required information on one form, use additional sheets. Please indicate at the top of each sheet "Page 1 of 2", "Page 2 of 2", etc. No other attachments will be accepted.

A Wage and Hour Administration (WH) date-stamped copy of this form will serve as a temporary receipt, while the acceptance of fees is processed. WH will mail or fax the approved copy of this form to the organization provided on the front of this form. Make a copy for your records. This will serve as your notice that the fees paid have been accepted by WH.

For questions call the nearest WH office:
Juneau: (907) 465-4842 Anchorage: (907) 269-4900 Fairbanks: (907) 451-2886

For more forms, see www.labor.state.ak.us/lss/lssforms.htm

Submit the notice and the appropriate filing fee to:

Alaska Department of Labor and Workforce Development
Wage and Hour Administration
3301 Eagle Street, Ste. 301
Anchorage, AK 99503-4149

If no fee is required, you may fax the notice to (907) 269-4915

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Alaska Department of Revenue
TAX CLEARANCE REQUEST FORM

Applicant's Name: _____

EIN&SSN: _____

Mailing Address: _____

City/State/Zip Code: _____

I hereby authorize the Alaska Department of Revenue to release to

_____
(Name of Department or Agency)

Departments Statute on tax clearance: _____

whose facsimile number or email address is _____,

confirmation that all taxes, penalties and interest due the Department of Revenue have been paid and that there are no outstanding amounts due.

Signed: _____

Printed Name: _____

Title*: _____

*If tax clearance is being requested on behalf of a corporation/LLC/partnership, must be signed by an officer/member/partner.

Send completed form by email to the Department of Revenue at DOR.tax.accounting@alaska.gov

DEPARTMENT USE ONLY

☐ *The above applicant is current on all taxes, penalties and interest due and is in good standing with the Alaska Department of Revenue.*

☐ *The above applicant is not current on all taxes, penalties and interest due and is not in good standing with the Alaska Department of Revenue.*

Department of Revenue Representative _____ *Date*

TaxClearanceRequestForm (Rev 2/21)

THE STATE of ALASKA
GOVERNOR MICHAEL J. DUNLEAVY

Department of Labor and Workforce Development

Division of Employment and Training Services
Employment Security Tax

P.O. Box 115509
Juneau, AK 99811-5509
Relay Alaska (in state): (800) 770-8973 or 7.1.1
Relay Alaska (out of state): (800) 770-8255
Toll free: (888) 448-2937
Phone: (907) 465-2787
Fax: (907) 465-2374

Tax Clearance Request Form for Contractors

Date of request: _____

Business name of the contractor a Tax Clearance is being requested for: _____

_____

Business address: _____

Business contact phone number: _____

Federal Identification Number: _____

Alaska Employer Account Number: _____

Specific time period a tax clearance is being requested for *(i.e. beginning and ending date of a subcontract agreement)*:

_____

Subcontract project name: _____

_____

Name and address of the person this Tax Clearance is to be returned to: _____

_____

Comments or additional information: _____

_____

For agency use only:

☐ Tax Clearance is granted

☐ Tax Clearance is not granted *(please have employer contact the department)*

☐ No account on file, liability unknown *(please have employer contact the department)*

☐ Employer has stated no employees, Tax Clearance not required.

Agency representative signature: _____ Date: _____

Agency representative title: _____

We are an equal opportunity employer/program. Auxiliary aids and services are available upon request to individuals with disabilities. labor.alaska.gov/estax

Rev. 8/2018

Project Title:_____ **Project Number:**_____

PROJECT CLOSEOUT CHECKLIST	Number Required	Number & Date Delivered
Inspection Documents		
Substantial Completion Inspection Documents	1	
Substantial Completion Punch List	1	
Final Inspection Documents	1	
Final Inspection Punch List	1	
Certificate of Substantial Completion (ASD Form 101)	1	
Contractor Submittals		
As-built drawings to Engineer of Record (Section 01700)	1	
All project record documents (Section 01720)	1	
Maintenance and Operations Manuals – Electronic version – OCR pdf (Section 01730)	1	
Warranty and Special Warranty Manuals (Section 01730)	4	
Certificate of Domestic Water Disinfection (Section 01700)	2	
Warranty of Work (Section 01750)	1	
Certificate of Compliance (Section 01750)	1	
Building Officials Certificate of Mechanical and Electrical Inspection	3	
Building Official's Certificate of Occupancy	3	
Building Official's Certificate of Completion	3	
AHERA Response Action Report (RAR)	1	
AHERA Exclusion Document (Section 00630)	1	
Return school keys to lock shop	1	
Lock Shop Release Form (signed)	1	

Project Title:_____ **Project Number:**_____

PROJECT CLOSEOUT CHECKLIST	Number Required	Number & Date Delivered
Contractor's Affidavit of Payment of Debts and Claims ASD Form102)	1	
Consent of Surety Company to Final Payment (ASD Form 104)	1	
Release on Contract (ASD Form 103)	1	
Consent of Surety to Reduction in/or Partial Release of Retainage (ASD Form 105)	1	
Engineered As-built drawings and special system drawings on reproducible CD's (not zipped)	1	
Engineered As-built drawings and special system drawings on bond/blacklines	2	
Spare Parts deliverables	1	
Copy of Warranty for all items with Extended Warranty	1	
Notice of Completion of Public Works (Section 00630) (Approved DOL Clearance Form)	1	
Dept. of Revenue Tax Clearance Form (Section 00630) (Approved DOR Tax Clearance Form)	1	
Dept. of Labor Tax Clearance Form (Section 00630) (Approved DOL Tax Clearance Form)	1	
Apprenticeship Program - Purchasing release for final payment (projects over $100,000)		
Final Application and Certificate for Payment (ASD Form 100A-C)	1	
Base Access Pass(s) returned to Visitor Control Center		NA

_____ _____

Project Manager Signature Date

END OF SECTION

UTILITY LOCATION REQUIREMENTS

PART 1. GENERAL

1.01 DESCRIPTION

A. Upon receipt of written notification from any of public agencies or utilities that Contractor has caused damage to any facility, equipment or installation of agency, and Contractor failed to request a utility locate service from said utility at least two (2) normal business days prior to damage, or if locate services was properly requested, that damage was not approximately caused by error in locate service, Owner will withhold from forthcoming or accrued Contract payment, including advances, a sum sufficient to protect agency or utility from loss. Public agencies or utilities that provide notice of facility damage under this paragraph are:

Anchorage Water and Wastewater Utility
Alaska Communications Systems
Alaska Fiber Star
Alaska Native Medical Center
Alaska Railroad Corporation
Alyeska Cable / TelAlaska
Anchorage School District
Aircraft Service International Group
AT&T Alascom
Chugach Electric Association, Inc.
Department of Transportation Street Lights, State of Alaska
Enstar Natural Gas Company
Flint Hills Resources/Williams Alaska Pipeline
GCI Cable
Matanuska Electric Association
Matanuska Telephone Association
Municipality of Anchorage/Department of Public Works
Municipal Light & Power Utility
Tesoro Alaska Inc.

B. Upon receipt of release of claim by notifying utility or upon judgment of a court having jurisdiction in matter and having established that Contractor is liable for a lesser amount or is not liable for damage, Owner will release excess funds to Contractor. Funds withheld pursuant to this provision shall not bear interest. Upon receipt of satisfactory evidence against Contractor in court of competent jurisdiction within sixty (60) days after discovery of damage, Owner shall release funds withheld pursuant to this provision.

1.02 PROTECTION OF UTILITIES

A. Any pipes or other utilities encountered in excavation shall be shored up and cared for by Contractor as to leave them in a proper working condition until such times as Owner determines what shall be done with them.

B. Any utilities mislocated or inadequately located by appropriate utility company which are damaged by Contractor shall not constitute reimbursement or time extensions to Contractor from Owner for repair(s) of work that Contractor performs.

C. Contractor shall coordinate his work to cooperate with original utility service installed.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION (NOT USED)

END OF SECTION

DEMOLITION

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 NOTIFICATION OF SITE-SPECIFIC RESTRICTIONS

A. An active eagle nest is present on the site. Comply with the US Federal Fish and Wildlife Permit when working within 500 feet of the eagle's nest.

1.03 SUMMARY

A. Section Includes:

1. Demolishing existing pavement, sidewalk, curb and gutter
2. Demolishing designated structures.
3. Demolishing designated foundations.
4. Removing memorial paving bricks for reuse.
5. Removing designated play structures for reuse.
6. Removing designated items including identified play structures for Owner's retention.
7. Protecting items designated to remain.
8. Removing demolished materials.

1.04 RELATED DOCUMENTS

1. Section 26 05 90 Selective Electrical Demolition
2. Section 31 00 00 Earthwork
3. Section 32 00 00 Exterior Improvements

1.05 PREINSTALLATION MEETINGS

A. Section 01300 – Administrative Requirements: Requirements for preinstallation meeting.

B. Convene minimum of one week prior to commencing Work of this Section.

1.06 REFERENCED SPECIFICATIONS

A. The contract is subject to and hereby incorporates by reference the following documents as though physically contained here:

1. Sections of the Municipality of Anchorage (MOA) Standard Specifications dated March 2015 as described below, herein referred to as MASS.
2. Anchorage Water and Wastewater Design and Construction Practices Manual, dated 2018
3. The Municipality of Anchorage Stormwater Manual, dated December 2020.

4. When conflicts exist between MASS and the Project Specifications, the Project Specifications shall govern.

B. When an item of Work not addressed by the Project Specifications, but addressed by MASS, then the item of Work shall be in accordance with MASS, regardless of whether or not the MASS Section of relevance is specifically enumerated herein.

C. This Specification section applies only to the civil designated Drawings.

1.07 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS, 2015, AS AMENDED:

A. This Contract incorporates the latest revision of the following MASS 2015, by reference. The full text of each division can be downloaded electronically at this site:

http://www.muni.org/Departments/works/project_management/Pages/MASS.aspx

B. Division 10.00 – Standard General Provisions

1.	Article 10.4.7	Reference Stakes and Surveying
2.	Article 10.4.8	Work Incidental to the Contract
3.	Article 10.4.9	Disposal Sites
4.	Article 10.4.14	Maintenance and Drainage
5.	Article 10.4.15	Temporary Erosion Control and Storm Water Pollution Prevention Plans for Construction
6.	Article 10.4.17	Utilities
7.	Article 10.5.5	Shop Drawings

C. Division 20.00 – Earthwork

1.	Section 20.01	General
2.	Section 20.02	Storm Water Pollution Prevention Plan
3.	Section 20.04	Clearing and Grubbing
4.	Section 20.06	Removal of Trees
5.	Section 20.07	Removal of Sidewalk and Concrete Apron
6.	Section 20.08	Removal of Curb and Gutter
7.	Section 20.09	Removal of Pavement
8.	Section 20.10	Excavation for Traffic Ways
9.	Section 20.20	Unclassified Fill and Backfill
10.	Section 20.21	Classified Fill and Backfill
11.	Section 20.27	Disposal of Unusable or Surplus Material

D. Division 70.00 - Miscellaneous

1.	Section 70.01	General
2.	Section 70.07	Remove Pipe

1.08 MODIFICATIONS AND / OR ADDITIONS TO MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS

A. All Divisions, All Sections: Delete Articles Entitled “Measurement” and “Basis of Payment.”

B. All Divisions, All Sections: All references to “Municipality”, “Municipality of Anchorage”, or “MOA” shall mean “Owner.”

C. All Divisions, All Sections: References to construction within a Public Right-of-Way shall also include the construction areas as indicated on the drawings.

D. All Divisions, All Sections: All staking or surveys that are noted to be completed by the "Owner" or the "Engineer" shall be completed by the Contractor.

E. Substitute all references to 'material testing by Engineer' for 'material testing by the Contractor.' The Contractor shall be responsible for all material testing and quality control in accordance with Division 1 Section 1400 "Quality Control." Frequency of testing for all constructed areas under the MASS Specifications shall be in accordance with Table 1.06-1

1.09 EXISTING CONDITIONS

A. Notify Architect/Engineer upon discovery of hazardous materials.

B. Do not sell demolished materials on-Site.

C. Maintain existing sidewalks and pavements not scheduled for removal to greatest extent possible.

D. Protect existing fencing not scheduled for removal.

E. Protect existing memorial bricks and playground structures scheduled to remain.

PART 2. PRODUCTS

2.01 FILL MATERIALS

A. Fill Material: Type: Classified fill as specified in Section 31 00 00.

PART 3. EXECUTION

3.01 DEMOLITION

A. Demolish items scheduled for removal in accordance with MASS Reference Specifications.

B. Continuously clean up and remove demolished materials from site. Do not allow materials to accumulate on site.

C. Do not burn or bury materials on site; leave site in clean condition.

3.02 ITEMS SCHEDULED FOR REUSE

A. Memorial paver bricks, play equipment, and other designated items scheduled for reuse shall be removed where in conflict with proposed improvements, protected on-site from damage and vandalism, and reset in their original location once improvements are complete. Items damaged during removal or storage shall be replaced in kind.

END OF SECTION

PLAYGROUND EQUIPMENT

PART 1. GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 0 and 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes the following:

1. Play Equipment - New
2. Painting on Playground and Sports Asphalt Surfaces
3. Basketball Equipment – Repair
4. Soccer Goals – Remove and reinstall

B. Related Sections include the following:

1. Division 32 Section “Playground Protective Surfacing”
2. Division 32 Section “Site Furnishings”
3. MASS Division 30.00 – Portland Cement Concrete

1.03 GENERAL NOTES

A. The information provided within Specifications and within Drawings related to play equipment and play surfacing acts as a basis of design for receiving bids and selecting a manufacturer. Upon selection, the design team will coordinate with the manufacturer or manufacturer’s representative to finalize the design.

B. The play system shall be a complete system that will, but not be limited to:

1. Meet all code requirements,
2. Be fully functioning,
3. Be appropriate for indicated age levels,
4. Provide for cognitive, social, emotional, and physical development and enjoyment, and
5. Meet the intent of being a valued playground with an equal to or better play capacity and types of equipment than the basis of design.

C. Intent:

1. Play systems shall be based on universal design. This includes, but is not limited to, a high level of accessibility, with play at or close to grade, transfer stations, and full use of unitary surfacing for complete ground level accessibility. Play shall include programming for cognitive, social, emotional, and physical development and enjoyment.

D. Structural Systems:

1. Unless otherwise noted, all components of the play system will be installed to meet manufacturer’s requirements, and meet or exceed minimum anchoring and structural requirements.
2. The general contractor is responsible for the coordination and integration of all parties involved with the procurement, fabrication, preparation, installation, and any other components for the delivery of a complete play system.
3. The contractor is responsible for the design, coordination and installation of footing and attachment systems. This requires close coordination among the trades, especially when one installer may be preparing an area for another installer’s subsequent work.

4. The Contractor is responsible for the Delegated Design (see submittals) for the play system structural system.

1.04 REFERENCES

A. ASTM Standards (latest versions)

1. F355 Standard Test Method for Impact Attenuation of Playing Surface Systems, Other Protective Sport Systems, and Materials Used for Athletics, Recreation and Play
2. F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
3. F1487 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
4. F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
5. F2223 Standard Guide for ASTM Standards on Playground Surfacing.

B. CPSC Handbook for Public Playground Safety (Publication No. 325).

C. Guide to ADA Accessibility Guidelines for Play Areas (Latest Version).

1.05 DEFINITIONS

A. ADA: The Americans with Disabilities Act

B. ASTM: American Society for Testing and Materials

C. Basis of Design: The basis of design establishes the minimum desired project outcome. This establishes the minimum criteria that a Contractor needs to meet or exceed should they choose to request substitutions.

D. Composite Play Structure – An item of playground equipment that is composed of several components linked together to form one complex unit.

E. CPSC: Consumer Product Safety Commission

F. CPSI: Certified Playground Safety Inspector

G. Equipment Component: An individual part or element of a larger composite play structure.

H. Fall Height: The vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it.

I. Footing: The means of anchoring playground equipment to and within the ground.

J. Full Complete Play System: All materials and installation to achieve a full and functioning play area that meets all relevant play standards and meets or exceeds project intent, and where relevant, basis of design.

K. IPEMA: International Play Equipment Manufacturers Association

L. Preschool-Age Children: Children 2 years of age through 5 years of age.

M. School-Age Children: Children 5 years of age through 12 years of age.

N. Use Zone: The surface under and around a piece of equipment onto which a child falling from or exiting from the equipment would be expected to land. These areas are also designated for unrestricted circulation around the equipment.

1.06 SUBMITTALS

A. General:

1. Contractor Recommendations: The Contractor is invited to make recommendations that will provide value to the project, increase play value, and

provide long-term durability. Please coordinate with the Landscape Architect for the submittal of recommendations. While methods and means are not prescriptive, the Contractor may request discussion/review where it is felt that methods and means are materially related to the success of the project. The intent of this specification item is to provide project value through meaningful interaction between the Contractor, the Client, and the Client team.

B. Contractor Qualifications:

1. Submit at least three references, including playground name, location, year installed, and Owner contact information.
2. Submit the installer's company name and address, and any training and experience certification.

C. Submit CPSI's information and qualifications.

1. Submit the individual's name, company name and address, and playground safety training certificate.
2. Contactor: Installer to be CPSI certified.
3. Inspection at completion to confirm warranty for manufacturer?
4. Inspection at completion for client confirmation. ← third party. Client pays for this.

D. Submit manufacturer's information for Owner's Representative approval for all products, including but not limited to:

1. Equipment renderings including application of project color design.
2. Standard range of color samples
3. Installation details
4. Warranty.

E. Playground Coordination Package

1. General: The intent of this package (combined with the accompanying Equipment Installation Coordination Package) is to confirm that site preparation, concrete, equipment fabrication, shipping, and installation are fully coordinated prior to construction. An additional intent is to ensure that as each installation phase is complete, the work is ready for the next phase and is accepted by the next responsible party as being prepared correctly for their needs (and those that will follow them). Installation timelines are critical for project success, including the ability to identify and replace damaged items prior to installation activities.
2. At a minimum, the submittal will include:

    a. Schedule, including but not limited to:

        1) Pre-construction conference
        2) Expected receipt of shipped equipment
        3) Inspection of equipment by contractor to identify missing or damage components for replacement
        4) Completion of site compaction with review by footing and equipment installers for compatibility with their efforts.
        5) Completion of concrete that occurs prior to equipment and surfacing installers for their review for compatibility with their efforts.
        6) Completion of equipment installation (including footings installed during equipment installation) by surfacing installers for compatibility with their efforts.
        7) Completion of surfacing installation.
        8) Third-Party CPSI inspection to confirm that playground has been installed to meet manufacturer's requirements and relevant play standards.

9) Additional meetings as needed for project benefit
10) ASD Inspections as relevant to the above items

b. Site preparation documentation with information including, but not limited to, materials, installation methods, thickness of lifts, compaction methods, and testing schedule and methods.

c. Concrete installation documentation with information including concrete mixes, coordination with equipment and surfacing installation needs that relate to recommended methods and means. For example, this may include use of customized screeds to set specific relationships between curbs and slabs to allow easier installation of surfacing.

F. Equipment Installation Coordination Package:

1. The Contractor is responsible for the Delegated Design for the play system structural system. The manufacturer's recommendations may be sufficient, but are generic and focus on the structural connections to footings with minimum footing designs that may not be sufficient for Alaskan conditions (soils, moisture, temperatures, frozen soils).
2. The Contractor is responsible for confirming or developing footing and structural systems and their submittal in a cohesive package. This includes coordination with the manufacturer for all attachments, and any fabrication modifications that may be needed to connect play equipment to the selected footing systems. Systems shall be based on a 20-year time frame to remain level and plumb, with no movement compromising equipment structural integrity or use. This Delegated Design shall include, but is not limited to, such considerations as:

a. Playground layout plan showing footing locations, with each footing identified for the type of footing and attachment (including hardware). Each different footing or attachment type should be accompanied by a detail keyed to the plan with a letter-based system. This detail will show the dimensional and structural detail for the footing, its relationship to the playground equipment, and hardware.
b. Manufacturer's standard or project-specific structural requirements for attachments, including but not limited to minimum pull-out and minimum fastener recommendations.
c. Earthwork and fill sections for classified fill materials, insulation board, and frost bond breaking. Footings shall be stable for the expected site conditions (including seasonally or permanent frozen soils).
d. Written acceptance by the manufacturer(s) that the design meets or exceeds their recommendations.

G. Submit statement certifying manufacturer's compliance with ASTM F1487-01, Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use, and compliance with the Guide to ADA Accessibility Guidelines for play areas.

H. Close-Out

1. Submit a letter from a CPSI stating that the completed installation is installed per manufacturer's recommendations and requirements. The CPSI will conduct a safety inspection and provide verification that installation meets ASTM, F 1487-01 Standards, and Guide to ADA Accessibility Guidelines.

1.07 SUBSTITUTIONS

A. If different play equipment than that outlined in the Drawings and Specifications is recommended, submit the following for review.

1. Certification that all equipment and surfacing meets current CPSC Guidelines, ASTM Standards, and IPEMA Standards.
2. For equipment where clamp-based attachment of equipment to posts is shown within the basis of design, clamp-based attachment is a requirement for all substitution requests.
3. Standard range of color samples
4. Installation details
5. Warranty.
6. Playground structure plan and 3D rendering detailing play components, material types, colors and dimensions.
7. A site plan, which details the placement of the play apparatus in relationship to other improvements on site, and provides details of the redesign of all items impacted by this substitution, including, but not limited to:
    a. Footing Plan and details
    b. Elevation (height/depth) of base course and playground edging
    c. Thickness of protective surfacing
8. Landscape Architect will coordinate with the playground manufacturer's representative to refine equipment selection, layout, and color scheme to ensure equivalent client value.
9. Footing Coordination Plan: Submit plans, details and supporting documentation for the installation of footing systems, including specific connections to play equipment.
10. Contractor statement that all cost impacts for the substitution and subsequent revisions to the plan and details shall be the responsibility of the Contractor.

B. If a substitution is proposed, provide a play structure with equivalent number of play events or more and will be of same value or higher at no extra cost to the Owner or project.

1.08 DELIVERY, STORAGE, AND DISPOSAL

A. Delivery: Deliver materials to the site in the manufacturer's original, unopened containers and packaging, with labels clearly identifying the product name and manufacturer.

B. Storage: Store materials in accordance with the manufacturer's instructions.

C. Handling: Protect materials during handling and installation to prevent damage.

1.09 QUALITY ASSURANCE

A. Installer Qualification: The installer must be certified by the manufacturer for training and experience installing play equipment in Alaska, and hold current Certified Playground Safety Inspector (CPSI) certification. Installer must have successfully installed a minimum 5 playgrounds of similar scope in the last 10 years. Provide at least three references, including playground name, location, year installed, and Owner contact information. Submit the installer's company name and address, and any training and experience certification.

B. Manufacturer's Representative: The manufacturer's certified playground safety inspector or the manufacturer's designated certified playground representative must supervise the installation and adjustment of the play components and equipment to verify the installation meets the requirements of the manufacturer, and specifications and drawings. Submit the individual's name, company name and address, and playground safety training certificate.

PART 2. PRODUCTS

2.01 MANUFACTURERS

A. Play Equipment: Playworld Systems has been used as the basis of design for this project. Acceptable Manufacturers for playground and field equipment include but are not limited to:

1. Playworld Systems (Basis of Design):
    a. Manufacturer representative: Jim Protiva. Northwest Playground Equipment, Inc., PO Box 2410, Issaquah, WA 98027, Phone 800-726-0031
2. Landscape Structures:
    a. Manufacturer representative: Karl Croft. Exerplay, Inc., 12220 N Hwy 14, Suite I, Cedar Crest, NM 87008, Phone: 800-457-5444
3. Playcraft Systems
    a. Manufacture representative: Margaret Miller. Margaret.Miller@playcraftsystems.com Playcraft Systems. 123 North Valley Drive, Grants Pass, OR 97526. www.playcraftsystems.com Main Office: 541-955-9199 ext. 60936. Direct: 541-507-1455

2.02 MATERIAL SPECIFICATIONS

A. General:
1. See manufacturers itemized bill of materials at the end of this section for specific included components.
2. Contractor is responsible to verify footing and attachment, and coordinate with project conditions to ensure correct installation.
3. Equipment and equipment components are provided below in summary.

B. Play Equipment (Ages 5-12 Play Area):
1. Composite Play Structure (Ages 5-12):
    a. Manufacturer: Playworld
    b. Model: Customized Structure
    c. Components:
        1) The Crossover
        2) The Grid
        3) Spiral Ladder with Access Ladder
        4) Post Mount Wheel
        5) Silo Climber ADA Stair
        6) Plastic Playcube with Transition Climber
        7) Oval Insert Panel with Ball Maze Insert
        8) Slither Slide with Slide-A-Side
        9) Anywhere Seats (Qty. 2)
        10) Pipe Wall Barrier with Telescope
        11) Coverage Climber
        12) Drop Zone
        13) Mighty Decent with Prism Pass
        14) Pipewall with Telescope
        15) Drum Panel
        16) Geo Vertical Climber
        17) Nuvo Transfer Station
    d. Colors: See exhibit for color scheme (Will be provided for 100%)
    e. Attachment: Direct Embed per Manufacturer’s Recommendations
2. Climbers
    a. Manufacturer: Playworld
    b. Customized Arrangement
        1) Tall Tri Mod Pod

2) Unity Steppers

a) Small
b) Medium

3) Anywhere Seat
4) Mod Pods - 4ft. Tri Tabletop
5) Mod Pods - 4ft. Quad Tabletop
6) Climbing Squares

a) Part# ZZUN7097
b) Part# ZZUN7098
c) Part# ZZUN7706

7) Balance Beam
8) Playcubes

c. Colors: See exhibit for color scheme
d. Attachment: Per Manufacturer's Recommendations

3. Accessible Whirl

a. Manufacturer: Playworld
b. Model: Accessible Whirl
c. Colors: See exhibit for color scheme
d. Attachment: Per Manufacturer's Recommendations

4. Swings (5-12):

a. Manufacturer: Playworld
b. Model: Heavy Duty Swings 4-Seats (2-Bay, 4 ADA seats)
c. Colors: See exhibit for color scheme
d. Attachment: Direct Embed per Manufacturer's Recommendations

5. Playhouse

a. Manufacturer: Playworld
b. Model: Chattery
c. Colors: See exhibit for color scheme
d. Attachment: Per Manufacturer's Recommendations

C. Playground Signs

1. As provided as a standard product from the manufacturer
2. Color: TBD

D. Basketball Equipment - Repair:

1. Shall consist of existing basketball hoop and footing removed from the site and refurbished. Hardware and component pieces shall be inspected and refurbished or replaced to bring them to new condition. The footing is to be removed, and the contractor shall install new footing per Civil Drawings. It is at the Contractor's discretion to substitute new basketball equipment of equal or higher quality in place of refurbishing.

E. Painting on Playground and Sports Asphalt Surfaces:

1. Paint colors and type to be confirmed. The expectation is that standard colors of traffic marking paint will be used. Provide standard color range for review and incorporation into design.

F. Soccer Goals:

1. Shall consist of existing soccer goals removed and refurbished. Hardware and component pieces shall be inspected and refurbished or replaced to bring them to new condition. It is at the Contractor's discretion to substitute new soccer goals of equal or higher quality in place of refurbishing.

2.03 Playground Footing Systems

A. The Contractor is responsible for coordinating footing systems with equipment attachment to ensure structural needs are met and that the system will be stable without significant differential movement.

PART 3. EXECUTION

3.01 GENERAL

A. All equipment is to be installed per manufacturer's recommendation and in accordance with local requirements and conditions, as shown on plans, and as specified. Meet ASTM standards, CPSC safety requirements, and Guide to ADA Accessibility Guidelines. Notify Landscape Architect immediately if any discrepancies are found and only proceed with Work once approved.

B. All play equipment and posts shall be of sufficient length to provide footing beneath safety surfacing, as shown on contract drawings, specifications, and manufacturer's recommendations.

3.02 PREPARATION

A. General:

1. Prior to installation, inspect site conditions to ensure that areas for installation of equipment meet conditions as per manufacturer's specifications and recommendations.
2. Complete all preparations and make needed corrections prior to proceeding.

B. Site:

1. Ensure that each stage of installation for playground installation is complete and correct prior to next stage. This includes confirming correct placement and compaction of installation sections. If the installer is a subcontractor, the subcontractor is responsible to verify that the installation area has been prepared correctly to receive their work, meet project requirements for quality and tolerances, and remain within tolerances for the duration of the equipment warranty.
2. Inspect job conditions to ensure proper site preparation and that all inserts, anchorages, blocking and other items have been accurately placed to receive equipment.
3. Confirm that classified fill, compaction, and grading meet the requirements as indicated in the documents and manufacturer's recommendations.
4. Proceed with subsequent Work only after making corrections and approval of previously completed Work, comply with requirements including type of materials, depth, compaction, and grading per documents.

C. Equipment:

1. Inspect and inventory equipment and hardware prior to accepting the materials from the manufacturer or the owner if owner-provided.
2. Stake equipment locations in accordance with approved layout drawings. It is the responsibility of the Contractor to maintain manufacturer-recommended minimum clearances for playground edges.

3.03 EQUIPMENT INSTALLATION

A. Install equipment per manufacturer's specifications. Units and components to be installed rigid, plumb, and true to lines and levels within 1/4 inch in 10 feet.

B. Maintain all manufacturer-recommended clearances for playground edges, play structures, site furnishings and other adjacent objects.

C. The Contractor shall be responsible for all site preparation, hardware, components, parts, or any necessary materials for proper installation of play equipment.

3.04 PAINTING OF ASPHALT

A. Provide painting of asphalt in patterns and shapes as indicated on the Drawings.

3.05 SITE OBSERVATIONS

A. The intent of observations is for the Landscape Architect to observe and review the project at key times to assist with early identification of items to be addressed and provide general quality oversight.

B. Base Course and Layout (footing and edging)

1. Review of

a. Footing types (including special footings if required)
b. Playground edging heights (confirm for height/depth of protective surfacing)

C. Intermediate Equipment Layout Review

1. Request Landscape Architect perform Intermediate Equipment Layout Review and Equipment Layout Review after half (50%) of playground equipment is installed.

a. Review of equipment layout

D. Pre-Playground Surfacing Review

1. Request Landscape Architect perform Pre-Playground Surfacing Review after the installation all playground is complete.

a. Review of equipment layout

E. Intermediate Surfacing Installation Review

1. See Section 32 18 00 – Playground Protective Surfacing

3.06 SITE INSPECTIONS

A. Substantial Completion Review

1. Upon completion of all equipment and protective surfacing installation, notify the Landscape Architect in writing seven (7) days in advance of the requested Substantial Completion date.

B. Acceptance Review

1. Upon correction of project deficiencies identified during the Substantial Completion Review, notify the Landscape Architect in writing seven (7) days in advance of the requested Acceptance Review date.

3.07 CLEANUP

A. During installation, keep adjacent areas and construction clean, and work area in an orderly condition.

3.08 PROTECTION

A. Protect playground equipment from damage during construction.

END OF SECTION

TESTING AND MAINTENANCE OF ELECTRICAL SYSTEMS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 WORK INCLUDED

A. Feeder Megohm Testing.

B. Ground Fault Circuit Interrupter Testing.

C. Electrical Service Ground Testing.

D. Telecommunications Bonding Backbone Testing.

E. Receptacle Branch Circuit Testing.

F. Phase Rotation.

G. Phase Load Balance.

H. Fire Alarm Testing.

I. Additional Testing and Maintenance requirements in individual equipment and system Sections

1.03 REFERENCES

A. NETA ATS – Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems.

B. ANSI/IEEE Std 81-1983 Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System.

C. ANSI/TIA/EIA – 568-B.1 and Addendums, General Cabling System Requirements

1.04 SUBMITTALS

A. Submit data under provisions of Division 1 and Section 26 05 00.

B. Product Data: Submit technical information for each test instrument to include manufacturer, model number, serial number, ratings, accuracy, and National Institute of Standards and Technology (NIST) Traceable calibration certification.

1.05 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit Test Reports per Section 26 05 I00.

1.06 COORDINATION

A. Provide written 72 hours advance notice of all tests to be performed to allow Owner's Representative to witness testing.

1.07 REQUIRED TEST INSTRUMENTS

A. MEGOHMMETER

1. Product Description: 1000 Volt DC, portable, insulation and resistance test Megohmmeter.
2. Equipment Accuracy:
   a. 2000 Megohm Range - 3% of full Scale.

B. BRANCH CIRCUIT ANALYZER

1. Product Description: Branch circuit analyzer capable of receptacle testing of voltage drop under load, hot-neutral-ground conductor resistances, common mode (N-G) Voltage, and G.F.C.I. trip point.
2. Manufacturer: Ideal SureTest. Model: 61-156 ST-1THD Wiring/Harmonic Distortion Analyzer or approved equal.
3. Equipment Accuracy:
   a. Accuracy 1% full scale ± 1 digit True RMS.

C. GROUND RESISTANCE CLAMP-ON METER

1. Product Description: Digital, direct reading clamp-on resistance ground tester.
2. Manufacturer: AEMC. Model: 3711 or approved equal.
3. Equipment Accuracy:
   a. 1.0 to 50.0 Ohms ± (1.5% + 0.1 Ohm)
   b. 50.0 to 100.0 Ohms ± (2.0% + 0.1 Ohm)
   c. 100 to 200 ± (1.5% + 0.1 Ohm)
   d. 200 to 400 Ohms ± (1.5% + 0.1 Ohm)
   e. 400 to 600 Ohms ± (1.5% + 0.1 Ohm).

1.08 MULTIMETER

A. Product Description: Digital True RMS Multimeter.

B. Equipment Accuracy:

1. AC Voltage Range: 0.75% ± 3 last single digits at 60 Hz.
2. AC Current Range: 0.90% ± 3 last single digits at 60 Hz.
3. DC Voltage Range: 0.25% ± 1 last single digit.
4. DC Current Range: 0.75% ± 1 last single digit.
5. Resistance Ranges: 0.50% ± 1 last single digit.
6. Frequency Range: 0.10% ± 1 last single digit @ 60 Hz.

C. SOUND LEVEL METER

1. Product Description: Sound Level Meter meeting ANSI S.14a Type 2, Specifications for Sound Level Meters. Capable of A-Weighted measurement.

1.09 TEST INSTRUMENT CALIBRATION

A. All test equipment shall be in good mechanical and electrical condition.

B. Provide calibration for each test instrument directly traceable to the National Institute of Standards and Technology (NIST) of higher accuracy than that of the instrument tested.

C. Provide calibration labels visible on all test equipment. Records, which show date and results of instruments calibrated or tested, shall be kept up-to-date.

D. Calibrate instruments in accordance with the following frequency schedule:

1. Field instruments: 12 months maximum.
2. Up-to-date instrument calibration instructions and procedures shall be maintained for each test instrument with the equipment.

1.10 MINIMUM REPORT INFORMATION

A. Report Criteria: After each test, promptly submit one copy of report to the Owner's Representative. Provide form with the minimum following information:

1. Date issued.
2. Project title and number.
3. Name and Model of Tester and witnesses.
4. Date and time of sampling or inspection.
5. Identification of product and specifications section.
6. Type of inspection or test.
7. Date of test.
8. Results of tests.
9. Indicate compliance or non-compliance with Contract Documents.
10. Final adjustment setting values where applicable.

B. Submit copy of all tests performed in the O&M manual.

1.11 GENERAL REQUIREMENTS

A. Submit test results within 3 working days of each test and included in the O&M manual.

B. Provide qualified personnel at site to perform all testing.

C. Perform specified testing of products in accordance with specified standards or as denoted in this specification whichever is more stringent.

D. Promptly notify Owner's Representative of irregularities or non- conformance of Work or products.

E. Perform additional tests when test is performed incorrectly, deemed inaccurate, or incorrectly documented.

F. The Contractor shall provide all forms, instrumentation and test equipment, loads, and other consumables required to demonstrate the systems to Owner's Representative satisfaction.

G. Perform and submit all testing prior to substantial completion and system acceptance.

H. Retest all material, cables etc that are disturbed after testing.

I. Replace and retest all material installed which does not meet or exceed the minimum acceptable limits set forth in this specification in accordance with the contract original requirements at no additional charge to Contract Sum/Price.

PART 2. PRODUCTS (NOT USED)

PART 3. EXECUTION

3.01 FEEDER CONDUCTOR TEST

A. Tests Criteria:

1. Use Megohmmeter to test all conductors sized #6AWG and larger.
2. Perform insulation-resistance test on each conductor with respect to ground and adjacent conductors. Applied potential 1000 volts DC for 600 volt rated cable.
3. Perform test immediately after installation.
4. Clean exposed cable ends with clean cloth and alcohol.
5. Test duration shall be one minute.
6. Disconnect conductors from all equipment.
7. Record the resistance of the insulated conductor under test with all other conductors connected together and to ground (metallic raceway, grounding conductor, etc.).

8. Perform continuity test to ensure correct cable connection.

    a. Submit test results to Owner's Representative.

B. Test Values:

1. Minimum insulation-resistance value: 50 megohms.
2. Investigate deviations between adjacent phases.

3.02 RECEPTACLE GROUND FAULT CIRCUIT INTERRUPTER TEST

A. Test Criteria:

1. Use Branch Circuit Analyzer to perform test of each GFCI protected receptacle.
2. Record trip level in ma for each outlet.
3. Submit test results to Owner's Representative.

B. Test Values:

1. Trip Range: Between 6-9 mA.

3.03 ELECTRICAL SERVICE GROUND TEST

A. Test Criteria:

1. Use ground resistance clamp-on meter to measure the resistance of service ground with meter clamped between system neutral bond and each grounding electrode. Perform this test on new or existing services and all separately derived systems.
2. Record resistance value in Ohms.
3. Submit test results to Owner's Representative.

B. Test Values:

1. Maximum ground resistance: 10 Ohms.

3.04 TELECOMMUNICATION BACKBONE BONDING TEST

A. Rack to TMGB or TGB:

1. Use multimeter to measure the resistance from each rack frame to the adjacent insulated grounding busbar.
2. Record resistance value in Ohms.

B. Telecommunication Backbone Bonding:

1. Use ground resistance clamp-on meter to measure the resistance with meter clamped at on each telecommunication backbone bonding at each isolated busbar.
2. Record resistance value in Ohms and detected current in Amperes.

C. Test Values:

1. Maximum resistance from Rack to adjacent busbar: 0.2 Ohms.
2. Backbone Bonding resistance: 5 Ohms.

3.05 RECEPTACLE BRANCH CIRCUIT TEST

A. Test Criteria:

1. Use Branch Circuit Analyzer to perform the tests.
2. Test minimum of 10% of installed receptacles. Select receptacles to test to be farthest from the panelboard and at the end of the string or branch of the circuits. Test each receptacle located adjacent to telecommunication equipment.
3. Record Line Volts.
4. Record Line Voltage Drop % at 15 Amp Load.
5. Record Resistance of Hot in Ohms.

6. Record Resistance of Neutral in Ohms.
7. Record Resistance of Ground in Ohms.

B. Test Values:

1. Maximum Resistance of Hot: 0.5 Ohms.
2. Maximum Resistance of Neutral: 0.5 Ohms.
3. Maximum Resistance of Ground: 0.5 Ohms.
4. Maximum Voltage Drop at 15% Amp Load: <5%

3.06 PHASE ROTATION TEST

A. Test each three phase circuit and feeder for consistent phase rotation for the entire power system with a phase rotation meter.

B. Bump test each motor for proper rotation prior to use.

C. Correct conductor phase relationship to provide proper phase rotation.

D. Record the rotation sequence on each panelboard, MDP and Service circuit schedule.

E. Submit test results of each panelboard, MDP and Service to the Owner's Representative.

3.07 PHASE LOAD BALANCE TEST

A. After energizing building loads conduct a phase load balance test for each new or remodeled panelboard with a clamp on ammeter.

B. Shift loads to provide current balance within 20% of the other phases. Revise circuit directory and all conductor labels to reflect any changes.

C. Notify Owner's Representative at least 72 hours in advance before test.

3.08 FIRE ALARM TESTS

A. Prior to substantial completion, test system in accordance with NFPA 72. At time of substantial completion for inspection, demonstrate that the system functions according to these specifications for the following outlined tests. Conduct approximately one-half of the system tests with the fire alarm controller operating on battery. After returning controller to normal

B. A.C. operation, log response of charger output current and voltage.

C. Alarm Initiation: Activate each new pull station and automatic detector in the system, and provide a log of response of each device.

1. Demonstrate activation of each addressable control relay module and response of connected equipment and systems.
2. Fixed temperature heat detectors: Short across the rear terminals of each such detector in the system.
3. Combination fixed and rate of rise heat detectors: Subject each detector in the system to a head source (portable heat lamp or hair dryer) to actuate the rate of rise portion of the combination unit. Replace the entire assembly and retest if the fixed temperature element of the original combination assembly is tripped.
4. Area coverage smoke detectors: Test each installed smoke detector in place with the manufacturer's recommended "field test meter" and procedure.
5. Duct mounted smoke detectors: Test each installed smoke detector in place. Demonstrate operation of fan shutdown control sequence.

D. Measure sound level in each room with calibrated dB meter. Take measurements at point in room farthest from signal and with all doors closed. Log test results on ASD Fire Alarm Notification Appliances Audio Test Report form.

1. Set Meter to A-Weighted setting

2. Meter must be placed 1.5 meters or 5 feet above floor.
3. Record maximum ambient dBA level. Sound within the occupiable area, from a temporary (less than 60 seconds) or abnormal source shall not be included in measuring maximum ambient sound level.
4. Record minimum dBA level during fire alarm.

E. Logs of the above test results to be tabulated for presentation at substantial completion inspection, and copies to be included in operation and maintenance manuals. Use M.O.A. fire alarm acceptance test from and NFPA 72 fire alarm system certification form. Samples of test forms are attached at the end of this section.

F. All testing shall be accomplished by U.L. listed Service Company. Upon completion of testing, issue U.L. certification.

G. Demonstrate reset, alarm signal silence, and other user-accessible controls at main control panel.

H. Demonstrate transmission of alarm, trouble, and supervisory signals to remote locations.

I. System supervision: demonstrate supervision of new circuits by performing the following tests. Provide a log of the system response.

1. Disconnect the end-of-the-line device in each conventional initiating device circuit and each circuit of alarm signals.
2. Disconnect each new addressable device data loop at panel and at device furthest from panel.
3. Remove a control cabinet function module to check supervision response.
4. Disconnect battery leads from each power supply.

END OF SECTION

COMMON WORK RESULTS FOR ELECTRICAL

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDES

A. General Requirements specifically applicable to Divisions 26-33, in addition to Division 1 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.

PART 2. WORK SEQUENCE

A. Construct Work in sequence under provisions of Division 1.

2.01 COORDINATION

A. Coordinate the Work specified in this Division under provisions of Division 1.

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.

2.02 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. ANSI/IEEE C2 - National Electrical Safety Code latest adopted edition. Utility work only.

E. 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.

F. 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, Civil, Structural, and Mechanical Drawings and adjust work to conform to conditions shown thereon. Field verification of dimensions, locations and levels is directed.

2.03 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. Conform to ANSI/IEEE C2. Utility work only.

D. Obtain electrical permits, plan review, and inspections from authority having jurisdiction.

2.04 SUBMITTALS

A. Submit inspection and permit certificates under provisions of Division 1.

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 1, the following is required for work provided under this division of the specification.

E. 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. Index and clearly identify all material and equipment by item, name or designation used on drawings and in specifications.

F. 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 diagrams and controls; component parts; finishes; dimensions; and required clearances.

G. 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.

H. 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.

I. Coordinate submittals with requirements of work and of Contract Documents.

J. 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.

K. Do not fabricate products or begin work which requires submittals until return of submittal with Architect/Engineer acceptance.

L. 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.

M. Submittals for Division 26 shall be complete and submitted at one time. Unless given prior approval, partial submittals will be returned unreviewed.

2.05 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.

2.06 PROJECT RECORD DRAWINGS

A. Maintain project record drawings in accordance with Division 1.

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.

2.07 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 1, 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 1, 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.

E. List chapters of information comprising the text. The following is a typical Table of Contents:

1. Electrical power distribution
2. Lighting controls
3. Fire alarm
4. Intercom system
5. Wireless clock system
6. Security system
7. Video surveillance system
8. Other chapters as necessary

F. Provide the following items in sequence for each chapter shown in Table of Contents:

1. Describe the procedures necessary for personnel to operate the system including start-up, operation, emergency operation and shutdown.
2. Give complete instructions for energizing equipment and making initial settings and adjustments whenever applicable.
3. Give step-by-step instructions for shutdown procedure if a particular sequence is required.
4. Include test results of all tests required by this and other sections of the specifications.

2.08 Maintenance Instructions:

A. Provide instructions and a schedule of preventive maintenance, in tabular form, for all routine cleaning and inspection with recommended lubricants if required for the following:

1. Lighting fixtures
2. Distribution equipment
3. Fire alarm and detection equipment
4. Intercom system
5. Wireless clock system
6. Security system

7. Video surveillance system

B. 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.

C. 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.

D. Provide any information of a maintenance nature covering warranty items, etc., which have not been discussed elsewhere.

E. 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.

2.09 DEMONSTRATION OF ELECTRICAL SYSTEMS

A. During substantial completion inspection:

1. Conduct operating test for approval under provisions of Division 1.
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.

2.10 WARRANTY

A. In addition to the requirements of Division 1, 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.

2.11 INSTRUCTION OF OPERATING PERSONNEL

A. In accordance with the requirements of Division 1 and this section provide services of qualified representative of supplier of each item or system listed below to instruct designated personnel of Owner in operation and maintenance of item or system.

B. Make instruction when system is complete, of number of hours indicated, and performed at time mutually agreeable.

System or Equipment	Hours of Instruction
Lighting controls	8
Security system	2
Fire alarm system	2
Intercom and clock system	2
Sound System	2
Video surveillance system	2

C. Certify that an Anchorage based authorized service organization regularly carries complete stock of repair parts for listed equipment or systems, that organization is available and will furnish service within 48 hours after request. Include name, address and telephone number of service organization.

D. Have approved operation and maintenance manuals and parts lists for all equipment on hand at time of instruction.

PART 3. PRODUCTS

3.01 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 4. EXECUTION

4.01 WORKMANSHIP

A. Install Work using procedures defined in NECA Standard of Installation and/or the manufacturer's installation instructions.

4.02 TESTS

A. Perform tests in accordance with Section 26 01 26 – Testing and Maintenance of Electrical Systems.

B. Notify the Owner’s representative at least 72 hours prior to conducting any tests.

C. Following completion of installation, test system ground in accordance with the requirements of NETA ATS 7.13. and all feeders in accordance with NETA ATS 7.3. Submit logs of values obtained, and nameplate data of instruments used prior to final inspection. Include a copy of all data in the power distribution section of the Operation and Maintenance Manuals.

D. Perform additional tests required under other sections of these specifications.

E. Perform all tests in the presence of the Owner's representative.

F. 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.

4.03 PENETRATIONS OF FIRE BARRIERS

A. 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 250º F or higher.

B. 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.

C. The rating of the fire stops shall be the same as the time-rated floor, wall or ceiling assembly.

D. Install fire stopping materials in accordance with the manufacturer's instructions.

E. 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

EQUIPMENT WIRING CONNECTIONS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 WORK INCLUDED

A. Electrical connections to equipment specified under other Sections.

1.03 RELATED WORK

A. Section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables.

B. Section 26 05 33 - Raceway and Boxes for Electrical Systems.

1.04 REFERENCES

A. FS W-C-596 - Electrical Power Connector, Plug, Receptacle, and Cable Outlet.

B. National Electrical Manufacturers Association:

1. NEMA WD 1 - General Purpose Wiring Devices.
2. NEMA WD 5 - Specific-Purpose Wiring Devices.

1.05 SUBMITTALS

A. Submit data under provisions of Division 1 and Section 26 05 00.

B. Product Data: Submit wiring device manufacturer’s catalog information showing dimensions, configurations, and construction.

1.06 COORDINATION

A. Division 1 - Administrative Requirements: Coordination and project conditions.

B. Obtain and review shop drawings, product data, manufacturer’s wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.

C. Determine connection locations and requirements.

D. Sequence rough-in of electrical connections to coordinate with installation of equipment.

E. Sequence electrical connections to coordinate with start-up of equipment.

PART 2. PRODUCTS

2.01 CORDS AND CAPS

A. Straight-blade Attachment Plug: NEMA WD 1.

B. Locking-blade Attachment Plug: NEMA WD 5.

C. Attachment Plug Configuration: Match receptacle configuration at outlet provided for equipment.

D. Cord Construction: Oil-resistant thermoset insulated Type SO multiconductor flexible cord with identified equipment grounding conductor, suitable for extra hard usage in damp locations.

E. Cord Size: Suitable for connected load of equipment and rating of branch circuit overcurrent protection.

PART 3. EXECUTION

3.01 INSPECTION

A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.02 PREPARATION

A. Review equipment submittals prior to installation and electrical rough-in. Verify location, size, and type of connections. Coordinate details of equipment connections with supplier and installer.

3.03 INSTALLATION

A. Use wire and cable with insulation suitable for temperatures encountered in heat-producing equipment.

B. Make conduit connections to equipment that is subject to vibration or movement using flexible conduit. Use Liquidtight flexible conduit in damp or wet locations.

C. Install pre-finished cord set where connection with attachment plug is indicated or specified by the equipment manufacturer's installation instructions, or use attachment plug with suitable strain-relief clamps.

D. Provide suitable strain-relief clamps for cord connections to outlet boxes and equipment connection boxes.

E. Make wiring connections in control panel or in wiring compartment of pre- wired equipment in accordance with manufacturer's instructions. Provide interconnecting wiring where required.

F. Install disconnect switches, controllers, control stations, and control devices such as limit switches and temperature switches and connect with conduit and wiring as indicated in the equipment manufacturer's installation instructions.

G. Coolers and Freezers: Cut and seal conduit openings in freezer and cooler walls, floor, and ceilings.

H. Where reconnecting existing equipment, extend connections using materials and methods compatible with existing electrical installations, or as specified.

3.04 ADJUSTING

A. Cooperate with utilization equipment installers and field service personnel during checkout and starting of equipment to allow testing and balancing and other startup operations. Provide personnel to operate electrical system and checkout wiring connection components and configurations.

END OF SECTION

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDES

A. Building wire.

B. Cable.

C. Wiring connections and terminations.

1.03 RELATED SECTIONS

A. Section 26 01 26 - Testing and Maintenance of Electrical Systems

B. Section 26 05 53 – Identification for Electrical Systems

1.04 REFERENCES

A. Federal Specification FS-A-A59544 – Cable and Wire, Electrical (Power, Fixed Installation)

B. Federal Specification FS-J-C-30B – Cable Assembly, Power, Electrical

C. ANSI/NEMA WC 70-2009 – Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy.

D. NETA ATS – Acceptance testing specifications for Electrical Power Distribution and Systems.

E. NFPA 70 – National Electrical Code.

F. NFPA 262 – Standard Method of test for flame travel and smoke of wires and cables for use in air-handling spaces.

G. UL 62 – Flexible Cords and Cables.

H. UL 83 – Thermoplastic Insulated Wire and Cable.

I. UL 1063 – Standard for Machine and Tool Wire and Cable.

J. UL 1424 – Standard for Cables for Power-Limited Fire Alarm.

K. UL 1479 – Standard for Fire Tests of Through Wall Penetration Fire Stops.

L. UL 1569 – Standard for Metal Clad Cable.

M. UL 1581 – Reference Standard for Electrical Wires, Cables and Flexible Cords.

1.05 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.

1.06 SUBMITTALS

A. Submit data under provisions of Division 1 and Section 26 05 00.

B. Product Data: Submit product data for all components provided which fall under 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.

C. Submittals are not requested for this section.

PART 2. PRODUCTS

2.01 BUILDING WIRE

A. Thermoplastic-insulated Building Wire: NEMA WC 5.

B. Feeders and Branch Circuits larger than 6 AWG: Copper, stranded conductor, 600 volt insulation, THW, THHN/THWN or XHHW-2 as indicated.

C. Feeders and Branch Circuits 6 AWG and Smaller: Copper conductor, 600 volt insulation, THHN/THWN or XHHW-2. 6 and 8 AWG, stranded conductor; smaller than 8 AWG, solid conductor.

D. 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. For conductors 4 AWG and larger, identify with colored phase tape at all terminals, splices, and boxes.
3. Grounding conductors 6 AWG and smaller shall have green colored insulation. For 4 AWG and larger, use green tape at both ends and at all other visible points in between, including pull and junction boxes.

E. Control Circuits: Copper, stranded conductor 600 volt insulation, THHN/THNN or XHHW-2.

F. Fire Alarm Notification Appliance Circuits: Copper, solid or stranded conductor 600 volt insulation, THHN/THNN or XHHW-2.

2.02 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 90º C dry, 75º wet, insulated green grounding conductor, and galvanized steel or aluminum armor overmylar.

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.

2.03 REMOTE CONTROL AND SIGNAL CABLE

A. Control Cable for Class 1 Remote Control and Signal Circuits: Copper conductor, 600 volt insulation, rated 90º 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 90º 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 90º 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.

2.04 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.
2. Motor connections: Spring wire connectors, pre-insulated “twist-on” rated 105 degrees C per UL 468C. Provide a minimum of 8 wraps of Scotch 33+ electrical tape around conductors and connector to eliminate connector back off.
3. Wet or exterior: Spring wire connectors, pre-insulated “twist-on”, resin filled rated for direct burial per UL 486D.

B. For conductors 6 AWG and larger:

1. Bus lugs and bolted connections: 600 V, 90 degrees C., two hole long barrel irreversible compression copper tin plated. Thomas & Betts or approved equal.
2. Motor connection: 600 V, 90 degrees C., copper tin plated compression motor pigtail connector, quick connect/disconnect, slip on insulator. Thomas & Betts or approved equal.
3. Two way connector for splices or taps: 600 V, 90 degrees C., compression long barrel, and copper tin plated. Thomas & Betts or approved equal. Insulate with Scotch 23 rubber insulating base covering and Scotch 33+ outer wrap.

PART 3. EXECUTION

3.01 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. Use 10 AWG conductor for 20 ampere, 120 volt branch circuit home runs longer than 75 feet.

1. Splice only in junction or outlet boxes.
2. Neatly train and lace wiring inside boxes, equipment, and panelboards.
3. Make Conductor lengths for parallel circuits equal.
4. Wiring in lighting fixture channels shall be rated for 90º C minimum.

C. Do not share neutral conductors. Provide a dedicated neutral conductor for each branch circuit that requires a neutral.

3.02 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. Use UL listed wire pulling lubricant for pulling 4 AWG and larger wires.

B. Install wire in raceway after interior of building has been physically protected from the weather and all mechanical work likely to injure conductors has been completed.

C. Do not install XHHW-2 conductors when ambient temperatures are below – 5 degrees C and THHN/THWN conductors when ambient temperatures are below 0 degrees C.

D. 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.

E. Place an equal number of conductors for each phase of a circuit in same raceway or cable.

F. Route conductors from each system in independent raceway system and not intermix in the same raceway, enclosure, junction box, wireway, or gutter as another system unless otherwise shown on the plans.

G. No more than six current carrying conductors shall be installed in any homerun unless otherwise indicated on the drawings or without prior approval from the Engineer.

H. Completely and thoroughly swab raceway system before installing conductors.

I. When two or more neutrals are installed in one conduit, identify each with the proper circuit number in accordance with Section 26 05 53.

3.03 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.

D. Trench and backfill for direct buried cables per Division 31. Install warning tape along entire length of direct burial cables.

3.04 WIRING CONNECTIONS AND TERMINATIONS

A. Splice only in accessible junction boxes.

B. Thoroughly clean wires before installing lugs and connectors.

C. Make splices, taps and terminations to carry full ampacity of conductors without perceptible temperature rise.

D. Terminate spare conductors with twist on connectors or heat shrink insulation to proper voltage rating.

E. Control systems wiring in conjunction with mechanical, electrical or miscellaneous equipment to be identified in accordance with wiring diagrams furnished with equipment.

F. Code sound and signal systems wiring and any special equipment in accordance with manufacturer's diagrams or recommendations.

G. Do not exceed manufacturer's recommended pull tensions.

3.05 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Division 1 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.

3.06 WIRE AND CABLE INSTALLATION SCHEDULE

A. All Locations: Building wire and/or remote control and signal cable in raceways.

B. At the Contractor’s option Metal Clad cable may be used for branch circuit wiring other than homeruns. Homeruns shall be building wire in raceway. Metal Clad cable used for branch circuit wiring from a light switch to the light fixture shall include a spare conductor for future use.

END OF SECTION

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDES

A. Power system grounding.

B. Communication system grounding.

C. Electronic Safety and Security system grounding.

D. Electrical equipment and raceway grounding and bonding.

1.03 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 1 General Requirements and Section 26 05 00 – Common Work Results for Electrical

B. Section 26 01 26 - Testing and Maintenance of Electrical Systems

C. Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables.

1.04 REFERENCE STANDARDS

A. ANSI/NEMA GR-1, Ground Rod Electrodes and Ground Rod Electrode Couplings.

B. ANSI/NFPA 70 – National Electrical Code.

C. ASTM B 3 – Standard Specification for Soft or Annealed Copper Wire.

D. AWS A5.8/A5.8M – Specification for Filler Metals for Brazing and Braze Welding.

E. IEEE Std 81 – Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System.

F. IEEE Std 142 – Recommended Practice for Grounding of Industrial and Commercial Power System.

G. UL 467 – Standard for Grounding and Bonding Equipment.

1.05 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.

1.06 SUBMITTALS

A. Product Data: Submit product data for all components provided, showing material type and dimensions. Each catalog sheet should be clearly marked to indicate exact part number provided, including all options and accessories.

1.07 CLOSEOUT SUBMITTALS

A. Project Record Drawings

1. Accurately indicate actual locations of main grounding bus, all grounding rods, concrete encased electrodes, etc.

2. Show the actual installed routing of grounding electrode conductor, and size/type of bonding conductors and termination locations of all major bonding connections (water, piping, steel, fuel tanks, etc.).

B. Test Reports

1. See Section 26 01 26 - Testing and Maintenance of Electrical Systems for grounding system tests.

1.08 COORDINATIONS

A. Division 1 – Administrative Requirements: Requirements for Coordination.

B. Complete grounding and bonding of building reinforcing steel prior to concrete placement.

PART 2. PRODUCTS

2.01 MATERIALS

A. Solid Ground Rods: ANSI/NEMA GR-1, copper-encased steel, ¾ inch diameter, minimum length 10 feet. Ground rods shall be clean and smooth.

B. Bonding Conductors: Solid bare copper wire for sizes No. 8 AWG and smaller diameter. Stranded bare copper wire for sizes No. 6 AWG and larger diameter. Conductors may be insulated conductors if used provide green insulation.

C. Grounding Conductors: Copper conductor bare or green insulated.

D. Telecommunications Bonding Backbone: Bare copper, 2 AWG, stranded conductor.

E. Telecommunications Bonding Busbar: Wall-mounted, solid copper, 12 inch by 4 inch by ¼ inch thick busbar with two insulators and standoff brackets. Chatsworth #40153-012 or approved equal.

F. Mechanical Grounding and Bonding Connectors: Non-reversible crimp type lugs only. Use factory made compression lug for all terminations.

G. Exothermic Grounding and Bonding Connectors: AWS A5.8/A5.8M Exothermic welded type. Welding procedure shall include the proper mold and powder charge and shall conform to the manufacturer's recommendations.

H. In external locations, clamping shall be used only where a disconnect type of connection is required. Connection device may utilize threaded fasteners. Device shall be constructed such that positive contact pressure shall be maintained at all times. Machine bolts with tooth-type lock washers shall be used.

PART 3. EXECUTION

3.01 INSTALLATION

A. Provide a separate, insulated equipment-grounding conductor in all feeder and 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. Connect grounding electrode conductors to metal water pipe using a suitable ground clamp. Make connections to flanged piping at street side of flange. Provide bonding jumper around water meter and back flow preventers.

C. Supplementary Grounding Electrode: Use driven ground rod on exterior of building. Use effectively grounded metal frame of the building. Use minimum of 20 feet No. 2 bare copper wire embedded in concrete foundation.

D. Telecommunications Bonding Backbone: Terminate at the electrical service entrance and at the ground bar on telecommunications backboard.

E. Provide grounding and bonding at Utility Company's metering equipment and pad-mounted transformer.

F. Bond together system neutrals, service equipment enclosures, exposed non-current carrying metal parts of electrical equipment, metal raceway systems, grounding conductor in raceways and cables, receptacle ground connectors, and plumbing and fuel systems.

G. Grounding conductors for branch circuits shall be sized in accordance with NEC, except minimum size grounding conductor shall be No. 12 AWG.

H. Grounding conductor is in addition to neutral conductor and in no case shall neutral conductor serve as grounding means.

I. Ground rods shall be installed so that the top of the rod is not less than 12 inches below finished grade. Conceal after inspection.

3.02 FIELD QUALITY CONTROL

A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.

B. Perform system ground test as specified in Section 26 01 26 - Testing and Maintenance of Electrical Systems.

C. Upon completion of the ground installation and before connection to the permanent facility power the Contractor shall measure the ground resistance of the grounding electrode system. The Contractor shall notify the Owner’s representatives a minimum of 5 business days prior to the scheduled ground testing date so they may be present at the time of testing. The Contractor shall immediately notify the Owner’s representative if the measured ground resistance is above 20 ohms. The Contractor shall submit a copy of the test report to the Owner’s representative within 10 days after testing and before the ground system becomes inaccessible.

D. 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

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDED

A. Conduit supports.

B. Formed steel channel.

C. Spring steel clips.

D. Equipment bases and supports.

1.03 RELATED WORK

A. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 1 General Requirements, and Section 26 05 00 – Common Work Results for Electrical.

B. MASS Division 30.00 – Portland Cement Concrete

1.04 REFERENCES

A. International Building Code (IBC), Chapter 16 – Structural Design.

1.05 SUBMITTALS

A. Division 1: Requirements for submittals.

B. Seismic Restraint Calculations:

1. Provide structurally engineered shop drawings for seismic restraint of all electrical equipment required by the International Building Code (IBC), Chapters 16, 17. Structural design shall be based on the Seismic Use Category and Seismic Design Category as designated in these chapters.
2. Shop drawings shall be stamped by a professional engineer registered in the State of Alaska.

1.06 COORDINATION

A. Coordinate size, shape and location of concrete pads with MASS Division 30.00

1.07 QUALITY ASSURANCE

A. Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.

PART 2. PRODUCTS

2.01 CONDUIT SUPPORTS

A. Manufacturers:

1. Allied Tube & Conduit Corp.

2. Minerallac Fastening Systems.
3. O-Z Gedney Co.
4. Substitutions: per Division 1

B. Hanger Rods: Threaded high tensile strength galvanized carbon steel with free running threads.

C. Beam Clamps: Malleable Iron, with tapered hole in base and back to accept either bolt or hanger rod. Set screw: hardened steel.

D. Conduit clamps for trapeze hangers: Galvanized steel, notched to fit trapeze with single bolt to tighten.

E. Conduit clamps - general purpose: One-hole malleable iron for surface mounted conduits.

F. Cable Ties: High strength nylon temperature rated to 185 degrees F. Self-locking.

2.02 FORMED STEEL CHANNEL

A. Manufacturers:

1. B-Line Systems
2. Allied Tube & Conduit Corp.
3. Unistrut Corp.
4. Substitutions: per Division 1

B. Product Description: Galvanized 12 gage) thick steel. With holes 1-1/2 inches on center.

PART 3. EXECUTION

3.01 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.

3.02 INSTALLATION - GENERAL

A. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using precast insert system, expansion anchors, preset inserts, beam clamps, or spring steel clips.

B. Use toggle bolts or hollow wall fasteners in hollow masonry partitions and walls; expansion anchors or preset inserts in solid masonry walls; self- drilling anchors or expansion anchor on concrete surfaces; sheet metal screws in sheet metal studs; and wood screws in wood construction.

C. Do not support raceways, low voltage pathways, cables, telecommunication pathways or boxes from ceiling suspension wires or suspended ceiling systems. Provide support from building structure independently to allow ceiling removal and replacement without removal of electrical system. If dedicated support wires are used, wires and wire clips must be painted or color-coded. Exception: Outlet boxes for ceiling-mounted light fixtures, speakers, video cameras, and smoke detectors may be mounted in the ceiling system.

D. Do not fasten supports to piping, ductwork, mechanical equipment, conduit, or ceiling suspension system.

E. 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.

F. Fabricate supports from structural steel or steel channel, rigidly welded or bolted to present a neat appearance. Use hexagon head bolts with spring lock washers under all nuts.

G. In wet locations install free-standing electrical equipment on concrete pads. Pad top shall be a minimum of 3 ½" above the surrounding grade and shall be reinforced in accordance with MASS Division 30.00.

H. Install surface-mounted cabinets and panelboards with minimum of four anchors.

I. Bridge studs top and bottom with channels to support flush-mounted cabinets and panelboards in stud walls.

J. Securely fasten fixtures and equipment to building structure in accordance with manufacturer's recommendations and to provide necessary earthquake anchorage.

K. Provide wall attached fixtures and equipment weighing less than 50 pounds with backing plates of at least 1/8" x 10" sheet steel or 2" x 10" fire retardant treated wood securely built into the structural walls. Submit attachment details of heavier equipment for approval.

L. Earthquake Anchorages:

M. Equipment weighing more than 50 pounds shall be adequately anchored to the building structure to resist lateral earthquake forces.

N. Total lateral (earthquake) forces shall be 1.5 times the equipment weight acting laterally in any direction through the equipment center of gravity. Provide adequate backing at structural attachment points to accept the forces involved.

O. For light fixtures installed in exposed areas (i.e. with no ceiling system), provide safety chains capable of supporting a minimum of 200 pounds. Attach safety chains to building structure and to each end of the light fixtures so as to not allow fixture to drop more than 6 inches upon primary fixture support failure.

P. Provide two minimum color-coded dedicated seismic support wires for each ceiling mounted light fixture weighing less than 50 pounds. Attach support wires to building structure independent from ceiling system and on opposing corners of the light fixtures to not allow fixture to drop more than 6 inches upon ceiling failure. Secure each end with three tight wraps within 1 inch at each end of the wire.

Q. Attach the supporting cables for all pendant fixtures to both the building structure and to the ceiling grid which they pass through.

R. Replace or repair any fireproofing damaged by the installation of supporting equipment or devices.

S. Power-driven fasteners are prohibited for tension load applications (such as supporting luminaries or conduit racks from ceiling above). Use drilled-in expansion anchors, or drilled and screw-in anchors such as Kwik-Con II or Tapcon.

3.03 PROTECTION OF FINISHED WORK

A. Division 1: Requirements for protecting finished Work.

B. Protect adjacent surfaces from damage by material installation.

END OF SECTION

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDES

A. Metal conduit.

B. Flexible metal conduit.

C. Liquid tight metal conduit.

D. Electrical metallic tubing.

E. Nonmetallic conduit.

F. Auxiliary Gutter

G. Fittings and conduit bodies.

H. Wall and ceiling outlet boxes.

I. Pull and junction boxes.

J. Floor boxes.

K. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions.

L. Division 1 – General Requirements, Summary, Administrative Requirements

M. Section 26 05 00 – Common Work Results for Electrical.

N. Section 26 05 19 – Low-Voltage Electrical Power Conductors and Cables.

O. Section 26 05 26 – Grounding and Bonding for Electrical Systems.

P. Section 26 05 29 – Hangers and Supports for Electrical Systems.

Q. Section 26 05 53 – Identification for Electrical Systems.

R. Section 26 27 26 – Wiring Devices.

1.03 REFERENCES

A. American National Standards Institute (ANSI):

1. ANSI C80.1 - Rigid Steel Conduit, Zinc Coated.
2. ANSI C80.3 - Electrical Metallic Tubing, Zinc Coated.
3. ANSI C80.5 - Rigid Aluminum Conduit.

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. UL651B – Continuous Length HDPE Conduit.
4. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

D. National Fire Protection Association (NFPA):

1. NFPA 70 - National Electrical Code.

E. Telecommunications Industry Association (TIA) and Electronics Industries Association (EIA)

1. ANSI/TIA/EIA568 – B Commercial Building Telecommunications Cabling Standard

F. Building Industry Consulting Service International (BICSI):

1. BICSI Telecommunication Design Methods Manual

G. International Building Code (IBC):

1. IBC chapters 16 and 17 seismic requirements.

1.04 RACEWAY AND BOX INSTALLATION SCHEDULE

A. Raceway Minimum Size:

1. Below Grade: Provide 1 inch minimum, unless otherwise noted.
2. Above Grade or Slab on Grade: Provide 3/4 inch minimum. Raceway may be reduced to ½ inch for final connection of raceway up to 6 feet for connection to fixture or device where maximum conduit entry size is ½ inch.

B. Underground more than 5 feet from foundation wall:

1. Raceway: Provide rigid steel conduit, intermediate metal conduit, or HDPE conduit per the plans.
   a. Provide detectable warning tape over all underground raceways per 26 05 53.
   b. Provide 3-inch minimum spacing between raceways.
   c. Provide 3/4 inch minus material 6 inches above and below conduit. Backfill remaining trench free of debris or rocks greater than 1 inch in diameter.
   d. Installation of conduit by plow method is not allowed.
2. Boxes and Enclosures: Provide concrete type 1A handhole.

C. Under or in concrete slab, or underground within 5 feet of foundation wall:

1. Raceway: Provide rigid steel conduit or intermediate metal conduit Arrange raceway so the curved portion of bend is not visible above finished slab.
2. Boxes and Enclosures: Provide concrete tight cast and sheet metal steel metal boxes.

D. In or through CMU walls:

1. Raceway: Provide rigid steel conduit or intermediate metal conduit.
2. Boxes and Enclosures: Provide concrete tight cast and sheet metal steel metal boxes.

E. Outdoor Above Grade, Damp or Wet Interior Locations:

1. Raceway: Provide rigid steel conduit or intermediate metal conduit.
2. Boxes and Enclosures: Provide weatherproof malleable iron for branch circuit junction and outlet boxes. Provide weatherproof NEMA 3R sheet metal enclosures for safety and disconnect switches and NEMA 4 sheet metal enclosures with gaskets for motor controllers and control panels.
3. Fittings: Provide galvanized malleable iron with gaskets. Provide Myers threaded hubs for all conduit entries into top and side of sheet metal enclosures.

F. Concealed Dry Locations:

1. Raceway: Provide rigid steel conduit, intermediate metal conduit, or electrical metallic tubing.
2. Boxes and Enclosures: Provide sheet-metal boxes.
3. Fittings: Provide galvanized malleable iron and steel.

G. Exposed Dry Locations:

1. Raceway: Provide rigid steel conduit or intermediate metal conduit. EMT conduit may be used where exposed conduit is allowed, 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.
4. Surface Raceway and Boxes. Where specifically noted on the Drawings, provide surface raceway and boxes.

H. Telecommunication Bonding:

1. Raceway: Route bonding backbone conductor along same route as fiber backbone cable between telecom rooms. Where telecom cable pathway consists of J-hooks or cable tray, bonding conductor may be run in same pathway. Provide aluminum or PVC conduit (non-ferrous) where the bonding conductor is concealed within the wall or inaccessible ceiling; or if the bonding conductor is exposed to physical damage.
2. Boxes and Enclosure: Provide non-ferrous as required.
3. Fittings: Provide non-ferrous as required.

I. Branch Circuits 60 Amperes or Larger and Feeders:

1. Raceway: Provide rigid steel conduit or intermediate metal conduit.
2. Boxes and Enclosures: Provide sheet-metal boxes.
3. Fittings: Provide galvanized malleable iron and steel.

J. Fiber Optic Cable:

1. Raceway: Provide plenum-rated flexible nonmetallic optical fiber raceway. Optical fiber raceway shall be routed in either conduit or J- hooks, as indicated on the Drawings.

K. Telecommunications Cable:

1. Raceway: Where portions of cabling system are installed in raceway, provide rigid steel conduit, intermediate metal conduit, or electrical metallic tubing.
2. Boxes and Enclosures: Provide sheet metal boxes.
3. Fittings: Provide galvanized malleable iron and steel

L. Fire Alarm Cable:

1. Raceway: Provide fire alarm EMT in all interior locations. Where portions of raceway are installed outdoors, in or under the slab, and in or through CMU walls, comply with all other requirements of this section, as noted above.
2. Boxes and Enclosures: Provide sheet metal boxes.
3. Fittings: Provide galvanized malleable iron and steel

M. Equipment Connections: Provide short extensions (three feet maximum) of flexible metal conduit for connections to light fixtures, motors, transformers, vibrating equipment or equipment that requires removal for maintenance or replacement. Use Liquidtight flexible conduit and fittings for motors and equipment in damp or wet locations or subject to spilling of liquids as at pumps, kitchen equipment, in mechanical rooms, boiler rooms, pump rooms, etc.

N. Liquidtight flexible nonmetallic conduit and electrical nonmetallic tubing are not approved raceway systems for this project.

1.05 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.
2. Fire Alarm, Telecom, Intercom and other Low-Voltage Circuits: Raceway size 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 cable diameter provided by the manufacturer.

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.

D. Telecommunication Pathways Layout and Configuration: BICSI Telecommunication Design Methods Manual and ANSI/TIA/EIA 568-B Commercial Building Telecommunications Cabling Standard.

1.06 SUBMITTALS

A. Section 26 05 00 – Common Work Results for Electrical.

B. Product Data: Submit data for products to be provided.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.

B. Protect PVC conduit from sunlight.

PART 2. PRODUCTS

2.01 RIGID METAL CONDUIT (RMC)

A. Rigid Steel Conduit: ANSI C80.1, UL 6.

B. Fittings and Conduit Bodies: NEMA FB 1, UL 514B; Galvanized malleable iron with threaded hubs for all conduit entries. Provide threaded connections and couplings only. Set Screw and running thread fittings are not permitted. Provide insulated throat bushings at all conduit terminations.

2.02 INTERMEDIATE METAL CONDUIT (IMC)

A. Product Description: ANSI C80.6, UL 1242; Galvanized Steel Conduit.

B. Fittings and Conduit Bodies: NEMA FB 1, UL 514B; use fittings and conduit bodies specified above for rigid steel conduit.

C. Provide insulated throat bushings at all conduit terminations.

2.03 FLEXIBLE METAL CONDUIT (FMC)

A. Product Description: UL 1, FS WW-C-566; galvanized or zinc-coated flexible steel, full-wall thickness. Reduced-wall flexible metal conduit is not acceptable.

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.

2.04 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

A. Product Description: UL 360, flexible metal conduit with interlocked steel construction and PVC jacket.

B. Fittings and Conduit Bodies: ANSI/NEMA FB 1; liquid tight steel or malleable iron with insulated throat bushings. Die cast fittings are not acceptable.

2.05 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 or set screw type with insulated throat bushings. Zinc die cast, set screw, or indenter fittings are not acceptable.

C. Maximum size shall be 2". Provide factory elbows on sizes 1-½" and larger.

2.06 RIGID NONMETALLIC CONDUIT (RNC)

A. Not approved for use on this project.

2.07 HIGH DENSITY POLYETHYLENE CONDUIT (HDPE)

A. Conduit: NEMA TC 7; HDPE conduit rated for 90º C cable. Provide Schedule 40 conduit for trade sizes up to 2” and Schedule 80 conduit for trade sizes above 2”.

B. Provide conduit with pullstring installed.

C. Fittings and Conduit Bodies: NEMA TC 7.

D. HDPE to RMC Couplings: Basis of design is Duraline “Shur-Lock II” or equal.

E. HDPE to HDPE Couplings: Butt-fusion, electro-fusion couplers, self- threading couplings, or drive-on couplings. All couplings shall be UL listed for the intended purpose.

2.08 ELECTRICAL NONMETALLIC TUBING (ENT)

A. Not approved for use on this project.

2.09 FLEXIBLE NONMETALLIC OPTICAL FIBER RACEWAY

A. Product Description: UL2024 Plenum Rated; Indoor, corrugated, 1-inch in diameter. Color Orange

B. Fittings: By same manufacturer as optical fiber raceway. Plenum Rated.

2.10 AUXILIARY GUTTERS

A. Manufacturers:

1. Square D.
2. Circle AW.
3. Hoffmann.
4. Substitutions under provision of Division 1

B. Auxiliary Gutters: General purpose wireway, with or without knockouts.

C. Size and length as required.

D. Cover: Hinged cover.

E. Connector: Slip-in construction; hinged cover.

F. Fittings: Lay-in type with removable top, captive screws.

G. Finish: Rust inhibiting primer coat with gray enamel finish.

2.11 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. Telecommunications Outlets: Minimum size 4-11/16 inches square, 2- 1/8 inches deep.

B. Cast Boxes: NEMA FB 1, Type FD, galvanized malleable iron. Furnish gasketed cover by box manufacturer. Furnish threaded hubs. “Bell” boxes are not acceptable.

C. Wall Plates: As specified in Section 26 27 26.

2.12 PULL AND JUNCTION BOXES

A. Sheet Metal Pull and Junction Boxes: ANSI/NEMA OS 1 , UL 514A galvanized steel.

1. Minimum Size: 4 inches square or octagonal, 1-1/2 inches deep, unless otherwise noted.

B. Sheet Metal Boxes Larger than 12 Inches in Any Dimension: Hinged enclosure. Hoffman or approved equal.

C. Cast Metal Boxes for Outdoor and Wet Location Installations: NEMA 250, Type 4; flat-flanged, surface mounted junction box, UL listed as raintight:

1. Material: Galvanized cast iron or copper-free cast aluminum.
2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover and screws.

D. Fiberglass Concrete composite Type 1A Handholes: Die-molded glass- fiber concrete composite hand holes with pre-cut 6 x 6 inch cable entrance at center bottom of each side:

1. Cover: Glass-fiber concrete composite, weatherproof cover with non- skid finish.
2. Cover Legend: "ELECTRIC"

E. Polymer Concrete Junction Boxes for Underground Installations: Polymer concrete consisting of sand and aggregate bound together with a polymer resin. Internal reinforcement shall be provided by means of steel, fiberglass or a combination of the two. The installed enclosure shall be rated for a minimum test load of 7500 pounds distributed

over a 10 inch by 10 inch area and used in occasional, non-deliberate vehicular traffic or pedestrian traffic application. All hardware shall be stainless steel.

2.13 FLOOR BOXES

A. Concealed Service Floor Boxes: Hubbell #LCFBCA or approved equal fully adjustable box with cast iron base and PVC housing constructed in accordance with UL514A/C. Box shall contain 6 enclosed wiring compartments capable of accommodating duplex receptacles, GFCI receptacles, modular telecom jacks, audio-visual jacks, etc. Provide with all faceplates required to accommodate installed devices. Provide with Hubbell #LCFBCALTC or approved equal flush aluminum cover with no carpet insert.

2.14 EXPANSION FITTINGS

A. Galvanized malleable iron, galvanized with grounding bond jumper.

2.15 BUSHINGS

A. Non-grounding: Threaded impact resistant plastic.

B. Grounding: Insulated galvanized malleable iron/steel with hardened screw bond to raceway and conductor lug.

2.16 LOCKNUTS

A. Threaded Electro Zinc Plated Steel designed to cut through protective coatings for ground continuity.

2.17 WIREWAY

A. Product Description: General purpose type wireway. Size per NEC minimum fill capacity required.

B. Knockouts: Field-installed, no factory knockouts acceptable.

C. Cover: Screw cover.

D. Fittings and Accessories: Include factory couplings, offsets, elbows, adapters and support straps required for a complete system. Provide internal ground bonding jumper bonded to each section.

PART 3. EXECUTION

3.01 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.

3.02 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. 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.

H. Conduit embedded in concrete or solid masonry shall not be larger than 1/3 the thickness of the wall or slab and shall be spaced not less than three diameters apart. No cutting of reinforcing bars shall be permitted unless specifically approved. Should structural members prevent the installation of conduit or equipment, notify the Contracting Officer before proceeding.

I. Route conduits in slabs to have 1 inch minimum cover. Conduits in slab shall not compromise the structural integrity of the slab.

J. 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.

K. 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.

L. Group raceway in parallel runs where practical and use conduit rack constructed of steel channel with conduit straps or clamps, as specified in Section 26 05 29. Provide space on each rack for 25 percent additional raceway.

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. Use threaded raintight conduit hubs for fastening conduit to cast boxes, and for fastening conduit to sheet metal boxes in damp or wet locations. Sealing locknuts are not acceptable.

O. Install no more than the equivalent of three 90-degree bends between boxes.

P. Install conduit bodies to make sharp changes in direction, such as around beams. "Goosenecks" in conduits are not acceptable.

Q. Use hydraulic one-shot conduit bender or factory elbows for bends in conduit larger than 2 inch size.

R. 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.

S. Avoid moisture traps; install junction box with drain fitting at low points in raceway system.

T. Install fittings and flexible metal conduit to accommodate 3-axis movements where raceway crosses seismic joints

U. Install fittings designed and listed to accommodate expansion and contraction where raceway crosses control and expansion joints.

V. Stub a minimum of 2 inches above floor all raceways terminated beneath free standing service equipment, pad mounted equipment, etc.

W. Provide weatherhead on all raceway stub ups which are outdoors and do not terminate into equipment

X. Use cable sealing fittings forming a watertight non-slip connection to pass cords and cables into conduit. Size cable sealing fitting for the conductor outside diameter. Use Appleton CG series or equal cable sealing fittings.

Y. Use suitable caps to protect installed raceway against entrance of dirt and moisture.

Z. Provide nylon "jet-line" or approved equal pull string in empty raceway, except sleeves and nipples.

AA. 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

BB. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area that will be inserted into fitting. Let joint cure for 20 minutes minimum.

3.03 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. Verify location of floor boxes prior to rough-in. Set boxes level and flush with finish flooring material.

G. Adjust box location up to 6 feet prior to rough-in to accommodate intended purpose.

H. Orient boxes to accommodate wiring devices oriented as specified in Section 26 27 26.

I. Unless otherwise specifically noted, locate outlet boxes for light switches within 6 inches of the door jamb on the latch side of the door.

J. Position outlets to locate luminaires as shown on reflected ceiling plans.

K. Locate and install boxes to maintain headroom and to present a neat appearance.

L. Locate flush-mounted box in masonry wall to require cutting of masonry unit corner only. Coordinate masonry cutting to achieve neat opening.

M. Provide knockout closures for unused openings.

N. Install boxes in walls without damaging wall insulation or reducing its effectiveness.

O. Provide recessed outlet boxes in finished areas; secure boxes to interior wall and partition studs, accurately positioning to allow for surface finish thickness.

P. 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.

Q. Do not install flush mounted boxes back-to-back in walls; install with minimum 6 inches separation.

R. 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.

S. Do not fasten boxes to ceiling support wires or other piping systems.

T. Support boxes independently of conduit.

U. Clean interior of boxes to remove dust, debris, and other material and clean exposed surfaces and restore finish

V. Provide blank covers or plates for all boxes that do not contain devices.

3.04 INSTALLATION – AUXILIARY GUTTER

A. Bolt auxiliary gutter to steel channels fastened to the wall or ceiling or in self-supporting structure. Install level.

B. Gasket each joint in oil-tight gutter.

C. Mount raintight gutter in horizontal position only.

3.05 INSTALLATION – TELECOMMUNICATION BOXES

A. Boxes:

1. All boxes shall be readily accessible.
2. Do not use boxes for angle pulls or change pathway direction. Locate pull boxes in straight through sections of horizontal conduit pathways.
3. Provide pull boxes for 3/4-inch and 1-inch through pull for horizontal UTP cabling. Provide all other boxes sized per the following table:

Maximum Trade Size Conduit	Minimum Size of Pull Box in Inches			For each additional conduit increase width in inches
	Width	Length (direction of conduit)	Depth	
0.75”	4	12	3	2
1”	4	16	3	2
1.25”	6	20	3	3
1.5”	8	27	4	4
2”	8	36	4	5
2.5”	10	42	5	6
3”	12	48	5	6
3.5”	12	54	6	6
4”	15	60	8	8

END OF SECTION

VIBRATION AND SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 REFERENCE

A. The Work under this Section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 1 General Requirements.

1.03 DESCRIPTION

A. Seismic Category B

1. Electrical components are not required to be seismically braced.

B. Seismic Category C

1. Only electrical items that are of Importance Factor (Ip) = 1.5 are required to be seismically braced. This applies to the following:
    a. The component is required to function for life safety purposes after an earthquake, including fire protection systems, fire alarm systems, emergency lighting, etc.
    b. The component contains hazardous materials.
2. All other electrical components shall be assigned a component importance factor (Ip) = 1.0 and are not required to be seismically braced.

C. Seismic Category D, E and F

1. All electrical items that are of Importance Factor (Ip) = 1.5 are required to be seismically braced. This applies to the following:
    a. The component is required to function for life safety purposes after an earthquake, including fire protection systems, fire alarm systems, emergency lighting, etc.
    b. The component contains hazardous materials.
2. All other electrical equipment shall be assigned a component importance factor (Ip) = 1.0 and are required to be seismically braced unless one of the following conditions is satisfied:
    a. Component is MOUNTED (connection to structure) at less than 4' above the floor (to the center of gravity of the component), and weighs less than 400 lbs.
    b. Component is mounted higher than 4' (to the center of gravity of the component), but weighs less than 50 lbs (if it is concealed)
    c. Component is mounted higher than 4' (to the center of gravity of the component), but weighs less than 100 lbs (if it is exposed)
    d. Flexible connections between the components and associated conduit are provided.

e. All runs or groupings of conduits on or off of trapezes shall be seismically braced, unless the distribution system (including conduit, wiring and fittings) weighs less than 5 pounds per linear foot.

f. Lighting fixtures, lighted signs and ceiling fans that are not rigidly connected to ducts or piping, that are supported by chains or otherwise suspended from structure, are not required to be seismically braced, as long as;

1) The attachment points can carry at least 140% of the weight of the fixture, and
2) The swinging light will not create a falling debris problem by bumping into ceiling of other finishes, and
3) Connections to structure allow for movement of the fixture without damaging the connections.

D. In accordance with ASCE 7-05 13.6.4, all electrical components with Ip = 1.5 shall also satisfy the following requirements:

1. Provisions shall be made to eliminate seismic impact between components.
2. Loads imposed on the components by attached utility or service lines that are attached to separate structures shall be evaluated.
3. Batteries on racks shall have wrap-around restraints to ensure that the batteries will not fall from the rack. Spacers shall be used between restraints and cells to prevent damage to cases. Racks shall be evaluated for sufficient lateral load capacity.
4. Internal coils of dry type transformers shall be positively attached to their supporting substructure within the transformer enclosure.
5. Electrical control panels, computer equipment, and other items with slide-out components shall have a latching mechanism to hold the components in place.
6. Electrical cabinet design shall comply with the applicable National Electrical Manufacturers Association (NEMA) standards. Cutouts in the lower shear panel that have not been made by the manufacturer and reduce significantly the strength of the cabinet shall be specifically evaluated.
7. The attachments of additional external items weighing more than 100 lbs shall be specifically evaluated if not provided by the manufacturer.
8. Where conduit, cable trays, or similar electrical distribution components are attached to structures that could displace relative to one another and for isolated structures where such components cross the isolation interface, the components shall be designed to accommodate the seismic relative displacements defined in ASCE 7-05 Section 13.3.2

E. Unless otherwise exempted above, electrical component supports and the means by which they are attached to the component shall be designed for the Seismic Category they are installed in accordance with ASCE 7-05 Section 13.6.5, which includes the following additional requirements:

1.04 REFERENCE STANDARDS

A. Seismic anchorage and restraints shall be designed and installed in accordance with codes and standards as enforced by authorities having jurisdiction in Anchorage, Alaska. Authorities shall include Owner's insurance company.

B. Where applicable, building standards supersede those of other evaluation or listing agencies referenced in specification.

C. International Building Code (IBC), Chapter 16 – Structural Design.

D. ASCE 7-05 Chapter 13.

1.05 SUBMITTALS

A. Provide structurally engineered shop drawings for seismic restraint of all electrical equipment required by the International Building Code (IBC), Chapters 16, 17. Structural design shall be based on the Seismic Use Category and Seismic Design Category as designated in these chapters

B. Provide complete calculations, drawings and details.

C. Shop drawings shall be stamped by a professional engineer registered in the State of Alaska.

D. Submittals shall be coordinated with building Structural engineer.

E. Submit for approval, seismic restraint calculations, drawings and details to authorities having jurisdiction as required by those authorities.

PART 2. PRODUCTS

2.01 MATERIALS

A. Materials and devices shall be in accordance with applicable codes and standards and shall be appropriate for intended use.

B. Anchors and attachments to building structure shall be as approved by building Structural engineer.

C. Seismic restraints used in conjunction with vibration isolators may consist of loose cables, telescoping pipes or box sections, angles or sections, flat plates used as limit stops or snubbers, or other types of housing used either integral with or separate from vibration isolators to accomplish necessary seismic restraint.

2.02 EQUIPMENT

A. Equipment available with seismic rating shall be provided with rating applicable to seismic zone of project location.

PART 3. EXECUTION

3.01 INSTALLATION

A. Secure stationary equipment, raceways and equipment supports to structure, concrete bases, or special supports to provide protection against earthquakes and to restrain lateral or vertical movement. Where vibration isolators are used, seismic restraints shall be designed to limit lateral or vertical movement during earthquake without short-circuiting vibration isolation system.

B. Coordinate seismic restraints with project Structural Engineer and incorporate project Structural Engineer's requirements.

C. Seismic restraint methods and materials shall be supplementary to support devices specified in other sections of this specification and together shall serve as equipment support criteria.

D. Installation of devices shall be in accordance with seismic Structural engineer's drawings and details and in accordance with seismic guidelines.

E. Coordinate installation of devices with other trades and incorporate their requirements.

F. Modify raceway and equipment locations as required for seismic restraint system.

G. Seismic restraint systems shall not interfere with installation of other building systems or access.

END OF SECTION

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 WORK INCLUDED

A. Nameplates and tape labels.

B. Wire and cable markers.

C. Conduit color-coding.

D. Wire markers.

E. Conduit markers.

F. Underground warning tape.

G. Working clearance striping.

H. Power one-line diagram and panel map.

I. Low-voltage one-line diagrams and system maps.

1.03 RELATED WORK

A. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 1 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 24 16 – Panelboards.

E. Section 26 27 26 – Wiring Devices.

1.04 SUBMITTALS

A. Division 1 and Section 26 05 00 – Common Work Results for Electrical.

B. Product Data:

1. Submit manufacturer’s catalog literature for each product required.
2. Submit electrical identification schedule including list of wording, symbols, letter size, color-coding, tag number, location, and function.

C. Manufacturer's Installation Instructions:

1. Indicate installation instructions, special procedures, and installation.

D. Prior to installation, submit power one-line diagram and panel map for review.

E. Prior to Substantial Completion, submit copies of all panel schedules for review by the Owner. The Owner will note any changes to the room numbers/names and the Contractor

shall provide revised typed panel schedules to reflect all changes, at no additional cost to the Owner.

F. Electrical One-Line Diagrams and Panel Maps: Provide electronically in AutoCAD format, submitted with the O&M manuals.

1.05 ENVIRONMENTAL REQUIREMENTS

A. Install labels and nameplates only when ambient temperature and humidity conditions for adhesive are within range recommended by manufacturer.

PART 2. PRODUCTS

2.01 NAMEPLATES

A. Product Description: Laminated three-layer plastic with engraved white letters on black background. Nameplate for service disconnect shall be engraved white letters on red background.

B. Letter Size:

1. 1/4-inch high letters for identifying individual panel or equipment.
2. 1/8-inch high letters for remaining lines with 1/8 inch spacing between lines.

C. Minimum nameplate size: 1/8 inch thick with a consistent length and height for each type of nameplate wherever installed on the project.

2.02 WIRE MARKERS

A. Power and Lighting Description: Machine printed heat-shrink tubing 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.

2.03 FIRE ALARM CONDUIT AND BOX IDENTIFICATION

A. Product Description: Red spray paint for fire alarm boxes.

2.04 WORKING CLEARANCE STRIPING

A. Product description: 2” wide epoxy yellow paint with 2 inch high block letters within the clearance area to read: “ELECTRICAL CLEARANCE – NO STORAGE WITHIN THIS ZONE”.

2.05 UNDERGROUND WARNING TAPE

A. Product Description: Red, 6-inch wide, detectable.

B. Wording to read “Caution – Buried Electric Line Below”.

2.06 POWER DISTRIBUTION SYSTEM ONE-LINE DIAGRAM AND PANEL MAP

A. Product Description: One-line diagram and building floor plan panel map. One-line diagram shall show the complete building power system for MDP. Panel map shall show the plan view location of MDP and branch panelboards. Minimum size shall be 11”x17” but larger maps are recommended. All text shall be legible without magnification.

B. Install one-line and panel map behind a Plexiglas cover screwed to wall on four corners, adjacent to MDP.

2.07 LOW-VOLTAGE SYSTEMS ONE-LINE DIAGRAMS AND MAPS

A. Provide one-line diagrams and system maps for low-voltage and special systems, such as fire, security, telecommunications, intercom, etc. Requirements are specified in individual specification sections for each system.

PART 3. EXECUTION

3.01 GENERAL INSTALLATION

A. Degrease and clean surfaces to receive nameplates and tape labels.

B. Install nameplates and tape labels parallel to equipment lines.

C. Underground Warning Tape Installation: Install underground warning tape along length of each underground conduit, raceway, or cable 6 to 8 inches below finished grade, directly above buried conduit, raceway, or cable.

3.02 NAMEPLATE INSTALLATION

A. Secure nameplates to equipment fronts using machine screws tapped and threaded into panelboard, or using rivets. The use of adhesives is not acceptable. Machine screws to not protrude more than 1/16 inch on back side.

B. Service Disconnect Nameplate: Provide nameplate on exterior service disconnect that reads “SERVICE DISCONNECT”.

C. Distribution Panel Nameplates:

D. Provide overall equipment identification.

1. Line 1: Distribution panel name.
2. Line 2: Source which panelboard is fed.
3. Line 3: Voltage, phase and wire configuration.
4. Line 4: AIC rating of the panel.
5. Line 5: Where applicable, indicate that panel is series-rated.

E. Provide circuit breaker identification for each feeder breaker.

1. Line 1: Name of panelboard or equipment served.
2. Line 2: Location of served panelboard.

F. Branch Panelboard Nameplates:

1. Provide nameplate for each panelboard with the following information:

a. Line 1: Panelboard name.
b. Line 2: Source from which the panelboard is fed.
c. Line 3: Voltage, phase and wire configuration.
d. Line 4: AIC rating of the panelboard.

G. Disconnects, Starters, or Contactors:

H. Provide nameplate for each device with the following information:

1. Line 1: Load served.
2. Line 2: Panelboard and circuit number from which the device is fed.
3. Line 3: Circuit amperage and poles. Where fused disconnect is installed, denote the maximum fuse size to be installed.

I. Control or Low Voltage System Panels:

1. Provide nameplate for each control panel with the following information:

a. Line 1: Unique panel name as shown on the shop drawings.
b. Line 2: System description such as Fire Alarm, Intercom, BAS, Security, etc.
c. Line 3: Panelboard and circuit number from which the panel is fed if applicable.

3.03 LABEL INSTALLATION

A. Conduit Feeder Labels - Provide conduit labels on all feeder raceways as follows:

1. Distribution Panels – “PANEL xxxx IN ROOM #xxx”.
2. Panelboards – “PANEL xxxx FED FROM MDP xxx”.

B. Spare Raceways: Provide raceway label on each individual raceway denoting the source and termination point at each end.

C. Low-Voltage System Device Labels: Provide label on each device, denoting device ID or address where applicable. Affix label to device faceplate for ceiling-mounted devices or wall-mounted devices above 8’-0” AFF. Affix label inside backbox for exterior devices.

3.04 WIRE IDENTIFICATION

A. Provide wire markers on each conductor in panelboard gutters, 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, except at panelboards, where markers for branch circuit conductors shall be visible without removing panel deadfront.
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 or feeder number.
6. Control Circuits: Control wire number as indicated on schematic and shop drawings.
7. Fire Alarm Circuits: Provide cable markers showing NAC or SLC loop identification number at all fire alarm junction boxes and pullboxes.
8. Provide cable markers on each cable, indicating device designation (e.g. “Camera 27”) for all security, intercom, door control, and video systems. Cables shall be labeled at each end, as well as at any intermediate junction boxes or pullboxes.

B. Provide pull string markers at each end of all pull strings. Marker shall identify the location of the opposite end of the pull string.

3.05 JUNCTION BOX IDENTIFICATION

A. Fire Alarm: In accessible ceiling spaces, exposed ceiling spaces, mechanical/electrical rooms, and other non-public spaces, paint fire alarm junction boxes and pullboxes with red spray paint. In all finished spaces where fire alarm boxes are visible, they shall be painted to match the surrounding finish. If there are any questions as to whether fire alarm boxes shall be painted red in a specific area, the Contractor shall get clarification from the Owner prior to painting.

B. Paint all junction boxes designated for future expansion with blue spray paint.

C. Label each lighting and power junction box with the panelboard name and circuit number.

D. Label all junction boxes for intercom, door control, and video systems with the type of system cables contained in the box.

E. 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.

3.06 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.

3.07 PANELBOARD IDENTIFICATION

A. Provide panelboard circuit directories in accordance with Section 26 24 16.

B. Install one-line and panel map adjacent to each MDP.

3.08 LOW-VOLTAGE SYSTEM IDENTIFICATION

A. Install all labeling in accordance with the requirements of this section and of each section where the individual systems are specified.

3.09 WORKING CLEARANCE STRIPING

A. Working clearance striping paint shall be applied in front of panels located in mechanical rooms, electrical rooms, storage rooms, and other non-public areas with exposed concrete floors.

B. Striping paint shall not be applied in front of panels located in corridors and other public spaces, or spaces with finished floor surfaces (e.g., carpet, tile, vinyl, etc.).

END OF SECTION

SELECTIVE ELECTRICAL DEMOLITION

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDES

A. Electrical demolition.

1.03 RELATED SECTIONS

A. Division 1 - Alteration Project Procedures.

B. Division 2 - Minor Demolition for Remodeling.

PART 2. PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. Materials and equipment for patching and extending work: As specified in individual Sections.

PART 3. EXECUTION

3.01 EXAMINATION

A. Verify that abandoned wiring and equipment serve only abandoned facilities.

B. Demolition Drawings are based on casual field observation and existing record documents. Report discrepancies to Owner before disturbing existing installation.

C. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

A. Disconnect electrical systems in walls, floors, and ceilings scheduled for removal.

B. Coordinate utility service outages with Utility Company.

C. 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.

D. Existing Electrical Service: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Obtain permission from Owner at least 24 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

E. Existing Fire Alarm System: Maintain existing system in service until new system is accepted. Disable system only to make switchovers and connections. Notify Owner and local fire service at least 24 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

F. Existing Telephone System: Maintain existing system in service until new system is complete and ready for service. Disable system only to make switchovers and connections. Notify Owner and Telephone Utility Company at least 24 hours before partially or completely disabling system. Minimize outage duration. Make temporary connections to maintain service in areas adjacent to work area.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Demolish and extend existing electrical work under provisions of Division 1, Division 2, 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. Where abandoned conduit is installed below existing slab not scheduled for demolition, remove the conductors, cut conduit flush with floor, and patch surface.

F. For underground conduit, remove all conductors back to source, remove all risers and sweeps and all conduit that interferes with new construction. Abandon conduit that does not interfere with new construction.

G. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not removed.

H. Disconnect and remove abandoned panelboards and distribution equipment.

I. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.

J. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other accessories.

K. Repair adjacent construction and finishes damaged during demolition and extension work. T-bar ceiling tiles damaged under normal construction conditions or having voids where junction boxes were removed shall be replaced by the Contractor.

L. Maintain access to existing electrical installations which remain active.

M. Extend existing installations using materials and methods as specified.

N. 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 no additional cost to the Owner.

3.04 EXISTING PANELBOARDS

A. Ring out circuits in existing panel affected by the Work. Where additional circuits are needed, reuse circuits available for reuse. Install new breakers.

B. Tag unused circuits as spare.

C. Where existing circuits are indicated to be reused, use sensing measuring devices to verify circuits feeding Project area or are not in use.

D. Remove existing wire no longer in use from panel to equipment.

E. Provide new updated directories where more than three circuits have been modified or rewired.

3.05 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused.

B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions.

3.06 INSTALLATION

A. Install relocated materials and equipment under the provisions of Division 1.

END OF SECTION

LIGHTING CONTROL DEVICES

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 WORK INCLUDED

A. This Section includes the following lighting control devices:

1. Indoor occupancy and daylight sensors.
2. Power Packs and Supplies
3. Wall Switches and Dimmer Switches
4. Communication Bridges
5. Network Control Gateway

1.03 RELATED SECTIONS

A. 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: Manual light switches

E. Section 26 56 00 – Exterior Lighting

1.04 SUBMITTALS

A. Product Data: For each type of product indicated. Include installation instructions for all sensors and switches, including any detailed programming information.

B. Shop Drawings: Submit detailed shop drawings with scaled floor plans showing all occupancy sensors, daylight sensors, and low voltage switches, power packs, etc. Provide one-line diagrams and detailed wiring diagrams for all connections. Provide a detailed sequence of operation for all luminaires controlled. Shop drawing intent shall be clear when printed in black/white (i.e. do not rely on different color to denote changes).

C. Operation and Maintenance Data: For each type of product to include in emergency, operation, and maintenance manuals. Include manufacturer's installation and troubleshooting instructions.

1.05 QUALITY ASSURANCE

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.06 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

2.01 MANUFACTURERS

A. Basis of Design: Throughout this specification, specific manufacturers and manufacturer's catalog numbers are cited. These citations are for the purpose of establishing quality and performance criteria and are not intended to be proprietary. Sensorswitch #nLight series lighting controls was used as the basis of design, but equal products by Wattstopper, Hubbell, Lutron, Encelium or alternate manufacturers may be substituted under the provisions of Division 01.

2.02 INDOOR OCCUPANCY & PHOTOCELL SENSORS

A. General Description:

1. Occupancy sensing technologies shall be completely passive meaning that they will not emit any radiation that is known to interfere with certain types of hearing aids, or electronic devices such as electronic white board readers. Passive Infrared (PIR), PIR/Ultrasonic, or PIR/Microphonic Dual Technology detection technologies shall be acceptable.
2. Sensors shall be available with zero, one, or two integrated Class 1 switching relays.
3. Sensors shall be available with one or two occupancy "poles", each of which provides a programmable time delay.
4. Sensors shall be available in multiple lens options which are customized for specific applications.
5. Communication and Class 2 low voltage power shall be delivered to each device via standard CAT-5 low voltage cabling with RJ-45 connectors.
6. All sensors shall have two RJ-45 ports.
7. Every sensor parameter shall be available and configurable remotely from the software and locally via the device push-button.
8. Sensors shall be able to function together with other sensors in order to provide expanded coverage areas by simply daisy-chain wiring together the units with CAT-5 cabling.
9. Sensors shall be equipped with an automatic override for 100 hour burn-in of lamps. This feature must be available at any time for lamp replacements.

B. Wall Switch Sensors – Passive Infrared:

1. Sensor shall recess into single-gang switch box and fit a standard GFI opening.
2. Sensor must meet NEC grounding requirements by providing a dedicated ground connection and grounding to mounting strap. Line and load wire connections shall be interchangeable. Sensor shall not allow current to pass to the load when sensor is in the unoccupied (Off) condition.
3. Sensors shall be white.
4. Sensor shall utilize passive infrared technology with adjustable settings.
5. Sensors shall be Sensor Switch #WSD series or approved equal, with device color as noted above.

C. Wall Switch Sensors – Dual Technology:

1. Sensor shall recess into single-gang switch box and fit a standard GFI opening.
2. Sensor must meet NEC grounding requirements by providing a dedicated ground connection and grounding to mounting strap. Line and load wire connections shall be interchangeable. Sensor shall not allow current to pass to the load when sensor is in the unoccupied (Off) condition.
3. Sensors shall be white.
4. Sensor shall utilize passive infrared and microphonic or ultrasonic technology with adjustable settings.

5. Sensors shall be Sensor Switch #WSD-PDT series or approved equal, with device color as noted above.

D. Ceiling and Corner Mount Sensors

1. Sensor shall have optional features for photocell/daylight override and dimming control.
2. Sensors with dimming control can control 0 to 10 VDC dimmable ballasts by sinking up to 20 mA of Class 2 current (typically 40 or more ballasts).
3. All sensors have at least one or two occupancy poles, each of which provides a programmable time delay
4. Sensors shall be the following Sensor Switch #nCMR-PDT series, or approved equal with device options as specified and/or additional power supplies or other equipment and as required to perform the specified sequence of operations. Provide extended or wide view lens where recommended by the manufacturer for the installation.

E. Daylight (Photocell) Sensors

1. Sensor shall provide for an On/Off set-point, and a deadband to prevent the artificial light from cycling. Delay shall be incorporated into the photocell to prevent rapid response to passing clouds.
2. Sensors' set-point and deadband shall be automatically calibrated through the sensor's micro-controller by initiating the "Automatic Set- point Programming" subroutine. Further adjustment may be made manually if needed. Deadband setting shall be verified and modified by the sensor automatically every time the lights cycle to accommodate physical changes in the space (i.e., furniture layouts, lamp depreciation, or lamp outage).
3. Accommodate physical changes in the space (i.e., furniture layouts, lamp depreciation, or lamp outages).
4. Sensors with dimming control can control 0 to 10 VDC dimmable ballasts by sinking up to 20 mA of Class 2 current (typically 40 or more ballasts).
5. Photocell sensor's set point shall be automatically calibrated through the sensor's micro-controller by initiating the "Automatic Set-point Programming" subroutine. Min and Max dim settings as well as set- point may be manually entered.
6. Dual zone option shall be available for On/Off Photocell, Automatic Dimming Control Photocell, or Combination units. The second zone shall be controlled as an "offset" from the primary zone and shall be the zone farthest from the natural light source.
7. Sensor shall be Sensor Switch #nCM-ADC series or approved equal, with device options as specified.
8. Exterior photocells shall be weatherproof and suitable for operation on the lighting control panel.

2.03 POWER (RELAY) PACKS AND SUPPLIES

A. Power Packs shall accept 120 or 277 VAC, be plenum rated, and provide Class 2 power to the system.

B. All devices shall have two RJ-45 ports.

C. Every Power Pack parameter shall be available and configurable remotely from the software and locally via the device push-button.

D. Power Pack shall securely mount to junction location through a threaded ½ inch chase nipple. Plastic clips into junction box shall not be accepted. All Class 1 wiring shall pass through chase nipple into adjacent junction box without any exposure of wire leads. Note: UL Listing under Energy Management or Industrial Control Equipment automatically meets this requirement, whereas Appliance Control Listing does not meet this safety requirement.

E. When required by local code, Power Pack must install inside standard electrical enclosure and provide UL recognized support to junction box. All Class 1 wiring is to pass through chase nipple into adjacent junction box without any exposure of wire leads.

F. Power Pack shall incorporate a Class 1 relay and contribute low voltage power to the rest of the system. Slave Packs shall incorporate the relay, but shall not be required to contribute system power. Power Supplies shall provide system power only, but are not required to switch line voltage circuit. Auxiliary Relay Packs shall switch low voltage circuits only.

G. Class 1 Relays used in Power (Slave) Packs shall provide 16 Amp switching of all load types, and be rated for 400,000 cycles.

H. Power (Relay) Packs and Supplies shall be the following Sensor Switch model numbers or approved equal:

1. nPP-16 (Power Pack w/ Line Voltage Relay)
2. nSP-16 (Slave Pack w/ Line Voltage Relay)
3. nPS-150 (Power Supply)
4. nAR-40 (Low Voltage Auxiliary Relay Pack)

2.04 WALL SWITCHES AND DIMMERS

1. Devices shall recess into single-gang switch box and fit a standard GFI opening.
2. Devices shall provide user control via push buttons.
3. Devices shall be available with zero or one integrated Class 1 switching relay.
4. Communication and Class 2 low voltage power shall be delivered to each device via standard CAT-5 low voltage cabling with RJ-45 connectors.
5. All sensors shall have two RJ-45 ports.
6. All devices shall provide toggle switch control. Provide dimming control where noted on plans.
7. Devices shall be white.
8. Devices with dimming control outputs can control 0 to 10 VDC dimmable ballasts by sinking up to 20 mA of Class 2 current (typically 40 or more ballasts).
9. Wall Switches & Dimmers shall be Sensor Switch #nPODM series or approved equal, with device options as specified.

2.05 COMMUNICATION BRIDGES

A. Device shall surface mount to a standard 4” x 4” square junction box.

B. Device shall have either 4 or 8 RJ-45 ports.

C. Device shall be capable of aggregating communication with connected daisy-chains of system devices.

D. Device shall be powered with Class 2 low voltage supplied locally via a directly wired power supply or delivered via a CAT-5 cabled connection.

E. Device shall be capable of communicating with other system devices using the ZigBee® wireless mesh networking standard.

F. Communication Bridge devices shall be Sensor Switch #nBRG series or approved equal.

2.06 NETWORK CONTROL GATEWAY

A. Device shall recess into a two-gang switch box.

B. Device shall provide user control via touch sensitive buttons which have no mechanical parts.

C. Device shall have a backlit LCD panel.

D. Device shall contain a real-time clock capable of synchronization with a network time authority.

E. Device shall be capable of communicating on an Ethernet network with a fixed or DHCP assigned IP address.

F. Device shall have three RJ-45 ports for connection to system devices and one RJ-45 port for connection to Ethernet network.

G. Device shall be powered with Class 2 low voltage supplied locally via a directly-wired power supply or delivered via a CAT-5 cabled connection.

H. Network Control Gateway device shall be Sensor Switch #nGWY or approved equal.

2.07 LIGHTING CONTROL PROFILES

A. Changes to the operation of the system shall be capable of being made in real-time or scheduled via lighting control profiles. These profiles are outlines of settings that direct how a collection of devices function for a defined time period.

B. Lighting control profiles shall be capable of being created and applied to a single device, zone of devices, or customized group of zones.

C. All relays and dimming outputs shall be capable of being scheduled to track or ignore information regarding occupancy, daylight, and local user switches via lighting control profiles.

D. Every device parameter (e.g. sensor time delay and photocell set-point) shall be configurable via a lighting control profile.

E. All lighting control profiles shall be stored on the network control gateway device and on the software's host server.

F. Lighting control profiles shall be capable of being scheduled to run according to the following calendar options: start date/hour/minute, end date/hour/minute, and sunrise/sunset +/- timed offsets.

G. Sunrise/sunset times shall be automatically derived from location information using an astronomical clock.

H. Daylight savings time adjustments shall be capable of being performed automatically, if desired.

I. Lighting control profile schedules shall be capable of being given the following recurrence settings: daily, weekday, weekend, weekly, monthly, and yearly.

J. Software shall provide a graphical tool for easily viewing scheduled lighting control profiles.

2.08 MANAGEMENT SOFTWARE

A. Every device parameter (e.g. sensor time delay and photocell set-point) shall be available and configurable remotely from the software

B. The following status monitoring information shall be made available from the software for all devices for which it is applicable: current occupancy status, current PIR Status, current Microphonics Status, remaining occupancy time delay(s), current photocell reading, current photocell inhibiting state, photocell transitions time remaining, current dim level, device temperature, and device relay state(s).

C. The following device identification information shall be made available from the software: model number, model description, serial number, manufacturing date code, custom label(s), and parent network device.

D. A printable network inventory report shall be available via the software.

E. A printable report detailing all system profiles shall be available via the software.

F. Software shall require all users to login with a User Name and Password.

G. Software shall provide at least three permission levels for users.

H. All sensitive stored information and privileged communication by the software shall be encrypted.

I. All device firmware and system software updates must be available for automatic download and installation via the internet.

J. Software shall be capable of managing systems interconnected via a WAN (wide area network).

2.09 BMS COMPATIBILITY

A. System shall provide a BACnet IP gateway as a downloadable software plug-in to its management software. No additional hardware shall be required.

B. BACnet IP gateway software shall communicate information gathered by networked system to other building management systems.

C. BACnet IP gateway software shall translate and forward lighting relay and other select control commands from BMS system to networked control devices.

2.10 SYSTEM ENERGY ANALYSIS & REPORTING SOFTWARE

A. System shall be capable of reporting lighting system events and performance data back to the management software for display and analysis.

B. Intuitive graphical screens shall be displayed in order to facilitate simple viewing of system energy performance.

C. An “Energy Scorecard” shall be display that shows calculated energy savings in dollars, KWHr, or CO2.

D. Software shall calculate the allocation of energy savings to different control measures (occupancy sensors, photocells, manual switching, etc).

E. Energy savings data shall be calculated for the system as a whole or for individual zones.

F. A time scaled graph showing all relay transitions shall be presented.

G. A time scaled graph showing a zones occupancy time delay shall be presented

H. A time scaled graph showing the total light level shall be presented.

I. User shall be able to customize the baseline run-time hours for a space.

J. User shall be able to customize up to four time-of-day billing rates and schedules.

K. Data shall be made available via a .CSV file.

2.11 START-UP AND SUPPORT FEATURES

A. To facilitate start-up, all devices daisy-chained together (using CAT-5) shall automatically be grouped together into a functional lighting control zone.

B. All lighting control zones shall be able to function according to default settings once adequate power is applied and before any system software is installed.

C. Once software is installed, system shall be able to auto-discover all system devices without requiring any commissioning.

D. All system devices shall be capable of being given user defined names.

E. All devices within the network shall be able to have their firmware reprogrammed remotely and without being physically uninstalled for purposes of upgrading functionality at a later date.

F. All sensor devices shall have the ability to detect improper communication wiring and blink it's LED in a specific cadence as to alert installation/startup personnel.

2.12 CONDUCTORS AND CABLES

A. Power Wiring to Supply Side of Remote-Control Power Sources: Not smaller than No. 12 AWG. Comply with requirements in Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

B. Classes 2 and 3 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 18 AWG. Comply with requirements in Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

C. Class 1 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 14 AWG. Comply with requirements in Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

PART 3. EXECUTION

3.01 SENSOR INSTALLATION

A. Install and aim sensors in locations to achieve not less than 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.

B. Align ceiling mounted occupancy sensor such that segments are crossed upon entrance and unable to view outside the space.

C. Install daylight sensors on ceiling near windows in accordance with the manufacturer's instructions to accurately detect available daylight in room.

3.02 WIRING INSTALLATION

A. Wiring Method: Comply with Division 26 Section "Low-Voltage Electrical Power Conductors and Cables." for line voltage cables.

B. Splices, Taps, and Terminations: Make connections only on numbered terminal strips in junction, pull, and outlet boxes; terminal cabinets; and equipment enclosures.

3.03 IDENTIFICATION

A. Identify components and power and control wiring according to Division 26 Section "Identification for Electrical Systems."

1. Identify controlled circuits in lighting contactors.
2. Identify circuits or luminaries controlled by photoelectric and occupancy sensors at each sensor when more than one light fixture is being controlled.

B. Label the gateway, bridges, power packs, etc. with a unique designation per the manufacturer's shop drawings.

C. Label all low voltage conductors for daylight/dimming system in accordance with the manufacturer's shop drawings.

3.04 LIGHTING CONTROL SEQUENCE OF OPERATIONS

A. As shown on Plans.

3.05 FIELD QUALITY CONTROL

A. Perform the following field tests and inspections and prepare test reports:

1. After installing time switches and sensors, and after electrical circuitry has been energized, adjust and test for compliance with requirements.
2. Operational Test: Verify operation of each lighting control device, and adjust time delays.

B. Lighting control devices that fail tests and inspections are defective work.

C. Provide written or computer-generated documentation on the commissioning of the system including room by room description including:

1. Sensor parameters, time delays, sensitivities, and daylighting setpoints.
2. Sequence of operation, (e.g. manual ON, Auto OFF. etc.)
3. Load Parameters (e.g. blink warning, etc.)

3.06 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide assistance in adjusting sensors and system programming to suit occupied conditions.

3.07 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain lighting control devices. Refer to Division 1 Section "Demonstration and Training." Provide a second training session approximately 6 months after substantial completion.

END OF SECTION

PANELBOARDS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDES

A. Lighting and appliance branch circuit panelboards.

1.03 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 1 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 53 – Identification for Electrical Systems.

D. Section 26 29 16 – Enclosed Contactors.

1.04 REFERENCES

A. NEMA AB 1 - Molded Case Circuit Breakers.

B. NEMA KS 1 - Enclosed Switches.

C. NEMA PB 1 - Panelboards.

D. NEMA PB 1.1 – Instructions for Safe Installation, Operation and Maintenance of Panelboards Rated 600 Volts or Less.

E. UL 50 – Enclosures for Electrical Equipment

F. UL 67 – Panelboards

G. UL 98 - Enclosed and Dead-front Switches

H. UL 489 – Molded Case Circuit Breakers and Circuit Breaker Enclosures

I. Federal Specification W-C-375B/Gen – Circuit Breakers, Molded Case, Branch Circuit and Service

1.05 SUBMITTALS

A. Submit data under provisions of Division 1 and Section 26 05 00.

B. Product Data: Submit product data for all components provided which fall under 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.

C. Shop drawings: Submit shop drawings for each panelboard load center indicating features and device arrangement and size. Include outline and support point dimensions, voltage, main bus ampacity, and integrated short circuit ampere rating.

D. Submit final panel schedules in PDF format with the O&M manuals.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site under provisions of Division 1.

B. Upon arrival at the site inspect equipment and report on any damage.

C. Handle carefully on site to avoid any damage to internal components, enclosures and finishes.

D. Store in a clean, dry environment. Maintain factory packaging and provide an additional heavy canvas or plastic cover to protect enclosures from dirt, water, construction debris and traffic.

1.07 OPERATION AND MAINTENANCE MATERIALS

A. Submit data under provisions of Division 1 and Section 26 05 00.

B. Provide product data and shop drawing information including replacement parts list.

C. Provide installation, operation and maintenance information per manufacturer.

D. Project record data: Submit final record panel schedules as hardcopy and in Microsoft Excel format.

1.08 WARRANTY

A. Manufacturer shall warrant specified equipment to be free of defects for a period of one year from the date of installation.

1.09 SPARE PARTS

A. Keys: Furnish 2 each to Owner.

PART 2. PRODUCTS

2.01 MANUFACTURERS - PANELBOARDS

A. Square D.

B. Cutler Hammer.

C. General Electric.

D. Siemens.

E. Substitutions: Under provisions of Division 1.

2.02 BRANCH CIRCUIT PANELBOARDS

A. Lighting and Appliance Branch Circuit Panelboards: NEMA PB 1; circuit breaker type.

B. Enclosure: NEMA PB 1; Type 1. Boxes shall be galvanized steel constructed in accordance with UL50 requirements. Interiors shall be field convertible for top or bottom incoming feed. Main lug interiors up to 400 amperes shall be field convertible to main breaker. Interior leveling provisions shall be provided for flush mounted applications.

C. Cabinet Size: 6 inches deep; 20 inches wide minimum.

D. Provide flush or surface cabinet front as indicated on the Drawings with hinged trim, hinged door, and flush lock all keyed alike. Finish in manufacturer's standard gray enamel.

E. Provide panelboards with copper bus, ratings as scheduled on Drawings. Provide one continuous bus bar per phase each. Panelboards shall have sequentially phased branch circuit connectors suitable for bolt-on branch circuit breakers. Bussing shall be fully rated.

F. Integrated Short Circuit Rating: Provide panelboards with short circuit ratings as shown on the Drawings. Minimum ratings shall be 10,000 amperes RMS symmetrical for 250 volt panelboards; 14,000 amperes RMS symmetrical for 600 volt panelboards.

G. Main/Sub Feed Circuit Breakers: NEMA AB 1; Provide vertical mount main and/or sub feed circuit breaker in panelboards as shown on the drawings.

1. Circuit breakers shall be operated by a toggle-type handle and shall have a quick-make, quick-break over-center switching mechanism that is mechanically trip-free. Automatic tripping of the breaker shall be clearly indicated by the handle position. Contacts shall be nonwelding silver alloy and arc extinction shall be accomplished by means of DE- ION arc chutes. A push-to-trip button on the front of the circuit breaker shall provide a local manual means to exercise the trip mechanism.
2. Lugs shall be UL Listed to accept copper and aluminum conductors and shall be suitable for 90^{o}C rated wire, sized according to the 75 ^{o}C temperature rating per NEC Table 310-16. Lug body shall be bolted in place.
3. Main circuit breakers shall be UL listed for use with the following accessories:

    a. Shunt Trip.
    b. Under Voltage Trip.
    c. Ground Fault Shunt Trip.
    d. Auxiliary Switch.
    e. Alarm Switch.
    f. Mechanical Lug Kits.
    g. Compression Lug Kits.

H. Branch Circuit Breakers: NEMA AB 1; Provide panelboards with bolt-on type thermal magnetic trip circuit breakers.

1. Circuit breakers shall be operated by a toggle-type handle and shall have a quick-make, quick-break over-center switching mechanism that is mechanically trip-free with common trip handle for all poles.
2. Lugs shall be UL Listed to accept copper and aluminum conductors and shall be suitable for 90^{o}C rated wire, sized according to the 75 ^{o}C temperature rating per NEC Table 310-16. Lug body shall be bolted in place.
3. Provide circuit breakers UL listed as Type SWD for lighting circuits.
4. Provide circuit breakers UL listed as type HACR for use with heating, air conditioning and refrigeration equipment.
5. Provide UL Class A ground fault interrupter circuit breakers where scheduled on Drawings.

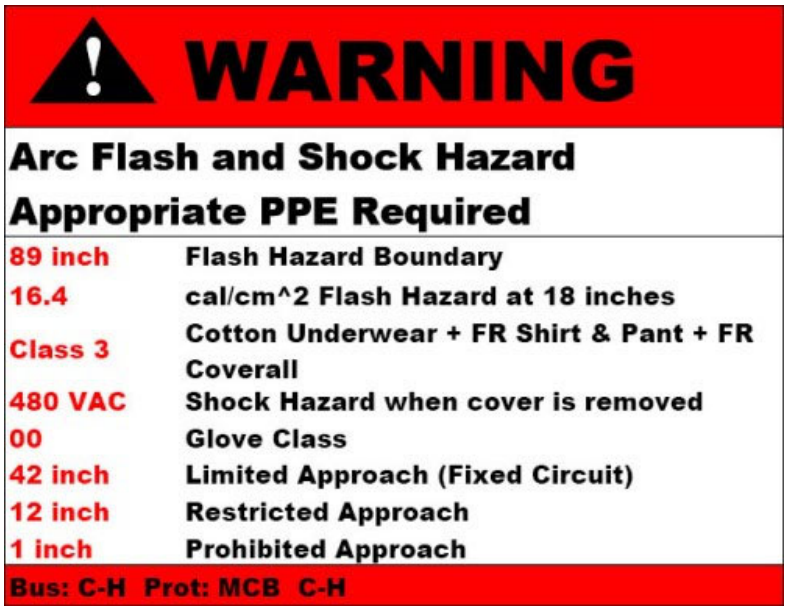
2.03 PANELBOARD IDENTIFICATION

A. For each panelboard, provide typed schedule denoting each circuit load by the load type and final name and room number actually designated by the

B. Owner. Schedule shall not be typed with names shown on the Contract Drawings unless names are acceptable to the Owner.

C. Provide panel schedule in O&M manual for every panelboard.

D. All panelboards shall have signage for arc hazard installed. The marking shall be located to be clearly visible to qualified personnel before examination, adjustment, servicing or maintenance of the equipment. At a minimum the signage shall include the following information:



E. Provide electronic copies of all panel schedules in PDF format, submitted with the O&M manuals.

PART 3. EXECUTION

3.01 INSTALLATION

A. Install panelboards plumb and flush with wall finishes, in conformance with NEMA PB 1.1.

B. Height: 6 feet, 6 inches to top of panelboard.

C. Provide filler plates for unused spaces in panelboards.

D. Panel Schedules: Revise schedules to reflect circuiting changes required to balance phase loads.

E. Stub 5 empty one inch conduits to accessible location above ceiling out of each recessed panelboard.

3.02 FIELD QUALITY CONTROL

A. Measure steady state load currents at each panelboard feeder. Should the difference at any panelboard between phases exceed 20 percent, rearrange circuits in the panelboard to balance the phase loads within 20 percent. Take care to maintain proper phasing for multi-wire branch circuits

B. Visual and Mechanical Inspection: Inspect for physical damage, proper alignment, anchorage, and grounding. Check proper installation and tightness of connections for circuit breakers.

END OF SECTION

WIRING DEVICES

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDES

A. Wall switches.

B. Receptacles.

C. Device plates and box covers.

D. RV outlet assembly.

1.03 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 1 - 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

1.04 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

1.05 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.

1.06 CLOSEOUT SUBMITTALS

A. Project Record Drawings: Indicate actual locations of all wiring devices on the project record drawings.

1.07 SPARE PARTS

A. Keyed Light Switches: Provide Owner 2 keys to operate switches.

PART 2. PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS - WALL SWITCHES.

A. Hubbell.

B. Leviton.

C. Pass & Seymour.

D. Substitutions: Under provisions of Division 1.

2.02 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: White nylon. Provide single-pole, 3-way, or 4-way switches as indicated on Plans.

B. Pilot Light Type: UL 20; NEMA WD 1; and Federal Specification FS W-S- 896 AC industrial grade snap switch, rated 20 amperes and 120-277 volts AC. Handle: Red pilot light toggle (illuminated when load is on). Provide single pole unless otherwise indicated on Plans.

C. Keyed Switches for Lighting Circuits: UL 20; NEMA WD 1; and Federal Specification FS W-S-896 AC industrial grade snap switch with keyed handle, rated 20 amperes and 120-277 volts AC. Handle: White nylon. Provide single-pole, 3-way, or 4-way switches as indicated on Plans.

2.03 ACCEPTABLE MANUFACTURERS - RECEPTACLES

A. Hubbell.

B. Leviton.

C. Pass & Seymour.

D. Substitutions: Under provisions of Division 1.

2.04 RECEPTACLES

A. Convenience and Straight-blade Receptacles: UL 498, NEMA WD 1 and Federal Specification FS W-C-596 industrial grade receptacle.

B. Locking-Blade Receptacles: NEMA WD 5.

C. Convenience Receptacle Configuration: NEMA WD 1; Type 5-20R, white nylon face.

D. Specific-use Receptacle Configuration: NEMA WD 1 or WD 5; type as indicated on Drawings, black phenolic face.

E. GFCI Receptacles: 20A, duplex convenience receptacle with integral class ‘A’ ground fault current interrupter, LED indicator lamp, and integral lockout function.

F. Tamper-Resistant Receptacles: Complying with the requirements of UL 498 (section 131) and NEC 406.12-14.

G. Weather-Resistant Receptacles: Listed to the weather-resistant supplement of UL498 and complying with the requirements of NEC 406.9.

2.05 ACCEPTABLE MANUFACTURERS – DEVICE PLATES

A. Hubbell.

B. Leviton.

C. Pass & Seymour.

D. Mullberry.

E. Red Dot.

F. Raco.

G. Substitutions: Under provisions of Division 1.

2.06 DEVICE PLATES

A. Decorative Cover Plate: Smooth 430 or 302 stainless steel with metal, counter sunk screws to match device plate.

B. Weatherproof Cover Plate: UL listed, cast aluminum, hinged outlet cover/enclosure, with gasket between the enclosure and the mounting surface, suitable for wet locations while in use.

C. Exposed Work Cover Plate: ½ inch raised, square, pressed, galvanized or cadmium plated steel cover plate supporting devices independent of the outlet box.

2.07 RV OUTLET ASSEMBLY

A. Midwest #U075GTL or approved equal RV outlet assembly with the following features:

1. Receptacles: (1) NEMA 14-50R, (1) NEMA BR32U, and (1) NEMA 5- 20R.
2. Breakers: (1) 50-Amp 2-pole circuit, (1) 30-Amp 1-pole, and (1) 20- Amp 1-pole GFCI.
3. Enclosure: NEMA 3R, designed for surface-mounting.

B. RV Telecom Outlet: Weatherproof outlet box with locking hasp and weatherproof cover plate. Provide a telecom outlet as specified in Section 27 10 00 and with jack count as shown on the drawings.

PART 3. EXECUTION

3.01 INSTALLATION

A. Install wall switches 48 inches above floor, OFF position down.

B. Unless otherwise noted install wall switches within 6 inches of the door jamb on the strike side.

C. Install convenience receptacles 18 inches above floor, 4 inches above counters or backsplash, grounding pole on bottom.

D. Classrooms: Install tamperproof receptacles at all locations shown on the Drawings and as required by NEC 406.14.

E. Install specific-use receptacles at heights shown on Contract Drawings.

F. Unless otherwise noted, mounting heights are for finished floor to center line of outlet.

G. 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.

H. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface-mounted outlets.

I. Install devices and wall plates flush and level.

J. Ground receptacles to boxes with a grounding wire. Grounding through the yoke or screw contact is not an acceptable alternate to the ground wire.

K. Install circuit label on each receptacle and light switch in accordance with Section 26 05 53.

END OF SECTION

ENCLOSED CONTACTORS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 SECTION INCLUDED

A. Enclosed lighting contactors.

B. Range Contactors.

C. Enclosures.

1.03 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 1 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 48 – Vibration and Seismic Controls for Electrical Systems.

D. Section 26 05 53 – Identification for Electrical Systems.

1.04 REFERENCES STANDARDS

A. ANSI/NEMA ICS 6 - Enclosures for Industrial Controls and Systems.

B. NEMA ICS 2 - Industrial Control Devices, Controllers, and Assemblies.

C. ANSI/NFPA 70 – National Electrical Code.

1.05 SUBMITTALS

A. Product Data: Submit product data for all components provided, showing electrical characteristics and connection requirements. Each catalog sheet should be clearly marked exact part number provided.

B. Shop Drawings: Submit shop drawings include outline Drawings with dimensions, and equipment ratings for voltage, capacity, and poles.

C. Submit manufacturers' instructions under provisions of Division 1.

1.06 CLOSEOUT SUBMITTALS

A. Project Record Drawings: Accurately indicate actual locations of each contactor and indicate circuits controlled.

B. Operation and Maintenance Manuals: Submit instructions for replacing and maintaining coil and contacts.

1.07 QUALITY ASSURANCE

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience and ISO 9000 certified.

B. Installer: Company specializing in installing products specified in this section with minimum three years documented experience.

PART 2. PRODUCTS

2.01 MANUFACTURERS – ENCLOSED CONTACTORS

A. Square D.

B. Cutler Hammer.

C. Siemens.

D. Substitutions: Under provisions of Division 1.

2.02 ENCLOSED LIGHTING CONTACTORS

A. Contactors: NEMA ICS 2; electrically held. 2 wire control.

B. Coil Operating Voltage: 120 volts, 60 Hertz.

C. Contacts: 30 amperes, 600 volts, 60 Hertz.

D. Enclosure: ANSI/NEMA ICS 6; Type 1

E. Provide solderless pressure wire terminals.

2.03 LIGHTING CONTACTOR SCHEDULE

A. Number of poles for each contactor, as indicated on the Drawings. Quantity of poles in contactor shall include spare poles as shown.

2.04 ELECTRIC RANGE CONTACTORS

A. Contactors: NEMA ICS 2; electrically held, 2-wire control.

B. Coil Operating Voltage: 120 volts, 60 Hertz.

C. Contacts: 60 amperes, 600 volts, 60 Hertz.

D. Poles: 2.

E. Enclosure: ANSI/NEMA ICS 6; Type 1.

F. Provide solderless pressure wire terminals.

PART 3. EXECUTION

3.01 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Require marking of terminals and wires landing on terminals.

C. Locate electrically held contactors where the eventual vibration and noise they will produce will not be objectionable to building occupants.

D. Mount contactors for electric ranges above accessible ceiling in kitchen areas. Connect as indicated on the Drawings.

E. Provide connection to DDC system to control corridor lighting and site lighting.

F. Provide connection to Security System to control corridor lighting.

3.02 FIELD QUALITY CONTROL

A. Verify wiring connections are tight.

B. Verify movable contact assemblies are not binding and are free to move.

C. Verify coil voltage is correct.

D. With load connected, energize and observe load current for each circuit installed.

END OF SECTION

EXTERIOR LIGHTING

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 WORK INCLUDED

A. Exterior luminaires and accessories.

B. Lamps.

C. Ballasts.

D. Poles.

1.03 RELATED WORK

A. The Work under this section is subject to requirements of the Contract Documents including the General Conditions, Supplementary Conditions, and sections under Division 1 General Requirements, and Section 26 05 00 – Common Work Results for Electrical.

1.04 REFERENCES

A. ASTM D635 - Rate of Burning and/or Extent and Time of Burning of Self- Supporting Plastics in a Horizontal Position.

1.05 SUBMITTALS

A. Product Data: Submit the following:

B. Luminaires: Include manufacturer's product data sheets and/or shop drawings including outline drawings showing support points, weights, and accessory information for each luminaire type.

1. Lamps: Submit manufacturer's product data sheets for each lamp used on the project. Indicate which luminaires each lamps is used in.
2. Ballasts: Submit manufacturer's product data sheets for each different type of ballasts used on the project. Indicate which luminaires each ballast is used in.

C. Calculations:

1. Submit calculations to substantiate pole selection.
2. Submit calculations to show that substitute parking lot lighting fixtures meet or exceed the lighting levels and uniformity ratios shown on the drawings.

1.06 CLOSEOUT SUBMITTALS

A. Project Record Drawings: Indicate actual locations and mounting heights of all lighting fixtures and accessories on the project record drawings.

B. Operation and Maintenance Manuals:

1. Provide detailed bill of materials for all items purchased in this section including distributor's contact name, phone number and pertinent information.
2. Provide luminaire manufacturer's installation instructions.
3. Include any specific warranty information provided by the manufacturer for luminaires, lamps and ballasts.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site, store and protect under provisions of Division 1.

1.08 EXTRA STOCK

A. None required.

PART 2. PRODUCTS

2.01 EXTERIOR 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 wet or damp 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.

2.02 ACCEPTABLE MANUFACTURERS - POLES

A. Valmont.

B. Gardco.

C. Hubbell.

D. Lithonia

E. Cooper

F. Provide poles (or approved equal) as scheduled on the Plans.

G. Substitutions: Under provisions of Division 1.

2.03 LIGHTING POLES

A. Metal Poles: Square straight steel lighting pole with anchor base and factory finish as specified on the Plans.

B. Wind Load: 100 mph velocity with a gust factor of 1.3 per AASHTO standard specifications for structural supports for highway signs, luminaries and traffic signals with luminaries and brackets mounted.

C. Fixture Mounting: Provide drilled mounting holes as required to accommodate the fixture configuration shown on the Drawings.

D. Hand Hole: Drilled hand access hole at manufacturer's standard location. Provide matching gasketed cover plate.

E. Anchor Bolts: As recommended by pole manufacturer.

F. Pole Base Cover: Shall match pole finish and shall extend down to concrete base. Where driven pile bases are used, cap shall extend over pole base to completely cover anchor bolts and flange between pole and driven pile.

PART 3. EXECUTION

3.01 INSTALLATION

A. Install lamps in luminaires and lampholders.

B. Unless otherwise noted on Plans, provide driver integral to luminaires, pre- wired and installed at the factory, and suitable for use with the selected lamp.

C. Support surface-mounted luminaires directly from building structure.

D. Install recessed luminaires to permit removal from below. Use plaster frames in hard ceilings.

E. Luminaire Pole Bases: Size and constructed as indicated on Drawings. Project anchor bolts 2 inches minimum above base. Install poles on bases plumb; provide double nuts for adjustment and pole base covers. After adjusting of pole to be vertical, pack grout under pole base to provide full contact with the foundation.

F. Use belt slings or non-chafing ropes to raise and set pre-finished luminaire poles.

G. LED Power Supplies: Install power supplies to be readily accessible. Where power supplies are installed outdoors, provide UL listed enclosures rated to –20ºF.

3.02 RELAMPING

A. Relamp luminaires which have failed lamps at completion of work.

3.03 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 and pole finish at completion of work.

END OF SECTION

EARTHWORK

PART 1. GENERAL

1.01 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 paint has been identified 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 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 NOTIFICATION OF SITE-SPECIFIC RESTRICTIONS

An active eagle nest is present on the site. Comply with the US Federal Fish and Wildlife Permit when working within 500 feet of the eagle's nest.

1.04 RELATED DOCUMENTS

A. Section 32 00 00 - Exterior Improvements

B. Section 33 00 00 - Utilities

1.05 REFERENCED SPECIFICATIONS

The contract is subject to and hereby incorporates by reference the following documents as though physically contained here:

A. Sections of the Municipality of Anchorage (MOA) Standard Specifications dated March 2015 as described below, herein referred to as MASS.

B. Anchorage Water and Wastewater Design and Construction Practices Manual, dated 2018

C. The Municipality of Anchorage Stormwater Manual, dated December 2020.

D. When conflicts exist between MASS and the Project Specifications, the Project Specifications shall govern.

When an item of Work is not addressed by the Project Specifications, but addressed by MASS, then the item of Work shall be in accordance with MASS, regardless of whether or not the MASS Section of relevance is specifically enumerated herein.

1.06 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS, 2015, AS AMENDED:

This Contract incorporates the latest revision of the following MASS 2015, by reference. The full text of each division can be downloaded electronically at this site:

https://www.muni.org/departments/public_works_infrastructure/project_management_engineering/mass.php#doc_center_0_panel_0

A. Division 10.00 – Standard General Provisions

1. Article 10.4.7 Reference Stakes and Surveying
2. Article 10.4.8 Work Incidental to the Contract
3. Article 10.4.9 Disposal Sites

5.	Article 10.4.15	Temporary Erosion Control and Storm Water Pollution Prevention Plans for Construction
6.	Article 10.4.17	Utilities
7.	Article 10.5.5	Shop Drawings

B. Division 20.00 – Earthwork

1.	Section 20.01	General
2.	Section 20.02	Storm Water Pollution Prevention Plan
3.	Section 20.04	Clearing and Grubbing
4.	Section 20.06	Removal of Trees
5.	Section 20.07	Removal of Sidewalk and Concrete Apron
6.	Section 20.08	Removal of Curb and Gutter
7.	Section 20.09	Removal of Pavement
8.	Section 20.10	Excavation for Traffic Ways
9.	Section 20.11	Grading Existing Surfaces
10.	Section 20.12	Dewatering
11.	Section 20.13	Trench Excavation and Backfill
12.	Section 20.16	Furnish Bedding Material
13.	Section 20.20	Unclassified Fill and Backfill
14.	Section 20.21	Classified Fill and Backfill
15.	Section 20.22	Leveling Course
16.	Section 20.25	Geotextile Fabric
17.	Section 20.27	Disposal of Unusable or Surplus Material
18.	Section 20.30	Shoring, Sheeting and Bracing/Shoring and Sheeting Left in the Trench and Portable

C. Division 65.00 - Construction Survey

1.	Section 65.01	General
2.	Section 65.02	Construction Surveying

D. Division 70.00 - Miscellaneous

1.	Section 70.01	General
2.	Section 70.12	Traffic Maintenance

E. Standard Details as Listed Below

1.	20-9	Pipe Insulation
2.	20-10	Class “B” Bedding Material
3.	20-14	Type II Classified Fill and Backfill
4.	20-15	Type II-A Classified Fill and Backfill
5.	20-18	Leveling Course

1.07 MODIFICATIONS AND / OR ADDITIONS TO MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS

A. All Divisions, All Sections: Delete Articles Entitled “Measurement” and “Basis of Payment.”

B. All Divisions, All Sections: All references to “Municipality”, “Municipality of Anchorage”, or “MOA” shall mean “Owner.”

C. All Divisions, All Sections: References to construction within a Public Right-of-Way shall also include the construction areas as indicated on the drawings.

D. All Divisions, All Sections: All staking or surveys that are noted to be completed by the “Owner” or the “Engineer” shall be completed by the Contractor.

E. Substitute all references to 'material testing by Engineer' for 'material testing by the Contractor.' The Contractor shall be responsible for all material testing and quality control in accordance with Division 1 Section 1400 "Quality Control." Frequency of testing for all constructed areas under the MASS Specifications shall be in accordance with Table 1.06-1

F. MASS Section 20.10 Excavation for Traveled Ways. Article 10.4. Add the following:

1. Usable Excavation shall be material from the excavation that is suitable for fill in non-traveled ways upon approval of the ASD Representative. Usable material shall contain no lumps, frozen material, organic matter, or other deleterious matter. Material deemed suitable for reuse shall be protected from weather and moisture. Material deemed unusable for reuse shall be hauled off site to a permitted location per Article 10.5.

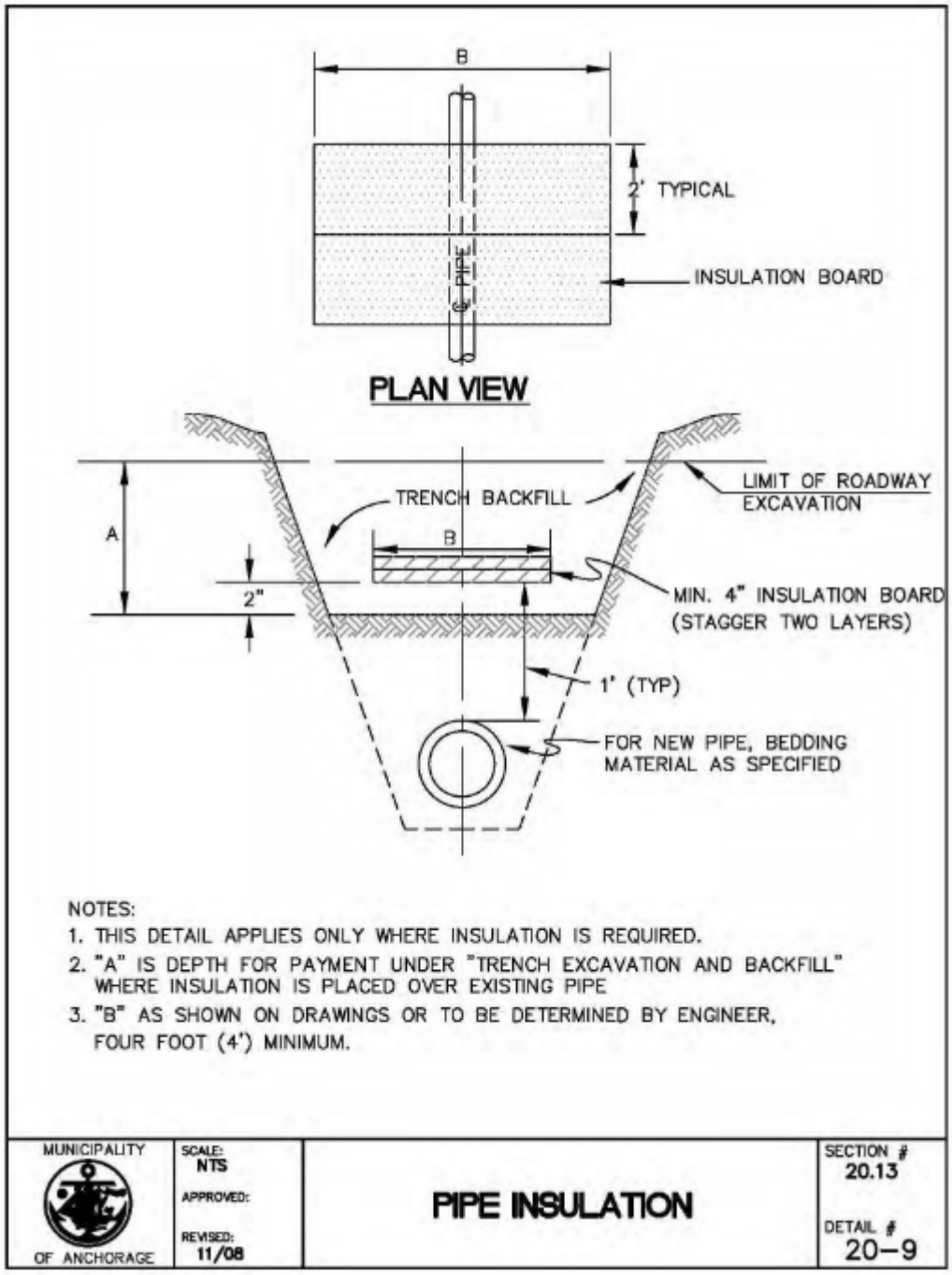
Table 1.06 - 1 Testing Requirements

Material	Characteristic	Sampling Frequency	Point of Sampling	Reporting Time
Classified Fill and Backfill (20.21)	Classification	1 per soil type	Prior to placement	Before Use on Project
	Moisture density	1 per soil type	Prior to placement	Immediately
	Compaction	1 per 12 inch lift per 5000 sf	In Place	Prior to Next Lift
Leveling Course (20.22)	Classification	1 per soil type	Prior to placement	Before use
	Degradation	1 per soil type	Prior to placement	Before use
	Compaction	1 per 5000 sf	In Place	Before placing next layer
Concrete (30.01) (30.02) (30.03) (30.04)	Sampling	1 per placement per day, 1 every 100 cy thereafter	Production point	24 hrs
	Slump test		During Placement	Immediately
	Compressive Strength		Production point	7 & 28 days
AC Paving	Gradation	1 per placement, per day and every 700 tons thereafter	Behind Paver and Prior to Compaction	24 hrs
	Content			
	Compaction	1 per 5000 sf	After Final	
	Visual	Observe and Document Depth, aggregate size, voids in aggregates, oil pooling, etc. Verify batch ticket mix design and project	During Placement	

PART 2. PRODUCTS

2.01 MASS DETAILS

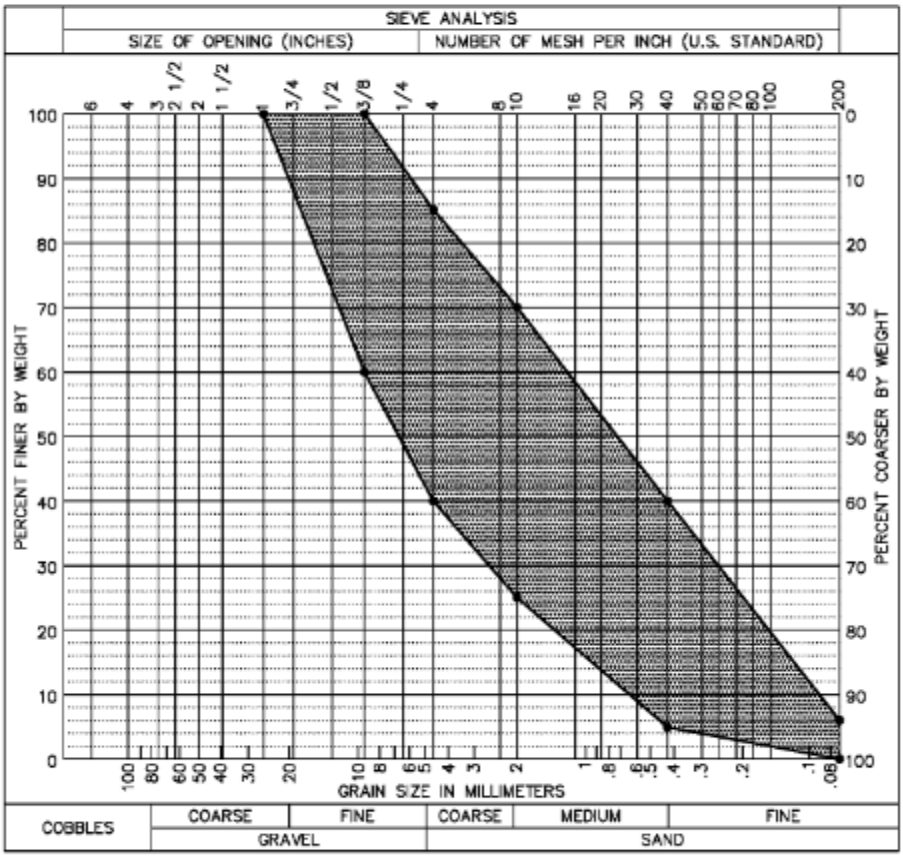
The following MASS details are provided for reference.


B
2' TYPICAL
INSULATION BOARD
℄ PIPE
PLAN VIEW
A
2"
TRENCH BACKFILL
B
LIMIT OF ROADWAY EXCAVATION
MIN. 4" INSULATION BOARD (STAGGER TWO LAYERS)
1' (TYP)
FOR NEW PIPE, BEDDING MATERIAL AS SPECIFIED
NOTES:
1. THIS DETAIL APPLIES ONLY WHERE INSULATION IS REQUIRED.
2. "A" IS DEPTH FOR PAYMENT UNDER "TRENCH EXCAVATION AND BACKFILL" WHERE INSULATION IS PLACED OVER EXISTING PIPE
3. "B" AS SHOWN ON DRAWINGS OR TO BE DETERMINED BY ENGINEER, FOUR FOOT (4') MINIMUM.
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 11/08
PIPE INSULATION
SECTION # 20.13
DETAIL # 20-9

GRADING LIMITS

U.S. STANDARD SIEVE	CUMULATIVE % PASSING BY WEIGHT
1"	100
3/8"	60–100
#4	40–85
#10	25–70
#40	5–40
#200	*0–6

*IN ADDITION TO THE GRADING LIMITS LISTED ABOVE, THE FRACTION OF MATERIAL PASSING THE #200 SIEVE SHALL NOT BE GREATER THAN 35% OF THAT FRACTION PASSING THE #4 SIEVE. THE BEDDING MATERIAL SHALL NOT INCLUDE MECHANICALLY FRACTURED MATERIALS.



MUNICIPALITY OF ANCHORAGE

SCALE: NTS
APPROVED:
REVISED: 11/08

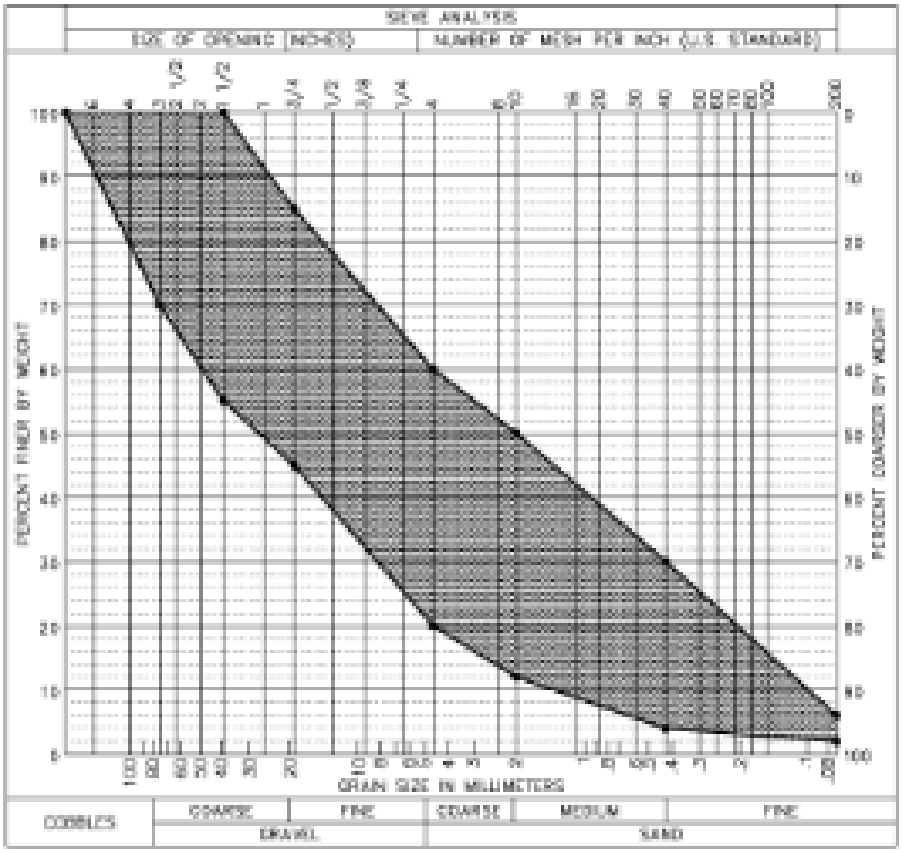
CLASS "B" BEDDING MATERIAL

SECTION # 20.16
DETAIL # 20–10

GRADING LIMITS

U.S. STANDARD SIEVE	CUMULATIVE % PASSING BY WEIGHT
8"	100
3"	70–100
1-1/2"	55–100
3/4"	45–85
#4	20–60
#10	12–30
#40	4–30
#200	*2–6

*IN ADDITION TO THE GRADING LIMITS LISTED ABOVE, THE FRACTION OF MATERIAL PASSING THE #200 SIEVE SHALL NOT BE GREATER THAN 15% OF THAT FRACTION PASSING THE #4 SIEVE.



MUNICIPALITY OF ANCHORAGE

SCALE: NTS

APPROVED:

REVISED: 11/14

TYPE II CLASSIFIED FILL AND BACKFILL

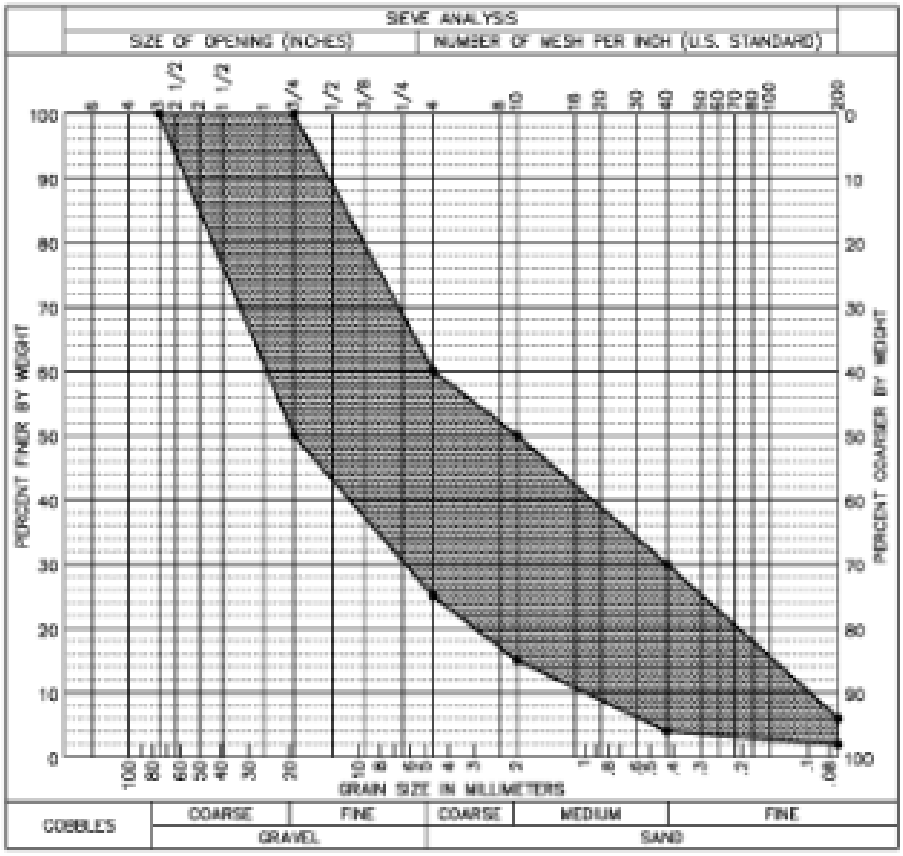
SECTION # 20.21

DETAIL # 20–14

GRADING LIMITS

U.S. STANDARD SIEVE	CUMULATIVE % PASSING BY WEIGHT
3"	100
3/4"	50–100
#4	25–60
#10	15–50
#40	4–30
#200	*2–6

*IN ADDITION TO THE GRADING LIMITS LISTED ABOVE, THE FRACTION OF MATERIAL PASSING THE #200 SIEVE SHALL NOT BE GREATER THAN 20% OF THAT FRACTION PASSING THE #4 SIEVE.



MUNICIPALITY OF ANCHORAGE

SCALE: NTS

APPROVED:

REVISED: 11/08

TYPE II-A CLASSIFIED FILL AND BACKFILL

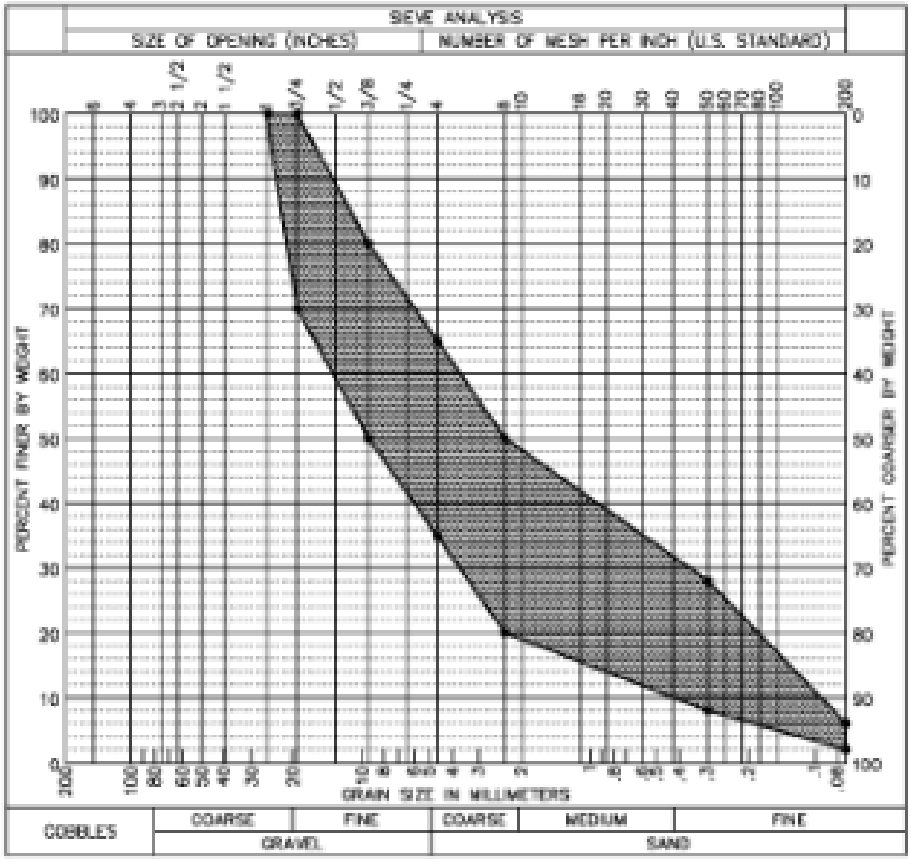
SECTION # 20.21

DETAIL # 20–15

GRADING LIMITS

U.S. STANDARD SIEVE	CUMULATIVE % PASSING BY WEIGHT
1"	100
3/4"	70–100
3/8"	50–80
#4	35–65
#8	20–50
#50	8–28
#200	*2–6

*IN ADDITION TO THE GRADING LIMITS LISTED ABOVE, THE FRACTION OF MATERIAL PASSING THE #200 SIEVE SHALL NOT BE GREATER THAN 75% OF THAT FRACTION PASSING THE #50 SIEVE.



MUNICIPALITY OF ANCHORAGE

SCALE: NTS

APPROVED:

REVISED: 10/08

LEVELING COURSE

SECTION # 20.22

DETAIL # 20–18

END OF SECTION

EXTERIOR IMPROVEMENTS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 NOTIFICATION OF SITE-SPECIFIC RESTRICTIONS

A. An active eagle nest is present on the site. Comply with the US Federal Fish and Wildlife Permit when working with 500 feet of the eagle's nest.

1.03 RELATED DOCUMENTS

A. Section 31 00 00 Earthwork

B. Section 33 00 00 Utilities

1.04 REFERENCED SPECIFICATIONS

A. The contract is subject to and hereby incorporates by reference the following documents as though physically contained here:

1. Sections of the Municipality of Anchorage (MOA) Standard Specifications dated March 2015 as described below, herein referred to as MASS.
2. Anchorage Water and Wastewater Design and Construction Practices Manual, dated 2018
3. The Municipality of Anchorage Stormwater Manual, dated December 2020.
4. When conflicts exist between MASS and the Project Specifications, the Project Specifications shall govern.

B. When an item of Work not addressed by the Project Specifications, but addressed by MASS, then the item of Work shall be in accordance with MASS, regardless of whether or not the MASS Section of relevance is specifically enumerated herein.

C. This Specification section applies only to the civil designated Drawings.

1.05 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS, 2015, AS AMENDED:

A. This Contract incorporates the latest revision of the following MASS 2015, by reference. The full text of each division can be downloaded electronically at this site:

https://www.muni.org/departments/public_works_infrastructure/project_management_engineering/mass.php#doc_center_0_panel_0

B. Division 10.00 – Standard General Provisions

1. Article 10.4.7 — Reference Stakes and Surveying
2. Article 10.4.8 — Work Incidental to the Contract
3. Article 10.4.9 — Disposal Sites

4.	Article 10.4.14	Maintenance and Drainage
5.	Article 10.4.15	Temporary Erosion Control and Storm Water Pollution Prevention Plans for Construction
6.	Article 10.4.17	Utilities
7.	Article 10.5.5	Shop Drawings

C. Division 20.00 – Earthwork

1.	Section 20.01	General
2.	Section 20.02	Storm Water Pollution Prevention Plan
3.	Section 20.10	Excavation for Traffic Ways
4.	Section 20.11	Grading Existing Surfaces
5.	Section 20.12	Dewatering
6.	Section 20.13	Trench Excavation and Backfill
7.	Section 20.16	Furnish Bedding Material
8.	Section 20.20	Unclassified Fill and Backfill
9.	Section 20.21	Classified Fill and Backfill
10.	Section 20.22	Leveling Course
11.	Section 20.25	Geotextile Fabric
12.	Section 20.26	Insulation
13.	Section 20.27	Disposal of Unusable or Surplus Material

D. Division 30.00 - Portland Cement Concrete

1.	Section 30.01	General
2.	Section 30.02	Portland Cement Concrete, Curb and Gutter and Valley Gutter
3.	Section 30.03	Portland Cement Concrete Sidewalks
4.	Section 30.04	Portland Cement Concrete Curb Ramps
5.	Section 30.09	Concrete Parking Bumpers
6.	Section 30.11	Sidewalk Joint Sealant

E. Division 40.00 – Asphalt Surfacing

1.	Section 40.01	General
2.	Section 40.04	Tack Coat
3.	Section 40.06	Asphalt Concrete Pavement

F. Division 65.00 - Construction Survey

1.	Section 65.01	General
2.	Section 65.02	Construction Surveying

G. Division 70.00 - Miscellaneous

1.	Section 70.01	General
2.	Section 70.07	Remove Pipe
3.	Section 70.10	Traffic Markings
4.	Section 70.11	Standard Signs
5.	Section 70.12	Traffic Maintenance
6.	Section 70.18	Chain Link Fence

H. Standard Details as Listed Below

1.	30-1	Curb and Gutter Cross Sections
2.	30-4	Typical Section Median/Curb Nose
3.	30-8	Perpendicular Curb Ramp
4.	70-14	Layout Templates for Stencils
5.	70-31	Concrete Foundation for Sign Post

1.06 MODIFICATIONS AND / OR ADDITIONS TO MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS

A. All Divisions, All Sections: Delete Articles Entitled “Measurement” and “Basis of Payment.”

B. All Divisions, All Sections: All references to “Municipality”, “Municipality of Anchorage”, or “MOA” shall mean “Owner.”

C. All Divisions, All Sections: References to construction within a Public Right-of-Way shall also include the construction areas as indicated on the drawings.

D. All Divisions, All Sections: All staking or surveys that are noted to be completed by the “Owner” or the “Engineer” shall be completed by the Contractor.

E. Substitute all references to ‘material testing by Engineer’ for ‘material testing by the Contractor.’ The Contractor shall be responsible for all material testing and quality control in accordance with Division 1 Section 1400 “Quality Control.” Frequency of testing for all constructed areas under the MASS Specifications shall be in accordance with Table 1.06-1

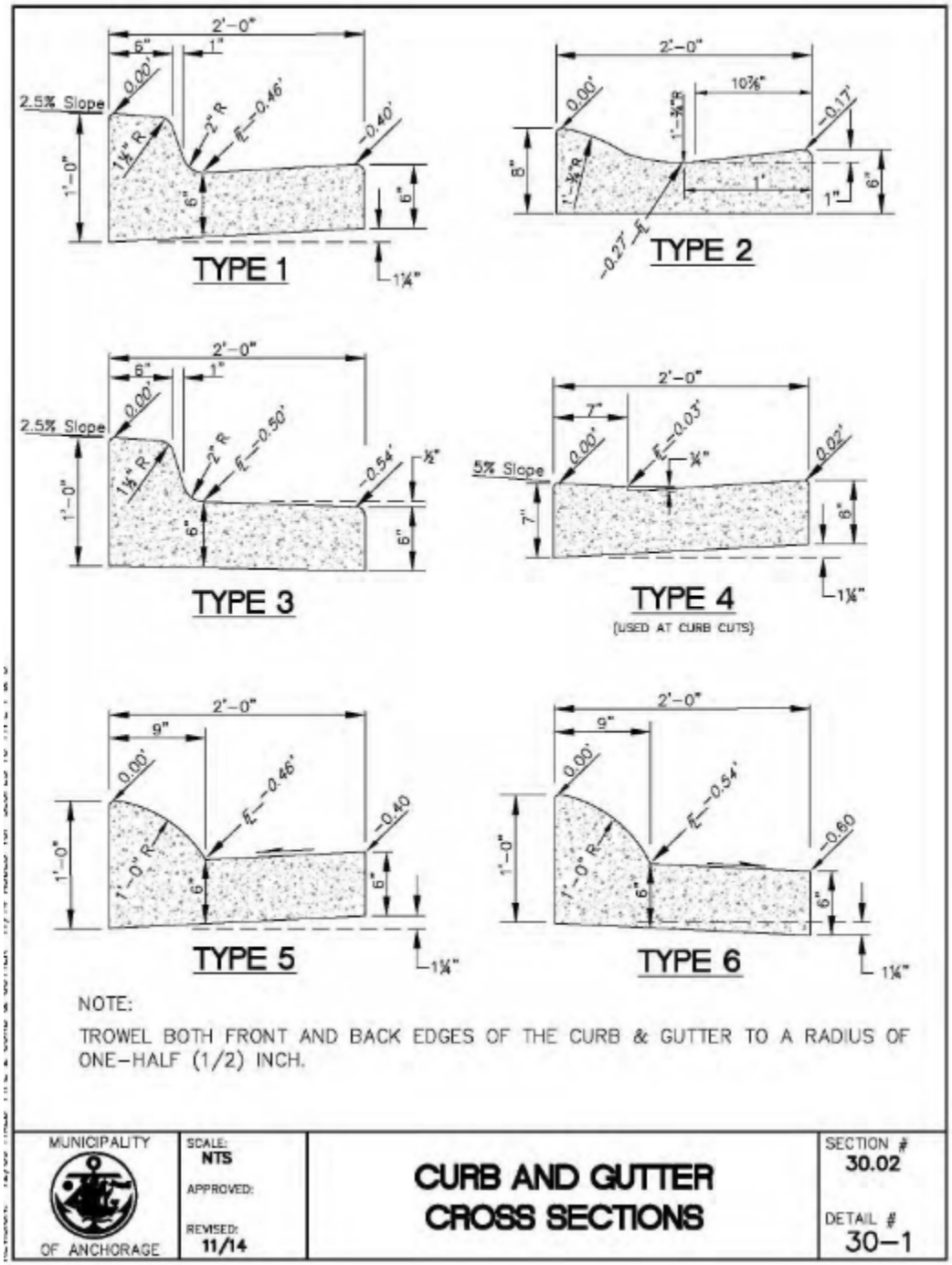
Table 1.06 - 1 Testing Requirements

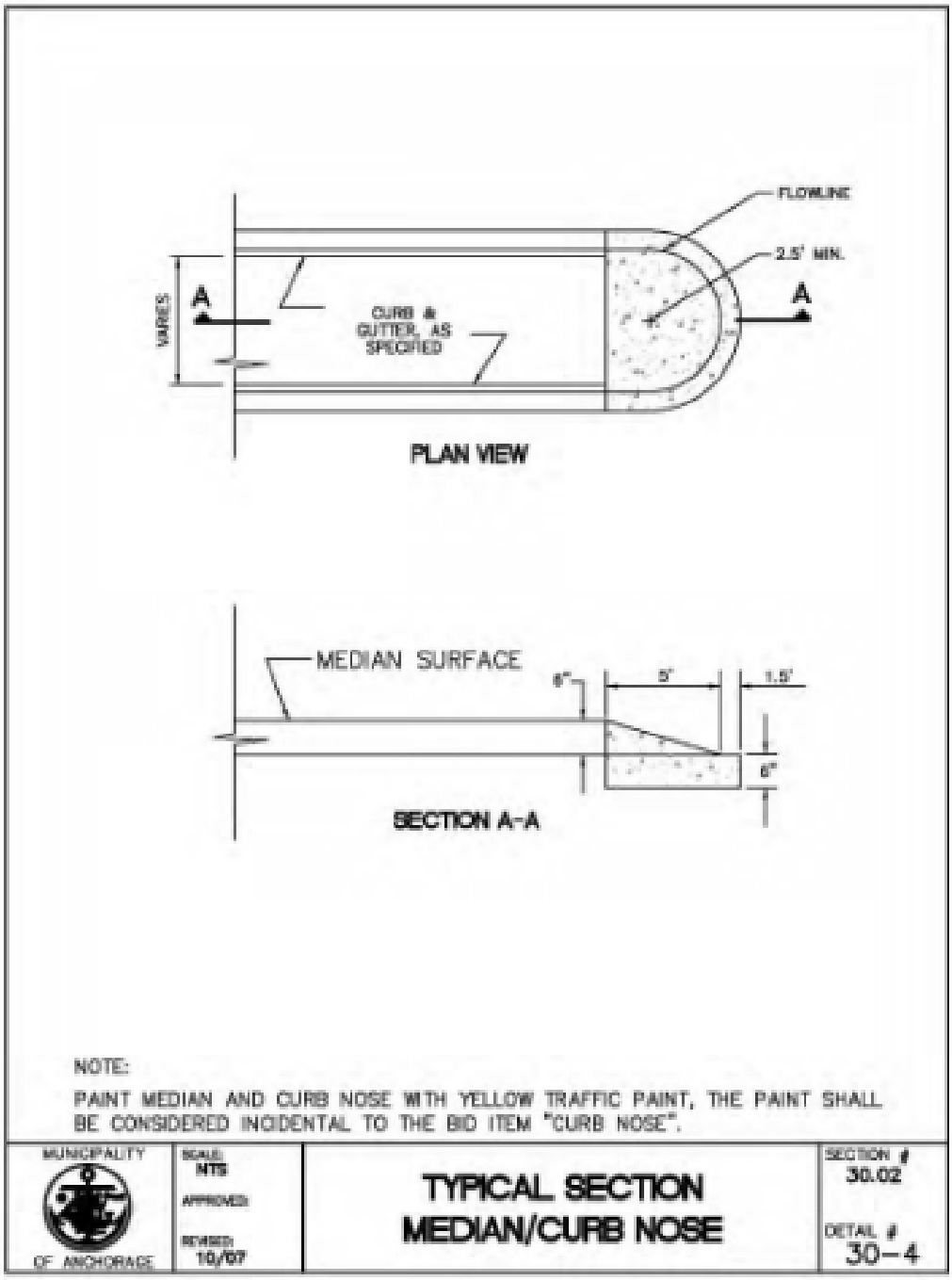
Material	Characteristic	Sampling Frequency	Point of Sampling	Reporting Time
Classified Fill and Backfill (20.21)	Classification	1 per soil type	Prior to placement	Before Use on Project
	Moisture density	1 per soil type	Prior to placement	Immediately
	Compaction	1 per 12 inch lift per 5000 sf	In Place	Prior to Next Lift
Leveling Course (20.22)	Classification	1 per soil type	Prior to placement	Before use
	Degradation	1 per soil type	Prior to placement	Before use
	Compaction	1 per 5000 sf	In Place	Before placing next layer
Concrete (30.01) (30.02) (30.03) (30.04)	Sampling	1 per placement per day, 1 every 100 cy thereafter	Production point	24 hrs
	Slump test		During Placement	Immediately
	Compressive Strength		Production point	7 & 28 days
AC Paving	Gradation	1 per placement, per day and every 700 tons thereafter	Behind Paver and Prior to Compaction	24 hrs
	Content			
	Compaction	1 per 5000 sf	After Final	
	Visual	Observe and Document Depth, aggregate size, voids in aggregates, oil pooling, etc. Verify batch ticket mix design and project	During Placement	

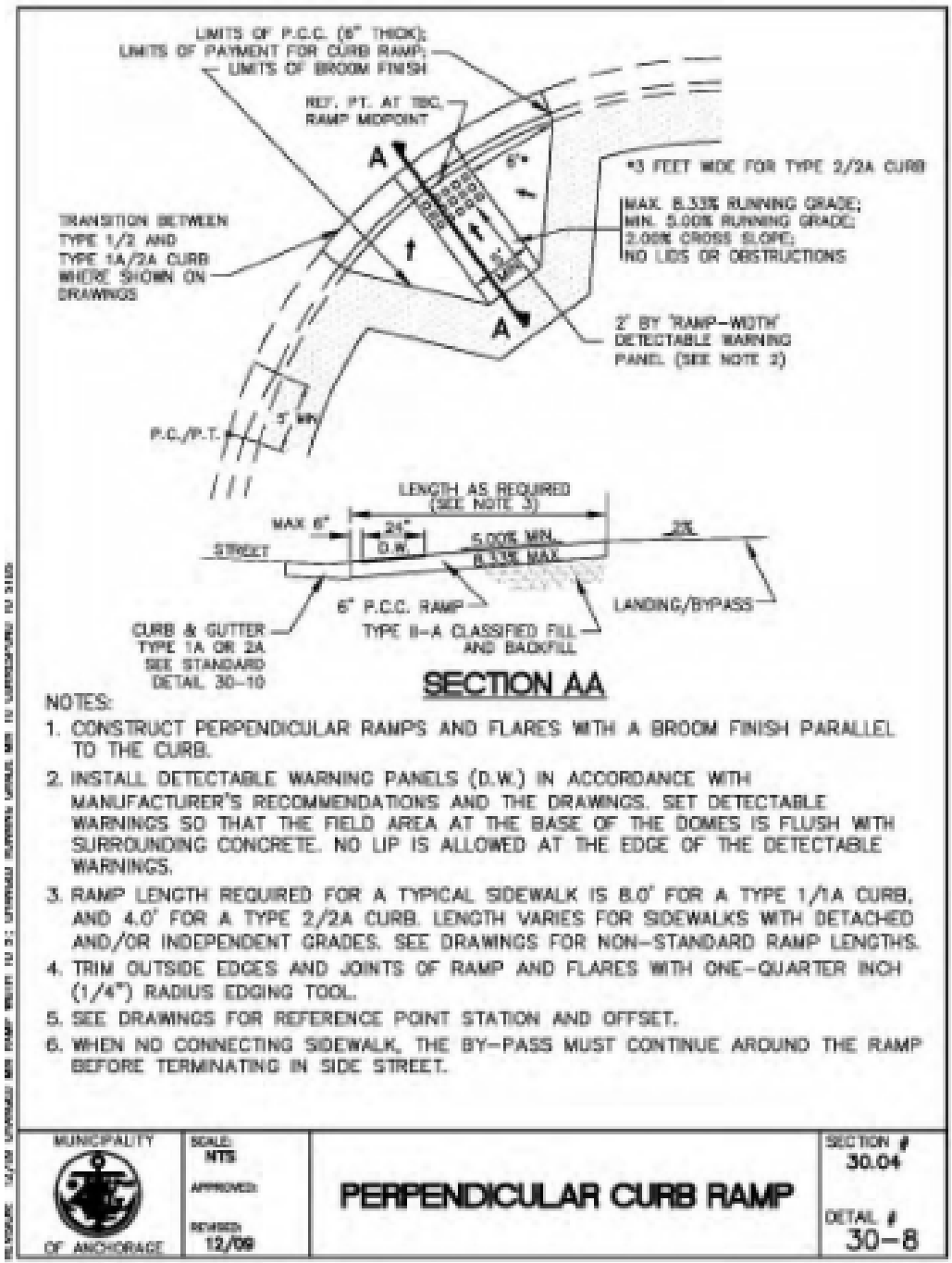
PART 2. PRODUCTS

2.01 MASS DETAILS

A. The following Mass details are provided for reference.


TYPE 1
TYPE 2
TYPE 3
TYPE 4
(USED AT CURB CUTS)
TYPE 5
TYPE 6
NOTE:
TROWEL BOTH FRONT AND BACK EDGES OF THE CURB & GUTTER TO A RADIUS OF ONE-HALF (1/2) INCH.
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 11/14
CURB AND GUTTER CROSS SECTIONS
SECTION # 30.02
DETAIL # 30-1


FLOWLINE
2.5' MIN.
A
A
VARIES
CURB & GUTTER, AS SPECIFIED
PLAN VIEW
MEDIAN SURFACE
6"
5'
1.5'
6"
SECTION A-A
NOTE:
PAINT MEDIAN AND CURB NOSE WITH YELLOW TRAFFIC PAINT, THE PAINT SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CURB NOSE".
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 10/07
TYPICAL SECTION
MEDIAN/CURB NOSE
SECTION # 30.02
DETAIL # 30-4

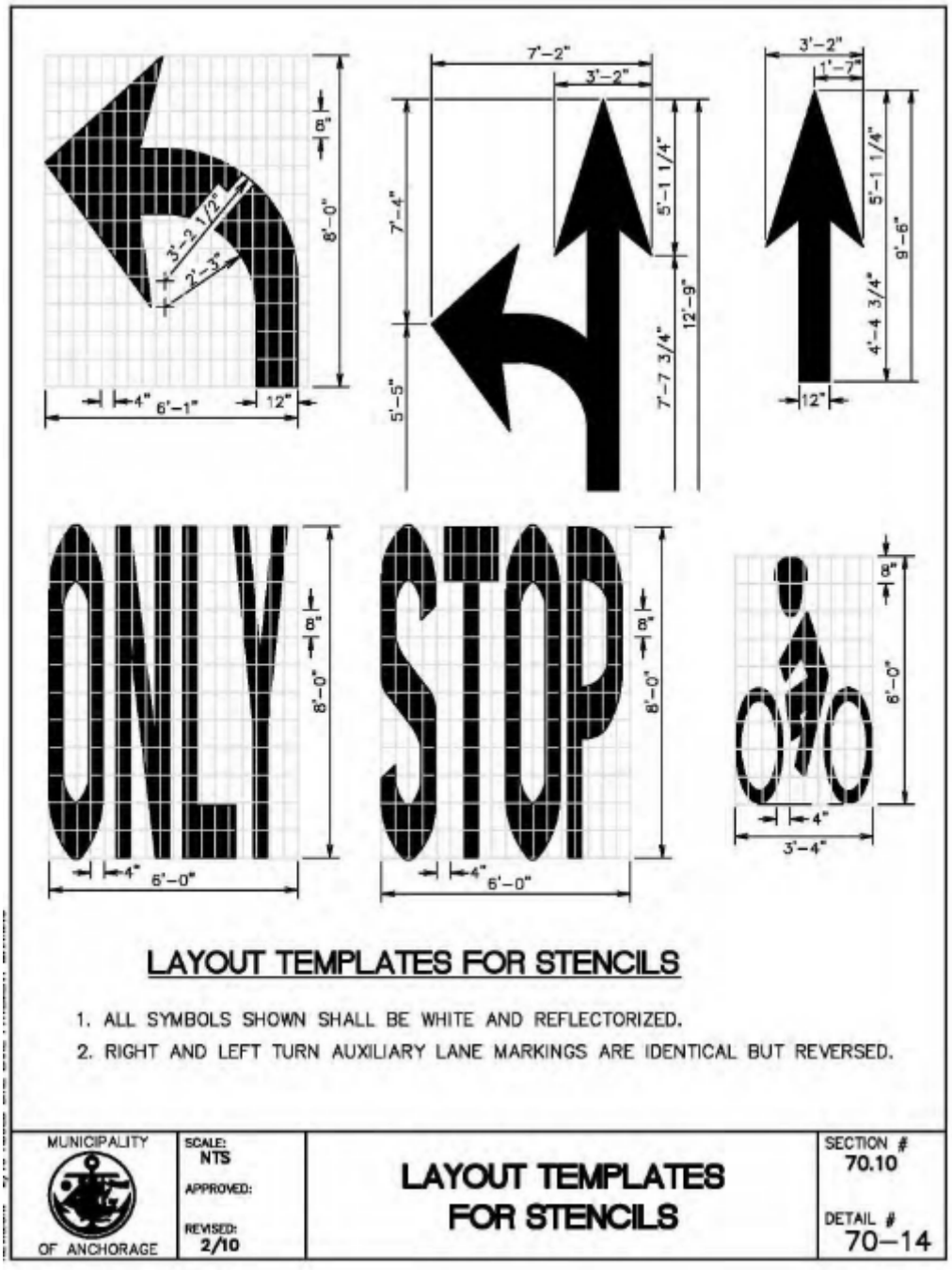


SECTION AA

NOTES:

1. CONSTRUCT PERPENDICULAR RAMPS AND FLARES WITH A BROOM FINISH PARALLEL TO THE CURB.
2. INSTALL DETECTABLE WARNING PANELS (D.W.) IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE DRAWINGS. SET DETECTABLE WARNINGS SO THAT THE FIELD AREA AT THE BASE OF THE DOMES IS FLUSH WITH SURROUNDING CONCRETE. NO LIP IS ALLOWED AT THE EDGE OF THE DETECTABLE WARNINGS.
3. RAMP LENGTH REQUIRED FOR A TYPICAL SIDEWALK IS 8.0' FOR A TYPE 1/1A CURB, AND 4.0' FOR A TYPE 2/2A CURB. LENGTH VARIES FOR SIDEWALKS WITH DETACHED AND/OR INDEPENDENT GRADES. SEE DRAWINGS FOR NON-STANDARD RAMP LENGTHS.
4. TRIM OUTSIDE EDGES AND JOINTS OF RAMP AND FLARES WITH ONE-QUARTER INCH (1/4") RADIUS EDGING TOOL.
5. SEE DRAWINGS FOR REFERENCE POINT STATION AND OFFSET.
6. WHEN NO CONNECTING SIDEWALK, THE BY-PASS MUST CONTINUE AROUND THE RAMP BEFORE TERMINATING IN SIDE STREET.

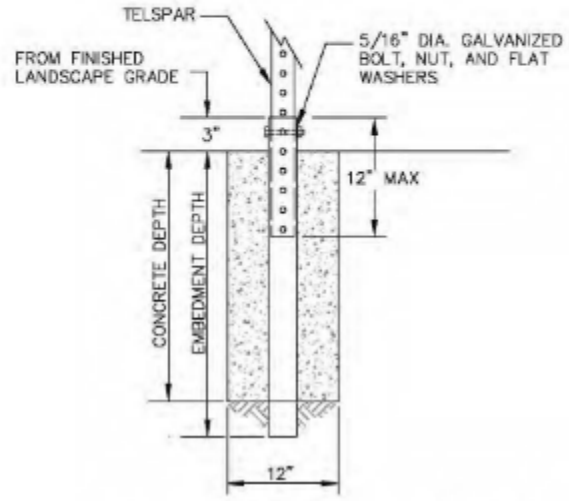
MUNICIPALITY OF ANCHORAGE	SCALE: NTS APPROVED: REVISED: 12/09	PERPENDICULAR CURB RAMP	SECTION # 30.04 DETAIL # 30-8



LAYOUT TEMPLATES FOR STENCILS

1. ALL SYMBOLS SHOWN SHALL BE WHITE AND REFLECTORIZED.
2. RIGHT AND LEFT TURN AUXILIARY LANE MARKINGS ARE IDENTICAL BUT REVERSED.

MUNICIPALITY OF ANCHORAGE	SCALE: NTS APPROVED: REVISED: 2/10	LAYOUT TEMPLATES FOR STENCILS	SECTION # 70.10 DETAIL # 70–14



CONCRETE FOUNDATION FOR SIGN POST

PERFORATED STEEL TUBES (P.S.T.) (12ga. – .105" Wall Thickness)			
SIGN SURFACE AREA SQ. FT.	POST SIZE	EMBEDMENT DEPTH	CONCRETE DEPTH
7' OR LESS	2" X 2"	27"	24"
GREATER THAN 7'	2 ½" X 2 ½"	33"	30"

MUNICIPALITY OF ANCHORAGE	SCALE: NTS APPROVED: REVISED: 11/14	CONCRETE FOUNDATION FOR SIGN POST	SECTION # 70.11 DETAIL # 70–31

SIGN DETAIL
1:20

BORDER
R=1.5"
TH=0.63"
IN=0.38"

SIGN NUMBER	Special-1
WIDTH x HGHT.	4'-0" x 3'-0"
BORDER WIDTH	0.63"
CORNER RADIUS	1.5"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
ARDOWN	180	6.3	24.2	7.5	5.1
ARDOWN	270	7.2	3.6	7.5	5.1

Panel Style: guide_con_auxiliary_wht_2012.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																								LENGTH	SERIES/SIZE
S	T	U	D	E	N	T																			
17.7	20.8	23.9	27.5	31.1	34.3	37.6																		22.4	4 D 2000
L	O	A	D	I	N	G																			
17.7	20.7	24.1	28.1	31.7	33.3	36.9																		21.9	4 D 2000
Z	O	N	E																						
17.7	21.1	24.8	28.5																					13.2	4 D 2000
P	A	R	K	I	N	G																			
17.7	20.7	24.7	28.1	31.6	33.2	36.8																		21.8	4 D 2000

SIGN DETAIL
1:20



SIGN NUMBER	Special-2
WIDTH x HGHT.	3'-6" x 2'-0"
BORDER WIDTH	0.63"
CORNER RADIUS	1.5"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
ARDOWN	270	5.3	13.2	7.5	5.1
ARDOWN	180	4.4	4.1	7.5	5.1

BORDER
R=1.5"
TH=0.63"
IN=0.38"

Panel Style: guide_con_auxiliary_wht_2012.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
P	A	R	K	I	N	G															D 2000
15.9	18.8	22.8	26.2	29.7	31.3	34.9														21.8	4
E	X	I	T																		D 2000
15.9	18.7	22.1	23.4																	10	4

SIGN DETAIL
1:10



SIGN NUMBER	name
WIDTH x HGHT.	2'-0" x 1'-6"
BORDER WIDTH	0.25"
CORNER RADIUS	0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Red/Black

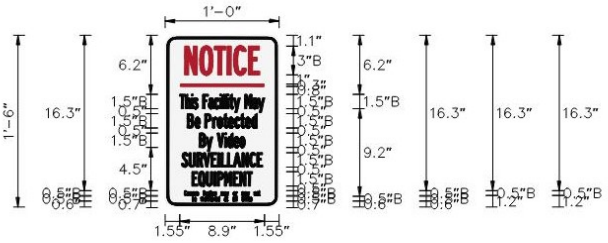
SYMBOL	ROT	X	Y	WID	HT

Panel Style: SP-3.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
A	N	C	H	O	R	A	G	E	S	C	H	O	O	L	D	I	S	T	R	I	B 2000 T
1.4	2.5	3.5	4.4	5.4	6.4	7.3	8.4	9.4	10.7	11.6	12.5	13.5	14.5	15.5	16.8	17.7	18.1	19	19.8	20.7	21.1 22
S	C	H	O	O	L	G	R	O	U	N	D	S									B 2000
1.4	2.9	4.4	6	7.6	9.3	10.9	12.5	14	15.7	17.3	18.9	20.4								20.3	3
C	L	O	S	E	D																B 2000
6.6	8.5	10	11.7	13.5	15.1															9.8	3
1	1	P	M	T	O	6	A	M													B 2000
3.7	4.9	6.1	7.9	10.3	11.8	14.2	15.8	17.8												15.6	3

SIGN DETAIL
1:10

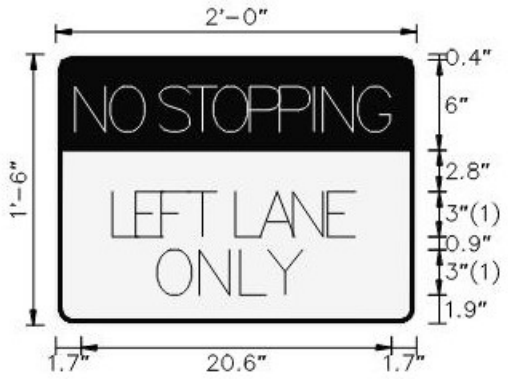


SIGN NUMBER	name
WIDTH x HGHT.	1'-0" x 1'-6"
BORDER WIDTH	0.25"
CORNER RADIUS	0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Red/Black

SYMBOL	ROT	X	Y	WID	HT

LETTER POSITIONS (X)																														LENGTH	SERIES/SIZE
N	O	T	I	C	E																										B 2000
2.1	3.6	5.2	6.5	7.2	8.8																									7.9	3
T	h	i	s	F	a	c	i	l	l	i	t	y	M	a	y																B 2000
1.5	2.2	2.8	3	4	4.6	5.2	5.8	6	6.3	6.5	6.7	7.2	8.4	9.2	9.8															8.9	1.5/1.1
B	e	P	r	o	t	e	c	t	e	d																					B 2000
2.3	3.1	4.2	5	5.5	6.1	6.6	7.3	7.9	8.4	9.1																				7.3	1.5/1.1
B	y	V	i	d	e	o																									B 2000
3.6	4.3	5.5	6.3	6.6	7.2	7.8																								4.8	1.5/1.1
S	U	R	V	E	I	L	L	A	N	C	E																				B 2000
1.8	2.5	3.3	4	4.8	5.5	5.9	6.6	7.2	8.1	8.9	9.7																			8.5	1.5
C	a	m	e	r	a	S	y	s	t	e	m	m	a	y	o	r	m	a	y	n	o	t									B 2000
2	2.3	2.6	2.9	3.2	3.3	4	4.2	4.5	4.7	4.8	5.1	5.9	6.2	6.5	7.2	7.4	8.1	8.4	8.6	9.4	9.6	9.8								7.9	0.5/0.4
E	Q	U	I	P	M	E	N	T																							B 2000
2.8	3.5	4.3	5.1	5.5	6.3	7.2	7.8	8.6																						6.3	1.5
b	e	m	o	n	i	t	o	r	e	d	a	t	a	l	l	t	i	m	e	s											B 2000
2.9	3.1	3.8	4.1	4.4	4.6	4.7	4.9	5.2	5.3	5.6	6.2	6.5	7.1	7.4	7.5	8.1	8.3	8.4	8.8	9										6.3	0.5/0.4

SIGN DETAIL
1:10



SIGN NUMBER	name
WIDTH x HGHT.	2'-0" x 1'-6"
BORDER WIDTH	0.25"
CORNER RADIUS	0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/Black/Black

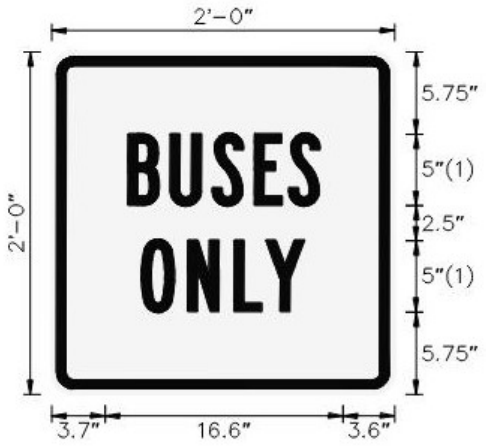
SYMBOL	ROT	X	Y	WID	HT

Panel Style: NOStopping.ssi
Dimensions are in inches.tenths
Letter locations from panel edge to lower left corner

(1) ClearviewHwy-2-W

LETTER POSITIONS (X)														LENGTH	SERIES/SIZE
N	O		S	T	O	P	P	I	N	G					ClearviewHwy-2-W
1.7	3.9	6.1	7.1	9	10.8	13.3	15.3	17.3	18.2	20.4				20.6	3
L	E	F	T		L	A	N	E							ClearviewHwy-2-W
4.2	5.7	7.4	9	10.5	11.6	13	15.4	17.7						14.9	3
O	N	L	Y												ClearviewHwy-2-W
7.1	10	12.7	14.3											9.1	3

SIGN DETAIL
1:10



SIGN NUMBER	name
WIDTH x HGHT.	2'-0" x 2'-0"
BORDER WIDTH	0.25"
CORNER RADIUS	0"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective
	COLOR: White
LEGEND/BORDER	TYPE: Reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Panel Style: SP-3.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

FONT:
(1) ClearviewHwy-2-W

LETTER POSITIONS (X)

																				LENGTH	SERIES/SIZE
B	U	S	E	S																	ClearviewHwy-2-W
3.7	7.5	11.2	14.8	17.6																16.6	5
O	N	L	Y																		ClearviewHwy-2-W
4.7	9.2	13.3	15.8																	14.3	5

END OF SECTION

PLAYGROUND PROTECTIVE SURFACING

PART 1. GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 0 and 1 Specification Sections, apply to this Section.

1.02 DESCRIPTION OF WORK

A. This Section includes the following:

1. Surfacing - Tiles

B. Related Sections include the following:

1. MASS Division 30.00 – Portland Cement Concrete
2. Division 11 Section “Playground Equipment”

1.03 GENERAL NOTES

A. The information provided within Specifications and within Drawings related to playground equipment and playground protective surfacing acts as a basis of design for receiving bids and selecting a manufacturer. Upon selection, the design team will coordinate with the manufacturer or manufacturer’s representative to refine the design. Proposals shall be composed of fully complete play systems that: meet all code requirements, are fully functioning, are appropriate for age levels, provide for cognitive, social, emotional, and physical development and enjoyment, and otherwise meet the intent of being a valued playground.

B. The intent is that the playground follows the intent of universal design. This includes a high level of accessibility, with play at or close to grade, transfer stations, and full use of unitary surfacing for complete ground level accessibility. It also focuses on cognitive, social, emotional, and physical development and enjoyment.

C. Proper design and installation of foundations and the installation section are critical to playground longevity. This required close coordination among the trades, especially when one installer may be preparing an area for another installer.

1.04 REFERENCES

A. ASTM Standards – Playground Specific

1. F355 Standard Test Method for Impact Attenuation of Playing Surface Systems, Other Protective Sport Systems, and Materials Used for Athletics, Recreation and Play
2. F1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
3. F1487 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
4. F1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
5. F2223 Standard Guide for ASTM Standards on Playground Surfacing.

B. ASTM Standards – Additional Relevant Sections

1. ASTM E303: Standard Test Method for Measuring Surfacing Frictional Properties Using the British Pendulum Tester.
2. ASTM D 2047: Standard Test Method for Static Coefficient of Friction of Polish-coated Flooring Surfaces as Measured by the James Machine.

C. CPSC Handbook for Public Playground Safety (Publication No. 325).

D. Guide to ADA Accessibility Guidelines for Play Areas (Latest Version).

1.05 DEFINITIONS

A. ADA: The Americans with Disabilities Act

B. Accessible Resilient Surfacing: See Unitary Surfacing

C. ASTM: American Society for Testing and Materials

D. CPSC: Consumer Product Safety Commission

E. CPSI: Certified Playground Safety Inspector

F. Fall Height: The vertical distance between the highest designated play surface on a piece of equipment and the protective surfacing beneath it.

G. IPEMA: The International Play Equipment Manufacturers Association

H. Unitary Surfacing: Safety surfacing under and around playground equipment that is bound together to create a smooth, unitary, accessible play surface, including Poured-In-Place, Rubber Tiles, or Synthetic Lawn.

I. Use Zone: The surface under and around a piece of equipment onto which a child falling from or exiting from the equipment would be expected to land. These areas are also designated for unrestricted circulation around the equipment.

1.06 SUBMITTALS

A. General:

1. Contractor Recommendations: The Contractor is invited to make recommendations that will provide value to the project, increase play value, and provide long-term durability. Please coordinate with the Landscape Architect for the submittal of recommendations. While methods and means are not prescriptive, the Contractor may request discussion/review where it is felt that methods and means are materially related to the success of the project. The intent of this specification item is to provide project value through meaningful interaction between the Contractor, the Client, and the Client team.

B. Submit CPSI's information and qualifications.

C. Installer's Qualifications:

1. Submit certification by the manufacturer for installation of the selected playground protective surfacing.
2. Submit copy of manufacturer issued installation certification

D. Manufacturer's Project References:

1. Submit list of 15 successfully completed projects
2. Include project name, location, and type of and quantity of playground protective surfacing installed.

E. Submit statement certifying manufacturer's compliance with IPEMA.

F. Submit manufacturer's information for Owner's Representative approval for all products, including but not limited to:

1. Standard range of color samples
2. Installation details (inclusive of inclusive of dimensions for termination and edges around installed play equipment and product perimeter)
3. Warranty.
4. Certification of compliance with:

a. ASTM 1292: Playground Surfacing Impact Attenuation
b. ASTM 1951: Playground Surfacing ADA Accessibility.

G. Samples:

1. Provide product samples for each product of playground safety surfacing as described in this specification.

H. Installation Verification:

1. Submit a playground section installation plan with information including, but not limited to, materials, installation methods, thickness of lifts, compaction methods, and testing schedule and methods. The intent is to ensure documentation and verification of installation.
2. Submit a summarized installation narrative that illustrates the contractor's approach, technical understanding, and compliance with manufacturer requirements for the selected playground protective surfacing.

I. Close-out

1. Submit a letter from a CPSI stating that the completed installation is installed per manufacturer's recommendations and requirements. The CPSI will conduct a safety inspection and provide verification that installation meets ASTM, F 1487-01 Standards, and Guide to ADA Accessibility Guidelines.

1.07 SUBSTITUTIONS

A. Should the Contractor wish to substitute different protective surfacing than that outlined in the Drawings and Specifications, they shall submit the following for review.

1. Certification that all surfacing meets current CPSC Guidelines, ASTM Standards, IPEMA Standards, and Guide to ADA Accessibility Guidelines for protective surfacing.
2. Site plan showing protective surfacing design including material types, colors and dimensions.
3. A site plan, which details the placement of the play apparatus in relationship to other improvements on site, including fall zone distances.
4. Contractor statement that all cost impacts for the substitution and subsequent revisions to the plan and details shall be the responsibility of the Contractor.

1.08 DELIVERY, STORAGE, AND DISPOSAL

A. Delivery: Deliver materials to the site in the manufacturer's original, unopened containers and packaging, with labels clearly identifying the product name and manufacturer.

B. Storage:

1. Store materials in accordance with the manufacturer's instructions.
2. Playground Safety Surfacing Tiles:
    a. Store tiles in a dry area at a minimum temperature of 50 degrees F for a minimum of 72 hours before installation.
    b. Protect tiles from direct sunlight before installation.
3. Adhesive: Store adhesive in a dry area at a minimum temperature of 50 degrees F.

C. Handling: Protect materials during handling and installation to prevent damage.

1.09 WARRANTY

A. Limited Lifetime Product Warranty

1. Materials and Workmanship: For the lifetime of the product, tiles will be free from defects in materials and workmanship.
2. Performance:
    a. For the lifetime of the product, tiles will comply with the requirements of the ASTM F1292-13 standard specification for impact attenuation as rated at the time of purchase.
    b. Surface wear due to ordinary abrasion from pedestrian traffic will not penetrate the wear course of the surface.
3. Warranty to include costs of repair or replacement, including transportation and installation costs. Within 6 years of shipment of the original product, the warranty shall include 100% of costs. Beyond 6 years, the warranty shall include 50% of costs.
4. The installer of the project is responsible for any issues deemed to be at fault of the installer.

1.10 QUALITY ASSURANCE

A. Installation must be by a manufacturer certified installer.

B. Installation must follow manufacturer requirements, including documentation of installation and submittals as needed to support and confirm warranty coverage.

PART 2. PRODUCTS

2.01 MATERIAL SPECIFICATIONS

A. Manufacturer’s Representatives Contacts:

1. Northwest Playground Equipment: PO Box 2410, Issaquah, WA 98027. www.nwplayground.com, Heather Plucinski. heather@nwplayground.com, Main Office: (800) 726-0031. Alaska Office (Cell): (907) 802-0188
2. Exerplay: PO Box 1160, Cedar Crest, NM 87008 www.exerplay.com, Karl Croft. karl@exerplay.com, Main Office: (800) 457.5444. Alaska Office (Cell): (907) 748.3736
3. Great Western Recreation: 975 US-89, Logan, UT 84321. www.gwpark.com, Nancy Casey. nancy@gwpark.com Main Office: (435) 245-5055. Alaska Phone (Cell): (907) 394-2577

B. Surfacing – Tiles

1. The basis of design for this project is sourced through Northwest Play Equipment. Additional acceptable Manufacturers for include:

    a. Northwest Playground Equipment:

        1) Manufacturer: DuraSAFE
        2) Product: DuraSAFE Rubber Playground Tiles
        3) Series: Premium 95
        4) Tile Locking: U-Shaped male and female configuration on all 4 sides to lock tiles to adjacent tiles
        5) Top Edges: Chamfered
        6) Wear Layer: Compression molded to obtain optimum density and durability.
        7) Colors: As indicated on the Drawings

2. Description: Resilient, interlocking, playground safety surfacing tiles.
3. Compliance: Meet and exceed CPSC guidelines for impact attenuation.
4. Material: Compression-molded, recycled rubber, and binding agents.
5. Tile Locking: U-shaped male and female locking mechanism on all four sides of the tile to assist in achieving the required amount of compression, holding tiles in place as well as tile-to-tile adhesion.
6. Top Edges: Chamfered.
7. Tile Sides: Edge-cut (glue channel) system for maximum seam adhesion.
8. Tile Bottom: Hollow core stanchion pattern or tunnel shaped grid pattern.
9. Wear Layer: Laminated EPDM Virgin rubber granules. Minimum 0.125 inches thick.
10. Manufactured Size: 24”x24” +/- 0.5” installed size.
11. Thickness: Coordinated by contractor to meet or exceed minimum fall height requirements.

D. Test Results: Test results shall meet or exceed those of the basis of design product.

1. Impact Attenuation, ASTM F 1292:
    a. G-Max Score: Less than 125.
    b. Head Injury Criteria (HIC) Score: Less than 700.
2. Freeze Thaw, ASTM C 67: No deterioration.
3. Rubber Deterioration/Air Oven, ASTM D 573: No deterioration.
4. Slip Resistance:

    a. ASTM E 303:

        1) Dry: 51 minimum.
        2) Wet: 44 minimum.

    b. ASTM D 2047: 0.601.

5. Tensile Strength, ASTM D 412: 0.636 Mpa (92 PSI
6. Elongation at Break, ASTM D 412: 35.3%
7. Tear Strength, ASTM D 624: 2.4 kNm.
8. Flammability: Burning Pill, ASTM D 2859: Pass.
9. Density, ASTM D 3676: 859 kg/m3
10. Taber Abrasion, Wear index, ASTM C 501: 77

PART 3. EXECUTION

3.01 GENERAL

A. Play curb shall be placed in accordance with MASS Division 30.00 – Portland Cement Concrete

B. Protect play equipment from use until all safety surfacing has been installed.

C. Install as per manufacturer's specifications and recommendations

3.02 PREPARATION

A. General:

1. Prepare subsurface in accordance with Manufacturer's instructions to ensure proper slope, support, and drainage for playground protective surfacing.
2. Prior to installation, inspect site conditions to ensure that areas for installation of play surfacing meet conditions as per manufacturer's specifications and recommendations.
3. Complete all preparations and make needed corrections prior to proceeding.

B. Site:

1. The Contractor is responsible to ensure that each stage of installation for playground installation is complete and correct prior to next stage. This includes confirming correct placement and compaction of installation sections. If the installer is a subcontractor, the subcontractor is responsible to verify that the installation area has been prepared correctly to receive their work, meet project requirements for quality and tolerances, and remain within tolerances for the duration of the equipment warranty.
2. Inspect job conditions to ensure proper site preparation and that all inserts, anchorages, blocking and other items have been accurately placed to receive equipment.
3. Verify that all play equipment footings are of sufficient length to provide proper embedment and structural support below play surfacing. For play equipment indicated to remain in place, ensure that proposed play surfacing can be installed as per manufacturer's recommendations.

3.03 INSTALLATION

A. Installation Section:

1. Installation of classified fill, geotextile, and insulation board for playground installations shall conform to project specifications.

B. Unitary Surfacing - Tiles: Install as per manufacturer's specifications and recommendations

C. Top of playground safety surfacing shall be flush with the top of adjacent hard surfacing unless otherwise indicated on the drawings.

3.04 INSPECTIONS AND REVIEWS

A. Pre-Playground Surfacing Review

1. See SECTION 11 68 00 – PLAYGROUND EQUIPMENT

B. Intermediate Surfacing Installation Review

1. Contractor shall request Landscape Architect perform Protective Surfacing Layout Review after the installation of approx. 50 SF of the playground surfacing is installed.

a. Review of surfacing layout and elevation compared to adjacent surfaces
b. Review surfacing height/depths meet specified requirements

3.05 FIELD QUALITY CONTROL

A. Installed Surface Performance Test: ASTM F1292

1. Perform impact attenuation testing according to ASTM F1292 in the presence of the Owner's representative within 30 days of installation.

a. Confirm Impact Attenuation Performance of Surfacing Tiles:

1) g-max Score: Less than 125
2) Head Injury Criteria (HIC) Score: Less than 700

2. Test Equipment Operator Qualifications:

a. National Recreation and Parks Association/National Playground Safety Institute (NRPA/NPSI), Certified Playground Safety Inspector (CPSI).
b. Trained in the proper operation of Triax test equipment by a competent agency.

B. Determine compliance with ASTM F 1292 unless otherwise specified in this section.

3.06 CLEAN UP

A. Remove adhesive spills from playground protective surfacing in accordance with manufacturer's instructions.

B. Clean playground protective surfacing accordance with manufacturer's instructions

3.07 PROTECTION

A. Tiles

1. Protect playground protective surfacing form foot traffic for a minimum of 12 hours after installation
2. Protect completed tiles form damage during construction.

END OF SECTION

SITE FURNISHINGS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD-OCCUPIED FACILITY

A. Portions of this building are classified as a child-occupied facility in accordance with 40 CFR 745, and lead-based paint has been identified 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 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 RELATED DOCUMENTS

A. Drawings.

B. Refer to Specification Divisions 0 and 1 for project general requirements.

1.03 SUMMARY

A. This Section includes the following:

1. Benches – Type A, Type B, & Type C
2. Litter Bins – Relocated
3. Bicycle Racks – Relocated

B. Related Sections include the following:

1. Division 31 – Earthwork
2. MASS Division 30.00 – Portland Cement Concrete

C. Products furnished, but not installed under this Section, include anchor bolts to be cast in concrete footings.

1.04 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, finishes, colors, field-assembly requirements, and installation details.

PART 2. PRODUCTS

2.01 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide the following or an approved equivalent:

B. Bench – Type A: Portiqoa

1. Manufacturer: MMCite
2. Contact: mmcité usa LLC, 2905 Westinghouse Blvd, Suite 100, Charlotte, NC 28273, (704) 995 1942.
3. Model: Portiqoa (with back and arm rests)
4. Finish: Cast Aluminum with Jatoba Slats
5. Attachment: Surface Mount

C. Bench – Type B: Channel - Embedded

1. Manufacturer: Pilot Rock
2. Contact: Pilot Rock ® R.J. Thomas Mfg. Co. Inc, P.O. Box 946, Cherokee, IA 51012-0946. 1-877-774-3160 or 712-225-5115.

3. Model: Channel Park Bench with back and armrests, 6 foot length
4. Finish: Powder coat Gray with Blue recycled plastic bench planks
5. Attachment: Embedded

D. Bench – Type C: Channel – Surface Mount

1. Manufacturer: Pilot Rock
2. Contact: Pilot Rock ® R.J. Thomas Mfg. Co. Inc, P.O. Box 946, Cherokee, IA 51012-0946. 1-877-774-3160 or 712-225-5115.
3. Model: Channel Park Bench with back and armrests, 6 foot length
4. Finish: Powder coat Gray with Blue recycled plastic bench planks
5. Attachment: Surface Mount

E. Litter Bins - Relocated

1. See drawings
2. Attachment: Surface Mount
3. Shall consist of existing site furnishings removed from the site and refurbished. Hardware and component pieces shall be inspected and refurbished or replaced to bring them to new condition. It is at the Contractor's discretion to substitute new bear-proof litter bins of equal or higher quality in place of refurbishing.

F. Bicycle Racks – Relocated

1. See drawings
2. Attachment: Surface Mount
3. Shall consist of existing site furnishings removed from the site and refurbished. Hardware and component pieces shall be inspected and refurbished or replaced to bring them to new condition. It is at the Contractor's discretion to substitute new bicycle racks of equal or higher quality in place of refurbishing.

G. FABRICATION

1. As per manufacturer.

H. FINISHES, GENERAL

1. As indicated.

PART 3. EXECUTION

3.01 EXAMINATION

A. Examine areas and conditions, with the Installer present, for compliance with correct and level finished grade requirements, mounting surfaces, installation tolerances, and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

A. Comply with the manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings, where required.

B. For relocated site furnishings, if the manufacturer's specifications cannot be located, install to match previously installed conditions unless otherwise directed by the landscape architect.

C. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.

D. Install site furnishings level, plumb, true, and securely anchored at locations indicated on Drawings.

E. Remove all non-essential labels.

3.03 CLEANING

A. During work, keep adjacent paving and construction clean and the work area in an orderly condition.

B. Protect areas from damage due to installation operations and operations of other contractors and trades.

C. After completing the site furnishing installation, inspect site furnishings. Remove spots, dirt, and debris. Repair damaged finishes to match the original finish or replace components.

END OF SECTION

PLANTING GENERAL

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 RELATED DOCUMENTS

A. Drawings.

B. Refer to Specification Divisions 0 and 1 for project general requirements.

1.03 SUMMARY

A. The Scope of work includes all labor, materials, appliances, tools, equipment, facilities, transportation, and services necessary for, and incidental to, performing all operations in connection with furnishings, delivery, and installation of plant (also known as “landscaping”) complete as shown on the drawings and as specified herein.

B. The scope of work in this section includes, but is not limited to, the following:

1. Preparation of site for planting efforts.
2. Locate, amend, deliver and install planting soils.
3. Locate, purchase, deliver and install all specified plants.
4. Water all specified plants.
5. Mulch, fertilize, stake, and prune all specified plants.
6. Maintenance of all specified plants until the beginning of the warranty period.
7. Plant warranty.
8. Clean up and disposal of all excess and surplus material.
9. Maintenance of all specified plants during the warranty period.

C. This Section includes general information and conditions for the following sections:

1. Division 32 Section “Planting Soil”
2. Division 32 Section “Turfs and Grasses”
3. Division 32 Section “Exterior Plants”
4. Division 32 Section “Landscape Maintenance”

1.04 DEFINITIONS

A. Acceptance Review: Inspection of landscape where upon approval, the maintenance and warranty period commencement.

B. Arborist: Personnel certified as an Arborist in good standing and meeting the requirements as set forth by the International Society of Arboriculture (ISA).

C. Backfill: The earth used to replace or the act of replacing earth in an excavation. Backfill may be planting soil, if designated in specifications.

D. Balled and Burlapped and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.

E. Bare-Root Stock: Plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for type and size of plant required.

F. Construction Administration: Landscape Architectural services that relate to office activities such as reviewing submittals, requests for information, and other administrative tasks.

G. Construction Observation: Landscape Architectural services that relate to field observations and related reporting.

H. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.

I. Dominant Leader: A single, primary or terminal shoot trunk of a tree. The dominant leader is to be straight and unpruned.

J. Existing Planting: Existing vegetation on-site, generally noted as being removed or noted to be protected and retained.

K. Finish Grade: Elevation of finished surface of planting soil.

L. Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.

M. Growth Media: the media in which plants are grown and/or delivered to the site.

N. Herbicide or Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, and fungicides.

O. Installation Period: The period of time where installation efforts are ongoing, yet Warranty Period has not commenced.

P. Intermediate Observations: Incremental inspections as provided for within Construction Observation scope.

Q. Invasive Species: Plant material as listed within the most recent US Department of Agriculture publication for Region 10 (Alaska) or most recent University of Alaska Fairbanks Cooperative Extension publication, specific for the region of Alaska in which the project is located.

R. Layout Review: Inspection of landscape to confirm locations of plants and designs for planting areas.

S. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce planting soil. Manufactured soil may also be called manufactured/imported topsoil by some commercial retailers.

T. Native Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

U. Organic Mulch - Bark: Wood material used as a mulch that has an aesthetic intent to create a neat area with a consistent appearance, a functional intent to retain soil moisture and locks together to form a mat.

V. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include but are limited to: insects, mites, grubs, mollusks (snails and slugs), rodents (voles and mice), unwanted plants (weeds), fungi, bacteria, and viruses.

W. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.

X. Planting Areas: Areas of any size to receive planting material.

Y. Plant Material Review: Inspection of plant quality as established by construction documents where upon approval, plant material may be installed. This does not act as a final acceptance for plant material and plant materials may still be rejected after this review.

Z. Planting Soil: Standardized approved topsoil, existing/native approved surface topsoil, existing/in-place approved surface soil, approved imported topsoil, or manufactured soil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. Any of the above must meet the requirements of the specifications for planting soil.

AA. Rock Mulch: Rock or stone material used as a mulch that has an aesthetic intent to create a neat area with a consistent appearance and a functional intent to retain soil moisture.

BB. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.

CC. Single-Stem Tree: A tree with a single trunk and one dominant leader. Trees with multiple leaders/trunks, unless specified, will be rejected. Cut limbs/trunks over three-quarter inch (3/4”) diameter are cause for rejection.

DD. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soils.

EE. Subgrade Review: Review of subgrade preparation where upon approval, soils may be installed.

FF. Subsoil: All material, or engineered fill, beneath the subgrade elevation and typified by the lack of organic matter and soil organisms.

GG. Substantial Completion Review: Inspection of landscape to provide punch-list items for completion prior to Acceptance Review.

HH. Substitution Request: A Contractor submittal to the Landscape Architect seeking approval for a product modification.

II. Warranty Inspection: Final inspection of landscape where upon approval, the maintenance and warranty period ends.

JJ. Warranty Period: The period of time after a successful Acceptance Inspection

KK. Weed Control Barrier: A material installed with the intent to stop plants from reaching the surface of an area from the soils below.

LL. Weeds: Plant material that is not specified in the Drawings or Specifications.

1.05 REGULATORY REQUIREMENTS

A. Comply with all requirements of the State of Alaska, Department of Environmental Conservation concerning application of herbicides, pesticides, and insecticides.

B. ANSI Z60.1 (latest edition), American Standard for Nursery Stock, American Nursery and Landscape Association.

C. AASHTO, American Association of State Highway and Transportation Officials, Standard Specifications for Transportation Materials and Methods of Sampling and Testing, Thirty-Second Edition, 2012.

D. Municipality of Anchorage Storm Water Pollution Prevention Plan requirements and related documents of erosion control.

1.06 SUBMITTALS

A. General: Unless otherwise noted, the Contractor shall provide all submittals a minimum of thirty (30) days prior to commencement of installation to avoid substitutions and assure availability.

B. Schedule: Submit a schedule indicating dates for accomplishing work of this section including watering and maintenance. Provide for periodic updating and adequate notice for inspections, observations, and testing dates.

C. Contractor Recommendations: The Contractor is invited to make recommendations that will provide value to the project and the long-term viability of the landscape or respond to availability of specified plant material. Please coordinate with the Landscape Architect for the submittal of recommendations relating but not limited to species/varieties, soil types, mulches, fertilizers, and irrigation. While methods and means are not prescriptive, the Contractor may request discussion/review where it is felt that methods and means are materially related to the success of the project. The intent of this specification item is to provide project value through meaningful interaction between the Contractor, the Client and the Client team.

D. Vegetation Protection Plan: The Contractor is responsible for protection of existing vegetation indicated to remain. The Contractor is to provide a description of how protection will be installed and maintained.

E. Plant Materials: The Contractor is responsible for plant establishment and survival through the warranty period. The Contractor is to review the planting schedule to confirm the suitability of species for the project location and site conditions. If the Contractor has establishment or survivability concerns for plant material, the Contractor will coordinate with the Landscape Architect for the submittal of substitution requests per project

requirements. Submit a list of confirmed plant materials for review a minimum of two (2) weeks prior to ordering plant materials.

F. Plant substitutions: submit all plant substitution requests with sufficient notice for two (2) week review period prior to ordering of materials. Request for substitution shall be accompanied with a list of nurseries contacted in the search for the required plant and a record of other attempts to locate the required material. Requests shall also include sources of plants found that may be of a smaller or larger size, or a different shape or habit than specified, or plants of the same genus and species but different cultivar origin, or which may otherwise not meet the requirements of the specifications, but which may be available for substitution.

G. Qualification Data:

1. Landscape Contractor: Provide project names, addresses, and year completed including names and addresses of owners' contact persons.
2. Landscape Construction Supervisor: Provide project names, addresses, and year completed as an experienced field supervisor.
3. Arborist: Provide documentation showing current certification of Arborist by the International Society of Arboriculture (ISA).
4. Planting Soil Manufacturer: Provide documentation on soil production experience.
5. Proof of Alaska certification of personnel handling herbicides or pesticides.

H. Product Data: For each type of product indicated.

1. Fertilizer: Include product label and manufacturer's application instructions specific to the Project.
2. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.
3. Soil amendments: Include product label and manufacturer's application instructions specific to the Project.
4. For custom fabrications or assemblies (shop drawings): Include construction details, material descriptions, dimensions of individual components and profiles, finishes, and installation details for approval.
5. Hydroseeding: Include product label and manufacturer's application instructions specific to the Project.
6. Product Data Sheets – Tree tie and stabilization materials
7. Product Data Sheets – Edging and Stakes
8. Product Data Sheets - Filter Fabric/Weed Control Barrier

I. Product Certifications:

1. Grass seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the date of the current germination test.
2. Manufacturer’s certified analysis of standard products.
3. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.

J. Product Sources:

1. The Contractor shall notify the Landscape Architect of the source of the planting soil – as per Division 32 – Planting Soil.
2. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.

K. Product Testing: For each unamended soil type and the specified planting soil, furnish soil analysis and a written report by a certified soil-testing laboratory. At a minimum, soil analysis shall include:

1. Percentage of organic matter by weight.
2. Sand and silt content by weight (including a grain size distribution curve)
3. Percentage of material (greater than #4 screen).
4. pH.
5. Soil nutrients

    a. Nitrogen (N)
    b. Phosphorous (P)
    c. Potassium (K)

6. Recommendations for soil amendments to achieve soil requirements.

L. Soil Amendment Plan: Based on soil tests, a Soil Amendment Plan shall be submitted that provides information for corrections to the soil for soil chemistry/nutrients. This shall include proposed amendments and an application rate and schedule if additional amendments will be needed during warranty period to correct planting soil deficiencies.

M. Samples: Provide samples of the following in the quantities indicated:

1. Bark Mulch: 1-quart volume of each required organic mulch; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
2. Rock Mulch: 2 lb. of each mineral mulch required, in sealed plastic bags labeled with source of mulch. Sample shall be typical of the lot of material to be delivered and installed on the site; provide an accurate indication of color, texture, and makeup of the material.
3. Planting Soil: 1-quart volume of each required planting soil; in sealed plastic bags labeled with composition of materials by percentage of weight and source of planting soil. Each sample shall be typical of the lot of material to be furnished.
4. Tree tie and wire: One tie and 6 inch segment of wire if proposing a substitution from what is specified.
5. Edging and stakes: Manufacturer's standard size, to verify material and color selected wire if proposing a substitution from what is specified.
6. Filter Fabric/Weed Control Barrier: 12 by 12 inches.

N. Maintenance Plan: This plan shall outline all of the tasks that will be performed during the warranty and maintenance period and shall include a schedule for performance of these tasks.

1.07 QUALITY ASSURANCE

A. Landscape Contractor: Shall demonstrate their capabilities in landscape installation and have 10 years of experience, 5 years in Alaska.

B. Landscape Construction Supervisor: Shall demonstrate their capabilities in horticultural operations and have 10 years of experience, 5 years in Alaska.

1. Certified Landscape Technician – Exterior, with installation specialty area(s), designated CLT-Exterior.
2. Certified Landscape Technician – Interior, designated CLT-Interior.
3. Certified Ornamental Landscape Professional, designated COLP.

C. Arborist: Shall be certified by the International Society of Arboriculture (ISA). This certification shall remain current for the length of the project including warranty and maintenance periods.

D. Planting Soil Manufacturer: Shall have 5 years of experience in the production of planting soil that supports the healthy growth of plant material.

E. Soil-Testing Laboratory Qualifications: An independent or university laboratory, recognized by the State Division of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

F. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.

1.08 PROJECT CONDITIONS

A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date Substantial Completion.

1. Planting: May 1 to October 1, or as approved by the Landscape Architect.
2. Seeding: May 1 to September 1, or as approved by the Landscape Architect.

B. Weather Limitations:

1. Plantings: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Do not plant during excessive periods of rain or when soils are saturated and can become compacted due to normal planting operations. Apply products during favorable weather conditions according to manufacturer's written instructions.
2. Planting Soil Production: Proceed with producing planting soil only when existing and forecasted weather conditions permit. Do not screen or produce planting soils during periods of prolonged rain, heavy rain, freezing conditions or other conditions that do not allow optimum results to be obtained.

1.09 MAINTENANCE SERVICE

A. Begin maintenance immediately after each area is planted and continue until work is accepted. See Division 32 – Landscape Maintenance.

1.10 INSPECTIONS AND REVIEWS

A. Layout Review

1. Contractor shall request Landscape Architect perform Layout Review after layout of planting beds are outlined and locations for plant material and landscape accessories are staked. This inspection will include but is not limited to execution of Division 32 – Exterior Plants and Landscape Accessories.
2. Make minor adjustments to layout as required.

B. Subgrade Review

1. Contractor shall request Landscape Architect perform Subgrade Review after planting bed preparation and prior to installation of plant material and landscape accessories. This inspection will include but is not limited to execution of Division 32 – Planting Soil, Exterior Plant, and Landscape Accessories.
2. Make minor adjustments to subgrade as required.

C. Plant Material Review

1. Contractor shall request Landscape Architect perform Plant Material Review prior to plant material arriving on site and prior to installation. This inspection will include but is not limited to the compliance with Division 32 – Exterior Plants.
2. Plant Material that does not meet specifications will be rejected.

D. Substantial Completion Review

1. The Contractor shall notify the Landscape Architect in writing seven (7) days in advance of the requested Substantial Completion Review Inspection date.
2. Within seven (7) days of this inspection, the Contractor will be provided with an itemized list of project deficiencies and required actions.

E. Acceptance Review

1. Upon correction of project deficiencies identified during the Substantial Completion Review and subsequent observations as relevant, the Contractor shall notify the Landscape Architect in writing seven (7) days in advance of the requested Acceptance Inspection date.
2. Within seven (7) days of this inspection, the Contractor will be provided with an itemized list of project deficiencies and required actions, OR
3. Upon acceptance of the landscape installation by the Landscape Architect as meeting project requirements, the Warranty Period will begin.

F. Warranty Completion

1. Inspection shall be conducted as per Division 32 – Landscape Maintenance.

G. Intermediate Observations

1. Intermediate Observations provide oversight and coordination for quality assurance and adherence to design documents, including that related to work that will be covered or concealed.

END OF SECTION

PLANTING SOIL

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 RELATED DOCUMENTS

A. Retain or delete this article in all Sections of Project Manual.

B. Drawings.

C. Refer to Specification Divisions 0 and 1 for project general requirements.

1.03 SUMMARY

A. Section includes:

1. Manufacturing of Planting Soil.

B. Related Sections include the following:

1. Division 31 Section “Earthwork”
2. Division 32 Section “Planting General”
3. Division 32 Section “Turfs and Grasses”
4. Division 32 Section “Exterior Plants”
5. Division 32 Section “Landscape Maintenance”

1.04 DEFINITIONS

A. Reference Division 32 – Planting General for definitions.

1.05 SUBMITTALS

A. Reference Division 32 – Planting General for submittals.

1.06 QUALITY ASSURANCE

A. Reference Division 32 – Planting General for quality assurance.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.

B. Bulk Materials:

1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.

2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.
4. Planting Soil: Protect planting soils and materials to produce planting soil from excessive moisture that will lead to erosion or saturation levels that will negatively affect the texture and structure of soil or its placement on site.

PART 2. PRODUCTS

2.01 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:

1. Class: T, with a minimum of 99 percent passing through No. 8 (2.36-mm) sieve and a minimum of 75 percent passing through No. 60 (0.25-mm) sieve.
2. Provide lime in form of ground dolomitic limestone.

B. Sand: Clean, washed, natural or manufactured, and free of toxic materials.

2.02 ORGANIC SOIL AMENDMENTS

A. Compost: Well-composted, stable, sterile, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

1. Organic Matter Content: 50 to 60 percent of dry weight.

B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or granular texture, with a pH range of 3.4 to 4.8.

C. Muck Peat: Partially decomposed moss peat, native peat, or reed-sedge peat, finely divided or of granular texture, with a pH range of 6 to 7.5, and having a water-absorbing capacity of 1100 to 2000 percent.

2.03 FERTILIZERS

A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

C. Organic fertilizer: Granular or pelleted, all natural, organic fertilizer approved by the United States Department of Agriculture, Organic Foods Production Act.

2.04 PLANTING SOILS

A. General Planting Soil: Manufacture planting soil from a variety of sources. Obtain native organic surface soil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from public land or protected bogs, or marshes. Soil shall have no more than 5% retained on the #4 or larger screen.

1. Additional Properties of Planting Soil: Screened and free of stones ¾ inch or larger in any dimension; free of roots, plants, sod, clods, clay lumps, pockets of coarse sand, paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials harmful to plant growth; free of obnoxious weeds and invasive plants not infested with nematodes; grubs; or other pests, pest eggs, or other undesirable organisms and disease-causing plant pathogens; friable and with sufficient structure to give good tilth and aeration.

B. Planting Soil. Planting soil shall conform to the following requirements:

1. Sand by Weight: 35-55%.
2. Silt by Weight: 25-45%.
3. Total Organic Material by dry weight of total sample: 15-25%.
4. Weight of Slow-release Fertilizers: As recommended by testing agency.
5. Weight of Lime: As recommended by testing agency.
6. pH between 5.5 and 6.5
7. Soil nutrients

a. Nitrogen (N): 30-75 ppm
b. Phosphorous (P):60-110 ppm
c. Potassium (K): 76-150 ppm

C. Turf/Sports Field Planting Soil. Planting soil shall conform to the following requirements:

1. Sand by Weight: 50%-55%.
2. Silt by Weight: 20%-35%.
3. Total Organic Material by dry weight of total sample: 15-25%.
4. Weight of Slow-release Fertilizers: As recommended by testing agency.
5. Weight of Lime: As recommended by testing agency.

PART 3. EXECUTION

3.01 EXAMINATION

A. Do not mix or place soils and soil amendments when frozen, wet, or during muddy conditions.

B. Suspend soil mixing operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.

C. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

D. Proceed with mixing only after unsatisfactory conditions have been corrected.

E. Suitability of planting soil for plant growth: Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. or volume per cu. yd. for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.

F. Problem materials: Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.

3.02 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting soil operations.

END OF SECTION

TURFS AND GRASSES

PART 1. GENERAL

1.01 NOTIFICATIONS OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 RELATED REQUIREMENTS

A. Drawings.

B. Refer to Specification Division 0 and 1 for project general requirements.

1.03 SUMMARY

A. This Section includes the following:

1. Planting Soils.
2. Fertilizing.
3. Hydroseeding.
4. Mulching.

B. Related Sections include the following:

1. Division 31 Section “Earthwork”
2. Division 32 Section “Planting General”
3. Division 32 Section “Planting Soil”
4. Division 32 Section “Exterior Plants”
5. Division 32 Section “Landscape Maintenance”

1.04 DEFINITIONS

A. Reference Division 32 – Planting General for definitions.

1.05 REGULATORY REQUIREMENTS

A. Reference Division 32 – Planting General for regulatory requirements.

1.06 SUBMITTALS

A. Reference Division 32 – Planting General for submittals.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver seed in original sealed, labeled, and undamaged containers.

B. Store products under original seal, and under environmental conditions as recommended by manufacturer or supplier to maintain effectiveness of the product.

1.08 PROJECT CONDITIONS

A. Reference Division 32 – Planting General for project conditions.

1.09 MAINTENANCE SERVICE

A. Begin maintenance immediately after each area is planted and continue until work is accepted. See Division 32 – Landscape Maintenance.

1.10 ACCEPTANCE INSPECTION

A. An Acceptance Inspection shall be conducted as per Division 32 – Landscape Maintenance.

1.11 WARRANTY PERIOD

A. For Warranty Period see Division 32 – Landscape Maintenance.

1.12 WARRANTY INSPECTION

A. Warranty Inspection shall be conducted as per Division 32 – Landscape Maintenance.

PART 2. PRODUCTS

2.01 SEED MIXTURE

A. General: Seed availability may vary from year-to-year. Submit species substitutions for review and approval per Division 32.

B. Seed mixes:

1. SCHEDULE A – Lawn Mix

Seed type	% by Wt.	Min. % Purity	Min.% Germination
Annual Rye	2	90	80
Chancellor Chewings Fescue	45	90	80
Kentucky Blue Grass Shamrock	53	90	80

Application Rate: 5 pounds per 1,000 square feet

C. Provide fresh re-cleaned seed of the latest crop meeting the minimum purity and germination requirement.

2.02 PLANTING SOILS

A. Planting soils as specified in Division 32 – Planting Soil.

2.03 INORGANIC AMENDMENTS

A. Limestone: Provide dolomitic limestone; Hydrated lime is not acceptable.

2.04 FERTILIZER

A. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition: Composition: 8 percent nitrogen, 32 percent phosphorous, and 16 percent potassium, by weight.

B. Water: Clean fresh and free of substances or matter which could inhibit vigorous growth of grass. Contractor to provide equipment using onsite source or Contractor provided source.

C. Top Mulch for Hand-Seeding: Use planting soil for top mulch where dry lawn seeding issued. Spread uniformly over all seeded areas to depth of 1/8" to 3/16" after seeding is complete.

2.05 HYDROSEEDING

A. Fiber Mulch and Tackifier: Hydroseeded areas are to be mulched using natural wood cellulose fiber with tackifier, specifically manufactured for the purpose of seed protection and germination and slope erosion control. Paper mulch is unacceptable.

B. Products, or an accepted equivalent, may include:

1. Rainier Products - Rainier Supreme
2. Profile Products - EcoFibre Plus - Premium Wood Fiber Mulch plus Tackifier

C. Dye green to facilitate metering materials application.

PART 3. EXECUTION

3.01 SITE CONDITION ASSESSMENT

A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Commencement of installation indicates Contractor acceptance of existing site condition.

3.02 PLANTING SOILS PREPARATION

A. Place planting soil as per Division 32 – Exterior Plants, Planting Soil Placement.

B. After soil placement and three days maximum prior to seeding:

1. Loosen planting soils to a depth of four (4) inches.
2. Break up clods and lumps, and rake to remove larger material and debris.
3. Grade and shape area to be seeded to bring surface to designed grades and to provide positive drainage.
4. After planting soils preparation, take no heavy objects over them except lawn rollers.
5. After preparation of lawn areas and with top soil in semi-dry condition, roll lawn planting areas in two directions at approximately right angles with water ballast roller weighing between 100 and 150 lbs.
6. Rake or scarify and cut or fill irregularities that develop as required until area is true and uniform, free from lumps, depressions, and irregularities.
7. Confirm grades indicated in drawings are met. Regrade as needed until elevations, slopes and grades are met.

3.03 INORGANIC AMENDMENTS

A. Limestone, in liquid or dry form, shall be applied at a sufficient rate to attain a soil pH between 6.0 and 7.0.

3.04 FERTILIZER

A. Apply fertilizer after smooth raking of topsoil and prior to roller compaction. Application to be in accordance with manufacturer's instructions and at a rate of 15 lbs. per 1,000 s.f.

B. Apply fertilizer 45 days following germination. If 45-day period occurs after August 15, apply an additional application between May 1 and June 1 of the following year.

C. Lightly water to aid the penetration of fertilizer.

3.05 HYDROSEEDING

A. Integral mulch shall be applied to a thickness of approximately 1/8 inch. Avoid hydroseeding of shrubs, trees, or other objects.

B. Avoid hydroseeding of shrubs, trees, planting beds, or other objects, such as buildings and site furnishings. Site amenities and furnishings shall be protected during seeding operations. If these objects get hydroseeding on them, the Contractor shall clean and/or repair the objects that got seeding on them.

C. Apply Seed Mixture specified in this section at the manufacturer’s recommended application rate based on slopes on site. Application rate increases with steeper slopes. Seed, fertilizer, and mulch material may be placed by the following method:

1. Hydraulic Method: Place a slurry made of seed, fertilizer, seeding mulch, and water. Mulch shall be added to the water slurry in the hydraulic seeder after the proportionate amounts of seed and fertilizer have been added. Slurry mixture shall be combined and applied to result in an even distribution of all materials. Hydraulic seeding equipment shall be capable of maintaining a continuous agitation so that a homogeneous mixture can be applied through a spray nozzle. The pump shall be capable of producing sufficient pressure to maintain a continuous, non-fluctuating spray capable of reaching the extremities of the seeding area with the pump unit located on the roadbed. Sufficient hose shall be provided to reach areas not practical to seed from the nozzle unit situated on the roadbed.

3.06 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Erect barricades and warning signs as needed to protect newly planted areas from traffic. Recommendation is to set string with fluorescent ribbon flagging at a height of approximately 36 inches, attached to stakes at 60-inch intervals. Maintain barricades throughout maintenance period and remove after lawn is established.

C. Remove erosion-control measures after grass establishment period, for a minimum of one year.

3.07 DISPOSAL

A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

3.08 MAINTENANCE

A. Refer to Division 32 – Landscape Maintenance.

END OF SECTION

EXTERIOR PLANTS

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 RELATED DOCUMENTS

A. Drawings.

B. Refer to Specification Divisions 0 and 1 for project general requirements.

1.03 SUMMARY

A. Section Includes:

1. Planting Soils.
2. Plant Material.
3. Fertilizers.
4. Mulches.
5. Filter Fabric.
6. Tree Stabilization.
7. Landscape Edging.

B. Related Sections include the following:

1. MASS Division 20 Section “Earthwork”
2. Division 32 Section “Planting General”
3. Division 32 Section “Planting Soil”
4. Division 32 Section “Turfs and Grasses”
5. Division 32 Section “Landscape Maintenance”

1.04 DEFINITIONS

A. Reference Division 32 – Planting General for definitions.

1.05 REGULATORY REQUIREMENTS

A. Reference Division 32 – Planting General for regulatory requirements.

1.06 SUBMITTALS

A. Reference Division 32 – Planting General for submittals.

1.07 QUALITY ASSURANCE

A. Reference Division 32 – Planting General for additional quality assurance.

B. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."

C. Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.

D. Observation: Landscape Architect may observe all plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Landscape Architect retains right to observe all plant material further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Landscape Architect may remove a portion of or all growth media from the root system for inspection of the roots and to ensure proper nursery practices. This shall be a maximum of two plants per species, up to 2% of the species if greater. The Landscape Architect reserves the right to observe and remove growing media from additional plants should previous observations indicate defects in the root system or nursery practices. It will be the responsibility of the Contractor to immediately plant or repot in original container, if approval of material is granted.

1. Notify Landscape Architect of arrival of planting materials for inspection 7 days prior to installation.

E. Approval: Plant material shall not be planted by the Contractor until observed and approved by the Landscape Architect. All rejected material shall be immediately removed from the Project site. All rejected material shall be replaced with observed and approved material of the required species and size at no additional cost. The Landscape Architect reserves the right to reject individual plants, or the entire shipment of any species or multiple species not meeting the specifications.

F. Trees shall meet the following specifications for quality:

1. As typical for the species/cultivar, trees shall be healthy and vigorous, as indicated by an inspection for the following:
    a. Foliar crown density
    b. Length of shoot growth (throughout crown)
    c. Size, color and appearance of leaves
    d. Uniform distribution of roots in the container media
    e. Appearance of roots
    f. Absence of twig and/or branch dieback
    g. Relative freedom from insects and diseases
2. There shall be no roots greater than 1/10 diameter of the trunk circling more than one-third the way around in the top half of the root ball. Roots larger than this may be cut provided they are smaller than one-third the trunk diameter. There shall be no kinked roots (90 degrees or more) greater than 1/5 the trunk diameter. Roots larger than this can be cut provided they are less than one-third the trunk diameter.
3. Trunk flare on trees must be visible above the surface of the root ball. Major roots must be found at 2 inches or less below surface of root ball.
4. Trees should be rooted into the root ball so that soil or media remains intact and trunk and root ball move as one when lifted. The trunk should bend when gently pushed, not pivot at or below soil line.
5. The point where the top-most root in the root ball emerges from the trunk shall be visible at the soil surface.
6. The relationship between caliper, height and root ball size shall meet the ANSI Z60.1 standard.
7. There should be one dominant leader more-or-less straight to the top of the tree with the largest branches spaced at least 6 inches apart. There can be a double

leader in the top 10% of the tree when typical of the species or cultivar. All coniferous plant material shall have only one leader.

8. The tree canopy should be symmetrical, free of large voids greater than twelve inches, and typical of the species or cultivar. Live crown ratio (distance from bottom of canopy to tree top/tree height) should be at least 65%.
9. One-half or more of the foliage shall be on branches originating on the lower two-thirds structure of the canopy, and one-half or less shall occur on the upper one-third of the canopy structure.
10. Branches should be less than 2/3 the trunk diameter when measured one inch above the branch, free of bark inclusions, and more-or-less radially distributed around the trunk and vertically along trunk, without crossed branching.
11. Trees shall stand erect without a supporting stake.
12. The trunk shall decrease in taper with increasing height.
13. The trunk and main branches shall be free of wounds (except for properly-made pruning wounds), damaged areas, conks, bleeding, and signs of insects or disease. Open wounds or visible damage on the trunk shall not exceed 2 inches in length or be more than 5% of the total circumference of the trunk. Pruning wounds do not have to be closed over but shall have been made properly and just outside the collar.
14. There shall be live buds or foliage along the length and to the ends of all twigs.
15. At time of inspection and delivery, the rootball shall be moist throughout, and the tree crown shall show no signs of moisture stress, as indicated by wilt, shriveled, dead leaves, or branch dieback. Roots shall show no signs of being subjected to excess soil moisture conditions, as indicated by root discoloration, distortion, death, or foul odor.
16. Trees shall not have nursery tape, labels, wire, twine, or other materials within live tissue of the trunk, branches, major roots, or other portions of the tree that may compromise the health or structural integrity of the tree.
17. If any of the above conditions are not met, trees may be rejected.

G. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Shrubs shall meet the same requirements for quality as for trees with the exception of trunk and branching requirements. The Landscape Architect may reject shrubs not meeting these requirements.

H. Shrubs shall meet the same requirements for quality as for trees with the exception of trunk and branching requirements. The Landscape Architect may reject shrubs not meeting these requirements.

I. Pre-installation Conference: Conduct conference on site prior to beginning work.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Bulk Materials: Do not deliver or place backfill, soils and soil amendments in frozen, wet, or muddy conditions.

1. Do not dump or store bulk materials near structures, utilities, sidewalks, pavements, and other facilities, or on existing trees, turf areas or plants.
2. Provide protection including tarps, plastic and or matting between all bulk materials and any finished surfaces sufficient to protect the finish material.

B. Provide erosion-control measures to prevent erosion or displacement of bulk materials and discharge of soil-bearing water runoff or airborne dust to adjacent properties, water conveyance systems, and walkways. Provide additional sediment control to retain excavated material, backfill, soil amendments and planting mix within the project limits as needed.

C. Deliver bare-root stock plants freshly dug. Immediately after digging up bare-root, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.

D. Plants transported to the site on open vehicles shall be completely covered with tarpaulins or other suitable covers securely fastened to the vehicle to prevent damage to the plants or wind desiccation. Closed vehicles or shipping containers shall be adequately ventilated to prevent overheating of plants and allow natural respiration. Do not ship plants in the same container with fresh produce (fruit and vegetables) or other products harmful to plant material. Ensure plants are well watered prior to shipping. Immediately open shipping containers upon arrival in port and water plants if necessary. Do not let plants remain in shipping containers more than 48 hours after arrival in port. Plants damaged in transit or due to improper handling shall be cause of rejection.

E. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery and handling.

F. Handle planting stock by root ball or container. Do not drop plant material.

G. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.

1. Heel-in bare-root stock. Soak roots that are in dry condition in water for two hours. Reject dried-out plants.
2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
3. Do not remove container-grown stock from containers before time of planting.
4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

H. Keep plant tags and labels on all plants until approved.

1.09 MAINTENANCE SERVICE

A. Begin maintenance immediately after each area, fraction of area or individual plant is planted and continue through completion of Warranty Period. See Section 329700 – Landscape Maintenance.

1.10 WARRANTY PERIOD

A. For Warranty Period see Division 32 – Landscape Maintenance.

1.11 INSPECTIONS

A. Inspections shall be per Division 32 – Landscape General.

PART 2. PRODUCTS

2.01 PLANTING SOIL

A. As referenced within Construction Documents and specified in Division 32 – Planting Soil.

2.02 PLANT MATERIAL

A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated or approved as submitted through a Substitution Request.

B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls. Tree and shrub sizes indicated on Drawings are sizes after pruning.

C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

D. Labeling: Label each plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.

E. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread. It is recommended to number or otherwise notate labels to assure symmetry in planting.

2.03 FERTILIZER

A. Planting Tablets: Tightly compressed chip type, long-lasting, slow-release, commercial-grade planting fertilizer in tablet form. Tablets shall break down with soil bacteria, converting nutrients into a form that can be absorbed by plant roots.

1. Size: 21-gram tablets.
2. Nutrient Composition: 8 percent nitrogen, 32 percent phosphorous, and 16 percent potassium, by weight plus micronutrients.

2.04 MULCHES

A. Organic Mulch: Free from deleterious materials, growth-inhibiting or germination-inhibiting ingredients, and suitable as a top dressing of trees and shrubs, consisting of the following:

1. Type: Ground or shredded bark.

a. Wood chips are not acceptable.
b. Naturally biodegradable.
c. May contain up to 50% shredded wood material aged for a minimum of one year prior to installation.

2. Size Range: Maximum length of any individual component 2 inches and a minimum of 75% of the mulch shall pass through a one inch screen. Shall be of size and structure to remain in place during rain and wind events.

3. Color: Natural.

B. Rock Mulch: Hard, durable stone, washed free of loam, sand, clay, and other foreign substances, of following type, size range, and color:

1. Type: Rounded riverbed gravel
2. Size Range: 1 ½” max, ¾” minimum
3. Color: Readily available natural gravel color range.

2.05 FILTER FABRIC:

A. Woven geotextile fabric allowing natural infiltration of water, manufactured for soil separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:

1. Survivability: Class 2; AASHTO M 288.

2.06 TREE STABILIZATION MATERIALS

A. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated softwood, free of knots, holes, cross grain, and other defects, size and length as indicated, pointed at one end.

1. Guys and Tie Wires: ASTM A 641A/M, Class 1 galvanized-steel wire, 2 strand, twisted, 0.05 inch in diameter.
2. Tree Webbing: 3/4 inch wide, UV-resistant polypropylene webbing, 18 inches long with a brass grummet on each end. Do not use hose and wire.

2.07 LANDSCAPE EDGING

A. Aluminum Edging: Standard-profile extruded-aluminum edging, ASTM B 221 Alloy 6063-T6, fabricated in standard lengths with interlocking sections with loops stamped from face of sections to receive stakes.

1. Dimensions and Finish:

a. 3/16 inch wide by 5-1/2 inches deep
b. Finish: Mill (natural aluminum).

2. 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. Curv-Rite, Inc.
b. Permaloc Corporation.
c. Russell, J. D. Company (The).
d. Sure-Loc Edging Corporation.

3. Stakes: Aluminum, ASTM B 221 Alloy 6061-T6, approximately 1-1/2 inches wide by 12 inches long.

PART 3. EXECUTION

3.01 EXAMINATION

A. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

D. Examine planting areas and surrounding areas for defects that will adversely affect the work and for deviations beyond allowable tolerances.

E. Verification of Existing Conditions and Protection of New or Existing Improvements: Before proceeding with work in this section, the Installer shall carefully check and verify all dimensions, quantities, and grade elevations, and inform the Landscape Architect immediately of any discrepancies.

1. Carefully examine the civil, record, and survey drawings to become familiar with the existing underground conditions before digging. Verify the location of all aboveground and underground utility lines, infrastructure, other improvements, and existing trees, shrubs, and plants to remain including their root system, and take proper precautions as necessary to avoid damage to such improvements and plants.
2. In the event of conflict between existing and new improvements notify the Landscape Architect in writing and obtain written confirmation of any changes to the work prior to proceeding.

a. When new or previously existing utility lines are encountered during the course of excavation, notify the Landscape Architect in writing and make recommendations as to remedial action. Proceed with work in that area only upon approval of appropriate remedial action. Coordinate all work with the appropriate utility contractors, utility company or responsible public works agency.

F. Protect partially completed installation against damage from other construction traffic when work is in progress, and following completion with highly visible construction tape, fencing, or other means until construction is complete.

3.02 PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.

B. Obtain utility locates for all underground utilities and structures in planting areas. Notify the Landscape Architect of any conflicts prior to beginning excavation.

C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations and outline areas.

D. Contractor shall request Landscape Architect perform Layout Review inspection per Division 32 – Planting General.

3.03 PLANTING AREA EXCAVATION

A. General:

1. Excavate pits to the depth required to accept the depth of planting soils, mulch and tolerances to adjacent surfaces as indicated on Drawings.
2. Secure open excavations when not under direct supervision.
3. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
4. If drain tile is shown on Drawings or required under planting areas, excavate to top of porous backfill over tile.

B. Planting Pit Sides: Maintain required angles of repose of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements. Unless otherwise shown, typical excavation will result in 45-degree angle slopes for planting area sides. Excavations with vertical sides are not acceptable. Scarify sides of planting pit smeared or smoothed during excavation.

C. Planting Pit Mounds: Tree and shrub plantings shall have root balls set on compacted material to prevent settling. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.

D. Planting Pit Bottom: Planting pit bottoms shall be graded to provide drainage away from center.

E. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.

F. Percolation Testing: Fill all excavations completely with water and allow to naturally percolate from excavations. Notify Landscape Architect of any beds which fail to percolate within 24 hours and correct soils through drilling, spiking, scarifying, reducing compaction, and other methods to a minimum depth of twelve (12) inches to get adequate percolation as indicated. Repeat water percolation test as needed. Scarify the sides and bottom of all beds to a minimum depth of 4 inches after percolation test to reduce compaction as a result of testing.

G. Subgrade Compaction: Loosen subgrade of planting areas to a minimum depth of 4 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

3.04 PLANTING SOIL PLACEMENT

A. General: Homogeneously blend planting soil mix off-site before spreading, or homogeneously blend planting soil in beds to a uniform texture for the full depth of soils. Do not place planting soil in planting pits with standing water. Do not install or spread planting soil that is frozen, muddy, or excessively wet.

B. Soil Installation: Spread approximately one-half the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Install remainder of planting soil to achieve depths as indicated in the Contract Documents.

C. Soil Compaction: Install soils in lifts that do not exceed eight (8) inches. Compact using irrigation or a water filled roller. Do not use mechanical compaction. Compact soil to 82-85% of maximum dry density. Check the soil compaction with a penetrometer or densiometer.

D. Spread soil to the depth indicated on Drawings.

E. If the planting soil becomes overly compacted, remove the soil and reinstall.

F. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades. Protect areas from vehicle and pedestrian traffic and other forms of compaction.

G. Contractor shall request Landscape Architect perform Subgrade Review per Division 32 – Planting General.

H. Plant trees and shrubs after finish grades are established and before planting lawns. Do not plant in soils immediately after performing irrigation compaction of planting soils. Allow soils to dry before planting.

3.05 TREES AND SHRUB PLANTING

A. General:

1. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated. If planting trees, shrubs, and other plants after planting turf areas, protect turf areas and promptly repair damage caused by planting operations.
2. Fertilization: Place planting tablets in each planting pit when pit is approximately one-half filled. Quantity and type of tablet shall result in fertilizer amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch from root tips; do not place tablets in bottom of the hole.

B. Preparation:

1. Contractor shall request Landscape Architect perform Plant Material Review per Division 32 – Planting General.
2. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
3. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.

C. Setting and Backfilling:

1. Balled and Burlapped and Container Grown:

a. Set approved balled and burlapped, and container grown stock plumb and in location as shown in Drawings, in center of trench, or in center of individual pit with uppermost lateral root no more than 2 inches below finish grades.
b. Remove burlap and wire baskets from root balls without breaking root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
c. Make adjustments to ensure proper planting depth is obtained.
d. Plumb before backfilling, and maintain plumb while working backfill around roots.
e. Backfill around root ball with planting soil in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
f. Continue backfilling process in layers to maintain soil layers established prior to excavating plant pits. Water again after placing and tamping final layer of soil.

D. Planting on Slopes: When planting on slopes, install the plants so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

3.06 TREE STABILIZATION

A. Upright Staking and Tying: Stake all trees indicated.

1. Use stakes of length required as indicated on drawings and to extend to height indicated above grade.
2. Set and space vertical stakes to avoid penetrating root balls or root masses.
3. Support trees with number of strands of tie wire and webbing as shown in Drawings at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.

3.07 EDGING INSTALLATION

A. General: Layout edging as shown on Drawings. Layout of curves shall be smooth and curvilinear without deformations or kinks or bends. Straight runs shall be linear with a deviation of less than ¼ inch in any 8 foot length. Connections shall be visually seamless with no overlap. Top elevation of edging shall be uniform.

B. Aluminum Edging: Install aluminum edging where indicated according to manufacturer's written instructions. Anchor with aluminum stakes spaced approximately 36 inches apart, driven below top elevation of edging.

3.08 MULCHING

A. Mulch all planting beds and other areas indicated on Drawings. Ensure even coverage.

1. General:
    a. Do not place mulch within 3 inches of trunks or stems.
    b. Install mulch to depths as shown in Drawings.
    c. Finish mulch level with adjacent soft-surface grades, top of landscape edging, except where adjacent to pedestrian or vehicular flatwork where mulch shall be installed 1” below adjacent walking or driving surfaces.
2. Organic Mulch in Planting Areas: Apply 3-inch average thickness of organic mulch over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.
3. Trees in Turf Areas: Apply organic mulch in a ring of 36-inch radius around trunks or stems. Do not place mulch within 3 inches of trunks or stems.
4. Rock Mulch in Planting Areas: Apply 4-inch average thickness of rock mulch over filter fabric in planting area as shown on Drawings, and finish level with adjacent finish grades. Do not place mulch within 3 inches of trunks or stems.

3.09 CLEANUP AND PROTECTION

A. During planting, keep adjacent paving and construction clean and work area in an orderly condition.

B. Protect plants and planting areas from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

C. Remove all nursery ties, tape, nursery stakes, ribbons, twine, and wire from branches and trunk. Remove all nursery plant identification labels and tags when approved and directed by Landscape Architect.

D. Remove all debris from plant material, planting areas, and Project site.

3.10 DISPOSAL

A. Remove surplus soil and waste material including but not limited to excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

3.11 MAINTENANCE

A. Refer to Division 32 – Landscape Maintenance.

END OF SECTION

LANDSCAPE MAINTENANCE

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 RELATED DOCUMENTS

A. Drawings.

B. Refer to Specification Divisions 0 and 1 for project general requirements.

1.03 SUMMARY

A. This Section includes the following:

1. Maintenance Period and Warranty
2. Maintenance of Exterior Plants
3. Maintenance of Lawns and Grasses
4. Clean-up
5. Inspection

B. Related Sections include the following:

1. Division 32 Section “Planting General”
2. Division 32 Section “Planting Soil”
3. Division 32 Section “Turfs and Grasses”
4. Division 32 Section “Exterior Plants”

1.04 DEFINITIONS

A. Reference Division 32 – Planting General for definitions.

1.05 REGULATORY REQUIREMENTS

A. Reference Division 32 – Planting General for regulatory requirements.

1.06 MAINTENANCE PERIOD AND WARRANTY

A. Warranty Periods: Commencement of the maintenance and warranty period shall begin upon completion of the Acceptance Inspection. Warranty periods are as follows:

1. Exterior Plants:

a. Trees and Shrubs: Two years.
b. Lawns and Grasses: Two years. If the period between the time of planting of Lawns and Grasses and winter freeze-up is less than 60 days, the warranty and maintenance period will carry over into the following growing season.

1) Protect lawns and grasses for a minimum of one full growing season with the use of Protection-Zone Fencing.

B. Acceptance Review:

1. Inspection shall be conducted as per Section 32 90 00 – Planting General.

C. Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period at no cost to the Owner.

1. Failures include, but are not limited to, the following:

a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control.
b. Structural failures including plantings falling or blowing over.
c. Faulty performance of tree stabilization and edgings.
d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

2. Include the following remedial actions as a minimum:

a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
c. A limit of one replacement of each plant will be required except for losses or replacements due to failure to comply with requirements including maintenance.
d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

D. Landscape Architect will provide the Contractor with written notice of any deficiencies with performance during the maintenance period. If the Contractor fails to address those concerns within thirty (30) day, the owner reserves the right to terminate the Contractor’s maintenance period and hire an alternative contractor to complete the remainder of the warranty period. The cost of the alternative contractor shall be at the original contractor’s expense.

1.07 WARRANTY COMPLETION

A. At the end of the Warranty Period, all trees, shrubs, plants, and turf areas shall be inspected and shall meet all required specified conditions. The Contractor shall notify the Landscape Architect in writing seven (7) days in advance of the requested Warranty Completion inspection date.

B. Condition of Plant Material: Prior to Acceptance Inspection, the Contractor shall be responsible for repairing third-party damage, watering, and protecting planted areas, resetting any plants to an upright position, to proper grade or to proper position, and for removal and replacement of any dead plant material. The Contractor shall also re-stake trees and prune plants if necessary.

C. Acceptance shall be contingent upon the following:

1. All plantings shall be in healthy condition, free of damage, and of the specified quantities and size, as outlined within Drawings and Specifications.
2. All planting areas shall be weed free.

3. Lawns and grasses shall consist of an established healthy, uniform, close stand of grass that is free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.

D. Within seven (7) days of this inspection, the Contractor will be provided with an itemized list of project deficiencies and required actions, OR

E. Upon acceptance of the landscape installation by the Landscape Architect as meeting project requirements, the Warranty Period will conclude.

1.08 SUBMITTALS

A. Reference Section 32 90 00 – Planting General for submittals.

1.09 QUALITY ASSURANCE AND SAFETY

A. Reference Division 32 – Planting General for additional quality assurance.

B. The Contractor shall furnish all labor, materials, equipment, supervision, traffic control, and transportation and shall secure all necessary permits and licenses required to maintain and keep the landscape in an attractive, healthy, and vigorous growing condition prior to the Acceptance Review and the duration of the Warranty Period.

PART 2. EXECUTION

2.01 GENERAL

A. Diseases and Pests: An approved pesticide shall be applied as necessary to maintain plant materials in a healthy and vigorous growing condition. The Contractor shall apply for and receive a "permit to apply pesticide" from the State of Alaska, Department of Environmental Conservation, or shall engage the services of a qualified, licensed pest control service familiar with plants, pests, and appropriate pesticides.

B. Weed Control: All planting and seeding areas shall be kept free of weeds by hand weeding, chemical control, or other approved methods.

2.02 PLANTING SOILS

A. Soil Amendments: Based on initial soil testing, an amendment plan shall be submitted for review and approval per 32 90 00 Planting General.

2.03 EXTERIOR PLANTS

A. Watering: Commencing immediately upon installation and continuing through the end of the Warranty Period, the Contractor shall deep water all trees and shrubs providing water penetration to the depth of planting pits and extent of the root zone. Deep watering shall be done in accordance with the following schedule:

1. Deep water all trees and shrubs each week (during periods of extended dry weather, watering shall occur twice weekly) continuing through the first hard frost, or October 15, whichever occurs first.

B. Staking and Guying: Tree collars, stakes, and guys are to be inspected and adjusted as necessary a minimum of twice per year. Tree collars, staking and guys shall be removed at the end of the warranty period. Tree girdling, rubbing, or other deficiencies caused by improper staking conditions or materials will be immediately repaired, and adjustments made as necessary to avoid additional issues.

C. Fertilization: Trees and shrubs shall be fertilized with 8-32-16 with the following schedule:

1. Summer of Installation: One week after the installation of plant material, an initial application of fertilizer will be applied. Only this initial application of fertilizer during planting is necessary.
2. Following summer(s) of warranty period: Fertilization shall occur twice per year. The first shall be applied no later than June 1, and the second shall be applied on or about July 15.
3. No fertilization shall occur after August 1.

D. Plant Damage: In the event of damages to trees or shrubs from a third party, including vandalism, the Owner may direct the Contractor to replace them at unit cost amounts. Such replacements to be made only upon written notice from the Owner's Representative.

2.04 TREE and SHRUB PRUNING

A. Prune only when directed by Landscape Architect. Pruning to be executed by or under direct supervision of a certified Arborist, or experienced nurseryman with pruning experience.

B. All pruning cuts shall comply with ANSI A-300 standards. Remove only injured or dead branches from trees, and do not cut tree leaders. Trees with dead leaders shall be replaced. Do not prune branches unless damaged or to retain natural character. Prune trees and shrubs according to standard horticultural practice with sharp, clean tools.

C. Tree sizes indicated are sizes after pruning. Prune shrubs to retain natural character. Shrub sizes indicated are sizes after pruning.

D. No pruning paint or other topical applications are to be used.

2.05 LAWNS AND GRASSES - MOWN

A. Watering: Commencing immediately upon installation and continuing through the end of the Warranty Period, all areas shall be watered at least once per week to maintain soil moisture throughout the root zone. This shall be conducted regardless of natural rain fall unless approved in writing by the Landscape Architect. This watering period shall extend from May 15 to the first hard frost or October 15 (whichever comes first).

1. Three-fourths of an inch (3/4") of water is required weekly and shall be applied at rates to promote maximum penetration to root zone with minimal run-off.
2. New areas to be kept moist at all times for the first six (6) weeks after seeding.

B. Mowing: Commencing immediately upon establishment and continuing through the end of the Warranty Period

1. Mowing shall occur a minimum of once per week.
2. Maximum height shall be 3 inches. Do not cut more than 1/3 of grass blade at any one mowing.
3. Immediately remove clippings after mowing and trimming.

C. Edging: Trimming next to all adjacent surfaces shall be done every other mowing.

D. Fertilization: Lawns and grasses shall be fertilized to encourage growth and maintain a manicured appearance.

1. Installation: 8-32-16 shall be applied at the time of seeding.

2. Installation Period and Warranty Period: 20-20-10 or 16-16-16 shall be applied a minimum of three (3) times per year. Suggested applications are every four (4) to six (6) weeks between May 1 and August 1.
3. No fertilization shall occur after August 1.

E. Limestone: Apply dolomitic limestone at rates to bring pH to 6.0 plus or minus 0.5 at the beginning of the growing season. An additional application may also be necessary to keep the pH level at 6.0 plus or minus 0.5.

F. Repair: Repair and replacement of all damaged or dead turf of seeded areas shall occur upon request to the Landscape Architect regardless of cause.

2.06 MULCH

A. Mulch shall be maintained to the depth and extents as indicated in the documents.

B. The Contractor shall assess and adjust mulch depth prior to the Warranty Inspection.

2.07 WEEDING

A. All areas shall be maintained as weed-free.

2.08 CLEAN-UP

A. The Contractor shall keep the project site clean and free of excess materials, and rubbish incidental to his work at all times. Clean-up will be one of the conditions to be met prior to all phases of planting acceptance.

2.09 DISPOSAL

A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

END OF SECTION

UTILITIES

PART 1. GENERAL

1.01 NOTIFICATION OF CHILD OCCUPIED FACILITY

A. Portions of this building are classified as a child occupied facility in accordance with 40 CFR 745 and lead-based paint has been identified 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 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 NOTIFICATION OF SITE-SPECIFIC RESTRICTIONS

A. An active eagle nest is present on the site. Comply with the US Federal Fish and Wildlife Permit when working within 500 feet of the eagle's nest.

1.03 RELATED DOCUMENTS

A. Section 31 00 00 Earthwork

B. Section 32 00 00 Exterior Improvements

1.04 REFERENCED SPECIFICATIONS

A. The contract is subject to and hereby incorporates by reference the following documents as though physically contained here:

1. Sections of the Municipality of Anchorage (MOA) Standard Specifications dated March 2015 as described below, herein referred to as MASS.
2. Anchorage Water and Wastewater Design and Construction Practices Manual, dated 2018
3. The Municipality of Anchorage Stormwater Manual, dated December 2020.
4. When conflicts exist between MASS and the Project Specifications, the Project Specifications shall govern.

B. When an item of Work not addressed by the Project Specifications, but addressed by MASS, then the item of Work shall be in accordance with MASS, regardless of whether or not the MASS Section of relevance is specifically enumerated herein.

C. This Specification section applies only to the civil designated Drawings.

1.05 MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS, 2015, AS AMENDED:

A. This Contract incorporates the latest revision of the following MASS 2015, by reference. The full text of each division can be downloaded electronically at this site:

B. Division 10.00 – Standard General Provisions

1. Article 10.4.7 — Reference Stakes and Surveying
2. Article 10.4.8 — Work Incidental to the Contract
3. Article 10.4.9 — Disposal Sites
4. Article 10.4.14 — Maintenance and Drainage
5. Article 10.4.15 — Temporary Erosion Control and Storm Water Pollution Prevention Plans for Construction

6.	Article 10.4.17	Utilities
7.	Article 10.5.5	Shop Drawings

C. Division 20.00 – Earthwork

1.	Section 20.01	General
2.	Section 20.02	Storm Water Pollution Prevention Plan
3.	Section 20.12	Dewatering
4.	Section 20.13	Trench Excavation and Backfill
5.	Section 20.16	Furnish Bedding Material
6.	Section 20.20	Unclassified Fill and Backfill
7.	Section 20.21	Classified Fill and Backfill
8.	Section 20.22	Leveling Course
9.	Section 20.25	Geotextile Fabric
10.	Section 20.27	Disposal of Unusable or Surplus Material
11.	Section 20.30	Shoring, Sheeting and Bracing/Shoring and Sheeting Left in the Trench and Portable

D. Division 30.00 - Portland Cement Concrete

1.	Section 30.01	General

E. Division 55.00 – Storm Drain Systems

1.	55.01	General
2.	55.02	Furnish and Install Pipe
3.	55.03	Subdrains
4.	55.04	Connections to Existing Manholes or Catch Basins
5.	55.05	Manholes and Catch Basin Manholes
6.	55.08	Adjust Storm Drain Manhole Ring to Finish Grade
7.	55.09	Construct Catch Basin
8.	55.11	Remove Manhole or Catch Basin
9.	55.12	Adjust Catch Basin to Finish Grade
10.	55.22	Oil and Grit Separator

F. Division 65.00 - Construction Survey

1.	Section 65.01	General
2.	Section 65.02	Construction Surveying

G. Division 70.00 - Miscellaneous

1.	Section 70.01	General
2.	Section 70.07	Remove Pipe
3.	Section 70.12	Traffic Maintenance

H. Standard Details as Listed Below

1.	50-5	Manhole Heights
2.	50-6	Polypropylene Manhole Step
3.	50-8	Sewer Manhole Cover
4.	50-9	Manhole Frame
5.	50-18	Sanitary Sewer Cleanout Cover
6.	50-26	Manhole Ring Adjustment

7.	55-4	Storm Drain Manhole, Type 1
8.	55-5	Storm Drain Manhole, Type 2
9.	55-7	Storm Drain Manhole Cover
10.	55-8	Storm Drain Top Intake Cover
11.	55-9	Storm Drain Beehive Intake Cover
12.	55-11	Precast Concrete Reducing Slab
13.	55-18	Manhole Ring Adjustment
14.	55-19	Catch Basin Inlet Frame and Hood for Type 1 Curb and Gutter
15.	55-20	Catch Basin Inlet Grates for Type 1 Curb and Gutter
16.	55-22	Precast Catch Basin

1.06 MODIFICATIONS AND / OR ADDITIONS TO MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS

A. All Divisions, All Sections: Delete Articles Entitled “Measurement” and “Basis of Payment.”

B. All Divisions, All Sections: All references to “Municipality”, “Municipality of Anchorage”, or “MOA” shall mean “Owner.”

C. All Divisions, All Sections: References to construction within a Public Right-of-Way shall also include the construction areas as indicated on the drawings.

D. All Divisions, All Sections: All staking or surveys that are noted to be completed by the “Owner” or the “Engineer” shall be completed by the Contractor.

E. Substitute all references to ‘material testing by Engineer’ for ‘material testing by the Contractor.’ The Contractor shall be responsible for all material testing and quality control in accordance with Division 1 Section 01400 “Quality Control.” Frequency of testing for all constructed areas under the MASS Specifications shall be in accordance with Table 1.06-1

F. Section 60.01 General

1. Article 1.1 Scope of Work: Add the following:

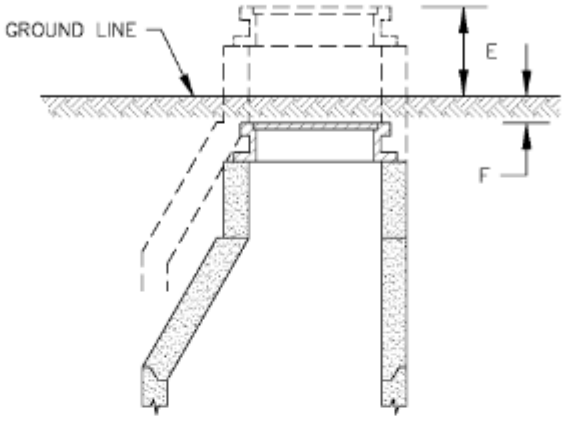
a. Depth of cover is being reduced over the existing water service to the school. Insulation shall be added over the water line when depth of cover is less than 10 feet. Pothole the existing water line every 100 feet where existing grade is being lowered to determine depth of cover over water line.

Table 1.06 - 1 Testing Requirements				
Material	**Characteristic**	**Sampling Frequency**	**Point of Sampling**	**Reporting Time**
Classified Fill and Backfill (20.21)	Classification	1 per soil type	Prior to placement	Before Use on Project
	Moisture density	1 per soil type	Prior to placement	Immediately
	Compaction	1 per 12 inch lift per 5000 sf	In Place	Prior to Next Lift
Leveling Course (20.22)	Classification	1 per soil type	Prior to placement	Before use
	Degradation	1 per soil type	Prior to placement	Before use
	Compaction	1 per 5000 sf	In Place	Before placing next layer
Concrete (30.01) (30.02) (30.03) (30.04)	Sampling	1 per placement per day, 1 every 100 cy thereafter	Production point	24 hrs
	Slump test		During Placement	Immediately
	Compressive Strength		Production point	7 & 28 days
AC Paving	Gradation	1 per placement, per day and every 700 tons thereafter	Behind Paver and Prior to Compaction	24 hrs
	Content			
	Compaction	1 per 5000 sf	After Final	
	Visual	Observe and Document Depth, aggregate size, voids in aggregates, oil pooling, etc. Verify batch ticket mix design and project	During Placement	

PART 2. PRODUCTS

2.01 MASS DETAILS

A. The following MASS details are provided for reference.

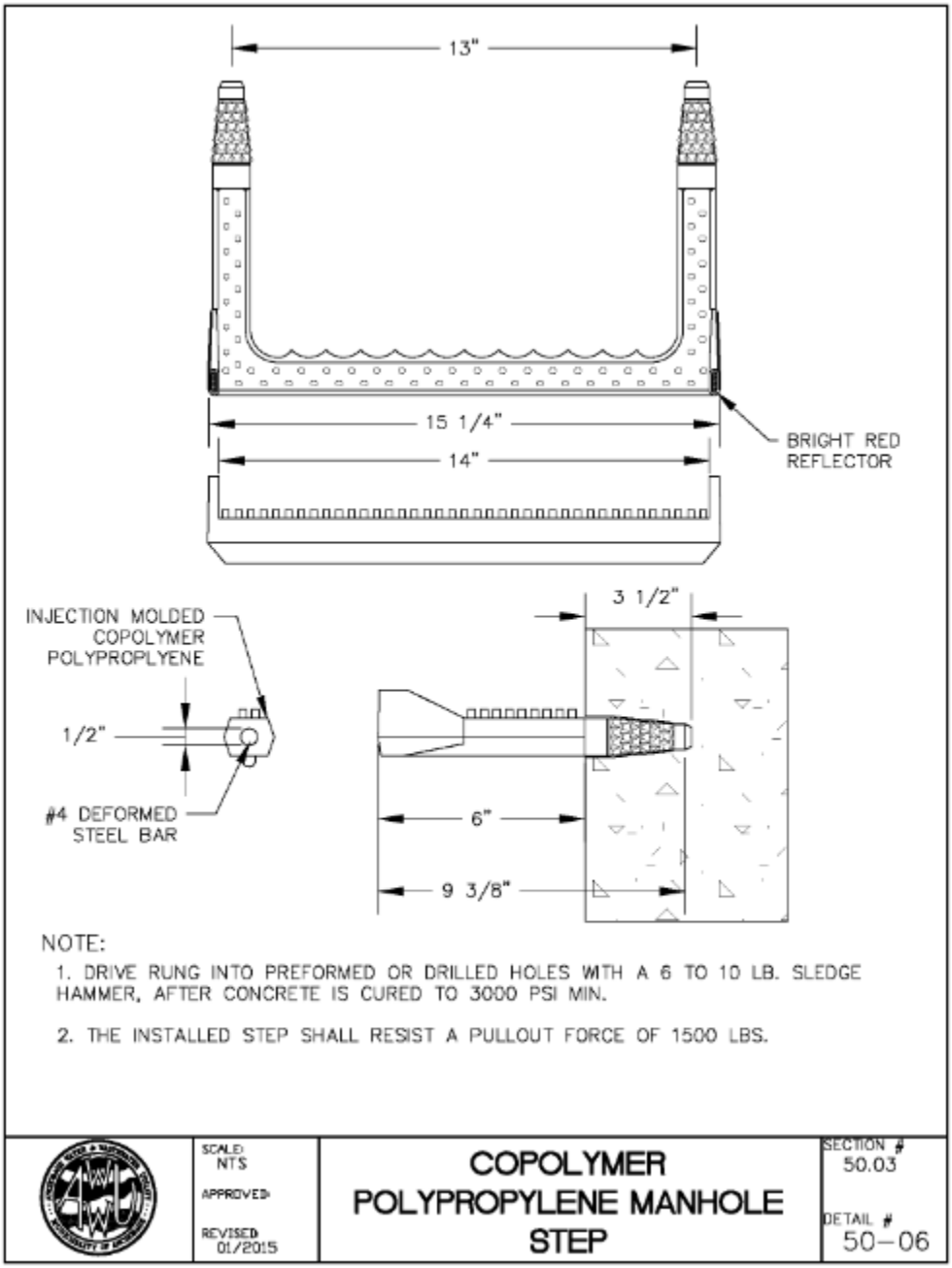


LOCATION	E-MIN	E-MAX	F MIN	F-MAX
LANDSCAPED AREAS, GRAVEL STREETS, AND ALLEY AREAS WHERE TRAVELED.			0"	2"
UNDEVELOPED AND SWAMPY AREAS.	24"	36"		
HIGHWAY R.O.W.S OUTSIDE TRAFFIC AREAS.	6"	10"		
PAVED STREETS.			1/2"	1"

SCALE: NTS
APPROVED:
REVISED: 1/2015

MANHOLE HEIGHTS

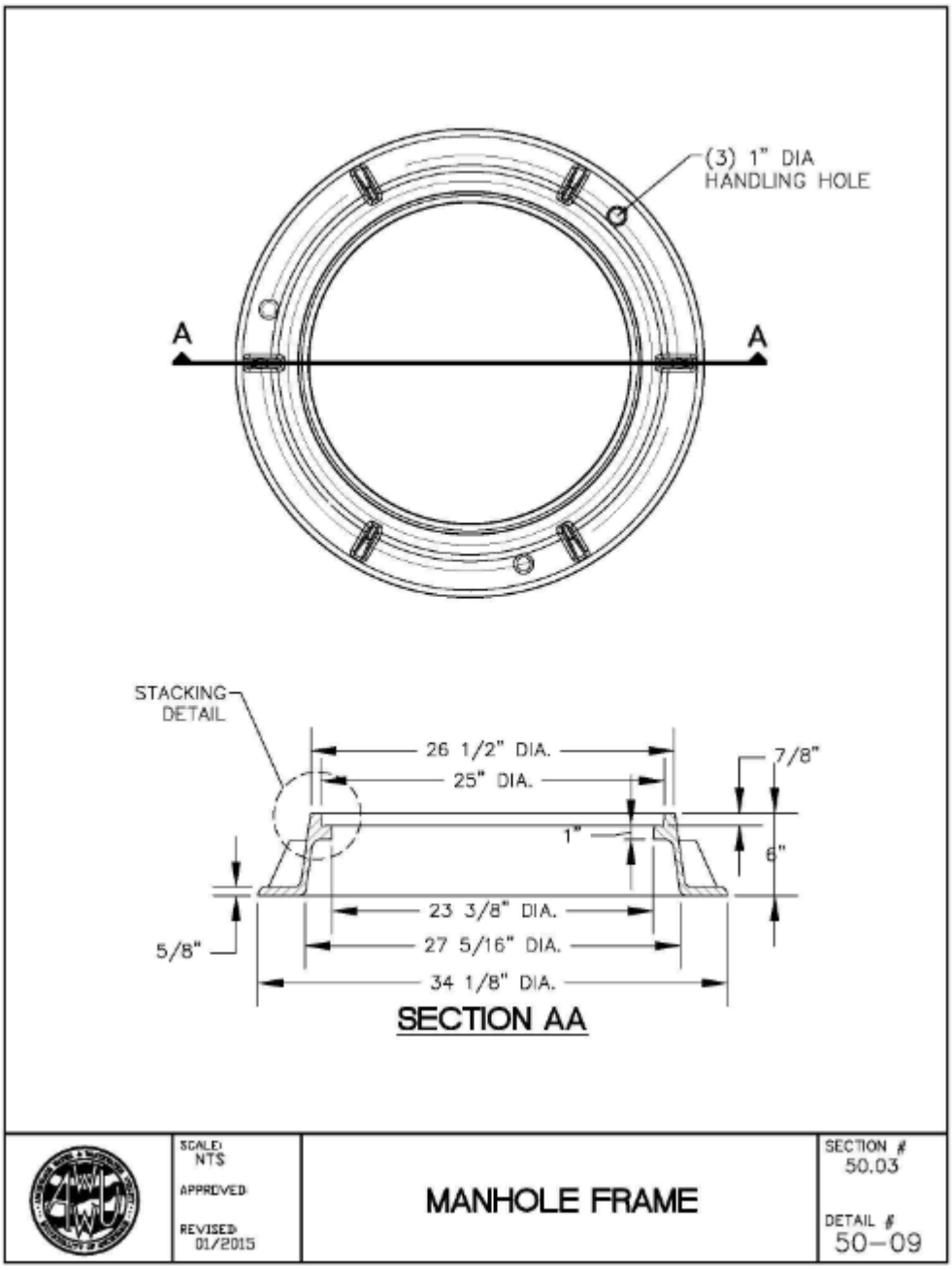
SECTION # 50.03
DETAIL # 50-05

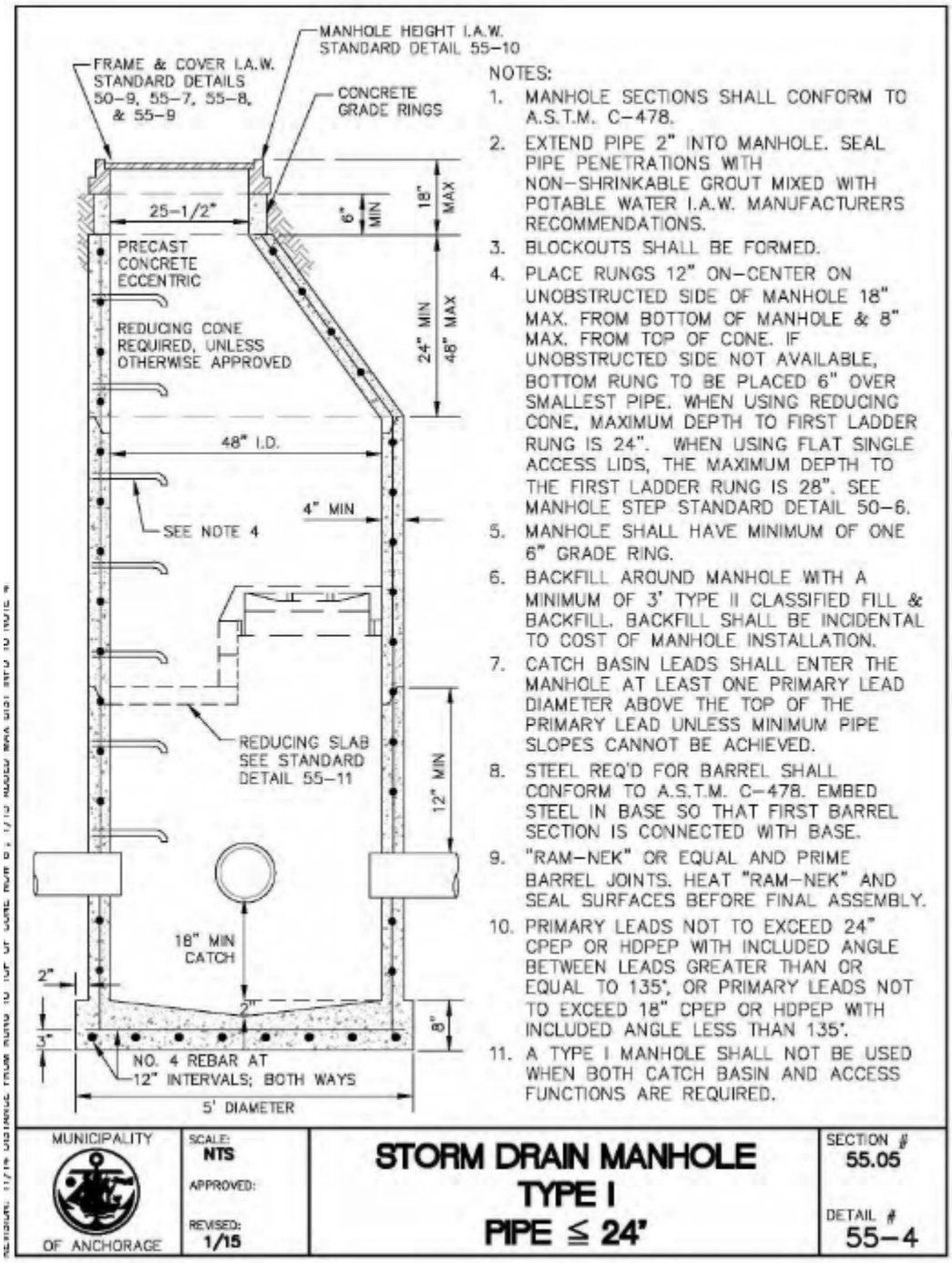


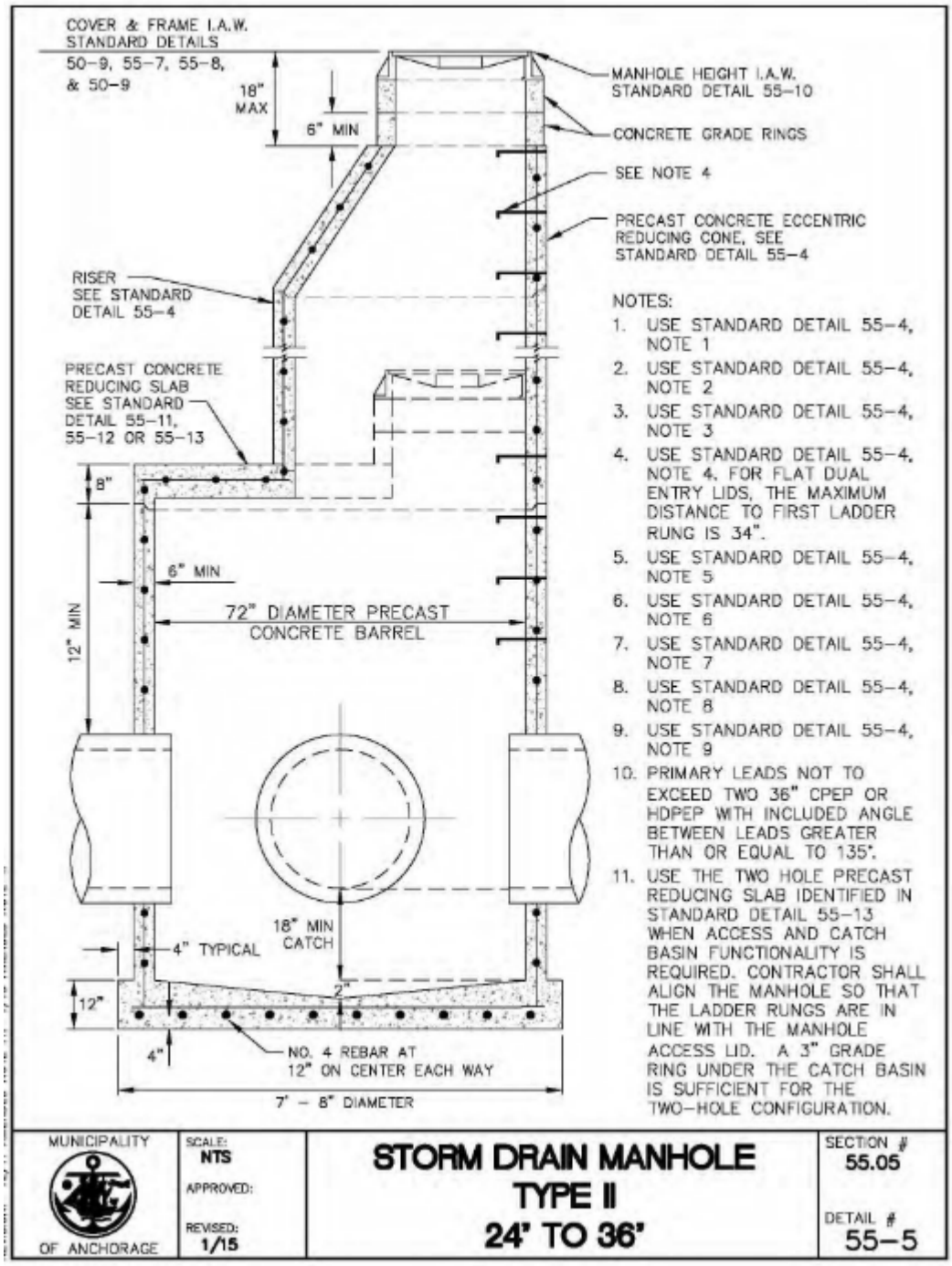
NOTE:

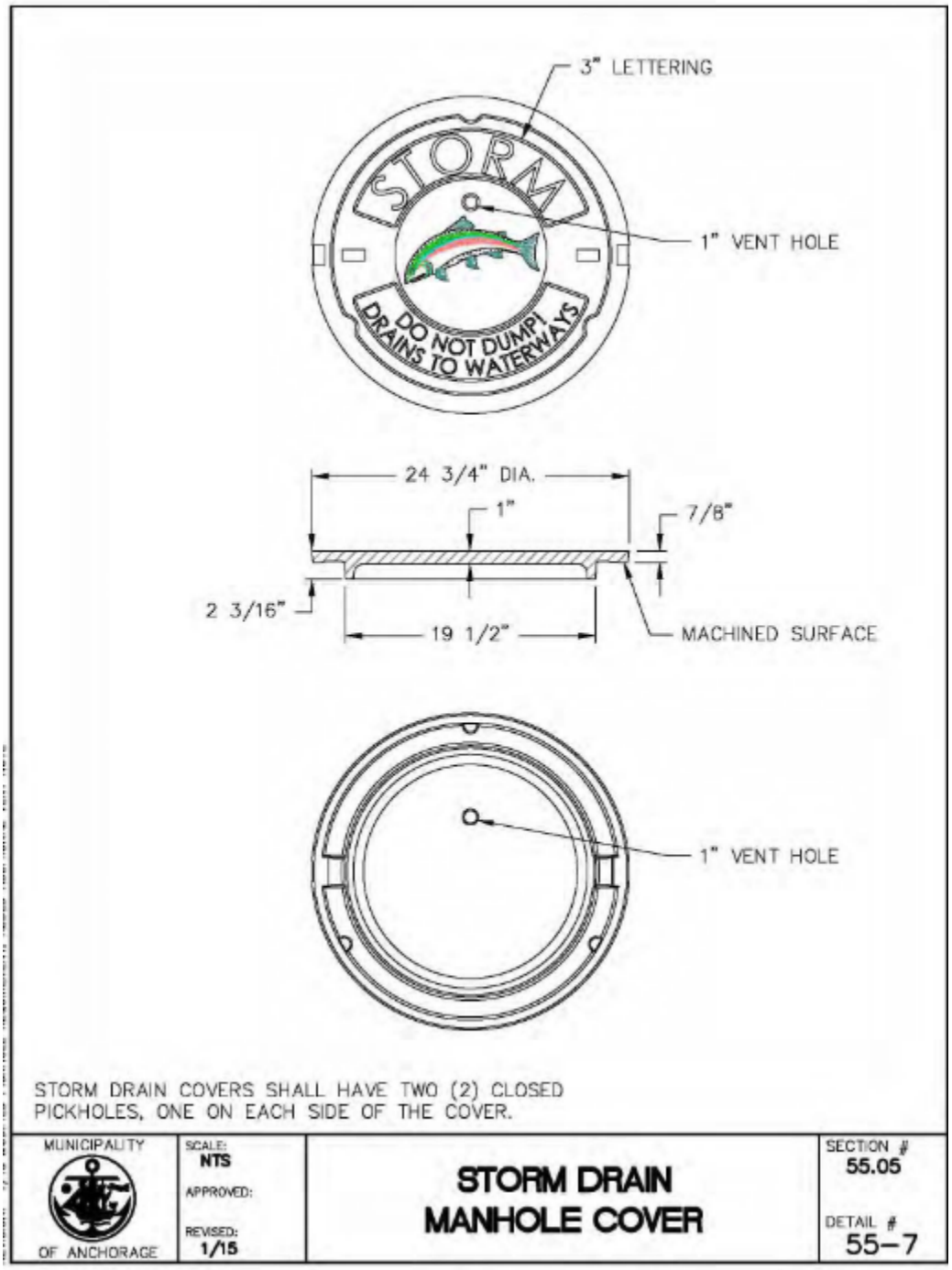
1. DRIVE RUNG INTO PREFORMED OR DRILLED HOLES WITH A 6 TO 10 LB. SLEDGE HAMMER, AFTER CONCRETE IS CURED TO 3000 PSI MIN.
2. THE INSTALLED STEP SHALL RESIST A PULLOUT FORCE OF 1500 LBS.

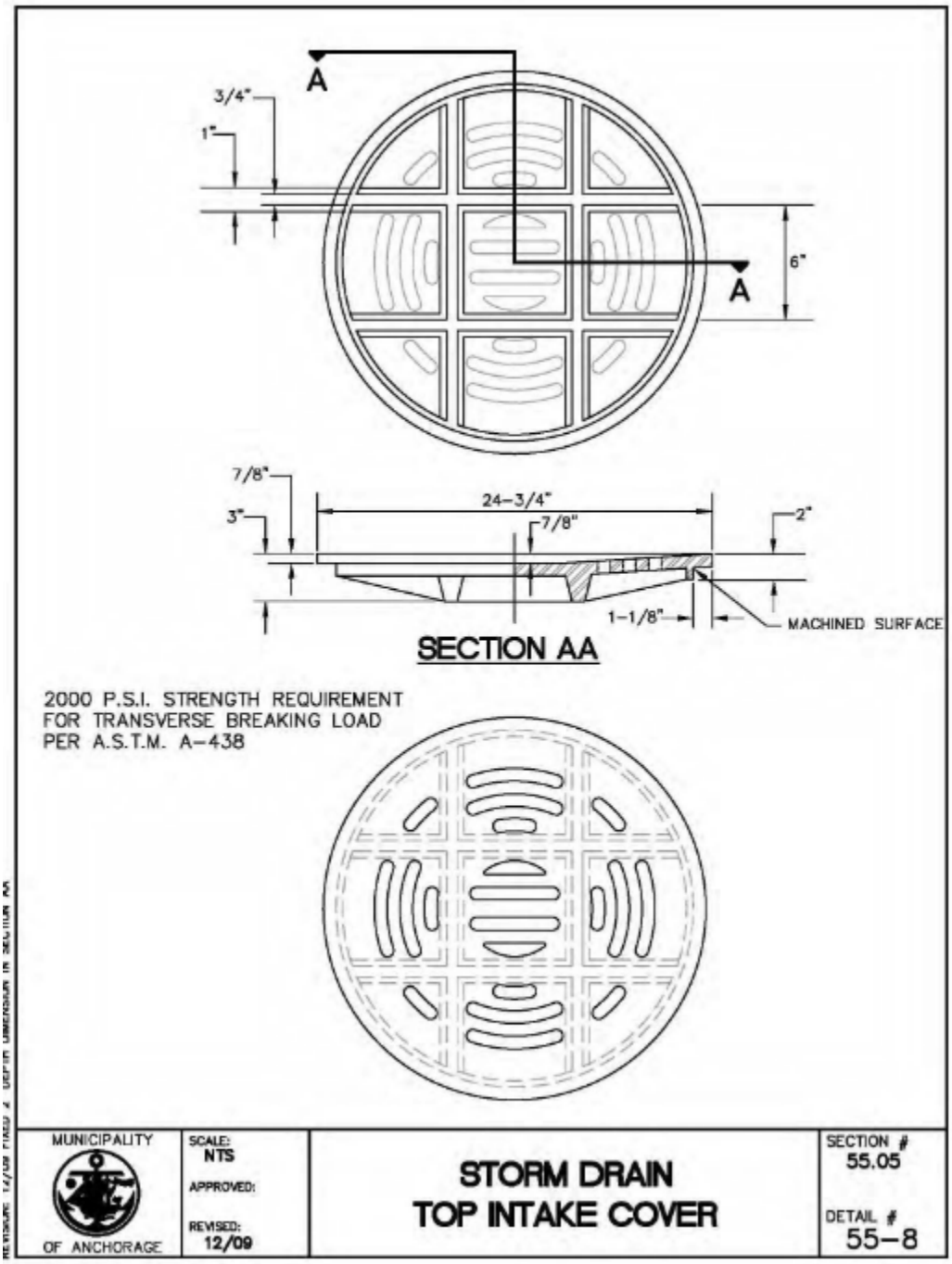
	SCALE: NTS APPROVED: REVISED: 01/2015	**COPOLYMER POLYPROPYLENE MANHOLE STEP**	SECTION # 50.03 DETAIL # 50–06

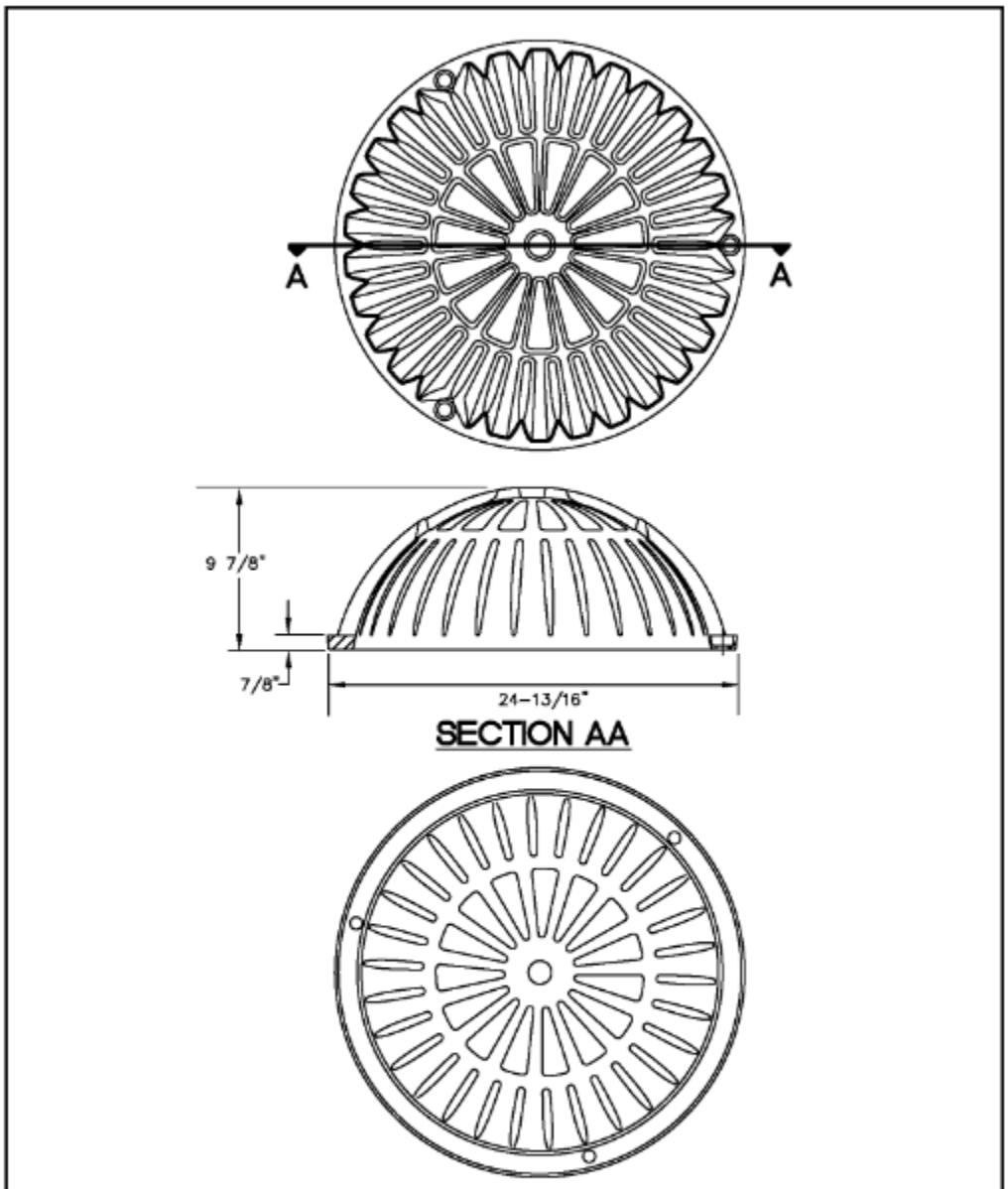

(3) 1" DIA
HANDLING HOLE
A
A
STACKING
DETAIL
26 1/2" DIA.
25" DIA.
7/8"
1"
6"
23 3/8" DIA.
27 5/16" DIA.
34 1/8" DIA.
5/8"
SECTION AA
SCALE:
NTS
APPROVED
REVISED
01/2015
MANHOLE FRAME
SECTION #
50.03
DETAIL #
50-09

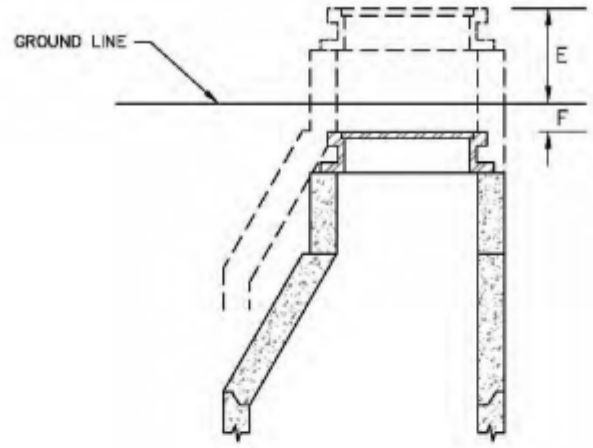

MANHOLE HEIGHT I.A.W. STANDARD DETAIL 55-10
FRAME & COVER I.A.W. STANDARD DETAILS 50-9, 55-7, 55-8, & 55-9
CONCRETE GRADE RINGS
25-1/2"
6" MIN
18" MAX
PRECAST CONCRETE ECCENTRIC
REDUCING CONE REQUIRED, UNLESS OTHERWISE APPROVED
24" MIN
48" MAX
48" I.D.
4" MIN
SEE NOTE 4
REDUCING SLAB SEE STANDARD DETAIL 55-11
12" MIN
18" MIN CATCH
2"
2"
3"
8"
NO. 4 REBAR AT 12" INTERVALS; BOTH WAYS
5' DIAMETER
NOTES:
1. MANHOLE SECTIONS SHALL CONFORM TO A.S.T.M. C-478.
2. EXTEND PIPE 2" INTO MANHOLE. SEAL PIPE PENETRATIONS WITH NON-SHRINKABLE GROUT MIXED WITH POTABLE WATER I.A.W. MANUFACTURERS RECOMMENDATIONS.
3. BLOCKOUTS SHALL BE FORMED.
4. PLACE RUNGS 12" ON-CENTER ON UNOBSTRUCTED SIDE OF MANHOLE 18" MAX. FROM BOTTOM OF MANHOLE & 8" MAX. FROM TOP OF CONE. IF UNOBSTRUCTED SIDE NOT AVAILABLE, BOTTOM RUNG TO BE PLACED 6" OVER SMALLEST PIPE. WHEN USING REDUCING CONE, MAXIMUM DEPTH TO FIRST LADDER RUNG IS 24". WHEN USING FLAT SINGLE ACCESS LIDS, THE MAXIMUM DEPTH TO THE FIRST LADDER RUNG IS 28". SEE MANHOLE STEP STANDARD DETAIL 50-6.
5. MANHOLE SHALL HAVE MINIMUM OF ONE 6" GRADE RING.
6. BACKFILL AROUND MANHOLE WITH A MINIMUM OF 3' TYPE II CLASSIFIED FILL & BACKFILL. BACKFILL SHALL BE INCIDENTAL TO COST OF MANHOLE INSTALLATION.
7. CATCH BASIN LEADS SHALL ENTER THE MANHOLE AT LEAST ONE PRIMARY LEAD DIAMETER ABOVE THE TOP OF THE PRIMARY LEAD UNLESS MINIMUM PIPE SLOPES CANNOT BE ACHIEVED.
8. STEEL REQ'D FOR BARREL SHALL CONFORM TO A.S.T.M. C-478. EMBED STEEL IN BASE SO THAT FIRST BARREL SECTION IS CONNECTED WITH BASE.
9. "RAM-NEK" OR EQUAL AND PRIME BARREL JOINTS. HEAT "RAM-NEK" AND SEAL SURFACES BEFORE FINAL ASSEMBLY.
10. PRIMARY LEADS NOT TO EXCEED 24" CPEP OR HDPEP WITH INCLUDED ANGLE BETWEEN LEADS GREATER THAN OR EQUAL TO 135°, OR PRIMARY LEADS NOT TO EXCEED 18" CPEP OR HDPEP WITH INCLUDED ANGLE LESS THAN 135°.
11. A TYPE I MANHOLE SHALL NOT BE USED WHEN BOTH CATCH BASIN AND ACCESS FUNCTIONS ARE REQUIRED.
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 1/15
STORM DRAIN MANHOLE TYPE I PIPE ≤ 24"
SECTION # 55.05
DETAIL # 55-4


COVER & FRAME I.A.W. STANDARD DETAILS 50-9, 55-7, 55-8, & 50-9
18" MAX
6" MIN
MANHOLE HEIGHT I.A.W. STANDARD DETAIL 55-10
CONCRETE GRADE RINGS
SEE NOTE 4
PRECAST CONCRETE ECCENTRIC REDUCING CONE, SEE STANDARD DETAIL 55-4
RISER SEE STANDARD DETAIL 55-4
PRECAST CONCRETE REDUCING SLAB SEE STANDARD DETAIL 55-11, 55-12 OR 55-13
8"
6" MIN
12" MIN
72" DIAMETER PRECAST CONCRETE BARREL
18" MIN CATCH
4" TYPICAL
2"
12"
4"
NO. 4 REBAR AT 12" ON CENTER EACH WAY
7' - 8" DIAMETER
NOTES:
1. USE STANDARD DETAIL 55-4, NOTE 1
2. USE STANDARD DETAIL 55-4, NOTE 2
3. USE STANDARD DETAIL 55-4, NOTE 3
4. USE STANDARD DETAIL 55-4, NOTE 4. FOR FLAT DUAL ENTRY LIDS, THE MAXIMUM DISTANCE TO FIRST LADDER RUNG IS 34".
5. USE STANDARD DETAIL 55-4, NOTE 5
6. USE STANDARD DETAIL 55-4, NOTE 6
7. USE STANDARD DETAIL 55-4, NOTE 7
8. USE STANDARD DETAIL 55-4, NOTE 8
9. USE STANDARD DETAIL 55-4, NOTE 9
10. PRIMARY LEADS NOT TO EXCEED TWO 36" CPEP OR HDPEP WITH INCLUDED ANGLE BETWEEN LEADS GREATER THAN OR EQUAL TO 135°.
11. USE THE TWO HOLE PRECAST REDUCING SLAB IDENTIFIED IN STANDARD DETAIL 55-13 WHEN ACCESS AND CATCH BASIN FUNCTIONALITY IS REQUIRED. CONTRACTOR SHALL ALIGN THE MANHOLE SO THAT THE LADDER RUNGS ARE IN LINE WITH THE MANHOLE ACCESS LID. A 3" GRADE RING UNDER THE CATCH BASIN IS SUFFICIENT FOR THE TWO-HOLE CONFIGURATION.
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 1/15
STORM DRAIN MANHOLE TYPE II 24" TO 36"
SECTION # 55.05
DETAIL # 55-5


3" LETTERING
STORM
1" VENT HOLE
DO NOT DUMP!
DRAINS TO WATERWAYS
24 3/4" DIA.
1"
7/8"
2 3/16"
19 1/2"
MACHINED SURFACE
1" VENT HOLE
STORM DRAIN COVERS SHALL HAVE TWO (2) CLOSED
PICKHOLES, ONE ON EACH SIDE OF THE COVER.
MUNICIPALITY
OF ANCHORAGE
SCALE:
NTS
APPROVED:
REVISED:
1/15
STORM DRAIN
MANHOLE COVER
SECTION #
55.05
DETAIL #
55-7

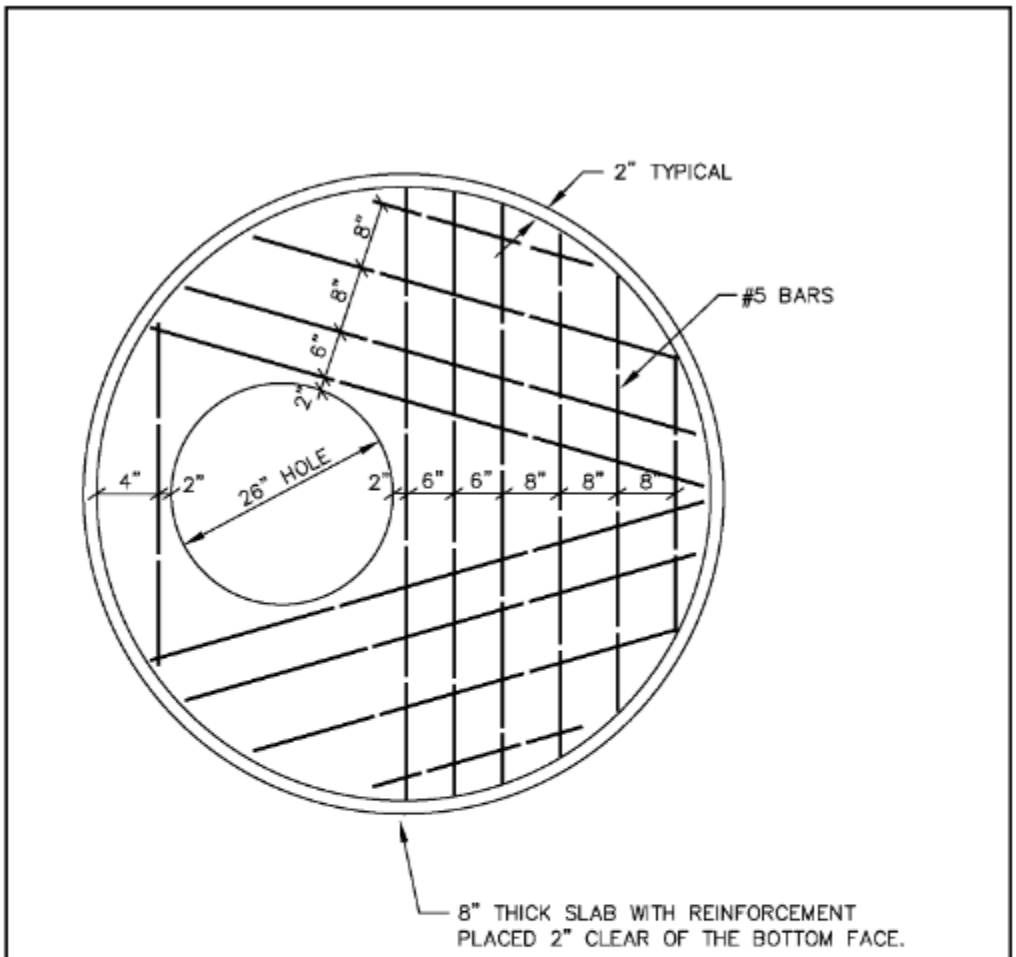

A
3/4"
1"
6"
A
7/8"
3"
24-3/4"
7/8"
2"
1-1/8"
MACHINED SURFACE
SECTION AA
2000 P.S.I. STRENGTH REQUIREMENT
FOR TRANSVERSE BREAKING LOAD
PER A.S.T.M. A-438
MUNICIPALITY
OF ANCHORAGE
SCALE:
NTS
APPROVED:
REVISED:
12/09
STORM DRAIN
TOP INTAKE COVER
SECTION #
55.05
DETAIL #
55-8


A
A
9 7/8"
7/8"
24-13/16"
SECTION AA
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 10/08
STORM DRAIN
BEEHIVE INTAKE COVER
SECTION # 55.05
DETAIL # 55-9

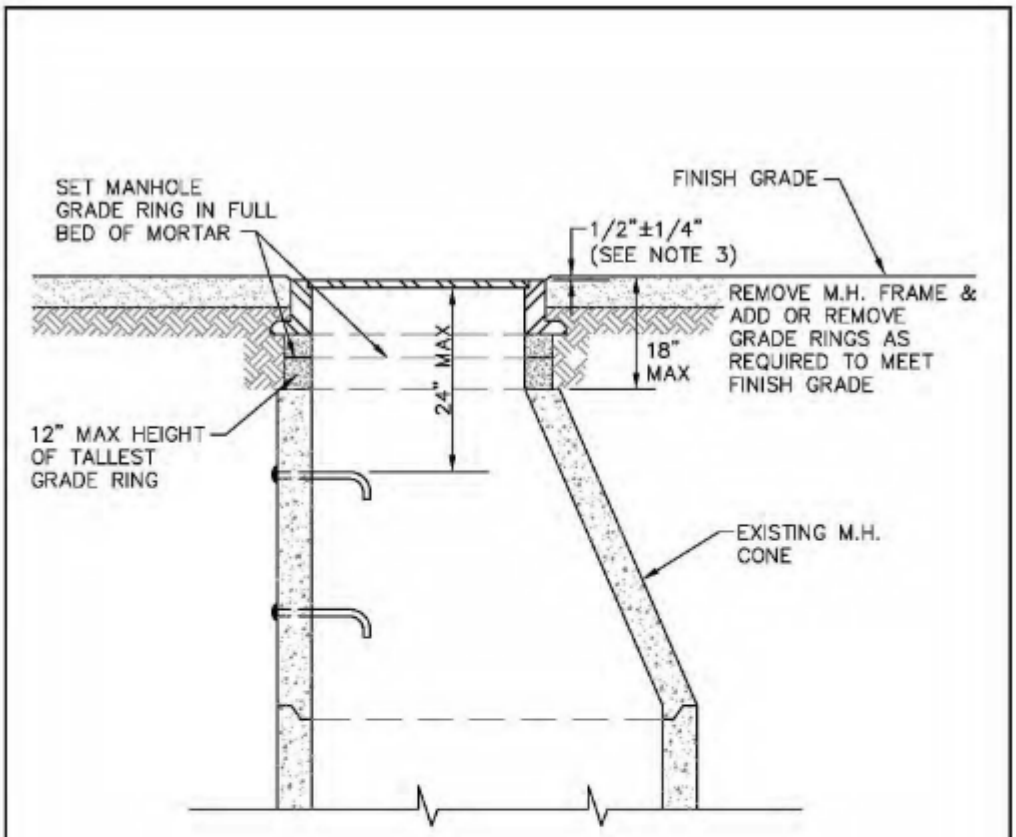


LOCATION	E	F
BACKYARDS, GRAVEL STREETS, AND ALLEY AREAS WHERE TRAVELED.		6" TO 12"
UNDEVELOPED AND SWAMPY AREAS	24" MIN	
HIGHWAY R.O.W.'S OUTSIDE TRAFFIC AREAS	6"	
PAVED STREETS (FEATHER PAVEMENT AT EDGE TO SMOOTH TRANSITION)		1/2"±1/4"

MUNICIPALITY OF ANCHORAGE	SCALE: NTS APPROVED: REVISED: 10/08	MANHOLE HEIGHTS	SECTION # 55.05 DETAIL # 55–10



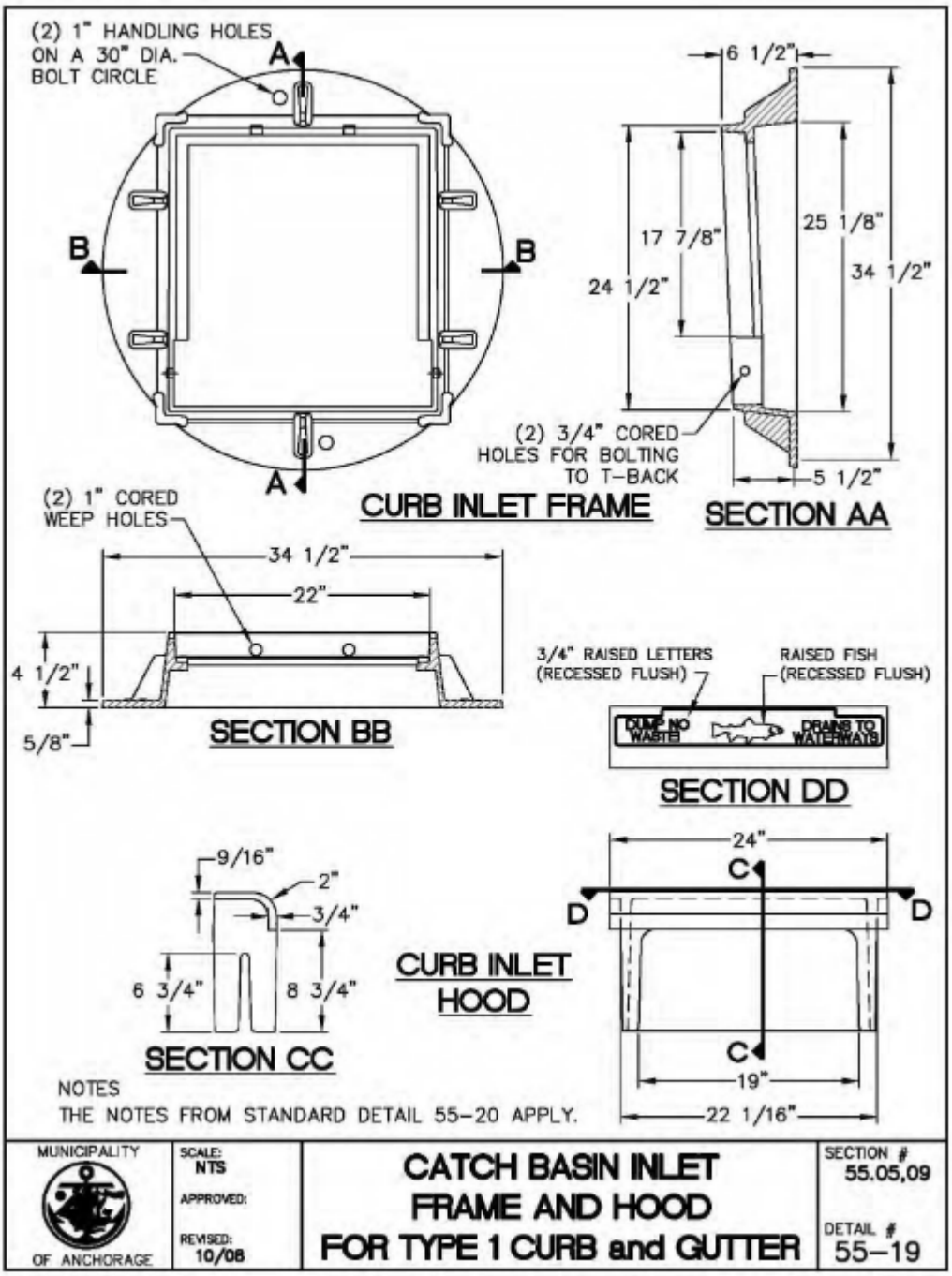
MUNICIPALITY OF ANCHORAGE	SCALE: NTS APPROVED: REVISED: 11/08	PRECAST CONCRETE REDUCING SLAB (72" OR 48" TO 26")	SECTION # 55.05 DETAIL # 55–11

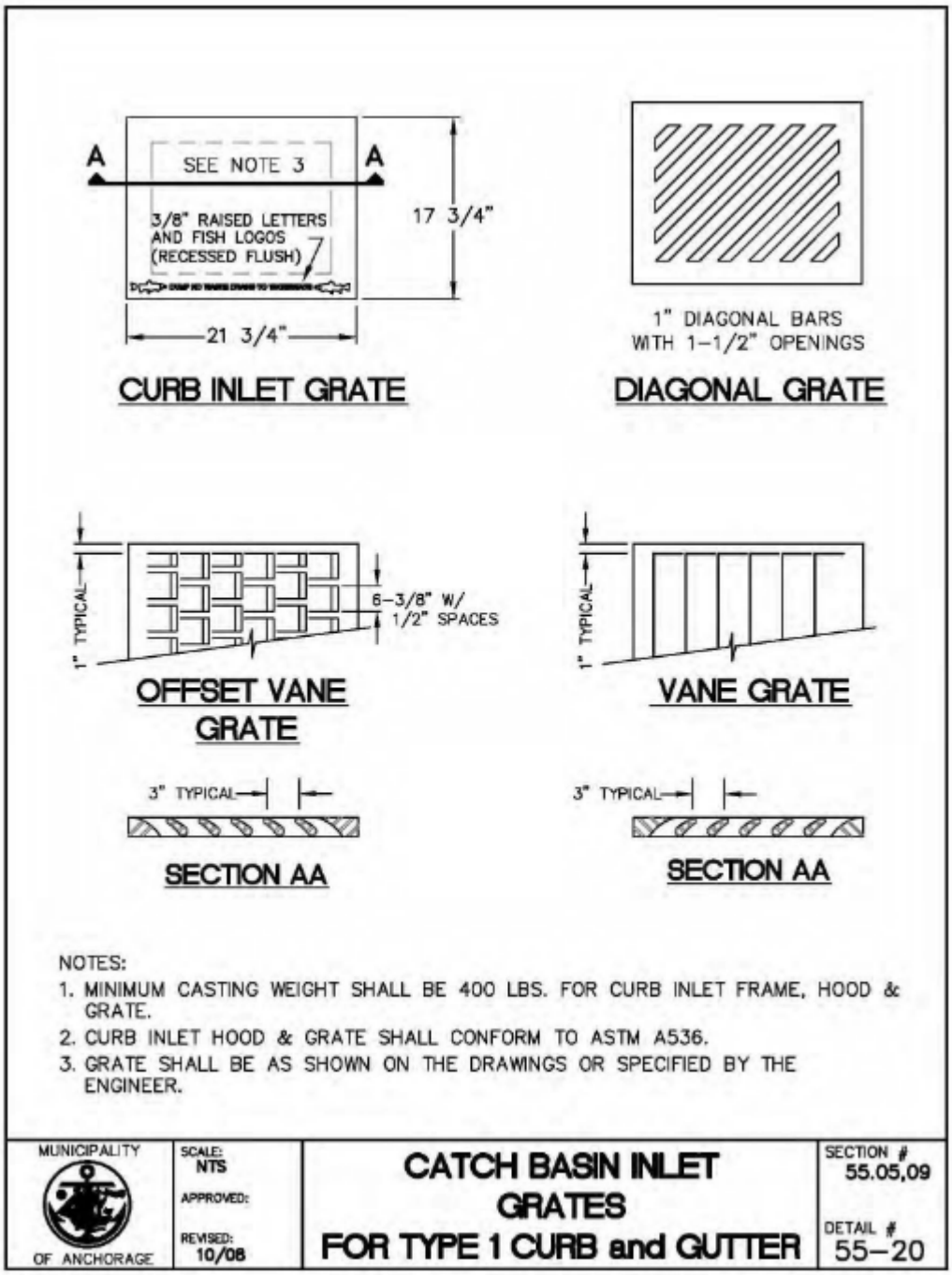


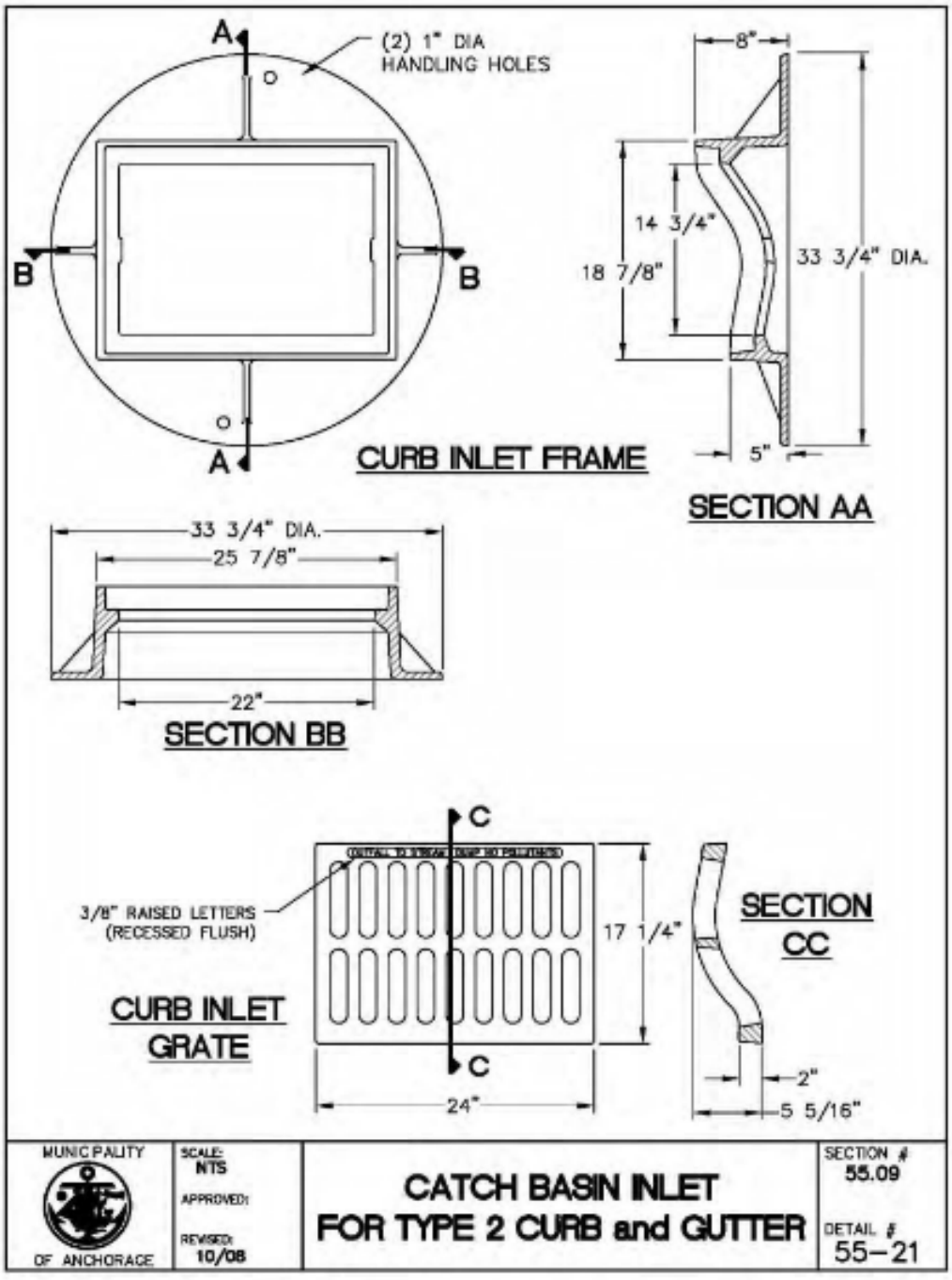
NOTES:

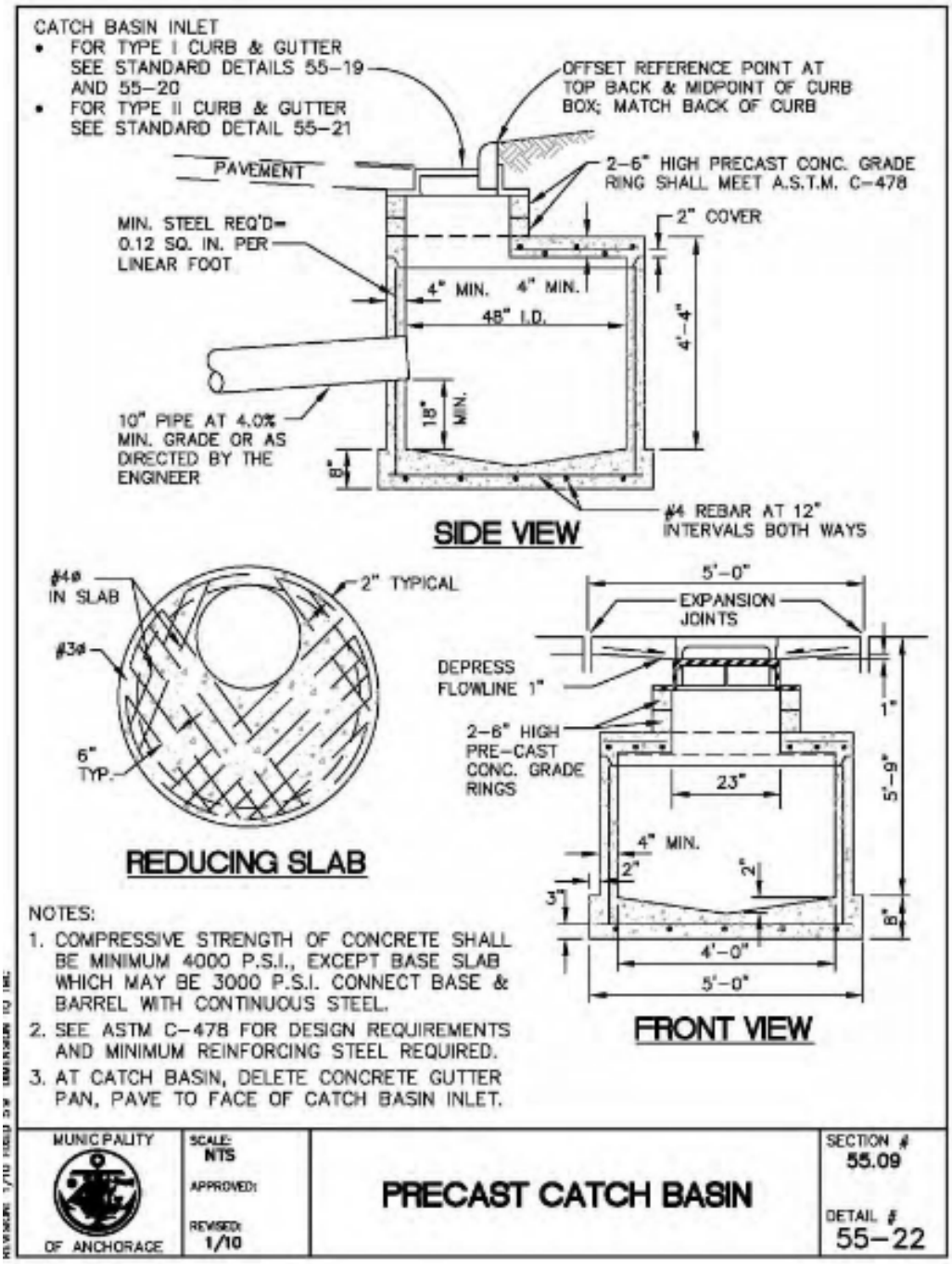
1. REFER TO ASTM DESIGNATION C-478 FOR DESIGN AND STRENGTH REQUIREMENTS.
2. WHEN AN ADJUSTMENT OF GREATER THAN 12" IN GRADE RINGS IS REQUIRED, ADJUST CONE I.A.W. STANDARD DETAIL 55-17 RATHER THAN GRADE RINGS.
3. IF NECESSARY, SHIM MANHOLE FRAME WITH STUD WASHERS, TO ADJUST FRAME TO A DEPTH OF 1/2"±1/4" BELOW SURFACE OF PAVEMENT. FEATHER EDGE OF PAVEMENT TO SMOOTH TRANSITION. WHEN SHIMS ARE USED, SET MANHOLE FRAME IN A FULL BED OF MORTAR WITH SHIMS.

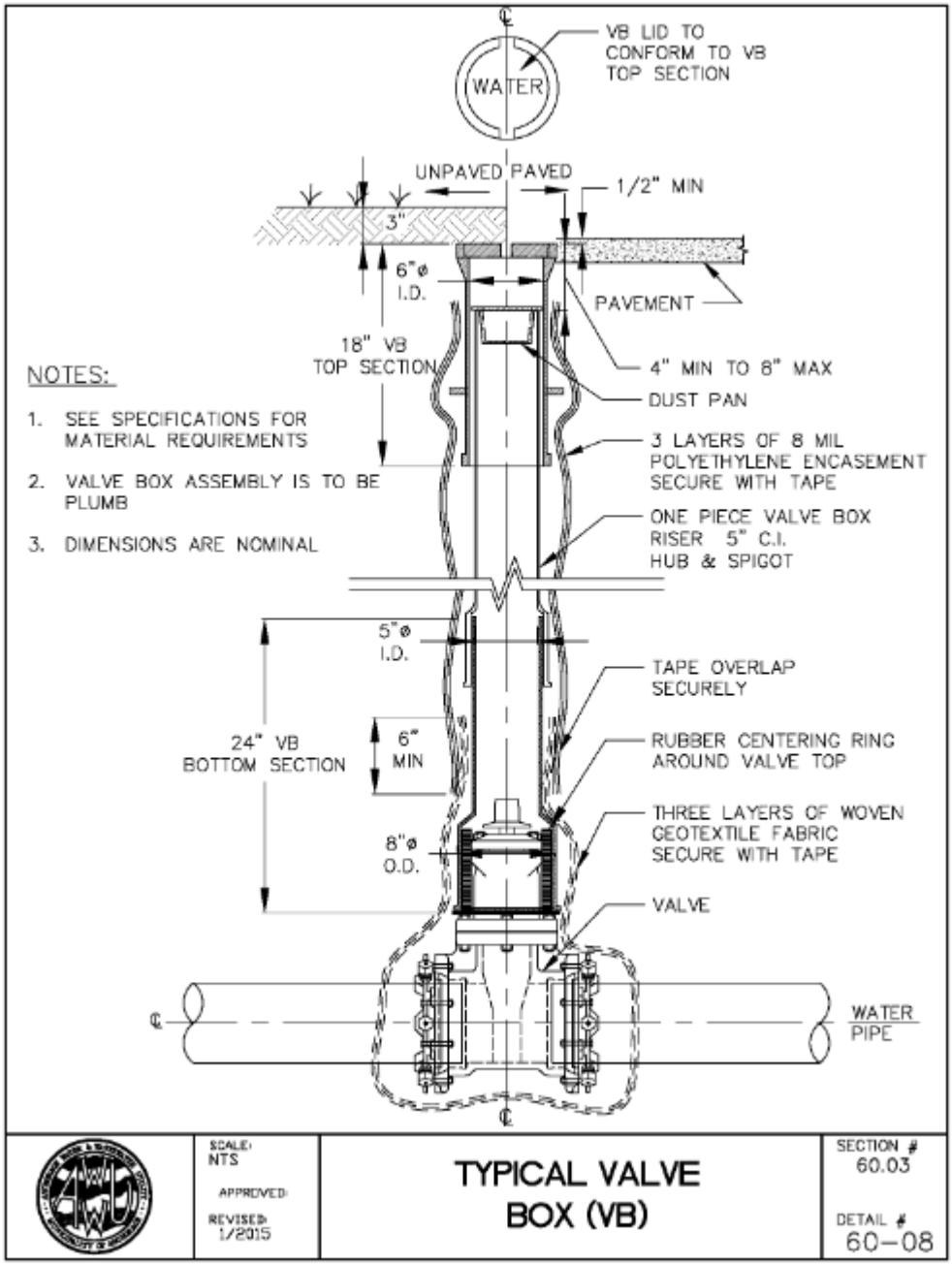
MUNICIPALITY OF ANCHORAGE	SCALE: NTS APPROVED: REVISED: 10/08	MANHOLE RING ADJUSTMENT	SECTION # 55.08 DETAIL # 55-18

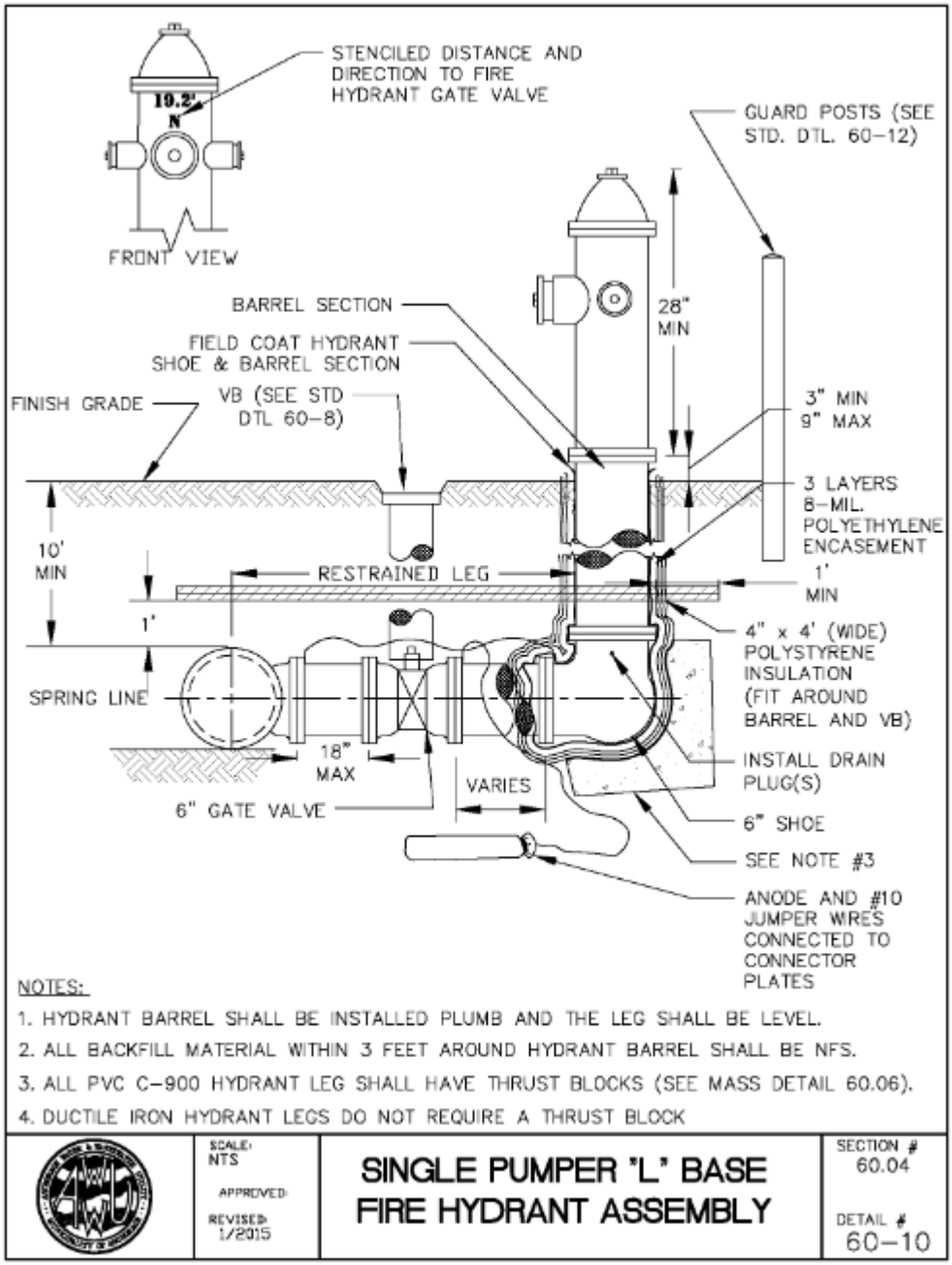

(2) 1" HANDLING HOLES ON A 30" DIA. BOLT CIRCLE
A
B
B
A
CURB INLET FRAME
6 1/2"
17 7/8"
25 1/8"
24 1/2"
34 1/2"
(2) 3/4" CORED HOLES FOR BOLTING TO T-BACK
5 1/2"
SECTION AA
(2) 1" CORED WEEP HOLES
34 1/2"
22"
4 1/2"
5/8"
SECTION BB
3/4" RAISED LETTERS (RECESSED FLUSH)
RAISED FISH (RECESSED FLUSH)
DUMP NO WASTE
DRAINS TO WATERWAYS
SECTION DD
9/16"
2"
3/4"
6 3/4"
8 3/4"
SECTION CC
CURB INLET HOOD
24"
C
D
D
C
19"
22 1/16"
NOTES
THE NOTES FROM STANDARD DETAIL 55-20 APPLY.
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 10/08
CATCH BASIN INLET FRAME AND HOOD FOR TYPE 1 CURB and GUTTER
SECTION # 55.05.09
DETAIL # 55-19


A
SEE NOTE 3
A
3/8" RAISED LETTERS
AND FISH LOGOS
(RECESSED FLUSH)
17 3/4"
21 3/4"
CURB INLET GRATE
1" DIAGONAL BARS
WITH 1-1/2" OPENINGS
DIAGONAL GRATE
1" TYPICAL
6-3/8" W/
1/2" SPACES
OFFSET VANE
GRATE
1" TYPICAL
VANE GRATE
3" TYPICAL
SECTION AA
3" TYPICAL
SECTION AA
NOTES:
1. MINIMUM CASTING WEIGHT SHALL BE 400 LBS. FOR CURB INLET FRAME, HOOD & GRATE.
2. CURB INLET HOOD & GRATE SHALL CONFORM TO ASTM A536.
3. GRATE SHALL BE AS SHOWN ON THE DRAWINGS OR SPECIFIED BY THE ENGINEER.
MUNICIPALITY
OF ANCHORAGE
SCALE:
NTS
APPROVED:
REVISED:
10/08
CATCH BASIN INLET
GRATES
FOR TYPE 1 CURB and GUTTER
SECTION #
55.05,09
DETAIL #
55-20


A
(2) 1" DIA
HANDLING HOLES
B
B
A
CURB INLET FRAME
8"
14 3/4"
18 7/8"
33 3/4" DIA.
5"
SECTION AA
33 3/4" DIA.
25 7/8"
22"
SECTION BB
C
3/8" RAISED LETTERS
(RECESSED FLUSH)
17 1/4"
CURB INLET
GRATE
C
24"
SECTION
CC
2"
5 5/16"
MUNICIPALITY
OF ANCHORAGE
SCALE:
NTS
APPROVED:
REVISED:
10/08
CATCH BASIN INLET
FOR TYPE 2 CURB and GUTTER
SECTION #
55.09
DETAIL #
55-21


CATCH BASIN INLET
• FOR TYPE I CURB & GUTTER SEE STANDARD DETAILS 55-19 AND 55-20
• FOR TYPE II CURB & GUTTER SEE STANDARD DETAIL 55-21
OFFSET REFERENCE POINT AT TOP BACK & MIDPOINT OF CURB BOX; MATCH BACK OF CURB
PAVEMENT
2-6" HIGH PRECAST CONC. GRADE RING SHALL MEET A.S.T.M. C-478
2" COVER
MIN. STEEL REQ'D= 0.12 SQ. IN. PER LINEAR FOOT
4" MIN.
4" MIN.
48" I.D.
4'-4"
18" MIN.
10" PIPE AT 4.0% MIN. GRADE OR AS DIRECTED BY THE ENGINEER
8"
#4 REBAR AT 12" INTERVALS BOTH WAYS
SIDE VIEW
#4ø IN SLAB
#3ø
6" TYP.
2" TYPICAL
REDUCING SLAB
5'-0"
EXPANSION JOINTS
DEPRESS FLOWLINE 1"
2-6" HIGH PRE-CAST CONC. GRADE RINGS
1"
5'-9"
23"
4" MIN.
2"
2"
3"
8"
4'-0"
5'-0"
FRONT VIEW
NOTES:
1. COMPRESSIVE STRENGTH OF CONCRETE SHALL BE MINIMUM 4000 P.S.I., EXCEPT BASE SLAB WHICH MAY BE 3000 P.S.I. CONNECT BASE & BARREL WITH CONTINUOUS STEEL.
2. SEE ASTM C-478 FOR DESIGN REQUIREMENTS AND MINIMUM REINFORCING STEEL REQUIRED.
3. AT CATCH BASIN, DELETE CONCRETE GUTTER PAN, PAVE TO FACE OF CATCH BASIN INLET.
MUNICIPALITY OF ANCHORAGE
SCALE: NTS
APPROVED:
REVISED: 1/10
PRECAST CATCH BASIN
SECTION # 55.09
DETAIL # 55-22

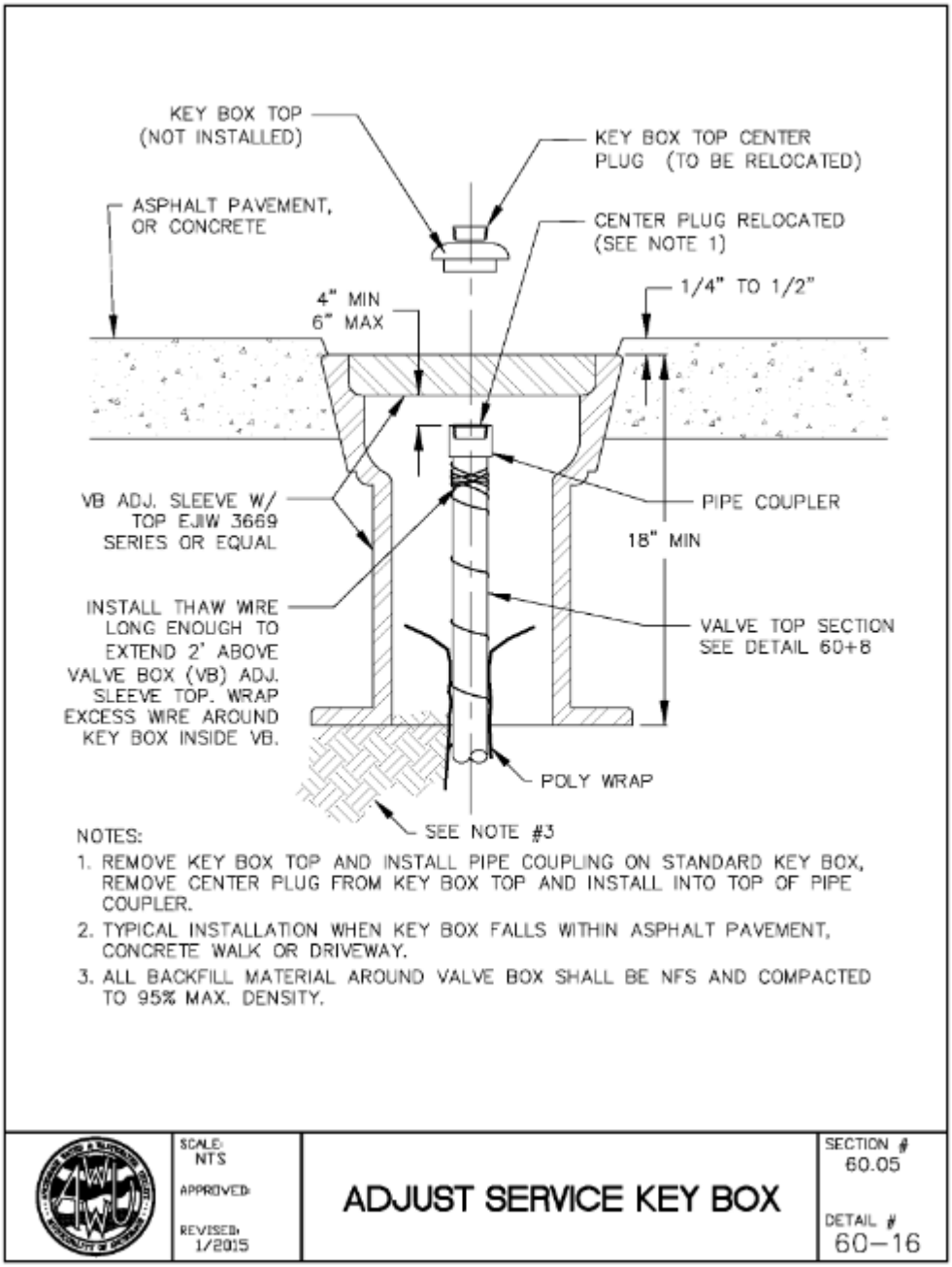

VB LID TO CONFORM TO VB TOP SECTION
WATER
UNPAVED PAVED
1/2" MIN
3"
6"ø I.D.
PAVEMENT
18" VB TOP SECTION
4" MIN TO 8" MAX
DUST PAN
NOTES:
1. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS
2. VALVE BOX ASSEMBLY IS TO BE PLUMB
3. DIMENSIONS ARE NOMINAL
3 LAYERS OF 8 MIL POLYETHYLENE ENCASEMENT SECURE WITH TAPE
ONE PIECE VALVE BOX RISER 5" C.I. HUB & SPIGOT
5"ø I.D.
TAPE OVERLAP SECURELY
24" VB BOTTOM SECTION
6" MIN
RUBBER CENTERING RING AROUND VALVE TOP
THREE LAYERS OF WOVEN GEOTEXTILE FABRIC SECURE WITH TAPE
8"ø O.D.
VALVE
WATER PIPE
SCALE: NTS
APPROVED:
REVISED 1/2015
TYPICAL VALVE BOX (VB)
SECTION # 60.03
DETAIL # 60-08



NOTES:

1. HYDRANT BARREL SHALL BE INSTALLED PLUMB AND THE LEG SHALL BE LEVEL.
2. ALL BACKFILL MATERIAL WITHIN 3 FEET AROUND HYDRANT BARREL SHALL BE NFS.
3. ALL PVC C-900 HYDRANT LEG SHALL HAVE THRUST BLOCKS (SEE MASS DETAIL 60.06).
4. DUCTILE IRON HYDRANT LEGS DO NOT REQUIRE A THRUST BLOCK

	SCALE: NTS APPROVED: REVISED: 1/2015	SINGLE PUMPER "L" BASE FIRE HYDRANT ASSEMBLY	SECTION # 60.04 DETAIL # 60-10



END OF SECTION

Community Workforce Agreement

for the

_____ (Project name)

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PREAMBLE

The Anchorage School District (Public Entity/Owner, hereinafter referred to as "Owner" or "District"), is committed to securing the best value for public construction funds, and to putting such funds to work for the benefit and improved general welfare of residents of the community, and in particular, community members in focus categories such as military veterans, members of the National Guard and reservists; adults skilled in the construction trades; people of color; women; District graduates, young people and unskilled adults, socially and economically disadvantaged members of the community; and individuals facing reentry into the community after leaving a State of Alaska correctional facility. The Building and Construction Trades Council of Southcentral Alaska (hereinafter, the "Council") is committed to preserving work traditionally performed by community members represented by the Council and its member organizations, and to creating employment opportunities for such individuals as well as for community members in the Owner's priority categories.

The Owner seeks to expand training and employment opportunities for District graduates, to gain ready access to a competent workforce for current as well as future projects, and to secure cost savings by employing skilled apprentices to work with more experienced workers on public construction projects. The Council seeks to participate in creating the workforce of the future, and to making such cost savings available to the Owner on present and future construction projects.

To these ends, the Council and its member organizations agree to provide the Owner, its contractors and subcontractors, with viable tools, including bona fide apprenticeship and training programs with proven track records of graduating skilled apprentices, and hiring and job referral systems designed to prioritize area resident and special applicant employment preferences as described above in Paragraph 1. The Owner agrees the interests of the community will be served by the utilization of these tools, and that the Owner can effectively achieve the goals stated herein by utilizing a Community Workforce Agreement (hereinafter the "CWA") to build projects constructed with public funds.

ARTICLE 1
PRODUCTIVITY

1.1 This CWA is intended to ensure that all construction work on the _____ (Public Project, hereinafter, the "Project") proceeds without interruption or delay, that all participants work cooperatively in accordance with the highest standards of excellence and professionalism, and that disputes are resolved in an effective, expeditious manner.

ARTICLE 2
FAIR CONTRACTING OPPORTUNITIES

2.1 This CWA is intended to provide access to fair and competitive work opportunities for all contractors, and subcontractors. The Owner or Contractor, as appropriate, has the right to select all qualified bidders or subcontractors to perform work on the Project subject only to the Letter of Assent requirement set forth in Article 8.

2.2 The Council and all signatory labor organizations shall work cooperatively with the Owner, Contractor and all subcontractors awarded work on the Project regardless of whether the Contractor or subcontractors have performed or are performing work on other projects under contract with the Council or any labor organization signatory to this CWA (hereinafter, “signatory labor organization”).

2.3 The Owner and/or the Project Contractor have the absolute right to select any qualified bidder for the award of contracts on this Project without reference to the existence or non-existence of any agreements between such bidder and any party to this Agreement; provided, however, only that such bidder is willing, ready and able to become a party to and comply with this Project Agreement, should it be designated the successful bidder.

ARTICLE 3
THE PARTIES

3.1 This CWA is entered into by Contractor selected by the Owner to be responsible for construction of the Project (hereinafter, the “Contractor”), for and on behalf of itself and its subcontractors of any tier, the Building and Construction Trades Council of South-Central Alaska (hereinafter, the “Council”) and all signatory labor organizations. The Owner, Contractor, all subcontractors, the Council and signatory labor organizations may be referred to individually as a "Party" and collectively as the “Parties.”

ARTICLE 4
TERM OF AGREEMENT

4.1 This CWA shall become effective on the ___day of _____, 20__ and shall continue in full force and effect until completion of all Covered Work. Termination of this CWA shall occur upon receipt by the Council of written notice from the Owner, of Project completion.

ARTICLE 5
CONSTRUCTION OF THE PROJECT

5.1 This CWA shall apply to all phases of construction of the Project, from site preparation, startup through clean-up, including rework, change orders and extensions of the Project, to completion certified in writing by the Owner. Construction of the Project will be undertaken pursuant to a contract between the Owner and the Contractor pursuant to contract documents executed between the Owner and the Contractor (hereinafter, the "Contract"). The Owner, at its sole option, may terminate, delay and/or suspend any or all portions of the Project at any time.

5.2 The Owner will implement this Article by including appropriate, binding provisions in the Contract and Solicitation documents establishing execution of and compliance with this CWA as conditions of the job award and construction of the Project.

ARTICLE 6
COVERED WORK AND SERVICES

6.1 This CWA shall apply to all activities engaged in or performed at the direction of the Contractor pursuant to the Contract, and by subcontractors awarded contracts to perform work on the Project (hereinafter, "Covered Work"). Covered work shall include all construction work traditionally performed by workers represented by the Council or members of the Council, including site preparation, dedicated off site lay down yard to the extent permitted by law, storage yard work, supply and delivery of concrete, and surveying. The site of construction is defined as _____ (hereinafter, the "Work Site") and shall refer to all locations at which the Contractor or subcontractors perform Covered Work.

6.2 This CWA applies only to covered work performed on the specific project Work Site listed above. It does not apply to, nor any rights of the parties under this agreement extended to, Contractors or sub-Contractors work on other projects outside the Covered Work of this agreement.

6.3 Nothing contained herein shall be construed to prohibit, restrict, or interfere with the performance of any other operation, work, or function which may occur at the Project site or be associated with the development of the Project.

6.4 This Agreement shall only be binding on the signatory parties hereto and shall not apply to their parents, affiliates, or subsidiaries.

ARTICLE 7
EXCLUDED WORK AND SERVICES

7.1 The following work is excluded from the scope of this CWA:

a. Non-manual work

b. Work performed by employees employed by the Owner.

c. Any work performed on, near, leading to, or into the Project Site by State, County, City or other governmental bodies, their contractors, or by public or private utilities or their contractors.

d. On and off-site maintenance of leased equipment and on-site supervision of such work.

e. Required equipment warranty work, and the onsite supervision of such work.

f. Startup, commissioning, specialty testing or inspections done by the Owner, Contractor or Subcontractors, unless such work is traditionally performed by employees represented by the Council or its members, in which case it is not excluded.

g. Off-site manufacture of materials, equipment, or machinery; the repair, maintenance, assembly, painting, handling or fabrication of components; or, work involved in deliveries to and from the Work Site; however, when subcontracting for prefabrication of materials to be installed on the Project, such prefabrication shall be subcontracted to fabricators who pay their employees engaged in such fabrication not less than the appropriate Alaska prevailing wage for comparable fabrication, as set by Alaska Statute Title 36, Public Contracts.

h. Furniture, fixture and equipment installation and other work performed after the Contractor and Subcontractors have completed construction work and or after the Contract completion date.

i. Any work within the historic jurisdiction of the Outside Construction Branch of the International Brotherhood of Electrical Workers Local Union 1547.

ARTICLE 8
COMPLIANCE WITH AGREEMENT

8.1 All Covered Work will be contracted only to the Contractor and those subcontractors who agree to become and remain signatory to this CWA for the duration of the Project. The Contractor and all subcontractors shall fulfill this commitment by executing a Letter of Assent (Attachment 1) prior to commencing Covered Work. A signed copy of the Letter of Assent shall be transmitted immediately upon execution to the President of the Council as condition of the dispatch of employees to the Work Site. The Contractor shall monitor and enforce compliance with this CWA by all subcontractors. The Council shall monitor compliance with this CWA of its member organizations.

8.2 The Project Contractor agrees that neither it nor any of its contractors or subcontractors will subcontract any Covered Work to be done on the Project except to a person, firm or corporation who is or agrees to become party to this Agreement. Any contractor or subcontractor working on the Project shall, as a condition to working on said Project, become signatory to and perform all work under the terms of this Agreement.

8.3 Audit rights contained in any collective bargaining agreement with the affected signatory labor organization that predominantly covers work associated with this CWA, shall be limited to the audit of the Contractor’s or subcontractor’s payroll records for non-exempt personnel assigned to this Project only.

ARTICLE 9
MANAGEMENT RIGHTS

9.1 The Contractor and the Contractor's subcontractors shall have full authority to manage their business operations, including but not limited to the authority to determine the number of workers and craft supervisory personnel, and their qualifications. The Contractor and its subcontractors also shall have full authority to direct the work force, hire, promote, transfer, lay-off, discipline or discharge for just cause, select foremen and general foremen, assign and schedule work, including overtime work and determine when it will be worked and the number and identity of employees to be engaged in such work. Project work rules are subject to the review by the Project Administrative Committee (hereinafter, the “PAC”) as described in Article 12.

9.2 There shall be no limitation or restriction on the Owner’s, Contractor’s or subcontractor’s choice of materials or design; or, regardless of source or location, on the full use, installation and utilization of equipment, machinery, package units, pre-casts, prefabricated, pre-finished, or pre-assembled materials, tools, or other labor-saving device. However, when subcontracting for prefabrication of materials for field installation on the Project, such prefabrication shall be subcontracted to fabricators who pay their employees engaged in such fabrication not less than the appropriate Alaska prevailing wage for comparable fabrication, as set by Alaska Statute Title 36, Public Contracts.

9.3 The on-site installation or application of such items shall be performed by employees represented by members of the Council, or labor organizations signatory to this CWA, if such employees traditionally perform such work; provided that other personnel having special talents or qualifications may participate in the installation, check-off or testing of specialized or unusual equipment.

If there is any disagreement between the Contractor, a subcontractor and the Council or a labor organization signatory to this CWA concerning the manner of installation, check-off or testing of such equipment, the work shall proceed as directed by the Contractor, or subcontractor and the labor organization shall have the right to dispute the matter and have it resolved in accordance with Article 21 of this CWA.

9.4 The rights of management enumerated in this Article are limited only by the Contract and the terms of this CWA.

9.5 If all crafts involved agree prior to commencing the work, the Contractor or Sub-Contractor may develop a composite crew for the performance of a particular task. So long as the crew consists of the required crafts in such proportions as the respective work being performed, the traditional craft jurisdictional boundaries will be waived by all Signatory Labor Organizations.

ARTICLE 10
REPRESENTATION OF EMPLOYEES

10.1 The Owner, Contractor and all subcontractors agree to recognize the Council and the labor organizations signatory to this CWA as the sole and exclusive bargaining representatives of all employees performing Covered Work on the Project with respect to wages or rates of pay, benefits, hours of work and other terms and conditions of employment.

10.2 Each labor organization signatory to this CWA shall be entitled to designate one (1) official representative and one (1) official alternate (hereinafter, “Employee Representatives”) as primary points of contact. It is understood that, depending upon the availability of these individuals, or the unique nature of a problem or dispute, other Employee Representatives may be designated on a short-term basis. Written notice of the designation of Employee Representatives (Attachment 3) shall be provided to the appropriate Contractor or subcontractor. Employee Representatives shall fully comply with the visitor, safety and security rules established for the Project.

10.3 The Contractor and/or subcontractors shall provide the Council or the appropriate labor organization with written notification of its chain of command for resolving issues or workplace disputes.

10.4 Employee Representatives shall be given fair and reasonable access to the Work Site. Employees performing Covered Work shall be permitted to consult and confer privately with their Employee Representatives. Employee Representatives shall work cooperatively with the Contractor's or subcontractor's representatives to prevent the escalation of Work Site problems and to resolve them at the lowest possible level.

10.5 Each labor organization signatory to this CWA also shall have the right to designate at least one (1) working journeyman as Steward. Written notice of the designation shall be provided to the appropriate Contractor or subcontractor. The Steward shall be recognized as the labor organization's Work Site employee representative. One (1) Steward also may be designated for each shift, should multiple shifts be utilized. Stewards shall be permitted on the Work Site at all times. A Steward's activities may not unreasonably interfere with the Steward's work for the Contractor or its subcontractors, or the work of other employees.

10.6 All Stewards shall be qualified workers assigned to a crew. Under no circumstances shall there be a non-working Steward on the Project.

10.7 The Steward shall be paid at the applicable prevailing wage rate for the job classification in which he or she is employed. The Steward shall be given all rights specified in the specific labor organization's CBA that covers construction work.

10.8 The Contractor shall notify the appropriate labor organization in reasonable advance of disciplining or discharging a Steward for just cause and as soon as possible after it becomes known to the Contractor that a Steward has voluntarily quit. In the case of a bona fide reduction in force, forty-eight (48) hours prior written notice shall be given the appropriate labor organization prior to the lay-off of a Steward. The Steward shall be laid off last in his classification and shall not be subjected to discrimination or discharge on account of providing employee representation.

10.9 No worker shall be required to become a member of a Union, or pay any dues or dues equivalent, to be eligible for employment under this SCWA. If elected by the employee, the Employer and subcontractors will deduct working membership dues, assessments and non-membership fees in the amount designated by the applicable labor organization, provided the employee has executed and provided the Contractor or subcontractor with a written assignment authorizing the deduction. All workers covered by this CWA who are Union members and working for a Contractor signatory to a collective bargaining agreement other than this CWA, shall remain members in said Union during the project. It is understood and agreed that the Contractor or subcontractor assumes no liability in connection with dues or fee collection, except for ordinary diligence and care in transmittal of the monies to the appropriate labor organization. The Contractor or subcontractor will remit to the appropriate labor organization, the dues deducted on or before the fifteenth (15th) day of each month following the month of accrual.

ARTICLE 11
PRE-JOB COOPERATION

11.1 The Contractor, all known subcontractors of all tiers, and the Council shall participate in a Pre-Job conference to be held within thirty (30) days after the award date, but not later than two (2) weeks prior to the commencement of Covered Work, and on an as needed basis for projects with multiple phases or start dates. Once the remaining subcontractors are selected, they shall participate in a Pre-Job conference with the Contractor and affected signatory labor organization(s) prior to starting their work.

11.2 The Pre-Job conference shall be arranged by the CWA Administrator pursuant to Article 12. Information about the scope of work and specific and detailed craft assignments will be presented by the Contractor or subcontractor so that all Parties can review proposed work assignments prior to the start of construction. The Contractor and subcontractors shall present all information available regarding the start date and duration of the Project, estimated peak employment periods, and any other information necessary to help ensure a successful, dispute-free Project.

11.3 Each Subcontractor shall submit a Pre-Job package addressing the matters described in Sections 11.2 and 11.4, to the Contractor for distribution to the Council in reasonable advance of the Pre-Job conference. The Pre-Job package shall include the signed Letter of Assent (Attachment 1), and if applicable, a Core Employee list (Attachment 2) together with supporting documentation pursuant to Article 14.6.

11.4 If the Contractor or any subcontractors at any tier fails to attend the Pre-Job conference prior to the commencement of Covered Work, or to submit the required materials, it shall be considered a violation of this CWA. The Council or signatory labor organization shall immediately notify the Contractor or Owner, as appropriate, of the violation. The Owner shall require the Contractor or subcontractor to take corrective action regarding this matter immediately. No Party shall commence Covered Work until the obligations set forth in this Article are satisfied. If the Contractor is the offending Party, the matter will be resolved by the PAC pursuant to Article 12, upon submission of a written complaint (Attachment 4) to the CWA Administrator.

ARTICLE 12
PROJECT ADMINISTRATIVE COMMITTEE (PAC)

12.1 The parties to this CWA recognize the necessity of cooperation, the prevention and elimination of disputes, misunderstandings, or unfair practices on the part of any party that may arise after award of the Contract or subcontract, or during construction of the Project.

12.2 A Project Administrative Committee (PAC) shall be established consisting of regular members, as follows:

a. One (1) Contractor representative who shall be appointed by the Contractor and who shall have the authority to speak for and make decisions on the Contractor's behalf

   Contractor Representative shall be: _____

b. The President of the Council shall preside as the PAC Representative and have the authority to speak for and make decisions on behalf of the Council after consultation with the appropriate signatory labor organization(s) as necessary.

   Council Representative shall be: _____

c. One (1) CWA Administrator representing the Owner who shall be appointed by the Owner and who shall have the authority to make decisions on the Owner's behalf. The Owner through the CWA Administrator, or Designee, shall initiate and participate in all proceedings of the PAC. The CWA Administrator or Designee shall chair all meetings of the PAC.

   CWA Administrator shall be: _____

12.3 The PAC shall monitor the progress of the project and be empowered to address Project wide issues and disputes such as, Project policies and work rules; Project safety; compliance with hiring requirements, apprenticeship utilization; job progress; job interruptions; core employee hire and other significant issues as may affect the Project. Furthermore, the PAC shall track the implementation of apprenticeship, military, and other hiring preferences and report progress to the Owner. The PAC's dispute resolution process does not supersede, nor is it a substitute for the grievance process. Complaints involving alleged violations of this CWA, or any signatory labor organization's CBA that predominantly covers their work associated with this CWA shall be resolved in accordance with the grievance process set forth in Article 20.

12.4 A Party or Parties may submit a dispute to the PAC for resolution, by providing a written copy of the Party's complaint (Attachment 4) to the CWA Administrator and all affected Parties. The CWA Administrator shall call a meeting to address any such complaint promptly upon receipt of it. One (1) representative of the Contractor, one (1) representative of each subcontractor(s) involved in the complaint, one (1) representative of the Council, and one (1) representative of each labor organization(s) involved in the complaint will be permitted to attend and participate in the complaint's resolution. Affected parties will be given an opportunity to present facts and witness testimony relevant to the complaint in accordance with general standards of due process. Proceedings of the PAC shall be informal and strict application of the rules of evidence shall not be required. If resolution of the complaint by mutual agreement of the Parties is not possible, the PAC shall decide the matter by open ballot, majority vote.

12.5 No decision or resolution reached by the PAC shall supersede, alter, modify, amend, add to or subtract from this CWA, or any signatory labor organization's CBAs except as the latter is modified or superseded by this CWA. The PAC's resolution of a complaint shall be reduced to writing and shall be signed by all the Parties. Decisions of the PAC shall be final and shall not be subject to appeal.

12.6 The PAC shall meet as needed to review the overall operation of the CWA on the Project. In the case of emergencies, the PAC shall be convened by the CWA Administrator, within forty-eight (48) hours of a written request submitted by any Party. All Parties acknowledge the importance of attendance and active support of the PAC and shall participate in meetings of the PAC as one of their responsibilities on the Project.

12.7 To promote day to day Work Site continuity, cooperation and information exchange, the Contractor and Council shall have Labor Management meetings monthly. The Contractor may also require the participation of any/all subcontractors who are working, or soon to be working on the Project. At these monthly Labor Management meetings, the topics of discussion will include job status, schedule updates, future work assignments, letter of assents, worker needs, and any other issue or concern that will help achieve a harmonious work site.

ARTICLE 13
CONTINUITY OF OPERATIONS

13.1 During the term of this CWA there shall be no strikes, picketing, work stoppages, slowdowns, or other disruptive activity for any reason by the Council, its signatory labor organizations, or by any employee employed on the Project.

13.2 There shall be no lockout of employees by the Contractor or subcontractors. In the event of action in violation of this Article, the Contractor may suspend all or any affected portion of the Work.

13.3 Any employee who participates in or encourages behavior that interferes with the performance of Covered Work may be subject to disciplinary action, up to and including discharge.

ARTICLE 14
HIRING PROCEDURES

14.1 The Contractor and subcontractors agree to comply with and exclusively use the appropriate signatory labor organization's referral system. All referral systems will be operated by the signatory labor organizations in a nondiscriminatory manner, in full compliance with federal, state, and local laws. Registration on out of work lists, or job referrals shall not be affected positively or negatively by membership or non-membership

in a labor organization and shall be open to all those who meet the respective crafts requirements.

14.2 By Contractor or subcontractor request, the appropriate signatory labor organization shall, to the greatest extent possible, prioritize the dispatch of applicants who are residents of the communities surrounding Project Work Sites. At the request of the Contractor or subcontractor, the appropriate signatory labor organization also shall, to the greatest extent possible, prioritize the dispatch of applicants falling within the focus categories set forth in the Preamble.

14.3 The Contractor may reject any applicant referred by a signatory labor organization for any lawful, nondiscriminatory reason, in accordance with the applicable labor organization's hiring hall rules and regulations. A written explanation shall be provided to the affected labor organization within forty-eight (48) hours of the rejection.

14.4 In the event any signatory labor organizations are unable to fill a request for referrals within forty-eight (48) hours after the request is made by the Contractor or a subcontractor (except for Saturdays, Sundays, and holidays), the Contractor or subcontractor may employ applicants from any other available source. The Contractor or subcontractor shall provide the appropriate labor organization with the name, address and phone number, or other viable contact information, in writing, for every applicant hired from other sources, and shall refer such applicants to the appropriate labor organization for dispatch to the Project before such applicant begins working on the Project. All successful applicants, whether referred by a signatory labor organization, or by another source, shall satisfy their financial obligations in accordance with the signatory labor organization hiring hall rules.

14.5 To ensure that the Contractor and all subcontractors have an opportunity to employ ("Core") employees on the Project, the Parties agree that in those situations where the successful Contractor or subcontractor is not a party to a current collective bargaining agreement with the affected signatory labor organization, the Contractor, or subcontractor, may request by name Core employees in accordance with the affected signatory labor organization's hiring hall rules. At the time of signing the letter of assent a list of all Core employees and classifications must be submitted (Attachment 2). All subsequent referrals will be made by the labor organization's hiring hall.

14.6 In order to be eligible to request a Core employee by name, the Contractor first must, demonstrate that the person possesses the following qualifications. Applicants, who cannot satisfy the following qualifications, will not be eligible for dispatch as Core employees:

a. Holds all licenses required by state or federal law for the Covered Work to be performed.

b. Has worked a total of at least one thousand (1,000) hours in the construction craft performing the Covered Work to be performed, during the previous year.

c. Has the ability to safely perform the essential functions of the job.

14.7 Complaints that the Core employee provisions of this Article have been violated shall be submitted in writing to the CWA Administrator and resolved by the PAC on an expedited basis. Any Contractor or subcontractors that attempt to or that are found to have circumvented the Core employee hiring provisions of this Article by misclassifying any of its employees as supervisors or foremen, or in any other way, shall, by Order of the PAC, forfeit their right to employ Core employees for the remaining duration of the Project.

ARTICLE 15
APPRENTICESHIP AND TRAINING

15.1 The Parties recognize the need for meaningful, continuing support of bona fide apprenticeship programs. Such programs enable community members and District graduates to enter the labor market qualified to earn a family wage on a construction job. They ensure that a diverse, well-trained workforce essential to the economic and social vitality of Alaska and in particular, the communities surrounding the Work Site, is cultivated on an ongoing basis. The signatory labor organizations agree to support and to enhance existing apprenticeship programs to provide training and job opportunities to District graduates, young people, and unskilled adults. The Contractors will employ apprentices to perform work customarily performed by the craft in which they are registered, within the capability of the apprentice.

15.2 Apprentices shall be utilized in accordance with the signatory labor organization's CBAs that predominantly covers the work associated with this CWA. Apprentices shall be indentured in bona fide training programs approved by the United States Department of Labor, Office of Apprenticeship Training, Employer Labor Services (formerly the Bureau of Apprenticeship & Training).

15.3 Consistent with Board Policy 3311.1.2 (Use of Apprentices), the Contractor shall ensure that no less than fifteen (15%) percent of the total Contract labor hours worked on the Project are worked by registered Apprentices.

15.4 The Contractor and each subcontractor shall estimate the total contract labor hours to be worked on the construction contract awarded to it and shall establish the anticipated apprenticeship participation by craft and hours. The Contractor shall submit a monthly report for itself and all subcontractors to the CWA Administrator identifying the number of apprentices and journey workers used by craft and trade at each tier and level of work. The CWA Administrator shall determine whether the Contractor or subcontractor is in compliance with the provisions of this Article and collaborate with Sr. Director of Purchasing-Warehouse on management of the District's Apprenticeship Utilization Program.

15.5 Funding for Apprenticeship and training shall be through hourly contributions to each respective Union's Joint Apprenticeship Training Committee (JATC) programs. Those contributions shall be in accordance with the appropriate Signatory Labor Organization's Schedule "A".

ARTICLE 16
DISTRICT GRADUATES AND PREFERRED ENTRY APPRENTICESHIP

16.1 The Parties are committed to expanding employment and training opportunities for District graduates and providing additional work opportunities for District graduates and students in career and technical education to the full extent permitted by law.

16.2 The Parties agree to construct and expand pathways to livable wage jobs and careers in the construction industry for community residents and District graduates through collaborative workforce development systems and bona fide apprenticeship programs maintained by the Council and its member organizations.

16.3 To the extent permitted by law and current Anchorage School Board policy regarding employment of sex offenders, preferred Entry programs will be utilized in an attempt to identify qualified individuals such as: District graduates, youth, unskilled adults, military veterans, members of the National Guard or reservists, people of color, women, socially/economically or otherwise disadvantaged members of the community, or individuals facing reentry after a period of State of Alaska incarceration, for preferred entrance into the regular apprenticeship programs maintained that have been or will be created by the labor organizations signatory to this CWA.

16.4 Identification, selection and mentorship of qualified applicants to be accepted into apprenticeship programs will be the sole responsibility of the Joint Apprenticeship Training Committee (JATC) of each bona fide Apprenticeship and Training program.

ARTICLE 17
MILITARY VETERANS, MEMBERS OF THE NATIONAL GUARD, AND RESERVISTS

17.1 The Contractor, subcontractors, the Council, and its member organizations have committed to facilitating entry into the building and construction trades of veterans, members of the National Guard and reservists who are interested in careers in the building and construction industry. The Contractors and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program and other appropriate veteran's programs. In furtherance of these efforts, the primary program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, and other needs identified by the Parties shall be VIPER.

17.2 The Contractor, subcontractors, and the labor organizations signatory to this CWA agree to coordinate with the Center and other appropriate veteran referral sources, to create and maintain an integrated database of veterans interested in working on the Project.

17.3 The labor organizations signatory to this CWA shall to the extent permitted by law, make reasonable, appropriate adjustments to their hiring hall rules and regulations to give credit to military veterans, members of the National Guard and reservists, for bona fide, provable past work experience.

ARTICLE 18
SOCIO-ECONOMICALLY DISADVANTAGED COMMUNITY MEMBERS

18.1 To the extent permitted by law and current Anchorage School Board policy regarding employment of sex offenders, employment opportunities shall be provided to eligible at-risk individuals, such as youth, unskilled adults, people of color, women, and those who experience a barrier to gaining employment due to their personal backgrounds. Those may include, socio-economically disadvantaged members of the community and individuals facing reentry into the community after leaving a State of Alaska correctional facility or incarceration.

ARTICLE 19
DRUG AND ALCOHOL-FREE WORKPLACE

19.1 The Contractor shall implement a fair and equitably administrated Drug Free Workplace Policy and Program (hereinafter, the “Policy”) for the duration of this CWA. The Policy will be administered in accordance with the provisions of its ALCOHOL AND DRUG POLICY which shall be included as an Exhibit 1 to this CWA. All positive or inconclusive drug or failed alcohol results must be verified by an independent third-party agency approved in advance by the CWA Administrator. The CWA Administrator has the right and authority to conduct an audit of the administration of the drug and alcohol testing procedures being implemented by the Contractor, upon request of any Party to this CWA.

19.2 Consistent with the Owner’s goals as forth in this CWA, persons with a history of alcohol or drug abuse shall not be denied employment on the Project so long as they can demonstrate their present ability to satisfy the requirements of the Drug Free Workplace Policy and Program applicable to the Project.

ARTICLE 20
STANDARDIZED GRIEVANCE PROCEDURE

20.1 This CWA is intended to provide close cooperation between labor and management, the Contractor, subcontractors, and signatory labor organizations with respect to the day-to-day performance of Covered Work. Alleged violations of this CWA or any signatory labor organizations CBA that predominantly covers work associated with this CWA, governing the performance of Covered Work by employees represented by a signatory labor organization, shall be resolved as follows.

a. **Step 1.** When any employee subject to the provisions of this CWA feels he or she has been adversely affected by a violation of this CWA or any signatory labor organizations CBA that predominantly covers work associated with this CWA, they shall, through their local Business Representative or job steward, give notice to the appropriate Contractor or subcontractor representative of the grievance. Notice shall be given within seven (7) calendar days after the employee become or should have become aware of the violation. The labor organization's representative or job steward and the Contractor's representative shall meet and endeavor to adjust the matter within three (3) calendar days after timely notice has been given. The representative of the Contractor shall respond to the Business Representative in writing at the conclusion of the meeting but not later than two (2) calendar days thereafter. If the Party's representatives fail to resolve the matter within the prescribed period, the grieving party may, within two (2) calendar days thereafter, pursue Step 2 of the Grievance Procedure, provided the grievance is reduced to writing, setting forth all relevant information, including a short description of the grievance the date on which the grievance occurred, and the provision(s) of the CWA alleged to have been violated.

b. Should a Party have a dispute with another Party they shall meet promptly to resolve it. If a settlement is not reached within three (3) calendar days of the meeting, the dispute may be reduced to writing and submitted at Step 2, in the same manner as outlined for the adjustment of an employee grievance.

c. **Step 2.** The Business Representative of the signatory labor organization or designee and the Contractor or subcontractor's representative, or designees shall meet within seven (7) calendar days after referral of a dispute to Step 2, to arrive at a satisfactory settlement. If the Parties' representatives fail to reach an agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days thereafter.

d. **Step 3.** If the grievance has been submitted but not adjusted at Step 2, either Party may within seven (7) calendar days thereafter, request in writing, that the grievance be submitted to a mutually acceptable Arbitrator. Alaskan arbitrators shall be utilized to the greatest extent possible. If an Arbitrator cannot be selected by mutual agreement, the selection shall be made by the PAC. The decision of the Arbitrator shall be final and binding on all Parties. The fee and expenses of Arbitration shall be borne equally be the Contractor or subcontractor and the labor organizations involved in the grievance regardless of the outcome.

e. Failure of a Party to adhere to the time limits established herein shall be deemed a default and shall resolve the grievance in favor or the non-defaulting party. The time limits established herein may be extended only by written consent of the Parties involved. The Arbitrator shall have the authority to make decisions only on the issues presented, and shall not have authority to change, amend, add to or detract from any of the provisions of this CWA, or any signatory labor organizations CBA that predominantly covers work associated with this CWA.

ARTICLE 21
CRAFT JURISDICTION & JURISDICTIONAL DISPUTES

21.1 The assignment of work is the sole responsibility of the Contractor performing the work involved; such work assignments will be under the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") or any successor Plan.

21.2 If there is a dispute over a work assignment on the Project, between or among signatory labor organizations and Contractors of any tier, representatives of the signatory labor organizations claiming the work shall first meet with the Council President, or designee, who will attempt to mediate a resolution on an expedited basis. If a resolution to the dispute cannot be reached, the signatory labor organizations claiming the work then shall notify the CWA Administrator and the dispute shall be settled and adjusted according to the Plan. Decisions rendered shall be final, binding, and conclusive on the Contractors and labor organizations that are parties to this Agreement.

21.3 All jurisdictional disputes shall be resolved without strike, work stoppage, or slow-down of any nature and the Contractor's assignment shall be adhered to until the dispute is resolved. Individuals violating this section may be subject to discipline up to and including discharge for just cause.

ARTICLE 22
WORK RULES

22.1 The Owner or the Contractor(s) may establish reasonable Project Rules, so long as such Rules are not inconsistent with this CWA. Project Rules will be explained at the pre-job conference and posted at the Project Site by the Contractor or appropriate subcontractor. Failure by any employee to observe these rules and regulations may be grounds for discipline, up to and including discharge for just cause.

22.2 Security procedures for control of tools, equipment and materials are solely the responsibility of the Contractor and its subcontractors. Employees having any company property or property of another employee in their possession without authorization may be subject to discipline, up to and including discharge for just cause. The Contractor or

subcontractor will be responsible for the establishment of reasonable job security measures for the protection of personal company and client property on the Work Site.

ARTICLE 23
SAFETY, HEALTH AND SANITATION

23.1 Employees shall be provided with a safe, drug and alcohol-free environment in which to work. All employees performing Covered Work on the Project shall be covered by a properly classified Alaska Workers' Compensation Policy. All required safety equipment shall be provided by the Contractor or subcontractors at no cost to employees.

23.2 The Contractor, subcontractors and employees performing Covered Work on the Project shall comply with all applicable provisions of District, local, state and federal laws, rules and regulations, relating to job safety and safe work practices (hereinafter, "Safety Rules'). Safety meetings will be scheduled and conducted weekly by the Contractor or subcontractor as appropriate, to discuss safety on the Project and to ensure adequate awareness and understanding of the manner of implementation and the application of all Safety Rules.

23.3 All employees shall be required to use appropriate, personal, protective equipment as is or may be prescribed by state or federal safety and health standards or by the Contractor. Adequate training shall be provided to all Project employees to ensure proper utilization of such equipment. Failure of employees to use such equipment properly may be grounds for disciplinary action, up to and including dismissal.

23.4 No employee shall be required to work under conditions or circumstances which place the employee in imminent danger of physical harm or injury, except that the employee may not make any such claim or refuse to perform Covered Work as a pretext for refusing to carry out a work assignment.

23.5 The Contractor or subcontractor may shut down a job, or a portion thereof, if in the Contractor's or subcontractor's judgment, an emergency arises which could endanger the life and safety of an employee. In such cases, employees will be compensated only for the actual time worked or for standby time if standby is required by the Contractor or subcontractor.

23.6 The Contractor and its subcontractors, as appropriate, shall provide a convenient and sanitary supply of drinking water and sanitary drinking cups, adequate sanitary toilet and clean up facilities for the employees, and dry shacks sufficient to accommodate employees during rest and meal breaks, and for storage of employee's personal clothing and equipment.

23.7 Where an unsafe condition is alleged to exist, the affected employee shall first notify his or her immediate supervisor who shall take any necessary corrective action. If the employee's immediate supervisor is not available, the employee may satisfy his or her duty to report unsafe conditions promptly, by notifying any available Shop Steward or

management representative of the Contractor or subcontractor. If the parties fail to resolve any difference or disagreement over the existence of an unsafe condition or the appropriate corrective measures to be taken, the issue shall be referred immediately, for final and binding, resolution to the CWA Administrator and resolved by the PAC pursuant to Article 12.

ARTICLE 24
PROTECTION OF PERSON AND PROPERTY

24.1 Employees shall use diligent care to perform their work in a safe manner and to protect themselves, the environment, and the property of the Employer. Failure to do so may, depending upon the severity of the offense, result in disciple up to and including dismissal. The Employer shall establish, post, and ensure employees are aware of and understand, reasonable visitor, security, and safety rules necessary to achieve this objective.

ARTICLE 25
WAGE SCALES AND FRINGE BENEFITS

25.1 All employees covered by this Agreement shall be classified in accordance with Alaska Statute Title 36, Public Contracts. This shall be applicable to all Contractors and subcontractors.

25.2 Wages and benefits for referenced project shall remain at the levels specified in the specific contract documents for twenty-four (24) months from the award date. After twenty-four (24) months, the wage and benefit will increase to the current prevailed rate as published by the Alaska State Statute Title 36.

25.3 The Contractor and all Sub-Contractors shall be required to pay into an appropriate joint labor/management employee benefit trust(s) ("Trust Fund") unless alternative benefit plans are approved by each affected Signatory Labor Organization as outlined Section 25.4 below. Contractor and subcontractors shall be required to complete trust documents and submit them to the Trust Fund for each employee and to pay into the Trust Fund as required by that Trust Fund's schedule.

25.4 **Alternative Benefits.** The Parties recognize the Owner's commitment to provide opportunities on the Project for all Contractors and subcontractors, including those which may not have previously had a relationship with the labor organizations signatory to this CWA. Each labor organization signatory to this CWA agrees to meet and confer with the Contractor or subcontractor to discuss alternative benefits for Pension and/or Health and Welfare to meet the needs of their core employees as defined in Article 15 above. To be eligible, Contractors or subcontractor's must have a qualifying Pension and/or Health and Welfare plan currently covering their core employees as outlined below. If such

Contractors or subcontractors do not have a qualifying company Pension and/or Health and Welfare plan, they shall be required to contribute to the appropriate Trust Fund for their core employees. All Contractors and subcontractors are required to pay the prevailed amount into the Training Trust Funds for the appropriate Signatory Labor Organization.

Qualifying Pension and/or Health and Welfare plan shall be one that satisfies the following requirements:

a. The Contractor's or subcontractor's company Pension and/or Health and Welfare plan must have been in existence for a period of at least one (1) year prior to the Contractor's or subcontractor's bid or proposal submission for work on the Project; and

b. The employees for whom continued coverage under the Contractor's or subcontractor's plan will be maintained must be qualified core employees as defined above and have been participants in such plans for the six (6) month period prior to their employment on the Project.

If the above requirements are met, the Contractor or subcontractor may request to meet and confer by submitting a written request to the Administrator for each affected signatory labor organization using (Attachment 5).

25.5 If any Contractor or subcontractor does not pay into the appropriate Trust Fund, the affected labor organization's trust administrator shall provide written notice to the Contractor.

a. The delinquent subcontractor, and the Contractor by mutual agreement, may identify other agreeable solutions that will assure timely payment to the Trust Fund. If the delinquent amounts are undisputed in whole or in part between the Trust Fund and the delinquent subcontractor, the Contractor shall issue a joint check to the Trust Fund and the subcontractor, in the amount of the undisputed delinquency.

25.6 If the Contractor is the delinquent Party, written notice of the alleged delinquency shall be provided by the affected labor organization to the CWA Administrator, and the delinquency shall be resolved by the PAC pursuant to Article 12.

25.7 Copies of applicable Trust Agreements will be made available upon request of the Contractor or subcontractor.

ARTICLE 26
WORK HOURS AND PAY

26.1 **Workweek and Workday.**

a. **Regular Workweek and Workday.** The regular workweek shall be five (5) consecutive days falling within Monday through Saturday. Where a single shift is worked, the regular workday shall be eight (8) consecutive hours between 6:00 AM and 6:00 PM; exclusive of a meal period of not less than one-half (1/2) hour. Nothing herein shall preclude the Contractor or subcontractor from scheduling any workday in excess of eight (8) hours or a workweek in excess of forty (40) hours. The Contractor or subcontractor shall determine and establish the work starting times at any time between 6:00 AM and 8:00 AM. All work performed before the regular starting time or after eight (8) consecutive hours shall be paid at the regular overtime rate, except that under conditions beyond the control of the parties to this Agreement (such as concrete paving, concrete pouring, asphalt paving, and road oiling work), or on work requiring special crews, or when the job or weather conditions warrant, the work starting time shall be mutually arranged to fit such conditions without penalty or premium payment. Other starting times, including staggering starting times, may be mutually agreed upon by the Parties without premium pay.

b. **Four-Ten Hour Workweek (4-10's).** With notification to the employees prior to the end of their workweek, the Contractor or subcontractor may schedule a workweek of four (4) consecutive ten (10) hour workdays between Monday and Saturday within the standard starting times as stated in Section 26.1 at the straight time rate of pay. Any work in excess of ten (10) hours on scheduled workdays shall be paid at the overtime rate of pay, and overtime shall be paid for any hours in excess of forty (40) in any workweek.

c. **Assembly Point.** The time of each Employee shall start in the morning at the designated Assembly Point, which shall be agreed upon at the pre-job conference. The Contractor or subcontractor shall make suitable and prompt transportation available from Assembly point to the job site and back. The time of the Employees shall end at quitting time on the job sites. It is intended that the lapse of time used to transport the Employees from normal quitting time at the job site to Assembly Point shall not exceed the lapse of time from starting time at Assembly Point in the morning to the Job site. In the event that the cumulative round-trip travel exceeds one (1) hour, then the employee's time exceeding the one (1) hour will be considered as time worked and compensation will be computed at the applicable rate. The Contractor or subcontractor will utilize Teamsters for all hours worked hauling employees to and from the agreed upon assembly point.

26.2 **Meal Period.** The Contractor or subcontractor will schedule a meal period of not less than one-half (1/2) hour, or more than one (1) hour's duration at approximately the mid-point of the scheduled shift regardless of such shift duration (8, 10, or 12 hours). The Contractor or subcontractor shall make an earnest effort not to work employees six (6) hours without a meal period. If the Contractor or subcontractor finds it is necessary to work employees beyond six (6) hours without a meal period, the employees shall be allowed a later meal period, and it shall be considered time worked and paid for at the proper overtime rate.

26.3 **Overtime.**

a. All work performed in excess of eight (8) consecutive hours (excess of ten (10) hours on a four-ten (4-10) schedule) in any one (1) day or forty (40) hours in any one (1) workweek shall be paid at one and one-half (1-1/2) times the straight time rate of pay. Employees shall be paid in accordance with the appropriate signatory labor organizations CBA that predominantly covers work associated with this CWA for all work performed on Saturdays and Sundays. An employee who was absent on their own accord, but work was made available during a regular straight time day, may be compensated at the straight time rate for hours worked on Saturday.

b. When a shift is started at a basic rate or at the appropriate overtime rate applicable on that day, it shall be completed at that rate. There will be no restrictions upon the Employer's scheduling of overtime or the non-discriminatory designation of employees that shall be worked. There will be no pyramiding of overtime.

26.4 **Holidays.**

a. All Holidays, except for Labor Day, may be worked. No work may be performed or scheduled on Labor Day unless an emergency exists.

b. If Saturday is not a normally scheduled workday, the holiday shall be observed on the preceding Friday. If Sunday is not a normally scheduled workday, the holiday shall be observed on the following Monday.

c. Employees shall be paid in accordance with the appropriate signatory labor organizations CBA that predominantly covers work associated with this CWA for all work performed on recognized holidays.

d. Recognized Holidays shall be:

New Year's Day (January 1st)
Presidents' Day (Third Monday of February)
Memorial Day (Last Monday in May)
Independence Day (July 4th)
Labor Day (First Monday of September)
Veteran's Day (November 11th)
Thanksgiving Day
Christmas Day (December 25th)

26.5 **Shift Work.**

a. Shift work may be performed at the option of the Contractor or subcontractor. The Contractor or subcontractor shall have the sole right to establish the starting time and duration of a shift, to designate the craft or crafts performing work on a shift

basis on the Project or any portion thereof, and to determine the number of employees required. Any time worked more than the regular shift shall be paid for at the normal overtime rate. The meal period provisions of Section 26.2 of this Article shall apply to both shifts.

b. On two- or three-shift operations, the work starting time for the first shift will not be established earlier than 5:00 AM, unless an earlier starting time is mutually agreed upon. If an earlier starting time is established without such mutual consent, overtime for those hours earlier than 5:00 AM will be paid. When an employee is moved from one shift to another, they shall be allowed a minimum of eight (8) consecutive hours off duty before they are required to begin work on the shift. An employee not having an eight (8) hour break between shifts shall be paid the overtime rate until such time as they receive an eight (8) hour break.

c. When changing shifts, the employee must be permitted to remain on that shift for at least fourteen (14) calendar days, unless this requirement is waived in writing by the employee's Employee Representative.

d. Employees shall be at their place of work at the starting time and shall remain at their place of work performing their assigned functions under the supervision of the Contractor or subcontractor until quitting time. The parties reaffirm their policy of a fair day's work for a fair day's wage.

e. Scheduling and premium pay for two- or three-shift operations shall be in accordance with the appropriate Signatory Labor Organization's Schedule "A".

f. When two (2) or three (3) shifts are regularly established and the first or second shift cannot be worked due to conditions caused by weather, either shift may be worked in accordance with the applicable Signatory Labor Organization's Schedule "A".

26.6 **Reporting Pay.**

a. If an employee reports to work for a regular or assigned shift and, weather permitting, is not put to work, he or she shall be paid two (2) hours reporting time and shall remain at the job site for two (2) hours if required by the Contractor or subcontractor.

b. An employee who starts to work shall be paid for not less than two (2) hours, and if the employee works beyond two (2) hours, the employee shall be paid for actual time worked. It shall be the Contractor or subcontractor's prerogative whether or not to stop work.

c. No employee covered by this Agreement shall be called to work outside of their regular shift for less than two (2) hours paid for such work at the applicable rate.

d. Any employee who leaves the job or work location of his or her own volition, quits, or is discharged for cause, shall be paid only for the time worked.

26.7 **Payday.**

a. Wages will be paid weekly by check or direct deposit on a designated day during working hours and, in no case, shall more than five (5) days be held back in any one (1) payroll week. Each payday the Employee shall be given a check or stub and a statement showing hours, deductions, and hourly rates of pay, with the Contractor or subcontractor name and address clearly stated.

b. When an employee is separated from employment, wages become due within three (3) days after separation (excluding weekends and holidays). Where complete payroll information is not available and the check issued is less than the total amount due, a check for the balance shall be sent to the office of the appropriate signatory labor organization. Should the Contractor or subcontractor fail to comply with this provision, in whole or part, the employee will be entitled to eight (8) hours pay at the straight time rate of pay for each day full termination pay is delayed (excluding Saturdays, Sundays and holidays). Checks not picked up by the employee shall be delivered to the appropriate signatory labor organization.

26.8 **Travel and Subsistence.** There shall be no travel, daily travel, subsistence, or zone pay required under the provisions of this Agreement, but nothing in this Agreement prohibits the Contractor or subcontractor from providing any of the aforementioned items necessary to employ workers and payment of travel and subsistence is encouraged.

26.9 **Employee Access.** Employee access to the Work Site by private automobile may be limited to certain roads and/or parking areas. Parking at or near the Work Site will be provided to employees at no cost. If such parking cannot be provided, transportation between the parking area and the Work Site shall be provided by the Contractor or subcontractor, and employees will be given fifteen (15) minutes of pay each way, or compensation for actual transportation time, whichever is greater. Parking fees shall be reimbursed if employees are required to park in a private lot.

26.10 **Foremen and General Foremen.**

a. The selection of craft foremen and general foremen shall be the exclusive responsibility of the Contractor or subcontractor. Foremen and general foremen shall take directions from authorized Representatives of the Contractor or subcontractor.

b. Craft foremen may be required to perform covered work of the trade.

c. General foremen may perform incidental work of the trade.

d. Craft and general foremen shall be paid at the applicable foreman rate.

e. The number of craft foremen and general foremen shall be in accordance with the applicable signatory labor organizations CBA that predominantly covers work associated with this CWA.

f. All foremen shall have the authority and responsibility to terminate for just cause any employee working under their supervision who fails to perform satisfactorily, competently, and diligently his or her assigned duties.

ARTICLE 27
COMPLETE AGREEMENT

27.1 This CWA represents the complete agreement of the Parties. Neither the Contractor nor any subcontractor will be required to sign any other agreement with the Council, or its member labor organizations, as a condition of performing work on the Project. If this CWA is silent on an issue the applicable signatory labor organization's CBA that predominantly covers work associated with this CWA will be used to determine the outcome. Where there is a conflict, the terms of this CWA shall supersede the terms of all national, regional, or signatory labor organizations CBAs that predominantly covers work associated with this CWA, except for all work performed under the NTD Articles of Agreement, the National Stack/Chimney Agreement, the National Cooling Tower Agreement, the National Agreement of the International Union of Elevator Constructors; and all instrument calibration work and loop checking shall be performed under the terms of the UA/IBEW Joint National Agreement for Instrument and Control Systems Technicians; with the exception of Articles 13, 20, and 21 of this Project Agreement, which shall apply to such work. Nothing in this CWA requires employees to join a union or pay dues or fees to a union as a condition of working on the covered project. This CWA is not, however, intended to supersede independent requirements in applicable local union agreements as to contractors that are otherwise signatory to those agreements and as to employees of such employers performing covered work.

27.2 Nothing in this CWA shall modify, amend, or supersede any provisions of any other agreement between the Owner, Contractor, and its subcontractors, or between the Owner, Contractor, its subcontractors and the Council or individual members of the Council.

27.3 The liability of any employer and the liability of the separate unions under this Agreement shall be several and not joint. The unions agree that this Agreement does not have the effect of creating any joint employer status between or among the Owner, Contractor(s) or any employer.

ARTICLE 28
GENERAL SAVINGS CLAUSE

28.1 If any article or provision of this Agreement is declared invalid, inoperative, or unenforceable by any administrative agency, or court of competent jurisdiction, the remainder of this CWA shall not be affected thereby. Thereafter, any Party may, upon not less than thirty (30) days written notice to the others, have the right to open negotiations for the substitution of a new article or provision consistent with the decision of the board or court and the intent of the invalidated provision.

ENDORSEMENT

The authorized signature by the undersigned commemorates and affirms the approval of this CWA by all Parties and its adoption as a bid specification for contracts pertaining to all Covered Work on the Project.

FOR THE PARTIES:

By:

_____ _____
Anchorage School District Date

By:

_____ _____
Contractor Date

By:

_____ _____
Building and Construction Trades Council of South Central Alaska - President Date

Building and Construction Trades Council of South-Central Alaska - Affected trades:

By:

_____ _____
Bricklayers Local 1 Date

(206) 248-2456

By:

_____ _____
Boilermakers Local 502 Date
(253) 435-0330

By:

_____ _____
Cement Masons Local 528 Date
(907) 351-0151

By:

_____ _____
Heat & Frost Insulators Local 7 Date
(206) 812-0777By:

By:

_____ _____
IBEW Local 1547 Date
(907) 272-6571

By:

_____ _____
Ironworkers Local 751 Date
(907) 563-4766

By:

_____ _____
IUOE Local 302 Date
(907) 561-5288

By:

_____ _____
Laborers' Local 341 Date
(907) 341-0341

By:

_____ _____
Western States Regional Council of Carpenters
(907) 276-3533 Date

By:

_____ _____
Painters (IUPAT) Local 1959 Date
(907) 562-8843

By:

_____ _____
Plumbers & Steamfitters UA Local 367 Date
(907) 562-2810

By:

_____ _____
Roofers Local 189 Date
(509) 327-2322

By:

_____ _____
Sheet Metal Workers Local 23 Date
(907) 277-5313

By:

_____ _____
Sprinkler Fitters Local 669 Date
(907) 283-8198

By:

_____ _____
Teamster Local 959 Date
(907) 751-8500

ATTACHMENT 1 - LETTER OF ASSENT

COMMUNITY WORKFORCE AGREEMENT FOR THE

_____ PROJECT

The undersigned, as a Contractor or subcontractor on the _____ Project, for and in consideration of the award of a Contract to perform work on said Project, and in further consideration of the mutual promises made in the Community Workforce Agreement (CWA), a copy of which was received, reviewed, is understood, and acknowledged, hereby:

a. On behalf of itself and all its employees, accepts and agrees to be bound by the terms and conditions of the CWA, together with any and all amendments and supplements, such as individual signatory labor organization's Schedule A's, now existing or that are later made thereto, and understands that any act of non-compliance with all such terms and conditions, will subject the non-complying Contractor or employee(s) to being prohibited from the Project Site until full compliance is obtained.

b. Certifies that it has no commitments or agreements that would preclude its full compliance with the terms and conditions of said CWA.

c. Agrees to secure from any subcontractor, of any tier (as defined in the CWA), a duly executed Letter of Assent in form identical to this document prior to commencement of any Covered Work.

Dated: _____

(Name of Contractor/Company) _____

(Signature of Authorized Representative) _____

(Print Name and Title) _____

(Phone Number) _____

(Billing Address) _____

(City, State and Zip Code) _____

(General Contractor) _____

(Contract Number) _____

ATTACHMENT 2 – CORE EMPLOYEE ROSTER

COMMUNITY WORKFORCE AGREEMENT FOR THE

_____ PROJECT

Contractor or subcontractor Name: _____

Per Article 14, and in accordance with the qualifications listed in Section 14.6, the following shall be considered our core employees for this project:

	Name	Classification
1)	_____	_____
2)	_____	_____
3)	_____	_____
4)	_____	_____
5)	_____	_____
6)	_____	_____
7)	_____	_____
8)	_____	_____
9)	_____	_____
10)	_____	_____

Submitted By:

_____ _____
Contractor/subcontractor Date

Page _____ of _____

ATTACHMENT 3 – EMPLOYEE REPRESENTATIVES

COMMUNITY WORKFORCE AGREEMENT FOR THE

_____ PROJECT

Per Section 10.2, the following are the designated Employee Representatives:

Labor Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip:_____

Physical Address: _____

City: _____ State: _____ Zip:_____

Primary Representative: _____

Cell Phone: _____ Office Phone: _____

Email Address: _____

Alternate Representative: _____

Cell Phone: _____ Office Phone: _____

Email Address: _____

By:

_____ _____
Signatory Labor Organization Date

ATTACHMENT 4 – PAC DISPUTE

COMMUNITY WORKFORCE AGREEMENT FOR THE

_____ PROJECT

CWA Administrator: _____

Party/Parties Filing Dispute: _____

Point of Contact: _____ Phone: _____

Date of Occurrence: _____

Statement of Dispute: _____

_____

_____

CWA Articles or sections that Apply: _____

_____

_____

Recommended Remedy: _____

_____

_____

By:

_____ _____
Signatory Date

ATTACHMENT 5 – ALTERNATIVE BENEFITS REQUEST

COMMUNITY WORKFORCE AGREEMENT FOR THE

_____ PROJECT

CWA Administrator: _____ Date: _____

Contractor/subcontractor requesting: _____

Point of Contact: _____ Phone: _____

Signatory Labor Organization Affected: _____

This request to meet and confer about alternative benefit arrangements for core employees shall also include the following:

1) A copy of the Contractor's or subcContractor's Health and Welfare and/or Pension plan; and

2) A list of the core employees who will be employed on the Project to whom the exemption will be applied and for whom the Contractor's or subcontractor's benefit plan coverage and payment of costs will be maintained; and

3) A calculation of the combined Contractor or subcontractor and employee costs for such programs expressed as an hourly cost based upon an assumed average monthly work hours of one hundred and sixty (160) hours.

The requested terms and conditions of alternative benefits for the requested core employees must be approved by the Signatory Labor Organization, and are as follows;

A. The core employees in this request shall be paid in accordance to the agreed terms for the duration of their employment on the Project. Any core employee may request in writing to cease participation in the Contractor's or subcontractor's plan. Effective on the date of the request, the Contractor or subcontractor shall make contributions on that employee's behalf to the appropriate Trust Fund for the duration of employment on the project.

B. For all other employees not submitted with this request, shall have their contributions paid to the applicable Trust Funds in accordance with the terms of the CWA.

C. Copies of all remittance forms confirming compliance with all Trust or benefit program requirements shall be submitted monthly to the Administrator.

D. If the Contractor or subcontractor has only one of the two qualifying benefits, either Pension or Health and Welfare plans, and not the other, the Contractor then must participate in the appropriate Trust Fund for the benefit that they do not provide.

E. Any difference between the Contractor or subcontractor benefit amount and the Signatory Labor organization benefit amount shall be paid on the check so that the total is equal to the appropriate prevailing wage determination.

F. The Contractor or subcontractors must pay the prevailed amount into the appropriate Training Trust Funds for the appropriate Signatory Labor Organization.

G. These conditions may be altered by mutual agreement, in writing, only by the Contractors or subcontractors signing this appendix and the signatory labor organization affected.

Submitted By:

_____ _____
Contractor or subcontractor Date

Alternative benefits as requested are Agreed and approved by:

_____ _____
Signatory Labor Organization Date

Geotechnical Investigation

Kincaid Elementary School Improvements

Anchorage, Alaska

September 2022

Contact
Steven Halcomb, PE, GE, DGE
shalcomb@crweng.com

3940 Arctic Blvd., Suite 300 Anchorage, AK 99503
p (907) 562.3252 | **f** (907) 561.2273

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Geotechnical Investigation
Kincaid Elementary School Improvements
Anchorage, Alaska

Submitted To:

Bob Weber
Anchorage School District
1301 Labar Street
Anchorage, AK 99515

Submitted By:

CRW Engineering Group, LLC
3940 Arctic Blvd., Suite 300
Anchorage, AK 99503
(907) 562-3252
www.crweng.com



9.16.2022

Steven Halcomb, PE, GE, D.GE
Senior Geotechnical Engineer

Ali Sacks, PE
Geotechnical Engineer

September 2022
CRW Project Number 10417.00

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Figure

Figure 1 – Borehole Locations

Appendices

Appendix A – Borehole Logs
Appendix B – Laboratory Results

1. Introduction and Project Description

CRW Engineering Group, LLC (CRW) is pleased to present this geotechnical data and design recommendations report to support the improvements at Kincaid Elementary School (ES) in Anchorage, AK. Improvements include new parking lot, sidewalks, light poles, water and sewer service utilities, and landscaping. A geotechnical investigation was conducted by CRW for the Anchorage School District (ASD).

The scope of work included:

- Reviewing historical geotechnical investigations within and near the project area;
- Performing a geotechnical investigation which included soil borings placed based on expected development of the site;
- Installing piezometers for groundwater level monitoring;
- Overseeing laboratory testing of recovered soil samples including moisture content, gradation, and Atterberg Limits;
- Analyzing field observations and testing results; and,
- Preparing the geotechnical report to provide recommendations.

2. Site Conditions

The project is located in Anchorage, Alaska, in the corner lot on the south side of Raspberry Road and west of Caravelle Drive (Figure 1). The site is currently developed with trees around the property's perimeter and the existing Kincaid ES. The existing school consists of the main school building, pavements, playground, ball fields, and portable building units (portables).

The site is generally sloping with a higher elevation along Raspberry Road to a lower elevation on the south side of the site.

2.1 Geology

The surficial geology in Anchorage was determined from the Simplified Geologic Map of Central and East Anchorage, Alaska, as mapped by R.A. Combellick with the Alaska Division of Geologic and Geophysical Surveys (DGGS) in 1999 in addition to the 1972 map by Schmoll and Dobrovolny. Ted Stevens International Airport (ANC) is located in the western portion of the Municipality of Anchorage (MOA); the surficial geology in this area is characterized by glacially-derived sediment. Soils in the area are typically 1) well stratified and sorted silts and clays of aeolian, fluvial, or lacustrine origin; 2) well sorted sands and gravels of glacial outwash origin; or 3) silts and clays underlying coarser sediments of lacustrine origin (Schmoll, et al. 1999). Peat bogs are common in the general area.

2.2 Historical Geotechnical Investigations

Historical geotechnical data was not provided to CRW nor do any boring logs appear in the MOA online Soil Boring application. The MOA Soil Boring application has borings in the area, particular along Raspberry Road, which show the native soils to be predominantly silt with varying sand content.

2.3 Contaminated Sites

The Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Program database was reviewed for potential contaminated sites near the project. In the ADEC database contaminated sites are designated Active, Cleanup Complete, and Cleanup Complete – Institutional Controls.

No contamination has been noted at Kincaid ES. Two adjacent properties were observed in the ADEC database to be contaminated. To the east, Chugach Electric Raspberry Substation is noted to be in "Cleanup Complete – Institutional Controls". To the north, a former underground storage tank (UST) was present at Kulis Air Base at Building 47 that is now designated as "Cleanup Complete". No other known contamination sites were within 1,500 feet of Kincaid ES.

3. Field Investigation

A geotechnical investigation was performed between 30 April and 1 May 2022 to assess existing soil conditions. The investigation drilled and sampled fourteen boreholes (BH-01 through BH-14) located around the school including the parking lot, playground, sidewalk, and near the portables, see Figure 1.

3.1 Subsurface Drilling

Discovery Drilling, Inc. (Discovery) of Anchorage, Alaska provided drilling services, using a tracked Geoprobe 6712DT and truck mounted CME 75 drill rigs equipped with a nominal 8-inch outer diameter (O.D.) hollow-stem auger to advance the boring. Asphalt and concrete were cored prior to the use of auger. Utilities were located prior to drilling.

A CRW engineer supervised the field investigation, managed field operations, and logged the recovered soil samples. Borings were advanced to various depths from 16.5 to 22 feet BGS (depth of the last split-spoon advanced beyond the auger). Borehole logs are presented in Appendix A.

3.2 Sample Collection

Soil samples were obtained by advancing a standard split-spoon sampler into the soil beyond the bottom of the auger. Driven samples were collected using a 2-inch O.D. split-spoon sampler via the Standard Penetration Test (SPT). The sampler was advanced either 18 or 24 inches, counted in 6-inch intervals, using a 140-pound auto-hammer. The number of blows required to drive the sampler each 6-inch interval is reported on the borehole logs. The blow counts shown on the borehole logs are field values that have not been corrected for overburden, sampler size, hammer energy, rod length, or other factors.

Split-spoon samples were collected at approximately 2.5-foot to 5-foot intervals depending on observed lithology. Recovered samples were visually classified in the field before being individually sealed in double plastic bags and transported to a soils laboratory for additional testing. Field visual classifications were verified with laboratory testing on selected samples. Soil characteristics, such as classification, consistency, moisture, and color were noted for each sample recovered. Classification was performed following the Unified Soils Classification System (USCS) according to ASTM D2487/D2488.

3.3 Borehole Completion and Piezometer Well Installation

Five boreholes (BH-01, 05, 08, 11, and 12) were completed as piezometer wells for groundwater level monitoring. Schedule 80 1-inch nominal diameter polyvinyl chloride (PVC) pipe with threaded connections was installed over the length of the boring, and hand-slotted over the screened interval. Borings completed without piezometers were backfilled with cuttings brought level to the existing ground surface, or finished with cold-patch asphalt, if in a paved area. BH-14 was located in an area paved with concrete and was patched with concrete finished smooth and level with the existing concrete. Boreholes completed as piezometers were backfilled around the casing with cuttings and finished with steel flushmount monuments. Piezometers in paved areas (BH-01, 05, and 11) were set in cold-patch asphalt, and those in lawns (BH-08 and 12) were set in pea gravel slightly below grade.

3.4 Groundwater Monitoring

Groundwater levels were noted during and immediately after drilling. Additional groundwater level measurements were collected after completion of drilling as summarized later in this report.

3.5 PID Field Screening

A photoionization detector (PID) equipped with a 10.2-electron-volt lamp was calibrated at the beginning of the field day with 100-parts per million (ppm) isobutylene calibration gas. Every soil sample was field screened. PID readings are reported on borehole logs (Appendix A).

4. Laboratory Testing and Results

Soil laboratory tests to evaluate index properties of representative samples were performed by the Alaska Testlab (ATL) in their Anchorage, Alaska facility. The laboratory testing program consisted of soil index tests to determine the water content, grain-size distribution, and limited mechanical analysis (LMA). LMA consists of washing a sample over the Number 200 mesh sieve. The coarse fraction of the remaining soil is then dried and sieved through the Number 4 sieve to determine the sand and gravel content. The LMA is a means to determine the percentage of coarse and fine soil in a sample without having to perform full gradations. The laboratory tests were performed in accordance with the test methods of ASTM International as listed in Table 4-1.

Table 4-1. Laboratory Analyses and Methods

Analysis	Method	Number of Samples
Water Content	ASTM D2216	98
Grain-size Distribution	ASTM D6913 ASTM D422	8
Limited Mechanical Analysis	ASTM D1140	15

Results of the laboratory testing are presented in Appendix B.

5. Investigation Findings

5.1 Soil Lithology

In paved areas, the asphalt was observed to be 2 inches thick and the concrete was 4.25 inches thick.

Underlying the pavements was generally gravel with varying sand and fine content ranging in thickness from 2 to 3 feet except in BH-10 which had gravel to a depth a 5 feet BGS. A separation geotextile was observed at the base of the gravel. Underlying the gravel were layers of silt, silt with sand, sandy silt, and silty sand to the depth of the borings. A layer of gravel with varying sand and fines content was encountered at 15 feet BGS in BH-08 and BH-11, the thickness of this deeper gravel layer is unknown.

In non-paved areas, the surface was generally a thin layer of organic mat though an approximately 6 inch layer of gravel was observed in BH-13. Similar silt and silt with sand were encountered below the organic mat or the thin gravel layer.

5.2 Contaminated Soils

No evidence of petroleum-contaminated soils was observed during this investigation. No odor or sheen was observed, and no field screening was performed.

5.3 Groundwater Conditions

Groundwater was generally not observed during drilling except at 2 feet in BH-10 and at 20 feet BGS in BH-12. The groundwater in BH-10 is likely perched on the silty subgrade and not necessarily a hydrostatic condition. Additional groundwater level readings were collected on 12 May 2022 and 11 August 2022. Groundwater levels observed during and after drilling are presented on the borehole logs and in Table 5-1 below.

Table 5-1. Groundwater Levels

Borehole Designation	Depth to Water (feet BGS)			Piezometer	
	At Time of Drilling	May 2022	August 2022	Screened Interval (feet BGS)	PVC Total Depth (feet BGS)
BH-01	Not Observed	Not Observed	15.9	6.6 – 16.6	16.6
BH-02	Not Observed	-	-	-	-
BH-03	Not Observed	-	-	-	-
BH-04	Not Observed	-	-	-	-
BH-05	Not Observed	Not Observed	14.9	6.5 – 16.5	16.5
BH-06	Not Observed	-	-	-	-
BH-07	Not Observed	-	-	-	-
BH-08	Not Observed	Not Observed	Not Observed	6.3 – 16.3	16.3
BH-09	Not Observed	-	-	-	-
BH-10	2.0 (Perched)	-	-	-	-
BH-11	Not Observed	Not Observed	16.1	6.4 – 16.4	16.4
BH-12	20.0	13.3	18.7	11 – 21	21
BH-13	Not Observed	-	-	-	-
BH-14	Not Observed	-	-	-	-

5.4 Seismic Considerations

Anchorage is in a region of moderate to high seismicity, and is subjected to relatively large earthquakes and strong ground motion. The Alaska Earthquake Center (AEC) has documented several earthquakes larger than moment magnitude (Mw) 7.0, including the November 2018 Anchorage earthquake. The area is bounded by the Denali Fault to the north and east, the Castle Mountain fault to the west-southwest, and the Alaska-Aleutian Megathrust Subduction zone to the south. The project site has three dominant seismic sources that present hazards. All information about faults, slip rates, and past earthquakes below comes from the AEC, the Alaska Department of Natural Resources Division of Geological and Geophysical Surveys (DGGS), and the United States Geological Survey (USGS) website.

- The Denali Fault is a thrust and right-lateral strike-slip surface fault extending over 1,000 miles, located approximately 130 miles away from the project site at the nearest approach. The Denali Fault has a variable slip rate of greater than 0.2 inches/year on some segments. The central portion generated a moment magnitude earthquake of 7.9 on November 3, 2002.
- The Castle Mountain fault is a northeast-striking, active fault system located an estimated 25 miles from the project site. The fault is approximately 120 miles long and the western segment is considered active with Holocene fault scarps identified along this portion of the fault. The Castle Mountain fault has a maximum slip rate of 0.2 inches/year and an estimated maximum moment magnitude earthquake of M7.1.
- The toe of the Alaska-Aleutian Megathrust Subduction zone is approximately 200 miles from the project site. This plate boundary fault is the source of the 1964 Great Alaska Earthquake. A fault in the subducted Pacific slab was the source of the 2018 Anchorage Earthquake. The convergence and slip along the megathrust is estimated to be between 2.2 and 2.9 inches/year in a north-northwest direction.

Seismic design parameters were determined from the MOA Building Safety Design parameters, the Applied Technology Council's (ATC) online Hazards by Location tool (https://hazards.atcouncil.org/), and the United States Geological Survey (USGS) online Unified Hazard Tool (https://earthquake.usgs.gov/hazards/interactive/) in addition to considerations from the American Society of Civil Engineers (ASCE) 7-16 (2016) and the International Building Code (IBC, International Code Council, 2018). We note that ASCE 7-16 has two maximum considered earthquakes (MCE): one for geometric mean (MCE_G) and one for risk-targeted (MCE_R). See ASCE 7-16 for detailed discussion of the differences in the two MCE ground motions.

Table 5-2 provides the seismic design parameters for the 2,475-year return period (2 percent in 50 years) consistent with the IBC and ASCE 7-16.

The borings depths were not sufficient to fully evaluate the project site class based on ASCE 7 however based on our borings, experience, and judgment, we estimate the project site class to be site class D.

Table 5-2. Seismic Design Parameters

Description	Value (Site Class D)
Moment Magnitude, M_w	9.2
Peak Ground Acceleration, PGA_M	0.60g
S_S (0.2 second period acceleration, MOA value)	1.50g
S_1 (1 second period acceleration, MOA value)	0.55g

The MOA has identified and mapped areas of the city where there are increased potential for ground failure during a seismic event (MOA, 2006). The map was developed based on observations of ground failure from the 1964 M9.2 earthquake and attempts to identify sites that may experience ground failure. There are five seismic hazard zones, Zones 1 through 5, that range from low to high potential for ground failure, respectively. The project site is located in Zone 3.

6. Geotechnical Engineering and Construction Recommendations

We understand the primary concern at Kincaid ES is frost heaving of the existing pavements. Based on our findings and results of our laboratory testing, we have developed the following recommendations based on our understanding the project.

6.1 Frost Depth and Permafrost

Seasonal frost was observed at the time of drilling in most borings and ranged in depth. See borehole logs for further information. No permafrost was observed or suspected.

We estimated the one-dimensional frost depth using the commercially available program Berg2 considering the default Anchorage climate parameter, typical surface n-factor, and assumed soil properties of moisture content and dry densities. We estimate the frost depth to average between 5 to 7 feet BGS with a maximum frost depth of 7.5 to 9 feet. It should be noted that seasonal fluctuations of snow cover, temperatures, infiltration/evaporation, and other climatic effects will have an impact on the design frost depth and therefore the calculated value should only be considered an average design value. Deeper frost penetrations are possible.

6.2 Site Preparation

Existing asphalt, concrete, grass, trees, and landscaping should be cleared as required to construct the new pavement sections. All earthwork should be performed in accordance with project specifications and with local, state, and federal laws and regulations.

6.3 Excavations

All excavations for utilities should follow proper local, state, and federal requirements including those in 29 Code of Federal Regulations (CFR) Part 1926 Occupational Safety and Health Standards Subpart P – Excavations (Occupational Safety and Health Administration [OSHA], 2020). The contractor is responsible for trench stability, worker safety, and regulation compliance as he will be present on a day to day basis and can adjust efforts to obtain the needed stability.

We recommend the area surrounding any excavation be prepared to direct surface water away from the excavation and to minimize surface water or runoff from entering the excavation. This may take the form of sandbags or silt fences. Excavation and backfilling operations should be closely coordinated so that seepage and surface runoff is not allowed to collect and stand in open trenches for long periods.

Excavations above the water table may stand relatively steeply initially but fail suddenly without warning. As the in situ soils dry, they will tend to ravel and slough to their natural angle of repose, which we estimate to be about 1.5H:1V (horizontal to vertical). If surface water is allowed to enter the trench, in situ soils may soften, squeeze, slump over time or due to disturbance, to slopes of 2.5 to 4H:1V or flatter.

We recommend that the excavations be performed with equipment that minimizes disturbance of the subgrade soils. We also recommend that the excavation bottom be evaluated by a qualified geotechnical engineer or trained inspector to identify unsuitable soils. If unsuitable soils, such as soft silts, debris-laden materials, or organics are encountered, they shall be over-excavated and replaced with engineered fill. Any soils that are disturbed, pumped, or rutted by construction activity shall be re-compacted or removed prior to placement of any classified fill.

After completion of construction activities, excavations should be cleared of debris and any structural material used for access. All subgrade exposed at the bottoms of excavations should be scarified, moisture conditioned, and tamped and rolled smooth.

6.4 Dewatering

Groundwater conditions will vary with environmental and seasonal conditions, such as the frequency and magnitude of rainfall patterns, as well as man-made influences, such as road grades, curbs, and storm sewers. We recommend the contractor evaluate groundwater levels at the time of the construction to determine groundwater impact on the construction procedures, if necessary. Contractors should note that shallow perched groundwater is likely to be encountered in some parts of the site. Excavations may experience seepage due to shallow, perched water or surface runoff, and should be monitored during construction.

In boreholes where groundwater was encountered, it was observed below 10 feet BGS in naturally-deposited soils. We do not anticipate dewatering being required during any excavations planned for construction. Surface runoff or seepage after a heavy precipitation event may cause water to pond in open excavations. Sumps and pumps are considered adequate to remove water that enters the excavation, if required.

6.5 Site Grading and Drainage

Site grading, including grade of parking areas, should be established to provide drainage of surface water and roof drainage away from proposed buildings. Grading should be designed to prevent ponding of surface water except where retention ponds or similar devices are intended. If a storm drain system is installed, site drainage should be directed toward storm drain inlets.

6.6 Utilities

The existing buildings onsite are served by water, sewer, natural gas, power and communications lines, many of which are buried. Storm drains are present under portions of the existing parking lot.

Utilities should be installed per the local utility agencies' standards considering frost depth and other constraints. Inspection of utility line subgrade should follow the requirements and standards of the local utility owner.

All utilities should be bedded and compacted per the requirements of the pipe manufacture or local utility entity. Backfill should consist of native material or classified over the bedding, as appropriate to match soils outside the utility trench. The appropriate pavement section should be incorporated into the utility trench design depending on trench location at the site. The satisfactory performance of piped utilities is highly dependent upon the quality of soil below, along the sides, and over the pipe.

6.7 Pavement Sections

There are two common approaches to pavement structural section followed in the Municipality of Anchorage (MOA). Complete Protection Method or Limited Subgrade Frost Penetration Method. Complete Protection requires the removal of all frost susceptible soils to the depth of the maximum frost which is typically uneconomically as noted by the frost depths above. The Limited Subgrade Frost Penetration Method considers a maximum amount of frost depth into frost susceptible layers to minimize potential movement. We recommend the Limited Subgrade Frost Penetration Method utilizing insulation to aid in the mitigation of frost depth. Typical frost penetrations into frost susceptible layers are limited and taken as a maximum of 10 of the structural section thickness.

We recommend pavement structural sections presented in Tables 6-1 and 6-2 for the parking lot/bus loop and sidewalk. Fill and compaction recommendations are provided in a separate section in this report. MOA material specifications may be found in the MOA Standard Specifications (M.A.S.S.; MOA Project Management and Engineering, 2015).

Table 6-1. Flexible Asphalt Insulated Pavement Section (Parking Lot/Bus Loop)

Thickness (inches)	Layer	Type/Material	Compaction (percent)
2/3*	Top/Wearing Course	Asphalt Concrete	-
4/3*	Base	MOA Leveling Course	95
14	Subbase	MOA Type II-A	95
2	Rigid Insulation	XPS	-
12	Subbase	MOA Type II-A	95
-	Geotextile Separation Fabric	Separation per MOA	-

*Larger number indicates bus loop values

Table 6-2. Rigid Pavement Insulated Section (Sidewalk)

Thickness (inches)	Layer	Type/Material	Compaction (percent)
4	Top/Wearing Course	Portland Concrete	-
4	Base	MOA Leveling Course	95
14	Subbase	MOA Type II-A	95
2	Rigid Insulation	XPS	-
12	Subbase	MOA Type II-A	95
-	Geotextile Separation Fabric	Separation per MOA	-

We recommend that a separation geotextile be used at the base of the pavement sections. Using a geotextile reduces the effects of thaw weakening, prevents fines migration, and increases lateral drainage at the base of the structural section.

A woven geotextile may provide better stabilization for soil when compared to a non-woven geotextile, however, a non-woven geotextile will provide better separation, preventing the migration of fines, which is important for this site. If a woven geotextile is used, it should meet project specifications and be designed to limit migration of fines into the pavement section. We recommend a non-woven geotextile consistent with MOA Standard Specifications be used for this project.

Geotextile joints should be overlapped or sewed in accordance with the manufacturer's recommendations. If no manufacturer's recommendations are provided, the geotextile should be placed in accordance with the guidance provided in the Federal Highway Administration (FHWA), Geosynthetic Design and Construction Guidelines, Publication No. FHWA-HI-95-038 (FHWA, 1998), as applicable.

The first lift above the separator fabric should be compacted by tracking with equipment or non-vibratory rollers to minimize disturbance of the sensitive subgrade soils. Subgrade soils that are disturbed, pumped, or rutted by construction activity should be removed prior to placement of any classified fill. Equipment should not track over or result in pumping the bottom of the excavation prior to fill placement.

6.8 Rigid Insulation

We recommend insulation consist of at least two layers of extruded polystyrene (XPS) with a minimum compressive strength of 60 pounds per square inch (psi) at no more than 10 percent strain and a maximum

water absorption of 0.3 percent by volume. We recommend a minimum cover of 18 inches over horizontal insulation when used in paving applications, unless beneath continuously heated pavements.

Board insulation installation should be extended a minimum of 3 feet beyond the back of the curb or 3 feet beyond the back of sidewalks. Extending the insulation 3 feet will reduce the risk of the curb or sidewalk heaving up. The potential for heaving decreases as the distance the insulation extends beyond the back of curb or sidewalk increases.

Transitions between insulated and non-insulated sections should involve the extension of insulation beyond the insulated section 8 to 12 feet with the insulation thickness reduced to minimize the possibility of differential heave. The insulation can be tapered from an R-value of 9 to an R-value of 4.5 in the transition zone. The subgrade in transitions should be graded (tapered) at a 10H:1V (horizontal to vertical) slope if construction distances permit. We recommend the transitions not be steeper than 5H:1V.

Insulation should be transported, handled, and placed with care to ensure it is not damaged prior to fill placement. The boards should be placed flat, on a smooth, level surface to minimize dimpling of the insulation. The adjoining ends should be butted closely together and any vertical joints should be staggered where more than one layer of insulation is used.

6.9 Retaining Walls and Lateral Earth Pressures

We understand retaining walls are not anticipated for this project; however, we recognize many times the site development changes such that they become necessary. We have provided the following general recommendations which can be refined if retaining walls are ultimately incorporated into the site design.

Retaining walls, including those used for basements or crawl spaces, must be designed to resist lateral earth pressures plus lateral pressure due to surcharge loads applied at the ground surface behind the wall. The magnitude of the earth pressure varies depending on permissible wall movement, type of backfill used, compaction, and drainage.

We recommend a minimum of 5 feet thick, clean, free-draining, and properly-compacted (per our recommendations) coarse-grained soil for backfill, with drainage provisions to prevent the buildup of hydrostatic pressure on the wall. All retaining wall recommendations in this report assume no hydrostatic pressures exist. Alternate recommendations can be provided, should differing materials or drainage exist. Additional lateral loads due to surface loads are not included in the equivalent fluid densities below.

The active earth pressure condition for static loading should be designed to resist the lateral earth pressure exerted by a fluid (i.e. equivalent fluid pressure) with a density of 40 pcf if the retaining wall is allowed to deflect or rotate a minimum of 0.001 times the wall height.

The at-rest pressure condition will occur if the wall is restrained at the top and cannot move sufficiently to permit the active earth pressure condition to exist. Under this condition, retaining walls should be designed to resist the lateral earth pressure exerted by a fluid with a density of 60 pcf.

The passive earth pressure condition for static loading should be designed for 180 pcf if the retaining wall is allowed to deflect or rotate a minimum of 0.01 times the wall height. This equivalent fluid pressure includes a factor of safety of 2.0. A friction coefficient of 0.30 is recommended to be used for resistance of footings to lateral sliding.

For seismic lateral earth pressures, we recommend a fluid density of 30 pcf be added to the active or at-rest condition, depending on the wall type.

We recommend any foundation stem walls be backfilled on both sides simultaneously to prevent differential lateral loading of the foundation wall.

We note equivalent fluid pressures are not applicable to braced excavation shoring or tie-back retaining walls. CRW can provide alternate recommendations should these kinds of retaining structures be used

6.10 Reuse of Material

The existing gravel may potentially be reused though does not meet MOA Type II-A classified fill. The existing gravel appears to meet MOA Type III classified fill.

Any excavated on-site soils should be protected from additional moisture inputs through the use of plastic tarps or other means. Cobbles were noted in existing structural fill while drilling, though none were observed to be greater than 6 inches in size. If cobbles exceeding 6 inches in any one direction are encountered during placement of reused material, they should be removed.

When reusing material, consideration should be given to the ability to excavate, sort, and store reusable materials. This effort may be less efficient and cost more than complete removal and replacement with imported materials.

6.11 Fill and Compaction

All earthworks should be performed in accordance with the project specifications and with local, state, and federal laws and regulations.

All fill material should be thawed, free from lumps, organics, debris, and other deleterious material and should be durable and sound. A vibratory steel drum roller should be used to compact engineered fill. Lightweight or hand-operated compactors should be used near existing structures, utilities, or new footings to avoid damage to the footings.

No hauling or grading equipment should be used in lieu of appropriate compaction equipment. Any loosening of fill material by hauling or other equipment shall be repaired and re-compacted. The number of passes required to meet the compaction criteria will depend on the size of compaction equipment used. Each layer should be compacted as recommended in the report and field verification of degree of compaction is recommended.

Frozen soil shall not be used as fill, nor shall any fill be placed over frozen soil. Any frozen soil shall be removed and replaced with appropriate fill prior to construction.

We recommend the engineered fill be clean, well-graded sand and gravel with a frost classification of non-frost susceptible (NFS) The gradation of the engineered fill should be consistent with the MOA Standard Specifications.

Engineered fill should be placed in loose lifts not exceeding 12 inches in thickness and adjusted in thickness depending on the size of the compaction equipment used. Each lift of engineered fill should be compacted to at least 95 percent of its Modified Proctor Maximum Density determined per ASTM D1557.

7. Limitations and Closure

The information submitted in this report is based on our interpretation of data from a field geotechnical exploration performed for this project. The conclusions contained in this report are based on site conditions as they were observed on the drilling dates indicated. It is presumed that the exploratory borings are representative of the subsurface conditions throughout the site. Effort was made to obtain information representative of existing conditions at the site. If, however, subsurface conditions are found to differ, we should be notified immediately to review these recommendations in light of additional information.

If there is substantial lapse of time between the submittal of this report and the start of work at the site, or if conditions have changed due to natural causes or construction operations at or adjacent to the site, we recommend that this report be reviewed to determine the applicability of the conclusions considering the changed conditions and time lapse. Unanticipated soil conditions are commonly encountered and cannot fully be determined by collecting discrete samples or advancing borings. The client and contractor should be aware of this risk and account for contingency accordingly.

Samples will be retained by CRW for six months following the date on which the final report is issued. Other arrangements may be made at the client's request.

This report was prepared by CRW for use on this project only, and may not be used in any manner that would constitute a detriment to CRW. CRW is not responsible for conclusions, opinions, or recommendations made by others based on data presented in this report.

8. References

Alaska Department of Environmental Conservation (ADEC) Contaminated Sites Program online database. Retrieved January 2021. https://adec.maps.arcgis.com/apps/mapviewer/index.html?webmap=315240bfbaf84aa0b8272ad1cef3cad3

Alaska Department of Natural Resources Division of Geological and Geophysical Surveys. Retrieved August 2020: https://dggs.alaska.gov/hazards/earthquakes.html.

Alaska Earthquake Center. Retrieved July 2020: http://earthquake.alaska.edu/.

American Society of Civil Engineers (ASCE). 2016. ASCE 7-16: Minimum Design Loads and Associated Criteria for Buildings and Other Structures.

Applied Technology Council (ATC). Online Hazards by Location tool https://hazards.atcouncil.org/. Retrieved June 2022.

Combellick, R.A., 1999. Simplified geologic map and cross sections of central and east Anchorage, Alaska: Alaska Division of Geological and Geophysical Surveys Preliminary Interpretive Report 1999-1.

Federal Highway Administration (FHWA), 1998. Geosynthetic Design and Construction Guidelines, Publication No. FHWA-HI-95-038.

International Codes Council. 2018. International Building Code.

Municipality of Anchorage, 2006. GIS Services, Data, Projects & Procurement Division, Information Technology Department *Anchorage Bowl Seismic*. December. https://www.muni.org/Departments/OCPD/Planning/Planning%20Maps/Anch_Bowl_Seismic_8x11.pdf

Municipality of Anchorage Project Management and Engineering. 2015. Municipality of Anchorage Standard Specifications.

Occupational Safety and Health Administration, 2020. 29 CFR Part 1926 Subpart P - Excavations, Occupational Safety and Health Standards. United Stated Department of Labor. Updated February 2020.

Schmoll, H.R. and Dobrovolny, E., 1972. Generalized Geologic Map of Anchorage and Vicinity, Greater Anchorage Area Borough, Alaska. US. Geological Survey Open File Report: Technical Data Unit Classification number 513.

United States Geological Survey (USGS) Quaternary Fault and Fold Database. Retrieved July 2020: https://www.usgs.gov/natural-hazards/earthquake-hazards/hazards.

USGS. Online Unified Hazard Tool https://earthquake.usgs.gov/hazards/interactive/. Retrieved June 2022.

USGS website. https://www.usgs.gov/news/2018-anchorage-earthquake.

Figure



LEGEND:

⬡ GEOTECHNICAL BOREHOLE LOCATION, "P" DENOTES PIEZOMETER COMPLETION

50' 0 50' 100'

PROJECT: 10417.00
STATUS: FINAL

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KINCAID ELEMENTARY SCHOOL
SITE IMPROVEMENTS

BOREHOLE LOCATIONS

DATE 09/2022
SCALE GRAPHIC
FIGURE 1

File: J:\JobsData\10417.00 Kincaid ES Site Improvements\00 CADD 2019\02 Figures\05 Geotech\10417 Geotech Figure 1.dwg

Appendix A

Borehole Logs

Included in this section:

1) Borehole Log Legend
2) Borehole Logs (BH-01 through BH-14)

UNIFIED SOIL CLASSIFICATION (ASTM D 2487)

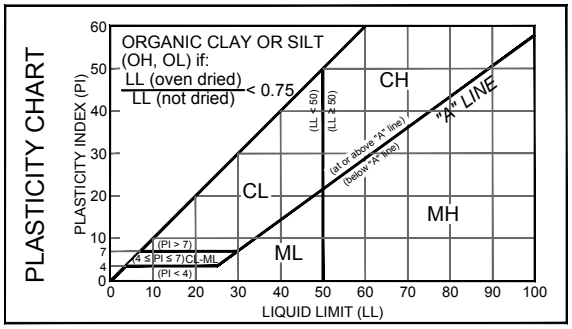
GROUP SYMBOL	SOIL GROUP NAMES & LEGEND	
GW	WELL-GRADED GRAVEL	if soil contains ≥ 15% sand, add "with sand"
GP	POORLY GRADED GRAVEL	
GM	SILTY GRAVEL	
GC	CLAYEY GRAVEL	
SW	WELL-GRADED SAND	if soil contains ≥ 15% gravel, add "with gravel"
SP	POORLY GRADED SAND	
SM	SILTY SAND	
SC	CLAYEY SAND	
CL	LEAN CLAY	if soil contains coarse-grained soil from 15% to 29%, add "with sand" or "with gravel" for whichever type is prominent, or for ≥ 30%, add "sandy" or "gravelly"
ML	SILT	
OL	ORGANIC CLAY OR SILT	
CH	FAT CLAY	
MH	ELASTIC SILT	
OH	ORGANIC CLAY OR SILT	
PT	PEAT	

Gravels or sands with 5% to 12 % fines require dual symbols (GW-GM, GW-GC, GP-GM, GP-GC, SW-SM, SW-SC, SP-SM, SP-SC) and add "with clay or "with silt" to group name. If fines classify as CL-ML for GM or SM, use dual symbol GC-GM or SC-SM.

Optional Abbreviations: Lower case "s" after USCS group symbol denotes either "sandy or "with sand" and "g" denotes either "gravelly" or "with gravel."

COMPONENT DEFINITIONS BY GRADATION

COMPONENT	SIZE RANGE
BOULDERS	ABOVE 12 IN.
COBBLES	3 IN. TO 12 IN.
GRAVEL	3 IN. TO NO. 4 (4.76 mm)
COARSE GRAVEL	3 IN. TO 3/4 IN.
FINE GRAVEL	3/4 IN. TO NO. 4 (4.76 mm)
SAND	NO. 4 (4.76 mm) TO NO. 200 (0.074 mm)
COARSE SAND	NO. 4 (4.76 mm) TO NO. 10 (2.0 mm)
MEDIUM SAND	NO 10 (2.0 mm) TO NO. 40 (0.42 mm)
FINE SAND	NO. 40 (0.42 mm) TO NO. 200 (0.074 mm)
SILT AND CLAY	SMALLER THAN NO. 200 (0.074 mm)
SILT	0.074 mm TO 0.005 mm
CLAY	LESS THAN 0.005 mm



OTHER SYMBOLS

SYMBOL	NAMES & LEGEND	
BLDR	COBBLES AND BOULDERS	overlay
FILL	GRANULAR FILL	man-made or placed
WD	WOODY DEBRIS	
RAP	RECLAIMED ASPHALT PAVEMENT	

RELATIVE DENSITY / CONSISTENCY ESTIMATE USING STANDARD PENETRATION TEST (SPT) VALUES (FROM TERZAGHI & PECK 1996)

COHESIONLESS SOILS[a]		COHESIVE SOILS[b]		
RELATIVE DENSITY	N_{60} (BLOWS/FOOT)[c]	CONSISTENCY	N_{60} (BLOWS/FOOT)[c]	UNCONFINED COMPRESSIVE STRENGTH (TSF)[d]
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.50
MED DENSE	10 - 30	MEDIUM	4 - 8	0.50 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

(a) Soils consisting of gravel, sand and silt, either separately or in combination possessing no characteristics of plasticity, and exhibiting drained behavior.
(b) Soils possessing the characteristics of plasticity, and exhibiting undrained behavior.
(c) Refer to ASTM D 1586-99 for a definition of N.
(d) Undrained shear strength, s_u = 1/2 unconfined compression strength, U_c. Note that Torvane measures s_u and Pocket Penetrometer measures U_c.

CRITERIA FOR DESCRIBING MOISTURE CONDITION (ASTM D 2488)

DRY	ABSENCE OF MOISTURE, DUSTY, DRY TO THE TOUCH
MOIST	DAMP BUT NO VISIBLE WATER
WET	VISIBLE FREE WATER, USUALLY SOIL IS BELOW WATER TABLE

SAMPLER ABBREVIATIONS

SS	SPT Sampler (2 in. OD, 140 lb hammer)	C	Core (Rock)
SSO	Oversize Spit Spoon (2.5 in. OD, 140 lb typ.)	TW	Thin Wall (Shelby Tube)
HD	Heavy Duty Split Spoon (3 in. OD, 300/340 lb typ.)	MS	Modified Shelby
BD	Bulk Drive (4 in. OD, 300/340 lb hammer typ.)	GP	Geoprobe
CA	Continuous Core (Soil in Hollow-Stem Auger)	AR	Air Rotary Cuttings
G	Grab Sample from surface / testpit	AG	Auger Cuttings

DESCRIPTIVE TERMINOLOGY FOR PERCENTAGES (ASTM D 2488)

DESCRIPTIVE TERMS	RANGE OF PROPORTION
TRACE	0 - 5%
FEW	5 - 10%
LITTLE	10 - 25%
SOME	30 - 45%
MOSTLY	50 - 100%

LABORATORY TEST ABBREVIATIONS

AL	Atterberg Limit	PI	Plastic Index	TS	Thaw Consolidation
Consol	Consolidation	PID	Photoionization Detector	TV	Torvane
LMA	Limited Mechanical Analysis	Proc	Proctor	TXCD	Consolidated Drained Triaxial
MA	Sieve and Hydrometer Analysis	PP	Pocket Penetrometer	TXCU	Consolidated Undrained Triaxial
MC	Moisture Content	P200	Percent Fines (Silt & Clay)	TXUU	Unconsolidated Undrained Triaxial
NP	Non-plastic	SA	Sieve Analysis	VS	Vane Shear
OLI	Organic Loss on Ignition	SpG	Specific Gravity	Ω	Soil Resistivity

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LEGEND: FIELD AND LABORATORY TEST ABBREVIATIONS

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FROZEN SOIL CLASSIFICATION (ASTM D 4083)

1. DESCRIBE SOIL INDEPENDENT OF FROZEN STATE	CLASSIFY SOIL BY THE UNIFIED SOIL CLASSIFICATION SYSTEM				
	MAJOR GROUP		SUBGROUP		
	DESCRIPTION	DESIGNATION	DESCRIPTION		DESIGNATION
2. MODIFY SOIL DESCRIPTION BY DESCRIPTION OF FROZEN SOIL	Segregated ice not visible by eye	N	Poorly bonded of friable		N_f
			Well bonded	No excess ice	Nbn
				Excess ice	Nbe
	Segregated ice visible by eye (ice less than 25 mm thick)	V	Individual ice crystals or inclusions		V_x
			Ice coatings on particles		V_c
			Random or irregularly oriented ice formations		V_r
			Stratified or distinctly oriented ice formations		V_s
			Uniformly distributed ice		V_u
3. MODIFY SOIL DESCRIPTION BY DESCRIPTION OF SUBSTANTIAL ICE STRATA	Ice greater than 25 mm thick	ICE	Ice with soil inclusions		ICE+soil type
			Ice without soil inclusions		ICE

ICE BONDING SYMBOLS



No ice-bonded soil observed

Poorly bonded or friable

Well bonded

DEFINITIONS

Candled Ice is ice which has rotted or otherwise formed into long columnar crystals, very loosely bonded together.

Clear Ice is transparent and contains only a moderate number of air bubbles.

Cloudy Ice is translucent, but essentially sound and non-pervious.

Friable denotes a condition in which material is easily broken up under light to moderate pressure.

Granular Ice is composed of coarse, more or less equidimensional, ice crystals weakly bonded together.

Ice Coatings on particles are discernible layers of ice found on or below the larger soil particles in a frozen soil mass. They are sometimes associated with hoarfrost crystals, which have grown into voids produced by the freezing action.

Ice Crystal is a very small individual ice particle visible in the face of a soil mass. Crystals may be present alone or in a combination with other ice formations.

Ice Lenses are lenticular ice formations in soil occurring essentially parallel to each other, generally normal to the direction of heat loss and commonly in repeated layers.

Ice Segregation is the growth of ice as distinct lenses, layers, veins and masses in soils, commonly but not always oriented normal to direction of heat loss.

Massive Ice is a large mass of ice, typically nearly pure and relatively homogeneous.

Poorly-Bonded signifies that the soil particles are weakly held together by the ice and that the frozen soil consequently has poor resistance to chipping or breaking.

Porous Ice contains numerous void, usually interconnected and usually resulting from melting at air bubbles or along crystal interfaces from presence of salt or other materials in the water, or from the freezing of saturated snow. Though porous, the mass retains its structural unity.

Thaw-Stable frozen soils do not, on thawing, show loss of strength below normal, long-time thawed values nor produce detrimental settlement.

Thaw-Unstable frozen soils show on thawing, significant loss of strength below normal, long-time thawed values and/or significant settlement, as a direct result of the melting of the excess ice in the soil.

Well-Bonded signifies that the soil particles are strongly held together by the ice and that the frozen soil possesses relatively high resistance to chipping or breaking.

FROST DESIGN SOIL CLASSIFICATION(1)

FROST GROUP(2)	GENERAL SOIL TYPE	% FINER THAN 0.02 mm BY WEIGHT	TYPICAL USCS SOIL CLASS
NFS(3)	(a) Gravels Crushed stone Crushed rock	0 - 1.5	GW, GP
	(b) Sands	0 - 3	SW, SP
PFS(4) [MOA NFS] [FAA NFS]	(a) Gravels Crushed stone Crushed rock	1.5 - 3	GW, GP
[MOA F2] [FAA FG-2]	(b) Sands	3 - 10	SW, SP
S1 [MOA F1] [FAA FG-1]	Gravelly soils	3 - 6	GW, GP, GW-GM, GP-GM, GW-GC, GP-GC
S1 [MOA F2] [FAA FG-2]	Sandy soils	3 - 6	SW, SP, SW-SM, SP-SM, SW-SC, SP-SC
F1(5) [FAA FG-1]	Gravelly soils	6 - 10	GM, GC, GM-GC, GW-GM, GP-GM, GW-GC, GP-GC
F2(5) [FAA FG-2]	(a) Gravelly soils	10 - 20	GW, GP, GW-GM, GP-GM, GW-GC, GP-GC
	(b) Sands	6 - 15	SM, SW-SM, SP-SM, SC, SW-SC, SP-SC, SM-SC
F3(5) [FAA FG-2] [For Clays, FAA FG-3]	(a) Gravelly soils	10 -20	GM, GC, GM-GC
	(b) Sands, except very fine silty sands	6 - 15	SM, SC, SM-SC
	(c) Clays, PI>12	--	CL, CH
F4(5) [FAA FG-4]	(a) Silts	--	ML, MH, ML-CL
	(b) Very fine silty sands	Over 15	SM, SC, SM-SC
	(c) Clays, PI<12	--	CL, ML-CL
	(d) Varved clays or other fine-grained banded sediments	--	CL or CH layered with ML, MH, ML-CL, SM, SC, or SM-SC

(1) From the U.S. Army Corps of Engineers (USACE), EM 1110-3-138, "Pavement Criteria for Seasonal Frost Conditions", April 1984
(2) USACE frost groups directly correspond to frost groups in Municipality of Anchorage (MOA) Design Criteria Manual (DCM). Federal Aviation Administration (FAA) frost groups come from Table 2-2 in Section 2.7 of Advisory Circular (AC) 150/5320-6F, Airport Pavement Design and Evaluation.
(3) Non-frost susceptible
(4) Possibly frost susceptible, requires lab test for void ratio to determine frost design classification.
(5) Consistent with MOA Definition.

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LEGEND: FROZEN SOIL CLASSIFICATION

FILE NAME: M:\Engineering_References\Tech_Geotechnical\CRW Geotechnical Report Template\Borehole Log Legend\Geotech_RAP_debris_added.dwg

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BOREHOLE BH-01

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 5/1/22 **COMPLETED** 5/1/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING 15.88 ft

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	SPT N VALUE / PL MC LL
0	AC		ASPHALT CONCRETE, (AC)								
	GW-GM		WELL GRADED GRAVEL WITH SILT AND SAND, (GW-GM) 61% gravel, 31% sand, 8% fines Brown, moist, asphalt odor. Subangular to rounded gravel and cobbles up to 3.5 inches. Sieve analysis on grab sample.	SS G S1	67	22-26-23-16 (49)			11.6	SA	
			Slit tape geotextile.	SS S2	25	17-15-9-8 (24)			8.8		
5	ML		SILT WITH SAND, (ML) 0% gravel, 24% sand, 76% fines Reddish brown, moist, no odor. Contains trace organics.	SS S3A SS S3B SS S3C	67	17-12-14-13 (26)			7.1 6.1 2.1	LMA P200	
	SM		SILTY SAND, (SM) 0% gravel, 85% sand, 15% fines Yellow-brown, moist, no odor. Fine to medium sand.	SS S4A					7.8		
	ML		SANDY SILT, (ML) 5% gravel, 30% sand, 65% fines Orange-brown, moist, crumbles with hand pressure, no odor.	SS S4B	50	8-9-11-12 (20)			8.1		
10	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, medium stiff, non-plastic, no odor.	SS S5A	71	5-6-8-9 (14)			7.1		
	ML		SILT WITH SAND, (ML) 0% gravel, 10% sand, 90% fines Orange-brown, moist, medium stiff, non-plastic, no odor.	SS S5B					6.9		
15	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, medium to firm, non-plastic, no odor.	SS S6	83	10-9-10-11 (19)			6.6		

Bottom of borehole at 17.0 feet.

Notes:
Completed as piezometer, 1" Sch 40 PVC with glued slip connections, hand-slotted. Screened 6.6 to 16.6 ft BGS. Flushmount steel monument with 1/2-inch bolts. Annulus backfilled with cuttings.

CRW MOA LOG - CRW_DATATEMPLATE_20190115.GDT - 9/15/22 10:57 - 10417_KINCAIDES.GPJ

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BOREHOLE BH-02

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 5/1/22 **COMPLETED** 5/1/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	AC		ASPHALT CONCRETE, (AC)								
	GP		POORLY GRADED GRAVEL WITH SAND, (GP) 74% gravel, 22% sand, 4% fines Gray-brown, moist, asphalt odor. Subround to rounded gravel and cobbles up to 5 inches, some broken. 15 to 30% cobbles by volume. LMA on grab sample.	SS G S1	38	22-25-20-15 (45)			4.9	LMA	
	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan to brown, moist, crumbles with hand pressure, medium to firm, non-plastic, no odor. Possibly partially frozen where indicated, bonding variable, no visible ice.	SS S2	0	8-7-6-12 (13)					
5				SS S3	67	9-4-5-8 (9)			4.6		
				SS S4	0	8-12-10-15 (22)					
10				SS S5	100	4-5-7-10 (12)			5.2		
15				SS S6	100	5-6-10-9 (16)			5.1		

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings, cold patch asphalt.

CRW MOA LOG - CRW_DATATEMPLATE_20190115.GDT - 9/15/22 10:57 - 10417_KINCAIDES.GPJ

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99503
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BOREHOLE BH-03

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 5/1/22 **COMPLETED** 5/1/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	AC		ASPHALT CONCRETE, (AC)								
	GP		POORLY GRADED GRAVEL WITH SAND, (GP) 70% gravel, 26% sand, 4% fines Brown, moist, asphalt odor. Subround to rounded gravel up to 2.5 inches. Sieve analysis on grab sample.	SS G S1	33	13-19-16-11 (35)			5.2	SA	
	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan, moist, crumbles easily with hand pressure, soft, non-plastic, no odor.	SS S2A					5.4		
	ML		SILT, (ML) 0% gravel, 4% sand, 96% fines Tan, moist, crumbles very easily with hand pressure, no odor. 20% finer than 0.02 millimeters. Frost class F4 (hydrometer). Frozen portion is Nbn.	SS S2B	75	5-5-7-14 (12)			7.5	MA	
5	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan, moist, crumbles easily with hand pressure, soft, non-plastic, no odor.	SS S3A	67	14-12-11-11 (23)			7.6		
			SILT, (ML) 0% gravel, 5% sand, 95% fines Tan, moist, crumbles very easily with hand pressure, no odor.	SS S3B					7.6		
				SS S4	67	8-9-12-14 (21)			5.4		
10	ML			SS S5	67	8-15-14-14 (29)			9.2		
15				SS S6	67	6-11-14-13 (25)			7.5		

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings, cold patch asphalt.

CRW MOA LOG - CRW_DATATEMPLATE_20190115.GDT - 9/15/22 10:57 - 10417_KINCAIDES.GPJ

CRW Engineering Group
3940 Arctic BLVD
99503
Telephone: 9076465670

BOREHOLE BH-04

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 5/1/22 **COMPLETED** 5/1/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	AC		ASPHALT CONCRETE, (AC)								
	GP		POORLY GRADED GRAVEL WITH SILT AND SAND, (GP) 67% gravel, 27% sand, 6% fines Gray-brown, moist, no odor. Subangular to subrounded gravel up to 3 inches and cobbles up to 5.5 inches. 15 to 30% cobbles by volume. LMA on grab sample.	SS G S1	21	11-23-8-8 (31)			4.8	LMA	
			Slit-tape geotextile.								
	ML		SILT, (ML) 5% gravel, 5% sand, 90% fines Tan, moist, soft and crumbles easily with hand pressure when thawed, non-plastic, no odor. Contains trace angular gravel up to 3/8 inch. Frozen: upper 13 inches (Nbn), lower 3 inches Vx with 15% ice in lenses 1/16 inch thick.	SS S2	71	0-6-6-6 (12)		■	5.4		
5	ML		SILT, (ML) 0% gravel, 9% sand, 95% fines Tan, moist, medium to firm, nonplastic, crumbles easily with hand pressure, no odor.	SS S3	88	4-6-8-10 (14)			4.6		
	ML		SILT, (ML) 0% gravel, 0% sand, 100% fines Tan, moist, medium to firm, nonplastic, crumbles easily with hand pressure, no odor. Has inclusions of gray very fine silt or clay, minor proportion of volume.	SS S4	88	7-8-8-9 (16)			6.4		
10	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan, moist, medium to firm, nonplastic, crumbles easily with hand pressure, no odor. Single lamination with medium sand.	SS S5	92	4-6-8-9 (14)			5.2		
15	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan, moist, nonplastic, crumbles very easily with hand pressure, no odor.	SS S6	92	7-13-14-14 (27)			4.8		

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings, cold patch asphalt.

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BOREHOLE BH-05

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 5/1/22 **COMPLETED** 5/1/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING 14.92 ft

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	SPT N VALUE / PL MC LL
0	AC		ASPHALT CONCRETE, (AC) Completely broken during milling.								
	GP		POORLY GRADED GRAVEL WITH SILT AND SAND, (GP) 68% gravel, 26% sand, 6% fines Gray-brown, moist, no odor. Subangular to rounded gravel up to 3 inches and cobbles up to 3.25 inches, broken, likely larger. 5 to 10% cobbles by volume. Sieve analysis on grab sample.	SS G S1	63	17-19-16-13 (35)			4.1	SA	
			Slit-tape geotextile. Depth estimated.	SS S2	33	4-3-9-8 (12)			6		
5	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan-brown, moist, medium to firm, non-plastic, no odor.	SS S3	83	4-5-10-10 (15)			6		
			SILT, (ML) 0% gravel, 0% sand, 100% fines Tan-brown, moist, medium, nonplastic, crumbles easily with hand pressure, no odor. Below 10 ft BGS contains some trace organics, orange and dark brown mottling.	SS S4	100	8-10-13-15 (23)			6.4		
10				SS S5	100	8-10-13-15 (23)			6.5		
	ML										
15				SS S6	100	11-14-15-17 (29)			8.2		

Bottom of borehole at 17.0 feet.

Notes:
Completed as piezometer, 1" Sch 40 PVC with glued slip connections, hand-slotted. Screened 6.5 to 16.5 ft BGS. Flushmount steel monument with 1/2-inch bolts. Annulus backfilled with cuttings.

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BOREHOLE BH-06

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 5/1/22 **COMPLETED** 5/1/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	AC		ASPHALT CONCRETE, (AC)								
	GM		SILTY GRAVEL WITH SAND, (GM) 71% gravel, 15% sand, 14% fines Brown, moist, asphalt odor. Subround to rounded gravel and cobbles up to 4.5 inches, some broken, likely larger. 5-10% cobbles by volume. LMA on grab sample.	SS G S1	54	13-11-8-4 (19)			4.1	LMA	
	SM		SILTY SAND WITH GRAVEL, (SM) 25% gravel, 28% sand, 47% fines Brown, moist to wet, no odor. Possibly slough.	SS S2A					5.2	LMA	
			SILT, (ML) 5% gravel, 5% sand, 90% fines Tan to brown, moist, medium to firm, non-plastic, no odor. Upper 17 inches frozen (Nbn).	SS S2B	88	8-10-5-8 (15)			4.9		
5				SS S3	88	4-9-11-10 (20)			5.1		
				SS S4	100	4-5-8-11 (13)			5.3		
10	ML			SS S5	92	6-8-13-11 (21)			5.5		
15				SS S6	96	10-12-12-13 (24)			5.6		

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings, cold patch asphalt.

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BOREHOLE BH-07

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 4/30/22 **COMPLETED** 4/30/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	OL		ORGANIC SOIL, (OL) Grass, roots, and topsoil, not sampled.	SS S1	38	0-0-3-4 (3)			1.7		
	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan-brown, moist to wet, soft, low plasticity to non-plastic, no odor. Where frozen, Vx 15% ice, well-bonded.								
			SILT, (ML) 0% gravel, 0% sand, 100% fines Brown, moist to wet, soft to medium, low plasticity to non-plastic, no odor. 65% finer than 0.02 millimeters, frost class F4.	SS S2	100	3-5-9-12 (14)			1.8		
5	ML			SS S3	100	5-8-10-12 (18)			2.3	MA	
			SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, medium to firm, non-plastic, no odor. Below 10 ft BGS, 1/8- to 1/2-inch-thick lenses of darker brown soil, less tha 5% of volume.	SS S4	100	4-7-10-13 (17)			3.9		
10	ML			SS S5	100	5-10-14-15 (24)			2		
15	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, stiff, non-plastic, no odor.	SS S6A	100	4-12-16-16 (28)			2.2		
	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, medium, non-plastic, no odor.	SS S6B					1.9		

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings.

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BOREHOLE BH-08

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 4/30/22 **COMPLETED** 4/30/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING Not observed.

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	OL		ORGANIC SOIL, (OL) Grass, roots, and topsoil, not sampled.								
			SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, soft to medium, crumbles easily with hand pressure, non-plastic, no odor. Below 10 ft BGS, contains trace oxidized organic material and some thin lenses of stiffer silt.	SS S1	53	0-2-4-5 (6)			7.9		
				SS S2	92	3-8-7-9 (15)			2.4		
5				SS S3	75	4-8-10-11 (18)			1.9		
	ML			SS S4	88	6-8-10-11 (18)			1.6		
10				SS S5	79	4-6-8-8 (14)			2.1		
	ML		SILT, (ML) 0% gravel, 26% sand, 74% fines Brown, moist, stiff, non-plastic, no odor. Top of interval inferred from drilling action.								
15									1.6	LMA	
	GP		POORLY GRADED GRAVEL WITH SAND, (GP) 60% gravel, 35% sand, 5% fines Dark brown, moist, no odor. Subrounded to rounded gravel up to 2 inches, broken, likely larger.	SS S6A / SS S6B	67	17-25-26 (51)			1.7		>>▲

Bottom of borehole at 16.5 feet.

Notes:
Completed as piezometer, 1" Sch 40 PVC with glued slip connections, hand-slotted. Screened 6.3 to 16.3 ft BGS. Flushmount steel monument with 1/2-inch bolts. Annulus backfilled with cuttings.

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BOREHOLE BH-09

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 5/1/22 **COMPLETED** 5/1/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	AC		ASPHALT CONCRETE, (AC)						3.5	SA	
	GW-GM		WELL GRADED GRAVEL WITH SILT AND SAND, (GW-GM) 55% gravel, 39% sand, 6% fines Brown, moist, asphalt odor. Subrounded to rounded gravel and cobbles up to 3.75 inches, some broken. 5 to 10% cobbles by volume. Sieve analysis on grab sample.	SS G S1	42	15-19-39-18 (58)				>>
			Slit-tape geotextile. Depth estimated.	SS S2	21	10-5-5-10 (10)			4.5		
5			SILT, (ML) 0% gravel, 5% sand, 95% fines Tan to brown, moist, crumbles easily with hand pressure, soft to firm, non-plastic, no odor. May be frozen 5 ft BGS (Nbn). Trace sand and rounded gravel up to 0.5 inch. Trace fresh-looking wood fragments in 20-ft BGS sample.	SS S3	50	6-6-8-12 (14)			5		
				SS S4	79	7-9-10-11 (19)			5.3		
10	ML		0% gravel, 5% sand, 95% fines	SS S5	88	6-8-10-11 (18)			6		
15				SS	0	9-8-9-10 (17)					
20											

(Continued Next Page)

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BOREHOLE BH-09

CLIENT Anchorage School District **PROJECT NAME** Kincaid Elementary School Improvements

PROJECT NUMBER 10417.00 **PROJECT LOCATION** Anchorage, Alaska

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
20	ML		0% gravel, 0% sand, 100% fines Wood fragments present.	SS S6A	71	6-6-7-7 (13)			5.1		
	ML		SILT, (ML) 0% gravel, 0% sand, 100% fines Gray, moist, soft to medium, crumbles easily with hand pressure, non-plastic, no odor.	SS S6B					5.4		

Bottom of borehole at 22.0 feet.

Notes:
Backfilled with cuttings, cold patch asphalt.

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BOREHOLE BH-10

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 4/30/22 **COMPLETED** 4/30/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING 2.00 ft Perched above subgrade.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	SPT N VALUE / PL MC LL
0	AC		ASPHALT CONCRETE, (AC)								
	GP-GM		POORLY GRADED GRAVEL WITH SILT AND SAND, (GP-GM) 58% gravel, 33% sand, 9% fines Brown, moist, asphalt odor. Subrounded to rounded gravel up to 3" in spoon and cuttings. LMA on grab sample.	SS G S1	38	13-12-10-7 (22)			3.2	LMA	
	GM		SILTY GRAVEL WITH SAND, (GM) 46% gravel, 41% sand, 13% fines Brown, wet, no odor. Subrounded to rounded gravel up to 3 inches.	SS S2A					1.8	LMA	
	GM		Slit-tape geotextile. SILTY GRAVEL, (GM) 65% gravel, 5% sand, 30% fines Brown, moist to wet, no odor. Rounded gravel up to 1 inch.	SS S2B	38	3-7-11-7 (18)			1.6		
5	ML		SILT WITH SAND, (ML) 3% gravel, 18% sand, 79% fines Brown, moist, non-plastic, no odor. Trace rounded gravel up to 1 inch.	SS S3	71	6-11-14-15 (25)			1.3	LMA	
				SS	0	19-19-32-50/4"					>>
10	SM		SILTY SAND, (SM) 0% gravel, 85% sand, 15% fines Brown, moist, no odor. Silty sand with 1.5-inch layer of sandy silt.	SS S5	75	17-20-16-12 (36)			2		
15	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, low plasticity to non-plastic, no odor.	SS S6	75	4-7-6-6 (13)			1.4		

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings, cold patch asphalt.

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BOREHOLE BH-11

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 4/30/22 **COMPLETED** 4/30/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING 16.07 ft

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS
0	AC		ASPHALT CONCRETE, (AC)							
	GP-GM		POORLY GRADED GRAVEL WITH SILT AND SAND, (GP-GM) 55% gravel, 37% sand, 8% fines Brown, moist, asphalt odor. Subrounded to rounded gravel up to 3" in spoon and cuttings. Sieve analysis on grab sample.	SS G S1	42	7-9-7-4 (16)			1.2	SA
	ML		SILT WITH SAND, (ML) 5% gravel, 11% sand, 84% fines Brown to tan, moist, nonplastic, no odor. Subangular to rounded gravel up to 3/4 inch, some oxidized organics.	SS S2	75	3-7-13-17 (20)			1.6	LMA
5	ML		9% gravel, 15% sand, 76% fines	SS S3	67	7-7-12-10 (19)			1.6	LMA
			SILT WITH SAND, (ML) 5% gravel, 20% sand, 75% fines Tan, moist, crumbles easily with hand pressure, nonplastic, no odor. Fine to coarse sand in lenses up to 1.5 inches thick, some silty sand lenses.	SS S4	75	6-15-15-15 (30)			1.7	
10	ML		5% gravel, 35% sand, 60% fines	SS S5	75	7-9-11-13 (20)			2.4	
15	GM		SILTY GRAVEL, (GM) 75% gravel, 5% sand, 20% fines Tan, moist, no odor. Silt that crumbles easily with hand pressure with gravel up to 1.5 inches, some broken, likely larger.	SS S6	27	17-23-27-50/4"			1.8	

▲ SPT N VALUE ▲
10 20 30 40
PL MC LL
10 20 30 40

Refusal at 16.8 feet.
Bottom of borehole at 16.8 feet.

Notes:
Completed as piezometer, 1" Sch 40 PVC with glued slip connections, hand-slotted. Screened 6.4 to 16.4 ft BGS. Flushmount steel monument with 1/2-inch bolts. Annulus backfilled with cuttings.

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BOREHOLE BH-12

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 4/30/22 **COMPLETED** 4/30/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING 20.00 ft
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING 18.70 ft

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS
0	OL		ORGANIC SOIL, (OL) 0% gravel, 0% sand, 100% fines Two thin layers of wet, dark brown organic soil with wet, tan-gray mottled silt between.	SS S1A					1.2	
				SS S1B	58	3-5-5-4 (10)			1.8	
	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Tan, moist, soft and crumbles easily with hand pressure, nonplastic, no odor.							
				SS S2	83	2-3-5-7 (8)			2.2	
5										
			SILT, (ML) 0% gravel, 5% sand, 95% fines Tan-gray, moist, medium, nonplastic, no odor.	SS S3	92	5-7-9-11 (16)			2.5	
	ML									
				SS S4A	92	5-10-12-17 (22)			2.1	
	GM		SILTY GRAVEL, (GM) 50% gravel, 5% sand, 45% fines Brown, moist, no odor. Sand and subangular to subrounded	SS S4B					1.3	LMA
10	ML		gravel up to 1 inch. Subsample analyzed by laboratory excluded gravel, result 0% gravel, 3% sand, 97% fines. Assigned grain size percentages based on visual classification.	SS S5A					2.5	
				SS S5B	88	7-9-11-15 (20)			2.6	
			SANDY SILT, (ML) 0% gravel, 40% sand, 60% fines Brown, moist, no odor. Fine to medium sand.							
			SILT, (ML) 0% gravel, 5% sand, 95% fines Tan-brown, moist, crumbles easily with hand pressure, medium to stiff, nonplastic, no odor. Trace amount of angular sand.							
15	ML			SS S6	92	7-12-19-17 (31)			1	
20										

▲ SPT N VALUE ▲
10 20 30 40
PL MC LL
10 20 30 40

(Continued Next Page)

CRW MOA LOG - CRW_DATATEMPLATE_20190115.GDT - 9/15/22 10:57 - 10417_KINCAIDES.GPJ

CRW Engineering Group
3940 Arctic BLVD
99503
Telephone: 9076465670

BOREHOLE BH-12

CLIENT Anchorage School District **PROJECT NAME** Kincaid Elementary School Improvements

PROJECT NUMBER 10417.00 **PROJECT LOCATION** Anchorage, Alaska

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
20											
	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist to wet, soft to medium, nonplastic, no odor.	SS S7	75	7-12-11-8 (23)			2.4		

Bottom of borehole at 22.0 feet.

Notes:
Completed as piezometer, 1" Sch 40 PVC with glued slip connections, hand-slotted. Screened 11 to 21 ft BGS. Flushmount steel monument with 1/2-inch bolts. Annulus backfilled with cuttings.

CRW MOA LOG - CRW_DATATEMPLATE_20190115.GDT - 9/15/22 10:57 - 10417_KINCAIDES.GPJ

CRW Engineering Group
3940 Arctic BLVD
99503
Telephone: 9076465670

BOREHOLE BH-13

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 4/30/22 **COMPLETED** 4/30/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not observed.
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID (ppm)	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0	GP-GM		POORLY GRADED GRAVEL WITH SILT AND SAND, (GP-GM) 80% gravel, 10% sand, 10% fines Dark brown, moist, no odor. Well rounded gravel up to 1 inch. Contains rootlets.	SS S1A					2.5		
	ML		SILT, (ML) 0% gravel, 27% sand, 73% fines Tan-brown, moist, fines soft, low plasticity to nonplastic, no odor. Subangular to angular gravel up to 1/2 inch. 26% represents all granular content, not just sand. Frozen in situ. Upper 6 inches Nbn, Vx (30% ice) well bonded to 2.5 ft BGS.	SS S1B	88	1-2-10-9 (12)			2.5	P200	
				SS S2	88	5-6-3-4 (9)			2.4		
5	ML		SILT, (ML) 5% gravel, 5% sand, 90% fines Tan-brown, mosit to wet, crumbles easily with hand pressure, soft to medium, nonplastic, no odor. Frozen to 3.75 ft BGS, Vx (10-40% ice) well bonded.	SS S3	88	5-10-15-15 (25)			2.4		
			SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, soft, crumbles easily with hand pressure, nonplastic, no odor.	SS S4	92	6-9-12-12 (21)			3		
10	ML		0% gravel, 5% sand, 95% fines	SS S5	92	6-10-15-18 (25)			2.7		
15	ML		SILT, (ML) 0% gravel, 5% sand, 95% fines Brown-tan, moist, crumbles easily with hand pressure, medium stiff to firm, nonplastic, no odor.	SS S6	92	9-15-18-19 (33)			2.1		

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings.

CRW MOA LOG - CRW_DATATEMPLATE_20190115.GDT - 9/15/22 10:57 - 10417_KINCAIDES.GPJ

CRW Engineering Group
3940 Arctic BLVD
99503
Telephone: 9076465670

BOREHOLE BH-14

CLIENT Anchorage School District
PROJECT NAME Kincaid Elementary School Improvements
PROJECT NUMBER 10417.00
PROJECT LOCATION Anchorage, Alaska
DATE STARTED 4/30/22 **COMPLETED** 4/30/22
GROUND ELEVATION
DRILLING CONTRACTOR Discovery Drilling
GROUND WATER LEVELS:
DRILLING METHOD Hollow-Stem Auger, autohammer
AT TIME OF DRILLING Not Observed
LOGGED BY AFS **CHECKED BY** SMH
AT END OF DRILLING
NOTES
AFTER DRILLING

DEPTH (ft)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (psf)	ICE BOND	PID	OTHER TESTS	▲ SPT N VALUE ▲ 10 20 30 40 / PL MC LL 10 20 30 40
0			4.25" Concrete.								
	GW-GM		WELL GRADED GRAVEL WITH SILT AND SAND, (GW-GM) 63% gravel, 27% sand, 10% fines Brown, wet, no odor. Subrounded to round gravel up to 3". Cobbles up to 5.5" in cuttings, up to 15 to 30% by volume. Sieve analysis on split spoon sample.	SS S1 G	25	8-5-3-2 (8)				SA	
	GP		POORLY GRADED GRAVEL WITH SAND, (GP) 71% gravel, 25% sand, 4% fines Brown, wet, no odor. Subangular to broken gravel up to 1.25". White styrofoam, black tape, and woven geotextile. Potential insulation at ~ 2.5 feet BGS.	SS S2A SS S2B	25	4-3-3-3 (6)				LMA	
5			SILT, (ML) 0% gravel, 5% sand, 95% fines Brown, moist, no odor, soft. Low plasticity to nonplastic. Soft to medium, nonplastic.	SS S3	83	4-7-9-10 (16)					
	ML		Possible angular sand.	SS S4	75	6-11-11-12 (22)					
10			0% gravel, 11% sand, 89% fines One piece of 1.25" subangular gravel.	SS S5	75	6-8-12-10 (20)				LMA	
15	ML		SANDY SILT WITH GRAVEL, (ML) 15% gravel, 15% sand, 70% fines Brown, moist, no odor. Low plasticity to nonplastic.	SS S6	88	10-16-17-19 (33)					

Bottom of borehole at 17.0 feet.

Notes:
Backfilled with cuttings, cement patch.

CRW MOA LOG - CRW_DATATEMPLATE_20190115.GDT - 9/15/22 10:57 - 10417_KINCAIDES.GPJ

Appendix B

Laboratory Results

Included in this section:

1) Laboratory Results from Alaska Testlab

Alaska Testlab - Anchorage
4040 B Street, Suite 102
Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: ASM:22-0778
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0778-S01	22-0778-S02	22-0778-S03	22-0778-S04
Client Sample ID	BH-01 Sa 1	BH-01 Sa 2	BH-01 Sa 3A	BH-01 Sa 3B
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	3	5	6	25	
Date Tested		5/10/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Group Code	ASTM D2487	GW-GM				
Group Name		Well-graded gravel with silt and sand				
Atterberg Limits Estimated		Yes				
Tested By		John Platt				
Method	ASTM D6913	A				
Preparation Method		Oven Dry				
Composite Sieving?		Yes				
Separating Sieve(s)		No. 4				
Fractional Mass Retained (%)		0.00				
Cu	ASTM D2487	78.37				
Cc		2.64				
Percent Gravel	LMA (Internal Method)				10	
Percent Sand					15	
Percent Fines (Silt/Clay)					75	
Group Symbol					ML	
Group Name					Silt with sand	
Tested By					Cindy Zickefoose	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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4040 B Street, Suite 102
Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: ASM:22-0778
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0778-S05	22-0778-S06	22-0778-S07	22-0778-S08
Client Sample ID	BH-01 Sa 3C	BH-01 Sa 4A	BH-01 Sa 4B	BH-01 Sa 5A
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Passing No. 200 (75 µm) (%)	ASTM D1140	76				
Procedure		A				
Soaking Period (min)						
Initial Dry Mass (g)		90.70				
Water Content Determined		No				
Tested By		Cindy Zickefoose				
Water Content (%)	ASTM D2216	22	9	14	25	
Date Tested		5/10/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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4040 B Street, Suite 102
Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: ASM:22-0778
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0778-S09	22-0778-S10
Client Sample ID	BH-01 Sa 5B	BH-01 Sa 6
Date Sampled		

Other Test Results

Description	Method	Results		Limits
Water Content (%)	ASTM D2216	18	21	
Date Tested		5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: MAT:22-0778-S01
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID 22-0778-S01
Client Sample ID BH-01 Sa 1

Other Test Results

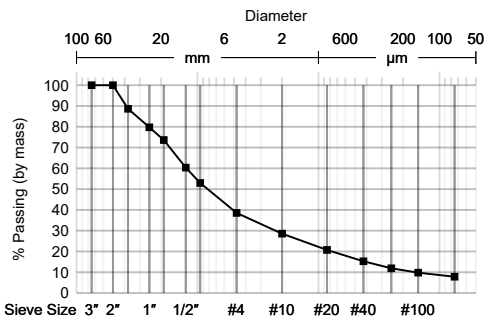
Description	Method	Result	Limits
Water Content (%)	ASTM D2216	3	
Date Tested		5/10/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	GW-GM	
Group Name		Well-graded gravel with silt and sand	
Atterberg Limits Estimated		Yes	
Tested By		John Platt	
Date Tested		5/16/2022	
Method	ASTM D6913	A	
Preparation Method		Oven Dry	
Composite Sieving?		Yes	
Separating Sieve(s)		No. 4	
Fractional Mass Retained (%)		0.00	
Cu	ASTM D2487	78.37	
Cc		2.64	
Date Tested		5/2/2022	

Particle Size Distribution

Method: ASTM D6913
Drying By: Oven
Date Tested: 5/2/2022
Tested By: John Platt

Sieve Size	% Passing	Limits
3in	100	
2in	100	
1½in	89	
1in	80	
¾in	74	
½in	60	
3/8in	53	
No.4	38.6	
No.10	29	
No.20	21	
No.40	15	
No.60	12	
No.100	10	
No.200	8	

Chart



Comments

Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
No Plasticity Index Test Performed

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4040 B Street, Suite 102
Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: ASM:22-0779
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0779-S01	22-0779-S02	22-0779-S03	22-0779-S04
Client Sample ID	BH-02 Sa 1	BH-02 Sa 3	BH-02 Sa 5	BH-02 Sa 6
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	3	31	33	32	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Percent Gravel	LMA (Internal Method)	74				
Percent Sand		22				
Percent Fines (Silt/Clay)		4				
Group Symbol		GP				
Group Name		Poorly Graded Gravel with Sand				
Tested By		John Platt				

Comments

N/A

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4040 B Street, Suite 102
Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: ASM:22-0780
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0780-S01	22-0780-S02	22-0780-S03	22-0780-S04
Client Sample ID	BH-03 Sa 1	BH-03 Sa 2A	BH-03 Sa 2B	BH-03 Sa 3A
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	2	25	15	24	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Group Code	ASTM D2487	GP		ML		
Group Name		Poorly graded gravel with sand		Silt		
Atterberg Limits Estimated		Yes				
Liquid Limit				0		
Plasticity Index				0		
Gravel (%)				0		
Sand (%)				4		
Fines (%)				96		
Tested By	ASTM D2487			Cindy Zickefoose		
Method	ASTM D6913	A				
Preparation Method		Oven Dry				
Composite Sieving?		Yes				
Separating Sieve(s)		No. 4				
Fractional Mass Retained (%)		0.00				
Cu	ASTM D2487	30.82				
Cc		3.37				
Dispersion device	ASTM D 422			Dispersant by hand		
Dispersion time (min)						
Shape						
Hardness						

Comments

N/A

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Phone: 907-205-1987
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Material Test Report

Report No: ASM:22-0780
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0780-S05	22-0780-S06	22-0780-S07	22-0780-S08
Client Sample ID	BH-03 Sa 3B	BH-03 Sa 4	BH-03 Sa 5	BH-03 Sa 6
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	11	12	14	14	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

N/A

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Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: MAT:22-0780-S01
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/25/2022

Sample Details

Sample ID 22-0780-S01
Client Sample ID BH-03 Sa 1

Other Test Results

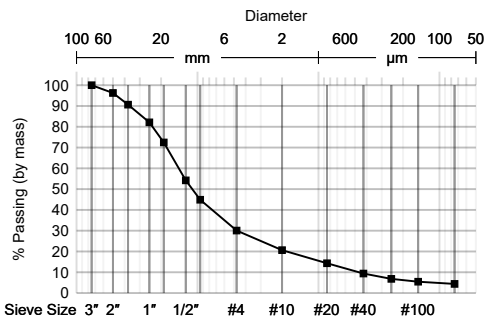
Description	Method	Result	Limits
Water Content (%)	ASTM D2216	2	
Date Tested		5/9/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	GP	
Group Name		Poorly graded gravel with sand	
Atterberg Limits Estimated		Yes	
Method	ASTM D6913	A	
Preparation Method		Oven Dry	
Composite Sieving?		Yes	
Separating Sieve(s)		No. 4	
Fractional Mass Retained (%)		0.00	
Cu	ASTM D2487	30.82	
Cc		3.37	
Date Tested		5/2/2022	

Particle Size Distribution

Method: ASTM D6913
Drying By: Oven
Date Tested: 5/2/2022
Tested By: John Platt

Sieve Size	% Passing	Limits
3in	100	
2in	96	
1½in	91	
1in	82	
¾in	72	
½in	54	
3/8in	45	
No.4	30.1	
No.10	21	
No.20	14	
No.40	9	
No.60	7	
No.100	5	
No.200	4	

Chart



Comments

Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
No Plasticity Index Test Performed

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4040 B Street, Suite 102
Anchorage, AK 99503
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Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: MAT:22-0780-S03
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0780-S03
Client Sample ID	BH-03 Sa 2B
Specification	Sieve SOILS

Other Test Results

Description	Method	Result	Limits
	ASTM D 422		
Dispersion device		Dispersant by hand	
Dispersion time (min)			
Shape			
Hardness			
Water Content (%)	ASTM D2216	15	
Date Tested		5/9/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	ML	
Group Name		Silt	
Liquid Limit		0	
Plasticity Index		0	
Gravel (%)		0	
Sand (%)		4	
Fines (%)		96	
	ASTM D2487		
Tested By		Cindy Zickefoose	
Date Tested		5/19/2022	

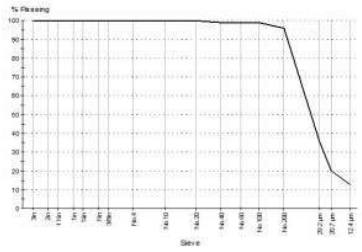
Particle Size Distribution

Method: ASTM D 422

Date Tested: 5/19/2022
Tested By: John Platt

Sieve Size	% Passing	Limits
3in	100	
2in	100	
1½in	100	
1in	100	
¾in	100	
½in	100	
3/8in	100	
No.4	100	
No.10	100	
No.20	100	
No.40	99	
No.60	99	
No.100	99	
No.200	96	
Finer No.200 (75µm)	95.5	
29.2 µm	36.4	
20.7 µm	20.4	
12.4 µm	12.9	

Chart



Comments

Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
No Plasticity Index Test Performed

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Anchorage, AK 99503
Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: ASM:22-0781
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/25/2022

Sample Details

Sample ID	22-0781-S01	22-0781-S02	22-0781-S03
Client Sample ID	BH-04 Sa 1	BH-04 Sa 2	BH-04 Sa 3
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	6	33	24	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	
Group Code	ASTM D2487				
Group Name					
Percent Gravel	LMA (Internal Method)	67			
Percent Sand		27			
Percent Fines (Silt/Clay)		6			
Group Symbol		GP-GM			
Group Name		Poorly Graded Gravel with Silt and Sand			
Tested By		John Platt			

Comments

N/A

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Material Test Report

Report No: ASM:22-0781
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/25/2022

Sample Details

Sample ID	22-0781-S04	22-0781-S05	22-0781-S06
Client Sample ID	BH-04 Sa 4	BH-04 Sa 5	BH-04 Sa 6
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	28	27	15	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

N/A

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Material Test Report

Report No: ASM:22-0783
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/25/2022

Sample Details

Sample ID	22-0783-S01	22-0783-S02	22-0783-S03
Client Sample ID	BH-05 Sa 1	BH-05 Sa 2	BH-05 Sa 3
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	4	33	32	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	
Group Code	ASTM D2487	GP-GM			
Group Name		Poorly graded gravel with silt and sand			
Atterberg Limits Estimated		Yes			
Tested By		John Platt			
Method	ASTM D6913	A			
Preparation Method		Oven Dry			
Composite Sieving?		Yes			
Separating Sieve(s)		No. 4			
Fractional Mass Retained (%)		100.00			
Cu	ASTM D2487	47.44			
Cc		3.63			

Comments

N/A

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Material Test Report

Report No: ASM:22-0783
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/25/2022

Sample Details

Sample ID	22-0783-S04	22-0783-S05	22-0783-S06
Client Sample ID	BH-05 Sa 4	BH-05 Sa 5	BH-05 Sa 6
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	27	26	25	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

N/A

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Material Test Report

Report No: MAT:22-0783-S01
Issue No: 1

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Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID 22-0783-S01
Client Sample ID BH-05 Sa 1

Other Test Results

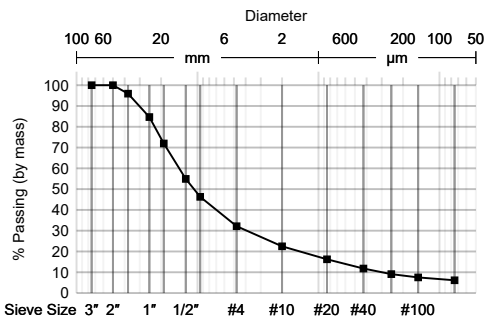
Description	Method	Result	Limits
Water Content (%)	ASTM D2216	4	
Date Tested		5/9/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	GP-GM	
Group Name		Poorly graded gravel with silt and sand	
Atterberg Limits Estimated		Yes	
Tested By		John Platt	
Date Tested		5/2/2022	
Method	ASTM D6913	A	
Preparation Method		Oven Dry	
Composite Sieving?		Yes	
Separating Sieve(s)		No. 4	
Fractional Mass Retained (%)		100.00	
Cu	ASTM D2487	47.44	
Cc		3.63	
Date Tested		5/2/2022	

Particle Size Distribution

Method: ASTM D6913
Drying By: Oven
Date Tested: 5/2/2022
Tested By: John Platt

Sieve Size	% Passing	Limits
3in	100	
2in	100	
1½in	96	
1in	85	
¾in	72	
½in	55	
3/8in	46	
No.4	32.2	
No.10	22	
No.20	16	
No.40	12	
No.60	9	
No.100	8	
No.200	6	

Chart



Comments

Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
No Plasticity Index Test Performed

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Material Test Report

Report No: ASM:22-0784
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0784-S01	22-0784-S02	22-0784-S03	22-0784-S04
Client Sample ID	BH-06 Sa 1	BH-06 Sa 2A	BH-06 Sa 2B	BH-06 Sa 3
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	5	20	28	27	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Percent Gravel	LMA (Internal Method)	71	25			
Percent Sand		15	28			
Percent Fines (Silt/Clay)		14	47			
Group Symbol		GM	SM			
Group Name		Silty Gravel with Sand	Silty Sand with Gravel			
Tested By		John Platt	John Platt			

Comments

N/A

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Material Test Report

Report No: ASM:22-0784
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0784-S05	22-0784-S06	22-0784-S07
Client Sample ID	BH-06 Sa 4	BH-06 Sa 5	BH-06 Sa 6
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	32	26	24	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

N/A

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Material Test Report

Report No: ASM:22-0785
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0785-S01	22-0785-S02	22-0785-S03	22-0785-S04
Client Sample ID	BH-07 Sa 1	BH-07 Sa 2	BH-07 Sa 3	BH-07 Sa 4
Date Sampled				

Particle Size Distribution

Method:
ASTM D 422

Description:
Analysis of Particle Size Distribution in Soils. Sieving for Particles >75µm, Hydrometer

Drying By:

Washed:
Sample Washed

Sieve Size	% Passing	Limits
3in	100	
2in	100	
1½in	100	
1in	100	
¾in	100	
½in	100	
3/8in	100	
No.4	100	
No.10	100	
No.20	100	
No.40	100	
No.60	100	
No.100	100	
No.200	100	
Finer No.200 (75µm)	99.4	

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	29	34	31	33	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Dispersion device	ASTM D 422			Dispersant by hand		
Dispersion time (min)						
Shape						
Hardness						
Group Code	ASTM D2487			ML		
Group Name				Silt		
Liquid Limit				0		
Plasticity Index				0		
Gravel (%)				0		
Sand (%)				0		
Fines (%)				100		
Tested By	ASTM D2487			John Platt		

Comments

N/A

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Material Test Report

Report No: ASM:22-0785
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0785-S05	22-0785-S06	22-0785-S07
Client Sample ID	BH-07 Sa 5	BH-07 Sa 6A	BH-07 Sa 6B
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	26	34	29	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

N/A

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Material Test Report

Report No: MAT:22-0785-S03
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0785-S03
Client Sample ID	BH-07 Sa 3
Specification	Sieve SOILS

Other Test Results

Description	Method	Result	Limits
	ASTM D 422		
Dispersion device		Dispersant by hand	
Dispersion time (min)			
Shape			
Hardness			
Water Content (%)	ASTM D2216	31	
Date Tested		5/9/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	ML	
Group Name		Silt	
Liquid Limit		0	
Plasticity Index		0	
Gravel (%)		0	
Sand (%)		0	
Fines (%)		100	
Tested By	ASTM D2487	John Platt	
Date Tested		5/19/2022	

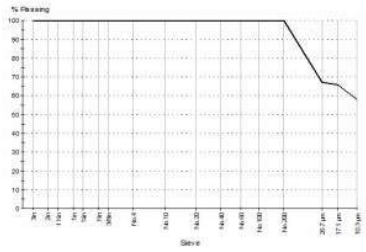
Particle Size Distribution

Method: ASTM D 422

Date Tested: 5/19/2022
Tested By: John Platt

Sieve Size	% Passing	Limits
3in	100	
2in	100	
1½in	100	
1in	100	
¾in	100	
½in	100	
3/8in	100	
No.4	100	
No.10	100	
No.20	100	
No.40	100	
No.60	100	
No.100	100	
No.200	100	
Finer No.200 (75µm)	99.4	
26.7 µm	67.3	
17.1 µm	65.8	
10.3 µm	58.1	

Chart



Comments

Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
No Plasticity Index Test Performed

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Material Test Report

Report No: ASM:22-0786
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0786-S01	22-0786-S02	22-0786-S03	22-0786-S04
Client Sample ID	BH-08 Sa 1	BH-08 Sa 2	BH-08 Sa 3	BH-08 Sa 4
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	24	23	23	26	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: ASM:22-0786
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0786-S05	22-0786-S06	22-0786-S07
Client Sample ID	BH-08 Sa 5	BH-08 Sa 6A	BH-08 Sa 6B
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	25	18	3	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	
Percent Gravel	LMA (Internal Method)		0		
Percent Sand			26		
Percent Fines (Silt/Clay)			74		
Group Symbol			ML		
Group Name			Silt with sand		
Tested By			John Platt		

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: ASM:22-0787
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0787-S01	22-0787-S02	22-0787-S03	22-0787-S04
Client Sample ID	BH-09 Sa 1	BH-09 Sa 2	BH-09 Sa 3	BH-09 Sa 4
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	3	5	27	23	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Group Code	ASTM D2487	GW-GM				
Group Name		Well-graded gravel with silt and sand				
Atterberg Limits Estimated		Yes				
Tested By		Braun Errico				
Method	ASTM D6913	A				
Preparation Method		Oven Dry				
Composite Sieving?		Yes				
Separating Sieve(s)		No. 4				
Cu	ASTM D2487	44.64				
Cc		1.30				

Comments

N/A

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Material Test Report

Report No: ASM:22-0787
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0787-S05	22-0787-S06	22-0787-S07
Client Sample ID	BH-09 Sa 5	BH-09 Sa 6A	BH-09 Sa 6B
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	21	22	27	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

N/A

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Material Test Report

Report No: MAT:22-0787-S01
Issue No: 1

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Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID 22-0787-S01
Client Sample ID BH-09 Sa 1

Other Test Results

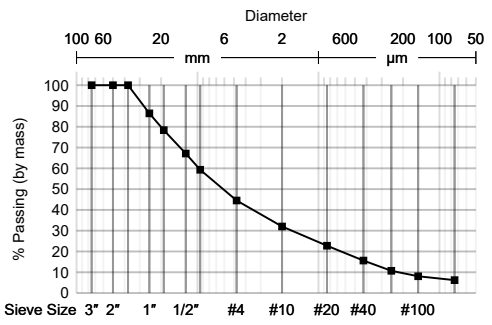
Description	Method	Result	Limits
Water Content (%)	ASTM D2216	3	
Date Tested		5/9/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	GW-GM	
Group Name		Well-graded gravel with silt and sand	
Atterberg Limits Estimated		Yes	
Tested By		Braun Errico	
Date Tested		5/18/2022	
Method	ASTM D6913	A	
Preparation Method		Oven Dry	
Composite Sieving?		Yes	
Separating Sieve(s)		No. 4	
Cu	ASTM D2487	44.64	
Cc		1.30	
Date Tested		5/18/2022	

Particle Size Distribution

Method: ASTM D6913
Drying By: Oven
Date Tested: 5/18/2022
Tested By: Braun Errico

Sieve Size	% Passing	Limits
3in	100	
2in	100	
1½in	100	
1in	86	
¾in	78	
½in	67	
3/8in	59	
No.4	44.5	
No.10	32	
No.20	23	
No.40	16	
No.60	11	
No.100	8	
No.200	6	

Chart



Comments

Sample Size Does Not Meet ASTM Requirements
Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
No Plasticity Index Test Performed

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Material Test Report

Report No: ASM:22-0788
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0788-S01	22-0788-S02	22-0788-S03	22-0788-S04
Client Sample ID	BH-10 Sa 1	BH-10 Sa 2A	BH-10 Sa 2B	BH-10 Sa 3
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	5	11	33	11	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Percent Gravel	LMA (Internal Method)	58	46		3	
Percent Sand		33	41		18	
Percent Fines (Silt/Clay)		9	13		79	
Group Symbol		GP-GM	GM		ML	
Group Name		Poorly graded gravel with silt and sand	Silty gravel with sand		Silt with sand	
Tested By		Braun Errico	Cindy Zickefoose		Cindy Zickefoose	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Phone: 907-205-1987
Fax: 907-782-4409
info@alaskatestlab.com

Material Test Report

Report No: ASM:22-0788
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0788-S05	22-0788-S06
Client Sample ID	BH-10 Sa 5	BH-10 Sa 6
Date Sampled		

Other Test Results

Description	Method	Results		Limits
Water Content (%)	ASTM D2216	10	36	
Date Tested		5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: ASM:22-0789
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0789-S01	22-0789-S02	22-0789-S03	22-0789-S04
Client Sample ID	BH-11 Sa 1	BH-11 Sa 2	BH-11 Sa 3	BH-11 Sa 4
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	6	22	17	15	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Group Code	ASTM D2487	GP-GM				
Group Name		Poorly graded gravel with silt and sand				
Atterberg Limits Estimated		Yes				
Tested By		John Platt				
Method	ASTM D6913	A				
Preparation Method		Oven Dry				
Composite Sieving?		Yes				
Separating Sieve(s)		No. 4				
Fractional Mass Retained (%)		0.00				
Cu	ASTM D2487	61.79				
Cc		0.71				
Percent Gravel	LMA (Internal Method)		5	9		
Percent Sand			11	15		
Percent Fines (Silt/Clay)			84	76		
Group Symbol			ML	ML		
Group Name			Silt with Sand	Silt with Sand		
Tested By			Braun Errico	John Platt		

Comments

N/A

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Material Test Report

Report No: ASM:22-0789
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0789-S05	22-0789-S06
Client Sample ID	BH-11 Sa 5	BH-11 Sa 6
Date Sampled		

Other Test Results

Description	Method	Results		Limits
Water Content (%)	ASTM D2216	21	17	
Date Tested		5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	

Comments

N/A

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Material Test Report

Report No: MAT:22-0789-S01
Issue No: 1

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0789-S01
Client Sample ID	BH-11 Sa 1

Other Test Results

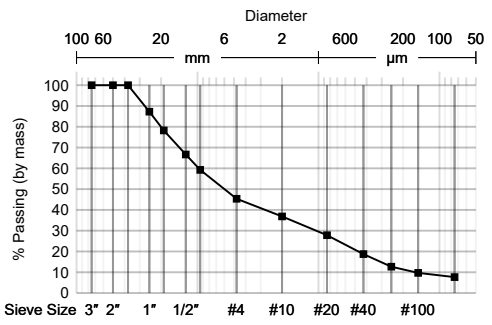
Description	Method	Result	Limits
Water Content (%)	ASTM D2216	6	
Date Tested		5/9/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	GP-GM	
Group Name		Poorly graded gravel with silt and sand	
Atterberg Limits Estimated		Yes	
Tested By		John Platt	
Date Tested		5/17/2022	
Method	ASTM D6913	A	
Preparation Method		Oven Dry	
Composite Sieving?		Yes	
Separating Sieve(s)		No. 4	
Fractional Mass Retained (%)		0.00	
Cu	ASTM D2487	61.79	
Cc		0.71	
Date Tested		5/17/2022	

Particle Size Distribution

Method: ASTM D6913
Drying By: Oven
Date Tested: 5/17/2022
Tested By: John Platt

Sieve Size	% Passing	Limits
3in	100	
2in	100	
1½in	100	
1in	87	
¾in	78	
½in	67	
3/8in	59	
No.4	45.4	
No.10	37	
No.20	28	
No.40	19	
No.60	13	
No.100	10	
No.200	8	

Chart



Comments

Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
Sample Size Does Not Meet ASTM Requirements

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Material Test Report

Report No: ASM:22-0790
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/24/2022

Sample Details

Sample ID	22-0790-S01	22-0790-S02	22-0790-S03	22-0790-S04
Client Sample ID	BH-12 Sa 1A	BH-12 Sa 1B	BH-12 Sa 2	BH-12 Sa 3
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	49	23	29	32	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: ASM:22-0790
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/24/2022

Sample Details

Sample ID	22-0790-S05	22-0790-S06	22-0790-S07	22-0790-S08
Client Sample ID	BH-12 Sa 4A	BH-12 Sa 4B	BH-12 Sa 5A	BH-12 Sa 5B
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	27	12	14	22	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Percent Gravel	LMA (Internal Method)		0			
Percent Sand			3			
Percent Fines (Silt/Clay)			97			
Group Symbol			ML			
Group Name			Silt			
Tested By			Braun Errico			

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: ASM:22-0790
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/24/2022

Sample Details

Sample ID	22-0790-S09	22-0790-S10
Client Sample ID	BH-12 Sa 6	BH-12 Sa 7
Date Sampled		

Other Test Results

Description	Method	Results		Limits
Water Content (%)	ASTM D2216	21	27	
Date Tested		5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: ASM:22-0794
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0794-S01	22-0794-S02	22-0794-S03	22-0794-S04
Client Sample ID	BH-13 Sa 1A	BH-13 Sa 1B	BH-13 Sa 2	BH-13 Sa 3
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	36	21	29	29	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Passing No. 200 (75 µm) (%)	ASTM D1140		73			
Procedure			A			
Soaking Period (min)						
Initial Dry Mass (g)			261.9			
Water Content Determined			No			
Tested By			Braun Errico			

Comments

N/A

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Material Test Report

Report No: ASM:22-0794
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0794-S05	22-0794-S06	22-0794-S07
Client Sample ID	BH-13 Sa 4	BH-13 Sa 5	BH-13 Sa 6
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	24	28	28	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	

Comments

N/A

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Material Test Report

Report No: ASM:22-0797
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0797-S01	22-0797-S02	22-0797-S03	22-0797-S04
Client Sample ID	BH-14 Sa 1	BH-14 Sa 2A	BH-14 Sa 2B	BH-14 Sa 3
Date Sampled				

Other Test Results

Description	Method	Results				Limits
Water Content (%)	ASTM D2216	7	13	38	34	
Date Tested		5/9/2022	5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	Morgan Zinn	
Group Code	ASTM D2487	GW-GM				
Group Name		Well-graded gravel with silt and sand				
Atterberg Limits Estimated		Yes				
Tested By		Nathan Wilson				
Method	ASTM D6913	A				
Preparation Method		Oven Dry				
Composite Sieving?		Yes				
Separating Sieve(s)		No. 4				
Cu	ASTM D2487					
Cc						
Percent Gravel	LMA (Internal Method)		71			
Percent Sand			25			
Percent Fines (Silt/Clay)			4			
Group Symbol			GP			
Group Name			Poorly graded gravel with sand			
Tested By			John Platt			

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: ASM:22-0797
Issue No: 1

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

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Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0797-S05	22-0797-S06	22-0797-S07
Client Sample ID	BH-14 Sa 4	BH-14 Sa 5	BH-14 Sa 6
Date Sampled			

Other Test Results

Description	Method	Results			Limits
Water Content (%)	ASTM D2216	21	26	19	
Date Tested		5/9/2022	5/9/2022	5/9/2022	
Tested By		Morgan Zinn	Morgan Zinn	Morgan Zinn	
Percent Gravel	LMA (Internal Method)		0		
Percent Sand			11		
Percent Fines (Silt/Clay)			89		
Group Symbol			ML		
Group Name			Silt		
Tested By			Braun Errico		

Comments

Soil Classification of Fines (-#200) in LMAs Assumed Unless Verified by Additional Testing

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Material Test Report

Report No: MAT:22-0797-S01
Issue No: 1

The results contained below pertain only to the items tested below. This report should not be reproduced, except in full, without the prior written approval of Alaska Testlab or the agency.

Client: CRW Engineering Group, LLC
3940 Arctic Blvd., Ste. 300
Anchorage, AK, 99503

Project Code: 220510

CC: CRW
Maria Kampsen

Project: Kincaid ES

10417.00

Reviewed By: Maria E Kampsen
Title: Senior Engineer
Date: 5/19/2022

Sample Details

Sample ID	22-0797-S01
Client Sample ID	BH-14 Sa 1

Other Test Results

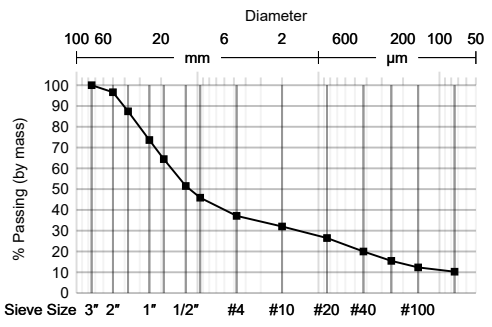
Description	Method	Result	Limits
Water Content (%)	ASTM D2216	7	
Date Tested		5/9/2022	
Tested By		Morgan Zinn	
Group Code	ASTM D2487	GW-GM	
Group Name		Well-graded gravel with silt and sand	
Atterberg Limits Estimated		Yes	
Tested By		Nathan Wilson	
Date Tested		5/19/2022	
Method	ASTM D6913	A	
Preparation Method		Oven Dry	
Composite Sieving?		Yes	
Separating Sieve(s)		No. 4	
Cu	ASTM D2487		
Cc			
Date Tested		5/19/2022	

Particle Size Distribution

Method:	ASTM D6913
Drying By:	Oven
Date Tested:	5/19/2022
Tested By:	Nathan Wilson

Sieve Size	% Passing	Limits
3in	100	
2in	97	
1½in	87	
1in	74	
¾in	64	
½in	52	
3/8in	46	
No.4	37.1	
No.10	32	
No.20	26	
No.40	20	
No.60	15	
No.100	12	
No.200	10	

Chart



Comments

Sample Size Does Not Meet ASTM Requirements
Soil Classification of Fines (-#200) in Sieve Analyses Assumed Unless Verified by Additional Testing
No Plasticity Index Test Performed

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Solstice Alaska Consulting, Inc.
2607 Fairbanks Street, Suite B
Anchorage, AK 99503
907.929.5960

Date: October 12, 2026

To: Alma Abaza and Bill Johnson, CRW Engineering, Inc.

From: Carrie Connaker, Solstice Alaska Consulting, Inc.

Subject: Kincaid Elementary School Site Improvements Project; CRW Project Number 10417.00

The following is a summary of expected permitting requirements that need to be considered during and following construction activities with regards to the bald eagle nest on the Kincaid Elementary School property, to comply with the U.S. Fish and Wildlife Service's (USFWS) Eagle Nest Disturbance Permit. These are only expected permitting requirements; the permit has not been issued. If the issued permit includes additional or different permitting requirements, CRW will be contacted immediately.

USFWS Eagle Nest Disturbance Permit (PER29322090)
Issued: In process, expected by December 2026
Expires: 3 years following issuance
Contacts: Jordan Muir, USFWS (jordan_muir@fws.gov)

Stipulations

1) All contractors and workers will be informed of the nesting trees, the nest disturbance permit, and permit restrictions on building and construction to minimize impacts to nesting eagles.
2) The nest trees (located at 61.156710°, -149.968800° and 61.157020°, -149.968220°) will be noted on plans and flagged prior to construction.
3) No vegetative clearing will be conducted adjacent to the nest trees.
4) Vegetation clearing limits will be clearly staked.
5) Any previously unidentified eagle nest (different from those permitted) located within 660 feet of the project area discovered prior to permit expiration must be reported to the migratory bird permit issuing office (Jordan_muir@fws.gov) within 10 days of discovery.
6) Immediately notify the migratory bird permit issuing office (907-786-3503 or 907-786-3693) regarding any apparent injury or death occurring to any eagle, including viable eggs, during project activities. Immediately contact and arrange transport any injured eagle to the Bird Treatment Learning Center in Anchorage, Alaska (907-562-4852 or Office@birdtlc.org).
7) Allow USFWS personnel or their designee access to the areas where eagles are likely to be affected, at any reasonable hour, and with reasonable notice from the Service, for purposes of monitoring eagles at the site(s).
8) Submit an annual report. Monitor in-use nests sufficiently to determine whether nestlings have fledged from the nest. Include this information in your annual report.

Solstice Alaska Consulting can assist with these measures, including flagging, reporting new nests, eagle injury or death, accompanying USFWS on site, and preparing the annual report. Please contact me as needed throughout the duration of the permit.

Sincerely,

Carrie Connaker
Solstice Alaska Consulting, Inc.
carrie@solsticeak.com