

**CONTRACT DOCUMENTS AND SPECIFICATIONS
FOR CONSTRUCTION OF
CITY OF UNALASKA
2020 PARK AND PLAYGROUND IMPROVEMENTS**

**DPW Project No. 19102 Sitka Spruce Park Improvements
DPW Project No. 15202 UCSD Playground Restoration**



**FOR BID
11-11-19**

By:
**Regan Engineering, P.C.
PO Box 889
Camas, WA 98697
360-903-5064**

For:
**City of Unalaska
Department of Public Works
P.O. Box 610
Unalaska, Alaska 99685
907-581-1260**

City of Unalaska
2020 PARK AND PLAYGROUND IMPROVEMENTS

TABLE OF CONTENTS

Part 1 - BIDDING REQUIREMENTS

Section 00030 - Invitation to Bid
Section 00100 - Instructions to Bidders
Section 00300 - Bid Form

Part 2 - CONTRACT FORMS

Section 00500 - Standard Form of Agreement
Section 00610 - Performance Bond
Section 00620 - Payment Bond

Part 3 - GENERAL CONDITIONS

General Conditions
Section 00800 – Supplementary Conditions

Part 4 – MINIMUM RATES OF PAY

Minimum Rates of Pay

Part 5 – TECHNICAL SPECIFICATIONS

Section 01010 – Summary of Work
Section 01025 – Measurement and Payment
Section 02200 – Earthwork
Section 02730 – Storm Sewerage
Section 02790 – Synthetic Turf
Section 02820 – Chain Link Fence
Section 02880 – Playground Equipment
Section 02885 – Playground Surfacing
Section 03300 – Cast-in-Place Concrete
Section 03310 – Precast Concrete Separator Wall

Part 6 – APPENDIX A – DRAWINGS

Part 1

BIDDING REQUIREMENTS

**Section 00030
INVITATION TO BID**

Sealed Bids for the City of Unalaska **2020 PARK AND PLAYGROUND IMPROVEMENTS**, addressed to the City of Unalaska, will be received at the following location:

City of Unalaska
Office of the City Clerk
P.O. Box 610
43 Raven Way
Unalaska, Alaska 99685
Tel. 907-581-1251
Fax 907-581-1417

Sealed bids will be received until 2:00 p.m., local time on **December 12, 2019** and then will be publicly opened and read. Any bids received after the time and date specified will not be considered.

The work will include, but not be limited to, furnishing all labor, tools, equipment, and materials and performing all operations in connection with the **2020 PARK AND PLAYGROUND IMPROVEMENTS**. The Work includes demolition of existing park improvements and construction of various playgrounds, concrete basketball courts, fencing, and general improvements at two existing City parks.

1. Project Locations:
 - a. UCSD (Unalaska City School District) Park, Unalaska High School, Broadway Avenue, Unalaska, AK 99685
 - b. Sitka Spruce Park, Biorka Drive, Unalaska, AK 99685
2. Owner: City of Unalaska, Department of Parks, Culture and Recreation

Technical questions shall be directed in writing to the Engineer at the address shown below. An electronic copy of the Bidding Documents may be obtained from the City of Unalaska Website.

Regan Engineering, P.C.
P.O. Box 889
Camas, WA 98607
Tel. (360) 903-5064
Attn: Thomas Regan, P.E.
Email: tom@reganengineering.com

Each Bid must be submitted on the prescribed form and accompanied by bid security as prescribed in the Instruction to Bidders, payable to the City of Unalaska, Alaska, in an amount not less than 5 (five) percent of the Total Bid amount. The successful bidder will be required to furnish the necessary additional bond(s) for the faithful performance of the Contract, as prescribed in the Bidding Documents.

A prebid conference will be held on **November 26, 2019** at 2:00 p.m. at the City of Unalaska Department of Public Works. A site visit by all bidders is strongly recommended.

INVITATION TO BID

00030-2

The successful Bidder shall hold such Contractors and Business Licenses as required by State Statutes and City of Unalaska Municipal Code Section 9.04. The right is reserved to reject any or all Bids, to waive informalities or irregularities in the bidding, and to accept bids that are considered to be in the best interest of the City of Unalaska.

No bidder may withdraw its bid after the time set for opening thereof, unless the award of the contract is delayed for a period exceeding 60 days.

Dated this _____ day of _____, 2019.

CITY OF UNALASKA, ALASKA

By _____
Tom Cohenour, Director of Public Works

Section 00100
INSTRUCTIONS TO BIDDERS

1. Defined Terms.

Terms used in these Instructions to Bidders which are defined in the General Conditions of the Contract Documents have the meanings assigned to them in the General Conditions.

Certain additional terms used in the Bidding Documents have the meanings indicated below which are applicable to both the singular and plural thereof.

- A. Bidder - one who submits a Bid directly to Owner as distinct from a subbidder, who submits a bid to a Bidder.
- B. Bidding Documents - the Bidding Requirements and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
- C. Bidding Requirements - the Invitation to Bid, Instructions to Bidders, and Bid Form, plus additional documents that may be submitted with the Bid.
- D. Issuing Office - the City Public Works Department, from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
- E. Successful Bidder - the highest scoring, qualified, responsible and responsive Bidder to whom the City (on the basis of the City's evaluation as hereinafter provided) makes an Award.

2. Copies of Bidding Documents.

- A. Complete sets of the Bidding Documents for the sum stated in the Invitation to Bid may be obtained from the Issuing Offices.
- B. Complete sets of Bidding Documents must be used in preparing Bids; the City does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- C. The Drawings bound in the Contract Documents are at a scale indicated by a note or scale bar on the Drawings.
- D. The City, in making copies of Bidding Documents available on the above terms, does so only for the purpose of obtaining Bids for the work and does not confer a license or grant for any other use.

3. Qualifications of Bidders.

To demonstrate qualifications to perform the work, each Bidder must be prepared to submit within 5 days after Bid opening upon City's written request, information such as financial data, previous experience, present commitments, subcontractor names and qualifications,

and other such data as may be called for below. Each Bid must contain evidence of Bidder's qualification to do business in Alaska. Bidders shall be eligible to obtain a business license from the City of Unalaska.

Nothing indicated herein should prejudice the right of Owner to seek additional pertinent information as provided in the General Conditions.

4. License Requirements

Contractors and subcontractors, in order to perform public work in the State of Alaska, are required to hold State of Alaska Contractor's licenses of the class required to perform the specified work. Contractors and subcontractors are also required to hold current Alaska Business Licenses and obtain a City of Unalaska business license in order to perform public work in the State of Alaska. Contractor's license and Alaska Business License numbers shall be inserted in the appropriate place on the Bid form. Evidence of subcontractor's compliance with the above shall be submitted to the City before starting subcontract work on public work contracts.

5. Examination of Contract Documents and Site.

A. It is the responsibility of each Bidder before submitting a Bid:

1. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents (including "technical data" referred to below);
2. To visit the site to become familiar with and satisfy Bidder as to the general, local, and site conditions that may affect cost, progress, performance, or furnishing of the Work;
3. To consider federal, state, and local Laws and Regulations that may affect cost, progress, performance, or furnishing of the Work;
4. To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related data;
5. To promptly notify the City of all conflicts, errors, ambiguities or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents;
6. To review applicability of the City of Unalaska sales tax to any purchases of materials or services related to the Work.

B. Information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based upon information and data furnished to the City by Owners of such Underground Facilities or others, and the City does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.

INSTRUCTIONS TO BIDDERS

- C. Provisions concerning responsibility for the adequacy of data furnished to prospective Bidders on subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Contract Documents due to differing or unanticipated conditions appear in Article 4 of the General Conditions.
- D. Before submitting a Bid, each Bidder will be responsible to make or obtain such examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
- E. On request, the City will provide each Bidder access to the site to conduct such examinations, investigations, explorations, tests and studies as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the site to its former condition upon completion of any such explorations, investigations, test, and studies.
- F. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 5; that, without exception, the Bid is premised upon performing and furnishing the work required by the Contract Documents and applying the specific means, methods, techniques, sequences, or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents; that Bidder has given the Contracting Officer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by the City is acceptable to Bidder; and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.
- G. The provisions of paragraph 5A through 5F above, inclusive, do not apply to asbestos, polychlorinated biphenyl (PCB), petroleum, hazardous waste, or radioactive material covered by the Supplementary Conditions.
- H. Nothing contained in the Bid Documents, any and all attachments thereto, or any and all addenda thereto, shall be interpreted by any party as requiring or allowing the Contractor to do anything that is not in compliance with all applicable codes and regulations, that is less than general standard industry quality, or that results in an unsafe, unstable or dangerous condition.

6. Availability of Lands for Work, Etc.

The lands upon which the work is to be performed, rights-of-way and easements for access thereto, and other lands designated for use by Contractor in performing the work are identified in the Contract Documents. All additional lands and access thereto required for

INSTRUCTIONS TO BIDDERS

temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the work are to be obtained and paid for by the Successful Bidder. Easements for permanent structures or for permanent changes in existing facilities are to be obtained and paid for by the City unless otherwise provided in the Contract Documents.

7. Interpretations and Addenda.

- A. All questions about the meaning or intent of the Bidding Documents are to be directed to the City of Unalaska. Interpretations or clarifications considered necessary by the City in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the Issuing Office as having received the Bidding Documents. Questions received less than 6 days prior to the date for opening of Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- B. Addenda may also be issued to modify the Bidding Documents as deemed advisable by the City.

8. Bid Security.

- A. Each Bid must be accompanied by Bid security made payable to Owner for 5 percent of Bidder's Total Bid price and in the form of a certified bank check or a Bid Bond on form attached, issued by a Surety meeting the requirements of the General Conditions.
- B. The Bid security of a successful bidder will be retained until such Bidder has executed the Agreement, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the successful Bidder fails to execute and deliver the Agreement and furnish the required Contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The bid security of the Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the 7th day after the Effective Date of the agreement or the 60th day after the Bid opening, whereupon Bid security furnished by such Bidders will be returned. Bid security submitted with bids which are not competitive will be returned within 15 days after the Bid opening.

9. Contract Times.

The number of days within which, or the dates by which, the work is to be completed and ready for final payment (the Contract Times as defined in Article 1 of the General Conditions) are set forth in the Agreement (or incorporated therein by reference to the attached Bid Form).

INSTRUCTIONS TO BIDDERS

10. **Liquidated Damages.**

Provisions for liquidated damages, if any, are set forth in the Agreement.

11. **Bid Form.**

- A. The Bid Form is included with the Bidding Documents.
- B. All blanks on the Bid Form must be completed by printing in black ink or by typewriter.
- C. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- D. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- E. All names must be typed or printed in black ink below the signature.
- F. The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).
- G. The address, telephone, email address, and FAX number for communications regarding the Bid must be shown.
- H. See Article 4 above, for required evidence of authority to conduct business as an out-of-state corporation in Alaska. State Contractor license number, if any, must also be shown.

12. **Submission of Bids.**

- A. Bids shall be submitted not later than the time prescribed, at the place, and in the manner set forth in the Invitation to Bid and shall be enclosed in an opaque sealed envelope, marked with the project title (and, if applicable, the designated portion of the project for which the Bid is submitted) and name and address of Bidder and accompanied by the other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "**BID ENCLOSED**" on the face of it.
- B. Only one Bid from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the City that any Bidder is interested in more than one Bid for work contemplated, all Bids in which such Bidder is interested will be rejected.
- C. Attachments.

INSTRUCTIONS TO BIDDERS

Bidder shall complete and submit the following forms with its Bid:

Bid Form
Addenda Acknowledgment
Bid Bond
Alaska Business and Contractor's License

13. Modifications and Withdrawal of Bids.

- A. Prior to the time and date designated for receipt of Bids, any Bid submitted may be withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by facsimile. If by facsimile, the modification received shall be over the signature of the Bidder and shall be received before the date and time set for receipt of Bids. Facsimile messages shall be worded as to not reveal the amount of the original or modified Bid. Facsimile telephone number is:

City of Unalaska (907) 581-1417

Bid modifications must be sent to the office to which the original proposal is delivered or sent.

- B. If, within 24 hours after Bids are opened, any Bidder files a duly signed, written notice with the City and promptly thereafter demonstrates to the reasonable satisfaction of the City that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid. Thereafter, that Bidder will be disqualified from further consideration on the Work to be provided under the Contract Documents.

14. Opening of Bids.

Bids will be opened and read aloud publicly at the place where Bids are to be submitted.

15. Bids to Remain Subject to Acceptance.

All Bids will remain subject to acceptance for 60 days after the day of the Bid opening, but the City may, in its sole discretion, release any Bid and return the Bid security prior to that date.

16. Award of Contract.

- A. The City reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, non responsive, unbalanced or conditional Bids, and to reject the Bid of any Bidder if the City believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner. The City also reserves the right to waive all informalities not involving price, time, or changes

INSTRUCTIONS TO BIDDERS

in the Work and to negotiate Contract terms with the successful Bidder. Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

- B. In evaluating Bids and Submittals, the City will consider the qualifications of Bidders, whether or not the Bids comply with the prescribed requirements, technical data, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- C. The City may consider the qualifications and experience of subcontractors, suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of subcontractors, suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. The City also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data are required to be submitted prior to the Notice of Award.
- D. The City may conduct such investigations as the City deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of Bidders, proposed subcontractors, suppliers, and other persons and organizations to execute the work in accordance with the Contract Documents to the City's satisfaction within the prescribed time.
- E. If, at the time this Contract is to be awarded, the total of the lowest acceptable Bid exceeds the funds then estimated by the City as available, the City may reject all Bids or take such other action as best serves the City's interests.
- F. If the Contract is to be awarded, it will be awarded to best responsive, responsible Bidder as stated in Section 00100 Instructions To Bidders, whose evaluation by the City indicates to the City that the award will be in the best interests of the Project. Scoring for award will be based on the Selection Process below.
- G. In the event of failure of the lowest responsive, responsible Bidder to sign the Contract and provide an acceptable Performance Bond, Payment Bond, and insurance certificate(s), the Owner may award the Contract to the next lowest responsive, responsible Bidder. Such award, if made, will be made within 60 days after the opening of Proposals.
- H. An Additive or Deductive Bid Item is an amount proposed by Bidders and stated on the Bid Form for certain construction activities defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems or installation methods described in the Contract Documents.

INSTRUCTIONS TO BIDDERS

- I. Award of the Additive or Deductive Bid Items will be made to the extent that construction funds are available, in such order as may suit the best interest of the Owner. The Deductive and Additive Bid items are not in any specific order and are not listed in order of preference. The Owner reserves the right to select the Base Bid plus any combination of Additive and/or Deductive Bid items. If the order of the bids is affected, the award will be made on the basis of the Base Bid plus any combination of Additive or Deductive Bid items that the Owner selects at their option.

17. **Contract Security.**

Article 5 of the General Conditions sets forth Owner's requirements as to Performance and Payment Bonds. When the successful Bidder delivers the executed Agreement to Owner, it must be accompanied by the required Performance and Payment Bonds.

18. **Signing of Agreement.**

When the City gives a Notice of Award to the successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement, with all other written Contract Documents attached. Within 10 days thereafter, contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to the City with the required Bonds. Within 10 days thereafter, the City shall deliver one fully signed counterpart to Contractor.

19. **State Required Wage Rates.**

All workers shall be paid prevailing wage rates as described in the State of Alaska LABORERS' AND MECHANICS' MINIMUM RATES OF PAY, Title 36, Public Contracts, AS 36.05 & AS 35.10 Wage and Hour Administration Pamphlet No. 600 – Latest revision.

NOTE TO BIDDER: Use BLACK ink or typewriter for completing this Bid Form.

**Section 00300
BID FORM**

To: **City of Unalaska, Department of Public Works**

Address: **P.O. Box 610, Unalaska, Alaska 99685**

Project Identification: **City of Unalaska 2020 PARK AND PLAYGROUND IMPROVEMENTS**

DEFINITIONS

The terms used in this Bid which are defined in the General Conditions and Instructions to Bidders included as part of the Contract Documents are used with the same meaning in this Bid.

BIDDERS DECLARATION AND UNDERSTANDING

This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over the City.

In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that Bidder has examined copies of all the Bidding Documents.

Bidder has familiarized itself with the nature and extent of the Contract Documents, work, site, locality, general nature of work to be performed by Owner or others at the site that relates to work for which this Bid is submitted as indicated in the Contract Documents, and all local conditions and all federal, state, and local Laws and Regulations that in any manner may affect cost, progress, performance, or furnishing of the work.

Bidder has reviewed and checked all information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, or similar information or data in respect of said Underground Facilities are or will be required by Bidder in order to perform and furnish the work at the Contract Price, within the Contract Time, and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.3 of the General Conditions.

Bidder has correlated information known to Bidder and the results of all such observations, examinations, investigations, explorations, tests, and studies with the Contract Documents.

Bidder has given the City written notice of all conflicts, errors, ambiguities or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by the City is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the work for which this Bid is submitted.

CONTRACT EXECUTION AND BONDS

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the City in the form included in the Contract Documents to perform and furnish all work as specified or indicated in the Contract Documents for the Contract price and within the Contract Time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds and City of Unalaska business license and other documents required by the Bidding Requirements within 10 days after the date of Owner's Notice of Award.

CERTIFICATE OF INSURANCE

Bidder agrees to furnish the City, before commencing any Physical Work related to this Contract and as required elsewhere, the certificates of insurance as specified in these Documents.

Bidder further agrees that the amount stated herein includes specific consideration for the insurance coverages, including contractual liability, specified in the Contract Documents.

CONTRACT COMPLETION TIME

Bidder agrees that the work will be completed and ready for final payment in accordance with the number of calendar days or completion date indicated in the Agreement.

LIQUIDATED DAMAGES

Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the times specified in the Agreement.

ADDENDA

The Bidder hereby acknowledges that it has received Addenda No's _____, _____, _____, _____, _____, _____ (Bidder shall insert No. of each Addendum received) and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that its Bid(s) includes all impacts resulting from said addenda.

SALES AND USE TAXES

The Bidder agrees that all sales and use taxes are included in the stated bid prices for the work, unless provision is made herein for the Bidder to separately itemize the estimated amount of sales tax.

SUBCONTRACTORS

The Bidder further agrees that if the bid is the apparent low bid, he shall submit, within 5 days after the bid opening, a listing of subcontracting firms or businesses that will be awarded subcontracts for work in excess of \$5,000 and a copy of the City of Unalaska business license for the Contractor and each Subcontractor.

BID TABULATION AND SUMMARY

The Bidder further proposes to accept, as full payment for work proposed herein, the amount computed under provisions of the Contract Documents and based on the following Bid amounts, it being expressly

BID FORM

understood that the unit quantities of work shown on the plans is independent of the exact quantities involved. The Bidder agrees that the bid amount represent(s) a true measure of the labor and materials required to furnish, install, or provide the item of Work, including all allowances for overhead and profit. The amount shall be shown in both words and figures. In case of a discrepancy, the amount shown in words shall govern.

Bidder agrees to perform all of the work described in the Documents including the specifications, special provisions, and as generally shown on the plans for the prices stated in the Bid Schedules. Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding. Bidder understands that the Owner reserves the right to pick and choose what bid items will be constructed as part of this work, recognizing that Mobilization and Demobilization will be common to the remaining items of Work.

City of Unalaska
2020 PARK AND PLAYGROUND IMPROVEMENTS

BONDING

If the Bidder is awarded a construction Contract on this Proposal, the surety who provides the Performance Bond and Payment Bond will be _____

_____ whose address is _____,

_____,'

Street

City

_____.

State

Zip

BIDDER

An Individual

By

_____ (SEAL)

(Individual's name)

doing business as

Business

address: _____

Phone No.: _____

Fax No.: _____

Email address: _____

A Partnership

By _____ (SEAL)
(Firm name)

(general partner)

Business address: _____

Phone No.: _____

Fax No.: _____

Email address: _____

A Corporation

By _____
(Corporation name)

(state of incorporation)

By _____
(name of person authorized to sign)

(Title)

(Corporate Seal)

Attest _____
(Secretary)

Business address: _____

Phone No.: _____

Fax No.: _____

Email address: _____

A Joint Venture

By _____
(Name)

(Address)

By _____
(Name)

(Address)

Phone Number and Address for receipt of official communications

Business address: _____

Phone No.: _____

Fax No.: _____

Email address: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

SUBMITTED on _____, 20__.

BID PROPOSAL
City of Unalaska
2020 PARK AND PLAYGROUND IMPROVEMENTS
UCSD PARK

ITEM NO.	EST. QUANT.	DESCRIPTION (Write Unit Bid Price in Words)	UNIT PRICE	TOTAL PRICE
U1	All	Mobilization/Demobilization <hr/> <hr/> per lump sum		
U2	All	Demolition <hr/> <hr/> per lump sum		
U3	All	Earthwork <hr/> <hr/> per lump sum		
U4	All	Play Field <hr/> <hr/> per lump sum		
U5	All	Basketball/Volleyball Court <hr/> <hr/> per lump sum		
U6	All	Play Area: 8-Person Swing Set <hr/> <hr/> per lump sum		
U7	All	Play Area, Pyramid Climber <hr/> <hr/> per lump sum		
U8	All	Play Area, Boulder Stack <hr/> <hr/> per lump sum		
U9	All	Chain Link Fence and Gates <hr/> <hr/> per lump sum		
U10	All	Storm Drain <hr/> <hr/> per lump sum		
U11	All	Concrete Sidewalk <hr/> <hr/> per lump sum		

U12	All	Guardrail Relocation _____ per lump sum		
U13	All	Four-Square Painting _____ per lump sum		
U14	All	Bleachers _____ per lump sum		
U15	2	Picnic Table _____ per each		
U16	2	Sign _____ per each		
U17	1	Trash Can _____ per each		
U18	5	Bench _____ per each		
U19	1	Bike Rack _____ per each		
U20	2	Soccer Goal _____ per each		

Total Bid Price: _____

Total Bid Price (in words): _____

Bidding Company: _____

Name (Printed): _____

Signature: _____ Date: _____

Contractors License No. _____ Business License No. _____

BID PROPOSAL
City of Unalaska
2020 PARK AND PLAYGROUND IMPROVEMENTS
SITKA SPRUCE PARK

ITEM NO.	EST. QUANT.	DESCRIPTION (Write Unit Bid Price in Words)	UNIT PRICE	TOTAL PRICE
S1	All	Mobilization/Demobilization _____ per lump sum		
S2	All	Demolition _____ per lump sum		
S3	All	Earthwork _____ per lump sum		
S4	All	Basketball Court _____ per lump sum		
S5	All	Play Area - Playground _____ per lump sum		
S6	All	Play Area, Summit Rock _____ per lump sum		
S7	All	Play Area, Pyramid Climber _____ per lump sum		
S8	All	Wood Fence and Gate _____ per lump sum		
S9	2	Picnic Table _____ per each		
S10	1	Trash Can _____ per each		

S11	3	Bench _____		
		_____ per each		
S12	1	Grill _____		
		_____ per each		

Total Bid Price: _____

Total Bid Price (in words): _____

Additive Alternate 1	All	Separator Wall _____		
		_____ per lump sum		

Additive Alternate 1 (in words) _____

Bidding Company: _____

Name (Printed): _____

Signature: _____ Date: _____

Contractors License No. _____ Business License No. _____

BID BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

as Principal, hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

a corporation duly organized under the laws of the State of Alaska as Surety, hereinafter called Surety, are held and firmly bound unto

City of Unalaska

(Name of Owner)

PO Box 610, Unalaska, Alaska 99685

(Address of Owner)

as Obligee, hereinafter called Obligee, in the sum of _____ Dollars, (\$ _____) for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for the City of Unalaska **2020 PARK AND PLAYGROUND IMPROVEMENTS**, located in Unalaska, Alaska.

NOW THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and Sealed this _____ day of _____ 2019

(Principal) Seal

(Witness)

(Title) Seal

(Surety) Seal

(Witness)

(Title) Seal

Part 2
CONTRACT FORMS

- Change Orders which may be delivered or issued after Effective Date of the Agreement and not attached hereto.

Article 2. CONTRACT TIME

- 2.1 The CONTRACTOR is allowed **150-days** for this work.
- 2.2 Liquidated Damages. The OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that the OWNER will suffer financial loss if the work is not completed within the times specified above, plus any extensions thereof allowed in accordance with Article 11 of the General Conditions. These losses include inconvenience to the City, administration and inspection costs, loss of efficiency and general inconvenience to the public. They also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by the OWNER if the work is not completed on time. Accordingly, instead of requiring any such proof, the OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay the OWNER Five Hundred Dollars (\$500.00) for each day that expires after the time specified above for *Final Completion* and readiness for final payment.

Article 3. CONTRACT PRICE

- 3.1 The OWNER shall pay CONTRACTOR for completion of the work in accordance with the Contract Documents an amount equal to sum of the established unit prices for each separately identified item of unit price work multiplied by the measured quantity of actual items installed plus the sum of the lump sum prices for each separately identified and selected bid item (herein referred to as the "Contract Sum"). The Contract sum is based upon the Bid Items which are set forth in the Contract Documents and which are hereby accepted by the OWNER.

Article 4. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 13 of the General Conditions. Applications for Payment will be processed by the OWNER as provided in the General Conditions.

- 4.1. Progress Payments. The OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about a day of the month mutually agreeable to the OWNER and CONTRACTOR as agreed to at the preconstruction conference. All progress payments will be on the basis of the progress of the work measured by the actual installed quantity of items, plus allowances for stockpiled materials.
- 4.1.1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as the OWNER shall determine, or the OWNER may withhold, in accordance with Article 13 (paragraph 13.8) of the General Conditions and the Supplemental Conditions.
- a. Ninety percent of work completed.

- b. Once 50 percent of the work is complete as determined by the OWNER, and if the character and progress of the work have been satisfactory to the OWNER, the OWNER, may determine that, as long as the character and progress of the work remain satisfactory to them, there will be no additional retainage on account of work completed; in which case, the remaining progress payments prior to Substantial Completion will be in an amount equal to 100 percent of the work completed.

4.1.2. Upon Substantial Completion, in an amount sufficient to increase total payments to CONTRACTOR to 95 percent of the Contract Price, less such amounts as the OWNER shall determine, or the OWNER may withhold, in accordance with Article 13 of the General Conditions.

- 4.2. Final Payment. Upon final completion and acceptance of the work in accordance with the General Conditions; Affidavit of Payment of Debts and Claims; Affidavit of Release of Liens; and Receipt of Consent of Surety Company to Final Payment, the OWNER shall pay the remainder of the Contract Price as provided in said Article 13.

4.2.1 Deductions. The City may deduct from the amount of any payment made to Contractor any sums owed to City by Contractor including, but not limited to, past due sales tax, port and harbor fees, property tax, or rent. Before making any such deduction the City shall have provided Contractor written notice of the amount claimed by City to be due and owing from Contractor.

Article 5. INTEREST ON RETAINAGE

All retainage shall bear interest at the rate required by AS 36.90.250, if applicable.

Article 6. CONTRACTOR'S REPRESENTATIONS

In order to induce the OWNER to enter into this agreement, CONTRACTOR makes the following representations:

- 6.1. CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance, or furnishing of the work.
- 6.2. CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports, and studies which pertain to the subsurface or physical conditions at or contiguous to the site or which otherwise may affect the cost, progress, performance, or furnishing of the work as CONTRACTOR considers necessary for the performance or furnishing of the work at the Contract Price, within the Contract Time, and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.2 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies, or similar information or data are or will be required by CONTRACTOR for such purposes.
- 6.3. CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site

and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies, or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the work at the Contract Price, within the Contract Time, and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.4 of the General Conditions.

- 6.4. CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Contract Documents.
- 6.5. CONTRACTOR has given the OWNER written notice of all conflicts, errors, or discrepancies that it has discovered in the Contract Documents and the written resolution thereof by the OWNER is acceptable to CONTRACTOR.

Article 7. MISCELLANEOUS

- 7.1. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.
- 7.2. The CONTRACTOR shall submit the Performance Bond, Labor and Material Payment Bonds, and Certification of Insurance and City of Unalaska business licenses and all Subcontractor City of Unalaska business licenses as required by the Contract Documents, prior to commencement of the Work. The Performance and Material Payment Bonds shall be in the amount of 100% of the contract bid price. **All Work shall be performed in accordance with the Laborers' and Mechanics' Minimum Rates of Pay as required by Title 36 AS 36.05 & AS 36.10 published by the Alaska Department of Labor.**
- 7.3. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 7.4. OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in the Contract Documents.
- 7.5. Until Contractor receives notice from the City that project records need not be preserved, Contractor shall preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its subcontractors' or agents' possession or control, or that come into its or its subcontractors' or agents' possession or control that relate to the Work.

IN WITNESS WHEREOF, The OWNER and CONTRACTOR have signed all counterparts of this Agreement. All portions of the Contract Documents have been signed or identified by the OWNER and CONTRACTOR.

This Agreement will be effective on _____, 2019.

CONTRACTOR

CITY OF UNALASKA, ALASKA

By: _____

By: _____

_____, Its _____

Erin Reinders, City Manager

State of Alaska)

State of Alaska)

) ss.

) ss.

Third Judicial District)

Third Judicial District)

The foregoing instrument was acknowledged before me on the ____ day of _____, 2019, by

The foregoing instrument was acknowledged before me on the ____ day of _____, 2019, by David A. Martinson, City Manager for the City of Unalaska, a First Class Alaska Municipal Corporation, on behalf of the City of Unalaska.

_____,
the _____,
of _____

_____, a _____ Corporation, on behalf of the corporation.

Notary Public, State of Alaska

My Commission Expires _____

Notary Public, State of Alaska

My Commission Expires _____

**Section 00610
PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

as Principal, hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto

City of Unalaska
(Name of Owner)

PO Box 610, Unalaska, Alaska 99685
(Address of Owner)

as Obligee, hereinafter called Obligee, in the sum of _____

_____ Dollars, (\$ _____) for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Contractor has a written agreement dated _____ day of _____ 20 ____, entered into a Contract with Owner for the

City of Unalaska
2020 PARK AND PLAYGROUND IMPROVEMENTS

in accordance with the Specifications prepared by Regan Engineering, P.C., which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

- 1) Complete the Contract in accordance with its terms and conditions, or
- 2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as the Work progresses (even though there should be a default or a succession of defaults under the contract or contracts completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract price", as used in this paragraph, shall mean the total amount payable by Owner to the Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of six (6) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators, or successors of the Owner.

Signed and Sealed this _____ day of _____ 20__.

(Principal) Seal

(Witness)

(Title) Seal

(Surety) Seal

(Witness)

(Title) Seal

**Section 00620
PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS,

That _____ as Contractor, and
_____ as Surety, are held and firmly bound unto
City of Unalaska hereinafter called "OWNER", in the sum of _____ dollars, for the
payment of which sum, well and truly made, we bind ourselves, our heirs, executors, administrators,
successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said CONTRACTOR has been awarded and is about to enter into the annexed
Agreement with said OWNER to perform the WORK as specified or indicated in the Contract
Documents entitled

City of Unalaska
2020 PARK AND PLAYGROUND IMPROVEMENTS

NOW THEREFORE, if said CONTRACTOR, or subcontractor, fails to pay for any materials,
equipment, or other supplies, or for rental of same, used in connection with the performance of work
contracted to be done, or for amounts due under applicable State law for any work or labor thereon,
said Surety will pay for the same in an amount not exceeding the sum specified above, and, in the
event suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond
shall inure to the benefit of any persons, companies, or corporations entitled to file claims under
applicable State law.

PROVIDED, that any alterations in the WORK to be done or the materials to be furnished, or
changes in the time of completion, which may be made pursuant to the terms of said Contract
Documents, shall not in any way release said CONTRACTOR or said surety thereunder, nor shall
any extensions of time granted under the provisions of said Contract Documents release either said
CONTRACTOR or said Surety thereunder, nor shall any extensions of time granted under the
provisions of said Contract Documents release either said CONTRACTOR or said Surety, and notice
of such alterations or extensions of the Agreement is hereby waived by said Surety.

SIGNED AND SEALED, this _____ day of _____, 20____.

(SEAL)

(CONTRACTOR)

(Surety)

By: _____
(Signature)

By: _____
(Signature)

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

Part 3

GENERAL CONDITIONS

GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

ARTICLE 2 - AUTHORITIES AND LIMITATIONS

- 2.1 Authorities and Limitations
- 2.2 Evaluations by Contracting Officer
- 2.3 Means and Methods
- 2.4 Visits to Site

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

- 3.1 Incomplete Contract Documents
- 3.2 Copies of Contract Documents
- 3.3 Scope of Work
- 3.4 Intent of Contract Documents
- 3.5 Discrepancy in Contract Documents
- 3.6 Clarifications and Interpretations
- 3.7 Reuse of Documents

ARTICLE 4 - LANDS AND PHYSICAL CONDI- TIONS

- 4.1 Availability of Lands
- 4.2 Visit to Site
- 4.3 Explorations and Reports
- 4.4 Utilities
- 4.5 Damaged Utilities
- 4.6 Utilities Not Shown or Indicated
- 4.7 Survey Control

ARTICLE 5 - BONDS AND INSURANCE AND INDEMNIFICATION

- 5.1 Delivery of Bonds
- 5.2 Bonds
- 5.3 Replacement of Bond and Surety
- 5.4 Insurance Requirements
- 5.5 Indemnification

ARTICLE 6 - CONTRACTOR'S RESPONSIBILI- TIES

- 6.1 Supervision of Work
- 6.2 Superintendence by CONTRACTOR
- 6.3 Character of Workers
- 6.4 CONTRACTOR to Furnish
- 6.5 Materials and Equipment
- 6.6 Anticipated Schedules
- 6.7 Finalizing Schedules
- 6.8 Adjusting Schedules
- 6.9 Substitutes of "Or-Equal" Items
- 6.10 Substitute Means and Methods
- 6.11 Evaluation of Substitution
- 6.12 Dividing the Work
- 6.13 Subcontractors
- 6.14 Use of Premises

- 6.15 Structural Loading
- 6.16 Record Documents
- 6.17 Safety and Protection
- 6.18 Safety Representative
- 6.19 Emergencies
- 6.20 Shop Drawings and Samples
- 6.21 Shop Drawings and Sample Review
- 6.22 Maintenance During Construction
- 6.23 Continuing the Work
- 6.24 Consent to Assignment
- 6.25 Use of Explosives
- 6.26 CONTRACTOR's Records

ARTICLE 7 - LAWS AND REGULATIONS

- 7.1 Laws to be Observed
- 7.2 Permits, Licenses, and Taxes
- 7.3 Patented Devices, Materials and Processes
- 7.4 Compliance of Specifications and Drawings
- 7.5 Accident Prevention
- 7.6 Sanitary Provisions
- 7.7 Business Registration
- 7.8 Professional Registration and Certification
- 7.9 Local Building Codes
- 7.10 Air Quality Control
- 7.11 Archaeological or Paleontological Discoveries
- 7.12 Alaska Forest Products
- 7.13 Preferential Employment
- 7.14 Wages and Hours of Labor
- 7.15 Overtime Work Hours and Compensation
- 7.16 Covenant Against Contingent Fees
- 7.17 Officials Not to Benefit
- 7.18 Personal Liability of Public Officials

ARTICLE 8 - OTHER WORK

- 8.1 Related Work at Site
- 8.2 Access, Cutting, and Patching
- 8.3 Defective Work by Others
- 8.4 Coordination

ARTICLE 9 - CHANGES

- 9.1 CITY's Right to Change
- 9.2 Authorization of Changes within the General Scope
- 9.3 Directives
- 9.4 Change Order
- 9.5 Shop Drawing Variations
- 9.6 Changes Outside the General Scope; Supplemental Agreement
- 9.7 Unauthorized Work
- 9.8 Notification of Surety
- 9.9 Differing Site Conditions

ARTICLE 10 - CONTRACT PRICE; COMPUTA- TION AND CHANGE

- 10.1 Contract Price
- 10.2 Claim for Price Change
- 10.3 Change Order Price Determination
- 10.4 Cost of the Work
- 10.5 Excluded Costs
- 10.6 CONTRACTOR's Fee
- 10.7 Cost Breakdown
- 10.8 Cash Allowances
- 10.9 Unit Price Work
- 10.10 Determinations for Unit Prices

ARTICLE 11 - CONTRACT TIME; COMPUTATION AND CHANGE

- 11.1 Commencement of Contract Time; Notice to Proceed
- 11.2 Starting the Work
- 11.3 Computation of Contract Time
- 11.4 Time Change
- 11.5 Extension Due to Delays
- 11.6 Essence of Contract
- 11.7 Reasonable Completion Time
- 11.8 Delay Damages

ARTICLE 12 - QUALITY ASSURANCE

- 12.1 Warranty and Guaranty
- 12.2 Access to Work
- 12.3 Tests and Inspections
- 12.4 Uncovering Work
- 12.5 CITY May Stop the Work
- 12.6 Correction of Removal of Defective Work
- 12.7 One Year Correction Period
- 12.8 Acceptance of Defective Work
- 12.9 CITY may Correct Defective Work

ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION

- 13.1 Schedule of Values
- 13.2 Preliminary Payments
- 13.3 Application for Progress Payment
- 13.4 Review of Applications for Progress Payments
- 13.5 Stored Materials and Equipment
- 13.6 CONTRACTOR's Warranty of Title
- 13.7 Withholding of Payments
- 13.8 Retainage
- 13.9 Request for Release of Funds
- 13.10 Substantial Completion
- 13.11 Access Following Substantial Completion
- 13.12 Final Inspection
- 13.13 Final Application for Payment
- 13.14 Final Payment and Final Completion
- 13.15 Final Acceptance
- 13.16 CONTRACTOR's Continuing Obligation
- 13.17 Waiver of Claims by CONTRACTOR

- 13.18 No Waiver of Legal Rights

ARTICLE 14 - SUSPENSION OF WORK, DEFAULT, AND TERMINATION

- 14.1 CITY May Suspend Work
- 14.2 Default of Contract
- 14.3 Rights or Remedies
- 14.4 Convenience Termination

ARTICLE 15 - CLAIMS AND DISPUTES

- 15.1 Notification
- 15.2 Presenting Claim
- 15.3 Claim Validity, Additional Information & Project Manager's Action
- 15.4 Contracting Officer's Decision
- 15.5 Notice of Appeal
- 15.6 City Manager's Decision

GENERAL CONDITIONS

ACKNOWLEDGMENT

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

The granting of permission by NSPE to allow the State of Alaska to reprint portions of the NSPE document 1910-8, 1983 does not constitute approval of the State of Alaska General Conditions or the subsequently developed City of Unalaska General Conditions.

Insurance requirements were modified March, 2001. Brooks Chandler review comments were incorporated January, 2005 and March, 2008.

ARTICLE 1 - DEFINITIONS

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

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

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

Terms not defined below shall have their ordinary accepted meanings within the context in which they are used. "Webster's Third New International Dictionary of the English Language, Unabridged, Copyright 1961", or subsequent revision thereof; shall provide ordinarily accepted meanings. Words which have a well-known technical or trade meaning when used to describe work, materials or equipment shall be interpreted in accordance with such meaning. Words defined in Article 1 are capitalized throughout these General Conditions.

Addenda - All clarifications, corrections, or changes issued graphically or in writing by the CITY after the advertisement but prior to the opening of bids.

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

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

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

A.S. - Initials which stand for Alaska Statute.

Award - The acceptance, by the City, of the successful Bid.

Bid - The offer of a bidder, on the prescribed form to perform the work at the prices quoted.

Bid Bond - A type of bid Guarantee.

Bid Guaranty - The security furnished with a bid to guarantee that the bidder will enter into a contract if his proposal is accepted by the Department.

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

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

Change Order - A written order by the CITY directing changes to the contract, within its general scope.

City - The City of Unalaska, Alaska. References to "owner" or "Contracting Agency" mean the city.

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

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

Contract Documents - The Contract Form, Addenda, the Bidding Requirements and CONTRACTOR's Bid (including all appropriate bid tender forms), the Bonds, the Conditions of the Contract and all other Contract Requirements, the Specifications, and the Drawings furnished by the CITY to the CONTRACTOR, together with all change orders and documents approved by the Contracting Officer for inclusion, modifications and supplements issued on or after the Effective Date of the Contract.

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

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

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

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

Consultant - A person, firm, agency or corporation retained by the CITY to prepare Contract Documents, perform construction administration services, or other Project related services.

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

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

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

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

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

General Requirements - Sections of Division 1 of the Specifications which contain administrative and procedural requirements as well as requirements for temporary facilities which apply to Specification Divisions 2 through 16.

Holidays - The City of Unalaska recognizes the following holidays:

1. New Years Day - January 1
2. President's Day - Third Monday in February
3. Memorial Day - Last Monday in May
4. Independence Day - July 4
5. Labor Day - First Monday in September
6. Veteran's Day - November 11
7. Thanksgiving Day - Fourth Thursday in November
8. Christmas Day - December 25

If any holiday listed above falls on a Saturday, Saturday and the preceding Friday are both legal holidays. If the holiday should fall on a Sunday, Sunday and the following Monday are both legal holidays.

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

Invitation for Bids or Invitation to Bid - A portion of the Bidding Documents soliciting bids for the Work to be performed.

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

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

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

Performance Bond - The security furnished by the CONTRACTOR and his surety to guarantee performance and completion of the work in accordance with the contract.

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

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

Proposal - The offer of a bidder, on the prescribed form to perform the work at the prices quoted.

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

Regulatory Requirement - Laws, rules, regulations, ordinances, codes and/or orders of the United States, State of Alaska or City of Unalaska to the extent applicable to the Work.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by the CONTRACTOR to illustrate material, equipment, fabrication, or erection for some portion of the Work.

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

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

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

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

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

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

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

Work - Work is the act of, and the result of, performing services, furnishing labor, furnishing and incorporating materials and equipment into the Project and performing other duties and obligations, all as required by the Contract Documents. Such Work, however incremental, will culminate in the entire completed Project, or the various separately identifiable parts thereof.

ARTICLE 2 - AUTHORITIES AND LIMITATIONS

2.1 Authorities and Limitations:

- 2.1.1 The Contracting Officer alone, shall have the power to bind the CITY and to exercise the rights, responsibilities, authorities and functions vested in the Contracting Officer by the Contract Documents, except that the Contracting Officer shall have the right to designate in writing authorized representatives to act for him. Wherever any provision of the Contract Documents specifies an individual or organization, whether Governmental or private, to perform any act on behalf of or in the interests of the CITY that individual or organization shall be deemed to be the Contracting Officer's authorized representative under this Contract but only to the extent so specified. The Contracting Officer may, at any time during the performance of this Contract, vest in any such authorized representatives additional power and authority to act for the Contracting Officer or designate additional representatives, specifying the extent of their authority to act for the Contracting Officer; a copy of each document vesting additional authority in or removing that authority from an authorized representative or designating an additional authorized representative shall be furnished to the CONTRACTOR. The City Council reserves the right to appoint a new Contracting Officer without affecting any of the CONTRACTOR's obligations to the CITY under this Contract.
- 2.1.2 The CONTRACTOR shall perform the Work in accordance with any written order (including but not limited to instruction, direction, interpretation or determination) issued by an authorized representative in accordance with the authorized representative's authority to act for the Contracting Officer. The CONTRACTOR assumes all the risk and consequences of performing the Work in accordance with any order (including but not limited to instruction, direction, interpretation or determination) of anyone not authorized to issue such order, and of any order not in writing.
- 2.1.3 Should the Contracting Officer or his authorized representative designate Consultant(s) to act for the CITY as provided for in Paragraph 2.1.1, the performance or nonperformance of the Consultant under such authority to act, shall not give rise to any contractual obligation or duty of the Consultant to the CONTRACTOR, any Subcontractor, any Supplier, or any other organization performing any of the Work or any Surety representing them.
- 2.1.4 The term "Contracting Officer" when used in the text of these General Conditions or other Contract Documents following this section shall also mean any duly authorized representative of the Contracting Officer when authorized in accordance with Paragraph 2.1.1.

2.2 Evaluations by Contracting Officer:

- 2.2.1 The Contracting Officer will decide all questions which may arise as to;
- a. Quality and acceptability of materials furnished;
 - b. Quality and acceptability of Work performed;
 - c. Compliance with the Schedule of Progress;
 - d. Interpretation of Contract Documents;
 - e. Acceptable fulfillment of the Contract on the part of the CONTRACTOR.
- 2.2.2 In order to avoid cumbersome terms and confusing repetition of expressions in the Contract Documents whenever the terms "as ordered", "as directed", "as required", "as approved", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used it shall be understood as if the expression were followed by the words "the Contracting Officer". When such terms are used to describe a requirement, direction, review or judgment of the Contracting Officer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise).

2.2.3 The use of any such term or adjective shall not be effective to assign to the CITY any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provision of paragraphs 2.3 or 2.4.

2.3 Means & Methods:

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

2.4 Visits to Site:

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

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.1 Incomplete Contract Documents:

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

3.2 Copies of Contract Documents:

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

3.3 Scope of Work:

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

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

3.4 Intent of Contract Documents:

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

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

or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

3.5 Discrepancy in Contract Documents:

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

3.5.2 Discrepancy - Order of Precedence:

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

- Supplementary Conditions
- General Conditions
- General Requirements
- Technical Specifications

Drawings (recorded dimensions will govern over scaled dimensions, large details over small scale, schedules over plans, architectural drawings over structural drawings over mechanical and electrical drawings)

3.6 Clarifications and Interpretations:

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

3.7 Reuse of Documents:

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

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

ARTICLE 4 - LANDS AND PHYSICAL CONDITIONS

4.1 Availability of Lands:

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

4.2 Visit to Site:

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

4.3 Explorations and Reports:

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

4.4 Utilities:

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

4.4.2 The CONTRACTOR shall have full responsibility for:

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

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

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

4.5 Damaged Utilities:

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

- a. When the utility is shown or indicated in the Contract Documents.
- b. When the utility has been located by the utility owner.
- c. When no locate was requested by the CONTRACTOR for utilities shown or indicated in the Contract Documents.
- d. All visible utilities.

- e. When the CONTRACTOR could have, otherwise, reasonably been expected to be aware of such utility.

4.6 Utilities Not Shown or indicated.

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

4.7 Survey Control:

The CITY will identify sufficient horizontal and vertical control data to enable the CONTRACTOR to survey and layout the Work. All survey work shall be performed under the direct supervision of a registered Land Surveyor when required by paragraph 7.8.

ARTICLE 5 - BONDS, INSURANCE, AND INDEMNIFICATION

5.1 Delivery of Bonds:

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

5.2 Bonds:

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

5.3 Replacement of Bond and Surety:

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

5.4 Insurance Requirements:

- 5.4.1. The contractor shall carry and maintain throughout the life of this contract, at its own expense, insurance not less than the amounts and coverage herein specified, and the City of Unalaska, its employees and agents shall be named as additional insured under the insurance coverage so specified and where allowed, with respect to the performance of the work. There shall be no right of subrogation against the City or its agents performing work in connection with the work, and this **waiver of subrogation** shall be endorsed upon the policies. Insurance shall be placed with companies acceptable to the City of Unalaska; and these policies providing coverage thereunder shall contain provisions that no cancellation or material changes in the policy relative to this project shall become effective except upon **30 days** prior written notice thereof to the City of Unalaska.

- 5.4.2. Prior to commencement of the work, the contractor shall furnish certificates to the City of Unalaska, in duplicate, evidencing that the Insurance policy provisions required hereunder are in force. Acceptance by the City of Unalaska of deficient evidence does not constitute a waiver of contract requirements.
- 5.4.3. The contractor shall furnish the City of Unalaska with certified copies of policies upon request. The minimum coverages and limits required are as follows:
1. **Workers' Compensation** insurance in accordance with the statutory coverages required by the State of Alaska and **Employers Liability** insurance with limits not less than **\$1,000,000** and, where applicable, insurance in compliance with any other statutory obligations, whether State or Federal, pertaining to the compensation of injured employees assigned to the work, including but not limited to Voluntary Compensation, Federal Longshoremen and Harbor Workers Act, Maritime and the Outer Continental Shelf's Land Act.
 2. **Commercial General Liability** with limits not less than **\$1,000,000** per Occurrence and **\$2,000,000** Aggregate for Bodily Injury and Property Damage, including coverage for Premises and Operations Liability, Products and Completed Operations Liability, Contractual Liability, Broad Form Property Damage Liability and Personal Injury Liability. Coverage shall not contain any exclusion of Explosion, Collapse, or Underground. Coverage is to be endorsed to include a per project aggregate. Additionally, such insurance shall be considered primary to any other insurance carried by the City of Unalaska and the insurer will endorse the policy accordingly.
 3. **Commercial Automobile Liability** on all owned, non-owned, hired and rented vehicles with limits of liability of not less than **\$1,000,000** Combined Single Limit for Bodily Injury and Property Damage per each accident or loss.
 4. If applicable, Contractor's Equipment insurance covering all of the contractor's equipment and machinery to be used in connection with the performance of the work specified in this contract. This coverage requirement may be waived at the discretion of the City of Unalaska if the Contractor self-insures the equipment and will waive all right of recovery against the City of Unalaska in writing.
 5. **Umbrella/Excess Liability** insurance coverage of not less than **\$1,000,000** per occurrence and annual aggregate providing coverage in excess of General Liability, Auto Liability, and Employers Liability.
 6. If work involves use of aircraft, Aircraft Liability insurance covering all owned and non-owned aircraft with a per occurrence limit of not less than \$1,000,000.
 7. If work involves use of watercraft, Protection and Indemnity insurance with limits not less than \$1,000,000 per occurrence. Hull and Machinery coverage is to be carried on the vessel for the full current market value. This coverage requirement may be waived at the discretion of the City of Unalaska if the contractor self-insures the equipment and will waive all rights of recovery against the City of Unalaska in writing.
 8. Where applicable, **Professional Liability** insurance with limits of not less than \$1,000,000 per claim and \$1,000,000 aggregate, subject to a maximum deductible of \$10,000 per claim. The City of Unalaska has the right to negotiate increase of deductibles subject to acceptable financial information of the policyholder.
 9. Where applicable, Pollution Liability insurance with a project limit of not less than \$1,000,000 subject to a maximum deductible of \$10,000 to include coverage for Asbestos, Hazardous Materials, Lead or other related environmental hazards. The City of Unalaska has the right to negotiate increase of deductibles subject to acceptable financial information of the policyholder.

In the event Asbestos, Hazardous Materials, Lead or other related environmental hazards are transported by vehicle and/or marine vessel, the operator of such vehicles and vessels shall provide a Certificate of Insurance for the transportation of such materials (including loading and unloading) with limits of not less than \$1,000,000.

10. **Builder's Risk Insurance:** Coverage shall be provided on an "All Risk" completed value basis and protect the interests of the City, the contractor and his subcontractors. Coverage shall include all materials, equipment and supplies that are intended for specific installation in the project while such materials, supplies and equipment are located at the project site and in transit from port of arrival to job site and while temporarily located away from the project site.
- 5.4.4. Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the contractor shall provide a financial guarantee satisfactory to the City guaranteeing payment of losses and related investigations, claim administration and defense expense.
- 5.4.5. All insurance policies as described above are required to be written on an "occurrence" basis. In the event occurrence coverage is not available, the contractor agrees to maintain "claims made" coverage for a minimum of two years after project completion.
- 5.4.6. If the contractor employs subcontractors to perform any work hereunder, the contractor agrees to require such subcontractors to obtain, carry, maintain, and keep in force during the time in which they are engaged in performing any work hereunder, policies of insurance which comply with the requirements as set forth in this section. This requirement is applicable to subcontractors of any tier.
- 5.4.7. The contractor is required to maintain all certificates of insurance during the course of the project and for a minimum of three (3) years following the completion of such project. It is further agreed, that upon request by the City of Unalaska, the Contractor will provide copies of any and all subcontractor certificates of insurance for review of compliance.
- 5.4.8. Failure by the Contractor to maintain the required insurance coverage or to comply with the above, may, at the option of the City of Unalaska, be deemed Defective Work and remedied in accordance with the contract.
- 5.5 Indemnification:
- 5.5.1 The CONTRACTOR and his Subcontractors will name the owner as "Additional Insured" and will provide a "Waiver of Subrogation" on all required policies of insurance.
- 5.5.2 The CONTRACTOR shall indemnify, save harmless, and defend the CITY and its agents and its employees from any and all claims or actions for injuries or damages sustained by any person or property arising directly or indirectly from the CONTRACTOR's performance of this contract; however, this provision has no effect if, but only if, the sole proximate cause of the injury or damage is the negligence of the City or its agents.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 Supervision of Work:

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

6.2 Superintendence by CONTRACTOR:

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

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

6.3 Character of Workers:

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

6.4 CONTRACTOR to Furnish:

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

6.5 Materials and Equipment:

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

6.6 Anticipated Schedules:

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

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

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

6.7 Finalizing Schedules:

Prior to processing the first Application for Payment the Contracting Officer and the CONTRACTOR will finalize schedules required by paragraph 6.6.

Acceptance by the CITY of the progress schedule, will neither impose on the CITY nor relieve the CONTRACTOR from full responsibility for the progress or scheduling of the Work. If accepted, the finalized schedule of Shop Drawing and other required submissions will be acceptable to the CITY as providing a workable arrangement for processing the submissions. If accepted the finalized Schedule of Values will be acceptable to the CITY as an approximation of anticipated value of Work accomplished over the anticipated Contract Time. Receipt and acceptance of a schedule submitted by the CONTRACTOR shall not be construed to assign responsibility for performance or contingencies to the CITY or relieve the CONTRACTOR of his responsibility to adjust his forces, equipment, and work schedules as may be necessary to insure completion of the Work within prescribed Contract Time. Should the progress of the Work be discontinued for any reason, the CONTRACTOR shall notify the Contracting Officer at least 24 hours in advance of resuming operations.

6.8 Adjusting Schedules:

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

6.9 Substitutes or "Or-Equal" Items:

- 6.9.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by the Contracting Officer only if sufficient information is submitted by the CONTRACTOR which clearly demonstrates to the Contracting Officer that the material or equipment proposed is equivalent or equal in all aspects to that named. The procedure for review by the Contracting Officer will include the following as supplemented in the General Requirements.
- 6.9.2 Requests for review of substitute items of material and equipment will not be accepted by the Contracting Officer from anyone other than the CONTRACTOR.
- 6.9.3 If the CONTRACTOR wishes to furnish or use a substitute item of material or equipment, the CONTRACTOR shall make written application to the Contracting Officer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not delay the CONTRACTOR's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with the CITY for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.
- 6.9.4 All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Contracting Officer in evaluating the proposed substitute. The Contracting Officer may require the CONTRACTOR to furnish at the CONTRACTOR's expense additional data about the proposed substitute. The Contracting Officer may reject any substitution request which the Contracting Officer determines is not in the best interest of the CITY.

6.10 Substitute Means and Methods:

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

6.11 Evaluation of Substitution:

The Contracting Officer will be allowed a reasonable time within which to evaluate each proposed substitute. The Contracting Officer will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without the Contracting Officer's prior written acceptance which will be evidenced by either a Change Order or a Shop Drawing approved in accordance with Sections 6.20 and 6.21. The Contracting Officer may require the CONTRACTOR to furnish at the CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute.

6.12 Dividing the Work:

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

6.13 Subcontractors:

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

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

6.14 Use of Premises:

The CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project limits and approved remote storage sites and lands and areas identified in and permitted by Regulatory Requirements, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. The CONTRACTOR shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against the CITY by any such owner or occupant because of the performance of the Work, the CONTRACTOR shall hold the CITY and its agencies harmless.

6.15 Structural Loading:

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

6.16 Record Documents:

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

6.17 Safety and Protection:

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

- 6.17.1 All employees on the Work and other persons and organizations who may be affected thereby;
- 6.17.2 All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and
- 6.17.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.
- 6.17.4 The CONTRACTOR shall comply with all applicable Regulatory Requirements enacted for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the CONTRACTOR with no change in Contract Price or Contract Time except as stated in 4.6, except damage or loss attributable to unforeseeable causes beyond the control of and without the fault or negligence of the CONTRACTOR, including but not restricted to acts of God or the public enemy. The CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until Final Acceptance (except as otherwise expressly provided in connection with Substantial Completion).

6.18 Safety Representative:

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

6.19 Emergencies:

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the CITY, is obligated to act to prevent threatened damage, injury or loss. The CONTRACTOR shall give the Contracting Officer prompt written notice if the CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents is required because of the action taken in response to an emergency, a change will be authorized by one of the methods indicated in Paragraph 9.2, as determined appropriate by the Contracting Officer.

6.20 Shop Drawings and Samples:

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

6.21 Shop Drawing and Sample Review:

- 6.21.1 The Contracting Officer will review with reasonable promptness Shop Drawings and samples, but the Contracting Officer's review will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review of a separate item as such will not indicate acceptance of the assembly in which the item functions. The CONTRACTOR shall make corrections required by the Contracting Officer and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review. The CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by the Contracting Officer on previous submittals.
- 6.21.2 The Contracting Officer's review of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless the CONTRACTOR has in writing advised the Contracting Officer of each such variation at the time of submission as required by paragraph 6.20.4. The Contracting Officer if he so determines, may give written approval of each such variation by Change Order, except that, if the variation is minor and no Change Order has been requested a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample review comments shall suffice as a modification. No approval by the Contracting Officer will relieve the

CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.20.3.

- 6.21.3 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to the Contracting Officer's review of the pertinent submission will be the sole expense and responsibility of the CONTRACTOR.

6.22 Maintenance During Construction:

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

6.23 Continuing the Work:

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

6.24 Consent to Assignment:

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

6.25 Use of Explosives:

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

6.26 CONTRACTOR's Records:

- 6.26.1 Records of CONTRACTOR and Subcontractors relating to personnel, payrolls, invoices of materials, and any and all other data relevant to the performance of the Contract, must be kept on a generally recognized accounting system. Such records must be available during normal work hours to the Contracting Officer for purposes of investigation to ascertain compliance with Regulatory Requirements and provision of the Contract Documents.
- 6.26.2 Payroll records must contain the name and address of each employee, his correct classification, rate of pay, daily and weekly number of hours of work, deductions made, and actual wages paid. The CONTRACTOR and Subcontractors shall make employment records available for inspection by the Contracting Officer and representatives of the State of Alaska Department of Labor and Workforce Development and will permit such representatives to interview employees during working hours on the Project.
- 6.26.3 Records of all communications between the CITY and the CONTRACTOR and other parties, where such communications affected performance of this Contract, must be kept by the CONTRACTOR and maintained

for a period of three years from Final Acceptance. The CITY or its assigned representative may perform an audit of these records during normal work hours after written notice to the CONTRACTOR.

ARTICLE 7 - LAWS AND REGULATIONS

7.1 Laws to be Observed:

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

7.2 Permits, Licenses, and Taxes:

7.2.1 The CONTRACTOR shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the Work. As a condition of performance of this Contract, the CONTRACTOR shall pay all Federal, State and local taxes incurred by the CONTRACTOR, in the performance of the Contract. Proof of payment of these taxes is a condition precedent to final payment by the CITY under this Contract.

7.2.2 The CONTRACTOR's certification that taxes have been paid (as contained in the Release of Contract) may be verified with the Department of Revenue and Department of Labor and Workforce Development and Unalaska City Clerk, prior to final payment.

7.2.3 If any Federal, State or local tax is imposed, charged, or repealed after the date of Bid opening and is made applicable to and paid by the CONTRACTOR on the articles or supplies herein contracted for, then the Contract shall be increased or decreased accordingly by a Change Order.

7.2.4 The Contractor shall require all Subcontractors to obtain a City of Unalaska Business License.

7.3 Patented Devices, Materials and Processes:

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

7.4 Compliance of Specifications and Drawings:

If the CONTRACTOR observes that the Specifications and Drawings supplied by the CITY are at variance with any Regulatory Requirements, CONTRACTOR shall give the Contracting Officer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 9.2. as determined appropriate by the Contracting Officer. If the CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Regulatory Requirements, and without such notice to the Contracting Officer, the CONTRACTOR shall bear all costs arising therefrom; however, it shall not be the CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings supplied by the CITY are in accordance with such Regulatory Requirements.

7.5 Accident Prevention:

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

7.6 Sanitary Provisions:

The CONTRACTOR shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees and CITY representatives as may be necessary to comply with the Regulatory requirements.

7.7 Business Registration:

The Contractor shall comply with AS 08.18.011 which states, as follows: "it is unlawful for a person to submit a bid or work as a contractor until he has been issued a certificate of registration by the Department of Commerce. A partnership or joint venture shall be considered registered if one of the general partners or ventures whose name appears in the name under which the partnership or venture does business is registered." The Contractor shall obtain a City of Unalaska Business License prior to commencement of the Work to the extent required by the City of Unalaska Code of Ordinances section 9.30.101.

7.8 Professional Registration and Certification:

All craft trades, architects, engineers and land surveyors, electrical administrators, explosive handlers, and welders employed under the Contract shall specifically comply with applicable provisions of AS 08.18, 08.48, 08.40, 08.52, and 08.99. Provide copies of individual licenses within seven days following a request from the Contracting Officer.

7.9 Local Building Codes:

The CONTRACTOR shall comply with AS 35.10.025 which requires construction in accordance with applicable local building codes including the obtaining of required permits. City of Unalaska permits required for the work are identified in the Supplemental Conditions.

7.10 Air Quality Control:

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

7.11 Archaeological or Paleontological Discoveries:

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

7.12 Not used.

7.13 Preferential Employment:

To the fullest extent allowed by law, the CONTRACTOR shall comply with AS 36.10, as amended, which provides for preferential employment of Alaska residents.

7.14 Wages and Hours of Labor:

- 7.14.1 One certified copy of all payrolls shall be submitted weekly to the State Department of Labor to assure compliance with AS 36.05.040, Filing Schedule of Employees Wages Paid and Other Information. The prime CONTRACTOR shall be responsible for the submission of certified copies of payrolls of all Subcontractors. The certification shall affirm that the payrolls are current and complete, that the wage rates contained therein are not less than the applicable rates referenced in these Contract Documents, and that the classification set forth for each laborer or mechanic conforms with the work he performed. The CONTRACTOR and his Subcontractors shall attend all hearings and conferences and produce such books, papers, and documents all as requested by the Department of Labor. Should Federal funds be involved, the Contracting Agency shall also receive a copy of the CONTRACTOR's certified payrolls.

7.14.2 The following Labor provisions shall also apply to this Contract:

- a. The CONTRACTOR and his Subcontractors shall pay all employees unconditionally and not less than once a week;
- b. Wages may not be less than those stated in the advertised specifications, regardless of the contractual relationship between the CONTRACTOR or Subcontractors and laborers, mechanics, or field surveyors;
- c. The scale of wages to be paid shall be posted by the CONTRACTOR in a prominent and easily accessible place at the site of the work;
- d. The CITY shall withhold so much of the accrued payments as is necessary to pay laborers, mechanics, or field surveyors employed by the CONTRACTOR or Subcontractors the difference between
 1. the rates of wages required by the contract to be paid laborers, mechanics, or field surveyors on the work, and
 2. the rates of wages in fact received by laborers, mechanics or field surveyors.

7.15 Overtime Work Hours and Compensation:

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

7.16 Covenant Against Contingent Fees:

The CONTRACTOR warrants that no person or selling agent has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee. For breach or violation of this warranty, the CITY shall have the right to annul this Contract without liability or, in its discretion, to deduct price of consideration from the Contract or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

7.17 Officials Not to Benefit:

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

7.18 Personal Liability of Public Officials:

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

ARTICLE 8 - OTHER WORK

8.1 Related Work at Site:

- 8.1.1 The CITY reserves the right at any time to contract for and perform other or additional work on or near the Work covered by the Contract.
- 8.1.2 When separate contracts are let within the limits of the Project, the CONTRACTOR shall conduct his Work so as not to interfere with or hinder the work being performed by other contractors. The CONTRACTOR shall join his work with that of the others in an acceptable manner and shall perform it in proper sequence to that of others.
- 8.1.3 If the fact that other such work to be performed is identified or shown in the Contract Documents, the CONTRACTOR shall assume all liability, financial or otherwise, in connection with this Contract and indemnify and save harmless the City of Unalaska and its agents from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by the CONTRACTOR because of the presence and operations of other contractors.
- 8.1.4 If the fact that such other work to be performed was not identified or shown in the Contract Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work. If the CONTRACTOR believes that such performance will require an increase in Contract Price or Contract Time, the CONTRACTOR shall notify the Contracting Officer of such required increase within fifteen (15) calendar days following receipt of the Contracting Officer's notice. Should the Contracting Officer find such increase(s) to be justified, a Change Order will be executed.

8.2 Access, Cutting, and Patching:

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

8.3 Defective Work by Others:

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

8.4 Coordination:

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

ARTICLE 9 - CHANGES

9.1 CITY's Right to Change:

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

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

9.2 Authorization of Changes within the General Scope:

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

- 9.2.1 Directive (pursuant to paragraph 9.3)
- 9.2.2 A Change Order (pursuant to paragraph 9.5)
- 9.2.3 CITY's acceptance of Shop Drawing variations from the Contract Documents as specifically identified by the CONTRACTOR as required by paragraph 6.20.4.

9.3 Directives:

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

9.4 Change Order:

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

9.5 Shop Drawing Variations:

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

9.6 Changes Outside the General Scope; Supplemental Agreement:

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

9.7 Unauthorized Work:

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

9.8 Notification of Surety:

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

9.9 Differing Site Conditions:

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

9.9.2 Any claim for additional compensation by the CONTRACTOR under this clause shall be made in accordance with Article 15 and shall not be allowed unless the CONTRACTOR has first given the notice required by this Contract. In the event that the Contracting Officer and the CONTRACTOR are unable to reach an agreement concerning an alleged differing site condition, the CONTRACTOR will be required to keep an accurate and detailed record which will indicate the actual cost of the work done under the alleged differing site condition. Failure to keep such a record shall be a bar to any recovery by reason of such alleged differing site conditions. The Contracting Officer shall be given the opportunity to supervise and check the keeping of such records.

ARTICLE 10 - CONTRACT PRICE; COMPUTATION AND CHANGE

10.1 Contract Price:

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

10.2 Claim for Price Change:

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

10.3 Change Order Price Determination:

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

- 10.3.1 Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 10.9.1
- 10.3.2 By mutual acceptance of a lump sum price which includes overhead and profit.
- 10.3.3 When 10.3.1 and 10.3.2 are inapplicable, on the basis of the Cost of the Work (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTORS's fee for overhead and profit (determined as provided in paragraph 10.6).

10.4 Cost of the Work:

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

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

- c. Rentals of all construction equipment and machinery and the parts thereof whether rented from the CONTRACTOR or others in accordance with rental agreements approved by the CITY and the costs of transportation, loading, unloading, installation, dismantling and removal thereof - all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the work.
- d. Sales, consumer, use or similar taxes related to the work, and for which the CONTRACTOR is liable, imposed by Regulatory Requirements.
- e. Deposits lost for causes other than negligence of the CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by the CONTRACTOR in connection with the performance and furnishing of the Work provided they have resulted from causes other than the negligence of the CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of the CITY. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining the CONTRACTOR's Fee. If, however, any such loss or damage requires reconstruction and the CONTRACTOR is placed in charge thereof, the CONTRACTOR shall be paid for services a fee proportionate to that stated in paragraphs 10.6.2.a and 10.6.2.b.
- g. The cost of utilities, fuel and sanitary facilities at the site.
- h. Minor expenses such as long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the work.
- i. Cost of premiums for additional bonds and insurance required because of changes in the work and premiums for property insurance coverage within the limits of the deductible amounts established by the CITY in accordance with Article 5.

10.5 Excluded Costs:

The term Cost of the Work shall not include any of the following:

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

10.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6 CONTRACTOR's Fee:

The CONTRACTOR's Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

10.6.1 A mutually acceptable fixed fee; or if none can be agreed upon.

10.6.2 A fee based on the following percentages of the various portions of the Cost of the Work:

- a. For costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR's Fee shall be twenty percent;
- b. For costs incurred under paragraph 10.4.3, the CONTRACTOR's Fee shall be fifteen percent; and if a sub-contract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all subcontractors shall be fifteen percent;
- c. No fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;
- d. The amount of credit to be allowed by the CONTRACTOR to the CITY for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR's Fee by an amount equal to ten percent of the net decrease; and
- e. When both additions and credits are involved in any one change, the adjustment in CONTRACTOR's Fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.a through 10.6.2.d, inclusive.

10.7 Cost Breakdown:

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

10.8 Cash Allowances:

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

10.8.1 The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

10.8.2 CONTRACTOR's cost for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

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

10.9 Unit Price Work:

10.9.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Contract. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by the CONTRACTOR will be made by the CITY in accordance with paragraph 10.9.3.

10.9.2 Each unit price will be deemed to include an amount considered by the CONTRACTOR to be adequate to cover the CONTRACTOR's overhead and profit for each separately identified item. If the "Basis of Payment" clause in the Contract Documents relating to any unit price in the bid schedule requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Contract Documents.

10.9.3 Payment to the CONTRACTOR shall be made only for the actual quantities of work performed and accepted or materials furnished, in conformance with the Contract Documents. When the accepted quantities of work or materials vary from the quantities stated in the bid schedule, or change documents, the CONTRACTOR shall accept as payment in full, payment at the stated unit prices for the accepted quantities of work and materials furnished, completed and accepted; except as provided below:

- a. When the quantity of work to be done or material to be furnished under any item, for which the total cost of the item exceeds 10% of the total Contract Price, is increased by more than 25 per cent of the quantity stated in the bid schedule, or change documents, either party to the Contract, upon demand, shall be entitled to an equitable unit price adjustment on the portion of the work above 125 per cent of the quantity stated in the bid schedule.
- b. When the quantity of work to be done or material to be furnished under any major item, for which the total cost of the item exceeds 10% of the total Contract Price, is decreased by more than 25 per cent of the quantity stated in the bid schedule, or change documents either party to the contract, upon demand, shall be entitled to an equitable price adjustment for the quantity of work performed or material furnished, limited to a total payment of not more than 75 per cent of the amount originally bid for the item.

10.10 Determinations for Unit Prices:

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

ARTICLE 11 - CONTRACT TIME; COMPUTATION AND CHANGE

11.1 Commencement of Contract Time; Notice to Proceed:

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

11.2 Starting the Work:

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

11.3 Computation of Contract Time:

11.3.1 When the contract time is specified on a calendar days basis, all work under the contract shall be completed within the number of calendar days specified. The count of contract time begins on the day following receipt of the Notice to Proceed by the CONTRACTOR, if no starting day is stipulated therein. Calendar days shall continue to be counted against contract time until and including the date of Final Completion of the Work.

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

11.4 Time Change:

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

11.5 Extension Due to Delays:

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

11.6 Essence of Contract:

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

11.7 Reasonable Completion Time:

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

11.8 Delay Damages:

Whether or not the CONTRACTOR's right to proceed with the Work is terminated, he and his sureties shall be liable for damages resulting from his refusal or failure to complete the Work within the specified time. Liquidated damages for delay shall be paid by the CONTRACTOR or his Surety to the City in the amount as specified in the Agreement or the Supplementary Conditions for each Calendar Day the completion of the Work or any part thereof is delayed beyond the Contract Time required by the Contract, or any extension thereof. If such amount of liquidated damages is not established by the Contract Documents, then the CONTRACTOR and his Surety shall be liable to the City for any actual damages occasioned by such delay. The CONTRACTOR acknowledges that the liquidated damages established herein are not a penalty but rather constitute an estimate of damages that the City will sustain by reason of delayed completion. These liquidated damages are intended as compensation for losses difficult to estimate, and include those items enumerated in the Supplementary Conditions or elsewhere in the Contract Documents. These damages will continue to run both before and after termination in the event of default termination. These liquidated damages do not cover excess costs of completion or the CITY's costs, fees, and charges related to reprocurement. If a default termination occurs, the Contractor or his Surety shall pay in addition to these damages, all excess costs and expenses related to completion as provided by Article 14.2.5.

ARTICLE 12 - QUALITY ASSURANCE

12.1 Warranty and Guaranty:

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

12.2 Access to Work:

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

12.3 Tests and Inspections:

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

12.4 Uncovering Work:

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

12.5 CITY May Stop the Work:

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

12.6 Correction or Removal of Defective Work:

If required by the Contracting Officer, the CONTRACTOR shall promptly, as directed, either correct all Defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the Contracting Officer, remove it from the site and replace it with Work which conforms to the requirements of the Contract Documents. The

CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.7 One Year Correction Period:

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

12.8 Acceptance of Defective Work:

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

12.9 CITY May Correct Defective Work:

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

ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION

13.1 Schedule of Values:

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

13.2 Preliminary Payments:

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

13.3 Application for Progress Payment:

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

13.4 Review of Applications for Progress Payments:

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

13.5 Stored Materials and Equipment:

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

13.6 CONTRACTOR's Warranty of Title:

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

13.7 Withholding of Payments:

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

13.7.1 The Work is Defective, or completed Work has been damaged requiring correction or replacement, or has been installed without approval of Shop Drawing, or by an unapproved Subcontractor.

13.7.2 The Contract Price has been reduced by Change Order.

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

13.8 Retainage:

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

13.9 Request for Release of Funds:

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

13.10 Substantial Completion:

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

13.11 Access Following Substantial Completion:

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

13.12 Final Inspection:

Upon written notice from the CONTRACTOR that the entire Work or an agreed portion thereof is complete, the Contracting Officer will make a final inspection with the CONTRACTOR and appropriate Consultants and will notify the CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or Defective.

The CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies. The CONTRACTOR shall pay for all costs incurred by the CITY resulting from re-inspections.

13.13 Final Application for Payment:

After the CONTRACTOR has completed all such corrections to the satisfaction of the Contracting Officer and delivered all maintenance and operating instructions, schedules, guarantees, bonds, certificates of payment to all laborers, Subcontractors and Suppliers, certificates of inspection, marked-up record documents and other documents - all as required by the Contract Documents, and after the Contracting Officer has indicated that the Work is acceptable (subject to the provisions of paragraph 13.17), the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all certificates, warranties, guaranties, releases, affidavits, and other documentation required by the Contract Documents.

13.14 Final Payment and Final Completion:

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

13.14.2 If, through no fault of the CONTRACTOR, Final Completion of the Work is significantly delayed, the Contracting Officer shall, upon receipt of the CONTRACTOR's final Application for Payment, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by the CITY for Work not fully completed or corrected is less than the retainage provided for in paragraph 13.8, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the CONTRACTOR to the CITY with the application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

13.14.3 In addition to other requirements, final payment shall not be due until CITY's receipt of verification from the State of Alaska Department of Labor and Workforce Development ("the Department") that (i) Contractor has complied with AS 36.05.045(a) and (ii) the Department is not conducting an investigation and (iii) the Department has not issued a notice of violation of AS 36.05 to Contractor or to any subcontractor.

13.15 Final Acceptance:

Following receipt of the CONTRACTOR's Release with no exceptions, and certification that laborers, Subcontractors and materialmen have been paid, certification of payment of payroll and sales taxes and revenue taxes, and final payment to the CONTRACTOR, the CITY will issue a letter of Final Acceptance, releasing the CONTRACTOR from further obligations under the Contract, except as provided in paragraph 13.16.

13.16 CONTRACTOR's Continuing Obligation:

The CONTRACTOR's obligation to perform and complete the Work and pay all laborers, Subcontractors, and materialmen in accordance with the Contract Documents shall be absolute. Neither any progress or final payment by the CITY, nor the issuance of a certificate of Substantial Completion, nor any use or occupancy of the Work or any part thereof by the CITY, nor any act of acceptance by the CITY nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor any correction of Defective Work by the CITY will constitute an acceptance of Work not in accordance with the Contract Documents or a release of the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.

13.17 Waiver of Claims by CONTRACTOR:

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

13.18 No Waiver of Legal Rights:

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

ARTICLE 14 - SUSPENSION OF WORK, DEFAULT AND TERMINATION

14.1 CITY May Suspend Work:

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

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

14.2 Default of Contract:

14.2.1 If the CONTRACTOR:

- a. Fails to begin the Work under the Contract within the time specified in the "Proposal", or
- b. Fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workmen or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 6.6 as revised from time to time), or
- c. Performs the Work unsuitably or neglects or refuses to remove materials or to correct Defective Work.
- d. Discontinues the prosecution of the Work, or
- e. Fails to resume Work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency except as prohibited by 11 U.S.C. 363e, or
- g. Allows any final judgment to stand against him unsatisfied for period of 60 days, or
- h. Makes an assignment for the benefit of creditors without the consent of the Contracting Officer, or

- i. Disregards Regulatory Requirements, or
- j. Otherwise violates in any substantial way any provisions of the Contract Documents, or
- k. For any cause whatsoever, fails to carry on the Work in an acceptable manner, the Contracting Officer may give notice in writing to the CONTRACTOR and his Surety of such delay, neglect, or default.

If the CONTRACTOR or Surety, within the time specified in the above Notice of Default, shall not proceed in accordance therewith, then the CITY may, upon written notification from the Contracting Officer of the fact of such delay, neglect or default and the CONTRACTOR's failure to comply with such notice, have full power and authority without violating the Contract, to take the prosecution of the Work out of the hands of the CONTRACTOR. The CITY may terminate the services of the CONTRACTOR, exclude the CONTRACTOR from the site and take possession of the Work and of all the CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by the CONTRACTOR (without liability to the CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the CITY has paid the CONTRACTOR but which are stored elsewhere, and finish the Work as the CITY may deem expedient. The CITY may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods that in the opinion of the Contracting Officer are required for the completion of said Contract in an acceptable manner.

- 14.2.3 The Contracting Officer may, by written notice to the CONTRACTOR and his Surety or his representative, transfer the employment of the Work from the CONTRACTOR to the Surety, or if the CONTRACTOR abandons the Work undertaken under the Contract, the Contracting Officer may, at his option with written notice to the Surety and without any written notice to the CONTRACTOR, transfer the employment for said Work directly to the Surety. The Surety shall submit its plan for completion of the Work, including any contracts or agreements with third parties for such completion, to the CITY for approval prior to beginning completion of the Work. Approval of such contracts shall be in accordance with all applicable requirements and procedures for approval of subcontracts as stated in the Contract Documents.
- 14.2.4 Upon receipt of the notice terminating the services of the CONTRACTOR, the Surety shall enter upon the premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the Work included under the Contract and employ by contract or otherwise any person or persons to finish the Work and provide the materials therefor, without termination of the continuing full force and effect of this Contract. In case of such transfer of employment to the Surety, the Surety shall be paid in its own name on estimates covering Work subsequently performed under the terms of the Contract and according to the terms thereof without any right of the CONTRACTOR to make any claim for the same or any part thereof.
- 14.2.5 If the Contract is terminated for default, the CONTRACTOR and the Surety shall be jointly and severally liable for damages for delay as provided by Article 11.8, and for the excess cost of completion, and all costs and expenses incurred by the CITY in completing the Work or arranging for completion of the Work, including but not limited to costs of assessing the Work to be done, costs associated with advertising, soliciting or negotiating for bids or proposals for completion, and other procurement costs. Following termination the CONTRACTOR shall not be entitled to receive any further balance of the amount to be paid under the contract until the work is fully finished and accepted, at which time if the unpaid balance exceeds the amount due the CITY and any amounts due to persons for whose benefit the CITY has withheld funds, such excess shall be paid by the CITY to the CONTRACTOR. If the damages, costs, and expenses due the CITY exceed the unpaid balance, the CONTRACTOR and his Surety shall pay the difference.
- 14.2.6 If, after notice of termination of the CONTRACTOR's right to proceed under the provisions of this clause, it is determined for any reason that the CONTRACTOR was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, or that termination was wrongful, the rights and obligations of the parties shall be determined in accordance with the clause providing for convenience termination.

14.3 Rights or Remedies:

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

14.4 Convenience Termination:

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

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

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

14.4.3 The termination claim shall be submitted promptly, but in no event later than 90 days from the effective date of termination, unless one or more extensions in writing are granted by the Contracting Officer upon request of the CONTRACTOR made in writing within the 90-day period. Upon failure of the CONTRACTOR to submit his termination claim within the time allowed, the Contracting Officer may determine, on the basis of

information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall thereupon pay to the CONTRACTOR so determined.

14.4.4 The CONTRACTOR and the Contracting Officer may agree upon whole or any part of the amount or amounts to be paid to the CONTRACTOR by reason of the total or partial termination of the Work pursuant to this section. The Contract shall be amended accordingly, and the CONTRACTOR shall be paid the agreed amount. In the event of the failure of the CONTRACTOR and the Contracting Officer to agree in whole or in part, as provided heretofore, as to the amounts with respect to costs to be paid to the CONTRACTOR in connection with the termination of the Work the Contracting Officer shall determine, on the basis of information available to him, the amount, if any, due to the CONTRACTOR by reason of the termination and shall pay to the CONTRACTOR the amount determined as follows:

- a. All costs and expenses reimbursable in accordance with the Contract not previously paid to the CONTRACTOR for the performance of the Work prior to the effective date of the Notice of Termination;
- b. So far as not included under "a" above, the cost of settling and paying claims arising out of the termination of the Work under subcontracts or orders which are properly chargeable to the terminated portions of the Contract;
- c. The reasonable costs of settlement with respect to the terminated portion of the Contract heretofore, to the extent that these costs have not been covered under the payment provisions of the Contract.

14.4.5 The CONTRACTOR shall have the right of appeal under the CITY's claim procedures, as defined in Article 15, for any determination made by the Contracting Officer, except if the CONTRACTOR has failed to submit his claim within the time provided and has failed to request extension of such time, CONTRACTOR shall have no such right of appeal. In arriving at the amount due the CONTRACTOR under this section, there shall be deducted:

- a. All previous payments made to the CONTRACTOR for the performance of Work under the Contract prior to termination;
- b. Any claim which the CITY may have against the CONTRACTOR;
- c. The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the CONTRACTOR or sold pursuant to the provisions of this section and not otherwise recovered by or credited to the CITY; and,
- d. All progress payments made to the CONTRACTOR under the provisions of this section.

14.4.6 Where the Work has been terminated by the CITY said termination shall not affect or terminate any of the rights of the CITY against the CONTRACTOR or his Surety then existing or which may thereafter accrue because of such default. Any retention or payment of monies by the CITY due to the CONTRACTOR under the terms of the Contract shall not release the CONTRACTOR or his Surety from liability. Unless otherwise provided for in the Contract Documents, or by applicable statute, the CONTRACTOR, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the CITY at all reasonable times at the office of the CONTRACTOR, all its books, records, documents, and other evidence bearing on the cost and expenses of the CONTRACTOR under his Contract and relating to the Work terminated hereunder.

ARTICLE 15 - CLAIMS AND DISPUTES

15.1 Notification:

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

Claim, if not resolved, shall be presented to the Project Manager, in writing, within 60 days following receipt of the Intent to Claim. Receipt of the Claim will be acknowledged in writing by the Project Manager. The CONTRACTOR agrees that unless these written notices are provided, the CONTRACTOR will have no entitlement to additional time or compensation for such act, event or condition. The CONTRACTOR shall in any case continue diligent performance of the Contract.

15.2 Presenting Claim:

The Claim shall specifically include the following:

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

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

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

15.4 Contracting Officer's Decision:

The CONTRACTOR will be furnished the Contracting Officer's Decision within the next 90 days, unless additional information is requested by the Contracting Officer. The Contracting Officer's Decision is final and conclusive unless fraudulent as to the Claim.

15.5 Notice of Appeal:

Within 30 days of receipt of the Decision, the CONTRACTOR may deliver a Notice of Appeal to the City Manager of Unalaska, Alaska. The Notice of Appeal shall include specific exceptions to the Contracting Officer's Decision, including specific provisions of the contract, which the CONTRACTOR intends to rely upon in the appeal. General assertions that the Contracting Officer's decision is contrary to law or fact are not sufficient.

15.6 City Manager's Decision:

The decision of the City Manager will be rendered within 120 days of Notice of Appeal. This decision constitutes the exhaustion of contractual and administrative remedies. The time limits given above may only be extended by mutual consent. The decision of the City Manager shall be final and conclusive unless the CONTRACTOR commences action through the court within 120 days from receipt thereof.

Section 00800
SUPPLEMENTARY CONDITIONS

REFERENCE: 1. "GENERAL CONDITIONS OF THE CONTRACT", constitutes the General Conditions of this Contract and is further revised and supplemented by the provisions of these Supplementary Conditions to the Contract, hereinafter called the "Supplementary Conditions." The General Conditions and the Supplementary Conditions are applicable to all of the Work under this Contract and shall apply to the Contractor and all Subcontractors.

SUPPLEMENTS: 2. 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, subparagraph or clause shall remain in effect.

SC-1 ARTICLE 1 - DEFINITIONS, Add the following:

OWNER - The OWNER & CONTRACTING OFFICER and ENGINEER are further defined as:

City of Unalaska
Department of Public Works
P.O. Box 610
Unalaska, Alaska 99685-0610
Tel. (907) 581-1260
FAX (907) 581-2187

Attn: Tom Cohenour, Director of Public Works
Email: tcohenour@ci.unalaska.ak.us

Regan Engineering, P.C.
P.O. Box 889
Camas, WA 98607
Tel. (360) 903-5064
Attn: Thomas Regan, P.E., Principal
Email: tom@reganengineering.com

SC-2 ARTICLE 11 - CONTRACT TIME; COMPUTATION AND CHANGE

11.2 Starting the Work; Change the second sentence to read as follows:

“CONTRACTOR shall notify the CONTRACTING OFFICER at least fourteen (14) days in advance of the time actual construction operations will begin.”

SC-3 ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.2 Copies of Contract Documents:

Change the paragraph to read: “The CITY shall furnish the CONTRACTOR up to six copies of the Contract Documents. Additional copies will be furnished, upon request, at the cost of reproduction.”

SC-4 ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.17 Safety and Protection; Add the following:

6.17.4 The Contractor shall do whatever work is necessary for overall project safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including

employees) and property during the Contract period. This requirement shall apply continuously and not limited to normal working hours.

Safety provisions shall conform to Federal and State Departments of Labor Occupational Safety and Health Act (OSHA), and other applicable federal, state, county, and local laws, ordinances, codes, requirements set forth herein, and regulations that may be specified in other parts of these Contract Documents. Where these are in conflict, the more stringent requirements shall apply. Contractor shall become thoroughly familiar with governing safety provisions and shall comply with the obligations set forth therein.

The Contractor shall develop and maintain for the duration of the Contract, a safety program that will effectively incorporate and implement required safety provisions. Contractor shall appoint a qualified employee who is authorized to supervise and enforce compliance with the safety program.

The Engineer's duty to conduct construction review of the Contractor's performance does not include a review or approval of the adequacy of Contractor's safety supervisor, safety program, or safety measures taken in, on, or near the construction site.

As part of safety program, Contractor shall maintain at its office or other well-known location at the job site, safety equipment applicable to the Work as prescribed by governing safety authorities, and articles necessary for giving first aid to the injured. Establish procedures for the immediate removal to a hospital or a doctor's care of persons who may be injured on the job site.

Contractor shall do all work necessary to protect the general public from hazards, including but not limited to, surface irregularities, trenches, excavations, and blasting. Barricades, lanterns, and proper signs shall be furnished in sufficient amount to safeguard the public and the work. Construct and maintain satisfactory and substantial fencing, railings, barricades, or steel plates, as applicable, at all openings, obstructions, or other hazards. Such barricades shall have adequate warning lights as necessary or required for safety.

SC-5 ARTICLE 5 – BONDS, INSURANCE, AND INDEMNIFICATION

Item 5.4 *Insurance Requirements*, 5.4.1, add the following:

“Regan Engineering, P.C. shall be named as additional insured under the insurance coverage so specified and where allowed.”

Item 5.4.3 Delete item 10 from the General Conditions. Builders Risk insurance is not required for this project.

SC-6 ARTICLE 13 – PAYMENTS TO CONTRACTOR AND COMPLETION

Item 13.14 Final Payment and Final Completion, add the following:

13.14.4 The Contractor shall furnish the attached forms fully executed prior to the City making final payment. These forms include the Affidavit of Release of Liens by the Contractor; Lien Release Form; and the Lien Release General to City. The forms will be made available to the contractor in electronic format upon request.

AFFIDAVIT OF RELEASE OF LIENS BY THE CONTRACTOR

TO ALL WHOM IT MAY CONCERN:

WHEREAS, the undersigned has been employed by City of Unalaska to furnish labor and materials under a contract dated _____ for the _____, in the Unalaska, Alaska of which the City of Unalaska is the Owner.

NOW, THEREFORE, this ____ day of _____, 201__, the undersigned, as the Contractor for the above-named Contract pursuant to the Conditions of the Contract, hereby certifies that to the best of his knowledge, information and behalf, except as listed below, the Releases or Waivers of Lien* attached hereto include the Contractor, all subcontractors, all suppliers of materials and equipment, and all performers of work, labor or services, who have or may have liens against any property of the Owner and on the monies or other considerations due or to become due from the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (If none, write "None." If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each Exception.) _____.

ATTACHMENTS:

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Release or Waiver of Liens from Subcontractors and material and equipment suppliers.

Contractor (Name of sole ownership corporation or partnership)

(Signature of Authorized Representative)

Title

* The word lien as used herein shall include Stop Orders, Stop Notices, or Freeze Orders on the monies other consideration of the Owner that are due or to become due on the Contract referenced above.

[INSERT GENERAL CONTRACTOR NAME].
(“Contractor”)

*Unconditional Waiver and Release of
Lien/Claim for Subcontractor Upon
Final Payment*

Project Name and Location:

Company Name:

[INSERT SUB NAME]

Project # _____

(“Payee”)

Unalaska, Alaska

AMOUNT OF PAYMENT: _____

WHEREAS,

_____, being first duly sworn, states that he is
[INSERT TITLE] ___ of Payee which has a contract with **Contractor** on the above-
referenced project.

NOW, THEREFORE, in **FINAL PAYMENT**, the undersigned, for and in consideration of the amount of payment identified above received or to be received and other good and valuable consideration, the receipt of which is hereby acknowledged, does hereby waive and release any and all liens or right of liens or claims on the aforementioned property and all improvements thereon, and on monies or other consideration due or to become due on account of labor or services, materials, fixtures, or apparatus heretofore furnished, or which may be furnished at anytime hereafter, and do hereby further release and forever discharge the City of Unalaska and Contractor, and any payment and performance bond surety, of and from all manner of debts, claims, demands or other sums due or claimed to be due or owed on account of the above-referenced project and/or the above-referenced contract.

THIS WAIVER AND RELEASE IS UNCONDITIONAL, save and except only the receipt of payment and final bank clearance of said remittance in the above-stated amount.

THE UNDERSIGNED further warrant that; 1) no other sums are claimed, 2) that all laborers, subcontractors, and suppliers employed by Payee. have been paid all sums previously due, and will be paid all current sums due out of this payment, 3) that none of such laborers, subcontractors or suppliers is or will be entitled to claim or assert any claim against the above-described real estate or the improvements thereon for labor or materials furnished to or for the account of Contractor; 4) there are no federal, state or municipal taxes or other charges unpaid or delinquent.

EXCEPT as set forth below:

EXCEPTIONS:

Person	Amount
_____	_____
_____	_____
_____	_____

Upon request, Payee shall list the names of each of its subcontractors and suppliers, with contract and payment status, and furnish waivers from said parties.

THE PERSONS SIGNING below, by signing, do hereby certify that he/she is fully authorized and empowered to execute this instrument and to bind the Company hereto.

DATED: _____

By: _____

DATED: _____

By: _____

STATE OF ALASKA)
) ss.
THIRD JUDICIAL DISTRICT)

THIS IS TO CERTIFY that on this ____ day of _____, 201_, before me appeared _____, who acknowledged being the _____, an Alaska corporation, and voluntarily signing and sealing the foregoing instrument on behalf of said Corporation, and being authorized so to do.

Notary Public in and for Alaska
My Commission Expires: _____

STATE OF ALASKA)
) ss.
THIRD JUDICIAL DISTRICT)

SUBSCRIBED AND SWORN to before me this __ day of _____, 201_.

Notary Public For Alaska
My Commission Expires:

CITY OF UNALASKA

*Receipt and Waiver and Release of
Claim for Contractor Upon Final Payment*

Project Name and Location:

Company Name:

**[INSERT CONTRACTOR
NAME]
"CONTRACTOR"**

Unalaska, Alaska

PAYMENT AMOUNT: _____

WHEREAS, _____, being first duly sworn, states that he is [INSERT TITLE] of CONTRACTOR, general contractor to the City of Unalaska for the above-referenced project.

NOW, THEREFORE, in **FINAL PAYMENT**, the undersigned, for and in consideration of the PAYMENT AMOUNT identified above and other good and valuable consideration paid or to be paid to CONTRACTOR, the receipt of which is hereby acknowledged, CONTRACTOR does hereby waive and release any and all liens or right of liens or claims on the aforementioned property and all improvements thereon, and on monies or other consideration due or to become due on account of labor or services, materials, fixtures, or apparatus heretofore furnished, or which may be furnished at any time hereafter, and does hereby further release and forever discharge the City of Unalaska of and from all manner of debts, claims, demands or other sums due or claimed to be due or owed on account of the above-referenced project and/or the above-referenced contract.

THIS WAIVER AND RELEASE IS UNCONDITIONAL, save and except only; 1) the receipt of payment and final bank clearance of said remittance in the above-stated amount; and 2) the Exceptions identified below or in the Contractor's affidavit attached hereto.

EXCEPTIONS:

Person	Amount
_____	_____
_____	_____

THE UNDERSIGNED further warrants that; 1) no other sums are claimed, 2) that all laborers, subcontractors, and suppliers employed by Contractor have been paid all sums

previously due, and will be paid all current sums due out of this payment, 3) that none of such laborers, subcontractors or suppliers is or will be entitled to claim or assert any claim against the above-described real estate or the improvements thereon or any surety bond related to the Project for labor or materials furnished to or for the account of Contractor; and 4) there are no federal, state or municipal taxes or other charges unpaid or delinquent.

THIS WAIVER AND RELEASE IS UNCONDITIONAL, save and except only the receipt of payment and final bank clearance of said remittance in the above-stated amount

THE PERSONS SIGNING below, by signing, do hereby certify that he/she is fully authorized and empowered to execute this instrument and to bind Contractor hereto.

CONTRACTOR.

DATED: _____ BY: _____, [insert title]

STATE OF ALASKA)
) ss.
THIRD JUDICIAL DISTRICT)

THIS IS TO CERTIFY that on this ____ day of _____, 201_, before me appeared _____, who acknowledged to me that he was the _____ of _____, and he acknowledged to me that he had, in his official capacity aforesaid, executed the foregoing documents as the free act and deed of said Corporation, for the uses stated therein.

Notary Public in and for Alaska
My Commission Expires: _____

Part 4

MINIMUM RATES OF PAY

Contractor shall comply with all applicable Federal and State labor regulations, including State of Alaska Title 36, Public Contracts, otherwise known as the Little Davis-Bacon Act, and all labor regulations and minimum rates of pay contained therein.

State Wage Rates

State Wage Rates can be obtained at <http://labor.alaska.gov/lss/pamp600.htm>. Use the State wage rates that are in effect 10 days before Bid Opening.

Part 5 – TECHNICAL SPECIFICATIONS

Section 01010 – Summary of Work

Section 01025 – Measurement and Payment

Section 02200 – Earthwork

Section 02730 – Storm Sewerage

Section 02790 – Synthetic Turf

Section 02820 – Chain Link Fence

Section 02880 – Playground Equipment

Section 02885 – Playground Surfacing

Section 03300 – Cast-in-Place Concrete

Section 03310 – Precast Concrete Separator Wall

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The work will include, but not be limited to, furnishing all labor, tools, equipment, and materials and performing all operations in connection with the **2020 PARK AND PLAYGROUND IMPROVEMENTS**. The Work includes demolition of existing park improvements and construction of various playgrounds, concrete basketball courts, fencing, and general improvements at two existing City parks.
 - 1. Project Locations:
 - a. UCSD (Unalaska City School District) Park, Unalaska High School, Broadway Avenue, Unalaska, AK 99685
 - b. Sitka Spruce Park, Biorka Drive, Unalaska, AK 99685
 - 2. Owner: City of Unalaska, Department of Parks, Culture and Recreation
- B. The Work will be constructed under a single prime contract. Payment will be made for designated items on a lump sum or unit price basis.

1.3 MEETINGS

- A. The Contractor and relevant subcontractors shall attend and participate in scheduled progress meetings during construction. Meetings will be held as frequently as once per week or as otherwise agreed to by the City. Meeting agenda and minutes will be prepared and organized by the Owners representative. At each meeting, the agenda shall include but not be limited to the following:
 - 1. Review of outstanding action items and determination of disposition.
 - 2. Review of status of project data submittals.
 - 3. Discussion of upcoming work. Contractor shall prepare for each meeting a schedule for the current work week and the following two calendar work weeks.
 - 4. Discussion of impacts of construction work on local users.
 - 5. Discussion of work quality and progress.
 - 6. Review of outstanding Contract Change issues.
 - 7. Discussion of other issues, as appropriate.

1.4 CONTRACTOR USE OF CONSTRUCTION SITE

- A. General: During the construction period the Contractor shall have use of the project sites for construction operations except roads cannot be blocked for any length of time.
- B. Use of the Sites: Limit use of the project sites to work in park area or adjacent Rights-of-Way. Confine operations to areas within City owned or controlled property. Do not disturb portions of the site beyond the areas in which the Work is indicated.
 - 1. Driveways and Entrances: Keep driveways and entrances serving all areas clear and available to the Owners and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
 - 2. Privately Owned Properties: The Contractor shall make their own arrangements for use of any and all properties not included in the designated Rights-of-Ways, Park, or easements. The Contractor shall receive written permission to use these property(s) and shall furnish the City copies of the agreements granting permission for access.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01010

PART 1 - GENERAL

1.1 SCOPE

- A. Payment for the various items of the Bid Schedule, as further specified herein, shall include full compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all materials, labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the WORK in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA) and the Alaska Department of Labor (ADOL). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the prices named in the Bid Schedule for the various appurtenant items of WORK.

1.2 PAY ITEMS

- A. Pay items indicated in the Bid Form are for bidding and contract purposes only. For Lump Sum bid items, required quantities and measurements supplied or placed in the WORK shall be the full responsibility of the CONTRACTOR.

1.3 PAYMENT

- A. Payment includes full compensation for furnishing all required labor, materials, products, tools, equipment, plant, transportation, services, incidentals, erection, application, or installation of all items of the WORK described or required, and all other costs for the items to necessary to provide complete functional systems in place.
- B. Payment for Lump Sum and Unit Cost pay items will be in accordance with the General Conditions and Section 00800 - Supplementary General Conditions.

1.4 NON-PAYMENT FOR REJECTED ITEMS

- A. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products placed beyond the lines and grades of the required WORK.
 - 4. Products remaining on hand at the completion of the WORK.
 - 5. Loading, hauling, and disposing of rejected products.
 - 6. Overly wet or frozen material.

7. Excavation or fill made for the convenience of the CONTRACTOR for any purpose or reason.

PART 2 - PRODUCTS (Not Used)

PART 3- MEASUREMENT AND PAYMENT

3.1 INCIDENTAL WORK

- A. Several items of work not specifically covered in the Contract Documents will be considered incidental to the cost of the contract. These items include, but are not limited to the following:
 1. Restoration of disturbed areas and final grading to restore the ground to uniform grades.
 2. Site Safety.
 3. Surveying and layout.
 4. Replacement of Survey Monuments, Property Corners or other Survey Markers removed or disturbed during construction.
 5. Removal and replacement of signs or fencing requiring removal to construct improvements
 6. Other items not specifically called out but otherwise necessary for proper construction.

These items are not associated with pay items and are considered incidental to other work performed under this contract. No separate payment will be made. The listed items are not in any order of precedence.

3.2 MOBILIZATION/DEMobilIZATION

- A. Measurement: No measurement of quantities will be made. Perform work and operations necessary to:
 1. Move personnel, equipment, supplies, and incidentals to the project site;
 2. Establish offices, buildings, and other facilities;
 3. Perform other work and operations and pay costs incurred, before beginning construction;
 4. Bonds and insurance;
 5. Alaska Department of Labor (ADOL) registration and fees.
 6. Complete similar demobilization activities; and
 7. Furnish required submittals such as as-builts, certificates, payrolls, civil rights reports, and equipment warranties.

Measurement will be split so that 50% of the payment is made with mobilization and 50% is made with Demobilization. Demobilization will be paid for after the project is complete, the

site is cleaned up and fully restored, and closeout documentation is submitted, including releases, warranties, and record drawings.

- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U1, S1	Mobilization/Demobilization	lump sum

3.3 DEMOLITION

- A. Measurement: No measurement of quantities will be made. Demolition will include removal of identified park amenities including playground equipment, fencing, pea gravel, rubber safety tiles, playground border, and other items necessary to construct the described work. No extra payment will be made for disassembling equipment desired to be retained by the City or for hauling pea gravel to a City designated site. Work also includes disposal of demolished items not retained by the City.

- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U2, S2	Demolition	lump sum

3.4 EARTHWORK

- A. Measurement: No measurement of quantities will be made. Earthwork will include clearing and grubbing, relocation of the earthen berms (UCSD Park), site preparation, trail construction, furnishing and installing surfacing material, landscape borders (where designated), grading, compaction and other items necessary to construct the described work.

- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U3, S3	Earthwork	lump sum

3.5 PLAYFIELD

- A. Measurement: The playfield shall be measured as a complete unit in place. Work includes site preparation, excavation, underdrain system, concrete perimeter curb, drain rock (two types), geotextile fabric, synthetic turf system, perimeter lumber, and other items necessary to construct a complete, fully functioning facility.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U4	Play Field	lump sum

3.6 BASKETBALL/VOLLYBALL COURT OR BASKETBALL COURT

- A. Measurement: No measurement of quantities will be made. This item includes construction of the basketball courts including site preparation, leveling course, vapor barrier, reinforced concrete slab-on-grade, basketball goals, volleyball net sleeves and net system (UCSD only), painted striping, and other items necessary to construct complete, fully functioning facilities.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U5	Basketball/Volleyball Court	lump sum
S4	Basketball Court	lump sum

3.7 PLAY AREAS

- A. Measurement: No measurement of quantities will be made. This item includes construction of the play areas including site preparation, leveling course, geotextile fabric, play equipment and foundations, rubber safety tiles, perimeter curb, signage (associated with each Play Area) and other items necessary to construct complete, correctly installed and fully functioning facilities. Work includes coordination of equipment/layout and tile thickness with the play equipment supplier and completed installation audit/inspection/certification with written inspection reports certifying the installed equipment complies with all project and safety requirements.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U6	Play Area: 8-Person Swing Set	lump sum
U7, S7	Play Area: Pyramid Climber	lump sum
U8	Play Area: Boulder Stack	lump sum
S5	Play Area: Playground	lump sum
S6	Play Area: Summit Rock	lump sum

3.8 CHAIN LINK FENCE AND GATES

- A. Measurement: No measurement of quantities will be made. This item includes all work as specified and shown on Plan Sheet 6 for limits of work and details shown on Plan Sheet 13. Work includes (2) 4' wide man gates, (1) 16' wide double swing gate, 4' fence, 8' fence, materials and foundations required to construct a complete chain link fence system.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U9	Chain Link Fence and Gates	lump sum

3.9 STORM DRAIN

- A. Measurement: No measurement of quantities will be made. This item includes a complete storm drain system, which is connected to an existing storm drain manhole as specified and detailed on Plan Sheets 14. 14.1 and 14.2. The system includes (1) inlet, (2) manholes, castings, 12" CPEP pipe, reducing tees with connection to the Play Field underdrain system, connection to the existing manhole, and other work as detailed and required to provide a complete, fully functioning storm drain system.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U10	Storm Drain	lump sum

3.10 CONCRETE SIDEWALK

- A. Measurement: No measurement of quantities will be made. This item includes extension of the existing concrete sidewalk as shown on Plan Sheet 6 and detailed on Plan Sheet 15.

- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U11	Concrete Sidewalk	lump sum

3.11 GUARDRAIL RELOCATION

- A. Measurement: No measurement of quantities will be made. This item includes relocation of the existing steel guardrail system and shown on Plan Sheet 6 and detailed on Plan Sheet 15.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U12	Guardrail Relocation	lump sum

3.12 FOUR-SQUARE PAINTING

- A. Measurement: No measurement of quantities will be made. This item includes painting the Four-Square play area as shown on Plan Sheet 6 and noted on Plan Sheet 9.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U13	Four-Square Painting	lump sum

3.13 BLEACHERS

- A. Measurement: No measurement of quantities will be made. This item includes furnishing and installing (1) set of three tier bleachers on a concrete pad as specified, shown on Plan Sheet 6 and noted on Plan Sheet 15.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U14	Bleachers	lump sum

3.14 WOOD FENCE

- A. Measurement: No measurement of quantities will be made. This item includes construction of a wood fence and gate as shown on Plan Sheet 18.1 and detailed on Plan Sheet 22. Work includes all materials and foundations to construct a complete wood fence system.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
S8	Wood Fence and Gate	lump sum

3.15 PICNIC TABLE

- A. Measurement: Measurement will be per each. This item includes a picnic table and concrete slab-on-grade as specified, shown on drawings 6 and 18, and as detailed on drawing 25.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U15, S9	Picnic Table	each

3.16 SIGN

- A. Measurement: Measurement will be per each. This item includes a sign mounted on dual posts set in concrete as specified, shown on drawing 6, and as detailed on drawing 25. Signs shown within the boundaries of Play Areas will be included in the price of those Play Areas.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U16	Sign	each

3.17 TRASH CAN

- A. Measurement: Measurement will be per each. This item includes a trash can and concrete slab-on-grade as specified, shown on drawings 6 and 18, and as detailed on drawing 25.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U17, S10	Trash Can	each

3.18 BENCH

- A. Measurement: Measurement will be per each. This item includes a bench, foundation and concrete slab-on-grade as specified, shown on drawings 6 and 18, and as detailed on drawing 25.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U18, S11	Bench	each

3.19 GRILL

- A. Measurement: Measurement will be per each. This item includes a grill and concrete slab-on-grade as specified, shown on drawing 18, and as detailed on drawing 25.
- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
S12	Grill	each

3.20 BIKE RACK

- A. Measurement: Measurement will be per each. This item includes a portable bike rack that will be field located at UCSD Park.

- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U19	Bike Rack	each

3.21 SOCCER GOALS

- A. Measurement: Measurement will be per each. This item includes a portable bike rack that will be field located at UCSD Park.

- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
U20	Soccer Goals	each

3.21 SEPARATOR WALL

- A. Measurement: No measurement of quantities will be made. This item includes construction of a precast concrete separator wall as specified and shown on Plan Sheet 18.1 and detailed on Plan Sheet 23. Work includes construction of concrete caissons or driven pipe foundations, pre-cast concrete panels, and appurtenances as noted.

- B. Basis of Payment: Payment for this work shall be in accordance with the General Conditions and shall include full payment for all work described. Payment will be made under the following Units:

<u>ITEM No.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
Additive Alternate 1	Separator Wall	lump sum

END OF SECTION 01025

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Technical Specifications, General and Supplementary Conditions, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Clearing and Grubbing.
 - 2. Excavation and Backfill.
 - 3. Disposal of Surplus or Unsuitable Material.
 - 4. Mechanical Compaction.
 - 5. Geotextile Fabric.
 - 6. Landscape Divider.
 - 7. Drain Rock/Sub-Base for Play Field.

1.3 DEFINITIONS

- A. Excavation consists of removal of materials encountered to subgrade elevations required.
- B. Leveling Course is the material located between the subgrade and the playground components.
- C. Subgrade: The undisturbed earth or the compacted soil layer immediately below the leveling course.

1.4 QUALITY ASSURANCE

- A. Any property corners or Right-of-Way monuments disturbed by construction operations shall be replaced by a surveyor licensed in the State of Alaska.

1.5 PROJECT CONDITIONS

- A. Maintain the construction site in a neat and orderly manner during construction. Remove all litter, garbage, and debris that occur as a result of construction activities.
- B. Clean up any spills of oil, fuel, or other potentially hazardous substances that occur and remove any resulting contaminated soils in accordance with State and Federal guidelines.

1.6 SUBMITTALS

- A. Provide submittals of the proposed materials including manufacturers information and installation requirements.
- B. For soils, provide gradations, Proctors, and aggregate quality information to verify supplied materials meet specified requirements.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Processing will be required to match the classification of fill required. Fill shall meet the following requirements.

TABLE 703-1
AGGREGATE QUALITY PROPERTIES

PROPERTY	BASE COURSE	SURFACE COURSE	TEST METHOD
L.A. Wear,%	50, max.	45, max.	AASHTO T 96
Degradation Value	45, min.	45, min.	ATM 313
Fracture,%	70, min.	70, min., 1 Face	ATM 305
Liquid Limit	---	35, max.	ATM 204
Plastic Index	6, max.	10, max.	ATM 205
Sodium Sulfate Loss,%	9, max. (5 cycles)	9, max. (5 cycles)	AASHTO T 104

1. Leveling Course, Surfacing Material, Bedding Material:

- a. Leveling Course, Surfacing Material and Bedding Material shall meet the requirements for ADOT Base Course and Surface Course Grading D-1 material as defined above with the following gradation:

<u>Sieve Designation</u>	<u>Percent Passing by Weight</u>
1"	100
3/4"	70-100
3/8"	50-80
No. 4	35-65
No. 8	20-50
No. 50	6-30
No. 200	0-6

- 2. 1/4" Drain Rock (Sub-Base): Processed material that meets the quality standards in Table 703-1 and is free-draining, 1/4" minus, well graded, and with less than 2% passing the No. 200 Sieve. Pea gravel does not meet this requirement since it is poorly graded. The

- gradation needs to allow the material to bind so that the grade remains intact when workers install the artificial turf system. This material gradation shall be coordinated with and approved by the artificial turf manufacturer and the Engineer prior to being processed.
3. ¾" Drain Rock: The City is in possession of approximately 2,500 CY of drain rock manufactured but not used for the UMC Dock. The material is stockpiled at the landfill. No more than 400 CY of this material is made available to the contractor ONLY for use in the ¾" minus portion of the drain system under the UCSD Playfield. The contractor is responsible for loading, hauling and any and all other work related to use of this material. Contractor furnished substitutions are allowed provided the material meets the quality standards in Table 703-1 and is free-draining, ¾" minus, well graded, and with less than 2% passing the No. 200 Sieve.
 4. Classified Fill: Materials not classified as unsatisfactory soil materials with no stone larger than 12". Material shall be compactable without rutting when driven on.
 5. Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT.

2.1 GEOTEXTILE FABRIC

- A. Provide non-woven geotextile fabric meeting the following requirements:

Specification for Geotextile

PROPERTY	TEST STANDARD	MARV
Weight	ASTM D 5261	8.0 oz/SY
Tensile Strength	ASTM D 4632	205 lbs
CBR Puncture	ASTM D 6241	500 lbs
Puncture Strength	ASTM D 4833	130 lbs
Trapezoid Tear Strength	ASTM D 4533	80 lbs
Apparent Opening Size	ASTM D 4751	80 US Sieve
Water Flow Rate	ASTM 4491	95 g/min/sf

- B. Make/Manufacturer: "US 205NW" manufactured by US Fabrics, Inc., 3904 Virginia Avenue, Cincinnati, OH 45227.

2.2 LANDSCAPE DIVIDER

- A. 1/8" x 5.5" aluminum for curvilinear applications with 12" stakes, Color: Black.
- B. Manufacturer: Permaloc Corporation, ProSlide Aluminum Landscape Edging or equal.

PART 3 - EXECUTION

3.1 CLEARING AND GRUBBING

- A. Clear and Grubb all areas to receive improvements. Remove grasses, vegetation, and organic materials to clean subgrade.

3.2 EXCAVATION AND BACKFILL

A. General:

- 1. The work under this section consists of providing all materials and performance of all operations pertaining to items of work involved in excavation, backfill, and compaction of fill material. Unsuitable materials shall be removed prior to installation of leveling course.

3.3 DISPOSAL OF UNSUITABLE OR SURPLUS MATERIAL

- A. Materials listed as unsuitable shall be removed from the area and properly disposed of. Grass and topsoil containing organic matter are considered unsuitable material. The Engineer will make the final determination as to the suitability of the materials. Payment for disposal of unsuitable material is incidental to other work.

3.4 LEVELING COURSE, SURFACING MATERIAL, BEDDING MATERIAL

- A. Leveling Course under play surfaces shall be placed, graded and compacted to an area extending a minimum 6" outside the park playground border footprint. The compacted surface grades shall be within ¼" when tested with a 10' straight edge. Grading and compaction shall apply to the entire playground footprint to receive rubber safety tiles. Leveling Course, Surfacing Material, and Bedding Material shall be placed in lifts no thicker than 6".

3.5 COMPACTION

- A. Control soil and fill compaction, providing minimum percentage of density specified below. Correct improperly compacted areas or lifts as directed by Engineer if soil density tests indicate inadequate compaction.
 - 1. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum density, in accordance with ASTM D 1557 or the specified performance requirements, as indicated below:

- a. Leveling Course, Bedding Material, and Surfacing Material: compact to 95% maximum density.

3.6 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Earthen materials, including cleared and grubbed wastes and organic materials, can be integrated into the relocated earthen berms at the UCSD site. At Sitka Spruce Park, remove excavated materials and dispose of them off Owner's property, except they can be used for the UCSD Berms provided there is adequate space available. For general wastes including trash, and debris, the materials shall be disposed of off City sites. The Contractor is responsible for disposal sites and all fees related to material, debris, or trash disposal.

3.7 FINAL GRADING

- A. After the parks are constructed and fill placed, including leveling course and surfacing material, grade the park surfaces to blend with adjoining grades. Fill depressions and remove surface rocks that may have segregated from the backfill. Provide a surface similar or better than the surface encountered prior to the start of any work performed under this contract.

3.8 GEOTEXTILE FABRIC

- A. Install per manufacturers recommendations. Lap ends minimum 24". Lap sides minimum 6".

3.9 LANDSCAPE DIVIDER

- A. Install per manufacturers recommendations. Install smooth circular radius at approximate drip line of tree.

END OF SECTION 02200

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUMMARY

- A. This Section includes storm sewerage system piping, manholes, inlets and appurtenances. It also includes the Playfield underdrain system.

1.3 RELATED SECTIONS

- A. The following Sections contain requirements that relate to this Section:
 - 1. Plan Sheets
 - 2. Section 01010 Summary of Work
 - 3. Section 02200 Earthwork for excavation and backfill required for sewerage piping and appurtenances.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
 - 1. Product data for sewer piping and specialties.
 - 2. Shop drawings for precast concrete inlets, manholes, including frames, covers, and concrete reducing slabs.

1.5 QUALITY ASSURANCE

- A. Environmental Compliance: Comply with applicable portions of Alaska Department of Environmental Conservation regulations pertaining to sewerage systems.
- B. Utility Compliance: Comply with local utility regulations and standards pertaining to sewerage systems.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage: Inspect materials for damage. Unload and store with minimum handling. Store materials on site in enclosures or under protective covering. Store jointing

materials and rubber gaskets under cover out of direct sunlight. Do not store materials directly on the ground. Keep inside of pipes and fittings free of dirt and debris.

- B. Handling: Handle pipe, fittings, and other accessories in a manner to ensure delivery to the trench in sound undamaged condition. Take special care to avoid injury to coatings and linings on pipe and fittings; make repairs if coatings or linings are damaged. Carry, do not drag the pipe to the trench.

1.7 PROJECT CONDITIONS

- A. Site Information: Perform site survey, research public utility records, and verify existing utility locations.
- B. Obtain utility locates in all areas influenced by construction.

1.8 SEQUENCING AND SCHEDULING

- A. Coordinate with other utility work.

PART 2 - PRODUCTS

2.1 CORRUGATED PLASTIC PIPE (CPEP)

- A. PIPE: Corrugated Polyethylene complying with the following requirements:
 - 1. Six inch (6") diameter: the requirements of AASHTO M-252.
 - a. Perforated Drain Pipe: Class II, Slotted at 120-degree intervals located in the outside valleys of the corrugations, with minimum inlet area of 1 square-inch opening per foot of pipe length.
 - 2. Twelve inch (12") and larger diameters: the requirements of AASHTO M-294.
- B. The corrugated Polyethylene Pipe covered by these specifications is classified as follows:
 - 1. Type S - This pipe shall have a full circular cross-section, with an outer corrugated pipe wall and a smooth inner liner. Corrugations may be either annular or helical.
 - 2. Soil Tight (ST).
- C. All CPEP fittings shall be rotational or blow molded and shall conform to the fitting requirements of AASHTO M-252 or M-294.
 - 1. Join CPEP with couplings or bell and spigot pipe. Couplings shall be corrugated to match the index in the pipe corrugations and in a width not less than three-quarters (3/4) of the

nominal pipe diameter. All couplings shall be manufactured to lap equally to a distance on each jointed pipe, to no less than the diameter of the pipe and shall provide a positive means of closure.

- D. All saddles shall be constructed of the same material as the pipe and shall be factory assembled units to serve as structural, hydraulic, and/or aesthetic end treatment to CPEP culverts. CPEP connections shall be as recommended by the manufacturer. The cost of the end sections and saddles shall be incidental to the pipe.

2.2 PRECAST MANHOLES AND INLETS

- A. Material used for the construction of manholes and inlets shall conform to ASTM C-478.
- B. Cement for mortar used in the construction of manholes shall conform to the requirements of ASTM C-150, Type II. Sand shall conform to AASHTO M-45. The mortar shall be composed of one-part cement and three parts sand.
- C. Each precast concrete barrel and cone section shall be set upon and sealed with a pre-molded plastic gasket that meets the requirements of ASTM C-990.
- D. Concrete reducing slabs, frames and covers shall be constructed as detailed.

2.3 IDENTIFICATION

- A. Plastic Underground Warning Tapes: Polyethylene plastic tape, 6 inches wide by 4 mils thick, solid color with continuously printed caption in black letters "CAUTION - SEWER LINE BURIED BELOW."

PART 3 - EXECUTION

3.1 PREPARATION OF BURIED PIPE FOUNDATION

- A. Excavation and backfill for furnishing and installing sewer line shall be in accordance with the specifications for Earthwork.
 - 1. Grade trench bottom to provide a smooth, firm, stable foundation throughout the length of the piping.
 - 2. Backfill trench bottoms with bedding material to dimensions shown on the drawings.
 - 3. Compact bedding material prior to installation of pipe.
 - 4. At no time shall the next layer of bedding material exceed the spring line of the pipe.
- B. Shape bedding material to fit bottom of pipe. Dig bell holes at each pipe joint to relieve the bells of all loads and to ensure continuous bearing of the pipe barrel on the foundation.

3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawings (plans and details) indicate the location and arrangement of the underground sewerage system piping.
- B. All piping shall be bedded and backfilled as required by the specification for Earthwork and as specified herein.
- C. Install piping true to grades and alignment indicated with unbroken continuity of invert. Place spigot ends of piping facing direction of flows (downstream). All sewer pipe shall be laid with grades sloping continuously upward from the discharge connection. Storm sewer pipe shall be installed at the slopes shown within a tolerance of 0.04' per 20' pipe joint.
- D. Install gaskets, seals, sleeves, and couplings in accordance with manufacturer's recommendations. Maintain swab or drag in line and pull past each joint as it is completed.
- E. Provide survey for pipe installation.
- F. Where the project outfalls into an existing sewer, construction of physical connection to the existing line shall be delayed until all new underground construction is complete and accepted.
- G. Install continuous plastic underground warning tape during backfilling of trench for underground sewer piping. Locate directly over pipe at dimension shown on the drawing.
- H. Install perforated pipe with one line of slots located vertically on top of the pipe, with the other two lines of slots located 60-degrees from the bottom of the pipe.

3.3 MANHOLES AND INLETS

- A. Excavation and backfill for furnishing and installing manholes and inlets shall be in accordance with the specifications for Earthwork and herein.
- B. The manhole frames and grates shall be brought to the grades shown on the drawings. Adjustments shall be made after surveyed ground elevations are available to assure drainage to the manhole grates. Manhole adjusting rings shall be set in and made secure by use of a plastic gasket pipe joint sealer. Storm drain grate elevations shall be as provided in the drawings and/or as required to drain surrounding surface water.
- C. Manholes shall be installed at the locations shown on the drawings, such that primary leads enter radially as detailed. The base section shall be set plumb on a prepared surface.

3.4 FIELD QUALITY CONTROL

- A. Cleaning: Clean interior of piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed.
- B. Place plugs in ends of uncompleted pipe at end of day or whenever work stops.
- C. Flush piping to remove collected debris.

END OF SECTION 02730

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, tools and equipment necessary to install slit-film/monofilament artificial grass as indicated on the plans and as specified herein; including components and accessories required for a complete installation, Including, but not limited to:
 - 1. Acceptance of prepared sub-base.
 - 2. Coordination with related trades to ensure a complete, integrated, and timely installation: Drain Rock; filling, grading and compacting; piping and drain components and geotextile fabric.

1.2 RELATED SECTIONS

- A. Section 02200 - Earthwork
- B. Section 02730 – Storm Sewerage
- C. Section 03300 – Cast-in-Place Concrete

1.3 REFERENCE STANDARDS

- A. FM Factory Mutual
 - 1. P7825 - Approval Guide; Factory Mutual Research Corporation; current edition
- B. ASTM – American Society for Testing and Materials.
 - 1. D1577 - Standard Test Method for Linear Density of Textile Fiber
 - 2. D5848 - Standard Test Method for Mass Per Unit Area of Pile Yarn Floor Covering
 - 3. D1338 - Standard Test Method for Tuft Bind of Pile Yarn Floor Covering
 - 4. D1682 - Standard Method of Test for Breaking Load and Elongation of Textile Fabrics
 - 5. D5034 - Standard Test Method of Breaking Strength and Elongation of Textile Fabrics (Grab Test)
 - 6. F1015 - Standard Test Method for Relative Abrasiveness of Synthetic Turf Playing Surfaces
 - 7. D4491 - Standard Test Methods for Water Permeability of Geotextiles by Permittivity
 - 8. D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
 - 9. F355 - Standard Test Method for Shock-Absorbing Properties of Playing Surfaces.
 - 10. F1936 - Standard Test Method for Shock-Absorbing Properties of North American Football Field Playing Systems as Measured in the Field.

1.4 SUBMITTALS

- A. Substitutions: Other products are acceptable if in compliance with all requirements of these specifications. Submit alternate products to Engineer for approval in accordance with General Condition Item 6.9.
 - 1. Provide substantiation that proposed system does not violate any other manufacturer's patents, patents allowed or patents pending.
 - 2. Provide a sample copy of insured, non-prorated warranty and insurance policy information.
- B. Comply with General Condition 6.20 for the Submittal. Submit for approval prior to ordering materials. Submittal shall be provided in Adobe Acrobat pdf compatible format.
- C. Shop Drawings:
 - 1. Indicate field layout and details for the specified turf system; roll/seaming layout; methods of attachment, field openings and perimeter conditions.
 - 2. Show installation methods and construction indicating field verified conditions, clearances, measurements, terminations, drainage.
 - 3. Provide joint submission with related trades when requested by Engineer.
- D. Product Data:
 - 1. Submit manufacturer's catalog cuts, material safety data sheets (MSDS), brochures, specifications; preparation and installation instructions and recommendations; storage, handling requirements and recommendations.
 - 2. Submit fiber manufacturer's name, type of fiber and composition of fiber.
 - 3. Submit data in sufficient detail to indicate compliance with the contract documents.
 - 4. Submit manufacturer's instructions for installation.
 - 5. Submit manufacturer's instructions for maintenance for the proper care and preventative maintenance of the synthetic turf system, ~~including painting and markings.~~
 - 6. Submit on sand infill material.
 - 7. Submit on rubber infill material.
- E. Samples: Submit a synthetic turf sample, 12 x 12 inches, representing the turf carpet portion of the product proposed for this project. Submit a 3-lb sample of each infill material.
- F. Product Certification:
 - 1. Submit manufacturer's certification that products and materials comply with requirements of the specifications.

2. Submit test results indicating compliance with Reference Standards.

- G. Project Record Documents: Record actual locations of seams, drains and other pertinent information in accordance with Specifications and General Requirements.
- H. List of existing installations: Submit list including respective Owner's representative and telephone number demonstrating Quality Assurance requirements are met.
- I. Warranties: Submit warranty and ensure that forms have been completed in Owner's name and registered with approved manufacturer.
- J. Submit Bills of Lading/Material Delivery Receipts for synthetic turf infill materials. Bills of lading shall bear the name of the project, delivery address, quantity of materials delivered, source/location of origin of infill materials and/or manufacturer, and date of delivery.
- K. Testing Certification: Submit certified copies of independent (third-party) laboratory reports on ASTM testing:
 - 1. Pile Height, Face Weight & Total Fabric Weight, ASTM D5848.
 - 2. Primary & Secondary Backing Weights, ASTM D5848.
 - 3. Tuft Bind, ASTM D1335.
 - 4. Grab Tear Strength, ASTM D1682 or D5034.
 - 5. Water Permeability, ASTM D4491
- L. The Turf Vendor shall submit a document holding the Owner and it's representatives harmless for any liability and/or costs of any type, including but not limited to legal costs, royalties, replacement costs, etc. associated with any claim by the Turf Vendor or others associated with any patents or infringements of any current or future patent issued for the synthetic turf product, infill materials, installation methods or drainage characteristics. It is not the intent of these documents to promote or induce the use of intellectual property belonging to others or promote infringement of any known or currently not known patents, licenses or rights of others.
- M. Submit the exact product name/description as well as the name and location of the manufacturers and suppliers of each component. Manufacturers and suppliers must not be changed after the contract is awarded unless approved by the Owner in writing.

1.5 QUALITY ASSURANCE

- A. Comply with the Contract Documents and Manufacturers standards for Quality Assurance.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section. The turf contractor and/or the turf manufacturer:
 - 1. Shall be experienced in the manufacture and installation of slit-film/monofilament grass turf for a minimum of three years. This includes use of a slit-film/monofilament fiber, and the installation method.
 - 2. Shall have 100 fields in play for at least two years. Fields shall be 65,000 ft² or more.

3. Turf manufacturer shall have installed a minimum of 5 fields that are at least 8 years old, which is equal to the respective warranty period.
 4. Shall have a minimum of 10 installations in the State of Alaska.
 5. Shall have a minimum of 100 installations in North America with a slit-film/monofilament fiber, each field of 65,000 ft² or more.
 6. Source Limitations: Obtain synthetic turf fiber through one source from a single manufacturer and provide fiber manufacturer's warranty.
 7. Manufacturer must be a member in good standing with the STC.
 8. Manufacturer must utilize best practices as certified by ISO-9001 and ISO-14001.
- C. Installer: Company shall specialize in performing the work of this section. The Contractor shall provide competent workmen experienced and skilled in this specific type of synthetic grass installation.
1. The designated Supervisory Personnel on the project shall be certified, in writing by the turf manufacturer, as competent in the installation of specified slit-film/monofilament material, including sewing seams and proper installation of the infill mixture.
 2. Installer shall be certified by the manufacturer and licensed.
 3. The installer supervisor shall have a minimum of 5 years-experience as either a construction manager or a supervisor of synthetic turf installations.
 4. The Alaska Department of Labor (ADOL) shall be notified in advance and approve Workers' in the event they are out-of-state residents. State law requires no more than one worker, or 10% of the crew, be residents of Alaska unless pre-approved before the work is accomplished. Provide documentation of ADOL coordination.
- D. Pre-Installation Conference: Conduct conference at project site at time to be determined by Engineer. Review methods and procedures related to installation including, but not limited to, the following:
1. Inspect and discuss existing conditions and preparatory work performed under other contracts.
 2. In addition to the Contractor and the installer, arrange for the attendance of workers affected by the Work, the Owner's representative, and the Engineer.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Product Requirements.
- B. Prevent contact with materials that may cause dysfunction.
- C. Deliver and store components with labels intact and legible.
- D. Store materials/components in a safe place, under cover, and elevated above grade.
- E. Protect from damage during delivery, storage, handling and installation. Protect from damage by other trades.

- F. Inspect all delivered materials and products to ensure they are undamaged and in good condition.

1.7 SEQUENCING AND SCHEDULING

- A. Coordinate the Work with installation of work of related trades as the Work proceeds.
- B. Sequence the Work in order to prevent deterioration of installed system.

1.8 WARRANTY AND GUARANTEE

- A. See Specifications and General Conditions for Closeout Submittals and for Additional Warranty Requirements.
- B. The Contractor shall provide a warranty to the Owner that covers defects in materials and workmanship of the turf for a period of eight (8) years from the date of substantial completion. The turf manufacturer must verify that their representative has inspected the installation and that the work conforms to the manufacturer's requirements. The manufacturer's warranty shall include general wear and damage caused from UV degradation. The warranty shall specifically exclude vandalism, and acts of God beyond the control of the Owner or the manufacturer. The Warranty shall cover damage from winds with speeds below the IBC published wind speed as recorded by the local NOAA weather station. The warranty shall be fully third-party insured; prepaid for the entire 8-year term and be non-prorated. The Contractor shall provide a warranty to the Owner that covers defects in the installation workmanship, and further warrant that the installation was done in accordance with both the manufacturer's recommendations and any written directives of the manufacturer's representative. Prior to final payment for the synthetic turf, the Contractor shall submit to owner notification in writing that the field is officially added to the annual policy coverage, guaranteeing the warranty to the Owner. The insurance policy must be underwritten by an "AM Best" A rated carrier and must reflect the following values:

1. Warranty must be backed by a surety licensed to do business in the State of Alaska.
2. Submit information confirming that a 3rd Party Insurance Policy, non-cancelable, non-prorated, and pre-paid for the entire duration of the warranty is in effect covering this installation, and underwritten by a Best A Rated Insurance Carrier.
3. Warranty shall be for full replacement of any damaged product within the warranty period. Warranty shall be comprehensive and sufficient to replace entire field if necessary.
4. Warranty shall become effective from the date of substantial completion
5. Must cover full 100% replacement value of total square footage installed, in case of complete product failure, which will include removal and disposal of the existing surface.
6. Provide a copy of insured, non-prorated warranty and insurance policy information.
7. The Warranty shall contain no usage limits for warranted field.
8. Policy cannot include any form of deductible to be paid by the Owner.

- C. The artificial grass system shall be warranted to maintain a G-max of less than 200 for the life of the Warranty period as per ASTM F1936

1.9 MAINTENANCE SERVICE

- A. Provide two (2) copies of Maintenance Manuals, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system, ~~including painting and markings~~. Also address remedial measures for graffiti removal.
- B. Contractor shall train the Owner's facility maintenance staff in the use of the turf manufacturer's recommended maintenance equipment.
- C. Manufacturer must provide maintenance guidelines to the facility maintenance staff.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

- A. FieldTurf USA
175 N. Industrial Blvd
Calhoun, GA 30701
P: 800-724-2969

Model: FieldTurf Vertex-57
- . B. Or equal.

2.2 MATERIALS AND PRODUCTS

- A. Artificial grass system materials shall consist of the following:
 - 1. Carpet made of slit-film/monofilament polyethylene fibers tufted into a perforated backing. Alternating row monofilament and slit-film carpet constructions are not permitted.
 - 2. Infill: Graded sand and ambient rubber that partially covers the carpet.
 - 3. Glue, thread, paint, seaming fabric and other materials used to install and mark the artificial grass slit-film/monofilament turf.
- B. The installed artificial grass slit-film/monofilament turf shall have the following properties:

<u>Standard</u>	<u>Property</u>	<u>Specification</u>
ASTM D1577	Yarn Structure – A	Slit-Film
	Yarn Denier - A	5,000+
ASTM D5823	Yarn Structure – B	Ridged Monofilament
	Yarn Denier – B	12,000+
ASTM D1577	Min. Pile Height	2.25"
ASTM D5793	Fiber Thickness A/B	100+/360 Microns
ASTM D5848	Stitch Gauge	3/8" - 3/4"
ASTM D5848	Pile Weight	43+oz/square yard
ASTM D5848	Primary Backing	7+oz/square yard
ASTM D5848	Secondary Backing	16+oz/square yard
ASTM D5848	Total Weight	66+oz/square yard
ASTM D1335	Tuft Bind (Without Infill)	8+lbs
ASTM D5034	Grab Tear (Width)	200 lbs/force
ASTM D5034	Grab Tear (Length)	200 lbs/force
ASTM D4491	Carpet Permeability	>40 inches/hour
ASTM F1936	Impact Attenuation (Gmax)	<200
	Min. Infill Material Depth	1.5 inches
	Min. Sand Infill Component	3 lbs/square foot
	Min. Rubber Infill	3 lbs/square foot
	Total Product Weight	930+oz/square yard

Variation of +/- 5% on above listed properties is within normal manufacturing tolerances

- C. Carpet shall consist of slit-film/monofilament fibers tufted into a primary backing with a secondary backing.
- D. Carpet Rolls shall be 15' wide rolls.
 - 1. Rolls shall be long enough to go from field edge to edge. Besides side seams at 15' intervals, no longitudinal or transverse seams are allowed.
- E. Backing:
 - 1. Primary backing shall be a minimum double-layered polypropylene fabric.
 - 2. Secondary backing shall permanently lock the fiber tufts in place.
- F. Fiber shall be measuring no less than 2 ¼ -inches high.
- G. Infill materials shall be provided or approved by the turf manufacturer.
 - 1. The infill shall consist of a resilient-layered, granular system, comprising selected graded sand and ambient rubber.

2. The sand infill will comply within the following characteristics:
 - a Average Particle size between 20 and 30 mesh [calculated based on summing the midpoint of sieve pan fractions times the % retained on given screen fractions]
 - b Average Particle shape > 0.4 on the Krumbein scale
 - c Particle structure predominantly single grain
 - d Produce < 0.4%, -50M in API crush test at 80-psig

3. Rubber: Rubber is SBR ambient (styrene butadiene rubber) rubber, color black, 10-18 mesh, that is 99% fiber free and is heavy metal safe. Rubber shall be placed on the turf in a minimum quantity as referenced above in this document and shall be of the following Mesh Size Distribution:

<u>Mesh Size</u>	<u>% Retained</u>
10	0-15%
12	5-30%
16	40-70%
20	15-35%
30	0-10%
40	0-1%
Pan	0-1%

- H. ~~Non-tufted or inlaid lines and markings shall be painted with paint approved by the synthetic turf manufacturer.~~
- I. Thread for sewing seams of turf shall be as recommended by the synthetic turf manufacturer.
- J. Glue and seaming fabric for inlaying lines and markings shall be as recommended by the synthetic turf manufacturer.

2.3 QUALITY CONTROL IN MANUFACTURING

- A. The manufacturer shall own and operate its own manufacturing plant in North America.
- B. The manufacturer’s full-time in-house certified inspectors shall perform pre-tufting fiber testing on tensile strength, elongation, tenacity, denier, shrinkage, and twist i.e., turns per inch, upon receipt of fiber spools from fiber manufacturer.
- C. The manufacturer shall have its own, in-house laboratory where samples of turf are retained and analyzed, based on standard industry tests, performed by full-time, in-house, certified inspectors.

2.4 FIELD GROOMER & SWEEPER

- A. Supply field Groomer and Sweeper as part of the work.

1. Field Groomer shall include a towing attachment compatible with a field utility vehicle.
 - a Field Groomer shall be a FieldTurf GroomRight
2. Field Sweeper shall include a towing attachment compatible with a field utility vehicle.
 - a Field Sweeper shall be a FieldTurf SweepRight

PART 3 - EXECUTION

3.1 EXAMINATION

- A. The Contractor shall verify clearing and grubbing operations were adequate prior to repairing subgrade.
- B. The Contractor, along with the Engineer, Grading Subcontractor (if applicable) and Synthetic Turf Subcontractor (if applicable), shall attend a joint inspection of the completed sub-base assembly for the purpose of determining the acceptability of that surface prior to installing the synthetic turf product and to confirm actual site dimensions.
- C. The inspection shall include a check for planarity. The finished surface shall not vary from a true plane more than 1/4" in 10 feet when measured in any direction. The Contractor shall provide all required tools and materials needed for the planarity check, which may include but not be limited to, a laser level, string line, straight edge and/or other assessment materials. The Contractor shall mark in the field any deviations from grade in excess of those specified above, as well as provide a marked-up plan locating the deviations. The Contractor shall correct any deviations to the satisfaction of the Engineer and Synthetic Turf installer.
- D. The compaction of aggregate base shall be 95% to Standard Proctor and surface tolerances shall not exceed 1/4" over 10 feet.
- E. The Contractor shall have a surveyor conduct an elevation survey of the field area in a 25' grid to determine and verify that subgrade elevations and slopes are within previously specified tolerances. This elevation survey may require further verification of smaller areas within the 25' grid if determined necessary by the Engineer.
- F. When any or all corrective procedures have been completed, the finished sub-base surface must be re-inspected, with the same representatives attending as the initial inspection. If required, additional repair and inspections are to be conducted until the subbase surface is deemed acceptable by the Engineer and Synthetic Turf Installer
- G. Once the sub-base surface has been deemed acceptable, the Turf Installer shall submit a written certificate indicating the acceptance of:
 1. The sub-base construction finished surface as totally suitable for the application of the selected synthetic turf system, and
 2. The sub-base construction as totally suitable for work under this section to proceed with the final installation and fully warrant the athletic surface installation for the period and conditions specified herein.

- H. Commencement of work under this section shall constitute acceptance of the work completed under other sections by the Contractor, acceptance of dimensions of the subbase, and hence, no claims for extra work based upon these conditions will be permitted.
- I. The Contractor shall verify special conditions required for the installation of the system.
- J. The Contractor shall notify the Engineer of any discrepancies.

3.2 PREPARATION

- A. Prior to the beginning of installation, inspect the sub-base for tolerance to grade.
- B. Sub-base acceptance shall be subject to receipt of test results for compaction and planarity that sub-base is in compliance with manufacturer's specifications and recommendations.
- C. Dimensions of the field ~~and locations for markings~~ shall be measured by a registered surveyor to verify conformity to the specifications and applicable standards. A record of the finished field as-built measurements shall be made.
- D. When requested by Engineer, installed sub-base shall be tested for porosity prior to the installation of the slit-film/monofilament turf. A subbase/drain rock that drains poorly is an unacceptable substrate

3.3 INSTALLATION - GENERAL

- A. The installation shall be performed in full compliance with approved Shop Drawings.
- B. Only trained technicians, skilled in the installation of athletic caliber synthetic turf systems working under the direct supervision of the approved installer supervisors, shall undertake any cutting, sewing, gluing, shearing, topdressing or brushing operations.
- C. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer, as competent in the installation of this material, including sewing seams and proper installation of the Infill mixture.
- ~~D. Designs, markings, layouts, and materials shall conform to all currently applicable National Collegiate Athletic Association rules, NFHS rules, and/or other rules or standards that may apply to this type of synthetic grass installation. Designs, markings and layouts shall first be approved by the Engineer or Owner in the form of final shop drawings. All markings will be in full compliance with final shop drawings.~~

3.4 INSTALLATION

- A. Install at location(s) indicated, to comply with final shop drawings and manufacturers'/installer's instructions.
- B. The Contractor shall strictly adhere to specified procedures. Any variance from these requirements shall be provided in writing, by the manufacturer's on-site representative, and submitted to the Engineer and/or Owner, verifying that the changes do not in any way affect the Warranty. Infill materials shall be approved by the manufacturer and installed in accordance with the manufacturer's standard procedures.

- C. Carpet rolls shall be installed directly over the properly prepared aggregate base. Extreme care shall be taken to avoid disturbing the aggregate base, both in regard to compaction and planarity.
 - 1. Repair and properly compact any disturbed areas of the aggregate base as recommended by manufacturer.

- D. Full width rolls shall be laid out across the field.
 - 1. Turf shall be of sufficient length to permit full cross-field installation from edge to edge.
 - 2. No cross seams will be allowed between the edges.
 - 3. Each roll shall be attached to the next roll utilizing standard state-of-the-art sewing procedures.

- E. Artificial turf panel seams shall be sewn. Other than extension inlays, seams secured by other means including gluing are unacceptable. Installation shall be 99% sewn.
 - 1. Minimum gluing will only be permitted to repair problem areas, corner completions, ~~and to cut in any logos or inlaid lines as required by the specifications.~~
 - 2. Seams shall be flat, tight, and permanent with no separation or fraying.
 - 3. ~~In the case of all lines and logos, turf carpet must be sheared to the backing (do not cut the backing) and adhered using hot melt adhesives.~~

- F. Infill Materials:
 - 1. Infill materials shall be applied in numerous thin lifts. The turf shall be brushed as the mixture is applied. The infill material shall be installed to a depth as specified and approved by the manufacturer.
 - 2. Infill materials shall be installed to fill the voids between the fibers and allow the fibers to remain vertical and non-directional. The Infill installation consists of a base layer of sand followed by a final application of specifically sized rubber that completes the system. The Infill shall be installed to the depth of minimum 1.5”.

- ~~G. Non tufted or inlaid lines and markings shall be painted in accordance with turf and paint manufacturers’ recommendations. Number of applications will be dependent upon installation and field conditions.~~

- H. Synthetic turf shall be attached to the perimeter edge detail in accordance with the more stringent of the plans or manufacturer’s standard procedures.

- I. Upon completion of installation, the finished field shall be inspected by the installation crew and an installation supervisor.

~~3.5~~ ~~FIELD MARKINGS~~

- ~~A. Field markings shall be installed in accordance with approved shop drawings.~~
- ~~B. Balance of sports markings will be inlaid or painted in accordance with the Drawings.~~
- ~~C. Center field logo shall be either painted or inlaid according to artwork indicated on Drawings and in accordance with manufacturer's standard palette of turf colors.~~
- ~~D. End zone letters and logos shall be either painted or inlaid according to artwork and fonts indicated on the Drawings, and in accordance with manufacturer's standard palette of turf colors.~~

3.6 ADJUSTMENT AND CLEANING

- A. Do not permit traffic over unprotected surface.
- B. Contractor shall provide the labor, supplies, and equipment as necessary for final cleaning of surfaces and installed items.
- C. All usable remnants of new material shall become the property of the Owner.
- D. The Contractor shall keep the area clean throughout the project and clear of debris.
- E. Surfaces, recesses, enclosures, and related spaces shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

3.7 PROTECTION

- A. Protect installation throughout construction process until date of final completion.

END OF SECTION 02790

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. DIVISION 01 - GENERAL REQUIREMENTS: Drawings, quality, product and performance requirements, general and supplemental conditions apply as applicable to the project and project documents.

1.2 SUMMARY

- A. This Section includes chain link fence and gates specifications:
 - 1. PVC coated galvanized steel coated chain link fabric
 - 2. PVC coated galvanized steel framework and fittings
 - 3. PVC coated Gates: Swing type
 - 4. Installation

1.3 REFERENCES

- A. ASTM A121 Specification for Metallic-Coated Carbon Steel Barbed Wire
- B. ASTM A392 Specification for Zinc-Coated Steel Chain-Link Fence Fabric
- C. ASTM A780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
- D. ASTM A817 Specification for Metallic-Coated Steel Wire for Chain Link Fence Fabric and Marcellled Tension Wire
- E. ASTM A824 Specification for Metallic-Coated Steel Marcellled Tension Wire for Use With Chain Link
- F. ASTM F552 Standard Terminology Relating to Chain Link Fencing
- G. ASTM F567 Standard Practice for Installation of Chain Link Fence
- H. ASTM F626 Specification for Fence Fittings
- I. ASTM F900 Specification for Industrial and Commercial Swing Gates
- J. ASTM F1043 Specification for Strength and Protective Coatings of Steel Industrial Chain Link Fence Framework
- K. ASTM F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures
- L. ASTM F1345 Specification for Zinc-5% Aluminum-Mischmetal Alloy-Coated Steel Chain-Link Fence Fabric
- M. ASTM F668 Specification for Polymer Coated Chain Link Fence Fabric
- N. ASTM F934 Specification for Standard Colors for Polymer Coated Chain Link

1.4 SUBMITTALS

- A. Catalog Cuts: Provide catalog cuts for all proposed products annotated to delineate options, sizes, and features to adequately describe the proposed products. Provide information for fence and gate posts, rails, fittings, fabric, reinforcements, attachments, gate latches, gates, hardware, and polymer coatings.
- B. Certifications: Manufacturers material certifications in compliance with the current ASTM specifications.
- C. Provide submittals in electronic pdf format.

1.5 QUALITY ASSURANCE

- A. Manufacturer: Company headquartered in the United States having U.S. manufacturing facility/facilities specializing in manufacturing chain link fence products with at least 5 years' experience.
- B. Fence contractor: Company with demonstrated successful experience installing similar projects and products in accordance with ASTM F567 and have at least 5 years' experience.
- C. Tolerances: Current published edition of ASTM specifications tolerances apply. ASTM specification tolerances supersede any conflicting tolerance.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver products to site per the recommendations of the manufacturer.
- B. Storage: Store and protect products off the ground per the recommendations of the manufacturer.

PART 2 – PRODUCTS

2.1 CHAIN LINK FABRIC

- A. Steel Chain Link Fabric: Height as indicated on drawings
 - 1. Zinc-Coated Steel Fabric: ASTM A392 hot dipped galvanized before or after weaving.
 - a. Class 2 - 2.0 oz/ft² (610 g/m²)
 - a. Mesh Size: 2" (50.8 mm)
 - b. Gauge: 9 Gauge, 0.148 in. (3.76 mm)
 - c. Wire Break Strength: 1,290 lbf (5740 N)
 - d. Fabric selvage: Knuckle selvage top and bottom, (K&K)

2. Polymer coated fabric shall have a PVC coating fused and adhered to the exterior zinc coating of the galvanized steel in accordance with ASTM F1043. The minimum thickness of the PVC coating shall be 10-mils. Color to be selected from manufacturers standards per ASTM F934. Products are to be Colorbond II as manufactured by Colorguard Corporation or approved equal.

2.2 ROUND STEEL PIPE FENCE FRAMEWORK

- A. Round steel pipe and rail: Schedule 40 standard weight pipe, in accordance with ASTM F1083, 1.8 oz/ ft² (610 g/m²) hot dip galvanized zinc exterior and 1.8 oz/ft² (610 g/m²) hot dip galvanized zinc interior coating
 1. Strength Grade: Minimum yield strength 50,000 psi (344 MPa)
 - a. Corner and End Post (4' Fence): 2.875" (73.0 mm) O.D., 1.8 oz/ ft² hot dip galvanized zinc exterior and 1.8 oz/ft² hot dip galvanized zinc interior coating, 5.79#/ft (8.6 kg/m).
 - b. Line Posts (4' Fence): 2.375" (60.3 mm) O.D., 1.8 oz/ ft² hot dip galvanized zinc exterior and 1.8 oz/ft² hot dip galvanized zinc interior coating, 3.65#/ft (5.4 kg/m).
 - c. End, Corner, Line Post (8' Fence): 4.00" (101.6 mm) O.D., 1.8 oz/ ft² hot dip galvanized zinc exterior and 1.8 oz/ft² hot dip galvanized zinc interior coating, 9.11#/ft (13.6 kg/m).
 - d. Top, Bottom and Intermediate Rails: 1.66" O.D., 1.8 oz/ ft² hot dip galvanized zinc exterior and 1.8 oz/ft² hot dip galvanized zinc interior coating, 2.27#/ft.
 2. Polymer Coated Pipe: All pipe shall have a PVC coating fused and adhered to the exterior zinc coating of the galvanized pipe in accordance with ASTM F1043. The minimum thickness of the PVC coating shall be 10-mils. Color to match fabric per ASTM F934.

2.3 FITTINGS

- A. Polymer Coated Color Fittings: All fitting shall be coated in compliance with ASTM F626, minimum coating thickness 0.006 in. (0.152 mm) fused and adhered to the zinc coated fittings. Match color to fence system.
- B. Tension and Brace Bands: Galvanized pressed steel complying with ASTM F626, minimum steel thickness of 12 gauge (0.105 in.) (2.67 mm), minimum width of 3/4 in. (19 mm) and minimum zinc coating of 1.20 oz/ft² (366 g/m²). Secure bands with 5/16 in. (7.94 mm) galvanized steel carriage bolts.

- C. Terminal Post Caps, Line Post Loop Tops, Rail and Brace Ends, Boulevard Clamps, Rail Sleeves: In compliance to ASTM F626, pressed steel galvanized after fabrication having a minimum zinc coating of 1.20 oz/ft² (366 g/m²).
- D. Truss Rod Assembly: In compliance with ASTM F626, 3/8 in. (9.53 mm) diameter steel truss rod with a pressed steel tightener, minimum zinc coating of 1.2 oz/ft² (366 g/m²), assembly capable of withstanding a tension of 2,000 lbs. (970 kg).
- E. Tension Bars: In compliance with ASTM F626. Galvanized steel one-piece length 2 in. (50 mm) less than the fabric height. Minimum zinc coating 1.2 oz. /ft² (366 g/m²). Bars for 1 ¼ in. (44 mm) mesh shall have a minimum cross section of 3/16 in. (4.8 mm) by 3/4 in. (19 mm).

2.4 TIE WIRE

- A. Tie Wire: Galvanized minimum zinc coating 1.20 oz/ft² (366 g/m²) 9-gauge (0.148) (3.76 mm) steel wire in compliance with ASTM F626.
- B. Polymer coated to match the coating, class and color to that of the chain link fabric.

2.5 SWING GATES

- A. Polymer coated gate frames and gateposts; match the coating type and color to that specified for the fence framework. Moveable parts such as hinges, latches and drop rods may be field coated using a liquid polymer touch up
- B. Swing Gates: Galvanized steel pipe welded fabrication in compliance with ASTM F900. Gate frame members minimum 1.900 in. OD (48.3 mm) ASTM F 1083 schedule 40 galvanized steel pipe. Frame members spaced no greater than 6 ft. (1830 mm) apart vertically and horizontally. Welded joints with coatings protected in accordance with section 3.8 of this specification. Galvanized malleable iron or heavy gauge pressed steel post and frame hinges. Provide gate holdbacks with double gates. Match gate fabric to that of the fence system. Gateposts per ASTM F1083 schedule 40 galvanized steel pipe.
- C. Gateposts: Schedule 40 pipe in compliance with ASTM F1083.
 - 1. Gate Posts (16' Double Swing Gate): 4.5" O.D., 1.8 oz/ ft² hot dip galvanized zinc exterior and 1.8 oz/ft² hot dip galvanized zinc interior coating, 10.79#/ft.
 - 2. Gate Posts (5' Man Gate): 2.875" O.D., 1.8 oz/ ft² hot dip galvanized zinc exterior and 1.8 oz/ft² hot dip galvanized zinc interior coating, 5.79#/ft.
- D. Gate Latches: Commercial grade, lockable hot-dip galvanized double arm latch set consisting of a latch arm assembly, latch arm bracket assembly, latch arm bolt and nut, latch bracket assembly, and mounting hardware including U-bolts, carriage bolts and hex nuts.

1. Manufacturer and Part:

- a. International Security Products, PL152 Industrial Gate Latch

PART 3 EXECUTION

3.1 SITE EVALUATION

- A. General: Survey and locate property lines so fence can be properly located.

3.2 FRAMEWORK INSTALLATION

- A. Posts: Posts shall be set plumb in concrete footings in accordance with ASTM F567. Minimum footing depth and width shall be as shown on the drawings. Top of concrete shall be crowned to shed water away from the post. Line posts installed at intervals not exceeding 6 ft. (1.8 m) on center.
- B. Terminal posts: End, corner, pull and gate posts shall be braced and trussed. The horizontal brace rail and diagonal truss rod shall be installed in accordance with ASTM F567.

3.3 CHAIN LINK FABRIC INSTALLATION

- A. Chain Link Fabric: Install fabric to outside of the framework. Attach fabric to the terminal post by threading the tension bar through the fabric; secure the tension bar to the terminal post with tension bands and 5/16 in. (7.94 mm) carriage bolts spaced no greater than 12 inches (304.8mm) on center. Chain link fabric to be stretched taut free of sag. Fabric to be secured to the line post with tie wires spaced no greater than 12 inches (304.8 mm) on center and to horizontal rail spaced no greater than 12 inches (304.8 mm) on center. Secure fabric to the tension wire with hog rings spaced no greater than 12 inches (304.8 mm) on center.
- B. Tie wire shall be wrapped 360 degrees (6.28 rad) around the post or rail and the two ends twisted together three full turns. Excess wire shall be cut off and bent over to prevent injury.

3.4 GATE INSTALLATION

- A. Swing Gates: Install swing gate and gateposts in compliance with ASTM F 567. Direction of swing shall be outward. Gates shall be plumb in the closed position having a bottom clearance of 3 in. (76 mm). Hinge opening space shall be no greater than 3 in. (76 mm) in the closed position. Latch offset space shall be between 4 in. (101 mm) and 5 in. (127 mm) to allow proper installation of the latch assembly.

3.5 NUTS AND BOLTS

- A. Bolts: Carriage bolts used for fittings shall be installed with the head on the secure side of the fence. All bolts shall be peened over to prevent removal of the nut.

3.6 TOUCH UP

- A. All field welds, scratches, imperfections, cut ends, or other damage that compromise the hot-dip galvanized coating or otherwise expose bare metal shall be repaired. Repairs shall be conducted as follows:

1. Use hot applied repair stick, zinc-cadmium alloys (melting point 518° - 527°F) such as "Rev-Galv", or zinc-tin-lead alloys (melting point 446° - 600°F) such as "Galv-Weld", Zilt", or "Galv-over". The zinc-tin-lead alloys shall comply with U.S. Federal Specification O-G-93 and contain fluxing agents.
2. Remove welding slag by chipping hammer and clean weld or damaged area by vigorous wire brushing.
3. Preheat the region to be repaired by means of an oxyacetylene torch or other convenient method to between 600°F and 750°F. The alloys do not spread well at temperatures lower than 600°F.
Also, as temperatures rise above 600°F, increasing amounts of dross form.
4. Wire brush surface again.
5. Apply coating by rubbing bar of the alloy over the heated surface while it is hot enough to melt the alloy.
6. Spread the molten alloy by briskly wire brushing or rubbing with a flat edge strip of steel or palette knife. Minimum thickness of applied zinc stick material shall be 12 mils.
7. Remove flux residues by wiping with a damp cloth or rinsing with water.
8. Brush apply two top coats of zinc rich paint, ZRC or equal (cold galvanize repair).

- B. Touch up or replace damaged polymer coatings as recommended by the manufacturer.

3.7 RESTORATION AND CLEAN UP

- A. Clean Up: The area of the fence line shall be left neat and free of any debris caused by the installation of the fence. Remove concrete debris, laitance and other construction materials that are not directly incorporated into the completed work.

END OF SECTION 02820

2020 PARK AND PLAYGROUND IMPROVEMENTS

SITE WORK
Section 02880
PLAYGROUND EQUIPMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES: Playground Equipment and Park Amenities

A. Scope of Work:

1. Design services: Play equipment and related improvements, including verification of fall zone and thickness of Rubber Safety Tile system to assure thickness and density meet fall height requirements.
2. Provide and install all play equipment, amenities, and materials as necessary.

1.2 RELATED SECTIONS

- A. Earthwork, Section 02200.
- B. Playground Surfacing, Section 02885.

1.3 REFERENCES

- A. ASTM F1487: Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
- B. ASTM F1951: Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
- C. Handbook For Playground Safety, U.S. Consumer Product Safety Commission (CPSC) Pub. 325.
- D. American with Disabilities Act (ADA) as published by the Federal Register, latest edition.
- E. IPEMA: International Play Equipment Manufacturers Association.
- F. CPSC: Consumer Product Safety Commission

1.4 DEFINITIONS

- A. Composite Play Structure – An item of playground equipment that is two or more play structure components linked together to form one integral unit that provides more than one play activity.

1.5 SUBMITTALS

- A. Provide submittal(s) electronically in Adobe Acrobat pdf format.
- B. Provide color samples for selection during submittal process.
- C. Submit manufacturers specifications and shop drawings for installation based on recommendations from the manufacturer. Submittals must include at a minimum: component specifications, plan view and isometric drawings of each accessory being

2020 PARK AND PLAYGROUND IMPROVEMENTS

SITE WORK
Section 02880
PLAYGROUND EQUIPMENT

proposed, and plan view and isometric drawings of the composite play structure showing minimum required use zones, transfer stations, accessible paths of travel, traffic patterns for each piece of equipment, assembly and footing details, and warranty compliance. Provide composite drawings of play equipment overlaid on the playground footprint.

- D. Provide third party certification of manufacturer's compliance with ASTM F 1487-01, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use for the submitted composite play structure.
- E. Provide third party certification of manufacturer's compliance with ASTM F-1951: Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment for submitted composite play structure.
- F. Provide statement certifying manufacturer's compliance with the guidelines and recommendations in the Handbook For Playground Safety, U.S. Consumer Product Safety Commission Pub. No. 325.
- G. Provide statement certifying manufacturer's compliance with the American with Disabilities Act (ADA).
- H. Resume for National Playground Safety Inspector, certified by the National Playground Safety Institute Inspection Certification Course

1.6 SUBSTITUTIONS

- A. In the event the Contractor proposes a substitution of product from other than the listed manufacturers, the following will be required:
 - 1. A complete set of data from the manufacturer providing all information required for the submittal, including shop drawings and certifications.
 - 2. A detailed listing and statement by the Contractor that all cost impacts for the substitution and subsequent revisions to the plan and details shall be the responsibility of the Contractor.

1.7 DELIVERY AND STORAGE

- A. Unload materials with necessary equipment, store covered out of weather, and keep out of direct sun. Inspect parts within 48 hours of delivery, compare with manufacturer's bill of material, and report any missing or non-conforming parts to manufacturer within this time.

1.8 QUALITY ASSURANCE

- A. Equipment supplier to provide an original certificate of product liability insurance within 10 days after receipt of award, with owner named as certificate holder. Minimum required level of manufacturer coverage required is \$10 million per occurrence.

2020 PARK AND PLAYGROUND IMPROVEMENTS

SITE WORK
Section 02880
PLAYGROUND EQUIPMENT

1.9 OPERATIONS AND MAINTENANCE DATA

- A. Provide bound documents that include the information required for submittals, lubrication requirements, periodic adjustments, and inspection procedures related to preventative maintenance.
- B. Include spare parts index, price list, and source for obtaining replacement parts.

1.10 MAINTENANCE MATERIALS AND SPARE PARTS

- A. Provide maintenance materials and any special tool necessary to make routine adjustments or repairs to equipment.
- B. Provide six (6) additional fasteners of each type.

1.11 WARRANTY

- A. Manufacturer's warranty, which shall include the following as a minimum:
 - 1. Hardware and Future Deficiencies in Design - Lifetime.
 - 2. All pipes, rungs, rails and loops or step pads, failure due to corrosion, deterioration, and/or workmanship, on bolted connections, rotating or moving parts of the structure – 15-years
 - 3. Rubber or Springs Used in the Structure – 5-years
 - 4. Manufacturer's Workmanship – Lifetime
- B. Playground equipment shall be guaranteed to meet CPSC standards and shall be IPEMA certified. All work is to be guaranteed in accordance with IPEMA, ASTM and CPSC standards for consumer safety performance specifications for playground equipment for public use with an independent laboratory validation of conformance to ASTM technical specifications.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Provided specification guidelines are met, acceptable manufacturers for playground equipment include the following:
 - 1. Playcraft Systems, Inc.
123 North Valley Drive
Grants Pass, OR 97526
Tel. 1-800-333-8519

2020 PARK AND PLAYGROUND IMPROVEMENTS

SITE WORK
Section 02880
PLAYGROUND EQUIPMENT

2. Playworld Systems, Inc.
1000 Buffalo Road
Lewisburg, PA 17837-9795
800-726-0031 (Northwest Playground Equipment, Issaquah, WA)
3. Gametime
P.O. Box 680121
Ft. Payne, Alabama 35968-0121
800-235-2440 (Sitelines, Everett, WA)

B. PARK AMENITIES

1. BUILTRITE
www.aluminum-bleachers.com

2.2 PLAY EQUIPMENT DESIGN AND COMPONENTS

- A. **General:** All installations are in a corrosive marine environment, requiring the most corrosion resistant material or coating system option available from the manufacturer. In addition, the following items apply:
 1. Playground equipment shall meet CPSC standards and be IPEMA certified.
 2. All materials shall be structurally sound and suitable for safe play, access points to meet ADA standards (as per the Consumer Safety Commission Public Playground Handbook for Safety, etc.).
 3. At a minimum, play equipment shall be equipped with the features shown on the plans including themes, slides, decks, climbers, transfer station, catwalks, swings, and miscellaneous items.
 4. Play equipment shall provide for interaction among disabled and fully-able children.
 5. Play equipment shall be designed to discourage vandalism or other misuse of product and ease of maintenance.
- B. **Metal Hardware** shall be stainless steel as required to resist rust and corrosion. Tamper resistant hardware shall be used for all principle connections.
- C. **Hardware Caps** shall be a UV-Stabilized, polypropylene based plastic consisting of two parts, a base and crown. Specified hardware is attached through the base to post support and then finished with a crown to form a smooth tamper-resistant attachment point.
- D. **Chain** used for Swings, Chain Nets, Chain Walks and Suspension Bridges shall be 4/0 and/or 5/0 galvanized steel. Chains shall be thermoplastic coated.
- E. **High Density Polyethylene** - (HDPE) Sheet Stock Parts shall be made from 1/2", 3/4" or 1" thick, high-density, hot extruded polyethylene sheet plastic specially formulated for

optimum UV stability and color retention. Parts shall meet or exceed density of 0.955 g/cc per ASTM D1505 and tensile strength of 4000 PSI per ASTM D638. Panels shall be cut or machined to size with design elements routed in. All HDPE Sheet Stock Parts shall comply to ASTM standards: D790 (Flex Modulus Test) and D648 (Heat Distortion Temperature Test).

- F. **Metal Parts** shall be galvanized, PVC (100-mil) coated, painted and/or powder coated as required to resist rust and corrosion.
- G. **Tube Steel** used in most applications shall be heavy-gauge and pre-galvanized. Tube shall be formed and/or fabricated into required components and finished as specified. All Steel Tube parts shall comply with ASTM standards: A-500/A-513 (Steel Tubing).
- H. **Powder Coating** shall be electrostatically applied to metal components. Surfaces shall be free of excess weld and spatter. Components shall be shot blasted and then further cleaned in a multi-step process that includes a hot phosphatizing bath and rinse and finished with a non-chrome seal for added corrosion resistance. Additionally, components shall be preheated to fully dry prior to coating for superior powder adhesion. Finally, powder shall be applied to all pre-treated components in a two-coat process to achieve an average thickness of 11 mils. All polyester powder coatings shall comply with ASTM standards: D-522 (Flexibility Mandrel Test), D-2794 (Impact Resistance Test), B-117 (Salt Spray Weatherability Test), D-3363 (Pencil Hardness Test), D-2454 (Overbake Resistance Test), and D-3359B (Adhesion Crosshatching Test).
- I. **RotoMold** shall be made from hot compounded linear low-density polyethylene resins. All linear low-density polyethylene plastic shall have a minimum 2500 PSI tensile strength per ASTM D 638-02. Parts shall have an average wall thickness of 0.250". Parts shall be available in a variety of solid colors. All Roto Molded Parts shall comply with ASTM standards: D-790 (Flex Modulus Test), D-648 (Heat Distortion Temperature Test) and ARM-STD (Low Temperature Impact Test).
- J. **Steel Decks Steps** (platforms, bridges, ramps, steps, etc.) shall be constructed using a combination of minimum 12-gauge sheet steel which shall be formed and fabricated into required designs with deck sides and additional parts of deck being fabricated out of 10 or 12-gauge sheet steel. All steel deck standing surfaces and stepping surfaces shall have a slip-resistant PVC coating minimum of 100 mil average thickness, with a uniform 5/16" diameter hole pattern. Deck faces shall have attachment slots to accommodate face mounting components. All sheet steel shall conform to ASTM A 1011-02.
- K. **Steel Walls** shall be fabricated using minimum 1.029" O.D. 14-gauge tube steel welded vertically on 4" centers between vertical 1.315" O.D. 12-gauge tube steel balusters and horizontal 1.315" O.D. 12-gauge tube steel rails, top & bottom. Brackets may be welded to the ends of each rail and between the verticals to provide attachment points. Walls shall be finished with a multi-stage baked-on powder coat finish.
- L. Vertical Deck Fillers shall be designed to eliminate the crawl space between decks at different elevations. All deck infills shall be made from 12-gauge sheet steel and powder coated after fabrication.

- M. **Aluminum Posts** shall be constructed of round 6061-T651 aluminum tube. Each post shall be shot blasted and then further cleaned in a multi-step process that includes a hot phosphatizing bath and rinse and finished with a non-chrome seal for added corrosion resistance. Additionally, posts shall be pre-heated to fully dry prior to coating for superior powder adhesion. Finally, powder shall be applied to all pre-treated posts in a two-coat process to achieve an average thickness of 11 mils. All post bases shall include a footing pin for securing posts in cement. Some posts may include a multi-stage powder coated die-cast aluminum base cap. All posts shall include a minimum loose fill resilient surfacing sticker to be field installed as required. All polyester powder coatings shall comply with ASTM standards: D-522 (Flexibility Mandrel Test), D-2794 (Impact Resistance Test), B-117 (Salt Spray Weatherability Test), D-3363 (Pencil Hardness Test) and D-2454 (Overbake Resistance Test).
- N. **Steel Posts** shall be constructed of round steel tube and a galvanized Flo-Coat finish inside and out. Each post shall be shot blasted and then further cleaned in a multi-step process that includes a hot phosphatizing bath and rinse and finished with a non-chrome seal for added corrosion resistance. Additionally, posts shall be pre-heated to fully dry prior to coating for superior powder adhesion. Finally, powder shall be applied to all pre-treated posts in an exclusive two coat process to achieve an average thickness of 11 mils. All post bases shall include a footing pin for securing posts in cement. Some posts may include a multi-stage powder coated die-cast aluminum base cap. All posts shall include a minimum loose fill resilient surfacing sticker to be field installed as required. All polyester powder coatings shall comply with ASTM standards: D-522 (Flexibility Mandrel Test), D-2794 (Impact Resistance Test), B-117 (Salt Spray Weatherability Test), D-3363 (Pencil Hardness Test), D-2454 (Overbake Resistance Test) and D-3359B (Adhesion Crosshatching Test).
- O. **Attachment Fittings (Sockets and Collars)** shall be two-part and precision die-cast from high strength 369 aluminum alloy with an ultimate tensile strength of 47,000 PSI and a yield strength of 28,000 PSI. Sockets and Collars shall be powder coated as specified.

2.3 DESIGN BASIS

- A. General: The intent is not to preclude other manufacturers but to provide general design standards to establish a level of quality for the supplied products. Submittals will be compared to the products listed below for review. Provide products generally meeting standards established by the following components:
1. Bench: 8'. In-ground Mount, Thermoplastic Finish, Perforated Standard Edge, Black Powdercoat Frame. Color: Ultra Blue (UCSD Park); Green (Sitka Spruce Park), Builtrite 940S
 2. Picnic Table: 8' Long, Thermoplastic Table ((1) ADA Accessible Table at Each Park), Very Heavy Duty, Stainless Steel Hardware, Black Powdercoat Frame, Perforated Standard Edge. Color: Ultra Blue (UCSD Park); Green (Sitka Spruce Park), Builtrite 238HS-TABLE

2020 PARK AND PLAYGROUND IMPROVEMENTS

SITE WORK
Section 02880
PLAYGROUND EQUIPMENT

3. Bleachers: 3-Row, 15' Long, Aluminum with Color Seat Planks, Color Navy Blue, Builtrite BRB-0315AP
4. Trash Cans: 32-gallon, Perforated Style Thermoplastic, plastic liner, Color: Ultra Blue (UCSD Park); Green (Sitka Spruce Park), Builtrite EX32-RECPT
5. Grill: Rotating Pedestal Grill, 280 Sq. inch, Galvanized Inground. Builtrite 620.
6. Bike Rack: 10' Double Sided, Portable, Galvanized steel tubing construction, powdercoat blue finish; Builtrite 5900
7. Summit Rock: ID Sculpture Transition Boulder CB008, Playcraft FREPCCB008
8. Pirate Ship: Playcraft Pirate Quest Theme, Playcraft R5066589A
9. Enclosed Stand-N-Spin: Playcraft PC-1949
10. Tuned Drums: Playcraft FREPCFTDNPINIGAN
11. Hollow Log: Playcraft PREPCAP008
12. Snapping Turtle: Playcraft FREPCTC030
13. Alligator Balance Beam: Playcraft PC-2426
14. Rock Step: Playcraft 1961-R
15. Panels: Playcraft R50B17E9A
16. Triple Sand and Water Table: Playcraft FREPC1510
17. Age Appropriate Sign: Playcraft STAC1303
18. Pyramid Climber: Dynamo Worldwide Meteor Regular DX-802, Playcraft PREPC1013
19. Swing Set: Playcraft PC-2120 (5" OD) Arch Swing (8'H); PC-2120-AB Add-A-Bay Unit (8'H)
20. Boulder Stack: Playcraft PC-2272-90
21. Volleyball: Per Plans
22. Basketball Goal: Per Plans
23. Soccer Goals: 6.5'x18.5', 2"x4" rectangular aluminum tubing with rounded corners, durable aluminum castings, 2" round aluminum backstays, with net and ground anchors. Pevo CastLite Club 6.5'x18.5' from soccer.com or equal.

Where components are not specifically listed but shown on the drawings, they shall generally comply with the standards established for the other products.

PART 3 - EXECUTION

3.1 GENERAL

- A. All equipment shall be installed per manufacturer's recommendations and in accordance with applicable safety codes. Installation shall meet all accessibility and safety requirements.

3.2 PREPARATION

- A. Stake locations of all equipment and site furnishings in accordance with approved layout drawings. Obtain approval from Owner's representative prior to installation.

2020 PARK AND PLAYGROUND IMPROVEMENTS

SITE WORK
Section 02880
PLAYGROUND EQUIPMENT

- B. Inspect job conditions to assure that all areas to receive equipment units specified have been properly prepared and that all inserts, anchorages, blocking, and other items have been accurately placed.
- C. Make needed corrections prior to proceeding.

3.3 INSTALLATION OF PLAY EQUIPMENT

- A. Install play equipment per manufacturer's printed installation instructions. Units and components shall be installed rigid, plumb, and true to lines and levels within ¼" in 10-feet. Decks and accessories shall be installed level. All hardware shall be tight and secure. All play equipment and legs shall be of sufficient length to provide footings beneath the safety surfacing as shown on the contract drawings or as required by the designer.
- B. Any holes drilled into finished posts as part of the installation process shall be touched up with a coating of galvanized spray.
- C. Installer must turn over all installation instructions, parts lists, maintenance instructions, and installation tools and extra hardware to the owner upon completion.

3.4 CERTIFICATION

- A. Provide field safety inspection for all new installed playground equipment items from an individual who is a National Playground Safety Inspector, certified by the National Playground Safety Institute Inspection Certification Course. Contractor to submit name and resume of individual. Equipment manufacturer shall furnish the services of the inspector. The inspector shall furnish a written report certifying that the installed equipment complies with the requirements outlined above.
- B. Inspection and Report shall certify that the play equipment is properly installed and meets all code and safety requirements. Report shall confirm compliance with appropriate ASTM and CPSC requirements/recommendations for Manufacturer and Materials; Use Zones; Maintenance, Surfacing, Labeling, Signage; Access and Egress; Platforms, Landings and Walkways; Climbers; Slides; and other components.

END OF SECTION

PART 1 - GENERAL

1.1 SECTION INCLUDES: Accessible resilient safety surfacing.

1.2 RELATED SECTIONS

- A. Earthwork, Section 02200.
- B. Play Equipment, Section 02880

1.3 SUBMITTALS

- A. Provide color samples for selection where applicable.
- B. Provide specifications demonstrating conformance with these specifications.
- C. Provide sample and certification of accessible resilient surfacing as described in this specification.
- D. Provide shop drawings for assembly and installation.

1.4 DELIVERY AND STORAGE

- A. Unload materials with necessary equipment, store covered out of weather, and keep out of direct sun. Inspect materials within 48 hours of delivery, compare with manufacturer's bill of material, and report any missing or non-conforming parts to manufacturer within this time.

1.5 WARRANTY

- A. Playground safety surfacing tiles shall be warranted for defects in materials and workmanship for 10-Years from date of final acceptance.

1.6 REFERENCES

- A. C.S.T. – Center for Sports Technology, London.
- B. ASTM F1292-18: Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- C. ASTM F 1951-09 – Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
- D. ASTM D 3676 – Standard Specification for Rubber Cellular Cushion Used for Carpet or Rug Underlay.
- E. ASTM D 3389 – Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Double-Head Method).
- F. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers.

- G. ASTM E 303 – Standard Test Methods for Skid Resistance on Coated Tile
- H. DIN – Deutsche Industrie Norm (German Industrial Standards).
- I. American with Disabilities Act (ADA) as published by the Federal Register dated October 18, 2000 and amended November 20, 2000.
- J. Handbook for Public Playground Safety, U.S. Consumer Product Safety Commission, Pub. No. 325

1.7 CERTIFICATIONS

- A. Provide written certifications that the proposed products meet ASTM, ADA and the recommendations presented in the CPSC Handbook for Public Playground Safety. Product shall be IPEMA Certified. Provide test data demonstrating that the safety surfacing provides adequate protection for the critical height in accordance with ASTM F1292.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Geotextile Fabric: Required properties of fabric are as follows:

<u>Description</u>	<u>Properties</u>	<u>Test Method</u>
Type: Woven		
Grab Tensile Strength	200#	ASTM D-4632
Grab Elongation	15%	ASTM D-4632
Trapezoidal Tear	95#	ASTM D-4633
Mullen Burst Strength	450 p.s.i.	ASTM D-3786
Puncture Strength	100#	ASTM D-4833
Apparent Opening Size	40	ASTM D-4751

The values listed above are minimum average roll values.

- B. Safety Surfacing: ADA accessible resilient surfacing shall be pre-fabricated polyurethane resin-bound, 100% post consumer recycled rubber tiles. Tiles shall be certified as meeting ASTM 1292 Standards for Impact.
 1. Thickness/Drop Height: Coordinate with specified and supplied play equipment. Per Playground Equipment Design Requirements, Minimum 3-1/4" (Minimum Certified for critical height of 8' per ATM F1292). Tiles may be thicker but not thinner or fabricated for less than 8' fall height.
 2. Square Tile Dimensions: 24x24-inches, dual density construction with drainage channels.
 3. Top Edges: Chamfered.

4. Colors: EPDM top layer with colors selected from manufacturer's standards. Assume a minimum of two colors per play area, with design/pattern determined by Owner during submittal process.
5. Thermal Resistance: R=2.32 (ASTM C-518-76).
6. Thermal Conductivity: K=0.75 (ASTM D-257).
7. Compression Endurance: No deterioration at 10,000 cycles with 10-ton load.
8. Abrasion Endurance: 0.3812 gloss (ASTM D-1044).
9. Flexibility Factor: 0-1 (ASTM F-147).
10. Flame Spread/Smoke Density: Federal Spec. LLL-T-43, Type II, Class I pass.
11. Water Permeability: 1.7 liters per second per square meter (DIN 18035, Part G).
12. Coefficient Friction: 1.10 dry; 1.10 wet. (ASTM D-2047-82).
13. Thermal Stability: -40 to 90 degrees Celsius
14. Accelerated Weathering: No change (2,500 hours).
15. Tear Strength: 64 psi (ASTM D-624).
16. Slip Resistance: 65-60 units (approved by C.S.T. London, 90609/1).
17. Durability: Wear Index (g/1000 revolutions) (Approved by C.S.T. London)
 - 1.64 un-aged
 - 2.40 air-aged
 - 1.61 water-aged
 - 1.92 UV-aged
18. Acceptable Manufacturers:
 - a. CSSI Resilient Surfacing Products
 - b. Kompan
 - c. Surface America, Inc.
 - d. GT Impax Interlocking Rubber Safety Tile System
 - e. Rubber Designs, LLC.

- C. Adhesive Specifications: Per the manufacturer's specifications, the adhesive shall be designed for the application.

PART 3 - EXECUTION

3.1 GENERAL

- A. Playground perimeter curb shall be placed as detailed in the plan sheets.
- B. Installations shall comply with recommendations of manufacturer.

3.2 PREPARATION

- A. Play equipment footings shall be approved by the Owner's representative prior to installation of the cushioned tile surfacing.

- B. Assure perimeter curb is installed and leveling course is properly backfilled.
- C. Ensure footings are installed with proper bury depths as detailed and backfilled to subgrade elevations.
- D. Inspect site conditions to ensure that the enclosed play area leveling-course is suitably compacted and the surface grades meet the required tolerances (1/4" in 10-feet).
- E. Complete all preparations and make needed corrections prior to proceeding.
- F. Protect play equipment from use until surfacing has been completed.
- G. Obtain inspection and approval from Owner's representative prior to proceeding.

3.3 INSTALLATION

- A. Install geotextile fabric over compacted leveling course. Lap fabric joints a minimum of 12-inches. Lap fabric to drain in direction of prevailing grades. Tape fabric joints with standard 2" duct tape.
- B. Install adhesive at a rate recommended for the application. Surfaces shall be dry and temperature shall be above 40° F.
- C. Install rubber resilient safety tiles in accordance with the manufacturer's specifications. Tiles shall be cut and aligned as required and laid on the substrate. Tiles shall be drilled for cutouts around posts. Remove any adhesive residue immediately as recommended. Tiles shall be trimmed as necessary to adapt to existing and new FunTimber perimeter.
- D. Fill all cutouts around play structure supports and other penetrations with sealer as recommended by the manufacturer. Sealer shall penetrate a minimum of 1/2" into opening and extend above the tile line by 1/8" and struck off in a uniform fashion.

3.4 CERTIFICATION

- A. Provide inspection and report by Certified Playground Inspector certifying that the tiles are properly installed, meet all code and safety requirements, and are the correct thickness for the installed play equipment. Review and confirm compliance with use zone for each structure (ASTM F1292); Critical Height appropriate for the fall height of each structure (ASTM F1951); Accessibility per DOJ 2010 Standard (Section 1008.2.6); free form extraneous materials (ASTM 13.2.2, CPSC 4); Well Drained (ASTM 13.2.2; CPSC 2.4.2.2); written document availability of laboratory compliance testing (ASTM F1292, F1951, F2075); and written documentation of post installation compliance to the appropriate ASTM Standards (ASTM 13.3).

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SECTION REQUIREMENTS

- A. Submit concrete mix designs, field and laboratory test reports in accordance with Division 1 of these specifications.
- B. Engage a qualified independent testing agency to design concrete mixes.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Deformed Reinforcing Bars: ASTM A 615, Grade 60 (ASTM A 615M, Grade 420).
- B. Welded Steel Wire Fabric: ASTM A 185, flat sheets, not rolls.
- C. Portland Cement: ASTM C 150, Type 1.
- D. Fly Ash: ASTM C 618, Type F.
- E. Aggregates: ASTM C 33, Class 4S.
- F. Fiber Reinforcement: ASTM C 1116, Type III, engineered polypropylene fibers.
- G. Air-Entraining Admixture: ASTM C 260.
- H. Chemical Admixtures: ASTM C 494, water reducing and high-range water reducing.
- I. Water Stops: Flat dumbbell or center-bulb type, of either rubber (CRD C 513) or PVC (CRD C 572)
- J. Liquid Membrane-Forming Curing Compound: ASTM C 309, clear, Type I, Class B, waterborne.

2.2 MIXES

- A. Proportion normal-weight concrete mixes to provide the following properties:
 - 1. Compressive Strength: 4000 psi (24.2 MPa) at 28 days.
 - 2. Slump Limit: 4 inches (100 mm) at point of placement.
 - 3. Water-Cement Ratio: 0.54 maximum at point of placement.
 - 4. Air Content: 5.5 to 7.0 percent for concrete exposed to freezing and thawing

PART 3 - EXECUTION

3.1 CONCRETING

- A. Construct formwork and maintain tolerances and surface irregularities within ACI 117 limits of Class A for concrete exposed to view and Class C for other concrete surfaces.
- B. Accurately position, support, and secure reinforcement. Maintain minimum clearances as required by code.
- C. Install construction, isolation, and control joints. Construct key-ways at construction joints.
- D. Place concrete in a continuous operation and consolidate using mechanical vibrating equipment.
- E. Protect concrete from physical damage or reduced strength due to weather extremes during mixing, placing, and curing.
- F. Slab and Sidewalk Finishes: Nonslip broom finish to exterior concrete slabs.
- G. Cure formed surfaces by moist curing or spray membrane curing compound until forms are removed.
- H. Chamfer exposed edges with 1" chamfer.
- I. Sawcut or tool control joints, 1/8" wide by 1" deep where indicated. Caulk sawcut joints.
- J. Begin curing concrete after finishing. Apply membrane-forming curing compound to concrete.
- K. Protect concrete from damage. Repair surface defects in concrete.

END OF SECTION 03300

PRECAST CONCRETE SEPARATOR WALL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

- 1. Architectural Precast Privacy/Separator Wall System
- 2. Wall System Design

1.3 DESIGN

- A. Design: Provide design of wall system above top of driven steel piles. Include connections at pile caps, anchor bolts, post base, posts and wall panels for a complete system.
 - 1. Provide comprehensive engineering analysis signed and sealed certified by the qualified professional engineer licensed responsible for its preparation. The design professional shall be licensed within the state of Alaska. The calculations shall indicate review of governing panel types, connections, types of reinforcement (including special reinforcement), posts, fasteners, shop and field welds and other components. Indicate location, type, magnitude, and direction of loads imposed on the structural frame from architectural precast concrete.
- B. Structural Performance: Provide architectural precast concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated:
 - 1. Loads: 160 mph Basic Wind Speed, Exposure D.
 - 2. Thermal Movements: Provide for in-plane thermal movements resulting from annual ambient temperature changes of 100 deg. F.
 - 3. Seismic Design: Design in accordance with ASCE 7-05 and IBC code requirements.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product Literature: Face Patterns, colors, etc. for selection by Owner during the submittal process. Range of Color and Pattern to be selected by Owner from manufacturer's standards.
- C. Design Mixtures: For each precast concrete mixture. Include compressive strength and water-absorption tests.
 - 1. 658 lbs Type III grey cement, 1358 lbs Valley Grey #2 aggregate from White Stone Calcium, 1558 lbs Valley Grey #00 from White Stone Calcium, admixtures (Glenium, air, VMA), and water.
- D. Shop Drawings: Detail fabrication and installation of architectural precast concrete units. Indicate locations, plans, elevations, dimensions, shapes, lifting points, and cross sections of components. Indicate joints, reveals, and extent and location of each surface finish.

PRECAST CONCRETE SEPARATOR WALL

1. Indicate welded connections by AWS standard symbols. Detail hardware and connections.
2. Indicate locations, tolerances, and details of anchorage devices.
3. Indicate locations, extent, and treatment of dry joints if two-stage casting is proposed.
4. Include plans and elevations showing unit location and sequence of erection for special conditions.
5. Indicate relationship of architectural precast concrete units to adjacent materials.
6. Indicate locations and details of stone facings, anchors, and joint widths.
7. Design Modifications: If design modifications are proposed to meet performance requirements and field conditions, submit design calculations and Shop Drawings. Do not adversely affect the appearance, durability, or strength of units when modifying details or materials and maintain the general design concept.

1.5 QUALITY ASSURANCE

A. Fabricator qualifications: The bidding firm shall participate in the Architectural Precast Association (APA) "Plant Certification Program of Architectural Precast Concrete Products" and is designated as an APA-Certified Plant. The bidding firm responsibility includes preparing of shop drawings and comprehensive engineering analysis by a qualified professional engineer. They shall demonstrate a minimum of 5-years experience in producing units similar to those required for this project.

1. Acceptable Manufacturers:

a. Northwest Precast
Corporate Office:
2323 West Overland Road
Boise, ID 83705
(800) 771-4862
(208) 472-0042
(208) 331-8301 Fax

Manufacturing:
212 10th Street SE
Puyallup, WA 98372
(253) 770-9119
(253) 770-3826 Fax

b. Or equal.

- B. Fabricator Qualifications: A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.
- C. Testing Agency Qualifications: An independent testing agency acceptable to authorities having jurisdiction, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
- D. Quality-Control Standard: For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with

PRECAST CONCRETE SEPARATOR WALL

PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."

- E. Welding: Qualify procedures and personnel according to AWS D1.1/D.1.1M, "Structural Welding Code - Steel"; and AWS D1.4, "Structural Welding Code - Reinforcing Steel."
- F. Pre-installation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver architectural precast concrete units in such quantities and at such times to limit unloading units temporarily on the ground.
- B. Support units during shipment on non-staining shock-absorbing material.
- C. Store units with adequate dunnage and bracing and protect units to prevent contact with soil, to prevent staining, and to prevent cracking, distortion, warping or other physical damage.
- D. Place stored units so identification marks are clearly visible, and units can be inspected.
- E. Handle and transport units in a position consistent with their shape and design in order to avoid excessive stresses which would cause cracking or damage.
- F. Lift and support units only at designated points shown on Shop Drawings.

1.7 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 301 - Specifications for Structural Concrete.
 - 2. ACI 318 - Building Code Requirements for Structural Concrete.
- B. ASTM International:
 - 1. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
 - 2. A185/A185M-07 Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.
 - 3. ASTM A615/A615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 - 4. ASTM A666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
 - 5. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 - 6. ASTM C33 - Standard Specification for Concrete Aggregates.
 - 7. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic Cement Concrete.
 - 8. ASTM C150 - Standard Specification for Portland Cement.
 - 9. ASTM A820 – Standard Specification for Steel Fibers for Fiber-Reinforce Concrete
 - 10. ASTM C1609 – Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam with Third-Point Loading)
- C. National Precast Concrete Association:

PRECAST CONCRETE SEPARATOR WALL

1. NPCA Quality Control Manual, 6th ed.
- D. ASCE
 1. ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
- E. INTERNATIONAL BUILDING CODE (IBC), Adopted Edition.

PART 2 - PRODUCTS

2.1 MOLD MATERIALS

- A. Molds: Rigid, dimensionally stable, non-absorptive material, warp and buckle free, that will provide continuous and true precast concrete surfaces within fabrication tolerances indicated; nonreactive with concrete and suitable for producing required finishes.
 1. Mold-Release Agent: Commercially produced liquid-release agent that will not bond with, stain or adversely affect precast concrete surfaces and will not impair subsequent surface or joint treatments of precast concrete.
- B. Form Liners: Units of face design, texture, arrangement, and configuration to match design selection. Furnish with manufacturer's recommended liquid-release agent that will not bond with, stain, or adversely affect precast concrete surfaces and will not impair subsequent surface or joint treatments of precast concrete.

2.2 REINFORCING MATERIALS

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- B. Low-Alloy-Steel Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- C. Steel Bar Mats: ASTM A 184/A 184M, fabricated from ASTM A 615/A 615M, Grade 60,, deformed bars, assembled with clips.
- D. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- E. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.
- F. Supports: Suspend reinforcement from back of mold or use bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place according to PCI MNL 117.

2.3 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type I or Type III, gray or white based on Engineer's selection. Use only one brand type and color from same mill.
- B. Supplementary Cementitious Materials:
 1. Fly Ash: ASTM C 618, Class C or F, with maximum loss on ignition of 3 percent.
 2. Metakaolin Admixture: ASTM C 618, Class N.
 3. Silica Fume Admixture: ASTM C 1240, with optional chemical and physical requirement.

PRECAST CONCRETE SEPARATOR WALL

4. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
- C. Normal-Weight Aggregates: Except as modified by PCI MNL 117, ASTM C 33, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project to match design reference sample mix design.
 1. Face-Mixture-Coarse Aggregates: Selected, hard, and durable; free of material that reacts with cement or causes staining; to match design mix of the design reference.
 - a. Gradation: To match design reference sample.
 2. Face-Mixture-Fine Aggregates: Selected, natural or manufactured sand of same material as coarse aggregate, to match design reference sample, unless otherwise approved by the Engineer.
- D. Coloring Admixture: ASTM C 979, synthetic or natural mineral-oxide pigments or colored water-reducing admixtures, temperature stable, and non-fading. Color to be selected by Owner.
- E. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117.
- F. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
- G. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride or more than 0.15 percent chloride ions or other salts by weight of admixture.
 1. Water-Reducing Admixtures: ASTM C 494/C 494M, Type A.
 2. Retarding Admixture: ASTM C 494/C 494M, Type B.
 3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 4. Water-Reducing and Accelerating Admixture: ASTM C 494/C 494M, Type E.
 5. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
 6. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
 7. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017 M.

2.4 STEEL CONNECTION MATERIALS

- A. As indicated on drawings.
- B. Carbon-Steel Shapes and Plates: ASTM A 36/A 36M.
- C. Carbon-Steel-Headed Studs: ASTM A 108, AISI 1018 through AISI 1020, cold finished, AWS D1.1/D1.1M, Type A or B, with arc shields and with minimum mechanical properties of PCI MNL 117, Table 3.2.3.
- D. Carbon-Steel Plate: ASTM A 283/A 283M.
- E. Malleable Iron Castings: ASTM A 47/A 47M.
- F. Carbon-Steel Castings: ASTM A 27/A 27M, Grade 60-30.
- G. High-Strength, Low-Alloy Structural Steel: ASTM A 572/A 572M.
- H. Carbon-Steel Structural Tubing: ASTM A 500, Grade B.

PRECAST CONCRETE SEPARATOR WALL

- I. Wrought Carbon-Steel Bars: ASTM A 675/A 675M, Grade 65.
- J. Deformed-Steel Wire or Bar Anchors: ASTM A 496 or ASTM A 706/A 706M.
- K. Carbon-Steel Bolts and Studs: ASTM A 307, Grade; carbon-steel, hex-head bolts and studs; carbon-steel nuts, ASTM A 563; and flat, unhardened steel washers, ASTM F 844.
- L. High-Strength Bolts and Nuts: ASTM A 325, Type 1, heavy hex steel structural bolts; heavy hex carbon-steel nuts, ASTM A 563; and hardened carbon-steel washers, ASTM F 436.
- M. Welding Electrodes: Comply with AWS standards.

2.5 HOT-DIP GALVANIZED COATED MATERIALS

- A. Exposed steel shall be hot-dip galvanized.
- B. Zinc-Coated Finish: All items indicated for galvanizing, apply zinc coating by hot-dip process according to ASTM A 123/A 123M.
 - 1. For steel shapes, plates, and tubing to be galvanized, limit silicon content of steel to less than 0.03 percent or to between 0.15 and 0.25 percent or limit sum of silicon and 2.5 times phosphorous content to 0.09 percent.
 - 2. Galvanizing Repair: Galvanized coatings damaged due to fabrication, welding, material handling or occurring during installation shall be repaired by using the following hot applied repair stick method. Repair sticks shall be zinc-cadmium alloys (melting point 518° - 527°F) such as “Rev-Galv”, or zinc-tin-lead alloys (melting point 446° - 600°F) such as “Galv- Weld”, “Zilt”, and “Galv-over”. The zinc-tin -lead alloys shall comply with U.S. Federal Specification O-G-93 and contain fluxing agents. Remove welding slag by chipping hammer and clean weld or damaged area by vigorous wire brushing. Preheat the region to be repaired by means of an oxyacetylene torch or other convenient method to between 600°F and 750°F. Wire brush surface again. Apply coating by rubbing bar of the alloy over the heated surface while it is hot enough to melt the alloy. Spread the molten alloy by briskly wire brushing or rubbing with a flat edge strip of steel or palette knife. Minimum thickness of applied zinc stick material shall be 12 mils. Remove flux residues by wiping with a damp cloth or rinsing with water. Brush apply two top coats of zinc rich paint, ZRC or equal (cold galvanize repair).

2.6 BEARING PADS

- A. Provide bearing pads for architectural precast concrete units as recommended by precast fabricator for application.

2.7 ACCESSORIES

- A. Precast Accessories: Provide clips, hangers, plastic or steel shims, and other accessories required to install architectural precast concrete units.

2.8 GROUT MATERIALS

- A. Nonmetallic, Non-shrink Grout: 10,000 ib. 28-day compressive strength, premixed, nonmetallic, noncorrosive, non-staining grout containing selected silica sands, Portland

PRECAST CONCRETE SEPARATOR WALL

cement, shrinkage-compensating agents, plasticizing and water-reducing agents, complying with ASTM C 1107, Grade A for dry pack and Grades B and C for flowable grout and of consistency suitable for application within a 30-minute working time.

2.9 CONCRETE MIXTURES

- A. Prepare design mixtures for each type of precast concrete required.
 - 1. Limit use of fly ash and silica fume to 20 percent of Portland cement by weight; limit metakaolin and silica fume to 10 percent of Portland cement by weight.
- B. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at architectural precast concrete fabricator's option.
- C. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 318 or PCI MNL 117 when tested according to ASTM C 1218/C 1218M.
- D. Normal-Weight Concrete Mixtures: Proportion full-depth mixtures, at fabricator's option by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:
 - 1. Compressive Strength (28 Days): 5000 psi minimum.
 - 2. Maximum Water-Cementitious Materials Ratio: 0.45.
- E. Water Absorption: 6 percent by weight or 14 percent by volume, tested according to PCI MNL 117.
 - 1. Compressive Strength (28 Days): 5000 psi.
 - 2. Unit Weight: Calculated equilibrium unit weight of 115 lb/cu. ft., plus or minus 3 lb/cu. ft., according to ASTM C 567.
- F. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an entrained air content of 5-7%.
- G. When included in design mixtures, add other admixtures to concrete mixtures according to manufacturer's written instructions.

2.10 MOLD FABRICATION

- A. Molds: Accurately construct molds, mortar tight, of sufficient strength to withstand pressures due to concrete-placement operations and temperature changes. Coat contact surfaces of molds with release agent before reinforcement is placed. Avoid contamination of reinforcement s by release agent.
 - 1. Place form liners accurately to provide finished surface texture indicated. Provide solid backing and supports to maintain stability of liners during concrete placement. Coat form liner with form-release agent.
- B. Maintain molds to provide completed architectural precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances specified.
 - 1. Form joints are not permitted on faces exposed to view in the finished work.
 - 2. Edge and Corner Treatment: Uniformly chamfered and/or radiused.

PRECAST CONCRETE SEPARATOR WALL

2.11 FABRICATION

- A. Cast-in Anchors, Inserts, Plates, Angles, and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.
 - 1. Weld-headed studs and deformed bar anchors used for anchorage according to AWS D1.1/D1.1M and AWS C5.4, "Recommended Practices for Stud Welding."
- B. Furnish loose hardware items including steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers, and other hardware shapes for securing architectural precast concrete units to supporting and adjacent construction.
- C. Cast-in reglets, slots, holes, and other accessories in architectural precast concrete units as indicated on the Contract Drawings.
- D. Cast-in openings in any dimension. Do not drill or cut openings without Engineer's approval.
- E. Reinforcement: Comply with recommendations in PCI MNL 117 for fabricating, placing, and supporting reinforcement.
 - 1. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete. When damage to epoxy-coated reinforcing exceeds limits specified in ASTM A 775/A 775M, repair with patching material compatible with coating material and epoxy coat bar ends after cutting.
 - 2. Accurately position, support, and secure reinforcement against displacement during concrete-placement and consolidation operations. Completely conceal support devices to prevent exposure on finished surfaces.
 - 3. Place reinforcement to maintain at least 1-1/2-inch -minimum coverage. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.
 - 4. Place reinforcing steel to maintain at least 1-1/2-inch -minimum concrete cover. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.
 - 5. Install welded wire fabric in lengths as long as practicable. Lap adjoining pieces at least one full mesh spacing and wire tie laps, where required by design. Offset laps of adjoining widths to prevent continuous laps in either direction.
- F. Reinforce architectural precast concrete units to resist handling, transportation, and erection stresses.
- G. Comply with requirements in PCI MNL 117 and requirements in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.
- H. Place face mixture to a minimum thickness after consolidation of the greater of 1 inch or 1.5 times the maximum aggregate size, but not less than the minimum reinforcing cover specified.
- I. Place concrete in a continuous operation to prevent seams or planes of weakness from forming in precast concrete units.

PRECAST CONCRETE SEPARATOR WALL

1. Place backup concrete mixture to ensure bond with face-mixture concrete.
- J. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines, honeycombing, or entrapped air on surfaces. Use equipment and procedures complying with PCI MNL 117.
 1. Place self-consolidating concrete without vibration according to PCI TR-6, "Interim Guidelines for the Use of Self-Consolidating Concrete in Precast/Prestressed Concrete Institute Member Plants."
- K. Comply with PCI MNL 117 for hot- and cold-weather concrete placement.
- L. Identify pickup points of architectural precast concrete units and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings.
- M. Cure concrete, according to requirements in PCI MNL 117, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.
- N. Discard and replace architectural precast concrete units that do not comply with requirements, including structural, manufacturing tolerance, and appearance, unless repairs meet requirements in PCI MNL 117 and Engineer's approval.

2.12 FABRICATION TOLERANCES

1. Conform to NPCA Precast Concrete Sound Wall Systems Best Practices Manual, except nothing shall exceed 1/2" from required dimensions.

2.13 FINISHES

- A. Panel faces shall be free of joint marks, grain, and other obvious defects. Corners, including false joints shall be uniform, straight, and sharp. Finish exposed-face surfaces of architectural precast concrete units to match approved design reference sample and as follows:
 1. Design Reference Sample provided by Northwest Precast or as approved by Engineer
 2. As-Cast Surface Finish: Provide surfaces free of pockets, sand streaks, and honeycombs.
 3. Textured-Surface Finish: Impart by form liners or inserts to provide surfaces free of pockets, streaks, and honeycombs, with uniform color and texture.
 4. Bush-hammer Finish: Use power or hand tools to remove matrix and fracture coarse aggregates.
 5. Exposed-Aggregate Finish: Use chemical retarding agents applied to concrete forms and washing and brushing procedures to expose aggregate and surrounding matrix surfaces after form removal.
 6. Abrasive-Blast Finish: Use abrasive grit, equipment, application techniques, and cleaning procedures to expose aggregate and surrounding matrix surfaces.
 7. Acid-Etched Finish: Use acid and hot-water solution, equipment, application techniques, and cleaning procedures to expose aggregate and surrounding matrix surfaces. Protect hardware, connections, and insulation from acid attach.

PRECAST CONCRETE SEPARATOR WALL

8. Honed Finish: Use continuous mechanical abrasion with fine grit, followed by filling and rubbing procedures.
 9. Polished Finish: Use continuous mechanical abrasion with fine grit, followed by filling and rubbing procedures.
 10. Sand-Embedment Finish: Use selected stones placed in a sand bed in bottom of mold, with sand removed after curing.
- B. Finish exposed surfaces of architectural precast concrete units to match face-surface finish.
 - C. Finish exposed surfaces of architectural precast concrete units by smooth, steel-trowel finish.
 - D. Finish unexposed surfaces of architectural precast concrete units by float finish.

2.14 FACTORY APPLIED SEALERS AND COATINGS

- A. Concrete Coatings, water repellants. High performance factory applied coatings as follows:
 1. Low VOC type; colorless, pure silane water repellent penetrating sealers.
 - a. Hydrozo 100 High performance sealer
 2. Sealer to maintain natural look of concrete surface with no glaze or gloss, darkening of color change.

2.15 SOURCE QUALITY CONTROL

- A. Quality-Control Testing: Test and inspect precast concrete according to PCI MNL 117 requirements. If using self-consolidating concrete, also test and inspect according to PCI TR-6, "Interim Guidelines for the Use of Self-Consolidating Concrete in Precast/Prestressed Concrete Institute Member Plants."
- B. Strength of precast concrete units will be considered deficient if units fail to comply with ACI 318 requirements for concrete strength.
- C. Testing: If there is evidence that strength of precast concrete units may be deficient or may not comply with ACI 318 requirements, precaster will employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C 42/C 42M.
 1. A minimum of three representative cores will be taken from units of suspect strength, from locations directed by Engineer.
 2. Cores will be tested in an air-dry condition.
 3. Strength of concrete for each series of 3 cores will be considered satisfactory if average compressive strength is equal to at least 85 percent of 28-day design compressive strength and no single core is less than 75 percent of 28-day design compressive strength.
 4. Test results will be made in writing on same day that tests are performed, with copies to Engineer, Contractor, and precast concrete fabricator. Test reports will include the following:
 - a. Project identification name and number.
 - b. Date when tests were performed.

PRECAST CONCRETE SEPARATOR WALL

- c. Name of precast concrete fabricator.
 - d. Name of concrete testing agency.
 - e. Identification letter, name, and type of precast concrete unit(s) represented by core tests; design compressive strength; type of break; compressive strength at breaks, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.
- D. Patching: If core test results are satisfactory and precast concrete units comply with requirements, clean and dampen core holes and solidly fill with precast concrete mixture that has no coarse aggregate, and finish to match adjacent precast concrete surfaces.

PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Examine supporting structural frame or foundation and conditions for compliance with requirements for installation tolerances, true and level bearing surfaces, and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Reference submitted and approved design details. Requirements below may vary.
- B. Trim steel pipe piles, align pile caps horizontally and vertically using string line to align anchor bolts for post placement. Weld steel pile cap to pile. Install double nut on anchor bolts to assure plumb and level installation of posts and bases.
- C. Install posts to line and grade with non-shrink grout placed between post base and pile cap. Torque posts bolts using Turn-of-the Nut Method of tightening.
- D. Erect architectural precast concrete panels level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment as units are being permanently connected.
 - 1. Install temporary steel or plastic spacing shims or bearing pads as precast concrete units are being erected. Tack weld steel shims to each other to prevent shims from separating.
 - 2. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses.
 - 3. Remove projecting lifting devices and grout fill voids within recessed lifting devices flush with surface of adjacent precast surfaces when recess is exposed.
- E. Connect architectural precast concrete units in position as indicated on Shop Drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.
- F. Welding: Comply with applicable AWS D1.1/D1.1M and AWS D1.4 for welding, welding electrodes, appearance, quality of welds, and methods used in correcting welding work.

PRECAST CONCRETE SEPARATOR WALL

1. Protect architectural precast concrete units and bearing pads from damage by field welding or cutting operations, and provide noncombustible shields as required.
 2. Welds not specified shall be continuous fillet welds, using no less than the minimum fillet as specified by AWS.
 3. Clean weld-affected metal surfaces with chipping hammer followed by brushing specified galvanizing repairs.
 4. Remove, reweld, or repair incomplete and defective welds.
- G. At bolted connections, use lock washers, tack welding, or other approved means to prevent loosening of nuts after final adjustment.
- H. Grouting Connections: Grout connections where required or indicated. Retain grout in place until hard enough to support itself. Pack spaces with stiff grout material, tamping until voids are completely filled. Place grout to finish smooth, level, and plumb with adjacent concrete surfaces. Keep grouted joints damp for not less than 24 hours after initial set. Promptly remove grout material from exposed surfaces before it affects finishes or hardens.

3.3 ERECTION TOLERANCES

- A. Erect architectural precast concrete units level, plumb, square, true, and in alignment without exceeding the noncumulative erection tolerances of PCI MNL 117, Appendix I.
- B. Erect architectural precast concrete units level, plumb, square, and true, without exceeding the following noncumulative erection tolerances:
1. Plan Location from Centerline of Steel: Plus or minus 1/2-inch.
 2. Top Elevation from Nominal Top Elevation: As follows:
 - a. Exposed Individual Panel: Plus or minus 1/2-inch.
 3. Support Elevation from Nominal Support Elevation: As follows:
 - a. Maximum Low: 1/2-inch.
 - b. Maximum High: 1/4-inch.
 4. Plumb in Any 10 Feet of Element Height: 1/4-inch.

3.4 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform the following special inspections and prepare reports:
1. Erection of precast concrete members.
- B. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- C. Field welds will be subject to visual inspections and nondestructive testing according to ASTM E 165 or ASTM E 709. High-strength bolted connections will be subject to inspections.

3.5 REPAIRS

- A. Repair architectural precast concrete units if permitted by Engineer. The Engineer reserves the right to reject repaired units that do not comply with requirements.
- B. Mix patching materials and repair units so cured patches blend with color, texture, and uniformity of adjacent exposed surfaces and show no apparent line of demarcation between

PRECAST CONCRETE SEPARATOR WALL

original and repaired work, when viewed in typical daylight illumination from a distance of 20 feet.

- C. Wire brush, clean, and paint damaged prime-painted components with same type of shop primer.
- D. Remove and replace damaged architectural precast concrete units when repairs do not comply with requirements.

3.6 CLEANING

- A. Clean surfaces of precast concrete units exposed to view.
- B. Clean mortar, plaster, fireproofing, weld slag, and other deleterious material from concrete surfaces and adjacent materials immediately.
- C. Clean exposed surfaces of precast concrete units after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.
 - 1. Perform cleaning procedures, if necessary, according to precast concrete fabricator's recommendations. Clean soiled precast concrete surfaces with detergent and water, using stiff fiber brushes and sponges, and rinse with clean water. Protect other work from staining or damage due to cleaning operations.
 - 2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.

END OF SECTION 03310