

BID DOCUMENTS COVER SHEET

CONTRACT DOCUMENTS

FOR

**D-642 SOFTBALL BLEACHERS
Increment 2 (Bleachers)**

AT

DIABLO VALLEY COLLEGE

321 Golf Club Road, Pleasant Hill, California CA 94523

CONTRA COSTA COMMUNITY COLLEGE DISTRICT

Consist of the following:

**DSA File #7-C1
DSA Application #01-115195**

Architect:
KYA Architecture
720 York Street, Suite 104
San Francisco, CA 94110

November 19, 2015

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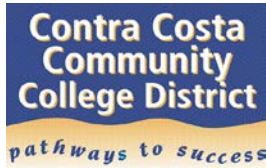
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Section 00100
NOTICE INVITING BIDS

D-642 SOFTBALL BLEACHER - INCREMENT 2 (Bleachers)

DIABLO VALLEY COLLEGE

321 Golf Club Road, Pleasant Hill, California CA 94523

NOTICE IS HEREBY GIVEN that the Governing Board of the Contra Costa Community College District (District), Martinez, California, will receive sealed bid proposals for the furnishing of all labor, materials, equipment, transportation and services for the construction of the project entitled **D-642 SOFTBALL BLEACHERS – INCREMENT 2 (Bleachers)**.

Construction Cost Estimate (Range): **\$175,000.00 to \$225,000.00**

California License Required: **A-General Engineering, or B-General Building Contractor**

In general, the Work includes, but is not limited to: all labor, material, equipment and services to design, obtain DSA approval, fabricate and install the softball bleachers with footing foundation.

Project Documents including but not limited to plans, specifications, addenda, bidders lists, bid results, etc. can be viewed online at the Contra Costa Builders Exchange at:

<http://onlineplanservice.com/PublicWorks/ProjectList.aspx?Agency=49>

The viewing software is free and can be downloaded from the website. If you are interested in receiving project notifications automatically, please register by clicking on the “Register” button on the Project Details page. Plan page copy service is available and can be ordered online through the Contra Costa Builders Exchange. Please feel free to contact the Contra Costa Builders Exchange at: 2440 Stanwell Drive, Suite “B”, Concord, California 94520, Tel: (925) 685-8630.

Hard copies of plans and specifications shall be available for purchase at ARC located at 5753 Pacheco Blvd., Pacheco, California, Phone: (925) 682-6930. To purchase plans at ARC’s Public Planroom website use the link: https://order.e-arc.com/arcEOC/PWELL_Main.asp?mem=23. Go to the Public Planroom for access to the documents without a login required. Payment for hardcopies shall be the responsibility of the bidder, and shall be made directly to ARC. The District does not provide hardcopies of bid documents or reimburse cost of printing, delivery, or any expenses related to the bidding process.

For information directly from the District, you may also log in to the District Website: <http://www.4cd.edu/webapps/PurchasingViewBids/default.aspx>. Project documents available include but are not limited to plans, specifications, addenda, bidders lists, bid results, etc., and can be viewed on this District webpage.

All questions related to this project must be in writing and are directed to:

Jovan Esprit, Contracts Manager
Contra Costa Community College District
500 Court St., Martinez, CA 94553
Email: jesprit@4cd.edu
Facsimile: 925-370-7512;

Each bid shall be made on the Bid Form, which is included in the Bid Documents and when submitted, shall be accompanied by a Bid Bond or Certified Cashier’s Check in the amount of 10% of bid (made payable to the

Contra Costa Community College District). The District reserves the right to forfeit Bid Bond submitted for failure of the successful bidder to secure Payment & Performance Bonds.

Important Information:

Pre-Bid Meeting and Job Walk, Date / Time: December 1, 2015, at 10:00AM — NON-MANDATORY
Pre-Bid Meeting and Job Walk , Location: DVC Job Trainer
 DIABLO VALLEY COLLEGE
 321 Golf Club Road
 Pleasant Hill, CA 94523

Last Date / Time for Bidder’s Requests for Information: December 10, 2015 prior to 5:00PM
Last Day to Issue Addendum: December 17, 2015
Bids Due No Later Than, Date / Time: January 7, 2016, prior to 2:00 PM
Bids Must Be Received at: Contra Costa Community College District (Lobby)
 500 Court St.
 Martinez, CA 94553
Attn: Jovan Esprit – Contracts Manager (CCCCD)

Bids must be received by the District prior to the time and by the date noted above. Bids that are not received by the District prior to the time and by the date noted above will not be accepted, and will be returned to the Bidder unopened.

The successful bidder will be required to furnish a labor and material bond in an amount equal to one hundred percent (100%) of the contract price and a faithful performance bond in an amount equal to one hundred percent (100%) of the contract price, said bonds to be secured from a surety company acceptable to the Contra Costa Community College District and authorized to execute such surety in the State of California.

This project is a public works project and is subject to prevailing wage rate laws. A copy of the prevailing rates of wages is on file with the Contracts & Purchasing Office of the Contra Costa Community College District. Said rates of wages shall be included in the contract for the work by this reference.

Attention is directed to Section 4100 through 4113 of the Public Contract Code concerning Subcontractors, with emphasis on Section 4104, known as the “Subletting and Subcontracting Fair Practices Act, effective July 1, 2014.

Attention is directed to Labor Code Section 1725.5 regarding Department of Industrial Relations (DIR) contractor registration process including registration criteria and implementation of DIR registration requirements. Labor Code Section 1771.7 establishes contractor’s obligation to submit Certified Pay Roll (CPR) to the Department of Labor and Standards Enforcement (DLSE) and public works monitoring and enforcement. Labor Code Section 1773.3 requires the District to submit a PWC-100 to DIR for all public works contract awarded effective January 1, 2015.

Attention is directed to Agreement Form, Article 5, and GENERAL CONDITIONS, Article 8, paragraphs 8.4.1 and 8.4.2, regarding liquidated damages. Liquidated Damages shall be set for \$300 Dollars for each calendar day the work is delayed. The Governing Board of the Contra Costa Community College District reserves the right to reject any and all bids and/or waive any informality or irregularity in any bid received. No bidder may withdraw their Bid for a period of ninety (90) days after the date set for opening thereof.

END OF SECTION 00100

SECTION 00210
INFORMATION AVAILABLE TO BIDDERS

PART 1 - REPORT AND INFORMATION

- 1.1** Existence of reports, record drawings, and utility surveys: Contra Costa Community College District, its consultants, and prior contractors may have collected documents providing a general description of the site and conditions of the work. These documents may consist of geotechnical reports for and around the site, record drawings, utility drawings, and information regarding underground utilities. These reports, documents and other information are not part of the Contract Documents and do not show new work to be constructed, rather, they show existing conditions that Contractor may have to address as part of its construction planning.
- 1.2** Available Documentation: The following existing documentation has been made available for downloading via the District's web site:
- a) Geotechnical Engineering and Geologic Hazards Study, Dec. 9, 2011
 - b) Updated Geologic Hazards Report, September 8, 2015
 - c) DVC Utility System Maps (9 sheets) 7-6-2011
 - d) Geotechnical Letter – Clarification of Grading Requirements, October 13, 2015
- 1.3** Contractor shall acknowledge and accept that the documents are not a part of the Contract Documents and are made available to bidders for reference only. The District and its representatives are not responsible for any and all discrepancies between the documents and the existing and actual as-built conditions, and do not guarantee the accuracy of the documents.
- 1.4** The District and Design Consultants assume no responsibility for the completeness or accuracy of the documents or the records compiled there from and the interpretations made from the documents. There is no express or implied guarantee that the conditions indicated in the documents are representative of those existing throughout the building and/or site Conditions differing substantially from those indicated may be encountered.

END OF SECTION 00210

**SECTION 00300
BID PROPOSAL FORM**

PROJECT NUMBER / NAME: D-642 SOFTBALL BLEACHERS PROJECT – INCREMENT 2 (Bleachers)

CAMPUS / LOCATION: DIABLO VALLEY COLLEGE

DISTRICT: **CONTRA COSTA COMMUNITY COLLEGE DISTRICT
500 Court St, Martinez, CA 94553**

Herein Referred to as "District"

1. INTRODUCTION

- A. The Bidder proposes to perform the Work for the Contract Sum and within the proposed Contract Time, based upon an examination of the site and the Bid and Contract Documents.
- B. The Bidder certifies this Bid is submitted in good faith.
- C. The Bidder agrees that the Contract Sum and other proposed terms will be considered in evaluating Bids and may be negotiated and adjusted before awarding of Contract.
- D. A fully executed Statement of Bidder's Qualifications signed by an authorized officer of the Bidder submitting the Bid shall be attached to the Bid Form.
- E. A fully executed Non-Collusion Affidavit signed by an authorized officer of the Bidder submitting Bid shall be attached to the Bid Form.
- F. The District shall award the contract to the lowest responsive and responsible Bidder. The evaluation of the low bid shall be based on the total of Item 2.A Base Bid.**
- G. The District reserves the right to award the other Additive/Deductive Alternates through change orders as budget allows.

2. CONTRACT SUM

A. BASE BID (No Alternates included.)

For labor, materials, bonds, fixtures, equipment, tools, transportation, services, sales taxes and other costs necessary to complete the general construction in accordance with the Contract Documents, for a stipulated Contract Sum in the amount of:

_____ Dollars (\$ _____)

Contractor Authorized Signature: _____

3. ADDITIVE ALTERNATES: NONE

4. COMPLETION TIME

- A. For establishing the Date of Final Completion the contract time for the Base Bid and Alternates shall be 228 calendar days after date of the Notice to Proceed. This time may be subject to modification to facilitate the work as mutually agreed upon at a later date.
- B. The Bidder certifies that the Bid is based on the Contract Time for completion as stated above and in the Contract Documents. Bidder further certifies that the Base Bid amount is sufficient to cover all labor, materials, central office and construction site overhead, profit, and all other costs related to the completion of the Project for the entire Project construction time for both the General Contractor and all Subcontractors, as stated above in paragraphs 2 and 3.

5. ADDENDA

- A. The Bidder acknowledges receipt of the following Addenda, and certifies the Bid has provided for all modifications and considerations required therein.

None []

Addendum No.: _____ dated _____

Addendum No.: _____ dated _____

Addendum No.: _____ dated _____

Addendum No.: _____ dated _____

Addendum No.: _____ dated _____

- B. List of Additional Addenda Attached: Yes [] No. [].

6. DESIGNATION OF SUBCONTRACTORS

- A. The Bidder has set forth a complete list indicating the type of work, name, and business address of each Subcontractor who will perform work in excess of one-half of one percent of the Contract Sum.
- B. Any portion of the work in excess of the specified amount having no designated Subcontractor shall be performed by the Bidder.
- C. Substitution of listed Subcontractors will not be permitted unless approved in advance by the District.
- D. Prior to signing the Contract, the District reserves the right to reject any listed Subcontractor.

	Type of Work	Subcontractor's Name	Address/Phone	Business License# & DIR Registration#
(1)		_____	_____	_____
(2)		_____	_____	_____
(3)		_____	_____	_____

Complete list of Subcontractors is attached: Yes [] No []

E. Continuation list of Subcontractors is attached: Yes [] No []

7. ACCEPTANCE AND AWARD

- A. The District reserves the right to reject this Bid and to negotiate changes before or after execution of the Contract. This Bid shall remain open and shall not be withdrawn for a period of 90 days after Bid Opening date.
- B. If written notice of acceptance of this Bid is mailed or delivered to the Bidder within 90 days after the date set for the receipt of this Bid, or other time before it is withdrawn, the Bidder will execute and deliver to the District a Contract prepared by District with the required Surety Bonds and Certificates of Insurance, within 10 days after personal delivery or deposit in the mail of the notification of acceptance.
- C. Notice of acceptance or request for additional information may be addressed to the Bidder at the address provided.

8. BID SECURITY

A. The required 10 percent (10%) Bid Security for this Bid is attached in the form of:

() Bid Bond Issued By: _____

() Certified or Cashier's Check No. _____

Issued by: _____

9. BIDDER'S BUSINESS INFORMATION

A. Individual []: _____

Personal Name: _____

Business Name: _____

Address: _____

_____ Zip Code: _____

Telephone: _____

Fax Number: _____

B. Partnership []: _____

Co-partners' Names: _____

Business Name: _____

Address: _____

_____ Zip Code: _____

Telephone: _____

Fax Number: _____

C. Corporation []: _____

Firm Name: _____

Address: _____

_____ Zip Code _____

Telephone: _____

Fax Number: _____

State of Incorporation: _____

President: _____

Secretary: _____

Treasurer: _____

Manager: _____

SECTION 00500

**PAYMENT BOND
(CALIFORNIA PUBLIC WORK)**

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the Contra Costa Community College District (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: _____ (hereinafter referred to as the "Public Work"); and

WHEREAS, said Contractor is required to furnish a bond in connection with said Contract, and pursuant to California Civil Code Section 9550;

NOW, THEREFORE, We, _____, the undersigned Contractor, as Principal; and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the Contra Costa Community College District and to any and all persons, companies, or corporations entitled by law to file stop notices under California Civil Code Section 9100, or any person, company, or corporation entitled to make a claim on this bond, in the sum of _____ Dollars (\$ _____), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code Section 9100; or fail to pay for any materials, provisions, or other supplies, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code, with respect to work or labor thereon of any kind; or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Unemployment Insurance Code Section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code Sections 9550 et seq.

This bond shall inure to the benefit of any person named in Civil Code Section 9100 giving such person or his/her assigns a right of action in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or

pertaining or relating to the furnishing of labor, materials, or equipment therefor; nor by any change or modification of any terms of payment or extension of time for payment pertaining or relating to any scheme or work of improvement herein above described; nor by any rescission or attempted rescission of the contract, agreement or bond; nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond; nor by any fraud practiced by any person other than the claimant seeking to recover on the bond; and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given; and under no circumstances shall the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Obligee and the Contractor or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California Civil Code Sections 9100, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

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

PRINCIPAL/CONTRACTOR:

By: _____

SURETY:

By: _____

Attorney-in-Fact

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service for service of process in California)

Telephone: _____

Telephone: _____

STATE OF CALIFORNIA)

) ss.

COUNTY OF)

On _____ before me, _____,
(insert name and title of the officer)

a Notary Public in and for said State, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument as the Attorney-in-Fact of the _____ (Surety) and acknowledged to me that he/she/they subscribed the name of the _____ (Surety) thereto and his own name as Attorney-in-Fact on the executed instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(SEAL)

Notary Public in and for said State

Commission expires: _____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.

**CONTRACT PERFORMANCE BOND
(CALIFORNIA PUBLIC WORK)**

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, Contra Costa Community College District (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: _____ (hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in that certain contract for said Public Work dated _____, (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the Contractor is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, _____, the undersigned Contractor, as Principal, and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the Contra Costa Community College District in the sum of _____ Dollars (\$ _____), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the bounded Contractor, his or her heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said Contract and any alteration thereof made as therein provided, on his or her part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill guarantees of all materials and workmanship; and indemnify, defend and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exonerated or pro tanto) by any change, extension of time, alteration in or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same, nor by any change or modification to any terms of payment or extension of time for any payment pertaining or relating to any scheme of work of improvement under the contract. Surety also stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exonerated or pro tanto) by any overpayment or underpayment by the Obligee that is based upon estimates approved by the Architect. The Surety stipulates and agrees that none of the aforementioned

changes, modifications, alterations, additions, extension of time or actions shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, modifications, alterations, additions or extension of time to the terms of the contract, or to the work, or the specifications as well notice of any other actions that result in the foregoing.

Whenever Principal shall be, and is declared by the Obligees to be, in default under the Contract, the Surety shall promptly either remedy the default, or shall promptly complete the Contract through its agents or independent contractors, subject to acceptance and approval of such agents or independent contractors by Obligees as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages; or, at Obligees' sole discretion and election, Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Obligees of the lowest responsible bidder, arrange for a contract between such bidder and the Obligees and make available as Work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the "balance of the Contract price" (as hereinafter defined), and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages. The term "balance of the Contract price," as used in this paragraph, shall mean the total amount payable to Principal by the Obligees under the Contract and any modifications thereto, less the amount previously paid by the Obligees to the Principal, less any withholdings by the Obligees allowed under the Contract.

Surety expressly agrees that the Obligees may reject any agent or contractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal. Unless otherwise agreed by Obligees, in its sole discretion, Surety shall not utilize Principal in completing the Contract nor shall Surety accept a bid from Principal for completion of the work in the event of default by the Principal.

No final settlement between the Obligees and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

The Contractor and Surety shall remain responsible and liable for all patent and latent defects that arise out of or are related to the Contractor's failure and/or inability to properly complete the Public Work as required by the Contract and the Contract Documents. The obligation of the Surety hereunder shall continue so long as any obligation of the Contractor remains.

Contractor and Surety agree that if the Obligees is required to engage the services of an attorney in connection with enforcement of the bond, Contractor and Surety shall pay Obligees' reasonable attorneys' fees incurred, with or without suit, in addition to the above sum.

In the event suit is brought upon this bond by the Obligees and judgment is recovered, the Surety shall pay all costs incurred by the Obligees in such suit, including reasonable attorneys' fees to be fixed by the Court.

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

PRINCIPAL/CONTRACTOR:

By: _____

SURETY:

By: _____

Attorney-in-Fact

The rate of premium on this bond is _____ per thousand.

The total amount of premium charged: \$_____ (This must be filled in by a corporate surety).

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service for service of process in California)

Telephone: _____

Telephone: _____

SECTION 00510

NOTICE OF AWARD

DATE: _____

TO: _____

ADDRESS: _____

PROJECT: _____

The Contract Sum of your contract is _____ Dollars,
(\$_____).

You must comply with the following conditions within **ten (10)** calendar days of the date of this Notice of Award, that is, by _____.

1. You must deliver to the District two fully executed counterparts of Section 00600, "Construction Agreement."
2. You must deliver to the District the "Contract Performance Bond," and "Payment Bond," executed by you and your surety, which are included in Section 00500.
3. You must deliver to the District the Contractor's CPM Schedule, prepared in Microsoft Project format, including both PDF and electronic file for the District's review.

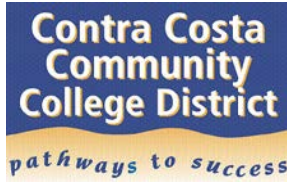
Failure to comply with these conditions within the time specified will entitle District to consider your bid abandoned, to annul this Notice of Award, and to declare your Bid Security forfeited. Within **ten (10)** calendar days after you comply with these conditions, the District will return to you one fully signed counterpart of the Construction Agreement.

Contra Costa Community College District

By: _____

Title: _____

END OF DOCUMENT



CONTRACT NO. _____
(Construction Agreement)

=====

This Agreement shall not be enforceable until ratified and approved by the Contra Costa Community College District's Governing Board. The estimated board meeting date is January 27, 2016.

1. SPECIAL TERMS. These special terms are incorporated below by reference.

(§1.1) Parties: (Public Agency) CONTRA COSTA COMMUNITY COLLEGE DISTRICT
500 Court St, Martinez, CA 94553

(Contractor) _____
Address: _____

(§1.2) Effective Date: _____

(§1.3) The Project: D-642 Softball Bleachers – Increment 2 (Bleachers)

(§1.4) Completion Time: **198 Calendar Days** from the Notice to Proceed to Substantial Completion, and **30 Calendar Days** from Substantial Completion to Final Completion (Remaining Work).

(§1.5.1) Liquidated Damages, Substantial Completion: **\$300** per Calendar Day beyond the Contract Substantial Completion Date.

(§1.5.2) Liquidated Damages, Remaining Work/Final Completion: **\$100/** per Calendar Day Remaining Work is delayed beyond the Contract Final Completion Date.

(§1.6) Public Agency's Agent: CONTRA COSTA COMMUNITY COLLEGE DISTRICT (The District)

(§1.7) Contract Price: _____

SCOPE OF WORK: Work includes, but is not limited to: provide all labor, material, equipment and services to design, obtain DSA approval, fabricate and install the softball bleachers with footing foundation. See attached drawings and specifications for additional requirements.

2. WORK CONTRACT, CHANGES

(a) By their signatures below, effective on the above date, these parties promise and agree as set forth in this Agreement, incorporating by these references labor and materials contained in Section 2, Scope of Work.

(b) Contractor shall, at Contractor's own cost and expense, and in a workmanlike manner, fully and faithfully perform and complete the work; and will furnish all materials, labor, services, equipment, and transportation necessary, convenient and proper in order fairly to perform the requirements of this contract, all strictly in accordance with the Scope of Work in Section 2 above, and the Public Agency's plans, drawings and specifications, and with Supplementary General Conditions, if any.

(c) The work can be changed only with Public Agency's prior written order specifying such change and its cost agreed to by the parties; and the Public Agency shall never have to pay more than specified in Section 7 without such an order.

3. TIME: NOTICE TO PROCEED

Contractor shall start this work as directed in Section 1.4 Completion Time above or as directed by the Notice to Proceed, if any, and shall complete it as specified in Section 1.4, Completion Time.

4. LIQUIDATED DAMAGES

If the Contractor fails to complete this contract and this work within the time fixed therefore, allowance being made for contingencies as provided herein, he becomes liable to the Public Agency for all its loss and damage there from; and because, from the nature of the case, it is and will be impracticable and extremely difficult to ascertain and fix the Public Agency's actual damage from any delay in performance hereof, it is agreed that Contractor will pay as liquidated damages to the Public Agency the reasonable sum specified in Section 1, the result of the parties' reasonable endeavor to estimate fair average compensation therefore, for each calendar day's delay in finishing said work; and if the same be not paid, Public Agency may, in addition to its other remedies, deduct the same from any money due or to become due Contractor under this contract. If the Public Agency for any cause authorizes or contributes to a delay, suspension of work or extension of time, its duration shall be added to the time allowed for completion, but it shall not be deemed a waiver nor be used to defeat any right of the Agency to damages for non-completion or delay hereunder. Pursuant to Government Code Section 4215, the Contractor shall not be assessed liquidated damages for delay in completion of the work, when such delay was caused by the failure of the Public Agency or the owner of a utility to provide for removal or relocation of existing utility facilities.

5. INTEGRATED DOCUMENTS

The plans, drawings and specifications or special provisions of the Public Agency's call for bids, and Contractor's accepted bid for this work are hereby incorporated into this contract; and they are intended to cooperate, so that anything exhibited in the plans or drawings and not mentioned in the specifications or special provisions, or vice versa, is to be executed as if exhibited, mentioned and set forth in both, to the true intent and meaning thereof when taken all together; and differences of opinion concerning these shall be finally determined by the Public Agency.

6. PAYMENT

- (a) For strict and literal fulfillment of these promises and conditions, and full compensation for all this work, the Public Agency shall pay the Contractor the sum specified in Section 1, except that in unit price contracts the payment shall be for finished quantities at unit bid prices.
- (b) On or about the first day of each calendar month, the Contractor shall submit to the Public Agency a verified application for payment, supported by a statement showing all materials actually installed during the preceding month, the labor expended thereon, and the cost thereof; whereupon, after checking, the Public Agency shall issue to Contractor a certificate for the amount determined to be due, minus five (5%) percent thereof, but not until defective work and materials have been removed, replaced and made good. Payment of the approved amount will be made to the Contractor within 30 calendar days from the date the Public Agency approves in writing the Contractor's application for payment.

7. PAYMENTS WITHHELD

- (a) The Public Agency or its agent may withhold any payment, or because of later discovered evidence nullify all or any certificate for payment, to such extent and period of time only as may be necessary to protect the Public Agency from loss because of:
 - (1) Defective work not remedied, or work not completed, or
 - (2) Claims filed or reasonable evidence indicating probable filing, or
 - (3) Failure to properly pay subcontractors or for material or labor, or
 - (4) Reasonable doubt that the work can be completed for the balance then unpaid, or
 - (5) Damage to another contractor, or

- (6) Damage to the Public Agency, other than damage due to delays.
- (b) The Public Agency shall use reasonable diligence to discover and report to the Contractor, as the work progresses, the materials and labor which are not satisfactory to it, so as to avoid unnecessary trouble or cost to the Contractor in making good any defective work or parts.
- (c) Thirty-five (35) calendar days after Public Agency files its notice of completion of the entire work, it shall issue a certificate to the Contractor and pay the balance of the contract price after deducting all amounts withheld under this contract, provided the Contractor shows that all claims for labor and materials have been paid, no claims have been presented to the Public Agency based on acts or omissions of the Contractor, and no liens or withhold notices have been filed against the work or site, and provided there are not reasonable indications of defective or missing work or of late-recorded notices of liens or claims against Contractor.

8. INSURANCE

Before the commencement of the Work, the Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in California as admitted carriers, or a District approved equal, with a financial rating of at least A status as rated in the most recent edition of Best's Insurance Reports or as amended by the Supplementary General Conditions, such insurance as will protect the Public Agency from claims set forth below, which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations are by the Contractor, by a Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

- (a) Claims for damages because of bodily injury, sickness, disease, or death of any person District would require indemnification and coverage for employee claim;
- (b) Claims for damages insured by usual personal injury liability coverage, which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor or by another person;
- (c) Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents;
- (d) Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work;
- (e) Claims involving contractual liability applicable to the Contractor's obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the Contractor and the Subcontractors; and
- (f) Claims involving Completed Operations, Independent Contractors' coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU)
- (g) Claims involving sudden or accidental discharge of contaminants or pollutants.

Additional Insured Endorsement Requirement: The Contractor shall name, on any policy of insurance, the District, Architect, Inspector, the State of California, their officers, employees, agents and independent contractors as Additional Insured. Subcontractors shall name the Contractor, the District, Architect, Inspector, the State of California, their officers, employees, agents and independent contractors as Additional Insured. The Additional Insured Endorsement included on all such insurance policies shall state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the Additional Insured, have other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. The insurance provided by the Contractor must be designated in the policy as primary to any insurance obtained by the Public Agency. The amount of the insurer's liability shall not be reduced by the existence of such other insurance.

Specific Insurance Requirement: Contractor shall take out and maintain and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain:

- (a) Comprehensive General Liability Insurance with an aggregate of not less than \$2,000,000.00; Per occurrence, \$1,000,000.00
- (b) Automotive (any auto) where operated in amounts \$1,000,000.00
- (c) Workers' Compensation Insurance: \$1,000,000.00; Contractor is aware of and complies with Labor Code Section 3700 and the Worker's Compensation Law.

9. **BONDS**

(Not Required for Public Projects below \$25,000; Civil Code 9550; Public Contract Code 7103.)

Bond Requirements: Prior to commencing any portion of the Work, the Contractor shall furnish separate payment and performance bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate surety authorized and admitted to transact business in California as sureties.

To the extent, if any, that the Contract Price is increased in accordance with the Contract Documents, the Contractor shall, upon request of the Public Agency, cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the Public Agency. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Price, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the surety. If the Contractor fails to furnish the required bonds, the Public Agency may terminate the Contract for cause.

On signing this contract, Contractor shall deliver to Public Agency for approval good and sufficient bonds with sureties, in amount(s), specified in the specifications or special provisions, guaranteeing faithful performance of this contract and payment for all labor and materials hereunder.

10. **FAILURE TO PERFORM**

If the Contractor at any time refuses or neglects, without fault of the Public Agency or its agent(s), to supply sufficient materials or workers to complete this agreement and work as provided herein, for a period of ten days or more after written notice thereof by the Public Agency, the Public Agency may furnish same and deduct the reasonable expenses thereof from the contract price.

11. **LAWS APPLY: General**

Both parties recognize the applicability of various federal, state and local laws and regulations, especially Chapter 1 of Part 7 of the California Labor Code (beginning with Section 1720, and including Sections 1735, 1777.5, 1777.6, forbidding discrimination) and intend that this agreement complies therewith. The parties specifically stipulate that the relevant penalties and forfeitures provided in the Labor Code, especially in Sections 1775, 1777.6, and 1813, concerning prevailing wages and hours, shall apply to this agreement as though fully stipulated herein.

12. **REGISTRATION WITH DEPARTMENT OF INDUSTRIAL RELATIONS**

Contractor shall be registered pursuant to Section 1725.5 of the California Labor Code to be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any public work contract that is subject to the requirements of Section 1725.5. For the purposes of this requirement, "contractor" includes a subcontractor as defined by Labor Code Section 1722.1.

The requirement to list only registered contractors and subcontractors on bids becomes effective on March 1, 2015. The requirement to only use registered contractors and subcontractors on public works projects applies to all projects awarded on or after April 1, 2015.

13. SUBCONTRACTORS

Public Contract Code Sections 4100-4113 are incorporated herein.

14. WAGE RATES

- (a) Pursuant to Labor Code Section 1773, the Director of the Department of Industrial Relations has ascertained the general prevailing rates of wages per diem, and for holiday and overtime work, in the locality in which this work is to be performed, for each craft, specified in the call for bids for this work and are on file with the Public Agency, and are hereby incorporated herein.
- (b) This schedule of wages is based on a working day of eight (8) hours unless otherwise specified; and the daily rate is the hourly rate multiplied by the number of hours constituting the working day. When less than that number of hours are worked, the daily wage rate is proportionately reduced, but the hourly rate remains as stated.
- (c) The Contractor, and all subcontractors, must pay at least these rates to all persons on this work, including all travel, subsistence, and fringe benefit payments provided for by applicable collective bargaining agreements. All skilled labor not listed above must be paid at least the wage scale established by collective bargaining agreement for such labor in the locality where such work is being performed. If it becomes necessary for the Contractor or any subcontractor to employ any person in a craft, classification or type of work (except executive, supervisory, administrative, clerical or other non-manual workers as such) for which no minimum wage rate is specified, the contractor shall immediately notify the Public Agency which shall promptly determine the prevailing wage rate therefore and furnish the Contractor with the minimum rate based thereon, which shall apply from the time of the initial employment of the person affected and during the continuance of such employment.

15. HOURS OF LABOR

Eight hours of labor in one calendar day constitutes a legal day's work, and no worker employed at any time on this work by the Contractor or by any subcontractor shall be required or permitted to work longer thereon except as provided in Labor Code Sections 1810-1815.

16. APPRENTICES

Properly indentured apprentices may be employed on this work in accordance with Labor Code Sections 1777.5 and 1777.6, forbidding discrimination.

17. SUBMISSION OF CERTIFIED PAYROLL RECORDS

Contractors and subcontractors on all public works projects will be required to submit certified payroll records (CPRs) to the Labor Commissioner unless excused from this requirement. This requirement will be phased in as follows:

- (a) Applies immediately to public works projects that have already been under CMU monitoring, i.e. contractors on ongoing projects that have been submitting CPRs to the CMU will continue doing so.
- (b) Will apply to any new projects awarded on or after April 1, 2015.
- (c) May apply to other projects as determined by Labor Commissioner.
- (d) Will apply to all public works projects, new or ongoing, on and after January 1, 2016.

18. PREFERENCE FOR MATERIALS

The Public Agency desires to promote the industries and economy of Contra Costa County, and the Contractor therefore promises to use the products, workers, laborers and mechanics of this County in every case where the price, fitness and quality are equal.

19. ASSIGNMENT

This agreement binds the heirs, successors, assigns, and representatives of the Contractor; but Contractor cannot assign it in whole or in part, nor any monies due or to become due under it, without the prior written consent of the Public Agency and the Contractor's surety or sureties, unless they have waived notice of assignment.

20. NO WAIVER BY PUBLIC AGENCY

Inspection of the work and/or materials, or approval of work and/or materials inspected, or statement by any officer, agent or employee of the Public Agency indicating the work or any part thereof complies with the requirements of this contract, or acceptance of the whole or any part of said work and/or materials, or payments therefore, or any combination of these acts, shall not relieve the Contractor of Contractor's obligation to fulfill this contract as prescribed; nor shall the Public Agency be thereby stopped from bringing any action for damages or enforcement arising from the failure to comply with any of the terms and conditions hereof.

21. HOLD HARMLESS AND INDEMNITY

- (a) Contractor promises to and shall hold harmless and indemnify from the liabilities as defined in this section.
- (b) The indemnities benefited and protected by this promise are the Public Agency and its elective and appointive boards, commissions, officers, agents and employees.
- (c) The liabilities protected against are any liability or claim for damage of any kind allegedly suffered, incurred or threatened because of actions defined below, including personal injury, death, property damage, inverse condemnation, or any combination of these, regardless of whether or not such liability, claim or damage was unforeseeable at any time before the Public Agency approved the improvement plan or accepted the improvements as completed, and including the defense of any suit(s) or action(s) at law or equity concerning these.
- (d) The actions causing liability are any act or omission (negligent or non-negligent) in connection with the matters covered by this contract and attributable to the contractor, subcontractor(s), or any officer(s), agent(s), or employee(s) of one or more of them.
- (e) Non-conditions: The promise and agreement in this section is not conditioned or dependent on whether or not any Indemnities has prepared, supplied, or approved any plan(s), drawing(s), specifications(s) or special provision(s) in connection with this work, has insurance or other indemnification covering any of these matters, or that the alleged damage resulted partly from any negligent or willful misconduct of any Indemnities.

22. EXCAVATION

Contractor shall comply with the provisions of Labor Code Section 6705, if applicable, by submitting to Public Agency a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during trench excavation.

23. GOVERNMENT CODE SECTION 10532

Contractor shall be subject to the examination and audit of the Auditor General for a period of three years after final payment under the contract.

24. WARRANTY

The Contractor warrants to the Public Agency that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contractor Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work shall conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage.

25. CONSEQUENTIAL DAMAGES

The Contractor and Public Agency waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

- (a) Damages incurred by the Public Agency for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- (b) Damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.
- (c) This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination. Nothing contained in this subparagraph shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.

26. HAZARDOUS MATERIALS

- (a) If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos, lead or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Public Agency in writing.
- (b) The Public Agency shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. The Public Agency shall furnish in writing to the Contractor the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written notification from the Public Agency and Contractor. The Contract Time shall be extended appropriately.

27. SAFETY:

- (a) **Safety Programs.** The Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Contractor's safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with

the California Drug Free Workplace Act of 1990 (California Government Code §§8350 et seq.). Without limiting or relieving the Contractor of its obligations hereunder, the Contractor shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs. Prior to commencement of Work, the Contractor shall meet with the campus Buildings and Grounds Manager, Project Manager, and Construction Manager to review Contractor's safety precautions and implementation of safety programs during the Work.

- (b) **Safety Precautions.** The Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and (iii) other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Contractor shall take adequate precautions and measures to protect existing roads, sidewalks, curbs, pavement, utilities, adjoining property and improvements thereon (including without limitation, protection from settlement or loss of lateral support) and to avoid damage thereto. Without adjustment of the Contract Price or the Contract Time, the Contractor shall repair, replace or restore any damage or destruction of the foregoing items as a result of performance or installation of the Work.
- (c) **Safety Signs, Barricades.** The Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities.
- (d) **Safety Notices.** The Contractor shall give or post all notices required by applicable law and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- (e) **Safety Coordinator.** The Contractor shall designate a responsible member of the Contractor's organization at the Site whose duty shall be the prevention of accidents and the implementation and maintenance safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Project Inspector and the Architect.

28. SIGNATURES AND ACKNOWLEDGEMENT

Public Agency:

By: _____
Assistant Secretary, Governing Board
DAVID S. WETMORE, Director of Purchasing & Contracts

Note to Contractor: (1) Execute acknowledgement form below, and (2) if a corporation, affix Corporate Seal.

Contractor hereby also acknowledging awareness of and compliance with Labor Code S1861 concerning Worker's Compensation Law.

Contractor:

By: _____ (CORPORATE SEAL)
(Designate Official Capacity – **NAME**)

Print NAME and TITLE

License Number

Federal ID Number

NOTARY PUBLIC

=====

STATE OF CALIFORNIA)
) ss.
COUNTY OF CONTRA COSTA)

On _____, before me, _____, Notary Public,

personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing is true and correct.

Witness my hand and official seal.

Notary Public

[SEAL]

SECTION 00650
NOTICE TO PROCEED

DATE: _____
TO: _____
ADDRESS: _____
PROJECT: _____

You are notified that the Contract Time under the above contract will commence to run on _____
_____ 2016. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Section 00600, Construction Agreement, the date of Substantial Completion is _____ 2016, and the date for Final Completion is _____.

CONTRA COSTA COMMUNITY COLLEGE DISTRICT

By : _____
Ray Pyle
Chief Facilities Planner

END OF SECTION 00650

SECTION 00800
SUPPLEMENTARY GENERAL CONDITIONS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. See section 00100 Notice Inviting Bid
- B. See the drawings and specifications (as listed in the Table of Contents) for the detailed scope of work.
- C. **Bidders are encouraged to submit bid questions after they review the drawings and specifications if they should have any questions regarding the scope of work, or if they have suggestions for the District and Architect's consideration regarding the design of the softball bleachers, including the foundation system shown on the drawings. The Responses to bid questions will be documented and included in addenda, and changes to the drawings or specifications, if any, as a result of bid questions, will also be documented and issued via addenda.**
- D. **Since the sitework and construction of the press box shown on the drawings will be performed by another District contractor prior to August 1, 2016, the Contractor (Increment 2 scope of work to install the softball bleachers) will be drilling through existing asphalt or modifying the existing asphalt paving for the bleacher foundation system.**

1.2 REFERENCES

- A. The publications listed below form a part of this specification by reference.
 - 1. Current California Occupational Safety and Health Act Regulations
 - 2. Current California Occupational Safety and Health Construction Safety Orders
 - 3. This work will be contracted using the District's Short Form Construction Agreement; See Section 00600.

1.3 SUBMITTALS

- A. Provide submittals in the format, and as described below:
 - 1. **Submittals shall be submitted to the District, electronically in PDF format, within twenty-one (21) Calendar Days from the Notice to Proceed.**
 - 2. Submit three (3) original (not less than 8-1/2" x 11", nor more than 30" x 42") wet-signed, and one (1) color PDF file for submittals that require shop drawings. **See Section 13125, Elevated Bleachers, Article 1.4H for specific requirements and number of required copies.**
 - 3. Submittals that require local and State agency approval, shall conform to this Specification and the requirements of the local or State agency.

4. **See Section 13125, Elevated Bleachers, Article 1.4H for specific requirements. Note that the Contractor shall assume DSA will require 60 calendar to review submittal once DSA receives the submittal.**
- B.** Provide submittals for all equipment, if any, listed on the drawings.
- C.** The Schedule of Values shall be submitted to the District within seven (7) calendar days after the Notice of Award. The Schedule of Values shall be broken down by the following minimum categories:
1. DSA Approval of Softball Bleachers
 2. Fabricated Softball Bleachers/Delivery
 3. Drill and Pour Foundation Piers
 4. Install Softball Bleachers
 5. Final Clean
 6. O&M and Warranties
 7. As-Built Drawings

The District will only pay for Work installed at the Site, unless otherwise approved by the District. For Item C.1, the District will only pay for the submittal preparation effort once approved by DSA. For C.2, the District will only pay for the completed off-site bleacher fabrication, but Contractor shall comply with District required insurance and bonds for the off-site storage of material specific for this project.

- D.** CPM construction schedule shall be submitted within five (5) work days from the Contract Award date. District and Contractor shall meet and review the schedule. The Notice to Proceed will not be issued until the District accepts the schedule, or accepts it with conditional changes. Below are the minimum activity types that shall be included in the schedule:
1. Contractor Submittals. **Allow 21 calendar days from the Notice to Proceed.**
 2. Submittal Reviews by DSA. **Allow 60 calendar days in the schedule for this review.**
 3. Procurement and Fabrication.
 4. Delivery of Fabricated Softball Bleachers. **Note in schedule bleachers cannot be delivered to the site until August 1, 2016, unless otherwise approved by the District.**
 5. Construction activities corresponding to the Schedule of Values
 6. Substantial Completion Milestone
 7. Project Closeout Activities.
 8. Final Completion Milestone
- E.** Submittals are for review of conformance with the requirements of the Contract.

F. Staging and fencing area plan shall be submitted within five (5) work days from Contract award date. The plan shall include the following minimum items:

1. Staging Area
2. Temporary Fencing around bleacher construction area.
3. Storage Area
4. Temporary Sanitary Facilities Locations
5. Path of Travel

Note: Contractor cannot stage material, equipment or vehicles on the soccer field or the softball field. Area is very limited for staging material and equipment and the area east of the softball field and up to the existing canal fence is the main area anticipated for staging material and equipment. Contractor and the District representatives will review the proposed staging plan, and can discuss other areas of staging of material and equipment.

1.4 SUBSTITUTIONS.

A. *One Product Specified.* Unless the Specifications state that no substitution is permitted, whenever the Contract Documents indicate any specific material, product, thing or service, or any specific name, make, trade name, or catalog number, with or without the words “or equal,” such specification shall be deemed to be used for the purpose of facilitating description of the material, product, thing or service desired and shall be deemed to be followed by the words “or equal” unless the Contract Documents specify “no substitution allowed”, “no equal”, “no equivalent”, or other language with similar meaning, in which case no substitutions will be allowed. Pursuant to Paragraph 1.3.F.3, the Contractor may, unless otherwise stated, within three (3) work days after the bid opening, submit a substitution request for any material, product, thing or service, which shall be materially equal or better in every respect to that so indicated or specified (“Specified Item”) and will completely accomplish the purpose of the Contract Documents.

1. *Products Specified which are Commercially Unavailable.* If the Contractor fails to make a request for substitutions for products, within three (3) work days after bid opening, and such products subsequently become commercially unavailable, the Contractor may request a substitution for such commercially unavailable item. The decision to grant this request is solely at the District’s discretion. The written approval of the District, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. The District may condition its approval of the substitution upon the delivery to District of an extended warranty or guaranty or other assurances of adequate performance of the substitution as well as an equitable deduction in the contract sum should the substituted item cost less than the Specified Item. All risks of delay due the approval of a requested substitution by the District, DSA, or any other governmental agency having jurisdiction, shall be on the requesting party. All additional costs, all procurement

and construction delays, and all costs for review by the Architect or its consultants shall be the responsibility of the Contractor and will be deducted from Contractor's pay request.

B. Substitution Request Form. Requests for substitutions of materials, products, things or services in place of a Specified Item must be submitted to the District in writing on the District's Substitution Request Form ("Request Form") within three (3) work days after bid opening, except as provided for in Paragraph 1.3.F.1.

1. The Substitution Request Form must be accompanied by evidence as to whether the proposed substitution:
 - (a) Is equal in quality/service/ability to the Specified Item;
 - (b) Will entail no changes in detail, construction, and scheduling of related work;
 - (c) Will be acceptable in consideration of the required design and artistic effect;
 - (d) Will provide no cost disadvantage to the District;
 - (e) Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
 - (f) Will required no change of the construction schedule.
2. In completing the Substitution Request Form, the bidder shall state, with respect to each requested substitution, that the bidder will agree to provide the Specified Item in the event that the District denies the bidder's request for such requested substitution. In the event the District denies the bidder's requested substitution for a Specified Item, the bidder shall provide the Specified Item without any additional cost or charge to the District, and waives all rights to submit a claim.

C. After Bid Opening. After bids are opened, the apparent lowest bidder shall provide, within three (3) days of opening such bids, any and all Drawing, Specifications, samples, performance data, calculations, and other information, as may be required to assist the Design Consultant and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

1. After the District's receipt of such evidence by the bidder, the District will make its final decision as to whether the bidder's request for substitution for any Specified Items will be granted. The decision as to whether a proposed request for substitution is equal to a Specified Item shall be at the sole discretion of the District. Any request for substitution that is granted by the District shall be documented and processed through a Change Order. The District may condition its approval of any substitution upon delivery to the District of an extended warranty or guaranty or other assurances of adequate performance of the substitution. Any and all risks of delay due to approval by the District, DSA or any other governmental agency having jurisdiction shall be on the bidder.
2. If the Design Consultant and District accept a proposed substitution, the Contractor agrees to pay for all District expenses, including but not limited to Division of the State Architect fees, engineering and design services, compensation to the Design Consultant for their required time to process such substitution through the Division of the State Architect, if required, and to make all changes and adjustments in

materials or the work of all trades directly or indirectly affected by the substituted item or items at no cost to the District

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Contractor Provided Materials: The Contractor provided materials shall include any associated equipment and appurtenances required for performing the contract properly and in accordance with the equipment manufacturer's literature.
- B. All materials shall be new, unless otherwise authorized or specified in the scope of work of this specification.

PART 3 - EXECUTION AND RELATED REQUIREMENTS

3.1 GENERAL

- A. Work Restrictions: Contractor shall maintain a safe path of travel for all pedestrians and vehicles during construction. Contractor is required to provide safety barricades and alternative routes of travel for pedestrians and vehicles at all times, unless otherwise approved by the District. Anytime the Contractor anticipates it will block and divert existing paths of travel for pedestrians or vehicles, it shall provide a hard copy plan along with proposed wayfinding signage for review by the District at least **15** work days prior to such blockage and diversion. Said plan shall be reviewed and approved by the District prior to commencement of this work by the Contractor.
- B. Contractor shall provide temporary chain link fencing, six feet high, around the construction site to deter access by students, faculty and the public.
- C. Contractor will be allowed to have access and use Campus utilities for temporary water and electricity, but Contractor shall be responsible to investigate prior to bid, and for all work necessary to connect to existing utilities for temporary use.
- D. Contractor shall provide temporary sanitary facilities for use of all workers throughout the course of the contract duration. Contractor shall comply with the minimum requirements of the Contra Costa Health Department. Contractor is not permitted to use any Campus toilet facilities.
- E. Scheduling and Coordination: **The installation of the Bleachers cannot commence until August 3, 2016.** Before commencing work on a specific area, the Contractor shall confirm that all requirements have been met pertaining to scheduling of the work. The Contractor shall further determine that all required notices have been given.
- F. Measurements: Before fabrication, obtain necessary field measurements and verify all measurements.

- G. Protection required to prevent damage to adjacent areas, equipment, fixtures and finishes shall be provided. Damage to items while accomplishing the work shall be repaired or replaced with new items at no additional cost to the District.
- H. Erosion Control: Contractor shall comply with State of California erosion control requirements and any other requirements specifically shown on the drawings or described in the specifications.
- I. Staging Area: Contractor shall stage its equipment, vehicles and materials on College property as noted above. **Contractor will be allocated 4 (four) parking spaces on College property in designated nearby parking lots.**
- J. Scheduling and Sequence of Work: The work shall be prosecuted in such a manner as to cause the least interference with the normal functions of the campus activity. Prior to beginning any work, the Contractor shall meet with the District and the Contractor's schedule shall be approved as noted in Article 1.3D above.
- K. Interruption of Utilities Services: Interruptions shall be kept to a minimum, and shall be at such times and duration as approved ahead of time by the District. No interruption shall occur unless scheduled with the District, and approved in advance as to time and duration of such interruption. No utility interruptions that impact building operation during classes will be allowed, and these types of interruptions, if any, shall be scheduled for after normal hours when classes are not in session.
- L. Material, equipment, tools and workmen shall be scheduled and delivered to the Site in a timely manner to avoid delay in the work. Materials provided shall be inspected by the Contractor to make certain they are in compliance with the specifications and are free from defects and damage.
- M. Workmanship: Skilled personnel shall execute in a careful, neat, and proficient manner and in compliance with accepted trade practices for all work. All work shall be executed in accordance with Cal/OSHA standards and safety orders. And all work on this contract shall comply with all Local, State, and Federal Environmental Laws.
- N. Incidental Work: Minor incidental materials and work not specifically mentioned herein, but necessary for the proper completion of the specified work, shall be provided without additional cost to the District.
- O. Administrative Forms: District shall provide its standard forms for use by Contractor.

3.2 EXISTING CONDITIONS & DRAWINGS

- A. See Section 00210, Information Available to Bidders for documents available for review by the Contractor and its subcontractors prior to and after bid.

3.3 FIELD VERIFICATION AND MEASUREMENTS

- A. Contractor shall field verify existing conditions above ground and also below ground prior to drilling for softball bleacher piers or any other below ground work. Contractor shall review its plan of work with the District prior to commencing said activities.

3.4 WORK BY CALIFORNIA LICENSED ENGINEER & DSA APPROVAL

- A. Design of the softball bleachers shall be performed by a California licensed Engineer employed by the Contractor. **See Specification Section 13125 for additional requirements.**
- B. The Contractor shall be entitled to a non-compensable time extension if DSA approval requires longer than 60 calendar days. The start of this time period commences when DSA receives the softball bleacher design at their Oakland office. **If DSA requires the Contractor to re-submit any portion of the design for review, Contractor shall prepare and resubmit within 7 calendar days of receiving written notice of the corrections required. Contractor will still receive a non-compensable time extension for the time to prepare the resubmit and for DSA's review of the resubmittal, provided the Contractor resubmits within 7 calendar days.**

3.5 SITE WORK

- A. Existing Work: Protect existing work which is to remain in place, be reused, or remain the property of the District. Repair items that are to remain and are damaged during performance of the work to their original condition, or replace with new.
- B. Existing Utilities: **Contractor shall review existing as-built drawings and layout softball bleacher foundation system to avoid existing underground utilities.** Contractor is responsible for any repair of damage to existing utilities back to original condition or replace with new.
- C. Dust and Debris Control: Prevent the spread of dust and debris generated by the Work, and avoid the creation of a nuisance or hazard in the surrounding area. Waste and debris resulting from the Work being performed shall be removed on a daily basis. Promptly remove, and legally dispose of all debris to an offsite location.
- D. Hazmat Work: The Contractor shall notify the District immediately if unforeseen hazardous materials are discovered during the course of construction. Contractor shall remove said hazardous materials as required by law, and a change order will be issued for the cost to remove and legally dispose of said materials.
- E. Limitation of heavy vehicles: **Existing asphalt paving from the parking lot to the Softball Bleacher location was designed for foot traffic and light truck vehicles. Contractor shall not transport bleacher materials or other heavy materials using large trucks that could damage said asphalt paving.** Contractor is responsible for any repair of existing asphalt paving and landscape damage during performance of work to the original condition.
- F. Disposal of Equipment and Materials: Contractor is responsible for removal and disposal of all construction debris.

3.6 PROJECT CLOSEOUT REQUIREMENTS (After Substantial Completion & Before Final Completion)

- A. Refer to the Drawings and Specifications listed in Section 00010, Table of Contents for requirements, and these Supplementary General Conditions.
- B. Provide final clean-up of Site prior to Final Completion.

C. Warranty

1. The Contractor warrants to the District that material and equipment furnished under the Contract will be of the highest quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Contractor's warranty and guaranty to District includes, but is not limited to the following representations:
 - a. In addition to any other warranties and guaranties provided elsewhere, Contractor shall, and hereby does, warrant all Work after the Certificate of Substantial Completion date issued by District and shall repair or replace any or all such work, together with any other work, which may be displaced in so doing that may prove defective in workmanship or materials within a one (1) year period from date of completion as defined in Public Contract Code Section 7107(c) without expense whatsoever to District, ordinary wear and tear, unusual abuse or neglect excepted. District will give notice of observed defects with reasonable promptness. Contractor shall notify District upon completion of repairs.
 - b. In the event of failure of Contractor to comply with above mentioned conditions within one week after being notified in writing, District is hereby authorized to proceed to have defects repaired and made good at expense of Contractor who hereby agrees to pay costs and charges therefore immediately on demand.
 - c. If, in the opinion of the District, defective Work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the District, the District will attempt to give the notice required by this Article. If the Contractor cannot be contacted or does not comply with the District's requirements for correction within a reasonable time as determined by the District, the District may, notwithstanding the provisions of this article, proceed to make such correction or attention which shall be charged against Contractor. Such action by the District will not relieve the Contractor of the guarantee provided in this Article or elsewhere in this Contract.
 - d. This Article does not in any way limit the guarantee on any items for which a longer warranty or guaranty is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish District all appropriate guaranty or warranty certificates upon completion of the project.
2. Format - All Warranties/Guaranties and shall include:
 - a. Contractor, subcontractor, and equipment supplier shall provide Warranties and Guaranties on their original company letterhead with original signature.
 - b. Contractor shall provide original Warranties and Guaranties. Photo copies, fax and e-mail copies are not acceptable.
3. Preparation

- a. Contractor shall obtain warranties and guaranties, executed in duplicate by each applicable and/or responsible subcontractor(s), supplier(s), and manufacturer(s), within fifteen (15) days after Certificate of Substantial Completion date of the applicable Work. Except for items put into use with District’s permission, Contractor shall leave date of beginning of time of warranty or guaranty blank until the date of completion is determined by District.
- b. Contractor's Response to Construction Warranty and Guaranty Service Requirements: Following oral or written notification by the District, respond to construction warranty and guaranty service requirements within 24 hours, or earlier in case of emergency.

WARRANTY/GUARANTY INFORMATION – [insert project number and name on actual tag]

- a. Type of product/material_____.
- b. Model number_____.
- c. Serial number_____.
- d. Contract number_____.
- e. Warranty/Guaranty period _____ (months) from_____ to_____.
- f. Inspector's signature_____.
- g. Construction Contractor_____.
- Address_____.
- Telephone number_____.
- h. Warranty or Guaranty contact_____.
- Address_____.
- Telephone number_____.
- i. **WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.**

3.7 TIME OF COMPLETION

- A. See Section 00300, Bid Proposal Form for specific requirements to complete the Work. Time requirements are also included in Section 00600, Construction Agreement.
- B. Substantial Completion: The date on which the Work or designated portion thereof, as certified by the District and Architect, is sufficiently complete, in accordance with the Contract Documents, so the District may occupy or utilize the Work or designated portion thereof for the use for which it is intended.
- C. Remaining Work after Substantial Completion: If the Architect or District determines that the work required by the Contract is Substantially Complete during any inspection conducted pursuant to this Agreement, the Contractor shall be notified of that determination and the District shall determine if there is Remaining Work. A list of Remaining Work shall be issued only by the District or the Architect and only after the District has certified Substantial Completion. The District or Architect shall give the Contractor the necessary instructions for correction or completion of the Remaining Work, and the Contractor shall immediately comply with and execute such instructions within the Contract Time. Upon completion of the Remaining Work, another inspection shall be made that shall constitute the Final Inspection, provided the Remaining Work has been completed to the satisfaction of the

District. If the remaining work has been completed to the satisfaction of the District, the District shall make the final acceptance and notify the Contractor in writing of this acceptance as of the date of Final Inspection.

- D. Final Completion:** The date when all Work for the total project has been completed in accordance with the terms of the Contract Documents and has been inspected following completion of Work identified in the Punch list Inspection and accepted by the Architect and the District. Final Completion is also sometimes referred to as Final Acceptance.

END OF SECTION 00800



CONTRA COSTA COMMUNITY COLLEGE DISTRICT

500 Court Street, Martinez, CA 94553

SUBSTITUTION REQUEST FORM

Contractor Name: _____
Contract #: _____

RFS # _____ Date: _____

DSA Application #: 01-115195

Campus: Diablo Valley College

Project No., Name: D-642 Softball Bleachers - Increment 2 (Bleachers)

Contractor pursuant to General Conditions submits the proposed items. If the District accepts such items so described, the undersigned may furnish such item with all necessary labor, materials, equipment and incidentals to perform and complete the Work.

Item No.	SPECIFIED ITEM OR DRAWING	SPECIFICATION SECTION	PROPOSED SUBSTITUTION (and name of Subcontractor if different)

CERTIFICATION

Under penalty of perjury under the Laws of California, I certify that the proposed substitution will be readily available, perform adequately the functions and achieve the results called for by the design concept, be similar in substance to that specified, and be suited to the same use as that specified in Contract Documents.

Contractor: _____

(Please print name of company) Name and Title (print/type) Contractor Authorized Representative Date

A. Does the substitution affect dimensions shown on Drawings?
B. Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution?
C. What effect does the substitution have on other trades?
D. Will substitution cause change to Project Schedule, or to critical delivery dates? Add ? Shorten ?
E. Differences between proposed substitution and specified item?
F. What is the Cost Differential including all mark-ups?
G. Are Manufacturer's guarantees for the proposed item the same as for item specified? Explain differences.
H. The undersigned accepts full responsibility for delays caused by redesign of other items of the Work necessitated by substitution.
I. The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

<p>A/E Response:</p> <p><input type="radio"/> Accepted</p> <p><input type="radio"/> Not Accepted</p> <p><input type="radio"/> Accepted As Noted</p> <p><input type="radio"/> Received Too Late</p> <p>BY: _____ Date: _____</p>	<p>District Representative Response:</p> <p><input type="radio"/> Accepted</p> <p><input type="radio"/> Not Accepted</p> <p><input type="radio"/> Accepted As Noted</p> <p><input type="radio"/> Received Too Late</p> <p>By: _____ Date: _____</p>
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SECTION 01015

ADDITIONAL REQUIREMENTS FOR DSA-APPROVED PROJECTS

PART 1 - GENERAL

1.01 GENERAL

The following additional requirements apply to this Project that is being reviewed by the Division of the State Architect (DSA).

1.02 ADDITIONAL REQUIREMENTS

- A. In addition to the duties specified in the Contract Documents, the duties of the Contractor shall be in accordance with the requirements specified in, Title 24, California Code of Regulations (CCR).
- B. In addition to the duties specified in the Contract Documents, the duties of the Architect and the Architect's consultants shall be in accordance with the requirements specified in Part 1, Title 24, CCR.
- C. DSA is not subject to arbitration proceedings.
- D. Notify DSA at start of construction in accordance in Part 1, Title 24, CCR.
- E. Changes: DSA defines all addenda and change orders as Construction Change Documents (CCD.) All CCD shall be submitted for DSA approval. Do not begin any work under an CCD until DSA approval is obtained. CCDs shall be in accordance in Part 1, Title 24, CCR.
 - 1. Submit DSA 140 Form for Category A changes defined as construction changes to or affecting Structural Safety, Fire Life Safety or Accessibility.
 - 2. Submit DSA 141 Form for Category B changes defined as construction changes **NOT** affecting Structural Safety, Fire Life Safety or Accessibility.
- F. Do not begin work under a written order until a CCD has been submitted to and approved by DSA in accordance with Part 1, Title 24, CCR. Substitutions effecting structural, fire/life/safety or access compliance shall be submitted as CCDs for DSA approval. The Contractor will be responsible for the additional architectural and engineering costs associated with the review and regulatory processing of these substitutions.
- G. Unless otherwise indicated or specified, perform the work in conformance with the latest edition of applicable regulatory requirements. A copy of Part 1 and Part 2 of Title 24, CCR shall be available on the Project site. The codes adopted by the City, County, State and Federal agencies shall govern minimum requirements for this Project.
- H. Contractor shall submit verified reports in accordance with Part 1, Title 24, CCR.

- I. DSA may supervise construction, reconstruction, or repair in accordance with Part 1, Title 24, CCR.
- J. Construction shall be observed by a full-time Project Inspector approved by DSA in accordance with Part 1, Title 24, CCR.
- K. Testing requirements of the DSA approved District's Testing Laboratory shall be in accordance of Part 1, Title 24, CCR.
- L. Special Inspection on masonry construction, glued laminated lumber, wood framing using timber connectors, ready-mixed concrete, gunite, prestressed concrete, high strength steel bolt installation, welding, pile driving, and mechanical and electrical work shall be as required by Part 1, Title 24, CCR. The costs of special inspection will be paid for by the District.
- M. DSA Box: The Contractor shall submit DSA required documents via DSA Box.
- N. DSA Box.com is a secure cloud based collaborative solution initiated by the DSA to allow greater transparency and communication between DSA field engineers and designated stakeholders.
 - 1. Forms which historically were mailed, processed and filed in a cabinet can now be posted on-line and viewed almost immediately.
 - 2. The Contractor shall receive authorization to access DSA Box via invitation by email from Box.com indicating that the Contractor are being invited to share or collaborate on a file or folder that relates to a specific project. Please check your email "junk folder," as your spam filter may not recognize the sender of the initial invitation.
 - 3. Additional instructions shall be provided during the course of the project.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01015

SECTION 01730

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes procedural requirements for cutting and patching.
- B. Related Sections:
 - 1. Cast-in-Place Concrete: Section 03300.

1.02 DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.03 SUBMITTALS

- A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to Existing Construction: Describe anticipated results.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. District's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.04 QUALITY ASSURANCE

- A. Visual Requirements: Do not cut and patch construction in a manner that would, in Architect's opinion, reduce the aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.05 WARRANTY

Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Comply with requirements specified in other Sections of these Specifications.
- B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.

3.02 PREPARATION

- A. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- B. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- C. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.

3.03 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. Asphaltic Concrete: Cut using a cutting machine, such as an abrasive saw.
 - 2. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.

3. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 4. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

END OF SECTION 01730

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 SUMMARY

- A. Work Included: Furnish all labor, materials, equipment, and related work necessary to complete cast-in place concrete for flatwork concrete, including reinforcement, concrete materials, mix design, placement procedures, finishes, and materials and procedures for anchorage to concrete work as indicated in the Drawings and specified herein.
 - 1. Seal all exposed interior concrete slab on grade with 2 coats.
 - 2. Under slab vapor barrier at interior concrete slab on grade.
- B. Related Work:
 - 1. Cutting and Patching: Section 01730.
 - 2. Elevated Bleachers: Section 13125.

1.02 REFERENCED STANDARDS

- A. Requirements of GENERAL CONDITIONS and DIVISION 1 apply to all Work in this Section.
- B. Published specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to Work of this Section where cited by abbreviations noted below (latest editions apply).
 - 1. California Building Code 2013 (CBC.)
 - 2. American Society for Testing and Materials (ASTM).
 - a. ASTM A82 Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
 - b. ASTM A370 Standard Test Methods and Definitions for Mechanical Testing of Steel Products.
 - c. ASTM A615 Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 - d. ASTM C31 Standard Practice for Making and Curing Concrete Test Specimens in the Field.
 - e. ASTM C33 Standard Specification for Concrete Aggregates.
 - f. ASTM C39 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - g. ASTM C88 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
 - h. ASTM C94 Standard Specifications for Ready-Mixed Concrete.

- i. ASTM C131 Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
 - j. ASTM C143 Standard Test Method for Slump of Hydraulic-Cement Concrete.
 - k. ASTM C150 Standard Specification for Portland Cement.
 - l. ASTM C289 Standard Test Method for Potential Alkali-Silica Reactivity of Aggregates (Chemical Method.)
 - m. ASTM C330 Standard Specification for Lightweight Aggregates for Structural Concrete.
 - n. ASTM C494 Standard Specification for Chemical Admixtures for Concrete.
 - o. ASTM C920 Standard Specification for Elastomeric Joint Sealants.
 - p. ASTM D448 Standard Classification for Sizes of Aggregate for Road and Bridge Construction.
 - q. ASTM D1751 Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types.)
 - r. ASTM D2419 Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
 - s. ASTM E329 Standard Specification for Agencies Engaged in Construction Inspection, Special Inspection, or Testing Materials Used in Construction.
 - t. ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
3. American Concrete Institute:
 - a. ACI 117 Standard Specification for Tolerances for Concrete Construction and Materials.
 - b. ACI 301 Specification for Structural Concrete for Buildings.
 - c. ACI 304 Recommended Practice for Measuring, Mixing and Placing Concrete.
 - d. ACI 305 Recommended Practice for Hot Weather Concreting.
 - e. ACI 306 Recommended Practice for Cold Weather Concreting.
 - f. ACI 318 Building Code Requirements for Reinforced Concrete.
 - g. ACI 347 Guide to Formwork for Concrete.
 4. State of California, Business and Transportation Agency Division of Highways' "Materials Manual," (CMM).
 - a. CMM California Test 217: Method of Test For Sand Equivalent.
 - b. CMM California Test 227: Method of Test For Evaluating Cleanness Of Coarse Aggregate.
 5. State of California Department of Transportation Standard Specifications (Caltrans Specifications-CS.)
 6. Concrete Reinforcing Steel Institute, Manual of Standard Practice (CRSI Manual).
 7. Concrete Reinforcing Steel Institute (CRSI):
 - a. Recommended Practice for Placing Reinforcing Bars.

- b. Manual of Standard Practice.
- 8. Department of the State Architect (DSA): Interpretation of Regulations: IR 17-10 Sampling, Testing and Tagging of Reinforcing Bars.
- 9. Leadership in Energy & Environmental Design (LEED), United States Green Building Council.
- 10. Forest Stewardship Council (FSC.)

1.03 QUALITY ASSURANCE

- A. Before starting concrete work, Contractor shall provide the Testing Laboratory with all materials and/or information regarding materials, he proposes to use in the work. The Testing Laboratory will determine the mix or mixes with slumps as specified.
- B. Requirements of ACI 301 shall govern work, materials and equipment related to this Section; specifications herein set minimum results required, and references to procedures are intended to establish minimal guides.
- C. The Contractor shall be responsible for quality of concrete in place and shall bear burden of proof that concrete meets minimum requirements.
- D. Placing of concrete by means of pumping will be an acceptable method of placement providing that the Contractor can demonstrate that:
 - 1. Specified concrete strengths will be met.
 - 2. Equipment has a record of satisfactory performance under similar conditions and using a similar mix.
 - 3. Trial batches have been made.
- E. Aggregate tests per CBC Section 1903A and ACI 318, Section 5.2 and 5.3.
 - 1. Test aggregates in accordance with ASTM C131 for compliance with requirements of ASTM C33 (maximum 50% abrasion loss).
 - 2. Test aggregates in accordance with ASTM C289 for alkali reactivity.
- F. District's Testing Agency will perform concrete compression tests and other quality control testing and inspection as indicated.
- G. Batch Plant Inspection will be provided in accordance with CBC Section 1901A.4, CBC Section 1705A.3.2 and CBC Section 1705A.3.3. Waiver of Batch Plant inspection shall be subject to the requirements of CBC Section 1705A.3.3, Item 1.
- H. Installer Qualifications: An experienced installer who has completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- I. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products complying with ASTM C94 requirements for production facilities and equipment.
- J. All reinforcing steel shall be accompanied by producer's certificates of mill analysis in accordance with CBC Section 1913A.2 and ACI 318.

1. District's testing agency will perform one tensile test and one bend test for each 10 tons or fraction thereof of each bar size from each source in accordance with CBC Section 1903A and ACI 318.
 2. If mill certificates are not available, sampling and testing rate shall be one tensile test and one bend test for each 2½ tons or fraction thereof of each bar size from each source. Such tests shall be made by an independent testing agency paid for by the Contractor. Conform to DSA IR 17-10 and ASTM A370.
- K. Testing and inspection of drilled-in expansion bolts and adhesive grout shall conform to the drawings and the requirements of CBC Section 1913A.7.

1.04 DESIGN REQUIREMENTS

- A. Sustainable Design Requirements:
1. Steel reinforcing used in work in this Section are intended contribute to meeting requirements for recycle content outlined in LEED NC3.0, Credit MR4.1 or Credit MR4.2.
 2. Design Mixtures used in work in this Section are intended to contribute to meeting requirements for the design mixture for innovation and design process outlined in LEED ID Credit 1.
 3. Aggregate base used in work in this Section are intended contribute to meeting requirements for total recycle content of 50% in LEED NC3.0, Credit MR4.1 or Credit MR4.2.
 4. Lumber used in work of this Section is to come from forests that have been certified "well managed" forestry sources in accordance with programs of FSC and is tended to contribute to meeting requirements for certified wood outlined in LEED NC3.0 Credit MR7.
 - a. Composition wood panels used in work of this Section are intended to:
 - i. Contribute to meeting recycled content outlined in LEED NC3.0 Credit MR4.
 - ii. Reduce quantity of indoor air contaminants that are harmful to comfort and well-being of installers and occupants and are not to contain added urea-formaldehyde resins outlined in LEED NC3.0 Credit EQ4.4.
 - iii. Adhesives used in work of this Section are intended to reduce quantity of indoor air contaminants that are harmful to comfort and well-being of installers and occupants and are to be formulated to be within VOC content limits outlined in LEED NC3.0, Credit EQ4.1.
 5. Regional Materials: Give preference to manufacturers and fabricators whose facilities are within 500-mile radius of the project site and to materials that are harvested and extracted within 500-mile radius of the project site to contribute to meet requirements for regional materials outlined in LEED NC3.3 Credit MR5.

1.05 SUBMITTALS

- A. Submit in accordance with the provisions of the General Conditions, Article 3.11.

- B. The Contractor's Testing Laboratory's certificate of compliance.
- C. The Contractor shall submit:
 - 1. Certified copies of mix designs for each concrete class specified including compressive strength test reports.
 - 2. Certification that materials meet requirements specified.
 - 3. Samples only as requested by the Architect.
 - 4. Certification from vendor that samples originate from and are representative of each lot proposed for use.
- D. The District's Testing Agency will submit reports on tests and inspections performed to the District, the Architect, the Contractor, and the Division of the State Architect.
- E. Shop Drawings:
 - 1. Show construction joint locations and details.
 - 2. Steel Reinforcement Shop Drawings: Details of fabrication, bending, and placement, prepared according to ACI 315, "Details and Detailing of Concrete Reinforcement." Include material, grade, bar schedules, stirrup spacing, bent bar diagrams, arrangement, and supports of concrete reinforcement. Include special reinforcement required for openings through concrete structures.
- F. Schedule of placing for the Architect's review before starting Work.
- G. LEED Submittals:
 - 1. Steel Reinforcing: Submit letter or product data from manufacture indicating recycled content. Designate percentage of post consumer and post industrial recycled content.
 - 2. Design Mixture: Submit letter or product data from manufacture indicating innovation for each concrete mixture containing fly ash or slag cement as a replacement for Portland cement or other Portland cement replacements and for equivalent concrete mixtures that do not contain Portland cement replacements.
 - 3. Aggregate Base: Submit letter or product data from manufacture indicating recycled content. Designate percentage of post consumer and post industrial recycled content.
 - 4. Wood:
 - a. Certified Wood: Submit FSC chain-of-custody certificate number with each delivery.
 - b. Wood Composite Panels:
 - i. Recycled Content: Submit letter or product data from manufacture indicating recycled content. Designate percentage of post consumer and post industrial recycled content.
 - ii. Urea-Formaldehyde Resin Content: Submit letter or product data from manufacture stating that materials used in this project contain no added urea-formaldehyde resins.
 - c. Adhesives: Submit letter of product data from manufacture stating that adhesives used in work of this Section do not exceed VOC content limits established in South Coast Air Quality Management District Rule 1168.

5. Regional Materials: Submit letter of product data form manufacture or fabricator stating products used in this project were extracted and manufactured locally; identify location of origin listing city, state and country. If only portion of product qualifies for this credit, submit product data or letter clearly designating percent age of product that is extracted and manufactured locally.
6. Submit hardcopies of completed Online Documentation required for LEED MR Credit 4.1 or 4.2, MR Credit 5, MR Credit 7, EQ Credit 4.1, EQ Credit 4.4 and ID Credit 1.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Ensure storage facilities are weather tight and dry.
- B. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use.
- C. Store bulk cement in bins capable of preventing exposure to moisture.
- D. Use sacked cement in chronological order of delivery. Store each shipment so that it may be readily distinguishable from other shipments.

PART 2 - PRODUCTS

2.01 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 1. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
 - a. Medium-density overlay, Class 1, or better, mill-release agent treated and edge sealed.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Chamfer Strips: Wood, metal, PVC, or rubber strips, $\frac{3}{4}$ by $\frac{3}{4}$ -inch, minimum.
- D. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- E. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 1. Furnish units that will leave no corrodible metal closer than 1-inch to the plane of the exposed concrete surface.
 2. Furnish ties that, when removed, will leave holes not larger than 1-inch in diameter in concrete surface.
 3. Furnish ties with integral water-barrier plates to walls indicated to receive dampproofing or waterproofing.
- F. Keyways: Greenstreak 521, $3\frac{1}{2}$ -inch plastic keyway; or equal.

- G. Waterstop: Cetco, Volclay WaterStop –RX 101 with WB Adhesive or SB-Primer or equal.

2.02 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A615 Grade 60, deformed.
- B. Plain-Steel Wire and Spirals: ASTM A82, as drawn.

2.03 REINFORCEMENT ACCESSORIES

- A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete or fiber-reinforced concrete of greater compressive strength than concrete, and as follows:
 - 1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected or CRSI Class 2 stainless-steel bar supports.
- B. Joint Dowel Bars: Plain-steel bars, ASTM A615 Grade 60. Cut bars true to length with ends square and free of burrs.

2.04 EXPANSION ANCHORS

- A. Expansion anchors: Hilti Kwik Bolt TZ, 304 Stainless Steel (ICC ES ESR 1917.)
- B. Epoxy Adhesive: Two component material suitable for anchoring rebar into dry or damp concrete. Same as Covert's CIA-Gel 7000, Hilti's HIT HY-150 or approved equal based on allowable values in ICC ES ESR 5193.

2.05 CONCRETE CLASSES

TYPE/LOCATION	STRENGTH	AGGREGATE	WEIGHT	SLUMP
Normal Weight Concrete (Interior)	3000	3/4	145	4
Normal Weight Concrete (Exterior)	3000	1½	150	4

- A. Strength: Compressive strength in psi after 28-days when tested in accordance with ASTM C39. All concrete shall develop compression strength specified in 28-days. To meet above requirements, mix shall be designed such that average compressive strength will exceed specified 28-day strength by an amount as specified by ACI 318.
- B. Aggregate: Maximum size in inches.
- C. Weight: Pounds per cubic foot, air dry.
- D. Slump: In inches when tested in accordance with ASTM C143.

2.06 UNDER SLAB VAPOR BARRIER

- A. Vapor barrier must have all of the following qualities:
 - 1. Permeance of less than 0.01 Perms as tested in accordance with ASTM E1745, Section 7.
 - 2. Other performance criteria:
 - a. Strength: ASTM E1745 Class A.
 - b. Thickness: 15 mils minimum.
 - 3. Vapor barrier products:
 - a. Basis of Design: Stego Wrap Vapor Barrier (15-mil) by Stego Industries.
 - b. Or equal products that meet all of the specified performance criteria.
 - 4. Accessories:
 - a. Seam tape: Stego Tape by Stego Industries or equal.
 - b. Vapor-proofing mastic: Stego Mastic by Stego Industries
- B. Sand Cover: Clean mixture of crushed stone, crushed gravel, and manufactured or natural sand; ASTM D448, Size 10, with 100 percent passing a No. 4 sieve and 10 to 30 percent passing a No. 100 sieve; meeting deleterious substance limits of ASTM C33 for fine aggregates.
- C. Granular Fill: Clean mixture of crushed stone or crushed or uncrushed gravel; ASTM D448, Size 57, with 100 percent passing a 1½-inches sieve and 0 to 5 percent passing a No. 8 sieve

2.07 MATERIALS

- A. General Requirements:
 - 1. Cement and aggregates shall have proven history of successful use with one another. Sources of cement and aggregate shall remain unchanged through-out work unless the Architect approves request for change made at least 10-days prior to anticipate date of casting.
 - 2. Ready-mixed concrete shall meet requirements of ASTM C94.
 - 3. Deviations in properties of materials tested by the District's Testing Agency shall be cause for their rejection pending additional test results and redesign of mix by the Contractor's Testing Laboratory.
 - 4. No frozen aggregates will be permitted.
- B. Cements: ASTM C150, Type II. Use one brand of cement throughout project unless otherwise acceptable to Architect.
- C. Fly Ash: ASTM C618, Type F, max. 15%.
 - 1. Type I/II typical unless otherwise noted.
 - 2. Type V when in contact with soil.
- D. Aggregates:
 - 1. Coarse: ASTM C33. Coarse aggregate shall consist of a clean, hard, fine grained, sound crushed rock, or washed gravel or a combination of both. It shall be free from oil, organic matter or other deleterious substances and shall not contain more than two percent by weight of shale or cherty material. "Cleanness value shall not be less than 75 when tested per CMM California Test 227 and conforming to CBC Section 1903A and ACI 318, Section 5.2 and 5.3.

2. Fines: ASTM C33. Sand equivalent shall be not less than 75 when tested as per ASTM D2419.
 3. Provide aggregates from a single source for exposed concrete.
 4. Recycled porcelain, concrete, stone, or other recycled content material conforming to requirements of mix design.
 - a. Recycled Content: Post-consumer recycled content and pre-consumer recycled content at Contractor's option for a total of 50% minimum.
- E. Water: Clean and potable, free from impurities detrimental to concrete.
- F. Water-Reducing Admixture: ASTM C494, Type A, non-lignini sulfonate. Same as Grace Construction Materials' "WRDA with Hycol"; Master Builders "Pozzolith 322N"; Sika Corp.'s "Plastocrete 161"; or equal product.
1. Air Entraining Admixture: ASTM C260, certified by manufacturer to be compatible with other products. Same as W.R. Grace's "Daravair", Master Builders' "Micro-Air", Sika Corp.'s "Sika Aer", or equal product substituted per Section 01630.
 2. High-Range Water-Reducing Admixture (Super Plasticizer): ASTM C494, Type F or Type G. Same as W.R. Grace's "WRDA 19", Master Builders' "Rheobuild", Sika Corp.'s "Sikament", or equal.
 3. Water Reducing, Accelerator Admixture: ASTM C494, Type E. Same as W.R. Grace's "Daraset", Master Builder's "Pozzutec 20", Euclid's "Accelgurad 80", or equal.
 4. Water Reducing, Retarding Admixture: ASTM C494, Type D. Same as W.R. Grace's "Daratard-17", Master Builders' "Pozzolith R", Sika's "Plastiment", or equal product.
 5. Fibrous Reinforcement: Engineered polypropylene fibers designed for secondary reinforcement of concrete slabs. Same as W.R. Grace's "Grace Fibers", Euclid's "Fiberstrand 100", Fibermesh's "Fibermesh", or equal product.
- G. Admixtures: Only as approved by the Architect. Use of admixtures requires DSA approval.
- H. Non-Shrink Grout: Premixed high strength grout requiring only addition of water at the site. Same as Master Builder's "Masterflow 928 Grout"; Burke's "Non-Ferrous, Non-Shrink Grout", or equal product..
- I. Concrete Sealer: Tamms Industries, Chemstop WB Regular or equal product. Clear water repellent treatment, blend of six resins containing no silicones or stearates, no darkening or change of color.
- J. Hardener, Clear Liquid Type: Grace construction Materials' "Hornstone Crystal Chemical Hardener"; Master Builder's "Mastercron"; Sonneborn-Contech's "Lapidolith"; Upco Co.'s "Vitrox 4701"; or equal product.
- K. Joints:
1. General: Provide all pavement joints, grooves, dummy joints, construction joints, etc.
 - a. Set expansion joint material to receive filler ¾-inch below finished surface of pavement or as shown on the Drawings.

- After concrete has set, fill all grooves, dummy joints, construction joints, etc.
- b. After concrete has set, fill all grooves, dummy joints, construction joints, etc., with polyurethane (self-leveling) complying with ASTM C920, Type M, Grade NS, Class 25 in grey, or equal.
2. Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber.

2.08 MIXES

A. General Requirements:

1. The Contractor shall perform tests or assemble the necessary data indicating conformance with specifications.
2. For each mix submit data showing that proposed mix will attain the required strength in accordance with requirements of CBC Section 1905A.1.2 and ACI 318, Section 5.6.
3. The Contractor shall instruct Laboratory to base mix design on use of materials tested and approved by the District's Testing Agency.
4. Mix shall be designed, tested, and adjusted if necessary in ample time before first concrete is scheduled to be placed. Laboratory data and strength test results for revised mix design shall be submitted to Architect prior to using in project.
5. Insure mix designs will produce concrete to strengths specified and of uniform density without segregation.
6. If mix yield exceeds 1-cubic yard, modify mix design to no more than one cubic yard without changing cement content.
7. The Contractor's mix designs shall be subject to review by the Architect and by the District's Testing Agency.
8. Introduction of calcium chloride will not be permitted.
9. Unspecified admixtures will not be permitted unless the Architect reviews, the Contractor modifies mix designs as necessary, and modifications are accepted by the District's Testing Agency.

B. Slab-on-Grade Mix requirements

1. Maximum water/cement ratio of 0.45.
2. Maximum fly ash content of 15% (as percentage replacement of cement).
3. Do not use air entrainment additives.
4. Use of Water-Reducing admixture is required. High Range Water-Reducing admixture (super plasticizer) shall be used when required to maintain workability and pumpability.

C. Patching Mortar: Mix in proportions by volume of one part cement to two parts fine sand.

D. Non-Shrink Grout: Follow approved manufacturer's printed instructions and recommendations.

2.09 MIXING

A. Batching Plant Conditions:

1. Ensure equipment and plant will afford accurate weighing, minimize segregation and will efficiently handle all materials to satisfaction of the Architect and the District's Testing Agency.
 2. Replace at no additional expense equipment the Architect and the District's Testing Agency deem inadequate or unsuitable.
 3. Use approved moisture meter capable of determining moisture content of sand.
- B. General Requirements:
1. Thoroughly clean concrete equipment before use for architectural concrete mixes to avoid contamination.
 2. Mix cement, fine and coarse aggregates, admixtures and water to exact proportions of mix designs. Method of mixing shall comply with CBC Section 1903A and ACI 318, Section 5.2 and 5.3.
 3. Measure fine and coarse aggregates separately according to approved method which provides accurate control and easy checking.
 4. Adjust grading to improve workability; do not add water unless otherwise directed.
 5. Maintain proportions, values, or factors of approved mixes throughout work.
 6. Mix concrete in transit mixers five minutes immediately prior to discharge in addition to mixing as called for by ACI 304 and ASTM C94.
- C. Admixtures: Use automatic metering dispenser to introduce admixture into mix. Dispenser shall be recommended and calibrated by admixture manufacturer.

2.10 SOURCE QUALITY CONTROL

- A. The District's Testing Agency will:
1. Review mix designs, certificates of compliance, and samples of materials the Contractor proposes to use.
 2. Test and inspect materials, as necessary, in accordance with ACI 318 and CBC Sections 1903A, CBC Section 1901A.4 and ACI 318 for compliance with requirements.
 3. Take samples as required from the Contractor's designated sources.
 4. Take one grab sample for each 100 tons of Portland cement except that, when used in bulk loading ready-mix plants where separate bins for pretested cement are not available, take grab samples for each shipment of cement placed in bin with not less than one sample being taken for each day's pour and subsequently test such samples if required by the Architect who may be so advised by Division of the State Architect.
 5. Test both coarse and fine aggregate by use of solution of sodium or magnesium sulfate, or both whenever in the judgment of the Architect such tests are necessary to determine quality of material. Perform such tests in accordance with ASTM C88. Loss shall not exceed 6-percent of either fine or coarse aggregate. Aggregate failing to comply with this requirement may be used in the Work provided it contains less than 2-percent of shale and other deleterious particles and shows a loss in soundness test of not more than 10-percent when

- tested in the sodium sulphate solution. Test aggregates as required by CBC Section 1903A.
6. Test for sand equivalent of fine aggregate in accordance with CMM California Test 217.
 7. Test for cleanness value of coarse aggregate in accordance with CMM California Test 227.
 8. Inspect plant prior to any work to verify following:
 - a. Plant is equipped with approved metering devices for determining moisture content of fine aggregate.
 - b. Other plant quality controls are adequate.
 9. Continuously inspect quality and quantity of materials used in transit mixed concrete, in batched aggregates and ready-mixed concrete at mixing plant or other location per CBC requirements where other materials are measured.
- B. Waiver of Batch Plant Inspection:
1. Continuous batch plant inspection may be waived in accordance with CBC requirements if the plant complies with ASTM C94 and has been certified by an agency acceptable to DSA to comply with the requirements of the National Ready Mix Concrete Association.
 2. When continuous batch plant inspection is waived, the following requirements shall apply:
 - a. Testing Agency shall check the first batching at the start of work and furnish mix proportions to the licensed Weigh master.
 - b. Licensed Weigh master shall identify material quantities and certify each load by a ticket.
 - c. Project Inspector shall collect truck mix tickets with load identification and maintain a daily record of placement. Trucks without a load ticket identifying the mix shall be rejected. Copies of daily placement record shall be submitted to DSA.
 - d. At the end of the project, the Weigh master shall submit an affidavit to DSA certifying that all concrete supplied conforms to proportions established by mix designs.

PART 3 - EXECUTION

3.01 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until concrete structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
 1. Class A, 1/8-inch.
- D. Construct forms tight enough to prevent loss of concrete mortar.

- E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical. Kerf wood inserts for forming keyways, reglets, recesses, and the like, for easy removal.
 - 1. Do not use rust-stained steel form-facing material.
- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- H. Chamfer exterior corners and edges of permanently exposed concrete.
- I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
 - 1. Seal edges abutting masonry surfaces with tape or sealants to prevent runoff onto masonry.
- L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.02 REMOVING AND REUSING FORMS

- A. General: Formwork, for sides of beams, walls, columns, and similar parts of the Work, that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete provided concrete is hard enough to not be damaged by form-removal operations and provided curing and protection operations are maintained.
- B. Leave formwork, for beam soffits, joists, slabs, and other structural elements, that supports weight of concrete in place until concrete has achieved the following:
 - 1. At least 70 percent of 28-day design compressive strength.
 - 2. Determine compressive strength of in-place concrete by testing representative field-cured test specimens according to ACI 301.
 - 3. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
- C. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.

- D. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.03 VAPOR BARRIER

- A. Place, protect, and repair vapor-barrier sheets according to ASTM E1643 and manufacturer's written instructions.
 - 1. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement.
 - 2. Lap vapor barrier over footings and/or seal to foundation walls.
 - 3. Overlap joints - inches and seal with manufacturer's tape.
 - 4. Seal all penetrations (including pipes) per manufacturer's instructions.
 - 5. No penetration of the vapor barrier is allowed except for reinforcing steel and permanent utilities.
 - 6. Repair damaged areas by cutting patches of vapor barrier, overlapping damaged area 6-inches and taping all sides with tape.
- B. Sand Cover: Cover vapor retarder with fine-graded granular material, moisten, and compact with mechanical equipment to elevation tolerances of plus 0-inch or minus 3/4-inch.

3.04 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
 - 1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

3.05 CONCRETE PLACEMENT EXAMINATION

- A. Examine units of work to be cast and verify that:
 - 1. Construction of formwork is complete.
 - 2. Required reinforcement, inserts, and embedded items are in place.
 - 3. Form ties at construction joints are tight.
 - 4. Concrete-receiving places are free of debris.
 - 5. Dampen subgrade or sand course for slabs-on-grade. Do not saturate.
 - 6. Depths of depressed slab conditions are correct for delayed finish noted and for its proper bonding to concrete.
 - 7. Conveying equipment is clean and properly operating.
 - 8. The Architect has reviewed formwork and reinforcing steel and that preparations have been checked with the Project Inspector.
- B. Do not begin casting before unsatisfactory conditions have been corrected.

3.06 PREPARATION

- A. Ensure availability of sufficient labor, equipment and materials to place concrete correctly in accordance with scheduled casting.
- B. Protect finished surfaces adjacent to concrete-receiving places.
- C. Clean transportation and handling equipment at frequent intervals and flush thoroughly with water before each day's run. Do not discharge wash water into concrete form.
- D. Construction Joints: Clean and roughen all construction joint contact surfaces by removing all surface laitance and exposing sound mortar. Sandblasting and bush-hammering are acceptable methods.

3.07 PLACING

- A. The Inspector of Record, Architect, Testing Laboratory and DSA shall be notified at least 48 hours before placing concrete.
- B. Place concrete in accordance with CBC Section 1903A and ACI 318.
- C. Place concrete in cycles as a continuous operation to permit proper and thorough integration and to complete scheduled placement. Place no concrete where sun, wind, heat, or facilities prevent proper finishing and curing.
- D. Convey concrete as rapidly and directly as practicable to preserve quality and to prevent separation from rehandling and flowing; do not deposit concrete initially set. Cast concrete within ninety (90) minutes after adding water unless otherwise noted. Retempering of concrete which has partially set will not be permitted.
- E. Take precautions to avoid damage to under-slab moisture barrier and displacement of reinforcement and formwork.
- F. Deposit concrete vertically in its final position. Avoid free falls in excess of six feet where reinforcement will cause segregation and in typical conditions unless the Architect approves otherwise.
- G. Keep forms and reinforcement clean above pour line by removing clinging concrete with wire brush before casting next lift. Also remove leakage through forms.
- H. Interruption in casting longer than 60-minutes shall be cause for discontinuing casting for remainder of day. In this event, cut back concrete and provide construction joints as the Architect directs; clean forms and reinforcement as necessary to receive concrete at a later time.
- I. Hot Weather Concreting: Conform to ACI 305 and following requirements when mean daily temperature rises above 75 degrees F.
 - 1. An upper temperature limit of concrete mixes shall be established by the Contractor for each class of concrete. Concrete temperature during placing shall not be so high as to cause difficulty from loss of slump, flash set, or cold joints, and shall not exceed 90 degrees F. Other project climatic conditions detrimental to concrete quality such

- as relative humidity, wind velocity, and solar radiation shall also be considered.
2. Trial batches of concrete for each mix design shall be made at the limiting mix temperature selected. In lieu of trial batches, compression strength test reports (20 minimum) at the limiting temperature for each proposed mix shall be submitted to the District's testing laboratory for review.
 3. Practices to maintain concrete below maximum limiting temperature shall be in accordance with ACI 305. Concrete ingredients may be cooled before mixing, or flake ice or well-crushed ice of a size that will melt completely during mixing may be substituted for part of the mixing water.
 4. Practices to avoid the potential problems of hot weather concreting shall be employed by the Contractor in accordance with ACI 305.
 5. When the temperature of the reinforcing steel or steel deck forms is greater than 120 degrees F, reinforcing and forms shall be sprayed with water just prior to placing the concrete.
- J. Cold Weather Concreting:
1. No placement of concrete will be allowed at temperatures below 20 degrees Fahrenheit or if mean daily temperature for curing period is anticipated to be below 20 degrees F.
 2. No concrete placement will be allowed on frozen subgrade.
 3. Conform to ACI 306 and following requirements when mean daily temperature falls below 40 degrees F.
 - a. Reinforcement, forms or ground to receive concrete shall be completely free from frost.
 - b. Concrete at time of placement for footings shall have temperature no lower than 50 degrees F, for all other concrete this minimum temperature at time of placement shall be 60 degrees F. Maximum temperature shall be 90 degrees F.
 - c. Concrete shall be maintained at temperature no lower than 50 degrees F for minimum 7-day period after placement by means of blanket insulation, heaters, or other methods as approved by the Architect.
 - d. Use of calcium chloride or admixtures containing calcium chloride as accelerators will not be permitted.
 - e. The Contractor shall keep a record of concrete surface temperature for first 7-days after each pour. This record shall be open to inspection by the Architect.
- K. Consolidating:
1. Use vibrators for thorough consolidation of concrete.
 2. Provide vibrators for each location during simultaneous placing to ensure timely consolidation around reinforcement, embedded items and into corners of forms; ensure availability of spare vibrators in case of failures. Vibrate through full depth of freshly placed concrete.
 3. Do not place vibrators against reinforcement, attach to forms, or use to spread concrete.

4. Exposed Concrete: Vibrate with rubber type heads and, in addition, spade along forms with flat strap or plate.

3.08 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints:
 1. Verify location and conformance with typical details; provide only where designated or approved by the Architect. Comply with ASI 318.
 2. All horizontal and vertical construction joints to be thoroughly sandblasted to clean and roughen entire surface to minimum ¼-inch relief exposing clean coarse aggregate solidly embedded in mortar matrix.
 3. Just prior to depositing concrete, the surface of the construction joint shall be thoroughly wetted.
- C. Contraction (Control) Joints in Slabs-on-Grade:
 1. Construct contraction joints in slabs-on-ground to form panels of patterns indicated on Construction Drawings. Use saw cuts 1/8-inch x ¼-inch slab depth, unless otherwise indicated.
 2. Time saw cutting to allow sufficient curing of concrete to prevent ravelled or broken edges.
 3. Contraction joints in unexposed floor slabs may be formed by saw cuts as soon as possible after slab finishing as may be safely done without dislodging aggregate.
 4. If joint pattern not shown, provide joints not exceeding 15-feet in either direction and located to conform to bay spacing wherever possible (at column centerlines, half bays, third-bays).

3.09 CURING

- A. General Requirements:
 1. Take curing measures immediately after casting and for measures other than application of curing compound, extend for seven days. The Architect may recommend longer periods based upon prevailing temperature, wind and relative humidity. Comply with CBC Section 1903A and ACI 318.
 2. Avoid alternate wetting and drying and fluctuations of concrete temperature.
 3. Protect fresh concrete from direct rays of sun, rain, freezing, drying winds, soiling, and damage.
 4. Do not permit curing method to affect adversely finishes or treatments applied to finish concrete.
- B. Curing Method, Typical: Obtain the Architect's approval of alternate measures.
 1. Keep forms and concrete surfaces moist during period forms are required to remain in place.
 2. Apply curing compound per manufacturers' recommendations, except at slabs-on-grade apply curing compound at 150 percent of manufacturer's recommended application coverage rate.

3.10 CLEANING, PATCHING AND DEFECTIVE WORK

- A. Where concrete is under strength, out of line, level or plumb, or shows objectionable cracks, honeycombing, rock pockets, voids, spalling, exposed reinforcement, signs of freezing or is otherwise defective, and, in the Architect's judgment, these defects impair proper strength or appearance of the work, the Architect will require its removal and replacement at the Contractor's expense.
- B. Immediately after stripping and before concrete is thoroughly dry, patch minor defects, form-tie holes, honeycombed areas, etc., with patching mortar. Patch shall match finish of adjacent surface unless otherwise noted. Remove ledges and bulges.
- C. Compact mortar into place and neatly file defective surfaces to produce level, true planes. After initial set, dress surfaces of patches mechanically or manually to obtain same texture as surrounding surfaces.
- D. Rock Pockets:
 - 1. Cut out to full solid surface and form key.
 - 2. Thoroughly wet before casting mortar.
 - 3. Where the Architect deems rock pocket too large for satisfactory mortar patching as described cut out defective section to solid surface, key and pack solid with concrete to produce firm bond and match adjacent surface.
- E. Cleaning
 - 1. Insure removal of bituminous materials, form release agents, bond breakers, curing compounds if permitted and other materials employed in work of concreting which would otherwise prevent proper application of sealants, liquid waterproofing, and other delayed finishes and treatments.
 - 2. Where cleaning is required, take care not to damage surrounding surfaces or leave residue from cleaning agents.
 - 3. Patching of defective concrete requires prior DSA approval.

3.11 PROTECTION

- A. Protect concrete from injurious action of the elements and defacement of any nature during construction operations.
- B. Protect exposed corners of concrete from traffic or use which will damage them in any way.
- C. Make provisions to keep all exposed concrete free from laitance caused by spillage or leaking forms or other contaminants. Do not allow laitance to penetrate, stain, or harden on surfaces, which have been textured.

3.12 FIELD QUALITY CONTROL

- A. The District's Testing Agency will:
 - 1. Perform testing in accordance with ACI 318 and CBC Section 1901A.4 and 1903A.

2. Review concrete mix designs.
 3. Inspect concrete and grout placement continuously.
 4. Test concrete to control slumps according to ASTM C143.
 5. Continuously monitor concrete temperature as it arrives on the site.
 6. Test concrete for required compressive strength in accordance with CBC Section 1905A.1.2 and ACI 318, Section 5.6.
 - a. Make and cure three specimen cylinders according to ASTM C31 for each 50 cubic yards, or fraction thereof, of each class poured at site each day.
 - b. Retain one cylinder for 7-day test and two for the 28-day test.
 - c. Number each cylinder 1A, 1B, 1C, 2A, 2B, 2C, etc; date each set; and keep accurate record of pour each set represents.
 - d. Transport specimen cylinders from job to laboratory after cylinders have cured for 24-hours on site. Cylinders shall be covered and kept at air temperatures between 60 and 80 degrees Fahrenheit.
 - e. Test specimen cylinders at age 7-days and age 28-days for specified strength according to ASTM C39.
 - f. Base strength value on average of two cylinders taken for 28-day test.
- B. Test and inspect materials, as necessary, in accordance with ACI 318, CMM California Test 227 (Coarse Aggregates) and CMM California Test 217 (Fine Aggregates), for compliance with requirements specified in this section.
- C. Testing Agency will inspect all reinforcing and embedded items.
- D. The Contractor shall:
1. Submit ticket for each batch of concrete delivered to job site. Ticket shall bear the following information:
 - a. Design mix number.
 - b. Signature or initials of ready mix representative.
 - c. Time of batching.
 - d. Weight of cement, aggregates, water and admixtures in each batch with maximum aggregate size.
 - e. Total volume of concrete in each batch.
 - f. Notation to indicate equipment was checked for contaminants prior to batching.
 2. Allow access for the District's Testing Agency for taking core specimens of hardened structure and testing specimen according to ASTM C88 and ASTM C42 when laboratory tests of specimen cylinders show compressive strengths below specified minimum.

3.13 SLAB FINISHES

- A. Non-Slip Broom Finish: Apply non-slip broom finish to exterior concrete paving, steps and ramps, and elsewhere as indicated.
1. Immediately after float finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.

2. Medium Broom finish on concrete surface less than 6% slope and Heavy Broom finish on concrete surfaces greater than 6% slope.

3.14 SEALING

- A. Preparation: Remove dirt, loose matter, scale, salt and alkali powder and other foreign matter. Remove oil and grease with solution of trisodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with solution of sodium metasilicate after thoroughly wetting with water; allow to dry.
- B. Application: Sealing product may be used in lieu of curing material.
 1. Conform to manufactures installation and application instructions.
 2. Stir sealer thoroughly before using.
 3. Apply a continuous, uniform film by solvent-resistant low pressure spray only, short nap roller, or lambs wool applicator.
 4. For curing, apply first coat evenly and uniformly as soon as possible after final finishing. Apply additional coats in full strength when all construction is completed and concrete is ready for use and occupancy.
 5. Drying Time per Coat:
 - a. Light Traffic Or Between Coats: 4 hours.
 - b. Normal Traffic: 12 hours.
 - c. Maximum hardness: 7 days.

3.15 CLEAN UP

Perform Work under this Section to keep affected portions of building site neat, clean, and orderly. Remove, immediately upon completion of Work under this Section, surplus materials, rubbish, and equipment associated with or used in performance. Be aware that failure to perform clean-up operations within 24 hours of notice by Architect will be considered adequate grounds for having work done by others at no added expense to the District.

END OF SECTION

SECTION 13125

ELEVATED BLEACHERS

PART 1 - GENERAL

1.01 SUMMARY

- A. Work Included: Provide design/engineering, materials, fabrication, freight, and supervision necessary to complete installation of elevated bleachers (referred to in this Section as bleachers), including but not limited to the following:
1. Aluminum permanent grandstand assembly with chain link fence guardrail perimeter.
 2. Aluminum seating with non-reflective riser closures, end closures and seat supports.
 3. Aluminum stairs and disabled accessible ramp; with associated guardrails and handrails with all required warning stripes.
 4. Aisle stairs with handrails.
 5. Interlocking closed decking/planking system.
 6. Sub-structure, support beams, braces and columns.
 7. Drilled pier footings and grade beams as required per design.
 8. Patching and repairing of asphalt paving.
- B. Related Work:
1. Cutting and Patching: Section 01730.
 2. Cast-in-Place Concrete: Section 03300.

1.02 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturers must have ten years of experience in the manufacture of bleachers; welders must be AWS certified; manufacturing capability according to various code compliance.
- B. Installer Qualifications: Experienced in the proper installation of bleachers.
- C. Source Quality Control: Mill Test Certification.
- D. DSA Required Certifications:
1. Fabricator shall be accredited or certified by the International Accreditation Service (IAS) or other independent accreditation agency to fabricate bleachers. The accreditation shall be based on the review of the fabricator's written procedural, quality control manuals and unannounced annual visit and audit of fabrication practices by an auditor approved by the accreditation agency.
 - a. A bleacher fabrication shop accredited for steel fabrication and welding in a manner similarly to the above paragraph is also considered an approved bleacher fabrication shop, provided the fabrication shop has a minimum of five years of documented continuous experience in the fabrication of bleachers.

- c. Inspect the bleacher for defects and compliance with DSA approved construction documents.
 - d. Inspect the field installation, including site work.
 4. Special Inspection of Field Welding: If welding is required in the field, an AWS-certified welding inspector (CWI), shall inspect welding in accordance with the CBC and IR 17-3. The field welding inspector shall provide daily Inspection Reports. At the completion of the work, the field welding inspector shall submit a Verified Report.
 5. Yearly Inspection: After the installation, the District shall conduct annual inspections as required by ICC/ANSI 300, Section 105.2. The District shall maintain copies of all annual Inspection Reports and make them available on site for DSA review upon request.

1.03 REFERENCES

- A. California Building Code (CBC), 2013.
- B. Americans with Disabilities Act (ADA.)
- C. American Architectural Manufacturers Association (AAMA): AAMA 2603 Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
- D. Aluminum Association (AA): Aluminum Design Manual.
- E. American Society of Civil Engineers (ASCE): ASCE 7-5 Minimum Design Loads for Buildings and Other Structures.
- F. American Standards for of Testing Materials (ASTM):
 1. ASTM A36 Standard Specification for Carbon Structural Steel.
 2. ASTM A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 3. ASTM A307 Standard Specification for Carbon Steel Bolts and Studs at 60,000 psi Tensile Strength.
 4. ASTM A572 Standard Specification for High-Strength Low Alloy Columbium-Vanadium Structural Steel.
- G. American Welding Society (AWS): AWS D1.1 Structural Welding Code-Steel.
- H. International Code Council/American National Standards Institute (ICC/ANSI): ICC/ANSI 300 Standard for Bleachers, Bleachers, Folding and Telescoping Seating, and Grandstands.
- I. Division of the State Architect, Interpretation of Regulation (IR):
 1. IR 16-5.07 Design and Construction of Reviewing Stands, Grandstands, and Bleachers.
 2. IR 17-3 Structural Welding (rev 03-19-12) Inspection:

1.04 SUBMITTALS

- A. Submit in accordance with the provisions of Section 00800, Submittal Procedures.
- B. Manufacturer's Product Data: Submit manufacturer's descriptive product data.
- C. Product and Material Certificates: Signed by manufacturer of bleacher systems certifying that products and materials furnished comply with requirements of this Section.
- D. Letter of Design Certification: Signed and sealed by the registered professional engineer. Include the following:
 - 1. Name and location of Project.
 - 2. Manufacturer's Order number.
 - 3. Name of manufacturer.
 - 4. Name of Contractor.
 - 5. Bleacher dimensions, including width, length, and height.
 - 6. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.
 - 7. Design Loads: Include dead load, live load, deflection, wind loads/speeds, uplift loads and exposure.
 - 8. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, in accordance with applicable code provisions.
- E. Warranties: Sample of manufacturer's warranty as specified in Article 1.06 of this Section.
- F. Welding Certificates: Copies of welding certificate and personnel.
- G. Erector Certification: Copies of manufacturer's certification that erector/installer is qualified and complies with requirements herein.
- H. INCREMENT 2 Approval: Submit items listed items to the Architect in the same manner as other Shop Drawing submittals.
 - 1. Compliance with specified characteristics is the Contractor's responsibility.
 - 2. The items list shall be sealed and signed by a registered professional Structural Engineer licensed to practice in the state of California.
 - a. Shop Drawings: Manufacturer to submit Shop Drawings and schedules for type, location, quantity, and details of steel and aluminum components required for Project.
 - i. Submit 6 copies for Architect's review and approval
 - b. Structural Calculations: Calculations must justify the structural design of bleacher, aisles stairs, stairs and ramp assemblies.
 - i. See Article 2.02C for loads and DSA IR 16-5 for interpretations of the structural requirements.
 - c. Other supporting data and information requested by the Division of the State Architect for the approval process in accordance to Article 1.02D.

3. Architect's Action:
 - a. Upon receipt, the Architect will review the submittal for general completeness and, given its compliance with the requirements, will forward such to DSA for review and approval.
 - b. Should the Architect ascertain that the submittal is incomplete or inaccurate, it will be returned to the Contractor for resubmittal.
 4. Time Frames for approvals will vary depending upon DSA's approval ability to process.
 - a. Contractor shall assume a 60 day turn-around when preparing said submittals and shall schedule submittals so as to not affect the critical path of the project for this turnaround and the work being approved.
 5. DSA's Action:
 - a. If approved, DSA shall return the Shop Drawings and/or structural calculation back to the Architect; who will then forward such to the Contractor.
 - b. Should the DSA ascertain that the submittal requires addition information, corrections, etc. it will be returned to the Architect, who in turn return to the Contractor for resubmittal.
- I. Sample:
1. Submit 18-inches seat, each type/size of plank, each type/size of riser or closure samples.
 2. Signage.
 3. Submit manufacturer's standard colors.

1.05 SITE CONDITIONS

- A. Field Site:
1. Bleacher location on site shall be confirmed by the Architect and District.
 2. Confirm site conditions and coordinate site Work in these Specifications.
- B. Underground Utility Line: Verify and coordinate the location of all underground utilities and obstructions.

1.06 WARRANTY

- A. Bleachers shall be under warranty for a period of two-years from Substantial Completion. The bleachers shall be warranted to be free from defect in materials and workmanship in the course of manufacture.
1. This warranty excludes defects resulting from abnormal use, accidental or intentional damage, or any occurrences beyond manufacturer's control.

- B. Maintenance: Contractor shall conduct an inspection one-year from Substantial Completion and make required adjustments and repairs to bleachers to ensure safe conditions.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Southern Bleacher Company, Graham, TX.
- B. Outdoor Aluminum, Inc., Geneva, AL.
- C. Sturidsteel, Wasco, TX.
- D. Dant Clayton Corp., Louisville KY.
- E. Or Equal.

2.02 BLEACHERS

- A. General Bleacher Structural Members:
 - 1. Horizontal beams are wide flange beams.
 - 2. Traverse bays are free of cross bracing the total length of the bleachers.
 - 3. Stringers are wide flange with steel angle rise and depth fabrication and are placed 6-feet on center.
 - 4. Front Walkway (Cross Aisle): 6-feet 2-inches wide and elevated 68-inches above grade at benchmark.
 - 5. Entry stairs to be firmly anchored to uniformly poured concrete bases.
 - 6. Stairs: 7-inches riser and 11-inches tread with aluminum closure and contrasting color aluminum stair nosing.
 - a. Entry stairs to be firmly anchored to uniformly poured concrete bases.
 - 7. Handrails and Handrail extensions: Provide handrails on both sides. The handgrip portion of handrails shall be 1½-inches diameter. The handgrip portion of handrails shall have a smooth surface with no sharp corners.
 - a. The top of handrails and handrail extensions shall be placed at 34-inches above the nosing of treads and landings.
 - b. Handrails shall be continuous the full length of the stairs and shall extend in the direction of the stair run not less than 12-inches beyond the top riser and 1-foot 11-inches beyond the bottom riser.
 - c. Ends shall be returned or shall terminate in newel posts or safety terminals.
 - 8. Aisles:
 - a. Aisles with seating on both sides to have 34-inches high handrail with intermediate rail at 22-inches above tread.
 - b. Anodized aluminum handrails with rounded ends are discontinuous to allow access to seating through a space 22-inches (min.) to 36-inches (max.).
 - c. Tread nosing of contrasting color aluminum on aisle steps.
 - d. Half steps shall provide equal rise and run throughout aisle. Each shall have aisle nosing with non-skid black powder coated finish conforming to and meeting AAMA 603.8-92 with

- a hardness rating of 2H and riser closure with clear anodized finish.
9. Decking:
 - a. Rise per row 11¼-inches, depth per row 26-inches.
 - b. Each seat 17-inches above its respective tread.
 10. Guard rails: To be at all sides of bleacher, both sides of entry stairs and ramps, and landings. Railing to be anodized aluminum with end plugs at ends of straight runs and/or elbows at corner. All guardrails shall be secured to angle rail risers by galvanized fasteners.
 - a. Guardrails and railings to be 42-inches above leading edge of step, ramps, walkways, entrances, and any adjacent seat with 9-gauge black vinyl clad chain link fence fabric infill.
 - b. Ramp guardrail shall have toe boards.
 11. Ramps:
 - a. Slope: 1 in 12 maximum.
 - b. Handrail: Conform to Article 2.02A7. Handrails shall be continuous the full length of the stairs and shall extend in the direction of the stair run not less than 12-inches beyond the top and bottom of ramp.
 12. Accessibility:
 - a. Quantity of wheelchair spaces as indicated on Drawings.
 - b. Riser area adjacent to wheelchair spaces to have intermediate construction so 4-inches sphere cannot pass through opening.
- B. Materials:
1. Substructures:
 - a. Structural shapes meet one of the following ASTM: A36, Grade 50; A572, Grade 50; or A500, Grade B.
 - b. Shop connections are seal welds.
 - c. After fabrication, all steel is hot-dipped galvanized to ASTM A123.
 - d. Painted steel finish is unacceptable.
 2. Extruded Aluminum:
 - a. Seat Planks, Riser Planks, and Railing are extruded aluminum alloy, 6063-T6.
 - b. Tread planks are extruded aluminum alloy 6063-T6 mill finish
 - c. Joint sleeve assembly to be inserted in flat plank to maintain true alignment in joining together two plank pieces. Extruded aluminum alloy, 6063-T, mill finish. Splice cover is unacceptable between two flat plank pieces joined in a straight line.
 3. Accessories:
 - a. Channel End Caps: Aluminum alloy 6063-T6, clear anodized.
 - b. Hardware:
 - i. Bolts, Nuts: Hot-dipped galvanized or mechanically galvanized.
 - ii. Hold-down Clip Assembly: Aluminum alloy 6005A-T6, mill finish.

- iii. Structural Hardware: Equal to or greater than hot-dipped galvanized ASTM A307. No connections utilizing high strength bolts are classed as slip critical.
 - 4. Aisle Nose and Stair Nose: Aluminum alloy, 6063-T6, non-skid black powder coated finish or other paint system meeting AAMA 603.8-92 specifications with a hardness rating of 2H.
 - 5. Component Sizes and Finishes:
 - a. Seats: 2 x 10 nominal planks, anodized aluminum.
 - b. Treads: Interlocking 3 piece making a 26 inch deck, with an 8 inch nose, 10 inch heel with standard 8-inches IL deck, mill finish aluminum.
 - c. Risers: 1 x 8 nominal planks, powder coated (color to be determined).
 - d. Half Steps: 4-inches IL nose with 9-inches IL deck, mill finish aluminum.
 - e. Front walkway (cross aisle): 8 – 8-inches IL deck with 8-inches IL 2K heel, mill finish aluminum.
 - f. Decking Arrangement: Interlocking "2K" deck, mill finish aluminum.
 - g. Entry stairs and ramps to be 2 x 12 nominal planks, mill finish aluminum.
 - h. Open ends of planks to be covered with aluminum end caps, securely fastened to the plank.
 - i. Joint sleeves: Dual joint sleeves to be inserted at each butt joint of each load bearing aluminum plank, and to penetrate 6 inches into each plank at the joint.
 - j. Ramp toe boards at guardrails: 2 x 6 planks, anodized finish aluminum.
 - 6. Finishes: Clear anodized: 204R1, AA-M10C22A31, Class II.
- C. Fabrication:
 - 1. Design Load:
 - a. Live Load: 100 psf gross horizontal projection.
 - b. Live Load of Seat and Tread Planks: 120 plf.
 - c. Guardrail: Per CBC Section 1607A.8.
 - d. Wind load: Per CBC Section 1609A.
 - e. Sway Loads:
 - i. Lateral Sway Load: 24 plf seat plank.
 - ii. Perpendicular Sway Load: 10 plf seat plank.
 - iii. The design of bleachers shall consider sway loads as live loads in accordance with Footnote (d), Table 4-1, ASCE 7-05.
 - iv. Applicable Load Combinations:

CBC Section 1605A.2.1 (Strength or LRFD)^{1,2}	Equations	1/3 Increase?
1.4 (D + F)	Equation 16A-1	No
1.2(D + F + T) + 1.6 (L + Lsway + H) + 0.5 (Lr or S or R)	Equation 16A-2	No
1.2D + 1.6(Lr or S or R) + (f1 (L + Lsway) or 0.8 W)	Equation 16A-3	No

$1.2D + 1.6W + f1L + 0.5(Lr \text{ or } S \text{ or } R)$	Equation 16 A-4	No
$1.2D + 1.0E + f1L + f2S$	Equation 16A-5	No
$0.9D + 1.6W + 1.6H$	Equation 16A-6	No
$0.9D + 1.0E + 1.6H$	Equation 16A-7	No
CBC Section 1605A.3.1 ASD Basic^{1,2}	Equations	1/3 Increase?
$D + F$	Equation 16A-8	No
$D + H + F + L + Lsway + T$	Equation 16A-9	No
$D + H + F + (Lr \text{ or } S \text{ or } R)$	Equation 16A-10	No
$D + H + F + 0.75(L + Lsway + T) + 0.75(Lr \text{ or } S \text{ or } R)$	Equation 16A-11	No
$D + H + F + (W \text{ or } 0.7E)$	Equation 16A-12	No
$D + H + F + 0.75(W \text{ or } 0.7E) + 0.75L + 0.75(Lr \text{ or } S \text{ or } R)$	Equation 16A-13	No
$0.6D + W + H$	Equation 16A-14	No
$0.6D + 0.7E + H$	Equation 16A-15	No
CBC Section 1605A.3.2 ASD Alternate Basic^{1,2,3}	Equations	1/3 Increase?
$D + L + Lsway + (Lr \text{ or } S \text{ or } R)$	Equation 16A-16	Yes except... 3
$D + L + \omega W$	Equation 16A-17	Yes except... 3
$D + L + \omega W + S/2$	Equation 16A-18	Yes except... 3
$D + L + S + \omega W/2$	Equation 16A-19	Yes except... 3
$D + L + S + E/1.4$	Equation 16A-20	Yes except... 3
$0.9D + E/1.4$	Equation 16A-21	Yes except... 3

Footnotes:

1. Sway loads shall be considered as live loads per ASCE 7-05, Table 4-1, Footnote (d)
 2. For seismic analysis, bleachers shall be considered as "all other self-supporting structures" per ASCE 7-05, Table 15.4-2 (the last non-building structural type in the table, R=1.25).
 3. ICC 300, Section 303.4 allows stresses permitted in the design standards of the various materials to be increased by one-third due to sway or wind loads or by a combination of sway or wind loads and vertical loads. The CBC allows stress increase only in Section 1605A.3.2 (ASD alternate basic load combinations) and only where permitted by the material chapter or the referenced standard. The steel chapter and the referenced standard AISC 360 does not permit stress increase for steel design. Therefore, ICC 300, Section 303.4 is not adopted for materials such as steel that does not permit stress increase.
2. All manufactured connections to be shop welded. Manufactured by certified welders conforming to AWS Standards.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. All work performed by technicians experienced in bleacher, stair and ramp installation. Install per approved Shop Drawings.
- B. Conform to manufacturer's installation instructions.
- C. Install level and plumb to required benchmark.

3.02 FIELD QUALITY CONTROL

Foundation: Footings for the bleachers shall provide sufficient bearing area at bottom to support all loads of the bleachers. Manufacturer's Structural Engineer from information of the District supplied soil test shall determine depth and design of footings. Hot-dipped galvanized anchor bolts shall be secured in the concrete footings. Concrete shall attain working strength of 3,000 psi.

3.03 CLEAN-UP

Clean up all debris caused by work of this Section.

END OF SECTION