

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF PARKS AND RECREATION



PROJECT MANUAL
DONNER MEMORIAL STATE PARK
Pioneer Monument Site Improvement
Contract # C25683007
May 2026



Key Action Dates

IFB Available to Prospective Bidders	May 18, 2026 2:00PM PST
Mandatory Site Inspection / Job-Walk	June 2, 2026 10:00AM PST
Questions Regarding IFB Due	June 9, 2026 2:00PM PST
Answers Posted to IFB	June 12, 2026 2:00PM PST
Due Date for Bid Submittals	June 17, 2026 2:00PM PST
Proposal Notice of Intent to Award	June 18, 2026
Proposal Award Date	July 3, 2026
Anticipated Contract Start Date	September 8, 2026

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF PARKS AND RECREATION

CONTRACT DOCUMENTS

DONNER MEMORIAL STATE PARK
Pioneer Monument Site Improvement

No. C25683007

February 2026



SMALL BUSINESS PREFERENCE NOTICE

5% Small Business Preference

5% SMALL BUSINESS PREFERENCE PROGRAM

What is a California Certified Small Business (SB)?

- 1) For a business to be considered a Small Business (SB), they must be certified with the State of California - Department of General Services in accordance with California Code of Regulations, Title 2, Section 1896.94.
- 2) Your business may be eligible if it meets all of the following*:
 - a. Must be independently owned and operated.
 - b. Cannot be dominant in its field of operation.
 - c. Must have its principal office located in California.
 - d. Must have its owners (or officers in the case of a corporation) domiciled in California.
 - e. Together with its affiliates, be either:
 - A business with 100 or fewer employees, and an average annual gross receipts of \$16 million or less over the previous three tax years, **or**
 - A manufacturer with 100 or fewer employees.
 - f. Microbusiness: A small business will automatically be designated as a microbusiness if gross annual receipts, together with all affiliates, are less than \$5,000,000 or, the small business is a manufacturer with 25 or fewer employees.

* For additional details visit the [Department of General Services \(DGS\) website](#).

What is the Small Business Preference?

5% Small Business Preference: State law allows certified small business (SB) and microbusiness (MB) firms to receive a 5% bidding preference on applicable state solicitations. The 5% preference is also available for non-certified businesses who subcontract 25% of contract amount with a certified SB/MB. **In no event shall the SB preference or non-SB subcontracting preference exceed \$50,000 in any single bid.**

The effect of the preference is to help SBs/MBs be more competitive in the bid process, thereby enhancing state contract awards directly or indirectly to SB/MB. The preference is only used for computation purposes to determine the winning bidder, the contract is awarded at the actual bid amount.

1. How does the 5% Small Business (SB) Preference Work?

- a) The following example shows how the 5% preference computation works, and how it is used to determine a successful bidder.

Bidder	Bid Amount	Bid After 5% Preference	Small Business Status
1	\$30,750	\$30,750	Claims small business status, but is not CA certified
2	\$28,975	\$28,975	Does not claim to be a small business
3	\$29,520	\$29,520	Claims small business status, but their CA certification has expired
4	\$29,870	\$28,421	Claims small business and is CA Certified

b) Computation Method for example 4-a:

1. Five percent is applied to the **lowest (non-certified small business)** responsible bid ([Bidder 2] \$28,975 x .05 = \$1448.75).
2. The preference amount (\$1,448.75) is subtracted from the certified small business (Bidder 4's) bid amount (\$29,870 - \$1,448.75 = \$28,421.25).
3. Bidder 4's computed total is \$28,421.25, making them the lowest bidder.
4. The contract is awarded to Bidder 4 for \$29,870.

c) **NOTE:** *The 5% SB preference is applied to currently certified and registered small businesses and is used for bid evaluation purposes and **does not alter the bid's actual amount.***

2. Documentation

- a) Bidders must provide a printout from the State's SB/DVBE vendor system showing your certification and expiration date from the following web site. www.Caleprocure.ca.gov
- b) If a non-certified firm is claiming the SB Preference based on subcontracting at least 25% of the contract to a certified SB/MB, you must include a complete GSPD 05-105 with your bid. An evaluated bid under the 25% SB subcontracting qualification cannot displace a certified and registered SB.
- c) At completion of performance and when SB participation was included toward SB goals under this contract, then the contractor must complete and submit form DPR 489 to the State's designated representative under this contract and within the time specified within the contracting documents or within 60 days of receipt of final payment, whichever ever is sooner.

3. Verification

Information submitted by the bidders to claim the SB Preference will be verified by the State. If evidence of an alleged violation is found during the verification process, the State shall initiate an investigation, in accordance with the requirements of the PCC §10115, et seq., and MVC §999 et seq., and follow the investigatory procedures required by the 2 CCR §1896.80. Contractors found to be in violation of certain provisions may be subject to loss of certification, penalties and/or contract termination.

4. To locate SB/MB contractors:

- a) Contact the department's contracting official named in this solicitation for any SB/MB contractors who may have identified themselves as potential subcontractors, and to obtain suggestions for search criteria to possibly identify SB/MB contractors for the solicitation. You may also contact the department's SB/DVBE Advocate for assistance: www.parks.ca.gov/advocate.
- b) Access the list of all certified SB/MBs by using the Department of General Services, Procurement Division (DGS-PD) online certified firm database at: www.Caleprocure.ca.gov
- c) Search by "Keywords" or United Nations Standard Products and Services Codes (UNSPSC) that apply to the elements of work you want to subcontract to a SB/MB.
- d) Check for subcontractor ads that may be placed on the California State Contracts Register (CSCR) for this solicitation prior to the closing date. You may access the CSCR at: www.Caleprocure.ca.gov

5. Information

The State of California, Department of General Services, Procurement Division, Office of Small Business and DVBE Services (OSDS) offers many services that assist contractor/business owners with a variety of information designed to streamline the State contracting process. OSDS also certifies SB/MB contractors. For more information, please contact

The State of California
Department of General Services
Office of Small Business and DVBE Services
707 Third Street, First Floor – Room 400
West Sacramento, CA 95605

www.dgs.ca.gov/PD/Contact
Receptionist: (916) 375-4940
24-hour recording: (916) 322-5060
FAX: (916) 375-4950
OSDSHelp@dgs.ca.gov

Disabled Veteran Business Enterprise (DVBE) Notice
DVBE Participation Requirement and Incentive for
Invitation For Bids (IFB)

1. Bidder's attention is directed to the Disabled Veteran Business Enterprise (DVBE) Participation Requirement for bidders, as outlined in the accompanying bid package.
2. In order to be responsive and eligible for award of the contract, bidder must attain the prescribed goals for the DVBE participation.

**The DVBE Participation Requirement
for this solicitation is 6%.**

**Failure to fulfill the DVBE requirement will render
your bid non-responsive.**

3. It is essential that you commence the required participation process immediately, to allow adequate response time for potential DVBE participants.
4. The DVBE participation requirement is mandatory by state law, whether you are conducting business as an individual, partnership or corporation.

IMMEDIATE ACTION REQUIRED

5. What is a Disabled Veteran Business Enterprise (DVBE)?

- a) For a business to be considered a Disabled Veteran Business Enterprise (DVBE), they must be certified with the State of California - Department of General Services in accordance with California Code of Regulations, Title 2, Section 1896.94. Please see the following website for more information about DVBE certification benefits and eligibility requirements:

www.dgs.ca.gov/PD/Services/Page-Content/Procurement-Division-Services-List-Folder/Certify-or-Re-apply-as-Small-Business-Disabled-Veteran-Business-Enterprise

- b) Only DVBEs who perform a commercially useful function relevant to this solicitation, may be used to satisfy the DVBE participation and/or incentive program requirements.

6. **Commercially Useful Function Definition**

- a) California Code of Regulations, Title 2, § 1896.61(l): The term "DVBE contractor, subcontractor or supplier" means any person or entity that satisfies the ownership (or management) and control requirements of §1896.61(f); is certified in accordance with §1896.70; and provides services or goods that contribute to the fulfillment of the contract requirements by performing a commercially useful function.
- b) A person or entity must perform a commercially useful function (CUF) as defined under Military and Veterans Code (MVC) §999.
- c) A contractor, subcontractor, or supplier will not be considered to perform a commercially useful function if the contractor's, subcontractor's, or supplier's role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of disabled veteran business enterprise participation.

7. What is the DVBE participation requirement?

- a) **Bidders must commit at minimum 6% of their total bid** to currently certified and registered DVBE companies for this solicitation. All bidders must meet the full participation requirement based on the total bid amount in order to be considered a responsive bidder.
- b) **Reporting Requirement:** *If, for this agreement and pursuant to Military & Veterans Code (MVC) 999.5 (d), a contractor made a commitment to achieve disabled veteran business enterprise (DVBE) participation, within 60 days of receiving final payment under this agreement (or within such other time period as may be specified elsewhere in this agreement) the contractor must certify in a report to the awarding department:*
 - 1. *the total amount the prime contractor received under the contract*
 - 2. *the name and address of the DVBE(s) that participated in the performance of the contract*
 - 3. *the amount each DVBE received from the prime contractor*
 - 4. *that all payments under the contract have been made to the DVBE(s)*
 - 5. *the actual percentage of DVBE participation that was achieved*

- c) *You will be required to report to DPR the actual dollars spent with each DVBE subcontractor on a STD. 817. If awarded the contract you will receive this form at the completion of the contract. A person or entity that knowingly provides false information shall be subject to a civil penalty for each violation. (Military & Veterans Code (M&VC) § 999.5(d))*

8. What is the DVBE Incentive Program?

- a) The DVBE Incentive Program was established by statute and applies to contracts solely financed by State funds. This program is separate from the DVBE Participation Program. The incentive is designed to encourage bidders to partner with DVBE subcontractors.
- b) DVBE incentive will be given to bidders who provide DVBE participation above 6%.
- c) The incentive may be combined with other incentives and preferences up to an established cap of \$100,000.00. **The incentive is used only for evaluation purposes and does not alter the amounts of the actual bids.**

9. Who is eligible to receive the incentive?

- a) Any responsive bidder who has attained more than the required amount (6%) of DVBE participation per the solicitation instructions.

10. Documentation

- a) To be considered a responsive bidder, bidders must document at least 6% DVBE participation commitment by completing and submitting the following forms:
 - 1. GSPD 05-105, Bidder Declaration
 - 2. DGS PD 843, DVBE Declaration
- b) GSPD 05-105, Bidder Declaration: The GSPD 05-105 is used to document the proposed prime contractor and subcontractors, including their roles and responsibilities. **The form must be submitted with the bid package.** If there is a discrepancy between the dollar amount and percentage of bid for DVBE participation then the percentage shall prevail.
- c) DGS PD 843, DVBE Declaration: All disabled veteran owners and disabled veteran managers of the DVBE must complete the form and submit it with the bid package. A DGS PD 843 needs to be submitted by every DVBE supplier who is part of a bid whether they are the prime contractor or subcontractor .
- d) Bids that fail to submit the completed required forms to confirm the level of DVBE participation will not be eligible to receive the DVBE incentive and may be declared unresponsive due to DVBE participation requirements. Clerical and typographical errors on these forms may be corrected at the State's sole discretion.
- e) Information submitted by the bidders to claim the DVBE incentive(s) will be verified by the State. If evidence of an alleged violation is found during the verification process, the State shall initiate an investigation, in accordance with the requirements of the PCC §10115, et seq., and MVC §999 et seq., and follow the investigatory procedures required by the 2 CCR §1896.80. Contractors found to be in violation of certain provisions may be subject to loss of certification, penalties and/or contract termination.

11. How does the DVBE Incentive Program Work?

- a) The DVBE incentive is used only for evaluation purposes to determine the successful bidder and does not alter the amounts of the actual bids. A dollar cap of \$100,000.00 is set for all combined incentives and preferences.
- b) For contracts to be awarded based on the Low Price Method, the incentive amount is equal to a percentage of the lowest responsive and responsible bid based on the amount of DVBE participation in the bid being evaluated per Table A below. The Computation Method does not include the small business preference; however, the small business preference may be applied and may affect the application of the incentive and the outcome of the ranking.

c) **Table A – Invitation For Bid (IFB) (aka Low Price Method)**

Confirmed DVBE Participation of	DVBE Incentive Amount for IFB
10% or more	5% of lowest responsive and responsible bid
9% - 9.99%	4% of lowest responsive and responsible bid
8% - 8.99%	3% of lowest responsive and responsible bid
7% - 7.99%	2% of lowest responsive and responsible bid
6.01% - 6.99%	1% of lowest responsive and responsible bid

d) **Computation Method**

Low Price Method

Bidder Name	A	B	C
Original Bid Price	\$98,000.00	\$102,100.00	\$100,000.00
DVBE Participation for certified DVBE Prime or Subcontractors	4%	8%	6%
Initial Ranking	Unresponsive	2	1
DVBE Incentive (from Table A)	n/a	3%	n/a
Incentive Amount (% x Lowest Responsive and Responsible Bid Price)	n/a	\$3,000.00 (3% x \$100,000)	n/a
Evaluated Bid Price (Bidder's Price - Bidder's Incentive Amount)	n/a	\$99,100.00 (\$102,100 - \$3,000)	n/a
Final Rank:	Unresponsive	1	2

12. Substitution of Proposed DVBE

- a) If awarded the contract, the DVBE subcontractors and/or contractors proposed by bidder must be used unless prior written notice of substitution is provided to the state and the state approves such substitution.
- b) The notice must include a minimum of: (1) a written explanation of the reason for the substitution; and (2) an updated GSPD 05-105 must be submitted to the award office of Department of Parks and Recreation. The substitution request must be approved before the substitution can take place.
- c) Failure to adhere to at least the DVBE participation proposed by the successful bidder may be cause for contract termination and recovery of damages under the rights and remedies due the state under the default section of the contract.
- d) Contractor understands and agrees that should award of this contract be based in part on their commitment to use the Disabled Veteran Business Enterprise (DVBE) subcontractor(s) identified in their bid or offer, per Military and Veterans Code 999.5 (e), a DVBE subcontractor may only be replaced by another DVBE subcontractor and must be approved by the State. Changes to the scope of work that impact the DVBE subcontractor(s) identified in the bid or offer and approved DVBE substitutions will be documented by contract amendment.
- e) Failure of Contractor to seek substitution and adhere to the DVBE participation level identified in the bid or offer may be cause for contract termination, recovery of damages under rights and remedies due to the State, and penalties as outlined in M&VC § 999.9; Public Contract Code (PCC) § 10115.10, or PCC § 4110 (applies to public works only).

13. To locate DVBE contractors:

- a) Contact the department's contracting official named in this solicitation for any DVBE contractors who may have identified themselves as potential subcontractors, and to obtain suggestions for search criteria to possibly identify DVBE contractors for the solicitation. You may also contact the department's SB/DVBE Advocate for assistance:
- b) Access the list of all certified DVBEs by using the Department of General Services, Procurement Division (DGS-PD) online certified firm database at:

<https://caleprocure.ca.gov/pages/PublicSearch/supplier-search.aspx?psNewWin=true>

Search by "Keywords" or United Nations Standard Products and Services Codes (UNSPSC), that apply to the elements of work you want to subcontract to a DVBE.

- c) Check for subcontractor ads that may be placed on the California State Contracts Register (CSCR) for this solicitation prior to the closing date. You may access the CSCR at:
www.Caleprocure.ca.gov

- d) The State of California, Department of General Services (DGS), Procurement Division, Office of Small Business and DVBE Services (OSDS) offers many services that assist contractor/business owners with a variety of information designed to streamline the State contracting process. OSDS also certifies DVBE contractors. For more information, please

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**DISABLED VETERAN BUSINESS ENTERPRISE (DVBE)
DVBE Documentation Checklist**

1. The State of California acknowledges the service and sacrifice of its disabled veterans, in part, through the "Disabled Veteran Business Enterprise (DVBE) Participation Program." As mandated by law, state agencies have a goal to award at least 3% of their annual contract dollars to certified DVBE's.
2. When a firm bids on a state DPR contract that contains DVBE participation, the the dollar amount of **the bid must meet the 6% participation requirement** set by DPR.
3. **INCOMPLETE DOCUMENTATION (GSPD 05-105 AND DGS PD 843) WILL RESULT IN DISQUALIFICATION FROM FURTHER PARTICIPATION IN THE SELECTION PROCESS FOR THE CONTRACT.**
4. The following checklist is provided to assist bidders with their DVBE participation documentation:

a) GSPD 05-105, Bidder Declaration

- ☐ All DVBE participation is indicated.
- ☐ The names of each participating DVBE company is listed with the corresponding percentage of the total bid price for the services/goods to be provided by each subcontractor.
- ☐ A copy of the printout from eProcurement system showing the company's DVBE certification status.
- ☐ The DVBE participation percentage listed agrees with the dollar value claimed.

b) DGS PD 843, DVBE Declaration

- ☐ A completed and signed DGS PD 843 is included with the bid for every DVBE (whether prime contractor or subcontractor) included.

NATURAL RESOURCES AGENCY
DEPARTMENT OF PARKS AND RECREATION
DONNER MEMORIAL STATE PARK
C25683007 Pioneer Monument Site Improvements
Nevada County, California

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DONNER MEMORIAL STATE PARK – Pioneer Monument Site Improvements

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Bidder's Bond (DPR 495).....	1
California Public Contract Code Section 10162 Questionnaire (DPR 20)	1
Darfur Contracting Act Form (DPR 74).....	1
Fair Chance Employment Act (DPR 282PW)	1
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California Civil Rights Laws Certification (DGS OLS 04).....	1

State of California - Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

**PUBLIC WORKS
NOTICE TO CONTRACTORS**

DONNER MEMORIAL STATE PARK

Pioneer Monument Site Improvement

Nevada County, California

Bid Number: C25683007

Bids must be submitted electronically with all necessary fully executed bid submission documents as an attachment in Portable Document Format (PDF) to Sierra.Contracts@parks.ca.gov no later than 2:00 PM PST, Wednesday, June 17, 2026. Bid submission time will be as of the electronic time stamp associated with when the electronic email submission was received. Submissions with attached PDF documents in excess of 10 Megabytes in size risk being rejected and can be deemed unresponsive. DPR will provide an individual electronic email response confirming receipt of each submission received. If a confirmation receipt is not received within 30 minutes of submission, please contact Charles Dobbs at Charles.Dobbs@parks.ca.gov to confirm your bid was received. Confirmation receipt is not a representation by DPR that the submitted bid is responsive and complete. Bidders shall ensure that the electronic submission contains the attachment, the documents are fully responsive and lack any deficiency and is directed to the appropriate email address (Sierra.Contracts@parks.ca.gov) without error. Failure to do so risks the bid being deemed unresponsive. It is recommended that Bidders submit bids at least an hour in advance of the bid submission deadline to allow for confirmation of bid submission. Bid will be opened publicly over conference-call, individuals interested in calling into the conference must send their request into Sierra.Contracts@parks.ca.gov to receive a conference participation access code. Please ensure a request for conference-call is submitted 24-hours in advance to allow DPR adequate time to accommodate all Bidders., at which time and place they will be publicly opened and read for performing the work as follows:

Furnish all labor, materials, tools, equipment and travel expenses necessary to complete improvements to the Pioneer Monument Site at DONNER MEMORIAL STATE PARK in Nevada County, California, complete and in accordance with the plans and specifications therefore and such addenda thereto as may be issued prior to bid opening date.

License required: A or C-27

Engineer's Estimate: \$125,000.00 - \$150,000.00

Contract Term: Four Hundred Twenty-Five (425) Calendar Days from Notice to Proceed
Work Performance Period: Sixty (60) Calendar Days from Formal Start Work Date

NOTE: A mandatory job showing will be held at 10:00 a.m., Tuesday, June 2, 2026, at Donner Memorial State Park Visitor Center, 12593 Donner Pass Road, Truckee CA 96161 in Nevada County. Attendance at the job showing is MANDATORY and will be the only opportunity made available for prospective bidders to view the site with park personnel. No Bid will be

considered from a Prime Contractor that did not attend the mandatory job showing. Please contact Charles.Dobbs@parks.ca.gov with any questions, and to confirm / RSVP attendance.

CONSTRAINTS: Work cannot commence until after Monday, September 7, 2026 (Labor Day holiday). Work must be completed before winter conditions and / or overnight freezing temperatures prevail. This project must be completed within sixty (60) calendar days from issuance of the Notice to Proceed (NTP). The "Contract Term" of Four Hundred Twenty-Five (425) Calendar Days from Notice to Proceed (NTP) is for administrative purposes only.

Instructions to Download Bid Package: Prospective bidders may examine and obtain the bid forms, specifications, plans and addenda (if any) by downloading this bid package from the Department of General Services' (DGS) website at: <https://caleprocure.ca.gov/pages/Events-BS3/event-search.aspx>. At the website go to Quicklinks, Find Bid Opportunities, and enter Bid Number "C25683007" in the "Event Name" field. Click on the "Search" button to view the full advertisement and bid documents.

Questions and Answers: Any discrepancies, omissions, ambiguities, or conflicts in or among the contract documents or doubts as to meaning shall be brought to the State's attention by including your comments directly to Charles.Dobbs@parks.ca.gov NO LATER THAN 2 p.m., seven (7) calendar days prior to bid opening date. Answers will be provided by Addendum which will be posted within the Bid Solicitation located on the Cal eProcure website stated above. It is the responsibility of the bidders to download any addenda as needed.

No bid will be considered unless it is made on a standard bid form furnished by the Department of Parks and Recreation, and is made in accordance with the "Instructions to Bidders".

Bids must be submitted for the entire work as described herein. The Department of Parks and Recreation reserves the right to waive any irregularity in a bid or to reject any or all bids.

The apparent low bidder will be required to execute a contractual agreement in the form of a "Standard Agreement - Form 213" which shall be binding upon the State of California only upon approval by the State.

Bond requirements for contracts exceeding \$5,000 are stated in the General Conditions, DPR 483, Section 000700.

In accordance with the provisions of Section 1770, 1773 and 1773.1 of the Labor Code, the Department has ascertained that the general prevailing rate of wages in the county in which the work to be done be as listed by the Department of Industrial Relations (415) 703-4780. A copy of this listing is on file at the address listed above or at www.dir.ca.gov.

Participation in Small Business Preference Program: Preference will be granted to bidder properly approved as "Small Business" in accordance with Section 1896, et seq., Title 2, California Code of Regulations. A small business firm must have an approved certification form (STD. 812) on file at the Department of General Services, Office of Small Business and DVBE Services, 707 Third Street, First Floor – Room 400, West Sacramento, California 95605, by 5:00 p.m. of bid opening date (website address: <http://www.pd.dgs.ca.gov/smbus>). If bidder requests "Small Business" preference on this project, bidder must sign STD. 811 form (Small Business Preference and Certification Request) and submit with bid. A printout from the eProcurement website www.caleprocure.ca.gov showing Small Business Certification and expiration date must be submitted with bid.

Non-Small Business Preference – A five percent (5%) bid preference is available to a non-small business proposing firms claiming twenty-five percent (25%) California certified small business subcontractor participation. If claiming the non-small business subcontractor preference, follow the directions and fill out the "Bidder Declaration" (GSPD 05-105) which is included in the Bid Forms. Proposers claiming the five percent (5%) preference must commit to subcontract at least twenty-five percent (25%) of the net bid price with one or more California certified small businesses. Completed certification applications and required support documents must be submitted to the office of Small Business and DVBE Services (OSDS) no later than 5:00 p.m. on the bid due date, and the OSDS must be able to approve the application as submitted. Questions regarding certification should be directed to the OSDS at (916) 375-4940.

Participation in Disabled Veteran Business Enterprise Program (DVBE): The minimum DVBE participation percentage goal is 6%. Failure to fulfill the DVBE requirement will render your bid non-responsive. DVBE Incentive: For evaluation purposes only, an incentive will be given to bidders who exceed 6% DVBE participation requirements. Refer to the DVBE forms beginning with DPR 479IP. In determining the lowest responsible bidder, the SB Preference is applied first in the bid evaluation process. If the Low Bidder is claiming the SB Preference or the Non-Certified SB Preference, the 5% or \$50,000 max is not calculated for any bidder. However, the DVBE Incentive would be calculated. A Low Bidder claiming the SB Preference can only be displaced by another bidder claiming the SB Preference, if the adjusted bid price with SB Preference and DVBE Incentive is lower. The DVBE program incentives are applied second for bidders attaining more than the required amount of DVBE participation per the solicitation instructions. More information regarding the incentive program(s) and how bids are evaluated is available on the State Administrative Manual Management Memo Number MM08-03 (Management Memo) at http://www.documents.CalProcure.ca.gov/osp/sam/mmemos/MM08_03.pdf.

Notice of Requirement for Nondiscrimination Program: Your attention is called to the "Nondiscrimination Clause" set forth or referred to herein, which is applicable to all nonexempt State construction contracts, and subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth herein. (Refer to General Terms and Conditions (GTC 04/2017) at <http://www.CalProcure.ca.gov/ols/Resources/StandardContractLanguage.aspx>).

Withdrawal of Bid: As stated in the Instructions to Bidders, any requests to withdraw a bid must be submitted in writing. Submit via email to Charles.Dobbs@parks.ca.gov. See Instructions to Bidders, section 1.03M for details.

Public Works Contractor Registration Program – SB 854: 1) No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)]. 2) No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. 3) This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Refer to <http://www.dir.ca.gov/Public-Works/SB854.html> for more information.

Executive Order N-6-22 – Russia Sanctions: On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (the EO) regarding Economic Sanctions against Russia and Russian entities and individuals. “Economic Sanctions” refers to sanctions imposed by the U.S. government in response to Russia’s actions in Ukraine, as well as any sanctions imposed under state law. By submitting a bid or proposal, Contractor represents that it is not a target of Economic Sanctions. Should the State determine Contractor is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for rejection of the Contractor’s bid/proposal any time prior to contract execution, or, if determined after contract execution, shall be grounds for termination by the State.

Gen AI solicitation language

The State of California seeks to realize the potential benefits of GenAI, through the development and deployment of GenAI tools, while balancing the risks of these new technologies.

Bidder / Offeror must notify the State in writing if it: (1) intends to provide GenAI as a deliverable to the State; or (2), intends to utilize GenAI, including GenAI from third parties, to complete all or a portion of any deliverable that materially impacts: (i) functionality of a State system, (ii) risk to the State, or (iii) Contract performance. For avoidance of doubt, the term “materially impacts” shall have the meaning set forth in State Administrative Manual (SAM) ? 4986.2 Definitions for GenAI.

Failure to report GenAI to the State may result in disqualification. The State reserves the right to seek any and all relief to which it may be entitled to as a result of such nondisclosure.

Upon notification by a Bidder / Offeror of GenAI as required, the State reserves the right to incorporate GenAI Special Provisions into the final contract or reject bids/offers that present an unacceptable level of risk to the State.

Government Code 11549.64 defines “Generative Artificial Intelligence (GenAI)” as an artificial intelligence system that can generate derived synthetic content, including text, images, video, and audio that emulates the structure and characteristics of the system’s

training data.

DEPARTMENT OF PARKS AND RECREATION
Armando Quintero, Director

SECTION 00100
PUBLIC WORKS
INSTRUCTIONS TO BIDDERS

PART 1. GENERAL

1.01 EXAMINATION OF BID DOCUMENTS AND SITE

- A. *Bidder shall carefully examine and thoroughly acquaint himself/herself with the conditions at the site of the work, the plans, the specifications and the provisions contained in the project manual. He/she shall investigate conditions character, quality and quantity of surface, and sub-surface materials of obstacles to be encountered. Failure by the bidder to acquaint himself/herself with site conditions and available information will not relieve him/her from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination.*
- B. Questions pertaining to the Plans and Specifications which may arise during the bidding period shall be directed to the Question and Answer section of the solicitation posted within the advertisement.

1.02 DISCREPANCIES

- A. Any discrepancies, omissions, ambiguities, or conflicts in or among the contract documents or doubts as to meaning shall be brought to the state's attention not later than seven days prior to bid opening date.
- B. All interpretations and clarifications will be in the form of written addenda. All bidders are responsible to inquire as to addenda issued. All addenda become part of the contract documents. Any oral representations issued shall be of no force or effect.

1.03 BIDS AND BIDDERS

- A. Before submitting bids, all bidders must be licensed in the appropriate classification in accordance with provisions in Chapter 9, Division 3, of the "California Business and Professions Code" as amended.
- No bidder may bid on work of a kind for which he/she is not properly licensed by the Contractors State License Board, and any such bid received will be rejected. Joint venture bidders must possess a joint venture license.*
- B. State shall not award a contract to a bidder, nor shall a bidder be eligible to bid for or receive a contract, who has, in the preceding five years, been convicted of violating a state or federal law respecting the employment of undocumented aliens.
- C. Bids shall be signed and submitted on the Bid Form provided and shall be filled out in the same name style, manner and license number as bidder is licensed with the Contractors State License Board.
- D. Each bid shall have listed therein the name, address, license number and portion of the work of each subcontractor to whom the bidder proposes to subcontract portions of the work in an amount in excess of 1/2 of 1 percent of the total bid in accordance with the "Subletting and Subcontracting Fair Practices Act," commencing with Section 4100 of the Public Contract Code. The contractor agrees that he/she is fully qualified to perform that portion of the work, and that he/she shall perform that portion of the work for which a subcontractor has not been listed.
- E. Bids exceeding \$250,000 shall have enclosed cash, a cashier's check, certified check, or a bidder's bond, executed as surety by a corporation authorized to issue surety bonds in the State of California, made payable to "Director of Parks and Recreation," in an amount equal to at least 10 percent of amount of bid. No such bid shall be considered unless one of the forms of bidder's security is enclosed therewith. If bidder's security is a bidder's bond, it must be executed on a form approved by the state. Personal checks are not acceptable.

Within 10 days after the contract award the Department of Parks and Recreation will return all bidder's security, other than bidder's bonds, accompanying proposals that are not to be further considered in making the award. Retained bidder's security will be held until the contract has been fully executed, after which all bidder's security, except bidder's bonds, will be returned.

- F. Bids shall not be qualified. Any proposal modifying the conditions of the bid will be disregarded, or will be cause for rejection of the bid. Deviations from the Plans and Specifications shall not be considered and shall be cause for rejection of the bid.
- G. Bids shall include the cost of all items shown on the Plans, mentioned in the Specifications, or reasonably inferred therefrom as necessary to complete the work within the intent of the contract documents.
- H. Bid shall include all applicable federal, state and other taxes, together with the cost of all permits, licenses and the like, which may be required under various laws and regulations.
- I. Amounts shall be written in figures.
- J. Bids shall be submitted in duplicate in a sealed envelope. This sealed envelope shall be delivered to the place shown prior to the time and date for the bid opening. This envelope must have the return address of the bidder. It is the responsibility of the bidder to see that his/her bid is received in proper time. Facsimile (FAX) responses will not be considered.
- K. No bids will be accepted after the time set for the bid opening.
- L. Bids will be opened and read publicly at the time set for the bid opening, or as soon as practicable thereafter.
- M. Any bid may be withdrawn prior to the time fixed in the Notice to Contractors for submitting bids, provided a request for withdrawal is submitted in writing, signed by the bidder or his duly authorized representative and filed at, or e-mailed to or faxed to the place shown on the Notice to Contractors. *An oral, telegraphic, or telephonic request to withdraw or alter a bid proposal is not acceptable.*
- N. No bid may be withdrawn after the time fixed in the Notice to Contractors for submitting bids.
- O. No bids exceeding \$1,000.00 shall be considered unless a sworn statement is executed by the bidder on the form provided by the state titled "NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS," DPR 837, and submitted with the bid. BIDDER'S SIGNATURE ON THE FORM MUST BE NOTARIZED.
- P. In the case of a tie bid, the determination of a successful bidder will be made by a coin toss in the presence of all interested bidders, at a time and date set by the state.

1.04 CONTRACT

- A. All bids shall remain valid for 30 calendar days after the bid opening date.
- B. If the contract is awarded, it will be awarded to lowest responsible bidder whose bid complies with all prescribed requirements, which may include a "Small Business Vendor" in accordance with California Code of Regulations, Title 2, Section 1896 et seq.

- C. The apparent low bidder shall execute the required number of copies of the contract documents and return them within ten (10) days, not including Saturdays, Sundays and Legal Holidays, after he/she has received notice that he/she is the apparent low bidder. Signature of the apparent low bidder on the contract documents will complete identification of these documents.

Failure to provide the required executed contract documents within the ten (10) working days, not including Saturdays, Sundays and Legal Holidays may be deemed refusal of an award which may be cause for forfeiture of bidder's security.

The state may award to the next lowest responsible bidder and avail itself of all legal remedies provided by statute.

- D. The contract shall be binding upon the state only after approval by the state. Should work begin in advance of receiving notice that the Contract is approved, that work shall be considered as having been done by a volunteer and Contractor shall go unpaid.

1.05 CERTIFICATE OF INSURANCE

The contractor shall furnish a Certificate of Insurance to the state as described in General Conditions, DPR 483, Section 00700.

1.06 CALIFORNIA PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

Bidder shall be required to submit a DPR 20 (California Public Contract Code Section 10162 Questionnaire) for bids that exceed \$147,000. Failure to submit this form with the bid shall not be cause for rejection; however, bidders must furnish the completed form within the time frame prescribed by the Department of Parks and Recreation. Failure to submit the required information within the time frame prescribed by the Department of Parks and Recreation may be deemed refusal of an award which shall be cause for forfeiture of bidder's security.

BIDDER DECLARATION

1. Prime bidder information (Review attached Bidder Declaration Instructions prior to completion of this form):

- a.** Identify current California certification(s) (MB, SB, NVSA, DVBE): _____ or **None** ☐ (If "None," go to Item #2)
- b.** Will subcontractors be used for this contract? **Yes** ☐ **No** ☐ (If yes, indicate the distinct element of work your firm will perform in this contract e.g., list the proposed products produced by your firm, state if your firm owns the transportation vehicles that will deliver the products to the State, identify which solicited services your firm will perform, etc.). Use additional sheets, as necessary.

- c.** If you are a California certified DVBE:
- (1) Are you a broker or agent? **Yes** ☐ **No** ☐
- (2) If the contract includes equipment rental, does your company own at least 51% of the equipment provided in this contract (quantity and value)? **Yes** ☐ **No** ☐ **N/A** ☐

2. If no subcontractors will be used, skip to certification below. Otherwise, list all subcontractors for this contract. (Attach additional pages if necessary):

Subcontractor Name, Contact Person, Phone Number & Fax Number	Subcontractor Address & Email Address	CA Certification (MB, SB, NVSA, DVBE or None)	Work performed or goods provided for this contract	Corresponding % of bid price	Good Standing?	51% Rental?
					☐	☐
					☐	☐
					☐	☐

CERTIFICATION: By signing the bid response, I certify under penalty of perjury that the information provided is true and correct.

BIDDER DECLARATION INSTRUCTIONS

All prime bidders (the firm submitting the bid) must complete the Bidder Declaration.

1.a. Identify all current certifications issued by the State of California. If the prime bidder has no California certification(s), check the line labeled "None" and proceed to Item #2. If the prime bidder possesses one or more of the following certifications, enter the applicable certification(s) on the line:

- Microbusiness (MB)
- Small Business (SB)
- Nonprofit Veteran Service Agency (NVSA)
- Disabled Veteran Business Enterprise (DVBE)

1.b. Mark either "Yes" or "No" to identify whether subcontractors will be used for the contract. If the response is "No," proceed to Item #1.c. If "Yes," enter on the line the distinct element of work contained in the contract to be performed or the goods to be provided by the prime bidder. Do not include goods or services to be provided by subcontractors.

Bidders certified as MB, SB, NVSA, and/or DVBE must provide a commercially useful function as defined in Military and Veterans Code Section 999 for DVBEs and Government Code Section 14837(d)(4)(A) for small/microbusinesses.

Bids must propose that certified bidders provide a commercially useful function for the resulting contract or the bid will be deemed non-responsive and rejected by the State. For questions regarding the solicitation, contact the procurement official identified in the solicitation.

Note: A subcontractor is any person, firm, corporation, or organization contracting to perform part of the prime's contract.

1.c. This item is only to be completed by businesses certified by California as a DVBE.

(1) Declare whether the prime bidder is a broker or agent by marking either "Yes" or "No." The Military and Veterans Code Section 999.2 (b) defines "broker" or "agent" as a certified DVBE contractor or subcontractor that does not have title, possession, control, and risk of loss of materials, supplies, services, or equipment provided to an awarding department, unless one or more of the disabled veteran owners has at least 51-percent ownership of the quantity and value of the materials, supplies, services, and of each piece of equipment provided under the contract.

(2) If bidding rental equipment, mark either "Yes" or "No" to identify if the prime bidder owns at least 51% of the equipment provided (quantity and value). If **not** bidding rental equipment, mark "N/A" for "not applicable."

2. If no subcontractors are proposed, do not complete the table. Read the certification at the bottom of the form and complete "Page ____ of ____" on the form.

If subcontractors will be used, complete the table listing all subcontractors. If necessary, attach additional pages and complete the "Page ____ of ____" accordingly.

2. (continued) Column Labels

Subcontractor Name, Contact Person, Phone Number & Fax Number—List each element for all subcontractors.

Subcontractor Address & Email Address—Enter the address and if available, an Email address.

CA Certification (MB, SB, NVSA, DVBE or None)—If the subcontractor possesses a current State of California certification(s), verify on this website (www.eprocure.pd.dgs.ca.gov).

Work performed or goods provided for this contract—Identify the distinct element of work contained in the contract to be performed or the goods to be provided by each subcontractor. Certified subcontractors must provide a commercially useful function for the contract. (See paragraph 1.b above for code citations regarding the definition of commercially useful function.) If a certified subcontractor is further subcontracting a greater portion of the work or goods provided for the resulting contract than would be expected by normal industry practices, attach a separate sheet of paper explaining the situation.

Corresponding % of bid price—Enter the corresponding percentage of the total bid price for the goods and/or services to be provided by each subcontractor. Do not enter a dollar amount.

Good Standing?—Provide a response for each subcontractor listed. Enter either "Yes" or "No" to indicate that the prime bidder has verified that the subcontractor(s) is in good standing for all of the following:

- Possesses valid license(s) for any license(s) or permits required by the solicitation or by law
- If a corporation, the company is qualified to do business in California and designated by the State of California Secretary of State to be in good standing
- Possesses valid State of California certification(s) if claiming MB, SB, NVSA, and/or DVBE status

51% Rental?—This pertains to the applicability of rental equipment. Based on the following parameters, enter either "N/A" (not applicable), "Yes" or "No" for each subcontractor listed.

Enter "N/A" if the:

- Subcontractor is NOT a DVBE (regardless of whether or not rental equipment is provided by the subcontractor) or
- Subcontractor is NOT providing rental equipment (regardless of whether or not subcontractor is a DVBE)

Enter "**Yes**" if the subcontractor is a California certified DVBE providing rental equipment and the subcontractor owns at least 51% of the rental equipment (quantity and value) it will be providing for the contract.

Enter "**No**" if the subcontractor is a California certified DVBE providing rental equipment but the subcontractor does NOT own at least 51% of the rental equipment (quantity and value) it will be providing.

Read the certification at the bottom of the page and complete the "Page ____ of ____" accordingly.

DISABLED VETERAN BUSINESS ENTERPRISE DECLARATIONS

DGS PD 843 (Rev. 9/2019)

Formerly STD. 843

Instructions: The disabled veteran (DV) owner(s) and DV manager(s) of the Disabled Veteran Business Enterprise (DVBE) must complete this declaration when a DVBE contractor or subcontractor will provide materials, supplies, services or equipment [Military and Veterans Code Section 999.2]. Violations are misdemeanors and punishable by imprisonment or fine and violators are liable for civil penalties. All signatures are made under penalty of perjury.

SECTION 1

Name of certified DVBE: _____ DVBE Ref. Number: _____

Description (materials/supplies/services/equipment proposed): _____

Solicitation/Contract Number: _____ SCPRS Ref. Number: _____

(FOR STATE USE ONLY)

SECTION 2**APPLIES TO ALL DVBEs. Check only one box in Section 2 and provide original signatures.**

- ☐ I (we) declare that the DVBE is not a broker or agent, as defined in Military and Veterans Code Section 999.2 (b), of materials, supplies, services or equipment listed above. Also, complete Section 3 below if renting equipment.
- ☐ Pursuant to Military and Veterans Code Section 999.2 (f), I (we) declare that the DVBE is a broker or agent for the principal(s) listed below or on an attached sheet(s). *(Pursuant to Military and Veterans Code 999.2 (e), State funds expended for equipment rented from equipment brokers pursuant to contracts awarded under this section shall not be credited toward the 3-percent DVBE participation goal.)*

All DV owners and managers of the DVBE (attach additional pages with sufficient signature blocks for each person to sign):

(Printed Name of DV Owner/Manager) (Signature of DV Owner/ Manager) (Date Signed)_____
(Printed Name of DV Owner/Manager) (Signature of DV Owner/Manager) (Date Signed)Firm/Principal for whom the DVBE is acting as a broker or agent: _____
(If more than one firm, list on extra sheets.) (Print or Type Name)

Firm/Principal Phone: _____ Address: _____

SECTION 3**APPLIES TO ALL DVBEs THAT RENT EQUIPMENT AND DECLARE THE DVBE IS NOT A BROKER.**

- ☐ Pursuant to Military and Veterans Code Section 999.2 (c), (d) and (g), I am (we are) the DV(s) with at least 51% ownership of the DVBE, or a DV manager(s) of the DVBE. The DVBE maintains certification requirements in accordance with Military and Veterans Code Section 999 et. seq.
- ☐ The undersigned owner(s) own(s) at least 51% of the quantity and value of each piece of equipment that will be rented for use in the contract identified above. I (we), the DV owners of the equipment, have submitted to the administering agency my (our) personal federal tax return(s) at time of certification and annually thereafter as defined in *Military and Veterans Code 999.2*, subsections (c) and (g). *Failure by the disabled veteran equipment owner(s) to submit their personal federal tax return(s) to the administering agency as defined in Military and Veterans Code 999.2, subsections (c) and (g), will result in the DVBE being deemed an equipment broker.*

Disabled Veteran Owner(s) of the DVBE (attach additional pages with signature blocks for each person to sign):

(Printed Name) (Signature) (Date Signed)_____
(Address of Owner) (Telephone) (Tax Identification Number of Owner)

Disabled Veteran Manager(s) of the DVBE (attach additional pages with sufficient signature blocks for each person to sign):

(Printed Name of DV Manager) (Signature of DV Manager) (Date Signed)

Page ____ of ____

PRINT**CLEAR**

COMMERCIALLY USEFUL FUNCTION – BIDDER CERTIFICATION

All California Certified Small Business (SB), Micro Business (MB), and Disabled Veteran Business Enterprise (DVBE) suppliers contracting and subcontracting must complete this certification form.

SUPPLIER NAME	DPR REFERENCE/AGREEMENT NUMBER
SUPPLIER TYPE ☐ Small Business ☐ Micro Business ☐ DVBE	DGS CERTIFICATION NUMBER (OSDS)

Government Code Section 14837 and Military and Veterans Code Section 999 require all California Certified Small Businesses (SB), Micro Businesses (MB), and Disabled Veteran Business Enterprises (DVBE) to perform a “commercially useful function” in any contract they perform for the State.

A business that is performing a commercially useful function is one that does all of the following:

1. Is responsible for the execution of a distinct element of the work of the contract.
2. Carries out its obligation by actually performing, managing, or supervising the work involved.
3. Performs work that is normal for its business services, and functions.
4. Is responsible, with respect to products, inventories, materials, and supplies required for the contract, for negotiating price, determining the quality and quantity, ordering, installing, if applicable, and making payment.
5. Is not further subcontracting a portion of the work that is greater than that expected to be subcontracted by normal industry practices.

Note: A contractor, subcontractor, or supplier will not be considered to perform a commercially useful function if the contractor's, subcontractor's, or supplier's role is limited to that of an extra participant in a transaction, contract or project through which funds are passed in order to obtain the appearance of small business or microbusiness participation.

BIDDER'S CERTIFICATION	
<i>I certify that my company meets all five of the criteria listed above and therefore performs a commercially useful function as defined by California Code.</i>	
SIGNATURE	DATE
PRINTED NAME AND TITLE OF AUTHORIZED SIGNER	

State of California - Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

**NON-COLLUSION DECLARATION TO BE EXECUTED
BY BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**

The undersigned declares:

I am the _____ of _____, the party
(Position Title) (Company Name)
making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bid or any other bid, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bid. All statements contained in the bid are true. The bidder has not, directly, or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that this declaration is executed on

_____, at _____, _____
(Date) (City) (State/Zip Code)

(Print or Type Name)

(Signature)

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

BIDDER'S BOND

KNOW ALL PEOPLE BY THESE PRESENTS:

That we, _____

_____, as Principal, and as Surety,
are held and firmly bound unto the State of California, hereinafter called the State, in the penal sum of ten percent (10%) of the
total amount of the bid of the Principal above named, submitted by said Principal to the State of California, Department of Parks
and Recreation for the work described below, for the payment of which sum in lawful money of the United States, well and truly
to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION of this obligation is such that:

WHEREAS, the Principal has submitted the above-mentioned bid to the State of California, Department of Parks and Recreation,
for certain construction specifically described as follows, for which bids are to be opened at

(Insert place where bids will be opened)

on _____

(Insert date of bid opening)

for _____
(Copy here the exact description of work, including location, as it appears on the proposal)

NOW, THEREFORE, If the aforesaid Principal is awarded the contract and, within the time and manner required under the
specifications, after the prescribed forms are presented to him or her for signature, enters into a written contract, in the prescribed
form, in accordance with the bid, and files the two bonds with the Department, one to guarantee faithful performance and the other
to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall be
and remain in full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by
the Obligee in such suit, including a reasonable attorney's fee to be fixed by the court.

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

(SEAL)

(SEAL)

(SEAL)

Principal

(SEAL)

(SEAL)

(SEAL)

Surety

NOTE: Signatures of those executing for the Surety must be properly acknowledged.

CERTIFICATE OF ACKNOWLEDGEMENT

State of California

County of _____ ss

On this _____ day of _____ in the year of 20____ before me, a notary public in and for the county and state
aforesaid, personally appeared, _____
known to me to be the person whose name is subscribed to the within instrument and known to me to be the attorney-in-fact of
_____ and acknowledged to me that
he subscribed the name of the said company thereto as surety, and his own name as attorney-in-fact.

(SEAL)

Notary Public

CONTRACTOR'S ACTUAL SMALL BUSINESS PARTICIPATION

PART 1 — ACTUAL SMALL BUSINESS (SB)/MICRO BUSINESS (MB) PARTICIPATION

Upon completion of a contract, for which a commitment to achieve SB/MB participation goal was made, the prime contractor must report to the Department of Parks and Recreation the total amount paid to the awarded contractor, the actual percentage of participation that was achieved and must also certify that the information reported is correct.

COMPLETION INSTRUCTIONS

COMPANY INFORMATION: List the information of the prime and the subcontractor(s) and supplier(s) for SB/MB.

CONTRACTED WITH: Show the name of the department or company with which the company listed contracted.

SB/MB STATUS: Identify whether company is a California Certified SB/MB and provide certification number.

TIER: Contractor may count toward its participation goal the dollar value of work and supplies to be obtained by its primary subcontractors and suppliers from SB/MB firms as second and third level tier subcontractors/suppliers. Contracting tier should be indicated with the following designations:

SB/MB company listed for participation.

0 = Prime or Joint Contractor

1 = Primary Subcontractor or Supplier

2 = Subcontractor/Supplier of Level 1 Subcontractor/Supplier

3 = Subcontractor/Supplier of Level 2 Subcontractor/Supplier

DOLLAR VALUE: The dollar amount of the contract actually paid to subcontracted company.

PERCENT OF CONTRACT: The percentage of the total contract amount the dollar value represents.

COMPANY INFORMATION						
PRIME COMPANY NAME		CONTRACT NUMBER		PRIME COMPANY ADDRESS (Street, City, State, Zip Code)		
P R I M E	CONTACT	CONTACT PHONE ()	☐ SB/MB ☐ NONE	CERTIFICATION NO.	TOTAL DOLLAR VALUE PAID TO PRIME COMPANY	
	CONTRACTED WITH					
S U B	SUBCONTRACTED COMPANY NAME	CONTACT PHONE ()	☐ SB/MB	CERTIFICATION NO.	DOLLAR VALUE	PERCENT OF CONTRACT
	CONTRACTED WITH					
S U B	SUBCONTRACTED COMPANY NAME	CONTACT PHONE ()	☐ SB/MB	CERTIFICATION NO.	DOLLAR VALUE	PERCENT OF CONTRACT
	CONTRACTED WITH					
S U B	SUBCONTRACTED COMPANY NAME	CONTACT PHONE ()	☐ SB/MB	CERTIFICATION NO.	DOLLAR VALUE	PERCENT OF CONTRACT
	CONTRACTED WITH					
S U B	SUBCONTRACTED COMPANY NAME	CONTACT PHONE ()	☐ SB/MB	CERTIFICATION NO.	DOLLAR VALUE	PERCENT OF CONTRACT
	CONTRACTED WITH					
S U B	SUBCONTRACTED COMPANY NAME	CONTACT PHONE ()	☐ SB/MB	CERTIFICATION NO.	DOLLAR VALUE	PERCENT OF CONTRACT
	CONTRACTED WITH					

PART 2 — CERTIFICATION

I hereby certify that I have made a diligent effort to ascertain the facts with regard to the representations made herein, including dollar amounts listed above were made to the SB/MB(s). In making this certification, I am aware of Section 12650 et seq. of the Government Code providing for the imposition of treble damages for making false claims against the State and Section 10115.10 of the Public Contract Code making it a crime for intentionally making an untrue statement in this certificate.

SIGNATURE	PRINTED NAME	DATE
TITLE (e.g. BUSINESS OWNER/CHIEF EXECUTIVE OFFICER, ETC.)		

CALIFORNIA PUBLIC CONTRACT CODE SECTION 10162
— Questionnaire —

PARK UNIT NAME	PROJECT NAME
NAME OF BUSINESS	
<i>In accordance with Section 10162 of the California Public Contract Code, bidders shall complete, under penalty of perjury, the question below. Please answer the following:</i>	
HAVE YOU, ANY OFFICER OF YOUR BUSINESS, OR ANY EMPLOYEE OF YOUR BUSINESS WHO HAS PROPRIETARY INTEREST IN YOUR BUSINESS EVER BEEN DISQUALIFIED, REMOVED, OR OTHERWISE PREVENTED FROM BIDDING ON, OR COMPLETING A FEDERAL, STATE, OR LOCAL GOVERNMENT PROJECT BECAUSE OF A VIOLATION OF LAW OR VIOLATION OF SAFETY REGULATIONS? ☐ Yes (Explain circumstances below. Attach additional pages if needed.) ☐ No	
NOTICE TO BIDDERS	
Bidders are cautioned that making false certification may subject the certifier to criminal prosecution. The Department of Parks and Recreation (DPR) reserves the right under California Public Contract Code Section 10162 to reject any bidder, any officer of such bidder, or any employee of such bidder who has a proprietary interest in such bidder who has been disqualified, removed or otherwise prevented from bidding on, or completing a federal, state or local government project because of a violation of law or violation of safety regulations. Failure to return this form with the bid shall not be cause for rejection; however, bidders must furnish the completed form within the time frame prescribed by the DPR. Failure to submit this form within the time frame prescribed by the DPR may be deemed refusal of an award which shall be cause for forfeiture of bidder's security.	
CERTIFICATION	
<i>By my signature, I certify under penalty of perjury under the laws of the State of California that the foregoing questionnaire and statements pursuant to California Public Contract Code Section 10162 are true and correct.</i> BIDDER SIGNATURE PRINTED NAME DATE	

DARFUR CONTRACTING ACT CERTIFICATION

DO NOT COMPLETE OR RETURN THIS FORM IF: Within the previous three years, your company **HAS NOT** had any business activities or other operations outside of the United States.

All other companies, complete Option #1 or Option #2 and return:

Public Contract Code Sections 10475 -10481 applies to any company that currently or within the previous three years has had business activities or other operations outside of the United States. For such a company to bid on or submit a proposal for a State of California contract, the company must certify that it is either a) not a scrutinized company; or b) a scrutinized company that has been granted permission by the Department of General Services to submit a proposal.

OPTION #1 - CERTIFICATION

If your company, within the previous three years, has had business activities or other operations outside of the United States, in order to be eligible to submit a bid or proposal, please insert your company name and Federal ID Number and complete the certification below.

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY that a) the prospective proposer/bidder named below is not a scrutinized company per Public Contract Code 10476; and b) I am duly authorized to legally bind the prospective proposer/bidder named below. This certification is made under the laws of the State of California.

COMPANY/VENDOR NAME (<i>Printed</i>)		FEDERAL ID NUMBER
BY (<i>Authorized Signature</i>)		
▶		
PRINTED NAME AND TITLE OF PERSON SIGNING		
DATE EXECUTED	EXECUTED IN THE COUNTY AND STATE OF	

OPTION #2 - WRITTEN PERMISSION FROM DGS

Pursuant to Public Contract Code section 10477(b), the Director of the Department of General Services may permit a scrutinized company, on a case-by-case basis, to bid on or submit a proposal for a contract with a state agency for goods or services, if it is in the best interests of the state. If you are a scrutinized company that has obtained written permission from the DGS to submit a bid or proposal, complete the information below.

We are a scrutinized company as defined in Public Contract Code section 10476, but we have received written permission from the Department of General Services to submit a bid or proposal pursuant to Public Contract Code section 10477(b). A copy of the written permission from DGS is included with our bid or proposal.

COMPANY/VENDOR NAME (<i>Printed</i>)		FEDERAL ID NUMBER
INITIALS OF SUBMITTER		
PRINTED NAME AND TITLE OF PERSON INITIALING		

DO NOT COMPLETE THIS FORM UNLESS YOUR COMPANY MEETS THE CRITERIA OF OPTION #1 OR OPTION #2.

FAIR CHANCE EMPLOYMENT ACT

Public Contract Code 10186:

- (a) This section shall be known, and may be cited, as the "Fair Chance Employment Act."
- (b) Any person submitting a bid to the state on a contract involving onsite construction-related services shall certify that the person will not ask an applicant for onsite construction-related employment to disclose orally or in writing information concerning the conviction history of the applicant on or at the time of an initial employment application.
- (c) This section shall not apply to a position for which the person or the state is otherwise required by state or federal law to conduct a conviction history background check or to any contract position with a criminal justice agency, as that term is defined in Section 13101 of the Penal Code.
- (d) This section shall not apply to a person to the extent that he or she obtains workers from a hiring hall pursuant to a bona fide collective bargaining agreement.

CERTIFICATION

By my signature, I certify under penalty of perjury under the laws of the State of California that I have read, understand and will abide by California Public Contract Code Section 10186.

<i>Contractor/Bidder Firm Name (Printed)</i>		<i>Federal ID Number</i>
<i>By (Authorized Bidders Signature)</i>		
<i>Printed Name and Title of Person Signing</i>		
<i>Date Executed</i>	<i>Executed in the County of</i>	

Pursuant to Public Contract Code section 2010, a person that submits a bid or proposal to, or otherwise proposes to enter into or renew a contract with, a state agency with respect to any contract in the amount of \$100,000 or above shall certify, under penalty of perjury, at the time the bid or proposal is submitted or the contract is renewed, all of the following:

1. CALIFORNIA CIVIL RIGHTS LAWS: For contracts executed or renewed after January 1, 2017, the contractor certifies compliance with the Unruh Civil Rights Act (Section 51 of the Civil Code) and the Fair Employment and Housing Act (Section 12960 of the Government Code); and
2. EMPLOYMENT DISCRIMINATORY POLICIES: For contracts executed or renewed after January 1, 2017, if a Contractor has an internal policy against a sovereign nation or people recognized by the United States government, the Contractor certifies that such policies are not used in violation of the Unruh Civil Rights Act (Section 51 of the Civil Code) or the Fair Employment and Housing Act (Section 12960 of the Government Code).

CERTIFICATION

I, the official named below, certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Proposer/Bidder Firm Name (Printed)	Federal ID Number
By (Authorized Signature)	
Printed Name and Title of Person Signing	
Executed in the County of	Executed in the State of
Date Executed	

ARTIFICIAL INTELLIGENCE (AI) DISCLOSURE FORM

Instructions for this form are on Page 3.

I. BIDDER CONTACT INFORMATION

BUSINESS NAME

SOLICITATION NUMBER

REPRESENTATIVE NAME

BUSINESS TELEPHONE NUMBER

BUSINESS ADDRESS

CITY

STATE

ZIP CODE

Description of Services:

Describe in detail the services being provided. Include names of products and large language model.

SAMPLE

II. DISCLOSURE

Will you and/or your subcontractor(s) be using or offering AI technology, model, service, or system (collectively, "product") for this product in question?

☐ No. (Skip to Section III) ☐ Yes. (Answer 1-5 below)

1. What type of AI is included?

☐ Traditional AI ☐ Generative AI

2. Is the AI required for this product?

☐ No ☐ Yes ☐ Other:

3. What is the model and version of this product?

4. What is the license tier of the AI product, if applicable (free, enterprise, platinum, etc.)?

SAMPLE

5. How is the AI solution delivered: IaaS, PaaS, SaaS, or will it be deployed on-premises? (Indicate if this is a thin client, thick client, web extension, plugin, etc.)

Provide the best contact for information related to questions related to the AI included in the product (if different than the representative listed in Section I.)

NAME	E-MAIL	PHONE NUMBER
------	--------	--------------

III. SIGNATURE

By signing this document, I have identified and reported any AI use in the performance of this product in question.

Signature	Date
-----------	------

ARTIFICIAL INTELLIGENCE (AI) DISCLOSURE FORM (Instructions)

Instructions:

The Department of Parks and Recreation (DPR) is required to track and complete risk assessments for any Generative Artificial Intelligence (GenAI) purchases. This document is intended to help DPR identify GenAI and assess the risk related to any GenAI purchases.

Section I:

Bidders shall fill in their contact information.

The DPR staff shall fill out the Description of Services in detail and/or reference the applicable Statement of Work or attachment(s). Include the services to be provided related to AI and include the names of products and large language model. It is important to include as much detail as possible related to any AI aspect of the potential purchase.

Section II:

Bidders shall disclose any aspect of AI related to the purchase.

If “no” is selected, no further information is required in this section.

If “yes” is selected, the Bidder shall fill out answers to questions 1-5. Bidders should provide as much detail as possible related to the AI technology, model, service or system as it relates to what the DPR is soliciting for.

If GenAI is selected and the DPR staff intends to pursue the product, the DPR staff must complete the [SIMM 5305-F GenAI Intelligence Risk Assessment](#), Data Classification section and the Risk Assessment Questionnaire questions a-j; and submit it to ISPO@parks.ca.gov with a cc: to both PMO@parks.ca.gov and DPR-IT.Procurement@parks.ca.gov. Contact ISPO@parks.ca.gov for assistance with completing this assessment.

Upon review, ISPO will contact the DPR staff for more information, if needed, prior to submitting the finalized document to the California Department of Technology.

Procurement efforts will be placed on temporary hold pending CDT approval.

Definitions:

- IaaS – Infrastructure as a Service is a cloud computing model that provides on-demand access to virtualized computing resources like servers, storage, and networking.
- PaaS – Platform as a Service is a cloud computing model that provides a complete platform for developing, running, and managing applications.
- SaaS – Software as a Service a cloud-based software delivery model where users access and use applications over the internet via a subscription rather than purchasing and installing software locally.

Section III:

Bidder signatures are required to certify all provided information on this document is true and accurate to the best of their knowledge.

SAMPLE

STATE OF CALIFORNIA - DEPARTMENT OF GENERAL SERVICES

STANDARD AGREEMENT

STD 213 (Rev. 04/2020)

AGREEMENT NUMBER

C25683007

PURCHASING AUTHORITY NUMBER (If Applicable)

1. This Agreement is entered into between the Contracting Agency and the Contractor named below:

CONTRACTING AGENCY NAME

Department of Parks and Recreation

CONTRACTOR NAME

2. The term of this Agreement is:

START DATE

Notice to Proceed (NTP)

THROUGH END DATE

Three Hundred Sixty-Five (365) Calendar Days from NTP

3. The maximum amount of this Agreement is:

Dollars and Zero Cents

4. The parties agree to comply with the terms and conditions of the following exhibits, which are by this reference made a part of the Agreement.

Exhibits	Title	Pages
Exhibit A	Scope of Work	1
Exhibit B	Budget Detail and Payment Provisions	2
Exhibit B	Attachment I, Public Works Bid Forms	3
Exhibit C *	General Terms and Conditions (GTC)	02/2025
Exhibit D	Special Terms and Conditions	1
Exhibit D	Attachment I, Project Manual	xx

Items shown with an asterisk (), are hereby incorporated by reference and made part of this agreement as if attached hereto.**These documents can be viewed at <https://www.dgs.ca.gov/OLS/Resources>***IN WITNESS WHEREOF, THIS AGREEMENT HAS BEEN EXECUTED BY THE PARTIES HERETO.****CONTRACTOR**

CONTRACTOR NAME (if other than an individual, state whether a corporation, partnership, etc.)

CONTRACTOR BUSINESS ADDRESS

CITY

STATE

ZIP

PRINTED NAME OF PERSON SIGNING

TITLE

CONTRACTOR AUTHORIZED SIGNATURE

DATE SIGNED

STATE OF CALIFORNIA - DEPARTMENT OF GENERAL SERVICES

STANDARD AGREEMENT

STD 213 (Rev. 04/2020)

AGREEMENT NUMBER

C25683007

PURCHASING AUTHORITY NUMBER (If Applicable)

STATE OF CALIFORNIA

CONTRACTING AGENCY NAME

Department of Parks and Recreation

CONTRACTING AGENCY ADDRESS

2241 Harvard Street, Suite 200

CITY

Sacramento

STATE

CA

ZIP

95815

PRINTED NAME OF PERSON SIGNING

Brian Dewey

TITLE

Assistant Deputy Director, Facilities & Development

CONTRACTING AGENCY AUTHORIZED SIGNATURE

DATE SIGNED

CALIFORNIA DEPARTMENT OF GENERAL SERVICES APPROVAL

EXEMPTION (If Applicable)

DGS APPROVAL NOT REQUIRED

Exempt per PCC § 10106(a)(3)

Exempt per PCC § 10107

Contractor's Name:

Agreement Number:

Page: 1 of 1

**EXHIBIT A — Public Works
(Standard Agreement)**

SCOPE OF WORK

1. Contractor agrees to furnish all labor, tools, materials and equipment necessary to:

2. The work shall be performed at:

3. The work shall be provided during:

4. The project representatives during the term of this agreement will be:

State Agency:		Contractor:	
Section/Unit:		Section/Unit:	
Attention:		Attention:	
Address:		Address:	
City/State/Zip Code:		City/State/Zip Code:	
Phone:		Phone:	
Fax:		Fax:	
E-mail:		E-mail:	

SAMPLE

Contractor's Name: To Be Determined - SAMPLE
Agreement Number: C25683007
Page: 1 of 1

**EXHIBIT B — PUBLIC WORKS (For Lump Sum)
(Standard Agreement)**

BUDGET DETAIL AND PAYMENT PROVISIONS

1. Invoicing and Payment

- A. For services satisfactorily rendered, and upon receipt and approval of the invoices, the State agrees to compensate the Contractor in accordance with the lump sum amount specified in the Bid Form, marked Exhibit B, Attachment 1, which is attached hereto and made a part of this Agreement.
- B. Invoices shall include the Agreement Number and shall be submitted in triplicate upon completion of all work to:

Department of Parks and Recreation
Attention: Contracts
PO Box 266
Tahoma, CA 96142

2. Budget Contingency Clause

- A. It is mutually agreed that if the Budget Act of the current year and/or any subsequent years covered under this Agreement does not appropriate sufficient funds for the program, this Agreement shall be of no further force and effect. In this event, the State shall have no liability to pay any funds whatsoever to Contractor or to furnish any other considerations under this Agreement and Contractor shall not be obligated to perform any provisions of this Agreement.
- B. If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, the State shall have the option to either cancel this Agreement with no liability occurring to the State, or offer an agreement amendment to Contractor to reflect the reduced amount.

3. Prompt Payment Clause

Payment will be made in accordance with, and within the time specified in, Government Code Chapter 4.5, commencing with Section 927.

4. Compensation

Contractor shall submit to the State an itemized request for payment, in triplicate. All invoices or requests for payment, not on Contractor's preprinted stationery, shall be signed by the Contractor or his authorized representative and submitted to the State's Representative as indicated in paragraph 1B above.

No progress payments will be made by the State. The one and only payment will be the final payment made by the State upon satisfactory completion of all work required under the contract documents.

Exhibit B, Attachment 1
PUBLIC WORKS BID FORM

BID TIME 2:00 PM PST	BID DATE
PROJECT LOCATION Donner Memorial State Park - 301	
PROJECT NAME C24683031 - Pioneer Monument Improvements	

Nondiscrimination Compliance Statement: The prospective contractor's signature affixed hereon and dated shall constitute a certification under penalty of perjury under the laws of the State of California that the bidder has, unless exempted, complied with the nondiscrimination program requirements of Government Code Section 12990 and Title 2, California Code of Regulations, Section 8103.

Verification: By signing this Bid Form, the bidder assures the state that it has not been convicted of violating a state or federal law regarding the employment of undocumented aliens, in the preceding five years.

The prospective contractor's signature affixed hereon and dated shall constitute a certification that the representations made by the prospective contract in the bid are made under penalty of perjury under the laws of the State of California.

Important: Pursuant to Title 2, California Code of Regulations, Section 8103 and Business and Professions Code Section 7028.15, no bid will be considered unless it contains the certifications and license information requested on this form. The State reserves the right to waive any irregularity in any bid or to reject any or all bids.

CERTIFICATION

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY that I am duly authorized to legally bind the prospective Contractor to the clause(s) listed above. This certification is made under the laws of the State of California. I understand that failure to submit the Public Works Bid Form without the appropriate bidder signature will result in rejection of the bid.

BY (Authorized Signature)

DATE



PRINTED NAME AND TITLE OF PERSON SIGNING

CONTRACTOR/BIDDER FIRM NAME (Printed)	PHONE NO.	FAX NO.
ADDRESS	CITY/STATE/ZIP CODE	
LICENSE CLASSIFICATION	LICENSE NO.	LICENSE EXPIRATION DATE
STATUS OF BUSINESS (Check appropriate box.)		
☐ Individual.		
☐ Corporation. State in which incorporated: _____		
☐ Partnership. Full names of partners: _____		

Listed hereinafter are the names, addresses and contractor's license numbers of all subcontractors who will perform work or labor or render services in an amount in excess of one-half of one percent of the general contractor's total bid if this bid is accepted and the portion of the work that each will perform. Material vendors are not included.

KIND OF WORK	NAME AND ADDRESS	LICENSE NO.

BID FORM

Bid Number: C256 3007

Contractor / Bidder Firm Name: _____

Page 2

The bidder hereby proposes to furnish all labor, materials, tools, equipment and travel necessary to make landscape improvements including expansion of the existing walkway, an ADA-accessible loop trail, gathering areas, installation of plant materials, and modification of existing irrigation systems, surrounding the existing Pioneer Monument site at DONNER MEMORIAL STATE PARK in Nevada County, California, in accordance with the contract documents therefore, for the following lump sum which shall include all applicable taxes and other expenses:

Base Bid Lump Sum Total: \$ _____

Base Bid Lump Sum Total Written Out:

ADDENDUM ACKNOWLEDGEMENT (Please initial for Addenda received)

Addendum #1 _____

Addendum #4 _____

Addendum #2 _____

Addendum #5 _____

Addendum #3 _____

Addendum #6 _____

The bidder agrees to complete all work within SIXTY (60) calendar days from the date of written notice to commence work. This time includes ten (10) calendar days allowed for the contractor to begin work.

Contractor's Name:

Agreement Number:

Page: 1 of 1

EXHIBIT D — PUBLIC WORKS (Standard Agreement)

SPECIAL TERMS AND CONDITIONS

1. Project Manual

The Project Manual, marked Exhibit D, Attachment I, containing general conditions, plans and specifications, and other pertinent bid documents related to this project, as enumerated in the Project Manual's Table of Contents, is hereby attached and incorporated into this agreement.

2. Public Works - Rules/Regulations

Contractor shall observe and comply with all federal, state, city, and county laws, rules or regulations affecting the work. Any work done that does not comply with any laws, rules, or regulations will be remedied at the Contractor's expense.

3. Executive Order N-6-22 – Russia Sanctions

On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (the EO) regarding Economic Sanctions against Russia and Russian entities and individuals. "Economic Sanctions" refers to sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any sanctions imposed under state law. The EO directs state agencies to terminate contracts with, and to refrain from entering any new contracts with, individuals or entities that are determined to be a target of Economic Sanctions. Accordingly, should the State determine Contractor is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for termination of this agreement. The State shall provide Contractor advance written notice of such termination, allowing Contractor at least 30 calendar days to provide a written response. Termination shall be at the sole discretion of the State.

PAYMENT BOND TO ACCOMPANY CONSTRUCTION CONTRACT
(Public Contract Code Sections 7103 and 10221)

BOND NO. _____

The premium on this bond is _____ for the term of _____

Know All Men By These Presents:

That the State of California, acting by and through the _____, has awarded to
_____ whose address for service is _____
as Principal, a contract for the work described as follows:

Project Title: _____

Project Location: _____

WHEREAS, the provisions of Public Contract Code Sections 7103 and 10221 require that the Principal file a bond in connection with said contract and this bond is executed and tendered in accordance therewith.

NOW THEREFORE, Principal and _____, a Surety Corporation organized under the laws of _____, and authorized to transact a general surety business in the State of California, as Surety, are held and firmly bound to the People of the State of California in the penal sum of _____, for which payment we bind ourselves, our heirs, executors, administrators, successors and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH,

1. That if said Principal or its subcontractors shall fail to pay any of the persons named in Civil Code Section 9100, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to such work and labor, that the surety herein will pay for the same, otherwise this obligation is to be void. In case suit is brought upon this bond, the Surety will pay a reasonable attorney's fee to be fixed by the court.
2. This bond shall inure to the benefit of any persons named in Civil Code Section 9100 as to give a right of action to such persons or their assigned in any suit brought upon this bond.
3. The aggregate liability of the Surety hereunder, including costs and attorney fees, on all claims whatsoever shall not exceed the penal sum of the bond in accordance with the provisions of Section 996.470(a) of the Code of Civil Procedure.
4. This bond is executed by the Surety, to comply with the provisions of Public Contract Code Sections 7103, 10221 and 10222, of Chapter 5, Title 3, Part 6, Division 4 of the Civil Code and of Chapter 2, Title 14, Part 2 of the Code of Civil Procedure and said bond shall be subject to all of the terms and provisions thereof.
5. This bond may be cancelled by the Surety in accordance with the provisions of Section 996.310 et seq. of the Code of Civil Procedure.
6. This bond to become effective _____

(NAME OF SURETY)

(ADDRESS FOR SERVICE)

I certify (or declare) under penalty of perjury under the laws of the State of California that I have executed the foregoing bond under an unrevoked power of attorney.

Executed in _____ on _____
(CITY AND STATE) (DATE)

 X
(SIGNATURE OF ATTORNEY IN FACT)

(PRINTED OR TYPED NAME OR ATTORNEY IN FACT)

PAYEE DATA RECORD

(Required when receiving payment from the State of California in lieu of IRS W-9 or W-7)

STD 204 (Rev. 4/2017)

1	INSTRUCTIONS: Type or print the information. Complete all information on this form. Sign, date, and return to the state agency (department/office) address shown in Box 6. Prompt return of this fully completed form will prevent delays when processing payments. Information provided in this form will be used by California state agencies to prepare Information Returns (Form1099). See next page for more information and Privacy Statement. NOTE: Governmental entities, i.e. federal, state, and local (including school districts), are not required to submit this form.																				
2	PAYEE'S LEGAL BUSINESS NAME (As shown on your income tax return)																				
	SOLE PROPRIETOR OR INDIVIDUAL- ENTER NAME AS SHOWN ON SSN (Last, First, M.I.)							E-MAIL ADDRESS													
	MAILING ADDRESS					BUSINESS ADDRESS															
	CITY	STATE	ZIP CODE	CITY	STATE	ZIP CODE															
3	ENTER FEDERAL EMPLOYER IDENTIFICATION NUMBER (FEIN): <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>																				
PAYEE ENTITY TYPE	☐ PARTNERSHIP ☐ ESTATE OR TRUST																				
CHECK ONE BOX ONLY	CORPORATION: ☐ MEDICAL (e.g., dentistry, psychotherapy, chiropractic, etc.) ☐ LEGAL (e.g., attorney services) ☐ EXEMPT (nonprofit) ☐ ALL OTHERS																				
	☐ SOLE PROPRIETOR OR INDIVIDUAL <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>																				
	Enter social security number (SSN) or Individual taxpayer identification number (ITIN) <i>(SSN required by authority of California Revenue and Tax Code sections 18646 and 18661)</i>																				
4	☐ CALIFORNIA RESIDENT - Qualified to do business in California or maintains a permanent place of business in California. ☐ CALIFORNIA NON RESIDENT (see next page for more information) - Payments to nonresidents for services may be subject to state income tax withholding. ☐ No services performed in California. ☐ Copy of Franchise Tax Board waiver of state withholding attached.																				
5	I hereby certify under penalty of perjury that the information provided on this document is true and correct. Should my residency status change, I will promptly notify the state agency below.																				
	AUTHORIZED PAYEE REPRESENTATIVE'S NAME (Type or Print)					TITLE			TELEPHONE (include area code)												
	SIGNATURE					DATE			E-MAIL ADDRESS												
6	Please return completed form to:																				
	DEPARTMENT/OFFICE Department of Parks and Recreation					UNIT/SECTION Acquisition and Development															
	MAILING ADDRESS One Capitol Mall, Suite 410					TELEPHONE (include area code) 916-445-8843			FAX												
	CITY Sacramento	STATE CA	ZIP CODE 95814	E-MAIL ADDRESS Merrilee.Byrnes@parks.ca.gov																	

PAYEE DATA RECORD

(Required when receiving payment from the State of California in lieu of IRS W-9 or W-7)

STD 204 (Rev. 4/2017)

1	Requirement to Complete the Payee Data Record, STD 204 A completed Payee Data Record, STD 204 form, is required for all payees (non-governmental entities or individuals) entering into a transaction that may lead to a payment from the state. Each state agency requires a completed, signed, and dated STD 204 on file; therefore, it is possible for you to receive this form from multiple state agencies with which you do business. Payees who do not wish to complete the STD 204 may elect not to do business with the state. If the payee does not complete the STD 204 and the required payee data is not otherwise provided, payment may be reduced for federal and state backup withholding. Amounts reported on Information Returns (Form 1099) are in accordance with the Internal Revenue Code (IRC) and the California Revenue and Taxation Code (R&TC).
2	Enter the payee's legal business name. The name must match the name on the payee's tax return as filed with the federal Internal Revenue Service. Sole proprietorships must also include the owner's full name. An individual must list his/her full name as shown on the SSN or as entered on the W-7 form for ITIN. The mailing address should be the address at which the payee chooses to receive correspondence (i.e. 1099 form) and payments. The business address is the address of the business' physical location; do not enter the payment address or lock box information here.
3	Check only one box that corresponds to the payee business type. Corporations must check the box that identifies the type of corporation. The State of California requires that all parties entering into business transactions that may lead to payment(s) from the state provide their Taxpayer Identification Number (TIN). The TIN is required by the R&TC sections 18646 and 18661 to facilitate tax compliance enforcement activities and the preparation of Form 1099 and other information returns as required by the IRC section 6109(a) and R&TC section 18662 and its regulations. Payees must provide one of the following TINs on this form: social security number (SSN), individual taxpayer identification number (ITIN), or federal employer identification number (FEIN). The TIN for sole proprietorships and individuals is the SSN or ITIN. Only partnerships, estates, trusts, and corporations will enter their FEIN.
4	Are you a California resident or nonresident? A corporation will be defined as a "resident" if it has a permanent place of business in California or is qualified through the Secretary of State to do business in California. A partnership is considered a resident partnership if it has a permanent place of business in California. An estate is a resident if the decedent was a California resident at time of death. A trust is a resident if at least one trustee is a California resident. For individuals and sole proprietors, the term "resident" includes every individual who is in California for other than a temporary or transitory purpose and any individual domiciled in California who is absent for a temporary or transitory purpose. Generally, an individual who comes to California for a purpose that will extend over a long or indefinite period will be considered a resident. However, an individual who comes to perform a particular contract of short duration will be considered a nonresident. Payments to all nonresidents may be subject to withholding. Nonresident payees performing services in California or receiving rent, lease, or royalty payments from property (real or personal) located in California will have 7% of their total payments withheld for state income taxes. However, no withholding is required if total payments to the payee are \$1,500 or less for the calendar year. For information on Nonresident Withholding, contact the Franchise Tax Board at the numbers listed below: Withholding Services and Compliance Section: 1-888-792-4900 E-mail address: wscs.gen@ftb.ca.gov For hearing impaired with TDD, call: 1-800-822-6268 Website: www.ftb.ca.gov
5	Provide the name, title, email address, signature, and telephone number of the individual completing this form. Provide the date the form was completed.
6	This section must be completed by the state agency requesting the STD 204.

Privacy Statement

Section 7(b) of the Privacy Act of 1974 (Public Law 93-579) requires that any federal, state, or local governmental agency, which requests an individual to disclose their social security account number, shall inform that individual whether that disclosure is mandatory or voluntary, by which statutory or other authority such number is solicited, and what uses will be made of it.

It is mandatory to furnish the information requested. Federal law requires that payment for which the requested information is not provided is subject to federal backup withholding and state law imposes noncompliance penalties of up to \$20,000.

You have the right to access records containing your personal information, such as your SSN. To exercise that right, please contact the business services unit or the accounts payable unit of the state agency(ies) with which you transact that business.

All questions should be referred to the requesting state agency listed on the bottom front of this form.

STATE OF CALIFORNIA – STATE CONTROLLERS OFFICE

PAYEE DATA RECORD SUPPLEMENT

(This form is optional. Form is used to provide remittance address information if different than the mailing address on the STD 204 – Payee Data Record. Use this form to provide additional remittance addresses and additional Authorized Representatives of the Payee not identified on the STD 204.)

ST 205 e 03 2021

Payee Information (must match the STD 204)

NAME (Required. Do not leave blank.)	TAX ID NUMBER (Required) SSN, ITIN, or FEIN that matches Tax ID number provided on STD 204
BUSINESS NAME, DBA NAME or DISREGARDED SINGLE MEMBER LLC NAME (If different from above)	

Additional Remittance Address Information

- Use the fields below to provide remittance addresses for payee if different from the mailing address on the STD 204.
- The addresses provided below are for remittance purposes only. 1099 information returns will be sent to the mailing address specified on the STD 204.**

1	REMITTANCE ADDRESS (number, street, apt or suite no.)		
	CITY	STATE	ZIP CODE
2	REMITTANCE ADDRESS		
	CITY	STATE	ZIP CODE
3	REMITTANCE ADDRESS		
	CITY	STATE	ZIP CODE
4	REMITTANCE ADDRESS		
	CITY	STATE	ZIP CODE
5	REMITTANCE ADDRESS		
	CITY	STATE	ZIP CODE

Additional Contact Information

Use the fields below to provide additional Authorized Representatives for the Payee if applicable.

1	CONTACT NAME	
	TELEPHONE (Include area code)	EMAIL
2	CONTACT NAME	
	TELEPHONE	EMAIL
3	CONTACT NAME	
	TELEPHONE	EMAIL

Certification

I hereby certify under penalty of perjury that the information provided on this supplemental document is true and correct.

By signing this document, I authorize the State of California to remit payment to the addresses specified on this supplemental form (STD 205) and certify that all persons identified on this form are authorized representatives of this payee. Payments remitted to any of the listed addresses may be reported on 1099 information returns to the tax liable entity identified on the accompanying Payee Data Record - STD 204.

NAME OF AUTHORIZED PAYEE REPRESENTATIVE (Print or Type name)	TITLE	E-MAIL ADDRESS
SIGNATURE X _____	DATE	TELEPHONE (Include area code)

PAYEE DATA RECORD SUPPLEMENT

(This form is optional. Form is used to provide remittance address information if different than the mailing address on the STD 204 – Payee Data Record. Use this form to provide additional remittance addresses and additional Authorized Representatives of the Payee not identified on the STD 204.)

ST 205 e 03 2021

GENERAL INSTRUCTIONS

Type or print the information on the Payee Data Record Supplement, STD 205. Sign, date, and return to the state agency/department with a completed STD 204. Prompt return of the fully completed forms will prevent delays when processing payments.

Purpose – Completion of this form (STD 205) is optional. Payees may use this form to provide remittance addresses or contact information in addition to the 1099 information return mailing address provided on the STD 204. This form shall only be used in conjunction with the STD 204, and will not be accepted without a STD 204.

Please note: The State of California Government will issue 1099 information returns to the mailing address provided on the most recently dated form STD 204 validated by the Payee. Addresses provided on this form (STD 205) will be used for remittance purposes only. If the payee would like to update the address for receiving 1099 information returns, please complete the STD 204.

Payee Information: The Payee's Tax ID number (TIN) and Name (including any Business, DBA, or Disregarded LLC names) are required. This information is subject to TIN matching via the IRS database for validation. Payee Information provided in this section must clearly match the STD 204. Any discrepancies may result in delays of payment, up to and including denial of the request.

Name – Enter the name of the Payee. The name provided shall be the tax liable party and is subject to IRS TIN matching (when applicable).

Business Name – Enter the business name, DBA name, trade or fictitious name, or disregarded LLC name.

Tax ID Number-The State of California requires that all parties entering into business transactions that may lead to payment(s) from the state provide their Taxpayer Identification Number (TIN). The TIN is required by R&TC sections 18646 and 18661 to facilitate tax compliance enforcement activities and preparation of Form 1099 and other information returns as required by the IRC section 6109(a) and R&TC section 18662 and its regulations.

Additional Remittance Address Information - Enter the Payee's additional remittance address(s) that are not listed on STD 204. Up to five (5) addresses may be provided on this form. The Payee may provide additional remittance addresses on a second STD 205 form if needed.

Additional Contact Information - Enter the Payee's additional or updated contact information. Up to three contacts may be identified on this form. Payee may provide additional contacts on a second STD 205 if needed.

PRIVACY STATEMENT

Section 7(b) of the Privacy Act of 1974 (Public Law 93-579) requires that any federal, state, or local governmental agency, which requests an individual to disclose their social security account number, shall inform that individual whether that disclosure is mandatory or voluntary, by which statutory or other authority such number is solicited, and what uses will be made of it.

It is mandatory to furnish the information requested. Federal law requires that payment for which the requested information is not provided is subject to federal backup withholding and state law imposes noncompliance penalties of up to \$20,000.

You have the right to access records containing your personal information, such as your SSN. To exercise that right, please contact the business services unit or the accounts payable unit of the state agency(ies) with which you transact that business.

All questions should be referred to the requesting state agency listed on the bottom front of the STD 204 form.

Contractor Certification Clause

CCC 04/2017

CERTIFICATION

I, the official named below, CERTIFY UNDER PENALTY OF PERJURY that I am duly authorized to legally bind the prospective Contractor to the clause(s) listed below. This certification is made under the laws of the State of California.

Contractor/Bidder Firm Name (Printed)	Federal ID Number
By (Authorized Signature)	
Printed Name and Title of Person Signing	
Date Executed	Executed in the County of

CONTRACTOR CERTIFICATION CLAUSES

STATEMENT OF COMPLIANCE:

Contractor has, unless exempted, complied with the nondiscrimination program requirements. (GC 12990 (a-f) and CCR, Title 2, Section 8103) (Not applicable to public entities.)

DRUG-FREE WORKPLACE REQUIREMENTS:

Contractor will comply with the requirements of the Drug-Free Workplace Act of 1990 and will provide a drug-free workplace by taking the following actions:

- a) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.
- b) Establish a Drug-Free Awareness Program to inform employees about:
 1. the dangers of drug abuse in the workplace;
 2. the person's or organization's policy of maintaining a drug-free workplace;
 3. any available counseling, rehabilitation and employee assistance programs; and,

4. penalties that may be imposed upon employees for drug abuse violations.
- c) Provide that every employee who works on the proposed Agreement will:
1. receive a copy of the company's drug-free policy statement; and,
 2. agree to abide by the terms of the company's statement as a condition of employment on the Agreement.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both and Contractor may be ineligible for award of any future State agreements if the department determines that any of the following has occurred: (1) the Contractor has made false certification, or violated the certification by failing to carry out the requirements as noted above. (GC 8350 et seq.)

NATIONAL LABOR RELATIONS BOARD CERTIFICATION:

Contractor certifies that no more than one (1) final unappealable finding of contempt of court by a Federal court has been issued against Contractor within the immediately preceding two-year period because of Contractor's failure to comply with an order of a Federal court which orders Contractor to comply with an order of the National Labor Relations Board. (PCC 10296) (Not applicable to public entities.)

CONTRACTS FOR LEGAL SERVICES \$50,000 OR MORE- PRO BONO REQUIREMENT:

Contractor hereby certifies that contractor will comply with the requirements of Section 6072 of the Business and Professions Code, effective January 1, 2003.

Contractor agrees to make a good faith effort to provide a minimum number of hours of pro bono legal services during each year of the contract equal to the lesser of 30 multiplied by the number of full time attorneys in the firm's offices in the State, with the number of hours prorated on an actual day basis for any contract period of less than a full year or 10% of its contract with the State.

Failure to make a good faith effort may be cause for non-renewal of a state contract for legal services, and may be taken into account when determining the award of future contracts with the State for legal services.

EXPATRIATE CORPORATIONS:

Contractor hereby declares that it is not an expatriate corporation or subsidiary of an expatriate corporation within the meaning of Public Contract Code Section 10286 and 10286.1, and is eligible to contract with the State of California.

SWEATFREE CODE OF CONDUCT:

- a. All Contractors contracting for the procurement or laundering of apparel, garments or corresponding accessories, or the procurement of equipment, materials, or supplies, other than procurement related to a public works contract, declare under penalty of perjury that no apparel, garments or corresponding accessories, equipment, materials, or supplies furnished to the state pursuant to the contract have been laundered or produced in

whole or in part by sweatshop labor, forced labor, convict labor, indentured labor under penal sanction, abusive forms of child labor or exploitation of children in sweatshop labor, or with the benefit of sweatshop labor, forced labor, convict labor, indentured labor under penal sanction, abusive forms of child labor or exploitation of children in sweatshop labor. The contractor further declares under penalty of perjury that they adhere to the Sweatfree Code of Conduct as set forth on the California Department of Industrial Relations [website](#) and Public Contract Code Section 6108.

- b. The contractor agrees to cooperate fully in providing reasonable access to the contractor's records, documents, agents or employees, or premises if reasonably required by authorized officials of the contracting agency, the Department of Industrial Relations, or the Department of Justice to determine the contractor's compliance with the requirements under paragraph (a).

DOMESTIC PARTNERS:

For contracts of \$100,000 or more, Contractor certifies that Contractor is in compliance with Public Contract Code section 10295.3.

GENDER IDENTITY:

For contracts of \$100,000 or more, Contractor certifies that Contractor is in compliance with Public Contract Code section 10295.35.

DOING BUSINESS WITH THE STATE OF CALIFORNIA

The following laws apply to persons or entities doing business with the State of California.

CONFLICT OF INTEREST:

Contractor needs to be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.

a) Current State Employees (PCC 10410):

1. No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.
2. No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.

b) Former State Employees (PCC 10411):

1. For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-

making process relevant to the contract while employed in any capacity by any state agency.

2. For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

If Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (PCC 10420)

Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC 10430 (e))

LABOR CODE/WORKERS' COMPENSATION:

Contractor needs to be aware of the provisions which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions, and Contractor affirms to comply with such provisions before commencing the performance of the work of this Agreement. (Labor Code Section 3700)

AMERICANS WITH DISABILITIES ACT:

Contractor assures the State that it complies with the Americans with Disabilities Act (ADA) of 1990, which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA. (42 U.S.C. 12101 et seq.)

CONTRACTOR NAME CHANGE:

An amendment is required to change the Contractor's name as listed on this Agreement. Upon receipt of legal documentation of the name change the State will process the amendment. Payment of invoices presented with a new name cannot be paid prior to approval of said amendment.

CORPORATE QUALIFICATIONS TO DO BUSINESS IN CALIFORNIA:

- a) When agreements are to be performed in the state by corporations, the contracting agencies will be verifying that the contractor is currently qualified to do business in California in order to ensure that all obligations due to the state are fulfilled.
- b) "Doing business" is defined in R&TC Section 23101 as actively engaging in any transaction for the purpose of financial or pecuniary gain or profit. Although there are some statutory exceptions to taxation, rarely will a corporate contractor performing within the state not be subject to the franchise tax.
- c) Both domestic and foreign corporations (those incorporated outside of California) must be in good standing in order to be qualified to do business in California. Agencies will determine whether a corporation is in good

standing by calling the Office of the Secretary of State.

RESOLUTION:

A county, city, district, or other local public body must provide the State with a copy of a resolution, order, motion, or ordinance of the local governing body which by law has authority to enter into an agreement, authorizing execution of the agreement.

AIR OR WATER POLLUTION VIOLATION:

Under the State laws, the Contractor shall not be: (1) in violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district; (2) subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or (3) finally determined to be in violation of provisions of federal law relating to air or water pollution.

PAYEE DATA RECORD FORM STD. 204:

This form must be completed by all contractors that are not another state agency or other government entity.

SECTION 000700 GENERAL CONDITIONS

1.01 DEFINITIONS

- A. Acceptance (or Final Completion)** – Acceptance occurs when all the provisions and requirements of the Contract are complete and is so certified by State's Representative.
- B. Bulletin** – A Bulletin is a written order directed to Contractor and issued by State's Representative, directing a minor change or making a clarification in the Work, or requesting information from Contractor about the Work. A Bulletin is to be used for minor changes or clarifications which State's Representative believes will have no impact on the Contract Sum or Contract Time.
- C. Calendar Day (or Day)** – A Calendar Day is a day of twenty-four (24) hours measured from one midnight to the next midnight, Pacific Time. Unless otherwise indicated, a "day" shall mean a Calendar Day.
- D. Change Order (or Amendment)** – A Change Order is a written modification of the Contract Documents made in accordance with the provisions of Section 1.08 of these General Conditions and which has been signed by State and Contractor.
- E. Contract (or Contract Documents)** – The Contract shall consist of the Notice to Contractors; Instructions to Bidders; Bid Form; Bidders Bond; Standard Agreement – STD. 213; General Conditions; STD. 807, Payment Bond; Performance Bond; Special Provisions; Specifications; Plans; STD. 811, Small Business Preference and Certification; Certificate of Insurance; Addenda; Amendments; Non Collusion Affidavit; Disabled Veteran Business Enterprise Compliance Certification and Documentation; and any other provisions made a part thereto by reference.
- F. Contract Time** – The Contract Time shall be the number of Calendar Days specified in which the Work is to be completed including any adjustments and/or time extensions that may be granted by State in accordance with the terms of the Contract.
- G. Contract Sum** – The Contract Sum is the total amount of money stated in the Contract as payable to Contractor for the performance of the Work under the Contract, including authorized adjustments thereto.
- H. Contractor** – The Contractor is the person, firm, individual, partnership, company, corporation, association, joint venture, or any combination thereof, who has entered into the Contract with State.
- I. Event of Default** – An Event of Default is an action that permits termination of the Contract as described herein.
- J. Field Order** – A Field Order is a written order directed to Contractor and signed by State's Representative directing a change or making a clarification in the Work, or requesting information from Contractor about the Work. A Field Order signed by Contractor indicates receipt of the Field Order. A Field Order shall be followed by a Change Order.
- K. Legal Holidays** – Legal Holidays are every Sunday; January 1; 3rd Monday in January; February 12; 3rd Monday in February; March 31; the last Monday in May; July 4; 1st Monday in September; 2nd Monday in October; November 11; Thanksgiving Day and the following Friday; December 25; and every day so declared by the President of the United States or the Governor of California. If January 1, February 12, March 31, July 4, November 11, or December 25 falls on a Sunday, the following Monday is a holiday. If November 11 falls on a Saturday, the preceding Friday is a holiday.
- L. Milestone Date** – A Milestone Date is a significant point in the development of the Work that is illustrated on Contractor's Project Work Schedule.
- M. Not-in-Contract (NIC)** – Not -in-Contract means work not included in the Contract.
- N. Project** – The Project means the erection, construction, alteration, repair, or improvement to be accomplished under the Contract.
- O. Project Work Schedule** – The Project Work Schedule is the schedule furnished by Contractor to State in accordance with Section 1.06A(2) of these General Conditions displaying the anticipated schedule for completing the Work.
- P. Punch List** – The Punch List is the list prepared as a result of a final inspection conducted by State at the completion of the Work indicating items to be completed, corrected, and/or replaced with regard to the Work as specified in the Contract Documents.

- Q. Regular Work Hours** – Eight hours labor constitutes a legal day's work and this Work period shall occur between the hours of 8:00 a.m. and 5:00 p.m. on Working Days unless otherwise agreed by State's Representative.
- R. Schedule of Values** – The Schedule of Values is the statement furnished by Contractor to State in accordance with Section 1.09A of these General Conditions displaying the portions of the Contract Sum allotted for the various parts of the Work and the projected schedule of payment.
- S. State** – The State means the State of California, Department of Parks and Recreation (DPR) and the Director of DPR.
- T. State's Representative** – The State's Representative is the person designated by State to oversee and manage the Contract and completion of the Work on behalf of State and who is the authorized representative of State for this Project. The term State's Representative may be used interchangeably with Project Manager. **CONTRACTOR SHALL ONLY TAKE DIRECTION FROM STATE'S REPRESENTATIVE FOR THE CONTRACT AND MAY NOT RELY ON THE COMMUNICATIONS, REPRESENTATIONS OR OTHER INSTRUCTIONS OF OTHER EMPLOYEES, OFFICERS, MANAGERS, CONTRACTORS, OR AGENTS OR REPRESENTATIVES OF STATE UNLESS CONFIRMED BY STATE'S REPRESENTATIVE IN WRITING OR AS OTHERWISE, FROM TIME TO TIME, MAY BE PERMITTED BY THE PROVISIONS OF THE CONTRACT.**
- U. Subcontractor** – A Subcontractor is anyone having a direct contract with Contractor or another Subcontractor and includes one who furnishes material worked to a special design according to the Plans and/or Specifications, but does not include one who merely furnishes material not so worked.
- V. Substantial Completion** – Substantial Completion is the point at which, in the discretion of State, in accordance with Section 1.09D of these General Conditions, the Project may be used for the purpose for which it is being constructed exclusive of Punch List items which do not interfere with such use and may be completed notwithstanding use of the Project.
- W. Supplier** – A Supplier is anyone who contracts with Contractor or a Subcontractor to furnish materials or equipment for the Project.
- X. Work** – The Work is everything required to complete the Project, including, but not limited to, all labor, suppliers, material, equipment, and tools.
- Y. Working Day** – A Working Day is every day except Saturdays, Sundays, and Legal Holidays and those days not charged as Working Days pursuant to the Contract Documents.

1.02 CORRELATION AND INTENT OF CONTRACT DOCUMENTS

- A.** The General Conditions are incorporated into the Contract Documents in their entirety and may not be revised or modified in any way, except by the Supplemental Conditions.
- B.** What is required by one document shall be as binding as if required by all. In the event of conflicts among the Contract Documents, such conflicts shall be resolved by giving the documents the following order of priority: (1) The Contract between State and Contractor, as the same may be amended (Amendments and revisions of later date take precedence over those of earlier date); (2) Special Conditions; (3) General Conditions; and (4) Drawings and Specifications. Drawings govern Specifications for quantity and location, and Specifications govern Drawings for quality and performance. In the event of ambiguity in quantity or quality, the greater quantity and the higher quality shall govern. Dimensions shall be figured rather than determined by scale or rule. Full-size or large-scale details or Drawings shall govern small-scale details or Drawings.
- C.** Where conflict exists between the Contract Documents or between the Contract Documents and applicable standards under codes or ordinances promulgated by governmental bodies having jurisdiction over the Project, **CONTRACTOR SHALL BE DEEMED TO HAVE AGREED TO PERFORM THE MOST STRINGENT OR HIGHEST QUALITY WAY OF PERFORMING THE WORK.**
- D.** Should Contractor discover conflicts, omissions, or errors in the Contract Documents or have any question concerning interpretation or clarification of the Contract Documents, or if it appears to Contractor that the Work to be done or any matters relative thereto are not sufficiently detailed or explained in the Contract Documents, then, before proceeding with the Work affected, Contractor shall immediately notify State's Representative in writing, using an approved Request For Information (RFI) form, and request interpretation, clarification, or furnishing of additional detailed instructions concerning the Work. Such questions shall be resolved and instructions to Contractor issued within fourteen (14) Calendar Days by State, whose decision shall be final and conclusive. Should Contractor proceed with the Work affected before resolution, Contractor shall be responsible for any resultant damage or added cost, and Contractor shall remove, replace, or adjust the Work not in accordance with State's Representative subsequent instructions.
- E.** All costs and time incurred by Contractor to prepare, review, respond to, estimate, or otherwise process RFI's, Bulletins, Field Orders, Amendments, Schedules, Correspondence, or any other paperwork shall be part of Contractor's base contract overhead and no additional compensation will be allowed therefore.

1.03 CONTRACT BONDS

- A. When the Contract Sum exceeds five thousand dollars (\$5,000), Contractor shall furnish, in duplicate, a Payment Bond, to accompany the Contract, in an amount equal to one hundred percent (100%) of the Contract Sum securing payment for laborers, mechanics, and material suppliers used on the Work under the Contract. Payment Bonds shall be prepared on a Payment Bond to Accompany Construction Contract (STD. 807) as furnished by State.
- B. ~~When the Contract Sum exceeds five thousand dollars (\$5,000), Contractor shall furnish, in duplicate, a Performance Bond, to accompany the Contract, in the amount equal to at least one hundred percent (100%) of the Contract Sum guaranteeing faithful performance of the Work. Performance Bonds may be prepared on standard bonding company forms.~~
- C. Payment and Performance Bonds shall be issued by a corporate surety authorized to transact a general surety business in the State of California. Contractor shall deliver its required bonds before the date of execution of the Contract.
- D. The bonds must remain in full force and effect for the entire length of time Contractor is involved with the Contract and shall include any warranty periods.

1.04 INSURANCE

A. Insurance Requirements

- (1) General Liability Insurance: Contractor shall procure commercial general liability insurance covering liability arising out of premises operations, products/completed operations, independent contractors, personal/advertising injury and liability assumed under an insured contract with limits not less than \$1,000,000 each occurrence, \$2,000,000 general aggregate and \$2,000,000 products/completed operations aggregate. Said policy shall apply separately to each insured against whom any claim is made or suit is brought subject to Contractor's limits of liability.
- (2) ~~Builder's Risk/Installation Floater: During the term of this Contract, Contractor shall maintain in force, at its own expense, Builder's Risk/Installation Floater for an amount equal to the full amount of the Contract improvements, upon the project and all materials or items which is or will become the property of State pursuant to the Contract Documents, including, but not limited to, materials and equipment at the work site or stored off site with the consent of State. A copy of any applicable Builder's Risk/Installation Floater will be provided to State, and it shall be the responsibility of Contractor and each Subcontractor to satisfy itself as to the terms of such coverage, and to determine whether or not at its own cost, to carry any supplemental policy of insurance.~~
- (3) Motor Vehicle Liability Insurance: Contractor shall maintain motor vehicle liability insurance with limits not less than \$1,000,000 combined single limit each accident. Such insurance shall cover liability arising out of an accident involving a motor vehicle in use by Contractor, including, but not limited to, Contractor owned, hired, and non-owned motor vehicles.
- (4) Workers' Compensation and Employer's Liability Insurance: Contractor shall maintain statutory worker's compensation and employer's liability insurance for all of Contractor's employees who will be engaged in the performance of work on the property, including special coverage extensions where applicable.

- B. **Insurance Policies** – Each policy of insurance shall: (1) Be in a form acceptable by State; (2) be written by an insurer acceptable to State; (3) be maintained at Contractor's sole expense; (4) require a minimum of ten(10) days written notice to State prior to any cancellation, non-renewal, or modification of insurance coverage; (5) contain an endorsement naming the State of California, its officers, agents, employees, and servants as additionally insured, but only with respect to Work performed for the State of California under this Contract or permit, at no cost to State; the endorsements are to be provided for the general liability and motor vehicle liability policies; (6) be in full force for the complete term of the Contract including any warranty periods; and (7) be primary, and not in excess, to any insurance carried by State.

Waiver of Subrogation: When work is performed on State-owned or controlled property, the Workers' Compensation and Employers' Liability policy shall be endorsed with a waiver of subrogation endorsement in favor of the State. This endorsement shall also be provided.

C. Insurance Companies

- (1) Insurance companies issuing any of the policies required by these provisions shall have a rating classification of "A-" or better and a financial size category rating of "vii" or better according to the latest edition of the A.M. Best Key Rating Guide. Any other rating classification requires State approval.
- (2) All insurance companies issuing any of the policies required by these provisions shall be licensed to do business in the State of California.

D. Certificate of Insurance

- (1) Concurrent with the execution of the Agreement, Contractor shall provide to State evidence that the insurance required to be

carried by these provisions, including any endorsement affecting the additional insured status, is in full force and effect and that premiums therefore have been paid. Such evidence shall be furnished on the insurance industry's standard ACORD Form (Certificate of Insurance) or a certified copy of the original policy, including all requirements set forth in this section.

- (2) Contractor shall notify the State within 10 days of receipt of a notice of cancellation, expiration, or any reduction in coverage, or if the insurer commences proceedings or has proceedings commenced against it, indicating the insurer is insolvent. Contractor shall provide to State evidence of replacement policy at least ten (10) Working Days prior to the effective date of such cancellation, expiration, or reduction in coverage.

E. Contractor's Additional Responsibilities

- (1) Contractor is responsible for any deductible or self-insured retention contained within the insurance program.
- (2) Contractor shall ensure that all Subcontractors procure insurance meeting the requirements of these provisions.

- F. State's Remedies** – Should Contractor fail to keep the insurance required to be carried by these provisions in full force and effect at all times, State may, in addition to any other remedies State has, terminate this Contract immediately, and all payments due or that become due will be withheld, until notice is received by State that such insurance has been restored or replaced in full force and effect and that the premiums, therefore, have been paid to cover a period of time satisfactory to State.

1.05 STATE'S RIGHTS TO STOP PERFORMANCE AND/OR CARRY OUT WORK

- A. State's Right to Stop the Work** – If Contractor fails to correct the Work which is not in accordance with the requirements of the Contract Documents or fails to carry out the Work in accordance with the Contract Documents; or fails or refuses to provide a sufficient amount of properly supervised and coordinated labor, materials, or equipment so as to be able to complete the Work within the Contract Time; or disregards the instructions of State's Representative when based on the requirements of the Contract Documents; State may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; provided, however, the right of State to stop the Work shall not give rise to a duty on the part of State to exercise this right for the benefit of Contractor or any other person or entity and any delay resulting from such Work stoppage shall not extend any Milestone Date identified in the Contract or the required dates of Substantial or Final Completion.
- B. State's Right to Carry Out the Work** – If Contractor fails to carry out the Work in accordance with the Contract Documents and fails within a five (5) day period after written notice from State to eliminate (or commence to eliminate and thereafter work diligently to eliminate) such failure, State may, regardless of whether an Event of Default has occurred, and without prejudice to other remedies State may have, correct such deficiencies. In such case an offset may be made deducting from payments then or thereafter due Contractor the cost of correcting such deficiencies, including compensation for State's and State Representative's additional services and expenses made necessary by such default, neglect, or failure. If payments then or thereafter due Contractor are not sufficient to cover such amounts, Contractor shall promptly pay the difference to State on demand. The correction of such deficiencies by State or by others shall not relieve Contractor of any obligation or liability for the Work and shall not operate to waive any right or claim of State.

1.06 CONTRACTOR

A. Contractor's Construction Schedules

- (1) Contractor agrees to complete the Work within the number of calendar days stated on the Bid Form from the date of written notice to commence Work. This time includes ten (10) Calendar Days allowed for Contractor to begin Work and ten (10) Calendar Days for issuance and completion of the Punch List. Upon written notice to proceed, Contractor shall begin Work and shall diligently prosecute the Work, with adequate forces, to completion within the Contract Time.
- (2) Within ten (10) Calendar Days of the Notice to Proceed, Contractor shall furnish to State one (1) electronic copy and three (3) paper copies of a Critical Path Method (CPM) Project Work Schedule, in form and content satisfactory to State Representative and utilizing Microsoft Project software, presenting an orderly and realistic plan for completing the Work. The schedule shall include all scheduled Working Days, relevant work activities by trade and critical path dates. No activity on the schedule shall have a duration longer than 15 calendar days, with the exception of fabrication and procurement, unless otherwise approved. Within five (5) Working Days from the date the Project Work Schedule is furnished to State's Representative, State's Representative shall review and comment on the Project Work Schedule and approve or disapprove it, giving reasons for any disapproval. If disapproved, Contractor shall modify the Project Work Schedule and resubmit it for approval following the above stated timeframes. Additionally, Contractor shall submit one (1) electronic copy and three (3) paper copies of the updated

Critical Path Method (CPM) Project Work Schedule with each monthly Request for Payment. The Project Work Schedule shall be maintained at the work site and all revisions, along with the reasons therefore, as well as any affect on the critical path of the Work and the completion date, shall be furnished to State as soon as possible after the date of the revision, but in no event later than five (5) days after its revision.

- (3) If the progress of the Work is behind the Project Work Schedule to such an extent that State reasonably determines that Contractor will be unable to meet any of the critical path dates set forth in the Project Work Schedule, including without limitation any Milestone Date, or Contractor fails to take prompt and adequate corrective action to State's satisfaction to bring the progress of the Work in compliance with the Project Work Schedule, State may, in addition to any other right or remedy provided herein, proceed as provided in Sections 1.05, 1.07, and/or 1.11 of these General Conditions.
- (4) Liquidated Damages:
- a. Failure of Contractor to complete the Work within the Contract Time will result in damages being sustained by State. It is and will be extremely difficult and impracticable to determine the actual damage which State will sustain by reason of such delay. Therefore, Contractor shall pay to State, as liquidated damages, the sum of ONE THOUSAND DOLLARS (\$1,000.00) for each and every Calendar Day's delay in finishing the Work under this Contract beyond the stipulated number of days, or any adjustments thereof. State may deduct liquidated damages from funds due or that become due Contractor. Execution of the Contract shall constitute acknowledgment by Contractor that Contractor has ascertained and agrees that State will suffer damages in the amount fixed herein.
 - b. Contractor shall not be assessed liquidated damages when the delay is caused by the failure of State or the owner of any utility to provide for removal or relocation of an existing utility, facility, or to perform work as indicated in the Contract Documents.

B. Shop Drawings, Product Data, and Samples

- (1) Reference in the Contract Documents to any equipment, material, article, or process by specific brand, trade name, make, or catalog number, followed by the term "or approved equal", shall be regarded as establishing a standard of quality. In such cases Contractor may, subject to State's Representative's review and approval, substitute any other brand of equal quality, utility, and availability. State's Representative shall be the sole judge of equality and suitability of substitute materials. Contractor shall bear all costs and expenses, including, but not limited to, costs and expenses related to demonstrating equality or suitability of such substitute equipment, material, article or process, and any costs or expenses of changes or adjustments necessitated by such substitutions, including, but not limited to, those related to other parts of the Work or the Work of other contractors. State's Representative's approval of any substitution shall not relieve Contractor from compliance with all requirements of the Contract Documents. Where the Contract Documents do not specifically permit the use of "approved equals" for any equipment, material, article, or process referred to by specific brand, trade name, make or catalog number, no substitutions shall be permitted except by means of the Change Order procedures as set forth in Section 1.08 of these General Conditions.
- (2) Contractor shall not be relieved of responsibility for any deviations from requirements of the Contract Documents or allowed any additional compensation by reason of State's Representative approval of Shop Drawings, Product Data, Samples or similar submittals unless Contractor has specifically informed State's Representative in writing of such deviation at the time of submittal and fully complied with Section 1.08 of these General Conditions, and State's Representative has given written approval to the specific deviation. If Shop Drawings provide detail not shown in Contract Documents, Contractor shall be deemed to have primary design-build responsibility for such items. Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals by State's approval thereof.

- C. Safety and Clean-Up** – Contractor acknowledges that State will continue to occupy and must maintain continuous operations in the Parks in which the Work is located. It is critical that these operations shall not suffer any significant interference, including, without limitation, any interruption in utilities or unreasonable noise, dust, odor, or vibration. Contractor shall perform the Work and limit its use of the Project site in such a manner as to minimize any interference with occupancies and operations in such Parks and in accordance with applicable Park rules and regulations. Contractor shall be liable for all costs for all claims related to dust, mud, noise, odor, vibration, or windblown materials attributed to the Work hereunder.

D. Potential Subcontractors

Nothing contained in this agreement or otherwise, shall create any contractual relation between State and any subcontractors, and no subcontract shall relieve Contractor of its responsibilities and obligations hereunder. Contractor agrees to be as fully responsible to State for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by Contractor. Contractor's obligation to pay its subcontractors is an

independent obligation from State's obligation to make payments to Contractor. As a result, State shall have no obligation to pay or to enforce the payment of any moneys to any subcontractor.

E. Force Majeure

Except for defaults of subcontractors, neither party shall be responsible for delays or failures in performance resulting from acts beyond the control of the offending party. Such acts shall include but shall not be limited to acts of God, fire, flood, earthquake, other natural disaster, nuclear accident, strike, lockout, riot, freight embargo, public regulated utility, or governmental statutes or regulations superimposed after the fact. If a delay or failure in performance by Contractor arises out of a default of its subcontractor, and if such default of its subcontractor, arises out of causes beyond the control of both Contractor and subcontractor, and without the fault or negligence of either of them, Contractor shall not be liable for damages of such delay or failure, unless the supplies or services to be furnished by subcontractor were obtainable from other sources in sufficient time to permit Contractor to meet the required performance schedule.

1.07 ADMINISTRATION OF THE CONTRACT

A. Claims and Disputes

- (1) Time Limits on Contractor Claims: Except where a shorter time period is provided herein, claims by Contractor arising during the course of construction, including claims for additional costs, must be made within five (5) days after occurrence of the event giving rise to such claim or within five (5) days after Contractor first recognizes or reasonably should have recognized the condition giving rise to the claim. Claims must be made by written notice to State within five (5) days following such event.
- (2) Continuing Contract Performance: Contractor, in the event of any claim or dispute with State over any matter whatsoever, shall not cause any delay or cessation in Contractor's Work and shall proceed with all Work called for in the Contract Documents and/or required to complete the Project.
- (3) Claims for Additional Cost: If Contractor wishes to make a claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Said notice shall itemize all claims, shall differentiate between extra work and base contract work, and shall contain sufficient detail and substantiating data to permit evaluation of same by State's Representative. Any change in the Contract Sum resulting from such approved claim shall only be authorized by a Change Order.
- (4) Claims for Additional Time: If Contractor wishes to make claim for an increase in the Contract Time, written notice as provided herein shall be given. Contractor's claim shall include an estimate of cost and the probable effect of delay on progress of the Work and shall document any adverse effect on the Project Work Schedule. In the case of a continuing delay, only one claim is necessary.
- (5) Claim Certification: Any claim for additional cost or time must include the following certification, signed by the Contractor's legal representative: "I certify under penalty of perjury, according to the Laws of the State of California, that this claim is made in good faith, that the supporting documentation is accurate and complete, and that the amount requested accurately reflects the contract adjustments for which the Department is responsible."
- (6) Delays in and Extensions of Time:
 - a. If (a) Work on the critical path as shown on the Project Work Schedule is delayed at any time by (i) an act or neglect of State, any employee of State, or any separate contractor employed by State, (ii) changes ordered in the Work in accordance with the provisions of Article 7, (iii) unusually severe and/or abnormal weather conditions which preclude the safe performance of the Work, (iv) national conflicts or priorities arising therefrom, (v) fires beyond the reasonable control of Contractor, (vi) floods beyond the reasonable control of Contractor, (vii) earthquakes, (viii) off-site or area-wide labor disputes which are beyond the reasonable control of Contractor, (ix) civil disturbances and for no other cause or causes; (b) Contractor would otherwise have been able timely to perform its obligations under the Contract Documents but for such delay; (c) Contractor has taken reasonable precautions to foresee, prevent and to mitigate the effects of delays to Work on the critical path due to such causes; and (d) Contractor has given written notice as required by Section 1.08 of these General Conditions; then subject to the provisions of Section 1.07 of these General Conditions, the Contract Time shall be appropriately extended by Change Order by the number of Working Days of delay on the critical path of the Work actually and directly caused by such occurrence. Such extension of Contract Time shall be net of any delays caused by or due to the fault or negligence of Contractor or which are otherwise the responsibility of Contractor or its agents or Subcontractors, and shall also be net of any contingency or "float" time allowance included in the Project Work Schedule. State may, at its option, authorize extra Work in order to accelerate the Project Work Schedule and minimize or eliminate the impact of the delay. No extension shall be made or allowed nor shall such extra Work be authorized unless a written request therefor by Contractor is made within five (5) Calendar Days after the first occurrence of the delay. Any claims of Contractor relating

to time shall be made promptly in accordance with the applicable provisions of Section 1.08 of these General Conditions, or shall be deemed waived.

- b. If adverse weather conditions are the basis for a claim for additional Contract Time, such claim shall be documented by data substantiating that weather conditions were abnormal for the period of time and could not have been reasonably anticipated, and that weather conditions had a direct and adverse effect on scheduled critical path activities.
 - c. Adjustments in compensation for delays or time extensions will be allowed only for the causes specified in (i) and (ii) of paragraph 1.07A(6)a above, which extend the overall project duration.
- (7) Disputes Resolution: A claim or dispute arising out of or relating to the Contract Documents which is not disposed of by agreement between Contractor and State shall be decided by State's Representative promptly, but not longer than ten (10) Working Days from the date Contractor notifies State's Representative in writing that agreement on a dispute cannot be reached and a written decision from State's Representative is required. The decision of State's Representative shall be final and conclusive on Contractor unless, within fifteen (15) days from the receipt of such decision, Contractor submits to State's Representative a written request for review of the decision made by State's Representative. The Director, or a designee other than State's Representative, shall review all decisions and render a decision in writing on or before thirty (30) days from the date of receipt of written position statements by Contractor and State's Representative as provided for herein. Contractor and State's Representative shall be afforded an opportunity to be heard by way of written submissions and to offer relevant information with respect to the matter in question.
- (8) Decision of Director is Final: The decision of the Director or her or his designee shall be final and conclusive on Contractor, unless, within fifteen (15) Working Days from receipt of such decision, Contractor submits to State's Representative a written notice of Contractor's election to reserve its rights to file a claim with the State Board of Control and seek further adjudication of such claim should such claim be rejected by the State Board of Control.
- (9) Arbitration: Claims (demands for monetary compensation of damages) arising out of related to the Contract Documents shall be resolved by arbitration unless State and Contractor agree in writing, after the claim has arisen, to waive arbitration and to have the claim litigated in a court of competent jurisdiction. Arbitration shall be pursuant to California Public Contract Code, Section 10240 et seq., and applicable regulations, Title 1, California Code of Regulations, Section 301 et seq. The arbitration decision shall be decided under and in accordance with the laws of the State of California, supported by substantial evidence and, in writing, contain the basis for the decision, findings of fact, and conclusions of law. Arbitration shall be initiated by a Demand for Arbitration made in compliance with the requirements of above referenced regulations. A Demand for Arbitration by Contractor shall be made not later than 180 days after date of service in person or by mail on Contractor of the final written decision by State on the claim. (This Section only applies to Contracts that exceed \$117,000.00.)
- (10) Exhaust All Administrative Remedies: Contractor must exhaust all remedies and comply with all disputes resolution procedures set forth in the proceeding section prior to filing any legal action which names the Department of Parks and Recreation, State of California, or any officer, employee, agent or affiliate of any of them. In no event, may Contractor bring any claims or pursue legal action for damages or other remedies for issues or matters not raised and presented in written notifications as provided for in the Contract Documents and as set forth in all written requests for review by State's Representative.

1.08 CHANGES IN THE WORK

- A. **Change Orders (Amendments)** – When adjustments in the Contract Sum and Contract Time are determined, such determination shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order. A Change Order signed by Contractor indicates Contractor's final and binding agreement therewith, including the adjustment in the Contract Sum or the Contract Time. No Change Order shall authorize an adjustment in the Contract Sum or Contract Time unless such Change Order specifies such adjustment. If no adjustment in either or both the Contract Sum and the Contract Time is specified, Contractor's execution of the Change Order shall constitute Contractor's agreement that no such adjustment shall be made. Contractor agrees that in no event shall it make any subsequent claim relating to the items covered by an executed Change Order, whether direct, indirect, or consequential in nature. All Change Orders are subject to the approval by the Department of General Services, if required.
- B. **Bulletins and Field Orders**
- (1) A Bulletin or Field Order shall not be recognized as having any impact upon the Contract Sum or the Contract Time. Contractor shall have no Claim therefor unless, within five (5) days from the date such direction or order was given, Contractor submits a written Change Order Request to the State's Representative with estimates of any adjustment in the Contract Sum or Contract Time to which Contractor believes it is entitled as a result of the change in the Work described in the Bulletin or Field Order, including sufficient detail to allow evaluation by the State's Representative.
- (2) Upon receipt of a Bulletin or Field Order, Contractor shall promptly proceed with the Work involved, or as otherwise directed by the Bulletin or Field Order.

C. Pricing Changes

- (1) When submitting its change proposal, Contractor shall include and set forth in clear and precise detail, breakdowns of labor, materials and allowable costs for all trades involved and the estimated impact on the Project Work Schedule. If requested by State, Contractor shall furnish spread sheets from which the breakdowns were prepared, plus spread sheets, if requested, of any Subcontractors. Allowable costs to be included in Contractor's change proposal shall be strictly limited to those set forth in Section 1.08C(2) of these General Conditions.
- (2) In the event that (a) State approves a Change Order to be priced on a time and material basis, (b) State issues a Field Order to proceed with a change in the Work, Contractor timely notifies State of Contractor's belief that it is entitled to an adjustment in the Contract Sum or the Contract Time as a result of such change, and State and Contractor cannot agree on the amount of such adjustment, (c) Contractor is entitled to compensation as the result of a concealed condition, or (d) the Contract Sum includes allowances, then the amount of Contractor's allowable costs shall be governed by this Subsection. Allowable costs include and shall be strictly limited to the following:
 - a. The actual and reasonable cost of additional materials required as a result of such change, purchased by Contractor (or any Subcontractor) and used in the Work, including sales taxes, freight and delivery charges.
 - b. Construction equipment costs shall be substantiated by vendor's invoices. In no event shall the cost of such items exceed (1) the average current wholesale prices at which the items are locally available in the quantities required, delivered to the site, less applicable cash or trade discounts or (2) the equipment rental rates in the Labor Surcharge and Equipment Rental Rates published by Caltrans; whichever is less. The allowable rate constitutes full compensation to the Contractor including cost of fuel, oil, lubrication, supplies, necessary attachments, repairs, maintenance, depreciation, storage, insurance, labor except for construction equipment operators, and incidentals. No costs will be allowed for time while construction equipment is inoperative, idle or on standby, unless approved by the State.
 - c. Labor costs including welfare and fringe benefits shall be the actual labor cost, required as a result of such change in the Work, including no more than one (1) working foreman, but not including any supervisory or administrative personnel. Labor costs shall not exceed the local prevailing wage, which includes the Straight-Time Total Hourly Rate plus Burden. Burden shall be limited to the actual FICA-OASDI, FUTA, SUI, and Workers' Compensation payment percentages multiplied by the sum of the Basic Hourly Rate and Vacation/Holiday payments. Labor costs shall be substantiated by daily time cards (signed by Contractor's Superintendent) and labor summaries.
 - d. The cost of Work performed by Subcontractors or sub-Subcontractors is based on the actual direct costs of material, labor, and construction equipment and is determined pursuant to the provisions of this Subsection.
 - e. For deleted Work otherwise required to be performed hereunder, the Contract Sum shall be reduced by an amount equal to the net savings to Contractor and all Subcontractors and sub-Subcontractors on account of the deleted work for material, labor, and construction equipment.
- (3) Failure of Contractor and State to agree on an adjustment of the Contract Sum or extension of Contract Time for performance under the Contract Documents shall not excuse Contractor from proceeding with the prosecution and performance of the Work as changed. State shall have the right within its sole discretion to require Contractor to commence performance of changes to the Work. If Contractor and State cannot agree on an appropriate stipulated sum for any change, the adjustment to the Contract Sum, if any, shall, subject to the provisions of Section 1.08 of these General Conditions, be determined by State on the basis of the allowable costs incurred as a result of such change as set forth in Section 1.08C(2) plus a fee as set forth in Section 1.08C(4).
- (4) In addition to the allowable costs incurred for a change, Contractor (and any Subcontractors) is entitled to a fee. Such fee shall be included in any agreed upon stipulated sum for the Change Order and shall be added to the allowable costs for Change Orders priced on a time and material basis or as to which no agreement is reached. The additional fee shall be Contractor's (and Subcontractor's) sole reimbursement for overhead, profit and any other cost (including insurance required in the Contract Documents) not specifically reimbursable under the Contract for Construction. No such fee shall be applied to gross receipts or use tax amounts or bond premiums paid by Contractor. The following fees shall apply to Contractor and all Subcontractors and represent the maximum fees chargeable on each Contract tier, who shall receive mark-ups for all categories on a percentage basis equal to Contractor's Fee stated in the Contract:
 - a. For Work to be performed by Subcontractors, such Subcontractors, cumulative of all tiers, shall be permitted an additional fee of fifteen percent (15%) of the allowable costs incurred by such Subcontractors;
 - b. For Work to be performed by Contractor's own forces, Contractor shall be permitted an additional fee in the amount of fifteen percent (15%) of the allowable costs incurred directly by Contractor;

- c. For Work to be performed by Subcontractors, Contractor shall be permitted an additional fee in the amount of five percent (5%) of the sum of the allowable costs incurred by Subcontractors plus the allowance for Subcontractors' fee provided in Subsection 4(a) above.

1.09 PAYMENTS AND COMPLETION

A. Schedule of Values – The apparent low bidder, within ten (10) days, not including Saturdays, Sundays, and Legal Holidays, after receiving notice that he/she is the apparent low bidder, shall submit along with the contract documents a complete itemized Schedule of Values that includes, but is not necessarily limited to, the cost of each line item equal to or greater than one and one-half percent of the contractor's total bid and every work item (activity) shown on the Contract Critical Path Method (CPM) Project Work Schedule. The sum of the cost of all activities in the Schedule of Values shall equal the Contract Amount. Contractor's mobilization, profit, fees, taxes, overhead and General Conditions must be itemized separately and not be prorated across other categories. The Schedule of Values, when approved by State's Representative, shall be used to monitor the progress of the Work and as a basis for payment requests. Each item shall show its total Scheduled Value, value of previous applications, value of the application, percentage completed, total value completed and value yet to be completed. All blanks and columns must be filled in, including every percentage complete figure. Contractor is to add approved Change Orders (Amendments) to the Schedule of Values on a monthly basis.

B. Request for Payment – Contractor shall submit to State an itemized request for payment no more than once each 30 day period for operations completed in accordance with the Schedule of Values. Such request shall be supported by such data substantiating Contractor's right to payment as State's Representative may require, such as copies of requisitions from Subcontractors and material suppliers, and reflect retainage. Any allowance included in the request for payment shall be separately itemized with supporting data attached. Progress payments for mobilization shall not exceed that authorized in Section 10264 of the Public Contract Code. Contractor shall furnish with each request for payment:

- (1) Cost data to support the application, including without limitation, copies of Subcontractor's pay requests accurately reflecting current percentage of completion on a line-item basis.
- (2) One (1) certified copy of all payroll records for the month.
- (3) One (1) electronic copy and three (3) paper copies of the updated Project Work Schedule reflecting the current status of the project.
- (4) One (1) originally signed Unconditional Waiver and Release Upon Progress Payment for all Subcontractor work paid to date.

C. Retention

- (1) ~~Five percent (5%) shall be retained from each progress payment and held by State. After the Punch List has been issued, retainage remains at five percent (5%) of all amounts billed or two (2) times the value of the Punch List Work, whichever is more, until Final Completion of the Work.~~
- (2) ~~Contractor may elect, upon prior notice to State, to retain additional sums, over the five percent (5%) required, from a Subcontractor. If, however, such additional retainage is made, then an equal amount shall be retained by State from Contractor.~~
- (3) ~~Section 10263 of the Public Contract Code pertaining to security deposits in lieu of retentions is incorporated, herein, in full by this reference. Pursuant to that Section, Contractor may, for contracts subject to the State Contract Act, request substitution of eligible securities for such retentions prior to issuance of original contract documents. Contractor hereby agrees to execute said securities using a State furnished standard escrow agreement.~~

D. Substantial Completion

- (1) Substantial Completion is the stage in the progress of the Work when, exclusive of Punch List items, the Work or designated portion thereof (which State agrees to accept and occupy and utilize separately) is sufficiently complete in accordance with the Contract Documents so State can legally and practically occupy and utilize the Work for its intended use, except for Work outside the scope of the Contract Documents.
- (2) Objections to Certificate of Substantial Completion (DPR 248)/Notice of Completion (DPR 249): Contractor shall have seven (7) Working Days after receipt of the Certificate of Substantial Completion (DPR 248) during which Contractor may make written objection to State as to provisions of the Certificate of Substantial Completion and Punch List. If, after considering such objection, State concludes that the Project is not substantially complete, State shall, within seven (7) days after submission of the objection notify the Contractor thereof in writing stating the reasons. Upon Contractor's completion of the items listed on the Punch List and upon satisfaction of the terms and conditions of the Certificate of Substantial Completion, State shall issue a final

Notice of Completion (DPR 249), which shall fix a date as may be necessary or appropriate. State's determination of the Date of Substantial Completion and other items under this paragraph shall be final and conclusive on Contractor.

E. Partial Occupancy or Beneficial Use

- (1) State and its lessees and separate Contractors may occupy or use any completed or partially completed portion of the Work at any stage of construction regardless of whether the Contract Time has expired (hereinafter sometimes referred to as "Partial Occupancy"). Such Partial Occupancy may commence whether or not the applicable portion of Work is substantially complete.
- (2) It shall be understood, however, that Partial Occupancy shall not: (a) constitute final acceptance of any Work; (b) relieve Contractor for responsibility for loss or damage because of or arising out of defects in, or malfunctioning of, any Work, material, or equipment, or from any other unfulfilled obligations or responsibilities under the Contract Documents; or (c) commence any warranty period under the Contract Documents, provided that Contractor shall not be liable for ordinary wear and tear resulting from such Partial Occupancy.

F. Testing, Inspection, Final Inspection, and Acceptance

- (1) Testing, inspection, and approval of portions of the Work required by the Contract Documents shall be made by an independent Testing Laboratory arranged and paid for by the Contractor and approved by the State. Contractor shall promptly furnish two certified copies of test results and inspection records to the State Representative. Material and equipment shall not be incorporated into the project until test results indicate conformance to the Contract Documents.
- (2) Authorized employees of State shall have access to the Work at all times. Contractor shall give State's Representative forty-eight (48) hours advance notice of what Work and when the Work will be ready for inspection. Contractor shall provide proper facilities for such access and inspection. Inspection of the Work shall not relieve Contractor of any obligations to fulfill the Contract as prescribed. Any Work covered or concealed by Contractor before approval by State's Representative, shall, if required to be uncovered for examination and recovered, be at Contractor's sole expense.
- (3) When the Work is completed, Contractor shall notify State's Representative and shall request final inspection. Within five (5) Calendar Days, State's Representative shall make final inspection. Contractor shall be notified in writing of any deficiencies (Punch List). Contractor shall remedy these deficiencies to complete satisfaction of State. After all the Work under this Contract has been completed and is so certified by State's Representative, formal acceptance will be made in writing by State by filing a Notice of Completion (DPR 249) for recording in the county in which the Work was performed.

1.10 UNCOVERING AND CORRECTION OF WORK

Correction of Work – If, within one (1) year after the date of Final Completion of the entire Work, or within such longer period of time as may be prescribed by laws or in equity or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be defective or otherwise not in accordance with the requirements of the Contract Documents, Contractor shall correct it promptly after receipt of written notice from State to do so unless State has previously given Contractor a written acceptance of such condition. Corrective Work shall be warranted to be free from defects for a period equal to the longer of six (6) months after the completion of the corrective Work or one (1) year after the Date of Final Completion or such longer period of time as may be prescribed by law or in equity, or expiration of the term of any applicable special warranty required by the Contract Documents whichever is longer. Any defect in such Work shall be corrected again by Contractor promptly upon written notice of the defect from State. The obligations under Section 1.10 of these General Conditions shall survive acceptance of the Work under the Contract for Construction and termination of the Contract for Construction. If Contractor fails to correct such Work, State may proceed to have the work corrected at Contractor's expense and Contractor shall pay the cost thereof on demand.

1.11 TERMINATION OR SUSPENSION OF THE CONTRACT

A. Termination by Contractor

- (1) Contractor may terminate in writing, the Contract in the manner provided in Section 1.11 of these General Conditions if the Work is entirely stopped for a continuous period of thirty (30) days through no act or fault of Contractor or a Subcontractor, sub-Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with Contractor, for any of the following reasons:
 - a. Issuance of an order of a court or other public authority having jurisdiction.
 - b. An act of government, such as a declaration of national emergency, making material unavailable.

- (2) If one of the above reasons exists, Contractor may, upon fourteen (14) days written notice to State's Representative, terminate the Contract, unless this reason is cured prior to the expiration of the notice period, and recover from State payment for Work properly executed in accordance with the Contract Documents, excluding any anticipated profits from uncompleted Work, and payment for costs directly related to Work thereafter performed by Contractor in terminating such Work, including reasonable demobilization charges, provided said Work is authorized in advance by State's Representative and State.

B. Termination by State

- (1) State may terminate the Contract if State deems any of the following conditions to exist:
- a. Contractor refuses or fails to supply enough properly skilled workers or proper materials or equipment.
 - b. Contractor fails to make prompt payment to Subcontractors for materials or equipment or labor in accordance with the respective agreements between Contractor and Subcontractors.
 - c. Contractor disregards laws, ordinances, or rules, regulations, or orders of a public authority having jurisdiction, including, without limitation, environmental rules and regulations and health and safety codes.
 - d. Contractor disregards the instructions of State's Representative (when such instructions are based on the requirements of the Contract Documents).
 - e. In accordance with applicable law, and if permitted by such law, Contractor is the subject of a voluntary or involuntary petition in bankruptcy, or makes a general assignment for the benefit of Contractor's creditors, or a trustee or receiver is appointed for Contractor or for any of its property, or files a petition to take advantage of any debtor's act, or to reorganize under bankruptcy or similar laws.
 - f. Contractor has all or substantially all of its assets, equipment, or materials in any way connected with the work, executed upon or judicially seized, when such attachment or seizure remains undismissed for seven (7) days after levy thereof.
 - g. Contractor has imposed against it a federal or state tax lien.
 - h. Contractor fails to diligently prosecute the Work and/or correct deficiencies.
 - i. Contractor fails to maintain the proper license to perform the Work prescribed by this Contract.
- (2) When any of the above reasons exist, State may, without prejudice to any other rights or remedies of State and after giving Contractor and Contractor's surety, if any, seven (7) days prior written notice (except in cases of emergency, as reasonably determined by State), terminate the Contract and may:
- a. Take possession of the site and Project and of all materials, equipment, tools, and construction equipment and machinery thereon owned, rented, or leased by Contractor; and
 - b. Finish the Work by whatever method State may deem expedient.
 - c. Tender completion of the Work to Contractor's surety, if any, in accordance with terms of the Performance Bond.
- (3) When State terminates the Contract for one of the reasons stated in Subsection 1.11B(1) of these General Conditions, Contractor shall not be entitled to receive further payment until the Work is finished and a final accounting is completed as to the proper sums due Contractor under the terms of the Contract.
- (4) To the extent the costs of completing Work, including compensation for additional professional services and expenses, exceed those costs which would have been payable to Contractor to complete the Work except for Contractor's default, Contractor will pay the difference to State. This obligation for payment shall survive termination of the Contract. Such costs incurred by State shall be determined by State.

- C. Suspension by State for Convenience** – State may, at any time, at will and without cause, suspend, delay, or interrupt any part of the Work or all the Work for any reason whatsoever for such period of time as State may determine by giving seven (7) days' prior written notice to Contractor specifying the part of the Work to be suspended, delayed, or interrupted and the effective date of such suspension, delay, or interruption, as the case may be. Contractor shall continue to perform the part of the Work not suspended, delayed, or interrupted and shall properly protect and secure the part of the Work so suspended, delayed, or interrupted, so far as is necessary in State's reasonable opinion. Notwithstanding Subsection 1.11B of these General Conditions, if any part of the Work is so suspended, delayed, or interrupted, Contractor shall be entitled to payment of reasonable standby fees (or at State's option, payment

for demobilization) and costs directly associated with protecting and securing the affected Work, provided said costs are authorized in advance by State's Representative. No payment shall be made by State, however, to the extent that such Work is, was, or could have been suspended, delayed, or interrupted under the Contract Documents or an equitable adjustment is made or denied under another provision of the Contract for Construction. In case of such suspension, delay, or interruption, State will issue a Change Order making any required adjustment to the Contract Time and/or the Contract Sum. For the remainder of the Work, the Contract Documents shall remain in full force and effect.

1.12 EMPLOYEES

For each phase and type of Work, Contractor shall employ journey level people skilled in their respective trades and skilled in the use of methods, tools, and appliances developed in order to obtain the highest quality of workmanship throughout the Project. Any person State may deem incompetent or disorderly must be promptly removed by Contractor and not re-employed on the Project.

1.13 PREVAILING WAGE

- A. The Notice to Contractors stipulates the prevailing wage rates applicable to the classes of labor to be used on this Project.
- B. Contractor shall abide by the laws and regulations set forth pursuant to California Labor Code, Sections 1720 et seq., and Title 8, California Code of Regulations, Section 16000 et seq.

1.14 TRAVEL AND SUBSISTENCE PAYMENTS

Contractor shall make travel and subsistence payments to each worker needed to execute the Work, as such travel and subsistence payments are defined in the applicable collective bargaining agreements filed in accordance with Labor Code Section 1773.8.

1.15 APPRENTICES

Special attention is directed to California Labor Code, Sections 1777.5, 1777.6, and 1777.7, and Title 8, California Code of Regulations, Section 200 et seq. Each Contractor and Subcontractor must, prior to commencement of the Public Works Contract, contact the Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California, 94102, or one of its branch offices to ensure compliance and complete understanding of the law regarding apprentices and specifically the required ratio thereunder. Responsibility for compliance with this section lies with the prime Contractor. For further information, the website for the Division of Apprenticeship Standards can be accessed at: www.dir.ca.gov.

1.16 SANITARY FACILITIES

Contractor shall provide potable drinking water, and sanitary toilet facilities for Contractor's workers unless the use of existing facilities is authorized by State's Representative. Contractor shall locate temporary facilities as directed by State's Representative and maintain such facilities in good repair and in a sanitary condition. Contractor shall remove such facilities completely at the conclusion of the Work.

1.17 OBSERVANCE OF PARK RULES AND REGULATIONS

The Work to be done is within the jurisdiction of the State Park System. All persons entering the premises for whatever reason are subject to the "Rules and Regulations" for the State Park System, as set forth in Title 14, California Code of Regulations, Division 3, Chapters 1 and 2. Any person who fails to observe these "Rules and Regulations" may be barred from further work in the State Park System.

1.18 RESPONSIBILITY FOR INJURY AND DAMAGE

- A. Contractor shall be responsible for damage to or loss of property regardless of cause, or for injury or loss of life to persons employed on this Project and to the general public, which arise from operations under this Contract.
- B. From the formal Start Work Date until formal acceptance of the Work, Contractor is responsible to save from injury and damage by whatever cause all of the Work under this Contract, except as provided in Section 7105 of the Public Contract Code. Contractor shall rebuild, restore, and/or repair any such injury or damage, at Contractor's sole expense, before formal acceptance.
- C. State is hereby relieved at all times from an indebtedness or claim other than the Contract Sum.

1.19 COOPERATION BETWEEN CONTRACTOR AND STATE

- A. When the Contract is approved, Contractor will be notified in writing by State of the formal Start Work Date, the Contract completion date, and the name and location of State's Representative responsible for inspection of the Work. Contractor shall start Work within ten (10) Calendar Days of the formal Start Work Date and diligently pursue the Work to completion.

- B. If Work is suspended for more than three (3) Calendar Days “due to Contractor’s actions” or “due to no fault of State,” Contractor shall immediately inform State’s Representative in writing as to the rescheduling of the Work.
- C. Contractor shall be responsible for notifying the surety or sureties, furnishing bonds for the Contract, of all changes to the Contract.
- D. No Work shall be done except on Working Days and during Regular Work Hours unless Contractor has submitted a written request to State’s Representative not less than five (5) Calendar Days in advance of each occurrence and State has given written approval. State may reject, without further reason, any work done in violation of this Subsection.

1.20 PERMITS, LAWS, AND REGULATIONS

- A. State shall obtain and pay for the permits as indicated in the Project Manual. Contractor is responsible for all other permits. Notwithstanding that State obtains any permits required for the Work, Contractor shall not be relieved of any responsibility for compliance with laws and codes, including without limitation, building codes, pertaining to the Work. Contractor shall pay all public utility usage charges, for utilities consumed during the Work, including any applicable connection charges, which apply to the Work.
- B. No building permits from city or county governments are necessary for Work on State projects.
- C. Contractor shall comply with the current edition of Title 24, California Code of Regulations, and the various safety orders and codes of the State of California where applicable.
- D. All records of Contractor, subcontractors, and suppliers that pertain to the performance of the work or are necessary to determine or verify compensation, including, but not limited to, all documents used to prepare the bid shall be retained for a period of three years after final payment for examination or audit by the State. The State may examine and copy all records including, but not limited to, paper, electronic, and photographic documents.

1.21 STORAGE OF EQUIPMENT AND MATERIALS

- A. State’s Representative shall inform Contractor of the availability of suitable areas for the storage of Contractor’s equipment and materials. Contractor shall maintain the storage of equipment and materials within the confines of the area designated by State’s Representative.
- B. Contractor shall store materials intended for use on this Project in such a manner that their quality and fitness for the Work will be preserved. When considered necessary by State, materials shall be stored so as to facilitate inspection. It shall be Contractor’s responsibility to protect those stored items. All stored materials remain the property of the Contractor until such time as they are installed in their final position as intended in the Contract Documents.
- C. Routes of hauling and parking vehicles and equipment beyond the limits of the existing roads shall be only as directed by State’s Representative.

1.22 SITE CONDITIONS

- A. State may furnish reports, surveys, or other information describing physical characteristics, legal limitations and utility locations for the Project site, and a legal description of the site. The furnishing of this information is for the convenience of Contractor only and shall not relieve Contractor from its duties under the Contract Documents in general. In performance of the Work, Contractor shall undertake such further investigations and studies as may be necessary or useful to determine subsurface characteristics and patent and concealed conditions. In connection with the foregoing, Contractor shall be solely responsible for locating (and shall locate prior to performing any Work) all utility lines, telephone company lines and cables, sewer lines, water pipes, gas lines, electrical lines, including, without limitation, all buried pipelines and buried telephone cables and shall perform the Work in such a manner so as to avoid damaging any such lines, cables, pipes, and pipelines. Utility points of connection and other site relationships referenced in the contract documents are diagrammatic in nature. The exact location and routing requirements are the responsibility of the Contractor and are subject to the approval of the State’s Representative.
- B. The Contractor shall visit the Project site and verify all existing conditions prior to preparing its bid, in accordance with Parts 1.01 and 1.02 of Section 00100 Public Works, Instructions to Bidders. No additional compensation will be allowed for any conditions described in the Contract Documents or reasonably anticipated from pre-bid examination and observation of the Project site.
- C. **Differing Site Conditions**
 - (1) During the progress of the Work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the Contract or if unknown physical conditions of an unusual nature, are encountered at the site, Contractor shall promptly notify State in writing of the specific differing conditions before they are disturbed and before the affected Work is performed.

- (2) Upon written notification, State's Representative will investigate the conditions, and if State's Representative determines that the conditions materially differ and cause change in the cost or time required for the performance of any Work under the Contract, an adjustment, excluding loss of anticipated profits, will be made and the Contract modified in writing accordingly. State's Representative will notify Contractor of its determination whether or not an adjustment of the Contract is warranted.

- D. The construction area must be confined to the minimum space needed and be compatible with the ongoing Park Unit operations. The construction area, including all staging and laydown areas, must be approved by the State's Representative.

1.23 WARRANTIES

ALL WARRANTIES SHALL INCLUDE LABOR AND MATERIALS AND SHALL BE SIGNED BY THE MANUFACTURER OR SUBCONTRACTOR AS THE CASE MAY BE AND COUNTERSIGNED BY CONTRACTOR. ALL WARRANTIES SHALL BE ADDRESSED TO STATE AND DELIVERED TO STATE'S REPRESENTATIVE UPON COMPLETION OF THE WORK AND BEFORE OR WITH THE SUBMISSION OF REQUEST FOR FINAL PAYMENT.

1.24 AS-BUILT PLANS

Prior to acceptance, Contractor shall furnish to State's Representative a set of Contract plans in CAD (computer-aided drafting) format unless otherwise directed by State's Representative, clearly and legibly marked showing the location, as constructed, of all elements, features, components, and utilities. The as-built plans shall provide detailed information and reference dimensions locating all concealed elements, features, components, and utilities. Each sheet must be stamped "AS-BUILT", signed and dated by the Contractor.

1.25 PROTECTION OF PERSONS AND PROPERTY

- A. Contractor shall comply with all air pollution control rules, regulations, ordinances, and statutes, which apply to any Work performed pursuant to the Contract, including, but not limited to, any air pollution control rules, regulations, ordinances, and statutes, specified in California Government Code, Section 11017.
- B. Contractor shall give notices 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. Contractor shall provide all facilities and shall follow all procedures required by the Occupational Safety and Health Act (OSHA) including, but not limited to, providing and posting all required posters and notices and shall otherwise be responsible for all other mandatory safety laws.
- C. Contractor shall not impose or permit loading upon any part of the Work, construction, site or upon or adjacent to the Work site, in excess of safe limits, or permit loading that will result in stress or damage to the structural, architectural, mechanical, electrical, or other components of the Work.
- D. **Hazardous Materials**
- (1) Contractor shall not cause or permit any "Hazardous Materials" [as defined in Section 1.27D(2) of these General Conditions] to be brought upon, kept or used in or about the Project site except to the extent such Hazardous Materials: (a) are necessary for the prosecution of the Work; and (b) are required pursuant to the Contract Documents; and (c) have been approved in writing by State. Any Hazardous Materials allowed to be used on the Project site shall be used, stored, and disposed of in compliance with all applicable laws relating to such Hazardous Materials.
- (2) As used herein, the term "Hazardous Materials" means any hazardous or toxic substances, materials or wastes listed in the United States Department of Transportation Hazardous Materials Table, or listed by the Environmental Protection Agency as a hazardous substance, or as defined in the California Health and Safety Code, Section 25316, or any substances, materials or wastes that are or become regulated, identified, defined or listed under federal, state or local law, and all products containing such Hazardous Materials.
- E. **Spread of Exotic Biological Organisms** – Before entering the park unit and at the conclusion of the Contract, all Contractors shall remove soil and organic materials from all motorized equipment used to transport or process soil or organic matter. Contractors shall clean the hull, motor, pumps, and accessories on all watercraft before entering the park unit and at the conclusion of the Contract.

SECTION 000802
SUPPLEMENTAL CONDITIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. The following requirements either amend or supplement the following sections
1. Section 00700 – General Conditions (DPR 483)
- B. ADD the following paragraph to Section 00700 – General Conditions (DPR 483)

1.04 Insurance, A. Insurance Requirements, (2) Builder's Risk/Installation Floater:

Builders Risk Insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, windstorm, false work, testing and startup, temporary buildings, and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for the State's and Contractor's services and expenses required as a result of such insured loss.

ADD the following paragraph to Section 00700 – General Conditions (DPR 483), 1.04 Insurance, (5) POLLUTION LIABILITY:

Contractor shall maintain in force, at its own expense, Pollution Liability / Environmental Liability Insurance (covers areas of: asbestos / lead abatement, demolition, electrical, excavation / grading, plumbing, masonry, painting, roofing, DOD & DOE, transformer / PCBs, general contracting, environmental remediation, drilling, emergency response, industrial cleaning / maintenance, lab packing, mechanical, paving, Superfund, storage tank and utility, mold remediation and incidental fungus), with limits not less than one million dollars (\$1,000,000) depending on exposure.

- C. All testing referred to in the Contract Documents shall be made by an independent testing lab arranged and paid for by the Contractor and approved by the State's Representative.

END OF SECTION 000802

SECTION 000804
DISPOSAL OF REFUSE

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Dispose of waste, debris, and rubbish resulting from the construction of the project.
- B. If excess excavation spoils cannot be suitably disposed of on State property, as directed by the State's Representative, it shall be hauled away at the Contractor's expense.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION

3.1 REQUIREMENTS

- A. Remove waste materials, debris, and rubbish from site and legally dispose of at public or private dumping areas off State property.
- B. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on project site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into streams or waterways

END OF SECTION 000804

SECTION 011000

SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Contractor's use of site and premises.
4. Specification and Drawing conventions.

1.2 PROJECT INFORMATION

A. Project Identification: Pioneer Monument Landscaping Improvements

1. Project Location: DONNER MEMORIAL STATE PARK , Nevada County, CA

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Furnish all labor, materials, tools, equipment and travel necessary to make landscape improvements including expansion of the existing walkway, an ADA-accessible loop trail, creation of gathering areas, installation of plant materials, and modification of existing irrigation systems per all specifications and drawings included in the project manual.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

1.4 CONTRACTOR'S USE OF SITE AND PREMISES

A. Unrestricted Use of Site: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by State's right to perform work or to retain other contractors on portions of Project.

Summary

- B. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.5 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Text Color: Text used in the Specifications, including units of measure, manufacturer and product names, and other text may appear in multiple colors or underlined as part of a hyperlink; no emphasis is implied by text with these characteristics.
 - 3. Hypertext: Text used in the Specifications may contain hyperlinks. Hyperlinks may allow for access to linked information that is not residing in the Specifications. Unless otherwise indicated, linked information is not part of the Contract Documents.
 - 4. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012600

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications. The terms "Change Order", "Contract Modification", and "Amendment" are synonymous.

1.2 MINOR CHANGES IN THE WORK

- A. State Representative will issue Bulletins, defined as supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.3 PROPOSED CHANGE ORDER (PCO)

- A. State-Initiated Requests: State Representative will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. PCOs issued by State Representative are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
 - 2. Within 15 days after receipt of a PCO, submit a change proposal indicating all cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity durations, start and finish times, and activity relationships. Use available total float before requesting an extension of the Contract Time.
- B. Contractor - Change Order Request (COR) - : Contractor may propose changes by submitting a Change Order Request (COR).

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Contract Modification Procedures

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

1.4 ALLOWANCES

- A. Allowance Adjustment: To adjust allowance amounts, base each Change Order proposal on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
 1. Include installation costs in purchase amount only where indicated as part of the allowance.
 2. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed.
 3. Submit substantiation of a change in scope of work, if any, claimed in Change Order proposals related to unit-cost allowances.
 4. State reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit requests for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the Purchase Order amount or Contractor's handling, labor, installation, overhead, and profit. Submit request within 10 days of receipt of the Contract Field Order (CFO) authorizing work to proceed on the allowance. The State has the option to reject requests submitted later than 10 days after such authorization.
 1. Do not include Contractor's or subcontractor's indirect expense in the Change Order proposal cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.

1.5 CONTRACT FIELD ORDER (CFO)

- A. Contract Field Order: The State may issue a Contract Field Order (CFO). A CFO instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Contract Amendment.
 - 1. A CFO contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

1.6 CHANGE ORDER (CONTRACT AMENDMENT)

- A. Submit a letter of authority indicating the Contractor's authorized representative for negotiation of cost and time adjustments, and the limits of their authority. On State's approval of a Contractor's Change Proposal, State will issue a Contract Amendment for signatures of State and Contractor.

PART 2 - PART2 – PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012600

SECTION 012900

PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements necessary to prepare and process Applications for Payment.

1.2 SCHEDULE OF VALUES

- A. General: Submit Schedule of Values in accordance with GENERAL CONDITIONS.
- B. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with the project CPM Schedule.
 - 2. Subschedules: Where the Work is separated into phases requiring separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- C. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
 - 2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - 3. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - 4. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
 - 5. Allowances: Provide a separate line item in the Schedule of Values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
 - 6. Each item in the Schedule of Values and Applications for Payment shall be complete..

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Payment Procedures

- a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
7. Provide separate line items for profit, fees, taxes, overhead, and General Conditions.
8. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Contract Field Orders result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be sequentially numbered and consistent with previous applications and payments as certified by the State Representative and paid for by the State.
 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Transmittal: Submit three (3) signed original copies of each Application for Payment to the State.
 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- C. Administrative Items: Administrative actions, submittals, and update submittals that must precede or coincide with submittal of first Application for Payment include the following:
 1. List of subcontractors.
 2. Schedule of Values.
 3. Contractor's Construction Schedule (preliminary if not final).
 4. Submittals Schedule (preliminary if not final).
 5. List of Contractor's staff assignments.
 6. Copies of required permits.
 7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- D. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.

2. This application shall reflect Certificates of Partial Substantial Completion issued previously for State occupancy of designated portions of the Work.
- E. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. Project Record Documents (As-Builts).
 5. Operation and Maintenance (O & M) Manuals.
 6. Warranties.
 7. Final meter readings for utilities, a measured record of stored fuel, and similar data as of date of Substantial Completion or when the State took possession of and assumed responsibility for corresponding elements of the Work.

END OF SECTION 012900

SECTION 013300

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other miscellaneous submittals.
- B. Absolutely no construction activity shall commence on submittal items or affected assemblies prior to the State's approval of contractors submittals.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information that requires the Designer's responsive action.
- B. Informational Submittals: Written information that does not require the Designer's approval. Submittals may be rejected for not complying with requirements.

1.3 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. The State Representative reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Submittals Schedule: Six copies of each submittal must be transmitted to the State Representative within 15 days of Notice To Proceed.
- C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on the Designer's receipt of submittal.
 - 1. Initial Review: Allow 20 working days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination

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Submittal Procedures

- with subsequent submittals. The State will advise Contractor when a submittal being processed must be delayed for coordination.
2. If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Allow 15 working days for processing each resubmittal.
 4. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- D. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
 2. Provide a space on label or beside title block to record Contractor's review and approval markings and action taken by the State.
 3. Include the following information on label for processing and recording action taken:
 - a. Project name.
 - b. Date.
 - c. Name and address of Contractor.
 - d. Name and address of subcontractor.
 - e. Name and address of supplier.
 - f. Name of manufacturer.
 - g. Unique sequential identifier, including revision number.
 - h. Number and title of appropriate Specification Section.
 - i. Drawing number and detail references, as appropriate.
 - j. Other necessary identification.
- E. Deviations: Highlight, encircle, or otherwise identify in a manner acceptable to the State any deviations from the Contract Documents on submittals.
- F. Additional Copies: Unless additional copies are required for final submittal, and unless the Designer observes noncompliance with provisions of the Contract Documents, initial submittal may serve as final submittal.
1. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.
- G. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Number each submittal sequentially and date each submittal. The State Representative will return submittals, without review, from sources other than Contractor.
1. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
 2. Transmittal Form: Use form approved by the State Representative.

- H. Use for Construction: Use only final submittals with mark indicating action taken by the State in connection with construction.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.
 - 1. Number of Copies: Submit six copies of each submittal, unless otherwise indicated. The State Representative will return two copies. Mark up and retain one returned copy as a Project Record Document.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Manufacturer's catalog cuts.
 - e. Wiring diagrams showing factory-installed wiring.
 - f. Printed performance curves.
 - g. Operational range diagrams.
 - h. Compliance with recognized trade association standards.
 - i. Compliance with recognized testing agency standards.
- C. Shop Drawings: Submit Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 - 1. Preparation: Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.

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- h. Schedules.
 - i. Notation of coordination requirements.
 - j. Notation of dimensions established by field measurement.
 - 2. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - 3. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
- D. Samples: Submit physical units of materials or products, including the following:
- 1. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Submit three full set[s] of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. The State Representative will return submittal with options selected.
 - 2. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Submit three (3) sets of Samples. The State will retain **two** Sample sets; remainder will be returned.
 - 3. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Submit Samples to match the State's sample where so indicated. Attach label on unexposed side.
 - 4. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
 - 5. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

- E. Product Schedule or List: Submit a written summary indicating types of products required for the Work and their intended location.
- F. Application for Payment: Comply with requirements in Division 1 Section 01290 "Payment Procedures."
- G. Schedule of Values: Comply with requirements in Section 00700 General Conditions.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by other Specification Sections.
 - 1. Number of Copies: Submit six (6) copies of each submittal, unless otherwise indicated. The State Representative will return two (2) copies.
 - 2. Certificates and Certifications: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements.
- C. Environmental Product Declarations (EPD):
 - 1. Per the Buy Clean California Act, Environmental Product Declarations (EPD) shall be submitted for the following items:
 - Concrete Reinforcing Steel: ASTM A615/A615M standard specification for carbon steel bars. ASTM A706/A706M standard specification for low-alloy steel bars. ASTM A767/A767M standard specification for zinc-coated steel bars. ASTM A775/A775M standard specification for epoxy-coated steel bars
 - Structural Steel: Hot-rolled sections consisting of wide flange beams (W-shape and HP-shape used in structural applications), standard beams (S-shape), misc. beams (M-shape), channels, angles, and tees. Hollow structural sections with round, square, or rectangular cross-section. Plate material.
 - Flat Glass: Float or rolled glass that is clear or tinted.
 - Mineral Wool Board Insulation: Board insulation made of rock or slag in light- and heavy-density types. Light-density: 2.5 lbs/ft³ – 4.3 lbs/ft³ Heavy-density: 4.4 lbs/ft³ – 8 lbs/ft³ lbs/ft³ is pounds per cubic foot

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2. An EPD is an independently verified and registered document that reports a product's environmental impact over its life cycle.
3. An EPD must be:
 - A facility-specific manufacturer declaration
 - Independently verified in accordance with ISO 14025 (Type III environmental declarations – Principles and procedures)
 - Developed according to the guidelines of the applicable Product Category Rule (PCR) as identified by the State
4. Global Warming Potential (GWP) Limits for Eligible Material

Table 1: GWP limits for eligible materials

Eligible material	Maximum acceptable GWP limit (unfabricated)*
Hot-rolled structural steel sections	1.01 MT CO ₂ eq./MT
Hollow structural sections	1.71 MT CO ₂ eq./MT
Steel plate	1.49 MT CO ₂ eq./MT
Concrete reinforcing steel	0.89 MT CO ₂ eq./MT
Flat glass	1.43 MT CO ₂ eq./MT
Light-density mineral wool board insulation	3.33 kg CO ₂ eq./1 m ²
Heavy-density mineral wool board insulation	8.16 kg CO ₂ eq./1 m ²

- D. **Welding Certificates:** Submit written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. **Installer Certificates:** Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements and, where required, is authorized for this specific Project.
- F. **Manufacturer Certificates:** Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements. Include evidence of manufacturing experience where required.

- G. **Material Certificates:** Submit written statements on manufacturer's letterhead certifying that material complies with requirements.
- H. **Material Test Reports:** Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- I. **Compatibility Test Reports:** Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- J. **Field Test Reports:** Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
- K. **Product Test Reports:** Submit written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- L. **Research/Evaluation Reports:** Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- M. **Maintenance Data:** Submit written and graphic instructions and procedures for operation and normal maintenance of products and equipment.
- N. **Design Data:** Submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- O. **Manufacturer's Instructions:** Submit written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.
- P. **Manufacturer's Field Reports:** Submit written information documenting factory-authorized service representative's tests and inspections.

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Submittal Procedures

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to the State.
- B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 DESIGNER'S ACTION

- A. General: The Designer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: The Designer will review each submittal, make marks to indicate corrections or modifications required, and return it. The Designer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken:
- C. Informational Submittals: The Designer will review each submittal and will return it, or will reject and return it if it does not comply with requirements. The State Representative will forward each submittal to appropriate party.

END OF SECTION 013300

SECTION 014200

REFERENCES

PART 1 - GENERAL

1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": Approved by the State.
- C. "Directed": A command or instruction by the State Representative. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- J. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

References

- K. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.
- L. "Submit": Deliver information in the specified format to the State for the State's review and approval.

1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the State for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to the State for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.
- E. Abbreviations and Acronyms for Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list:

ADAAG Americans with Disabilities Act (ADA)

CFR Code of Federal Regulations

CRD	Handbook for Concrete and Cement
DOD	Department of Defense Specifications and Standards
FED-STD	Federal Standard (See FS)
FS	Federal Specification
FTMS	Federal Test Method Standard (See FS)
MILSPEC	Military Specification and Standards
UFAS	Uniform Federal Accessibility Standards

1.3 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

AA	Aluminum Association, Inc. (The)
AAADM	American Association of Automatic Door Manufacturers
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AAN	American Association of Nurserymen (See ANLA)
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists (The)
ABMA	American Bearing Manufacturers Association
ACI	American Concrete Institute/ACI International
ACPA	American Concrete Pipe Association
ADC	Air Diffusion Council
AEIC	Association of Edison Illuminating Companies, Inc. (The)

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References

AFPA	American Forest & Paper Association (See AF&PA)
AF&PA	American Forest & Paper Association
AGA	American Gas Association
AGC	Associated General Contractors of America (The)
AHA	American Hardboard Association
AHAM	Association of Home Appliance Manufacturers
AI	Asphalt Institute
AIA	American Institute of Architects (The)
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALA	American Laminators Association (See LMA)
ALCA	Associated Landscape Contractors of America
ALSC	American Lumber Standard Committee
AMCA	Air Movement and Control Association International, Inc.
ANLA	American Nursery & Landscape Association (Formerly: AAN - American Association of Nurserymen)
ANSI	American National Standards Institute
AOSA	Association of Official Seed Analysts
APA	APA - The Engineered Wood Association
APA	Architectural Precast Association
API	American Petroleum Institute
ARI	Air-Conditioning & Refrigeration Institute
ASCA	Architectural Spray Coaters Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers

ASME	ASME International (The American Society of Mechanical Engineers International)
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWCI	AWCI International (Association of the Wall and Ceiling Industries International)
AWCMA	American Window Covering Manufacturers Association (See WCMA)
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Industry Association (The)
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International)
CCC	Carpet Cushion Council
CCFSS	Center for Cold-Formed Steel Structures
CDA	Copper Development Association Inc.
CEA	Canadian Electricity Association
CFFA	Chemical Fabrics & Film Association, Inc.
CGA	Compressed Gas Association
CGSB	Canadian General Standards Board
CIMA	Cellulose Insulation Manufacturers Association
CISCA	Ceilings & Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CPA	Composite Panel Association

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References

	(Formerly: National Particleboard Association)
CPPA	Corrugated Polyethylene Pipe Association
CRI	Carpet & Rug Institute (The)
CRSI	Concrete Reinforcing Steel Institute
CSA	CSA International (Formerly: IAS - International Approval Services)
CSI	Construction Specifications Institute (The)
CSSB	Cedar Shake & Shingle Bureau
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute)
DHI	Door and Hardware Institute
EIA/TIA	Electronic Industries Alliance/Telecommunications Industry Association
EIMA	EIFS Industry Members Association
EJMA	Expansion Joint Manufacturers Association, Inc.
FCI	Fluid Controls Institute
FGMA	Flat Glass Marketing Association (See GANA)
FM	Factory Mutual System (See FMG)
FMG	FM Global (Formerly: FM - Factory Mutual System)
GA	Gypsum Association
GANA	Glass Association of North America (Formerly: FGMA - Flat Glass Marketing Association)
GRI	Geosynthetic Research Institute
GTA	Glass Tempering Division of Glass Association of North America (See GANA)
HI	Hydraulic Institute
HI	Hydronics Institute
HMMA	Hollow Metal Manufacturers Association (See NAAMM)
HPVA	Hardwood Plywood & Veneer Association

HPW	H. P. White Laboratory, Inc.
IAS	International Approval Services (See CSA International)
ICEA	Insulated Cable Engineers Association, Inc.
ICRI	International Concrete Repair Institute (The)
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The)
IESNA	Illuminating Engineering Society of North America
IGCC	Insulating Glass Certification Council
ILI	Indiana Limestone Institute of America, Inc.
IRI	Industrial Risk Insurers
ITS	Intertek Testing Services
IWS	Insect Screening Weavers Association (Now defunct)
KCMA	Kitchen Cabinet Manufacturers Association
LGSI	Light Gage Structural Institute
LMA	Laminating Materials Association (Formerly: ALA - American Laminators Association)
LPI	Lightning Protection Institute
LSGA	Laminated Safety Glass Association (See GANA)
MBMA	Metal Building Manufacturers Association
MCA	Metal Construction Association
MFMA	Maple Flooring Manufacturers Association
MFMA	Metal Framing Manufacturers Association
MGPHO	Medical Gas Professional Healthcare Organization, Inc.
MHIA	Material Handling Industry of America
MIA	Marble Institute of America
ML/SFA	Metal Lath/Steel Framing Association (See SSMA)

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References

MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc.
NAAMM	National Association of Architectural Metal Manufacturers
NAAMM	North American Association of Mirror Manufacturers (See GANA)
NACE	NACE International (National Association of Corrosion Engineers International)
NAIMA	North American Insulation Manufacturers Association (The)
NAMI	National Accreditation and Management Institute, Inc.
NAPM	National Association of Photographic Manufacturers (See PIMA)
NBGQA	National Building Granite Quarries Association, Inc.
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NCTA	National Cable Television Association
NEBB	National Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NeLMA	Northeastern Lumber Manufacturers' Association
NEMA	National Electrical Manufacturers Association
NETA	InterNational Electrical Testing Association
NFPA	National Fire Protection Association
NFRC	National Fenestration Rating Council
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NLGA	National Lumber Grades Authority
NOFMA	National Oak Flooring Manufacturers Association
NPA	National Particleboard Association (See CPA)
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association

NSA	National Stone Association
NSF	NSF International (National Sanitation Foundation International)
NTMA	National Terrazzo and Mosaic Association, Inc.
NWWDA	National Wood Window and Door Association (See WDMA)
PCI	Precast/Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing & Drainage Institute
PGI	PVC Geomembrane Institute
PIMA	Photographic & Imaging Manufacturers Association (Formerly: NAPM - National Association of Photographic Manufacturers)
RCSC	Research Council on Structural Connections
RFCI	Resilient Floor Covering Institute
RIS	Redwood Inspection Service
RMA	Rubber Manufacturers Association
SAE	SAE International
SDI	Steel Deck Institute
SDI	Steel Door Institute
SEFA	Scientific Equipment and Furniture Association
SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division)

References

SPI	The Society of the Plastics Industry
SPIB	Southern Pine Inspection Bureau (The)
SPI/SPFD	The Society of the Plastics Industry Spray Polyurethane Foam Division (See SPFA)
SPRI	SPRI (Single Ply Roofing Institute)
SSINA	Specialty Steel Industry of North America
SSMA	Steel Stud Manufacturers Association (Formerly: ML/SFA - Metal Lath/Steel Framing Association)
SSPC	SSPC: The Society for Protective Coatings
STI	Steel Tank Institute
SWI	Steel Window Institute
SWRI	Sealant, Waterproofing, and Restoration Institute
TCA	Tile Council of America, Inc.
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance
TPI	Truss Plate Institute
TPI	Turfgrass Producers International
UFAC	Upholstered Furniture Action Council
UL	Underwriters Laboratories Inc.
UNI	Uni-Bell PVC Pipe Association
USITT	United States Institute for Theatre Technology, Inc.
USP	U.S. Pharmacopeia
WASTEC	Waste Equipment Technology Association
WCLIB	West Coast Lumber Inspection Bureau
WCMA	Window Covering Manufacturers Association (Formerly: AWCMA - American Window Covering Manufacturers Association)
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association)
WIC	Woodwork Institute of California

WMMPA Wood Moulding & Millwork Producers Association

WWPA Western Wood Products Association

C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

ICC International Code Council
(Formerly: CABO - Council of American Building Officials)

D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

CE Army Corps of Engineers

CPSC Consumer Product Safety Commission

DOC Department of Commerce

EPA Environmental Protection Agency

FAA Federal Aviation Administration

FCC Federal Communications Commission

FDA Food and Drug Administration

GSA General Services Administration

HUD Department of Housing and Urban Development

LBL Lawrence Berkeley Laboratory (See LBNL)

LBNL Lawrence Berkeley National Laboratory

NCHRP National Cooperative Highway Research Program (See TRB)

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References

NIST	National Institute of Standards and Technology
OSHA	Occupational Safety & Health Administration
RUS	Rural Utilities Service (See USDA)
TRB	Transportation Research Board
USDA	Department of Agriculture
USPS	Postal Service

- E. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list:

CALTRANS	State of California, Department of Transportation
CAPUC	(See CPUC)
CBHF	State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation
CPUC	California Public Utilities Commission
DGS	State of California, Department of General Services
DPR	State of California, Department of Parks and Recreation
TFS	Texas Forest Service Forest Products Laboratory

END OF SECTION 014200

SECTION 017700

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project Record Documents.
 - 3. Operation and maintenance manuals.
 - 4. Warranties.
 - 5. Instruction of the State's personnel.
 - 6. Final cleaning.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Make final changeover of permanent locks and deliver keys to the State. Advise the State's personnel of changeover in security provisions.
 - 3. Complete startup testing of systems. Submit test reports.
 - 4. Submit test/adjust/balance records.
 - 5. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 6. Advise the State of changeover in heat and other utilities.
 - 7. Submit changeover information related to the State's occupancy, use, operation, and maintenance.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, the State will either proceed with inspection or notify Contractor of unfulfilled requirements. The State will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by the State, that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 - 2. Results of completed inspection will form the basis of requirements for Final Completion.

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Closeout Procedures

1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Division 1 Section 01290 "Payment Procedures."
 2. Submit one copy of the State's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the State. The copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 4. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
 5. Deliver tools, spare parts, extra materials, and similar items to location designated by the State. Label with manufacturer's name and model number where applicable.
 6. Submit pest-control final inspection report and warranty.
 7. Instruct the State's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
 8. Complete final cleaning requirements, including touchup painting.
 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, the State will either proceed with inspection or notify Contractor of unfulfilled requirements. The State will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit one copy of punch list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order.
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

1.5 PROJECT RECORD DOCUMENTS (AS-BUILTS)

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for the State's reference during normal working hours.
- B. Provide Project Record Documents in accordance with the General Conditions.

1.6 OPERATION AND MAINTENANCE MANUALS

- A. Assemble two (2) complete sets of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
 - 1. Operation Data: Include emergency instructions and procedures, system and equipment descriptions, operating procedures, and sequence of operations.
 - 2. Maintenance Data: Include manufacturer's information, list of spare parts, maintenance procedures, maintenance and service schedules for preventive and routine maintenance, and copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

1.7 WARRANTIES

- A. Submittal Time: Submit written warranties on request of the State for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

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Closeout Procedures

- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

PART 3 - EXECUTION

3.1 DEMONSTRATION AND TRAINING

- A. Instruction: Instruct the State's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. Provide instructors experienced in operation and maintenance procedures.
 - 2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
 - 3. Schedule training with the State, with at least seven days' advance notice.
 - 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline.
 - 1. Include instruction for system design and operational philosophy, review of documentation, operations, adjustments, troubleshooting, maintenance, and repair.

3.2 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - g. Sweep concrete floors broom-clean in unoccupied spaces.
 - h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - j. Remove labels that are not permanent.
 - k. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - l. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - m. Replace parts subject to unusual operating conditions.
 - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed

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Closeout Procedures

by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

q. Leave Project clean and ready for occupancy.

- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the State's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

SECTION 031100
CONCRETE FORMWORK

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Formwork for cast-in-place concrete, with shoring, bracing, and anchorage. Design, furnish and install forms for concrete as indicated on drawings and specified here. Remove forms and shores at specified time. Clean up.
- B. Openings for other affected work.
- C. Form accessories.
- D. Stripping forms.

1.2 WORK INSTALLED BUT FURNISHED UNDER OTHER SECTIONS

- A. Section 031500 - Expansion and Contraction Joints.

1.3 RELATED SECTIONS

- A. Section 032000 - Concrete Reinforcement.
- B. Section 031500 - Expansion and Contraction Joints.
- C. Section 321313 - Cast-In-Place Concrete.

1.4 REFERENCE STANDARDS

- A. ACI 301 - Specifications for Structural Concrete for Buildings.
- B. ACI 347 - Recommended Practice for Concrete Formwork.

1.5 SYSTEM DESCRIPTION

- A. Design, engineer, and construct formwork, shoring, and bracing to meet design and code requirements, so that resultant concrete conforms to required shapes, lines, and dimensions.
- B. Formwork: Concrete formwork shall be designed and constructed to safely support fluid concrete and superimposed construction loads without excessive deflection or concrete leakage. Provide bracing to maintain accurate alignment and to resist all anticipated lateral loads. Forms shall conform with drawings as to shape, line, and dimension. Design, engineering and construction of forms shall be Contractor's responsibility.
- C. Cooperate and coordinate with other trades who furnish and/or install piping,

conduit, reglets, anchors, inserts, sleeves, hangers, etc., as their work requires; including provisions for recesses and chases.

1.6 QUALITY ASSURANCE

- A. Construct and erect concrete formwork in accordance with ACI 301.

PART 2 - PRODUCTS

2.1 FORM MATERIALS

- A. Plywood: Douglas Fir species; select sheathing-tight face grade; sound, undamaged sheets with straight edges.
- B. Lumber: Douglas Fir species; Construction grade; with grade stamp clearly visible.
- C. Wood Forms: Wood forms concealed or below finished grade shall be Construction or Standard Grade Douglas Fir. At Contractor's option, plywood forms may be used. At exposed surfaces, use B-B Plyform Class I Ext - APA plywood, un-oiled.
- D. Fiber Forms: Tubular column forms spirally constructed of laminated plies of fiber. Plies shall be laminated using a non-water sensitive adhesive and surface wax impregnated for moisture protection. Forms shall give a smooth and seamless appearance to the cast concrete. Provide reveals, as shown on the drawings, as supplied by the form manufacturer. Forms shall be as manufactured by Sonoco Products, plastic lined; Burke Smoothtube by Burke Co.; or approved equal.

2.2 FORMWORK ACCESSORIES

- A. Form Clamps: Assembly to have cone washers, (1" break back) 1/2" cold rolled center rod.
- B. Form Ties: Combination tie-spreader, W.J. Burke and Co. Snap ties, Richmond "Snap Tys" or approved equivalent. 1" break back with wood or plastic cones.
- C. Plywood Form Coating: Non-staining water resistant chemical equivalent to Sonneborn "Cast-Off", W.R. Meadows "Durogard", Euclid Chemical Company "Euroslip", W.J. Burke and Co. Form Release "No. 356", or approved equivalent.
- D. Extruded Polystyrene Foam: ASTM C578 type IV. Dow Chemical Corp. "Styrofoam", UC Industries "Foamular", or approved equal.
- E. Fillets for Chamfered Corners: Wood strips

- F. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Sized as required; of strength and character to maintain formwork in place while placing concrete.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Verify lines, levels, and measurements before proceeding with formwork.

3.2 PREPARATION

- A. Hand-trim sides and bottoms of earth forms; remove loose dirt prior to placing concrete. Form sides of footings where earth cannot hold vertical cut.
- B. Minimize form joints. Symmetrically align joints and make watertight to prevent leakage of mortar.
- C. Unblemished new concrete formwork is to be used for all exposed concrete, finished concrete surfaces, or exposed-to-view concrete surfaces.
- D. Arrange and assemble formwork to permit stripping, so that concrete is not damaged during its removal.
- E. Arrange forms to allow stripping without removal of principal shores, where required to remain in place.

3.3 ERECTION

- A. Provide bracing to ensure stability of formwork. Strengthen formwork liable to be overstressed by construction loads.
- B. Do not displace or damage vapor barrier placed by Section 321313.
- C. Construct formwork to maintain tolerances in accordance with ACI 301.
- D. Construct substantial forms sufficiently tight to prevent leakage of mortar, and tied, clamped and braced to prevent spreading, shifting or settling. Plywood joints shall be square and tight; plywood shall be arranged in such manner as to minimize number of joints and to provide a smooth, attractive finished concrete surface. Tolerances for construction of forms shall meet the suggested tolerance limits of ACI 347.
- E. Apply form coating to forms before reinforcing steel is in place.
- F. Use form ties to act as tie and spreader to accurately maintain wall thickness. At construction joints, wall openings, and other locations where additional rigidity is required, forms shall be rigidly held in place using form clamps. Rods shall be either completely removable, or, if left in place, shall terminate

not less than 1" from surfaces of wall.

G. Cast-in-Place Items:

- H. Anchor bolts for structural steel, tanks, pumps, equipment, etc., as furnished by the various trades, shall be set in accordance with approved shop and erection drawings.
- I. Anchor bolts, reglets, dovetail anchor slots, hangers, inserts, etc. for securing miscellaneous metal, plumbing, heating, electrical, lathing or other work to concrete, also sleeves, boxes for piping, etc. shall be set and secured in forms by various trades in cooperation with the work of this Section.
- J. Chamfer strips of 3/4" x 3/4" milled straight grain lumber, shall be installed at external corners and edges of retaining walls, planters, etc.
- K. Chases, recesses and openings, other than those indicated on drawings but required for installation of Work of other trades, shall be provided only as approved by State's Representative.

3.4 APPLICATION OF FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's instructions. Apply prior to placing reinforcing steel, anchoring devices, and embedded items.
- B. Do not apply form release agent where concrete surfaces are scheduled to receive special finishes or applied coverings that may be affected by agent. Soak contact surfaces of untreated forms with clean water. Keep surfaces wet prior to placing concrete.

3.5 INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Provide formed openings where required or needed to facilitate work, embedded items, blockouts, openings, or work passing through concrete.
- B. Coordinate work of other Sections in forming and setting openings, slots, recesses, chases, sleeves, bolts, anchors, and other inserts.
- C. Install accessories in accordance with manufacturer's instructions, level and plumb. Ensure items are not disturbed during concrete placement.

3.6 FORM REMOVAL

- A. Do not remove forms until concrete has sufficient strength to support its own weight, and construction and design loads which may be imposed upon it.
- B. Do not damage concrete surfaces during form removal.

- C. Formwork shall normally remain in place for the duration of the curing period. Do not remove forms until permission is obtained from State's Representative. Contractor or his representative in charge of concrete construction shall be present during removal of forms and shores, and shall be personally responsible for safety of this operation at all times and under all conditions.
- D. No heavy or concentrated loads in excess of 2500 pounds shall be placed on any slabs for 14 days after concrete placement. At Contractor's option, risk, and cost, the Contractor can procure concrete testing services to expedite concrete testing results for review by the State's Representative. Testing agency shall be the same as City provided testing agency or as approved by the State's Representative. Prior to applying any heavy or concentrated loads on concrete slabs, the Contractor may submit acceptable concrete test results to the State's Representative / Engineer for approval.

END OF SECTION 031100

**SECTION 031500
EXPANSION AND CONTRACTION JOINTS**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Forming integral contraction and control joints in concrete.
- B. Visually concealing expansion joints in concrete.

1.2 WORK FURNISHED BUT INSTALLED UNDER OTHER SECTIONS

- A. Furnish only integral waterstops and joint fillers to Section 031100 – Concrete Formwork for installation.

1.3 RELATED SECTIONS

- A. Section 321400 – Unit Paving.
- B. Section 031100 – Concrete Formwork.
- C. Section 321313 – Cast-In-Place Concrete.

1.4 SUBMITTALS

- A. Product Data: For each joint sealant product indicated.
- B. Samples: For each joint sealant product indicated.
- C. Sealant compatibility and adhesion test reports.

1.5 QUALITY ASSURANCE

- A. Sealant Compatibility and Adhesion Testing: Use sealant manufacturer's standard test methods to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

1.6 REFERENCE STANDARDS

- A. ANSI/ASTM D994 - Preformed Expansion Joint Filler for Concrete (Bituminous Type).
- B. ANSI/ASTM D1751 - Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction.
- C. ANSI/ASTM D1752 - Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.

PART 2 - PRODUCTS

2.1 INTEGRAL JOINT MATERIALS

- A. Formed Construction Joints: Galvanized steel, tongue and groove type, with removable top strip exposing sealant trough; knockout holes spaced at 6 inches oc, ribbed steel spikes with tongue to fit top screed edge.
- B. Joint Filler: ANSI/ASTM D1752, closed cell polyvinyl chloride foam; resiliency recovery of 95 percent if not compressed more than 50 percent of original thickness, compatible with radiant heat system in concrete paving.
- C. Joint Filler: ANSI/ASTM D1751, asphalt impregnated, vegetable fiber & finely divided mineral filler.

2.2 SEALANTS

- A. Sealant: Cold applied two-part liquid neoprene, compatible with Joint Filler and radiant heat system in concrete paving.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate and form expansion control and contraction joints.
- B. Place formed construction joints in floor slab pattern placement sequence. Set top screed to required elevations. Secure to resist movement of wet concrete.
- C. Where unit pavers occur, install joint filler full depth of concrete pavement and unit pavers.
- D. Install joint filler for unit pavers flush with finish grade of pavers.
- E. Install joint fillers and sealants in accordance with manufacturer's instructions. Use primers of type recommended by joint filler and sealant manufacturer.

END OF SECTION 031500

SECTION 032000
CONCRETE REINFORCEMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Reinforcing steel bars, welded steel wire fabric fabricated steel bar for cast-in-place concrete.
- B. Support chairs, for supporting reinforcement.

1.2 RELATED SECTIONS

- A. Section 031100 - Concrete Formwork.
- B. Section 031500 - Expansion and Contraction Joints.
- C. Section 321313 - Cast-In-Place Concrete: Concrete placement and vapor barrier.

1.3 REFERENCE STANDARDS

- A. ACI 301 - Specifications for Structural Concrete for Buildings.
- B. ACI 315 - Details and Detailing of Concrete Reinforcement.
- C. ANSI/ASTM A185 - Welded Steel Wire Fabric for Concrete Reinforcement.
- D. ANSI/AWS D1.4 - Structural Welding Code Reinforcing Steel.
- E. ASTM A615 - Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
- F. ASTM A706 – Low Alloy Steel Deformed and Plain Bars for Concrete Reinforcement.
- G. CRSI - Manual of Practice.
- H. CRSI 63 - Recommended Practice for Placing Reinforcing Bars.
- I. CRSI 65 - Recommended Practice for Placing Bar Supports, Specifications and Nomenclature.

1.4 QUALITY ASSURANCE

- A. Perform concrete reinforcement work in accordance with CRSI Manual of Standard Practice, and Documents 63 and 65.

- B. Conform to ACI 301.
- C. Reinforcing Steel: Where samples are taken from bundles as delivered from mill, with bundles identified as to heat number, provided mill analysis accompanies report, no testing is required. Where positive identification of heat number cannot be made or where random samples are to be taken, one series of tests shall be made from each 5 tons, or fraction thereof, of each size of reinforcing steel. The cost of testing occasioned by use of un-identified steel, shall be paid for by the Contractor.

1.5 SHOP DRAWINGS

- A. Submit shop drawings under provisions of Section 01330.
- B. Shop Drawings shall indicate sizes, spacing, locations and quantities of reinforcing steel, wire fabric, bending and cutting schedules, splicing, stirrup spacing, supporting, bend and cutting schedules and spacing devices, and supporting and spacing devices. Shop drawings are to include identification and dimensioned layout for all construction joints, expansion joints, and added rebars for all concrete penetrations, concrete block outs and concrete openings. Clearly note any changes to the size, grade, location or spacing from that shown on the drawings.

1.6 CERTIFICATES

- A. Submit mill test certificates of supplied concrete reinforcing, indicating physical and chemical analysis.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Reinforcing Steel: ASTM A615, 60 ksi yield grade billet-steel deformed bars, uncoated finish. Bars to be welded shall be ASTM A706.
- B. Welded Steel Wire Fabric: ANSI/ASTM A185 plain type; coiled rolls; uncoated finish.
- C. Steel Wire: ASTM A 82, plain, cold-drawn steel.
- D. Welded Deformed Steel Wire Fabric: ASTM A 497.

2.2 ACCESSORY MATERIALS

- A. Tie Wire: Minimum 16 gage annealed type.
- B. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for strength and support of reinforcement during installation and placement of concrete,

including load bearing pad on bottom to prevent vapor barrier puncture.

- C. Supports for Reinforcement: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications.
 - 1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
 - 2. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs which are plastic protected (CRSI, Class 1) or stainless steel protected (CRSI, Class 2).

2.3 FABRICATION

- A. Fabricate in accordance with ACI 315, providing concrete cover as indicated on Drawings or specified in Section 321313.
- B. Locate reinforcing splices not indicated on Drawings at points of minimum stress. Indicate location of splices on shop drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Before placing concrete, clean reinforcement of foreign particles or coatings.
- B. Place, support, and secure reinforcement against displacement. Do not deviate from alignment or measurement.
- C. Do not displace or damage vapor barrier required by Section 321313.

3.2 FABRICATION OF REINFORCING

- A. Fabricate reinforcing as shown on the drawings and in accordance with the Reference Standard.
- B. Locate reinforcing splices where indicated on drawings or where not indicated at points of minimum stress. Locations of splices are subject to review by State's Representative/Engineer. Welded splices of reinforcing bars in accordance with AWS D1.4 are subject to review by the State's Representative / Engineer.
- C. Reinforcing with any of the following defects will not be permitted. Bar lengths, depths and bends exceeding the specified fabrication tolerances. Bends or kinks not indicated on the drawings. Bars that have been re-bent or straightened in a manner that injured or weakened the material. Bars with reduced cross section due to excessive rusting or other cause.

- D. Field cutting and bending of reinforcing bars shall be reviewed and approved by the State's Representative / Engineer prior to any action being undertaken. Reinforcing bars may be cut using an oxy-acetylene torch.

3.3 PLACING REINFORCEMENT

- A. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars", for details and methods of reinforcement placement and supports, and as herein specified.
- B. Before the start of concrete placement, accurately place all concrete reinforcement, positively securing and supporting by concrete blocks, metal chairs or spacers, or by metal hangers at the proper placement elevation and location. Maintain minimum clearances shown on Drawings or specified in Section 321313 between concrete reinforcement and concrete embedded materials, conduit, pipe, anchor bolts, sleeves, formwork, earth, and finish face of concrete.
- C. Welded Wire Fabric: Lay out straight, cut to required size; lay flat and place on supports, supporting chairs, bolsters, or concrete blocks to meet proper placement elevation and location prior to concrete placement. At edges, extend fabric to within 1" of edge. Installing welded wire fabric on the sand base and lifting the fabric into place during concrete placement will not be acceptable.
- D. Avoiding cutting or puncturing vapor retarder during reinforcement placement and concreting operations.
- E. In general, no conduits, pipes, etc. shall be embedded in concrete without the specific approval of the State's Representative. Conduits, pipes, etc. that are approved for installation shall not displace reinforcing steel. In the event conduits, piping, inserts, sleeves, or any other items interfere with placing reinforcement as indicated on the drawings or as otherwise required, immediately consult the State's Representative and obtain review of new procedure before placing concrete.
- F. Place all required steel dowels, anchor bolts, sleeves, conduits, and pipes and securely anchor them in position before concrete is placed. Remove all concrete reinforcement steel tags, identification labels, tie wire, debris, and left over rebar related material at least 24 hours prior to concrete placement.
- G. When concrete is placed, steel reinforcement shall be free of rust scale, loose mill scale, oil, paint, and all other coatings that will destroy or reduce bond between steel and concrete.

3.4 INSTALLATION OF EMBEDDED ITEMS

- A. General: Set and build into work anchorage devices and other embedded

items required for other work that is attached to, or supported by, cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of items to be attached thereto. Installing concrete embedded items during or after concrete placement will not be accepted unless approved by the State's Representative / Engineer.

END OF SECTION 032000

SECTION 044300.13 LANDSCAPE BOULDERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Work under this Section consists of relocation and placement of landscape and bookend boulders including excavation and finish grading.
 - 1. In addition to those boulders shown on the Drawings to be relocated and placed in the project landscape, up to 10 additional boulders may be selected by the State Representative for this purpose prior to boulder excavation.

1.2 REVIEWS

- A. Contractor shall stake or mark all locations and sizes of boulders to be relocated for review by State Representative prior to excavation.
- B. Contractor shall layout and position boulders at locations designated on the Drawings for review by the State Representative prior to installation.
- C. State Representative shall approve final positioning of boulders at time of installation.
- D. Notify the State's Representative 48 hours before boulder installation.

1.3 QUALITY ASSURANCE

- A. Work shall be performed by those experienced in landscape boulder placement.

1.4 PROJECT CONDITIONS

- A. Stain Prevention: Immediately remove concrete, mortar and soil to prevent staining of the surfaces of installed landscape boulders.

PART 2 – PRODUCTS

2.1 LANDSCAPE BOULDERS

- A. Landscape boulders shall be obtained from boulders on-site.

2.2 CLEANERS

- A. Job-Mixed Detergent Solution: Solution of ½-cup dry-measure tetrasodium polyphosphate and ½-cup dry-measure laundry detergent dissolved in 1 gal- lon of water.
- B. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner de- signed for removing concrete and mortar/grout stains, efflorescence, and other new stains from rock surfaces without discoloring or damaging them.
 - 1. Products: Diedrich Technologies, Inc, 202 New Masonry Detergent; Dominion Restoration, Inc., DR-60 Stone and Masonry Cleaner; Pro- SoCo, Inc., Sure Klean No. 600 Detergent, Sure Klean Restoration Cleaner; approved equal.

PART 3 - EXECUTION

3.1 STOCKPILING

- A. Excavated landscape boulders to be placed according to the Drawings shall be stockpiled according to category size and stored in such a manner as to prevent scaring, breaking, chipping or other damage.

3.2 INSTALLATION

- A. General: The base of each boulder shall be buried in soil and the excavated soil placed around the boulder. Total depth of soil surrounding the boulder base shall be equivalent to one-quarter to one-third the boulder height, or more if existing soil line dictates additional depth.
- B. Excavation and Placement: Excavate soil as required and place the boulders as shown on the Plans and Detail. Care shall be taken as to not scar or damage boulders during excavation, movement, storage or placement. Damaged boulders shall be replaced with suitable boulders at Contractor's expense.
 - 1. Boulders shall be placed with weathered side up and so as to conform to existing stable ground and shall not rock or shift once placed.
 - 2. Boulders shall be placed as to provide minimum of exposed

rough or fractured edges.

3. Protect surfaces of boulders set into or adjacent to concrete paving to remain free of concrete splashing or staining.
 4. Place boulders using slings or other suitable equipment to prevent marring of the rocks by equipment.
 5. Boulders shall be set to remain stable and in place after placement.
- D. Grading of Boulders Set in Soil Only: Deposit soil from excavation around base of boulder. Smooth soil and feather to meet undisturbed grade.
1. Soil in disturbed areas shall be free of rocks or debris greater than 2- inches in diameter.
 2. Ground surrounding landscape rocks shall be finish graded so that ponding and surface erosion will not occur in the landscape areas.

3.2 CLEAN UP AND DISPOSAL

- A. Brush boulders clean of soil and mud. Take care to keep concrete off exposed boulder faces. Avoid damage to boulders or surrounding concrete. If mechanical cleaning is necessary, use only wood scrapers and fiber brushes. Do not use metal implements.
- B. Disposal: Remove waste material, including chips and broken pieces of rock/boulder created from excavation or transport, unsatisfactory soil, trash, debris, and other non-soil material and legally dispose of it off State Park property.

END OF SECTION 044300.13

SECTION 311000 SITE CLEARING

PART 1 - GENERAL SUMMARY

- A. This Section includes the following:
 - 1. Protecting existing vegetation to remain.
 - 2. Clearing and grubbing.
 - 3. Stripping and stockpiling topsoil.
 - 4. Temporary erosion and sedimentation control measures.
- B. Related Sections include the following:
 - 1. Section 311000 – Site Clearing.
 - 2. Section 313000 – Earthwork.
 - 3. Section 044300.13 – Landscape Boulders.

1.2 REFERENCES AND REGULATORY REQUIREMENTS

- A. Truckee Sanitation District Code Ordinance 1-2002, latest edition.
- B. Truckee Donner Public Utility District Water System Construction Standards, latest edition.
- C. State of California Department of Transportation Standard Specifications, latest edition.

1.3 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.
- B. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain Owner's

property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings, according to Division 1 identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1.

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by States Representative.
- C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- D. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- E. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.
- F. A large quantity of rocks of various sized occur on-site in the work area.

- G. Contractor shall be responsible for removal and relocation of all known and unknown rocks as required for completion of all contract work.
- H. It is likely that subsurface boulders will be encountered.
- I. Not all rocks will be affected by work. Rocks not affected by work can remain in place.

PART 2 – PRODUCTS

2.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Section 313000 – Earthwork.
 - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

2.2 ROCK REMOVAL

- A. Contractor is required to provide all equipment necessary to perform rock removal work.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas

disturbed during removal.

3.3 TREE PROTECTION

- A. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.
 - 1. Do not store construction materials, debris, or excavated material within fenced area.
 - 2. Do not permit vehicles, equipment, or foot traffic within fenced area.
 - 3. Maintain fenced area free of weeds and trash.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
 - 1. Cover exposed roots with burlap and water regularly.
 - 2. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 - 3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
 - 4. Backfill with soil as soon as possible.
- D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by State's Representative.
 - 1. Replace trees that cannot be repaired and restored to full-growth status, as determined by States Representative.

3.4 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 - 1. Arrange with utility companies to shut off indicated utilities.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to

requirements indicated:

1. Notify States Representative not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without State Representative's written permission.
- C. Excavate for and remove underground utilities indicated to be removed.
- D. Removal of underground utilities is included in Division 2 Sections covering site utilities.

3.5 CLEARING AND GRUBBING

- A. All existing vegetation, debris, uncontrolled fill, loose or disturbed natural soils, and other deleterious materials should be stripped and removed from the construction limits. Uncontrolled fill is any existing fill that was not properly placed, observed and tested. All exposed surfaces should be free of mounds and depressions that could prevent uniform compaction. If unexpected fills or underground facilities are encountered during site clearing such features should be removed and the excavation thoroughly cleaned and backfilled.
1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 2. Remove roots 2 inches and larger in paved areas.
 3. Grind stumps in non-paved areas to 6 inches below grade.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches and compact each layer to a density equal to adjacent original ground.

3.6 ROCK REMOVAL

- A. Measurement
1. Cubic Foot measurement shall be made in the field at the time of rock removal, with the Inspector present, based on criteria determined and agreed upon by the State Representative, Inspector and Contractor.
- B. Excavation/Removal

Site Clearing

1. Excavation of rocks to be used per Landscape plans shall be excavated in such a way as to ensure that no scaring, breakage or fracturing occurs to the rocks and shall be moved with care to avoid damage per Section 044300.13 – Landscape Boulders.
2. There is sufficient rock removal on site to use as landscape boulders per Section 044300.13. If the existing rocks, during removal, are fractured, scared, or damaged in any other way beyond use, it shall be the Contractor's responsibility to provide boulders from off site at no cost to the State. Selection and final determination for re-use and/or replacement boulders from off site shall be made by the State Representative.
3. Blasting/explosives are prohibited.
4. Inspector shall be present for rock removal operations. Provide 48 hour notice to State Representative prior to rock removal operations.
5. Backfill and compact voids from boulder removal per Section 313000 – Earthwork.

C. Disposal

1. Boulders not stockpiled, placed or relocated per plans and specifications shall be disposed of per 3.9 below.

3.7 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 1. Remove subsoil and nonsoil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 1. Limit height of topsoil stockpiles to 72 inches.
 2. Do not stockpile topsoil within tree protection zones.
 3. Dispose of excess topsoil as specified for waste material disposal.
 4. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.8 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.9 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
 - 1. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

END OF SECTION 311000

SECTION 313000 EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all earthwork and related work shown on the Drawings and/or specified herein.
- B. Scope of work: The general extent of earthwork is shown on the Drawings and can include, but is not necessarily limited to the following:
 - 1. Topsoil stripping, stockpiling, and replacement into planting areas.
 - 2. Finish grading.
 - 3. Filling and backfilling to attain required grades.
 - 4. Excavating for paving, footings and foundations.
 - 5. Adherence to requirements, recommendations and/or Best Management Practices (BMPs) for storm water management as may be outlined in the Project Storm Water Pollution Prevention Plan (SWPPP), or as required by governing agencies.
 - 6. Finish grading of subgrade to receive concrete flatwork and asphalt paving.
- C. Related sections can include, but may not be limited to:
 - 1. Section 01330 – Submittals Procedures
- D. The requirements of the General Conditions, Supplemental Conditions and Division 1, General Requirements, apply to this work.

1.2 REFERENCES AND REGULATORY REQUIREMENTS

- A. International Conference of Building Officials (ICBO):
 - 1. Uniform Building Code (UBC):
 - a. Chapter 29 – Excavations, Foundations, and Retaining Walls.
 - b. Chapter 70 – Excavation and Grading.

- B. American Society for Testing and Materials (ASTM)
 - 1. B 1557-78: Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-pound Rammer and 18-inch Drop.
 - 2. D 1556-82: Test Methods for Density of Soil in Place by the Sand-Cone Method.
- C. California Occupational Safety and Health Standards (OSHA):
 - 1. Article 6 – Excavations and Shoring.
- D. Geotechnical Investigation, Geocon Consultants, August 2007.
- E. Truckee Sanitation District Code Ordinance 1-2002, latest edition.
- F. Truckee Donner Public Utility District Water System construction Standards, latest edition.
- G. State of California Department of Transportation Standard Specifications, latest edition.

1.3 SUBMITTALS

- A. Project Record Drawings:
 - 1. Conform to Section 01770 and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.
 - 2. Accurately record locations of utilities remaining, re-routed utilities, all new utilities and sleeving, and newly discovered utilities by horizontal dimensions, elevations, inverts, and slope gradients.
- B. Import Topsoil
 - 1. It is the contractor's responsibility to determine if import soil is required on the project.
 - 2. As applicable, contractor shall submit samples (1 quart min. each) of proposed import topsoil per Section 01330, with an accompanying fertility and structure analysis, prepared by a recognized soil and plant laboratory, for review and acceptance by the State's Representative prior to use.

1.4 QUALITY ASSURANCE

- A. Geotechnical Investigation:

1. The Owner may designate and pay for the services of a Geotechnical Engineer to make recommendations based on the soil conditions encountered the results of field and laboratory tests, and observations of the activities performed under this Section.
2. Relative compaction densities specified for structural fills under footings, slabs, or pavements shall be determined in accordance with ASTM 0- 1556 and 0-1557, unless otherwise noted.

B. Certification:

1. Certify source and type of backfill proposed to be incorporated into the work.
2. Certify elevations of excavations, footings, and subgrades with the use of a Licensed Surveyor, at contractor's expense.
3. Accurately provide dimensioned locations of installed work including all top of pipe and top of box elevations referenced to project datum.

1.5 PROTECTION

- A. Protect all existing utilities, structures, fences, roads, sidewalks, paving, curbs, and other items necessary from earthwork activity.
- B. Protect above or below grade utilities which are to remain.
- C. Repair damages to any existing site features which are to remain. Repair and restoration shall be equal to quality and appearance of prior condition and to the satisfaction of the State's Representative.

1.6 PROJECT CONDITIONS

- A. Underground Utilities: Unknown buried utility lines may exist. If encountered, notify State's Representative immediately for direction and re- direct work to avoid delay.
 1. Cooperate and coordinate with State's Representative and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of State's Representative.
 2. Do not interrupt existing utilities serving occupied facilities without proper notification to, and written direction from, State's Representative.

- B. Wet Conditions: No grading operations shall be conducted when excessively wet conditions exist as determined by the State's Representative.
- C. Contractor shall provide dewatering equipment as required to continue scheduled operations and provide optimum working conditions at no additional cost to State's Representative.
- D. Dry Conditions: Contractor shall apply sufficient water to materials during construction to properly compact materials and control dust.

1.7 GRADE STAKES AND LINES

- A. All grading and subgrading shall be controlled by contractor- installed intermediate grade stakes and lines necessary to obtain the finished grade elevations shown or implied in the Drawings. Subgrade and finish grade surfaces shall conform to the control planes established by these grade stakes and lines
- B. Protect and maintain all existing benchmarks, monuments and other reference points. If disturbed or destroyed, they shall be replaced at the Contractor's expense
- C. Contractor shall set temporary bench marks as necessary to properly complete construction operations.

1.8 SURVEYING

- A. Contractor shall be responsible for hiring a licensed professional surveyor to perform all surveying, layout and staking. Contractor shall be responsible for informing Owner (minimum two (2) working days notice) when staking and layout is scheduled so that a review of completed chalk lines and staking can take place.

1.9 TOLERANCES

- A. Sub-grades, rough, and finished grades for un-surfaced areas may vary within a tolerance of five hundredths of a foot (0.05') from the finished grade elevations shown on the plans, provided that no drainage pockets or depressions result.
- B. Refer to material-specific specifications for tolerances for surfaced areas (i.e. concrete, asphalt, etc.).

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Select material for structural backfill shall be in accordance with applicable portions of Section 313000 – Earthwork, of the Standard Specifications, unless modified by recommendations and requirements of the Project Geotechnical Report.
- B. Topsoil: Excavated material from top 6 inches (maximum) of existing grade (unpaved areas) and/or acceptable import material graded free of roots and rocks larger than two inches, subsoil, debris, weeds, large mats of grass, and other deleterious material.
- C. Subsoil: Excavated material below top 6 inches of existing grade, graded free of clay clods larger than 6 inches, rocks larger than 3 inches, and debris.
- D. Fill: Imported fill materials shall be free of vegetation and debris. The gradation of imported engineering fill material shall be determined by ASTM C-136, and shall be within the following limits:

- Gradation (ASTM C 136): Percent Finer by

<u>Weight:</u> 6"	100
3"	70-100
No. 4 Sieve.....	35-100
No. 200 Sieve.....	20 (maximum)
- Plasticity Index Less than 15
- Maximum Expansive Potential (%) (60-psf-surge) .. Non-Expansive
- Maximum Sulfate Content (%) 0.20
- Maximum Solubility (%)..... Non-Soluble
- Minimum R-value 60
- Select free-draining granular materials should be used as backfill behind retaining walls, conforming to the following:

<u>Gradation (ASTM C 136):</u>	<u>Percent Finer by</u>
<u>Weight:</u> 6"	100
3"	70-100

No. 4 Sieve..... 10-70

No. 100 Sieve..... 10 (maximum)

- Plasticity Index Less than 15
- Expansive Potential (%) (60-opsf-surcharge) Non-Expansive
- Maximum Sulfate Content (%) 0.10
- Maximum Solubility (%).....Non-Soluble

PART 3 - EXECUTION

3.1 PREPARATION

- A. Identify all required lines, levels, contours, datum, control points and property lines required to properly establish limits of work.
- B. Verify elevations of critical existing grades as noted on Drawings and as directed by State's Representative. Notify State's Representative of discrepancies prior to start of work and re-direct work to avoid delay.
- C. Identify all known below grade utilities. Stake and flag locations.
- D. Identify and flag surface grades and utilities.
- E. Contact Underground Service Alert (USA) (800-642-2444) and local utility companies to verify locations of existing utilities a minimum of two (2) working days prior to excavation.

3.2 PROTECTION

- A. Maintain and protect existing utilities remaining which pass through work area.
- B. Perform excavation work near utilities by hand. Provide necessary protection as the work progresses.
- C. Provide and maintain protection for walks, curbs, drains, trees, corners of structures, etc., as necessary to prevent damage.
- D. Barricade and/or cover open excavations occurring as part of this work and post with warning lights to the satisfaction of the State's Representative. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

- E. Keep adjacent properties, streets and drives clean of any dirt, dust, or stains caused by earthwork operations.
- F. Upon discovery of unknown utility or concealed conditions, notify the State's Representative immediately and re-direct work to avoid delay.
- G. Control dust on and near the work, and on and near off-site borrow areas.
 - 1. Thoroughly moisten surfaces as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of any other activities that may occur on the site.
 - 2. Non-compliance with proper dust control measures shall be grounds for issuance of "stop work" orders by the Owner until such time as satisfactory measures can be implemented.
- H. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- I. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by State's Representative; reshape and recompact.
- J. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.3 TOPSOIL EXCAVATION

- A. Do not excavate topsoil that has become wetted to, or beyond, the saturation point that would be required for optimum compaction.
- B. Topsoil to be reused in proposed planting areas shall be stockpiled in wind- row(s) of a height not to exceed 8 feet, protect from erosion, and cover as necessary to prevent formation of dust. Excavate trenches with vertical walls, uniform bottom, free of deleterious materials, and wide enough for pipes to lay side by side, fully supported on bottom. There shall be a minimum three inch (3") clearance between all pipes.

3.4 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.5 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.6 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. It is anticipated that excavations of the on-site natural non-cemented deposits for the proposed structures can be accomplished using conventional earthmoving equipment.
 - 3. If oversize boulders are encountered during excavation, removal of such boulders may require heavy-duty or specialized equipment.
 - 4. Contractors, especially those installing underground utilities, should satisfy themselves as to the hardness of materials and equipment required.
 - 5. Trenching and shoring operations should be conducted in accordance with Section 10 Nos. 1926.650 through 1926.652 of the State of Nevada Occupational Safety and Health Standards for the Construction Industry (with amendments as of August, 1991) and in accordance with 29 CFR Part 1926, Occupational Safety and Health Standards – Excavations; Final Rule (October 31, 1989). Safety of construction personnel is the responsibility of the contractor.

3.7 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 0.10 feet. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

3.8 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.9 SUBGRADE INSPECTION

- A. Notify State's Representative when excavations have reached required subgrade.
- B. If State's Representative determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction. Limit vehicle speed to 3 mph.
 - 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
 - 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by State's Representative, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by State's Representative, without additional compensation.

3.10 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi, may be used when approved by State's Representative.

3.11 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations.

3.12 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Surveying locations of underground utilities for Record Documents.
 - 2. Testing and inspecting underground utilities.
 - 3. Removing concrete formwork.
 - 4. Removing trash and debris.
 - 5. Removing temporary shoring and bracing, and sheeting.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.13 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 5 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under steps and ramps, use engineered fill.
 - 4. Under building slabs, use engineered fill.
 - 5. Under footings and foundations, use engineered fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. After required excavations have been performed, the exposed soils should be carefully observed to verify removal of all unsuitable deposits. Exposed soils should then be scarified to a depth of 6 inches (not necessary if cemented sand and gravel is exposed), watered as necessary, and compacted as recommended.
- B. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- C. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- D. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 1557:
 - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 90 percent.
 - 2. Under walkways, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 95 percent.
 - 3. Under lawn or unpaved areas, scarify and recompact top 6 inches below subgrade and compact each layer of backfill or fill soil material at 90 percent.

3.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular

surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.

1. Provide a smooth transition between adjacent existing grades and new grades.
 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
1. Lawn or Unpaved Areas: Plus or minus 0.10 feet.
 2. Walks: Plus or minus 0.05 feet.
 3. Pavements: Plus or minus 0.05 feet.
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 0.05 feet when tested with a 10-foot straightedge.

3.17 FIELD QUALITY CONTROL

- A. Testing Agency: Contractor shall engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by State's Representative.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable.
Tests will be performed at the following locations and frequencies:
1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 2000 sq. ft. or less of paved area or building slab, but in no case fewer than 3 tests.

2. Foundation Wall Backfill: At each compacted backfill layer, at least 1 test for each 100 feet or less of wall length, but no fewer than 2 tests.

E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.18 DISPOSAL OF SURPLUS AND WASTE MATERIALS

A. Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

B. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by State's Representative.

C. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

3.19 TOLERANCES

A. Finish grades of landscape areas shall be as required to ensure positive drainage as shown on Drawings and as acceptable to the State's Representative.

END OF SECTION 313000

SECTION 321100
SOIL CEMENT PAVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Work shall consist of furnishing, placing, compacting and curing a mixture of soil material, Portland cement and water.
- B. The mixture shall be uniformly mixed, blended, compacted, finished and cured as specified. It shall conform to the lines, grades, thicknesses and cross sections as shown on the drawings.

1.2 DEFINITIONS

- A. Design Mix: Mix indicating the percentage by weight of on-site soil (dry weight), percentage by weight of Portland cement and volume of water.

1.3 SUBMITTALS

- A. Product data: For each manufactured material and product indicated.
 - 1. Proposed design mix based on evaluation of available site soils. Any changes to the design mix during the course of the project shall be approved by State's Representative prior to commencing installation of soil cement.
 - 2. Approximate quantities of soil cement to be mixed based on soil test.
 - 3. The types of equipment to be used for excavation, mixing, placement, compaction and watering.
 - 5. The methods used to cure permanently exposed surfaces.
- A. Qualification Data Depicting 3 Separate Installations:
 - A. Dates of soil cement installation
 - B. Name of installer
 - C. Name and locations of installations
 - D. Labeled photo documentation.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Portland cement shall be stored and protected at all times from weather, moisture or other destructive elements. Cement that is partially hydrated or otherwise damaged will not be accepted.

1.5 QUALITY ASSURANCE

- A. **Installer Qualifications:** Installer to provide evidence of at least 3 successful soil cement paving installations similar in material, design, and extent.
- B. **Regulatory Requirements:** Meet requirements of applicable laws, codes, and regulations required by authorities having jurisdiction over such work.
- C. **Pre-installation Meeting:** On site meeting with contractor and State's Representative to review the variables of the site to be prepared for soil cement treatment.
- D. **Soil Cement Paving Test Section:** The contractor shall prepare a soil cement test section for approval by State's Representative to verify the proposed design mix meets the intent of these specifications. The soil cement test section shall be constructed at least three (3) calendar days prior to soil cement placement. The test section shall be constructed at a location determined and approved by the State's Representative. The test section shall be 8 inches thick, 9 feet wide and 18 feet long. The subgrade shall be shaped, pulverized and mixed as specified herein. Soil cement shall be placed, wetted, mixed, compacted and cured as specified herein. After the test section is complete the States Representative shall evaluate the test section to determine if it meets the intent of these specifications and project requirements. If necessary the contractor shall make adjustments to equipment, construction methods and design mixes as necessary to produce soil cement in accordance with these specifications. Additional test sections may be required at no additional cost to the State if initial test section fails to meet specification requirements or the intent of the project requirements. The need for additional test sections shall be determined by the State's Representative. Once determined that the test section meets specification requirements the States Representative shall then grant approval to the Contractor to proceed with paving operations.

1.6 PROJECT/SITE CONDITIONS

- A. Soil Cement will be installed adjacent to existing site features. Extra care shall be taken to assure they are protected. Protect all adjacent walls, fences, structures or existing pavement from damage. Mask areas to prevent overspray. Any damage shall be repaired to the satisfaction of the State's Representative at no additional cost to the State.
- B. **Environmental Requirements:**
 - 1. Mix and place cement only when weather conditions permit courses to be finished without interruption.
 - 2. Mix and place materials only when moisture content of the soil meets

the requirements as stated in these specifications.

3. Begin mixing only when the air temperature is above 40 degrees Fahrenheit and rising.

- C. Field Measurements: Contractor to verify the existing site conditions. Where surfacing is indicated to fit with existing site features, verify dimensions of by field measurements before proceeding with work.

1.7 DELIVERY, STORGE AND HANDLING

A. Cement shall be stored and protected at all times from weather, dampness or other destructive elements. Cement that is partially hydrated or otherwise damaged will not be accepted.

B. All curing compound shall be delivered to the site of the work in the original container bearing the name of the manufacturer and the brand name. The compound shall be stored in a manner that prevents damage to the container and protects water-emulsion types from freezing.

1.8 WARRANTY

A. Warranty: Contractor shall repair or replace components of stabilized surfacing that fail in materials or workmanship within the specified warranty period. Failures include, but are not limited to, the following:

1. Premature wear and tear, provided the material is maintained in accordance v
2. Failure of system to meet performance requirements.

A. Warranty Period: Contractor shall provide warranty for performance of product. Contractor shall warranty installation of product for the time of one year from final acceptance.

PART 2 - PRODUCTS

2.0 MATERIALS

A. Soil: Limited to available on-site soils in work areas or as designated in the field by the State's Representative.

B. Portland Cement: Shall be Type V and shall comply with the latest specifications for Portland Cement (ASTM C150, CSA, A-5, or AASHTO M85)

B. When air-entraining cement is required, the Contractor shall furnish the manufacturers written statement providing the source, amount and brand name of the air-entraining component.

- C. Water: Shall be clear and from a potable source.

2.1 EQUIPMENT

- A. Provide equipment in good working condition to allow continuous and steady production. Sufficient equipment should be supplied to mix, place and compact soil cement within the required time limits.

PART 3 - EXECUTION

3.0 SURVEY REQUIREMENTS

- A. Lines and Levels: Establish lines and levels, locate and lay out by instrumentation and similar appropriate means to finish grades. Contractor shall give special attention to linear grade requirements as shown on plans.
- B. Staking: Provide a sufficient quantity of grade stakes as required to provide paving with smooth finish grades and positive drainage.

3.1 SITE PREPARATION

- A. Contractor shall locate and identify any aboveground or underground facilities/utilities that may be affected by earthwork or soil cement construction prior to commencing with earthwork operations. Before proceeding with work, notify State's Representative in writing of the presence of unsuitable conditions and conflicts.
- B. Grade and shape existing roadways and trail alignments to receive soil cement treatment to lines and grades as shown on the plans. If additional fill soil is needed to meet grade requirements, place and spread uniformly to proper depth. Compact new fill areas to 90 percent relative compaction in 8" lifts. Once initial grading operations are complete, finished grades shall be checked and approved by State's Representative prior to commencing with mixing and placement of soil cement.

3.2 PREPARING SOILS

- A. Areas to receive soil cement shall be cleared and grubbed. Remove all roots, woody material, rocks that exceed 3 inches and any other harmful materials. Material removed shall be legally disposed of offsite by the Contractor.

- B. Rip the soils to the specified width and depth along the entire length of the pavement to be stabilized without disturbing or damaging the underlying soils. Ripping bars shall be placed at a minimum eight (8) inch spacing so that any harmful materials or soil conditions are exposed.
- C. Once clearing/grubbing and ripping operations are complete, the Contractor's Independent Soil Testing Lab shall evaluate soil conditions, with the State's Representative present for proper texture and composition prior to adding cement. Any adjustments to soil composition necessary to facilitate proper soil cement construction shall be made based on field evaluation of soil conditions by Soils Testing Lab.

3.3 APPLYING CEMENT AND MIXING

- A. Uniformly spread the required amount of Portland cement evenly over the area to be treated. Minimum, Portland cement shall be spread at the rate of 8% by weight of dry soil (Soil Dry Weight: assumes 135 pounds/cubic foot).
- B. Dry mix Portland cement evenly into soil. The appropriate mechanized equipment shall be used to thoroughly mix and distribute cement throughout the profile of the pavement. Once dry mixing is complete, the Contractor and the Testing Agency, with the State's Representative present, shall field inspect to ensure that cement has been adequately mixed and distributed throughout profile.
- C. Soil and cement shall then be wetted. Water shall be applied by means of controls that will supply the correct quantity of water to produce a completed mixture with uniform moisture content. Leakage of water from equipment or application of excessive amounts of water shall be corrected before proceeding further. Soils and cement mixture shall be hydrated to +/- 2% of optimum moisture content during mixing process. The optimum moisture content of the soil cement mixture shall be determined by ASTM D1557-00.
- D. Begin mixing as soon as practical after the water has been added to the mixture and continue until a homogeneous mixture is produced. Continue mixing with successive passes if necessary. Immediately after the preliminary mixing of the cement and soil, add water as needed to maintain or bring the mixture to within optimal moisture requirements. Uniformly mix the additional water to incorporate it into the full depth of the mixture.

3.4 COMPACTION

- A. Once mixing is complete, the mixture shall be compacted. Begin

compaction within 30 minutes of the time water is added to the soil-cement mixture. Complete compaction within 1 hour. Complete all operations in two (2) hours, from adding cement to finishing the surface.

- B. Compaction shall follow immediately after the mixing operation, and shall consist of at least one complete coverage of the soil-cement mixture. During compaction, ensure a uniform moisture content of the mixture is +/- 2% optimum moisture content.
- C. Soil-cement mixture shall be longitudinally rolled, beginning at the outside or lower side and proceeding toward the higher side to meet cross slope requirements as shown on plans. Each pass of the roller shall overlap the proceeding pass by at least one-half the roller.
- D. Relative compaction of the mixture shall not be less than 95% of the maximum density as determined by ASTM D1557-00. Multiple passes of the roller equipment may be necessary to achieve proper compaction.
- E. Uniformly compact the mixture and then fine-grade the surface to the line, grade and cross section as shown on the plans. Roll again to compact loose material and smooth surface material. The finished surface of the soil-cement mixture after compaction shall be uniform and smooth.
- F. Do not perform vibratory compaction on soil-cement mixture more than 1 & 1/2 hours old.

3.5 FINISHING

- A. Once shaping has been completed to the required line, grade and cross section the surface shall be rolled smooth.

3.6 CURING

- A. Permanently exposed soil cement surfaces shall be kept in a moist state for seven (7) days and/or may be covered with a protective cover subject to State's Representatives approval.
- B. No other curing materials shall be applied other than clean potable water.

3.7 CONSTRUCTION JOINTS

- A. At the end of each days work, or whenever construction operations are interrupted for more than two (2) hours, a transverse construction joint shall be formed by cutting back into the complete compacted soil cement to form a full depth vertical face.

3.8 TOLERANCES

- A. Finished Surface Smoothness: Maximum 1/2 inch in 10 feet 0 inches any direction.
- B. The thickness of the soil cement shall not be deficient by more than one-half inch ($\frac{1}{2}$ "). If deficiencies are detected corrective action shall be taken as determined by States Representative. This can include removing soil-cement material to full depth of the course and reconstructing to the required thickness at the expense of the Contractor.

3.9 SOIL CEMENT COMPRESSIVE STRENGTH

- A. The minimum 7-day compressive strength shall not be less than 350 PSI. Testing of in-place soil cement by boring or other methods shall be preformed by an independent testing laboratory, approved by the State, hired and paid for by the Contractor. Samples shall be taken every 500' linear feet or a minimum of 1 for each days operations, to determine compressive strength.

3.10 REPLACEMENT OF DEFECTIVE PAVEMENT

- A. Soil cement installation shall be considered defective and shall be removed and replaced in accordance with these specifications, when any of the following conditions occur:
 - 1. Compaction operations are interrupted for any reason prior to the completion of compaction and soil cement is left undisturbed for more than thirty (30) minutes.
 - 2. The soil cement mixture becomes excessively wet prior to completion of compaction, so that the moisture content exceeds specified limits.
 - 3. The compacted soil cement does not meet the minimum compressive strength requirements.
 - 4. The finished surface is excessively rough or below grade such that a thin "scab section" would be required to smooth the surface or bring the surface to grade.
 - 5. Quality of workmanship or material is judged unsatisfactory by the State's Representative or where damage from construction has occurred.
 - 6. Finished surfaces are not smooth, uniform and solid or evidence of

chipping or cracking exists. Material is not firm and spongy areas exist. Loose material is present on the surface.

- B. Repairs of faulty or damaged work shall be performed through full depth of the course at the Contractor's expense.

3.11 FIELD QUALITY CONTROL

- A. Testing: Contractor shall retain an independent testing laboratory acceptable to DPR to provide testing for:
 - 1. Soil analysis as basis for design mix,
 - 2. compaction, and
 - 3. compressive strength.
- B. Finished Surface Smoothness:
 - 1. Correct areas not meeting specified surface tolerance immediately after initial compaction.

3.12 CLEAN-UP

- A. Throughout the duration of the Project, Contractor shall provide trash receptacles for collecting debris, shall remove debris, trash, unused materials, and excess soil from the job site at regular intervals of not less than weekly and shall dispose of same off site in a legal manner.
- B. Upon completion of the Work of this Section, Contractor shall clean all improvements installed by removing all surplus soil, excess soil-cement, etc. and shall remove all excess materials, rubbish, debris, etc., sweep all adjacent pavement surfaces, streets, walkways, and slabs, and shall remove construction equipment from the premises.

END OF SECTION 321100

SECTION 321123
AGGREGATE BASE COURSE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation, and services to complete hauling, placing and compacting and related work as shown on the drawings and called out in the details. Reference Specifications: State of California Department of Transportation Standard Specifications, latest edition.
- B. Related Sections include the following:
 - 1. Division 2 Section 313000 – "Earthwork".
 - 2. Division 3 Section 321313 – "Cast-in-Place Concrete".

1.3 SUBMITTALS

- A. The Contractor shall make all tests necessary to locate a source of materials that meets the Specifications. Certified copies of the test results from a commercial testing laboratory shall be furnished to the State's Representative 20 days prior to delivery of the materials to the project. Materials delivered and used without approval will not be paid for and may be required to be removed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aggregate Base: Type II aggregate base in conformance with Section 26 of the Reference Specifications.

PART 3 - EXECUTION

3.1 Examination

- A. Verify subgrade has been inspected, tested and passed and elevations are correct.

3.2 Spreading, compacting and acceptance.

- A. In accordance with Section 26 of the Reference Specifications.

3.3 Surface Finish

- A. Apply MC-70 to prime coat.

END OF SECTION 311123

SECTION 321313
CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SECTIONS INCLUDES

- A. Cast-in-place concrete foundations, walls, columns, beams and supported slabs.
- B. Install miscellaneous metal and other items furnished by other trades to be installed in concrete work.
- C. Provide facilities for job curing of test cylinders and transporting to Testing Laboratory.

1.2 RELATED SECTIONS

- A. Section 031100 – Concrete Formwork.
- B. Section 321316 – Concrete Curb, Gutters, Walks And Driveways.
- C. Section 032000 – Concrete Reinforcement.
- D. Section 031500 – Expansion and Contraction Joints.

1.3 REFERENCE STANDARDS

- A. Codes and Standards: Comply with provisions of following codes, specifications, and standards, except where more stringent requirements are shown or specified:
 - 1. ACI 117 - Standard Tolerances for Concrete Construction Materials.
 - 2. ACI 201 - Guide for Making a Condition Survey of Concrete in Service.
 - 3. ACI 301 - Specifications for Structural Concrete for Buildings.
 - 4. ACI 304 - Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.
 - 5. ACI 305 - Recommended Practice for Hot Weather Concreting.
 - 6. ACI 318 - Building Code Requirements for Reinforced Concrete.
 - 7. ACI 347 - Recommended Practice for Concrete Formwork.
 - 8. ACI 361 - Guide for Evaluation of Concrete Structures.
 - 9. ACI 546 - Concrete Repair Guide.

10. Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice.

1.4 SUBMITTALS

- A. Refer to Section 01330.
- B. Concrete Mix Designs: Submit mix design by concrete supplier or independent testing laboratory.
- C. Hardeners, Sealers and Curing Compounds: Submit manufacturers' data.
- D. Form Coatings and Release Agents: Submit manufacturer's data.
- E. Layout drawings for all construction joints, concrete shut offs, cut offs, break points, details of joints and concrete embedment's. These drawings are to be coordinated with the concrete reinforcement submittal drawings.
- F. Layout drawings for all ICF and conventional cast in place concrete wall. Drawings shall full detail extent and elevations of all walls and locations of all cast in place embeds.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with ACI 301.
- B. Obtain materials from same source throughout the Work.

1.6 FIELD SAMPLES

- A. Cast field sample in formwork specified in Section 031100 under provisions of Section 01330.
- B. Use specified concrete.
- C. Obtain acceptance of surface finish.
- D. Maintain sample panel exposed to view for duration of concrete work. Remove when directed.

1.7 TESTS

- A. Testing and analysis of concrete will be performed under provisions of Section 01400.
- B. Submit proposed mix design of each class of concrete for review prior to commencement of work. Appointed firm will review mix design.

- C. Tests of cement and aggregates will be performed to ensure conformance with requirements stated herein.
- D. Concrete Compression Tests: Samples for strength tests shall be made for each class of concrete for each day's concrete placement, not less than once for each 100 cubic yards or not less than once for each 5000 square feet of surface area for slabs or walls. A record shall be made of date and time that samples were taken and the locations of concrete from which the samples were taken. The record shall indicate the slump of the concrete.
- E. From each sample, make three test cylinders. Make and cure test cylinders at the job in accordance with ASTM C-31. At the end of 24 hours after making, store the cylinders under moist curing conditions, at approximately 70 degrees Fahrenheit until tested. Test cylinders in accordance with ASTM C-39. Test one cylinder at age 7 days for information. Test two cylinders at age 28 days for acceptance. The acceptance test result shall be the average of the two specimens tested at 28 days.
- F. Concrete Slump Tests: Slump tests shall be made in accordance with ASTM C143. Slump tests shall be performed at the same time as compression test samples are taken.

1.8 PRODUCT DATA

- A. Submit product data under provisions of Section 01330.
- B. Provide product data for specified products.
- C. Submit manufacturers' instructions under provisions of Section 01330.

PART 2 – PRODUCTS

2.1 CONCRETE MATERIALS

- A. Portland cement: ASTM C150, Type II, low alkali.
- B. Concrete aggregates: ASTM C33 for natural aggregate.
- C. Water: Clean and free from deleterious amounts of acids, alkalis, scale, or organic materials.

2.2 ADMIXTURES

- A. Admixtures: Subject to approval by State's

Representative/Engineer. Calcium chloride is not permitted.

1. Water Reducing: ASTM C494 Type A, for use in cool weather, ASTM C494 Type D, for use in hot weather.
2. Air Entraining: ASTM C260.

2.3 ACCESSORIES

- A. Bonding Agent: Weld Crete manufactured by Larson Products Corporation.
- B. Vapor Barrier: TruBarrier by Floor Seal Technology, Vapor Black by Raven Industries, Slabguard by CreteGuard per ASTM E 1745 Class A, Puncture Resistance: 3600 grams, Tensile Strength: 55.5 (MD & TD Average)
- C. Non-shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 7000 psi in 28 days. Non-shrink, non-gas producing, non-metallic, non-staining. Master Builders 928, Euclid N-S, or equal. Acceptance by State's Representative is required before using.
- D. Epoxy Adhesive: Hilti "HIT HY-150", Powers Rawl "Power-Fast", ITW Ramset/ Red Head "Epcon", or equal. Acceptance by State's Representative is required before using.
- E. Curing Paper: Waterproof "Sisalkraft", Burke "Seekure", or approved equal.
- F. Concrete Curing Compound: Clear liquid, spray applied, conforming to ASTM C309, Type 1 with fugitive dye, guaranteed to be compatible with all work, finishes, and materials applied to concrete.
- G. Concrete Hardener/Sealer: Clear, water soluble, sprayable inorganic silicate based hardener/sealer or acrylic co-polymer resin guaranteed to be compatible with all work, finishes, and materials applied to the concrete. Euclid Chemical Company "Eucosil", Burke "Spartan-Cote", Sonneborn "Sonosil", W.R. Meadows "Pena-Lith", or approved equal.
- H. Bonding agent for patching: Guaranteed to be compatible with all work, finishes, and materials applied to the concrete. Sonneborn "ChemRex - Sonocrete", Euclid Chemical Company "Euco-Weld", Larsen Products Corp. "Weld Crete", or approved equal.
- I. Expansion Joint Filler: Non-extruded resilient filler, saturated with bituminous materials and conforming to ASTM D 1751. Burke "Fiber Expansion Joint", W.R. Meadows "Fibrated Expansion Joint Filler", or approved equal.

- J. Non-slip grits: General Abrasive's "Fut-Sure", or approved equal, aluminum oxide grain.

2.4 CONCRETE MIX

- A. Mix concrete in accordance with ASTM C94.
- B. Designed strength and classes of concrete:
 - 1. Type "A" concrete:
 - a. Minimum strength: 3000 psi at 28 days
 - b. Maximum aggregate size: 1 inch
 - c. Minimum cement content: 5.0 sacks cement/cu. yd
 - d. Maximum water to Cement Ratio: .45
 - e. Admixture: Pozzolan, maximum of 15% Portland Cement replacement
 - f. Use: Slabs on grade.
 - 2. Type "B" concrete:
 - a. Minimum strength: 4000 psi at 28 days
 - b. Maximum aggregate size: 1 inch
 - c. Minimum cement content: 5.25 sacks cement/cu. yd
 - d. Maximum water to Cement Ratio: 0.50
 - e. Use: Seat walls and retaining walls.
- C. Mix Designs: Prepared by concrete supplier or independent testing laboratory selected by the Contractor. Mix designs shall conform to the requirements of ACI 318 Section 5.3 or 5.4. Submit written mix designs to State's Representative and Structural Engineer for each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until mix designs have been reviewed by State's Representative.
- D. Slump limits: Provide concrete, at point of final discharge, of proper consistency determined by Test Method ASTM C143. Concrete slump for Types "A" and "B" concrete shall be 3 inches plus or minus 1 inch.

Concrete slump for Types “C” and “D” concrete shall be 4 inches, plus or minus 1 inch.

E. Mixing:

1. Equipment: All concrete shall be machine mixed. Provide adequate equipment and facilities for accurate measurement and control of materials.
2. Method of Mixing:
 - a. Transit Mixing: Comply with ASTM C 94. Ready mixed concrete shall be used throughout, except as specified below.
 - b. On-Site Mixing: Use only if method of storing material, mixing of material and type of mixing equipment is approved by State’s Representative. Approval of site mixing does not relieve Contractor of any other requirements of Specifications.
3. Mixing Time: After mix water has been added, concrete shall be mixed not less than 1-1/2 minutes nor more than 1-1/2 hours. Concrete shall be rejected if not deposited within the time specified.
4. Admixtures:
 - a. Air entraining and chemical admixtures shall be charged into mixer as a solution and shall be dispensed by an automatic dispenser or similar metering device. Powdered admixtures shall be weighed or measured by volume as recommended by manufacturer. Accuracy of measurement of any admixture shall be within plus or minus 3%.
 - b. Two or more admixtures may be used in same concrete, provided such admixtures are added separately during batching sequence, and provided further that admixtures used in that combination retain full efficiency and have no deleterious effect on concrete or on properties of each other.
5. Retempering:
 - a. Concrete shall be mixed only in quantities for immediate use. Concrete which has set shall be discarded, not retempered. Indiscriminate addition of water to increase slump is prohibited.
 - b. When concrete arrives at project with slump below that suitable

for placing, water may be added only if neither maximum permissible water-cement ratio specified in the mix design nor maximum slump is exceeded. Water shall be incorporated by additional mixing equal to at least half of total mixing time required. Any addition of water above that permitted by limitation of water-cement ratio shall be accompanied by a quantity of cement sufficient to maintain proper water-cement ratio. Such additions shall only be used if approved by State's Representative. In any event, with or without addition of cement, not more than 2 gallons of water per cubic yard of concrete, over that specified in design mix, shall be added.

6. Cold Weather Batching: When temperature is below 40 degrees F or is likely to fall below 40 degrees F during 24 hour period after placing, provide adequate equipment for heating concrete materials. No frozen materials or materials containing ice shall be used. Temperatures of separate materials, including mixing water, when placed in mixer shall not exceed 100 degrees F. When placed in forms concrete shall have a temperature between 50 degrees F and 90 degrees F.
 7. Hot Weather Batching: Concrete deposited in hot weather shall have a placing temperature below 90 degrees F. If necessary, ingredients shall be cooled to accomplish this.
- F. Use accelerating admixtures in cold weather only when approved by State's Representative/Engineer. Use of admixtures will not relax cold weather placement requirements.
 - G. Use set-retarding admixtures during hot weather only when approved by State's Representative/Engineer.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Verify anchors, seats, plates, reinforcement, and other items to be cast into concrete are accurately placed, held securely, and will not cause hardship in placing concrete.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Apply bonding agent in accordance with manufacturer's instructions.
- B. At locations where new concrete is dowelled to existing work, refer to Construction Drawings for size and spacing of steel dowels, diameter

of drilled holes in the existing concrete, and minimum embedment of the dowels. Drill and clean holes, inject epoxy adhesive, and install dowels per manufacturers instructions. Contractor to have drilled holes inspected for size, depth, cleanliness, and compliance with the epoxy adhesive manufacturers recommendations.

- C. Install vapor barrier under interior slabs on fill per ASTM E 1643. Lap joints minimum of 6 inches and seal with manufacturer supplied bonding tape. Do not disturb or damage vapor barrier while placing concrete. Repair damaged vapor barrier by cutting patches of vapor barrier, overlapping the damaged area 6 inches on all sides, and sealing all four sides with bonding tape. Seal around pipe penetrations with a manufacturer supplied pipe boot or with an elastomeric sealant. Secure vapor barrier to footings by concrete nail or as recommended by manufacturer for a seamless installation.

3.3 PLACING CONCRETE

- A. Notify State's Representative/Engineer minimum 48 hours prior to commencement of concreting operations.
- B. Place concrete in accordance with ACI 304.
- C. Hot Weather Placement: ACI 301.
- D. Cold Weather Placement: ACI 301.
- E. Ensure reinforcement, inserts, embedded parts, formed joints are not disturbed during concrete placement.
- F. Maintain concrete cover around reinforcing as follows:

<u>Footings and Concrete</u>	
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Slabs on Fill	1-1/2 inch
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- G. Place concrete continuously between predetermined construction and control joints. Do not break or interrupt successive pours such that cold joints occur.
- H. Place floor slabs on fill in checkerboard pattern indicated on Drawings.
- I. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify State's Representative/Engineer upon discovery.
- J. No concrete shall be placed until formwork and reinforcement have been approved by State's Representative. Clean forms of all debris and remove standing water. Thoroughly clean reinforcement and all handling equipment for mixing and transporting concrete. Concrete shall not be

placed against reinforcing steel that is hot to the touch. Notify State's Representative 48 hours in advance of concrete pour.

- K. Conveying: Handle concrete from mixer to place of final deposit by methods that will prevent separation or loss of ingredients. Deposit concrete in forms as nearly as practicable at its final position in a manner that will insure that required quality is obtained.
- L. Depositing: Deposit concrete into forms in horizontal layers around building, proceeding along forms at a uniform rate and pouring into edge of previous pour. In no case shall concrete be poured into an accumulation of water ahead of pour, nor shall concrete be flowed along forms to its final place of deposit. Fresh concrete shall not be permitted to fall from a height greater than 6' without use of adjustable length pipes or, in narrow walls, of adjustable flexible hose sleeves.
- M. Consolidation: Concrete shall be thoroughly compacted and worked to all points with solid continuous contact to forms and reinforcement. Power vibrators of approved type shall be used immediately following pour. Spading by hand, hammering of forms or other combination of methods will be allowed only where permitted by State's Representative. In no case shall vibrators be placed against reinforcing steel or used for extensive shifting of deposited fresh concrete. Provide and maintain standby vibrators, ready for immediate use.
- N. Construction Joints: Install only where indicated and noted on drawings. Joints not indicated on drawings shall be so located, when approved, as to least impair strength of structure, and shall conform to typical details shown on the plans. Construction joints shall have level tops, vertical sides.

Contact surfaces shall be thoroughly cleaned and roughened by removing entire surface film and exposing clean aggregate solidly embedded in mortar matrix. Joints between concrete and masonry shall be considered construction joints.

- O. Clean construction joints by any of following methods:
 - 1. By sandblasting joint.
 - 2. By thoroughly washing joint, using a high-pressure hose, after concrete has taken initial set. Washing shall be done not less than 2 hours nor more than 4 hours after concrete has been poured, depending upon setting time.
 - 3. By application of retarder to concrete surface and removing it, prior to next pour and while it is still active.

4. By chipping and wire brushing.
 5. All decisions pertaining to adequacy of construction joint surfaces and to compliance with requirements pertaining to construction joints shall rest exclusively with State's Representative.
 6. Just before starting new pour, horizontal and vertical joint surfaces shall be dampened (but not saturated).
 7. Before placing regular concrete mix, horizontal construction joint surfaces shall be covered with a layer of mortar composed of cement and fine aggregate of same proportions as that used in prescribed mix, but omitting coarse aggregate.
- P. Concrete Slabs on Grade: Exterior concrete slabs on grade shall be poured as required under Division 2. Base shall be accurately leveled and dampened (but not saturated) prior to placing of concrete. Typically, interior slabs on grade shall be poured over a two (2") inch thick layer of sand, limited to moisture content of 15%, over a vapor barrier and over a minimum of four (4") inches, unless otherwise indicated, of compacted gravel.
- Q. Construction Jointing - Slabs on Grade: Joints shall be in locations indicated on drawings, or as directed by State's Representative. Control joints in concrete topping slab for radiant heat system shall be installed in accordance with details 4/S4.01 and 11/S4.01. Contractor shall ensure that no damage occurs to radiant heat pipes during installation of control joints. Joints in interior slabs shall be made by one of following methods:
1. By saw-cutting of control joints, 1/8 inch wide by the depth indicated on the drawings. Cuts in floor slabs shall be made as soon as possible after slab finishing without dislodging aggregate. Cutting shall be completed before shrinkage stresses become sufficient to produce cracking.
 2. By use of dummy groove joints a depth as indicated on drawings and at least 1/8" wide.
 3. By use of galvanized sheet metal construction joint forms. These shall be used for interior slabs only and shall be placed in such a way that top of the joint form is at least 1/4" below concrete surface and is not used as a screed.
 4. Edges of concrete at joints shall be edger finished to approximately 3/8" radius.
 5. By use of forms laid out in checkerboard pattern; pour and allow alternate slabs to set; fill out balance of checkerboard

pattern with second pour.

- R. Exercise extreme caution when working adjacent to waterproofing membrane. Membrane is to be protected so that absolutely no punctures occur during placement of concrete.

3.4 FINISHING

- A. Provide concrete surfaces to be left exposed, smooth rubbed finish.
- B. Finish floors in accordance with Section 03366.

3.5 CURING AND PROTECTION

- A. Curing: Exposed surfaces of all concrete used in structure shall be maintained in a moist condition for at least 7 days after placing. The following final curing processes shall normally be considered to accomplish this. Concrete shall be maintained at not less than 50 degrees F nor more than 110 degrees F for a period of 72 hours after being deposited.

1. Initial Curing Process - Flat Work:

- a. Mist Spraying: As soon as troweling of concrete surfaces is completed, exposed concrete shall be sprayed continuously with a special atomizer spray nozzle, capable of producing a fine mist. Spraying shall be done without any dripping of water from nozzle. Amount of spraying shall be such as to maintain surface of concrete moist without any water accumulating on surface. Maintain spraying for a minimum of 12 hours, or until such time as hereinafter described curing process is applied. Mist spraying will not normally be required when the ambient air temperature is below 65 degrees F.

2. Final Curing Process - Flatwork: Except as noted, use any of following:

- a. Water Curing: Concrete shall be kept wet by mechanical sprinklers or by any other approved method that will keep surfaces continuously wet.
- b. Saturated Burlap Curing: Finished surfaces shall be covered with a minimum of two layers of heavy burlap that shall be kept saturated during the curing period.
- c. Curing Compounds: Membrane curing compounds of chlorinated rubber or resin type conforming to ASTM C309 may be used only if specifically approved by State's Representative. Use of membrane curing compound will not be permitted on

surfaces to be painted, or to receive ceramic tile, membrane water-proofing or hardeners and sealers. Membrane curing compound may be used in areas to receive resilient floor tile, provided it is wax-free, compatible with adhesive used and approved by adhesive manufacturer. Agitate curing compounds thoroughly by mechanical means continuously during use and spray or brush uniformly in accordance with manufacturer's recommendations. Apply immediately following final finishing operation.

- d. Waterproof paper conforming to ASTM C 171, or opaque polyethylene film, may be used. Concrete shall be covered immediately following final finishing operation. Anchor paper or film securely and seal all edges in such a manner as to prevent moisture escaping from concrete.
3. Curing Process - Formed Surfaces: Forms heated by sun shall be kept moist during curing period. If forms are to be removed during curing period, curing as described for flatwork shall be commenced immediately.
- B. Refer to drawings for areas of concrete slab not to receive curing compounds or hardening compounds. Where concrete floors are to receive heavy duty coatings, waterproof coatings and the like, verify with coating installer the type of finish required for specified coating.
 - C. Protection: Contractor shall be responsible for protection of finished concrete against injury by rain, cold, vibration, animal tracks, marking by visitors, vandalism, etc.
 - D. Provide additional curing agents or compounds, not necessarily listed herein, but as recommended and or required for use with shake type hardeners or other special coatings and coverings by their manufacturers for a complete and proper installation.

3.6 SURFACE HARDENER AND SEALER

- A. Seal all interior exposed flatwork with clear sealer, except surfaces receiving ceramic tile, quarry tile, poured flooring or other special finishes specified, or as scheduled on the drawings.
- B. Apply sealer in 2 or 3 coats, in accordance with manufacturer's directions, using the maximum quantity recommended. Concrete floors must be thoroughly cured for a minimum of 30 days and completely dry before treatment. Surfaces to be treated must be clean, free of membrane curing compounds, dust, oil, grease and other

foreign matter.

- C. Upon completion, concrete surfaces shall be clean and without discoloration or traces of excess hardener left on the surface.

3.7 REMOVAL OF FORMS AND SHORING

- A. Formwork shall normally remain in place for the duration of the curing period. Do not remove forms until permission is obtained from State's Representative. No heavy or concentrated loads shall be placed on any slabs for 14 days. Contractor or his representative in charge of concrete construction shall be present during removal of forms and shores, and shall be personally responsible for safety of this operation at all times and under all conditions.
- B. Apply sprayable hardener/sealer at locations as scheduled or as indicated on the drawings. Apply in accordance with the manufacturer's favorably reviewed application instructions and recommendations.

3.8 GROUTING AND DRYPACKING

- A. Prepare and place grout and drypacking materials at locations as indicated on the drawings in accordance with the manufacturer's recommendations and installation instructions.
- B. Pack grout and drypack materials solidly between bearing surfaces and bases or plates as indicated and to ensure no voids.

3.9 DEFECTIVE CONCRETE

- A. Defective concrete shall mean any of the following:
 - 1. Concrete not meeting specified 28 day compressive strength.
 - 2. Concrete exhibiting rock pockets, voids, spalls, exposed reinforcing to such an extent that strength, durability, or appearance is adversely affected as determined using the guidelines set forth in ACI 201 and ACI 361.
 - 3. Concrete which exceeds the tolerances set forth in ACI 117.
- B. Upon determination that concrete strength is defective:
 - 1. Should cylinder tests fall below minimum strength specified, concrete mix for remainder of work shall be adjusted to produce required strength. Core samples shall be taken and tested from cast-in-place concrete where cylinders and samples indicate inferior concrete with less than minimum specified strength.

- a. Cores of hardened concrete shall be taken and tested in accordance with ASTM C 42 and C 39. Number and location of such cores shall be subject to the approval of State's Representative.
 - b. Cost of core sampling and testing will be paid for by the Contractor.
 - c. ACI 318 article 5.6.4.4 shall be excluded from these specifications.
- C. Upon determining that concrete surface is defective, Contractor may restore concrete to acceptable condition by cutting, chipping, pointing, patching, grinding, if this can be done without significantly altering strength of structure.
- D. If core tests indicate that concrete is below the strength specified, or if patching does not restore concrete to specified quality and appearance, the concrete shall be deemed defective, and shall be removed and replaced without additional cost to the City.

3.10 PATCHING

A. Formed Surfaces:

- 1. Promptly upon removal of contact forms and after concrete surfaces have been inspected, form ties shall be removed and all necessary patching and pointing shall be expertly done.
- 2. Honeycombed areas shall be removed down to sound concrete, coated with a bonding grout or approved compound and patched using a low shrinkage high bond mortar. Patched areas shall be cured by being kept damp for at least 5 days.
- 3. Tie holes shall be cleaned, dampened and filled solid with patching mortar or cement plugs of an approved variety.

B. Slabs on Grade: After entire slab is finished, shrinkage cracks that may appear shall be patched as follows:

- 1. Where slab is not exposed or where appearance is not important, cracks larger than 1/32" wide shall be filled with cement grout and struck off level with surface.
- 2. Where slab is exposed and appearance is important, unsightly cracks shall be repaired in a manner satisfactory in appearance to State's Representative. If this cannot be accomplished, concrete shall be considered defective.

3.11 ADJUSTING AND CLEANING

- A. Upon completion of this Work, clean up and remove from Site all equipment and debris resulting from this work.
- B. Surfaces to be painted shall be smooth and free of substances such as dirt, wax, excessive laitance, grease or other materials that would prevent proper bonding of paint.
- C. Sandblast cleaning shall not be employed without specific approval of State's Representative.

END OF SECTION 321313

SECTION 321316
CONCRETE CURB, GUTTERS, WALKS, AND DRIVEWAYS

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Construction of all concrete curb, gutters, walks and driveways, as shown on the plans and as required by the specifications. It shall be understood that the driveway construction shall also pertain to Rigid Concrete Pavement.

1.2 RELATED WORK

- A. Section 031500 – Expansion and Contraction Joints.

1.3 REFERENCE STANDARDS

- A. State of California Department of Transportation Standard Specifications, latest edition.

1.4 INSPECTION AND TESTING

- A. Inspection and testing of concrete will be in accordance with Part 3, Execution, Section 3.4, Sampling and Testing.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Concrete shall comply with the requirements of Section 2520 of the specifications unless otherwise specified herein. Unless otherwise indicated on the drawings, concrete shall have a minimum 28-day compressive strength of 3,500 psi, and shall contain an air entraining agent sufficient to produce an entrained air content within the range of 5 to 7 percent. Maximum water/cement ratio shall be 0.45. Aggregates shall conform to ASTM C-33. Course aggregates shall be as indicated in Section 2520 of the specifications. Cement shall be Type I-P or Type II and shall meet the requirements of ASTM C 595. Fiber mesh and wire welded fabric shall be installed where required. Fiber mesh shall comply with ACI requirements.

2.2 AGGREGATE BASE

- A. Aggregate base shall conform to the requirements of Section 321123.

PART 3 – EXECUTION

3.1 CONSTRUCTION OF CURBS, GUTTERS, SIDEWALKS AND DRIVEWAYS

- A. Forming, placement, joints, finishing and curing shall all be accomplished in conformance with the applicable paragraphs of Section 321313 of the specifications. All walks to slope a minimum of 2% transverse to walking patterns, unless shown otherwise.
- B. All concrete sidewalks, curbs and gutters shall have 1/2" expansion joints every 30'-0" and weakened plane joints every 10' on center both directions except as noted otherwise on the plans. Expansion joints shall be filled with pre-formed joint filler material to a point 3/4" below the surface and the remaining void completely filled with joint sealant. Joint filler material shall be per Section 031500.

3.2 WEATHER LIMITATIONS

- A. Cold Weather: ACI 306R. Provide 50 degrees F minimum concrete temperature. Obtain approval prior to placing concrete when the ambient temperature is below 40 degrees F or when concrete is likely to be subjected to freezing temperatures within 24 hours. Cover concrete and provide sufficient heat to maintain concrete while curing. Limit the rate of cooling to 5 degrees F in any one hour and 50 degrees F per 24 hours after heat application.
- B. Hot Weather: ACI 305R. Provide and maintain required concrete temperature below 90 degrees F using Figure 2.1.5 in ACI 305R to prevent the evaporation rate from exceeding 0.2 pound of water per square foot of exposed concrete per hour. Cool ingredients before mixing or use other suitable means to control concrete temperature and prevent rapid drying of newly placed concrete. Shade the fresh concrete as soon as possible after placing. Start curing when the surface of the fresh concrete is sufficiently hard to permit curing without damage. Provide water hoses, pipes, spraying equipment, and water hauling equipment (where worksite is remote to water source) to maintain a moist concrete surface throughout the curing period. Provide burlap cover or other suitable, permeable material with fog spray or continuous wetting of the concrete when weather conditions prevent the use of either liquid membrane curing compound or impervious sheets. For vertical surfaces, protect forms from direct sunlight and add water to top of structure once concrete is set.

3.3 FINISHES

- A. Broomed: Provide for in areas shown on the plans and ramps, unless otherwise indicated. Provide a floated finish, then finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom transverse to traffic or at right angles to the slope of

the slab.

3.4 SAMPLING AND TESTING

- A. To be performed by others. The following is an example of the type and frequency of testing which will occur.
1. Sampling: ASTM C 172. Collect samples of fresh concrete to perform tests specified. ASTM C31 for making test specimens.
 2. Testing:
 - a. Slump Tests: ASTM C143. Take concrete samples during concrete placement. The maximum slump may be increased as specified with the addition of an approved admixture provided that the water- cement ratio is not exceeded. Perform tests at commencement of concrete placement, when test cylinders are made, and for each batch (minimum) or every 25 cubic yards (maximum) of concrete.
 - b. Temperature Tests: Test the concrete delivered and the concrete in the forms. Perform tests in hot or cold weather conditions (below 50 degrees F and above 80 degrees F) for each batch (minimum) or every 10 cubic yards (maximum) of concrete, until the specified temperature is obtained, and whenever test cylinders and slump tests are made.
 - c. Compressive Strength Tests: ASTM C39. Make three test cylinders for each set of tests in accordance with ASTM C31. Test one cylinder at 7 days, one cylinder at 28 days, and hold one cylinder in reserve. Provide concrete cylinders for compressive tests not less than once a day, nor less than once for each 30 cubic yards of concrete. Double the cylinder collection frequency and number of batches samples when pumping concrete. If the average strength of the 28-day test cylinders is less than f'_c and a maximum of one single cylinder is less than f'_c minus 300 psi, take three ASTM C42 core samples and test. If the average strength of the 28-day test cylinders is less than f'_c and two or more cylinders are less than f'_c minus 300 psi, take six core samples and test. Concrete represented by core tests shall be considered structurally adequate if the average of three cores is equal to at least 85 percent of f'_c and if no single core is less than 75 percent of f'_c . Locations represented by erratic core strengths shall be retested. Remove concrete not meeting strength criteria and provide new, acceptable concrete. Repair core holes with nonshrink grout. Match color and finish of adjacent concrete.

- d. Air Content: ASTM C173 or ASTM C231. Test air-entrained concrete for air content at the same frequency as specified for slump tests.

END OF SECTION 321316

SECTION 321413 UNIT PAVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Concrete pavers set in aggregate setting beds.
- B. Concrete Edge Restraints
- C. Joint Materials

1.2 ACTION SUBMITTALS

- A. Product Data: For paver, cleaner, primer and sealant
- B. B. Surplus Product: One Five-Gallon container of sealant for future sealing

1.3 MOCK-UP

- A. Install 10 ft x 3 ft paver area along the axis and a 10 ft x 3 ft paver area along the radius as described in Article 3.02
- B. B. This area will be used to determine surcharge of the bedding sand layer, joint sizes, lines, laying pattern(s), and texture of the job.
- C. C. This area shall be the standard from which the work will be judged and shall it be incorporated into the work.

1.4 PROJECT CONDITIONS

- A. Cold Weather Protection: Do not use frozen materials or build on frozen subgrade or setting beds.
- B. Do not install sand or pavers during heavy rain or snowfall.

PART 2 - PRODUCTS

2.1 CONCRETE PAVERS

- A. A. Concrete Pavers: Solid interlocking paving units complying with ASTM C 936 and resistant to freezing and thawing when tested according to ASTM C 67, made from normal-weight aggregates.
1. 1. Manufacturers: Subject to compliance with requirements, provide the following:
 - a. Belgard, Mega-Lafitt
 2. Thickness: 3-1/8 inches
 3. 3-Piece Modular Shape and Size:
 - a. Face Size and Shape: 10-1/2 square.
 - b. Face Size and Shape: 5-1/4-by-10-1/2-inch rectangle.
 - c. Face Size and Shape: 15-3/4-by-10-1/2 inch rectangle.
 4. Large Square
 - a. Face Size and Shape: 15-3/4-inch square
 5. Color: Bella
- B. Concrete Pavers: Solid paving units complying with ASTM C 1491, made from lightweight concrete.

2.2 EDGE RESTRAINTS

- A. Concrete Edge Restraints: Per LSI-7
1. Color: Davis Pewter, or approved equal

2.3 AGGREGATE SETTING-BED MATERIALS

- A. Graded Aggregate for Base: Sound, Class II crushed stone or gravel complying with ASTM D 2940.
- B. Bedding Sand: Clean, non-plastic, free from deleterious or foreign matter, natural or manufactured from crushed rock. Do not use limestone screenings or stone dust that do not conform to the grading requirements in Table 1.
1. Sieve according to ASTM C136 or CSA-A23.2A.
 2. Conform to the grading requirements as shown in Table 1 below:

Table 1
Grading Requirements for Bedding Sand
ASTM C 33 CSA A23.1-M94

Sieve Size	Percent Passing	Sieve Size	Percent Passing
3/8 in.(9.5 mm)	100	10 mm	100

No. 4 (4.75 mm)	95 to 100	5 mm	95 to 100
No. 8 (2.36 mm)	85 to 100	2.5 mm	80 to 100
No. 16 (1.18 mm)	50 to 85	1.25 mm	50 to 90
No. 30 (0.600 mm)	25 to 60	0.630 mm	25 to 65
No. 50 (0.300 mm)	10 to 30	0.315 mm	10 to 35
No. 100 (0.150 mm)	2 to 10	0.160 mm	1 to 10

2.4 JOINT SAND

- A. Techniseal HP² Napa Tan color polymeric jointing sand for joints, or approved equal.
- B. The joint sand shall conform to the grading requirements as shown in Table 2 below:

Table 2
Grading Requirements for Joint Sand ASTM C 144 CSA A82.56M

Natural Sand		Manufactured Sand	
Sieve Size	Percent Passing	Sieve Size	Percent Passing
No. 4 (4.75 mm)	100	5 mm	100
No. 8 (2.36 mm)	95 to 100	2.5 mm	95 to 100
No. 16 (1.18 mm)	70 to 100	1.25 mm	90 to 100
No. 30 (0.600 mm)	40 to 100	0.600 mm	35 to 80
No. 50 (0.300 mm)	20 to 40	0.300 mm	15 to 50
No. 100 (0.150 mm)	10 to 25	0.150 mm	2 to 15
No. 200 (0.075 mm)	0 to 10		

- C. Water: Potable:

2.5 SEALANT

- A. Techniseal Color Boost, matte-finish sealer, or approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.
- B. Cut unit pavers with motor-driven masonry saw equipment to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible.

- C. Joint Pattern: As indicated on LSI-7.
- D. Tolerances: Do not exceed 1/16-inch unit-to-unit offset from flush (lippage) nor 1/8 inch in 24 inches and 1/4 inch in 10 feet from level, or indicated slope, for finished surface of paving.
- E. Install edge restraints as indicated on LSI-7. Install edge restraints before placing unit pavers.

3.2 AGGREGATE SETTING-BED APPLICATION

- A. Compact soil subgrade uniformly to at least 95 percent of ASTM D 1557 laboratory density.
- B. Verify that subgrade preparation, compacted density and elevations conform to the specifications.
- C. Place aggregate base, compact uniformly to at least 98 percent of ASTM D 1557 laboratory density. Screed to depth indicated.
- D. Spread the bedding sand evenly over the base course and screed to a nominal 1 in. (25 mm) thickness, not exceeding 1 1/2 in. thickness. The screeded sand should not be disturbed. Moisture content shall remain constant and density loose and uniform until pavers are set and compacted. Place sufficient sand to stay ahead of the laid pavers. Do not use the bedding sand to fill depressions in the base surface.
- E. Ensure that pavers are free of foreign material before installation.
- F. Lay the pavers in the pattern(s) as shown on the drawings. Maintain straight pattern lines.
- G. Joints between the pavers on average shall be between 1/16 in. and 3/16 in. wide.
- H. Fill gaps at the edges of the paved area with cut pavers or edge units
- I. Units shall be cut no smaller than one-third of a whole paver.
- J. The surface elevation of pavers shall be 1/8 to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.
- K. Compact the pavers, sweeping dry joint sand into the joints and vibrating until joints are completely full. This will require at least two or three passes with the compactor. Leave a slight surplus of sand on the surface for joint filling.

Unit Paving

- L. Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of at least 5000-lbf compaction force at 75 to 100 Hz.
- M. During installation, do not compact within 3 ft of uncompleted edges.
- N. All work to within 3 ft of the laying face must be left fully compacted with sand-filled joints at the end of each day. Cover the laying face with plastic sheets overnight if not closed with cut and compacted pavers.
- O. Sweep off excess sand when the job is complete.
- P. Clean and or prime pavers as required by manufacturer per site conditions 60 days after pavers are completely installed.
- Q. Apply sealer per manufacturer's recommendations after pavers have been cleaned and/or primed.
- R. Provide container of sealant for future re-sealing by park staff per 1.2 B.

END OF SECTION 321440

SECTION 323253
STONE WALL (LANDSCAPE)

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes stone masonry assemblies in the following applications:
 - 1. On concrete masonry unit walls.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
 - 1. For stone varieties proposed for use on Project, include data on physical properties specified.
 - 2. Adjustable veneer anchors.
- B. Stone Samples: For each color, grade, finish, and variety of stone required.
- C. Colored Mortar Samples: For each color required.
- D. Qualification Data Depicting 3 Separate Installations:
 - 1. Dates of stone wall installation
 - 2. Name of installer
 - 3. Name and locations of installations
 - 4. Labeled photo documentation.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An installer who employs experienced stone masons and stone fitters who are skilled in installing stone similar in material, design, and extent to those indicated for this Project and whose projects have a record of 3 successful in-service performances.
- B. Mockups: Build mockup to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution. Mockup shall be the standard from which the work will be judged.
 - 1. Build mockup incorporating each type of stone and approximately 5 feet long by 1 foot-6 inches high by full thickness, including face and back. Mockup shall include a portion built around a boulder.
 - 2. Clean per Final Cleaning, Section 3.6 B.
 - 3. Approved mockups may become part of the completed Work if

accepted and undisturbed at time of Substantial Completion.

1.4 PROJECT CONDITIONS

- A. Protection of Stone Assemblies: During construction, cover tops of walls, with waterproof sheeting at end of each day's work.
- B. Stain Prevention: Immediately remove soil and excess mortar to prevent them from staining the face of stone.
- C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Comply with cold-weather construction requirements contained in Section 2104.3 of the Uniform Building Code.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried.
- D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 STONE

- A. Varieties: Mixture of Local Sierra granite salt and pepper with local Sierra browns and rust color granite mixed in to match photo shown on Sheet L4.05 and conforming to Granite Building Stone Standard: ASTM C 615.
- B. Shapes: 75-80% square to rectangular shaped; 20-25% natural, organic shaped, randomly distributed throughout wall.
- C. Color mixture: Mixture shall contain 60% brown and rust granite and 40% salt and pepper granite.
- D. Available Sources: Subject to compliance with requirements, stone available from:
 - 1. Rock Garden, 10642 Pioneer Trail, Truckee, CA. 96161, 530-582-3610, Contact Gerald Wallace or Greg Peterson, or other supplier.

2.3 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Products: Subject to compliance with requirements, provide one

of the products specified.

2.4 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.

1. Low-Alkali Cement: Not more than 0.60 percent total alkali when tested according to ASTM C 114.

- B. Hydrated Lime: ASTM C 207, Type S.

- C. Masonry Cement: ASTM C 91.

- D. For pigmented mortar, use a colored cement formulation as required to produce color indicated or, if not indicated, as selected from manufacturer's standard formulations.

1. Available Products:

- a. Colored Portland Cement-Lime Mix:

- 1) Blue Circle Cement; Eaglebond.
- 2) Glen-Gery Corporation; Color Mortar Blend.
- 3) Holnam, Inc.; Rainbow Mortamix Custom Color Cement/Lime.
- 4) Lafarge Corporation; Centurion Colorbond PL.
- 5) Lehigh Portland Cement Co.; Lehigh Custom Color Portland/Lime
- 6) Riverton Corporation (The); Riverton Portland Cement Lime Custom Color.

- b. Colored Masonry Cement:

- 1) Blue Circle Cement; Magnolia Masonry Cement.
- 2) Essroc Materials, Inc.; Brixment-in-Color.
- 3) Holnam, Inc.; Rainbow Mortamix Custom Color Masonry Cement.
- 4) Lafarge Corporation; Centurion Colorbond.
- 5) Lehigh Portland Cement Co.; Lehigh Custom Color Masonry Cement.
- 6) National Cement Company, Inc.; Coosa Masonry Cement.
- 7) Riverton Corporation (The); Flamingo Color Masonry Cement.
- 8) Southdown, Inc.; Richcolor Masonry Cement.

- E. Aggregate: ASTM C 144 and as follows:

1. For pointing mortar, use aggregate graded with 100 percent

- passing No. 16 sieve.
 - 2. White Aggregates: Natural white sand or ground white stone.
 - 3. Colored Aggregates: Natural-colored sand or ground marble, granite, or other sound stone; of color necessary to produce required mortar color.
- F. Mortar Pigments: Natural or synthetic iron oxides, compounded for use in mortar mixes and with a record of satisfactory performance in stone masonry mortars.
- 1. Available Products:
 - a. Bayer Corporation, Industrial Chemicals Div.; Bayferrox Iron Oxide Pigments.
 - b. Davis Colors; True Tone Mortar Colors.
 - c. Lafarge Corporation; Centurion Pigments.
 - d. Solomon Colors; SGS Mortar Colors.
- G. Latex additive (water emulsion) described below, serving as replacement for part of or all gaging water, of type specifically recommended by latex-additive manufacturer for use with job-mixed portland cement mortar and not containing a retarder.
- 1. Latex Additive: Styrene-butadiene rubber or acrylic resin.
- H. Water: Potable.
- I. Grout Sealer: silicone based sealer

2.5 VENEER ANCHORS

- A. Materials:
- 1. Seismic Veneer Anchors: Units with rib-stiffened, sheet metal anchor section with screw holes top and bottom and with raised rib-stiffened strap stamped into center to provide a slot for a connector section designed to engage continuous wire embedded in the veneer mortar joint.
 - a. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304 or 316. Formed from W1.7, 9 gage wire.
 - 1) Available Products:
 - a) Dur-O-Wal, a Dayton Superior Company; D/A 213S.
 - b) Hohmann & Barnard, Inc.; DW-10-X-Seismicclip.
 - c) Masonry Reinforcing Corporation of America; RJ-711 with Wire-Bond Clip.

2.6 STONE FABRICATION

- A. General: Fabricate stone in sizes and shapes necessary to comply with requirements indicated, including details on Drawings.
- B. Gage backs of stones for adhered veneer if more than 81 sq. in. in area.
- C. Shape stone for type of masonry (pattern) as follows:
 - 1. Uncoursed rubble (fieldstone).
- D. Finish exposed faces and edges of stone to comply with requirements indicated for finish and to match approved samples and mockups.
 - 1. Finish: As indicated.
 - a. Finish exposed ends same as front and back faces.
 - 2. Finish for Top of Wall: Rock face.

2.7 MORTAR MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
 - 1. Do not use calcium chloride.
 - 2. Mixing Pointing Mortar: Thoroughly mix cementitious and aggregate materials together before adding water. Then mix again, adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for one to two hours. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within 30 minutes of final mixing; do not retemper or use partially hardened material.
- B. Mortar for Stone Masonry: Comply with ASTM C 270, Proportion Specification.
 - 1. Limit cementitious materials in mortar to portland cement, mortar cement, and lime.
 - 2. Mortar for Setting Stone: Type S.
 - 3. Mortar for Pointing Stone: Type N.
- C. Latex-Modified Portland Cement Setting Mortar: Proportion and mix portland cement, aggregate, and latex additive to comply with latex-additive manufacturer's written instructions.
- D. Cement-Paste Bond Coat: Mix either neat cement and water or cement, sand, and water to a consistency similar to that of thick cream.
 - 1. For latex-modified portland cement setting-bed mortar, substitute latex admixture for part or all of water, according to latex-additive

manufacturer's written instructions.

- E. Mortar for Scratch Coat over Unit Masonry: 1 part portland cement, 1 part lime, 7 parts loose damp sand, and enough water to produce a workable consistency.
- F. Pigmented Mortar: Select and proportion pigments with other ingredients to produce color required.
 - 1. Pigments shall not exceed 10 percent of portland cement by weight.
 - 2. Pigments shall not exceed 5 percent of masonry cement by weight.

PART 3 - EXECUTION

3.1 SETTING OF STONE, GENERAL

- A. Perform necessary trimming and shaping as stone is set. Break stone to create natural, uncut look.
- B. Arrange and trim stones for accurate fit in random pattern with random course heights, random lengths (interrupted coursed), and uniform joint widths to match sample wall construction type photo.
- C. Maintain uniform joint widths. Lay walls with joints not less than 1/4 inch at narrowest points, nor more than 1/2 inch at widest points.

3.2 CONSTRUCTION TOLERANCES

- A. Variation from Plumb: For vertical lines and surfaces, do not exceed 1/4 inch in 10 feet or more. For external corners, expansion joints, control joints, and other conspicuous lines, do not exceed 1/4 inch in 20 feet or more.
- B. Variation from Level: For bed joints and other conspicuous lines, do not exceed 1/4 inch in 20 feet or more.
- C. Variation of Linear Building Line: For position shown in plan, do not exceed 1/2 inch in 20 feet or 3/4 inch in 40 feet or more.

3.3 INSTALLATION OF ANCHORED STONE VENEER

- A. Anchor stone veneer to unit masonry with metal veneer anchors as follows:
 - 1. Embed corrugated-metal anchors in unit masonry mortar joints or grouted cells for distance at least one-half of veneer thickness.
 - 2. Embed anchors in veneer mortar joints to within 1/2 inch of face.
- B. Space veneer anchors per manufacturer's recommendations.

- C. Set stone in full bed of mortar with full head joints, unless otherwise indicated. Build veneer anchors into mortar joints as stone is set.
 - 1. Install continuous wire reinforcement in horizontal joints indicated on the plans and attach to seismic veneer anchors as stone is set.
- D. Rake out joints for pointing with mortar to depth of not less than 3/4 inch. Rake joints to uniform depths with square bottoms and clean sides.

3.4 INSTALLATION OF ADHERED STONE VENEER

- A. Install scratch coat 3/8 inch thick to comply with ASTM C 926.
- B. Coat backs of stone units and face of scratch coat with cement-paste bond coat, then butter both surfaces with setting mortar. Use sufficient setting mortar so a slight excess will be forced out the edges of stone units as they are set. Tap units into place, completely filling space between units and scratch coat.
- C. Rake out joints for pointing with mortar to depth of not less than 3/4 inch. Rake joints to uniform depths with square bottoms and clean sides.

3.5 POINTING

- A. Prepare stone-joint surfaces for pointing with mortar by removing dust and mortar particles. Where setting mortar was removed to depths greater than surrounding areas, apply pointing mortar in layers not more than 3/8 inch deep until a uniform depth is formed.
- B. Point stone joints by placing and compacting pointing mortar in layers not more than 3/8 inch deep. Compact each layer thoroughly and allow to become thumbprint hard before applying next layer.
- C. Tool joints, when pointing mortar is thumbprint hard, with a smooth jointing tool to produce the following joint profile:
 - 1. Joint Profile: Smooth, flat face flush with edges of stone.
- D. Seal grout uniformly per manufacturer's recommendations. Wipe off excess sealant.

3.6 ADJUSTING AND CLEANING

- A. In-Progress Cleaning: Clean stone as work progresses. Remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean stone as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Clean stone veneer by bucket and brush hand-cleaning method.

3.7 EXCESS MATERIALS AND WASTE

- A. Disposal as Fill Material: Dispose of clean masonry waste, including mortar and excess or soil-contaminated sand, by crushing and mixing with fill material as fill is placed.
 1. Do not dispose of masonry waste as fill within 18 inches of finished grade.

END OF SECTION 323253

SECTION 02810 IRRIGATION SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes piping, valves, sprinklers, specialties, controls, and wiring for automatic control irrigation system.
- B. Planting irrigation system shall be a delegated design approach by the landscape contractor for a new permanent in-ground, automatic operation irrigation system compatible with and tied into the existing irrigation system for the property. The water supply for the new system will be based off the Town's potable water system and supply system on the property. The landscape contractor shall coordinate with the State's representative to understand the conditions of water supply and usage and requirements for irrigation, including water demand/application, and comply as required.

The new irrigation system shall contain new infrastructure and controls (e.g., mainline and lateral piping and fittings, sleeves, sprinkler heads, bubblers, drip tubing, controllers, including controller and control wires, backflow preventers, quick couplers, valves, meters, yard boxes etc. and other appurtenances as required.

1.2 SYSTEM DESIGN

- A. Irrigation system design, engineering and installation shall comply with requirements of Town of Truckee requirements.
- B. Irrigation system shall be designed to provide peak, daily landscape irrigation water demand within a 24 hour watering window in accordance with State and Local requirements.
- C. Design will clearly document required System Flow Rate to stay within watering window defined by State and Local requirements
- D. Design will clearly document AVAILABLE static & dynamic water pressure at the point of connection and the required WORKING water pressure to adequately operate the irrigation system.
- E. Preliminary and final cost estimates prepared by the Contractor will include a summary of the above and documentation of the controlling mainline size assumed during pricing exercises.

1.3 DEFINITIONS

- A. Circuit or Lateral Line Piping: Downstream from control valves to sprinklers, specialties, and drain valves. Piping is under pressure during flow.
- B. Irrigation Main Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under water-distribution-system pressure.
- C. Drain Piping: Downstream from circuit-piping drain valves. Piping is not under pressure.

1.4 SUBMITTALS

- A. Product Data: Include pressure ratings, rated capacities, and settings of selected models for the following:
 - 1. General-duty valves.
 - 2. Specialty valves.
 - 3. Valve boxes.
 - 4. Sprinklers.
 - 5. Irrigation specialties.
 - 6. Controllers.
- B. As-Built Drawings: Provide full size drawings for files as well as 2 - 8.5x11 laminated color coded drawings which show irrigation system piping, including plan layout, and locations, types, sizes, capacities, and flow characteristics of irrigation system piping components. Include backflow preventers, valves, piping, sprinklers and devices, accessories, controls, and wiring. Show wire size and number of conductors for each control cable.
- C. Field quality-control test reports.
- D. Operation manuals and maintenance data.
- E. Winterization procedures for system.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 PIPES, TUBES, AND FITTINGS

- A. PVC Pipe for Pressure Mainlines: ASTM D 1735, PVC 1120 compound, Schedule 40.
 1. PVC Socket Fittings, Schedule 40, ASTM D 2467.
- B. Non-Pressure Laterals: ASTM D 1735, PVC 1120 compound, Schedule 40.
 1. PVC Socket Fittings, Schedule 40, ASTM D 2466.
- C. Galvanized Pipe and Fittings: Galvanized steel pipe ASTM A 120. Fittings shall be standard threaded galvanized malleable iron.
 1. All galvanized main below grade shall be wrapped with 2-inch wide plastic adhesive tape, #50 "Scotch Wrap" or equal.
- D. Sleeves and Conduit: PVC Pipe, ASTM D 1785, Schedule 40.
- E. Joining Materials:
 1. Solvent Cements for Joining PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.

2.3 GENERAL-DUTY VALVES

- A. PVC Ball Valves: MSS SP-122, union type, with full-port ball, socket or threaded detachable end connectors, and pressure rating not less than 150 psig.
 1. Material Option: MSS SP-122, of plastic other than PVC and suitable for potable water. Include threaded ends and pressure rating not less than 150 psig, unless otherwise indicated.
 2. Manufacturers:
 - a. American Valve, Inc.
 - b. LASCO
 - c. NIBCO INC.; Chemtrol Div.
 - d. Watts Industries, Inc.; Water Products Div.
- B. Valve boxes: Round reinforced, traffic rated, concrete box with bolt-down steel cover, bottom section with base of size to fit over valve and adjustable extension of length required for depth of burial of valve. Permanently mark cover VALVE.
 1. Product: Christy, or accepted equivalent.

2.4 SPECIALTY VALVES

- A. Plastic Automatic Control Valves: Molded-plastic body, normally closed, diaphragm type with manual flow adjustment, and operated by 24-V ac solenoid. Available from Hunter Industries, Donald Franklin, 916-899-9437, or other approved equal.
- B. Automatic Drain Valves: Spring-loaded-ball type of corrosion-resistant construction and designed to automatically open for drainage if line pressure drops below 4 psig. Allows water to drain out of pipe. Has brass-to-brass seat. Cannot stick in closed position.
- C. Manual Drain Valves: Hose bib.
- D. Quick-Couplers: Factory-fabricated, red brass, two-piece assembly. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key.
 - 1. Keys: Same manufacturer as valve. Provide one key per five quick-couplers. Two key minimum.
- E. Valve Boxes: Box and cover, with open bottom and openings for piping; designed for installing flush with grade. Size as required for valves and servicing.
 - 1. Control valve boxes shall be rectangular pre-cast concrete with lockable cast iron or galvanized steel traffic rated covers marked VALVE.
 - a. Valve box covers shall be permanently marked with the appropriate controller letter and station number corresponding to the Plans.
 - b. Manufacturer: Christy, or accepted equal.
 - 2. Quick coupler valve boxes shall be round pre-cast concrete with lockable cast iron or galvanized steel traffic rated covers. Christy, or accepted equal. Permanently mark cover QCV.
- F. Drainage Backfill: Cleaned gravel or crushed stone, 3/4 inch minimum to 1 inches maximum.

2.5 SPRINKLERS

- A. Description: Plastic housing and corrosion-resistant interior parts designed for uniform coverage over entire distribution area indicated, at available water pressure.
 - 1. Bubblers: Fixed pattern, with screw-type flow adjustment.

2.6 IRRIGATION SPECIALTIES

- A. Flex Tube: NPS 1/2, flexible PE or PVC tubing for bubblers.
- B. Swing Joint Assemblies: PVC
 - 1. Available manufacturers:
 - a. King Brothers
 - b. Nibco
 - c. Rainbird

2.7 AUTOMATIC-CONTROL SYSTEM

- A. Interior Control Enclosures: NEMA 250, Type 12, drip-proof, with locking cover and two matching keys.
 - 1. Material: Enameled-steel or sheet metal.
 - 2. Mounting: Surface type for wall mounting.
- B. Control Transformer: 24-V secondary, with primary fuse.
- C. Controller Stations for Automatic Control Valves: Each station is variable from approximately 5 to 60 minutes. Include switch for manual or automatic operation of each station. Connect one valve per station.
- D. Timing Device: Adjustable, 24-hour, 14-day clock, with automatic operations to skip operation any day in timer period, to operate every other day, or to operate 2 or more times daily.
 - 1. Manual or Semiautomatic Operation: Allows this mode without disturbing preset automatic operation.
 - 2. Nickel-Cadmium Battery and Trickle Charger: Automatically powers timing device during power outages.
- E. Available from Hunter Industries, Donald Franklin, 916-899-9437, or other approved equal.

2.8 Wiring: UL 493, Type UF-B multi-conductor, with solid-copper conductors and insulated cable; suitable for direct burial.

- 1. Available Manufacturers:
 - a. AFC Cable Systems Inc.
 - b. Alcatel Canada Wire, Inc.
 - c. American Electric Cable Co.
 - d. American Insulated Wire Corp.
 - e. Cerro Wire & Cable Co., Inc.

- f. Colonial Wire and Cable Co., Inc.
 - g. Essex Group, Inc.; Building Wire Products Division.
 - h. Precision Cable Manufacturing Co., Inc.
 - i. Southwire Company.
 - j. Triangle Wire and Cable Co.
- 2. Low-Voltage Cables: No. 14 AWG minimum, between controllers and automatic control valves; with jackets of different colors for multiple-cable installation in same trench.
 - 3. Splicing Materials: Manufacturer's packaged kit consisting of insulating, spring-type connector or crimped joint and epoxy resin moisture seal; suitable for direct burial. UL-rated.
 - 4. Feeder-Circuit Cables: No. 12 AWG minimum, between building and controllers.

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Refer to Division 2 Section 02300 "Earthwork" for excavating, trenching, and backfilling.
- B. Install warning tape directly above pressure piping, 12" below finished grade, except 6 inches below subgrade under pavement and slabs.
- C. Install piping and wiring in sleeves under sidewalks, roadways and parking lots.
- D. Drain Pockets: Excavate to 8 inches x 8 inches x 8 inches. Backfill with cleaned gravel or crushed stone, graded from 3/4 to 1 inches to 12 inches below grade. Cover gravel or crushed stone with sheet of filter fabric and backfill remainder with excavated material.
- E. Provide minimum cover over top of underground piping according to the following:
 - 1. Irrigation Main Piping: Minimum depth of 36 inches below finished grade for Frost Depth.
 - 2. Circuit (Lateral Line) Piping: 12 inches.
 - 3. Sleeves and Conduit: 24 inches.
 - 4. Drain Piping: 12 inches

3.2 FITTING APPLICATIONS

- A. Piping in control-valve boxes and aboveground may be joined with flanges instead of joints indicated.
- B. Transition Fittings: Use transition fittings for plastic-to-metal pipe connections according to the following:

1. Couplings:
 - a. Underground Piping NPS 1-1/2 (DN 40) and Smaller: Manufactured fitting or coupling.
 - b. Underground Piping NPS 2 (DN 50) and Larger: AWWA transition coupling.
2. Fittings:
 - a. Aboveground Piping: Plastic-to-metal transition fittings.
 - b. Underground Piping: Union with plastic end of same material as plastic piping.
- C. Transition Fittings: AWWA transition couplings same size as, and with pressure rating at least equal to and with ends compatible with, piping to be joined.

3.3 INSTALLATION

- A. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.
- B. Install piping free of sags and bends.
- C. Install groups of pipes parallel to each other, spaced to permit valve servicing.
- D. Install fittings for changes in direction and branch connections.
- E. Install unions adjacent to valves and to final connections to other components.
- F. Lay piping on solid subbase uniformly sloped without humps or depressions.
- G. Plastic Piping Solvent-Cement Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
 2. PVC Pressure Piping: Join schedule number ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
 3. PVC Nonpressure Piping: Join according to ASTM D 2855.
- H. Piping Connections: Make connections according to the following, unless otherwise indicated:
 1. Install unions, in piping NPS 2 (DN 50) and smaller, adjacent to each valve and at final connection to each piece of equipment.
 2. Install flanges, in piping NPS 2-1/2 (DN 65) and larger, adjacent to flanged valves and at final connection to each piece of equipment.

- I. Underground Valves: Install in valve box with top flush with grade.
- J. Control Valves: Install in control-valve box with top flush with grade.
- K. Automatic Drain Valves: Install in valve box with top flush with grade. Valve to be at 45° angle from the horizontal on the side of the pipe.
- L. Manual Drain Valves: Install in valve box with top flush with grade.
- M. Flush piping with full head of water and install sprinklers after hydrostatic test is completed.
- N. Install control cable in same trench as irrigation piping and at least 2 inches below piping. Provide conductors of size not smaller than recommended by controller manufacturer. Install cable in separate sleeve under paved areas if irrigation piping is installed in sleeve.

3.4 LABELING AND IDENTIFYING

- A. Warning Tapes: Arrange for installation of continuous, underground, detectable warning tape over underground piping, during backfilling of trenches.
- B. Refer to Division 2 Section 02300 "Earthwork" for warning tapes.
- C. Control Boxes and Quick Coupler Boxes: Label and identify as per Sections 2.3.B, 2.4.C.1 and 2.4.C.2.

3.5 FIELD QUALITY CONTROL

- A. Perform the following field tests and inspections in the presence of the State's Representative:
 - 1. Leak Test: After piping and valve installation and before installation of heads, charge lateral and main line system to 60 PSI and test for leaks. Repair leaks and retest until no leaks exist.
 - 2. Operational Test: After electrical circuitry has been energized, operate controllers, automatic control valves and heads to confirm proper system operation and sprinkler coverage.
 - 3. Test and adjust controls, spray coverage and safeties. Replace damaged and malfunctioning controls and equipment.
- B. Remove and replace non-functional units and retest and reinspect as specified above.

3.6 ADJUSTING

- A. Adjust settings of controllers to efficiently irrigate new plantings in the current season.

- B. Adjust automatic control valves to provide flow rate of rated operating pressure required for each circuit.
- C. Adjust sprinklers so they will be flush with, or not more than 1/2 inch above, finish grade.
- D. Field train Park staff on operation of controller and irrigation system.

END OF SECTION 02810

SECTION 329113 SOIL PREPARATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes:
 - 1. Planting Soils.
- B. Related Requirements:
 - 1. Section 311000 "Site Clearing" for topsoil stripping and stockpiling.
 - 2. Section 312000 "Earth Moving" for excavation and subgrade preparation and materials.

1.3 DEFINITIONS

- A. AAPFCO: Association of American Plant Food Control Officials.
- B. Backfill: The earth used to replace or the act of replacing earth in an excavation. This can be amended or unamended soil as indicated.
- C. CEC: Cation exchange capacity.
- D. Compost: The product resulting from the controlled biological decomposition of organic material that has been sanitized through the generation of heat and stabilized to the point that it is beneficial to plant growth.
- E. Duff Layer: A surface layer of soil, typical of forested areas, that is composed of mostly decayed leaves, twigs, and detritus.
- F. Imported Soil: Soil that is transported to Project site for use.
- G. Layered Soil Assembly: A designed series of planting soils, layered on each other, that together produce an environment for plant growth.

- H. **Manufactured Soil:** Soil produced by blending soils, sand, stabilized organic soil amendments, and other materials to produce planting soil.
- I. **NAPT:** North American Proficiency Testing Program. An SSSA program to assist soil-, plant-, and water-testing laboratories through interlaboratory sample exchanges and statistical evaluation of analytical data.
- J. **Organic Matter:** The total of organic materials in soil exclusive of undecayed plant and animal tissues, their partial decomposition products, and the soil biomass; also called "humus" or "soil organic matter."
- K. **Planting Soil:** Existing, on-site soil; imported soil; or manufactured soil that has been modified as specified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- L. **RCRA Metals:** Hazardous metals identified by the EPA under the Resource Conservation and Recovery Act.
- M. **SSSA:** Soil Science Society of America.
- N. **Subgrade:** Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- O. **Subsoil:** Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- P. **Surface Soil:** Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil"; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- Q. **USCC:** U.S. Composting Council.

1.4 PREINSTALLATION MEETINGS

- A. **Preinstallation Conference:** Conduct conference at Project site.

1.5 ACTION SUBMITTALS

- A. **Preconstruction Test Reports (Soil Analysis Report):** For preconstruction soil analyses specified in "Preconstruction Testing" Article.
 - 1. Include method and location of collection and Sample labeling, and test results.
 - 2. Include recommendations, based on test results, for soil treatments and soil amendments to be incorporated to produce satisfactory planting soil

suitable for healthy, viable plants indicated. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.

- a. Prepare for each type of planting soil and planting condition (e.g., backfill, planting beds, turf planting, etc.) associated with that planting soil as indicated on Drawings.

B. Product Data: For each type of soil and soil amendment and fertilizer as follows:

1. Include recommendations for application and use.
2. Include test data substantiating that products comply with requirements.
3. Include sieve analyses for aggregate materials.
4. Material Certificates: Before delivery to the site, according to the following:
 - a. Manufacturer's qualified testing agency's certified analysis of standard products.
 - b. Analysis of fertilizers, by a qualified testing agency, made according to AAPFCO methods for testing and labeling and according to AAPFCO's SUIP #25.
 - c. Analysis of nonstandard materials, by a qualified testing agency, made according to SSSA methods, where applicable.

C. Samples: For each bulk-supplied material, 1-quart volume of each in sealed containers labeled with content, source, and date obtained. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of composition, color, and texture.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For each testing agency.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent, state-operated, or university-operated laboratory; experienced in soil science, soil testing, and plant nutrition; with the experience and capability to conduct the testing indicated; and that specializes in types of tests to be performed.

1.8 PRECONSTRUCTION TESTING

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction soil analyses on existing, on-site soil and imported soil.

1. Notify State's Representative seven days in advance of the dates and times when laboratory samples will be taken.
- B. Preconstruction Soil Analyses: For each unamended soil type, perform testing on soil samples and furnish soil analysis and a written report containing soil-amendment and fertilizer recommendations by a qualified testing agency performing the testing according to "Soil-Sampling Requirements" and "Testing Requirements" articles.
 1. Have testing agency identify and label samples and test reports according to sample collection and labeling requirements.

1.9 SOIL-SAMPLING REQUIREMENTS

- A. Collect soil samples according to requirements of soil testing laboratory.

1.10 TESTING REQUIREMENTS

- A. General: Perform tests on soil samples according to requirements in this article.
- B. Physical Testing:
 1. Soil Texture: Soil-particle, size-distribution analysis by one of the following methods according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods":
 - a. Sieving Method: Report sand-gradation percentages for very coarse, coarse, medium, fine, and very fine sand; and fragment-gradation (gravel) percentages for fine, medium, and coarse fragments; according to USDA sand and fragment sizes.
 - b. Hydrometer Method: Report percentages of sand, silt, and clay.
 2. Total Porosity: Calculate using particle density and bulk density according to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
 3. Water Retention: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods."
 4. Saturated Hydraulic Conductivity: According to SSSA's "Methods of Soil Analysis - Part 1-Physical and Mineralogical Methods"; at 85% compaction according to ASTM D 698 (Standard Proctor).
- C. Chemical Testing:

1. CEC: Analysis by sodium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
 2. Clay Mineralogy: Analysis and estimated percentage of expandable clay minerals using CEC by ammonium saturation at pH 7 according to SSSA's "Methods of Soil Analysis - Part 1- Physical and Mineralogical Methods."
 3. Phytotoxicity: Test for plant-available concentrations of phytotoxic minerals including aluminum, arsenic, barium, cadmium, chlorides, chromium, cobalt, copper, lead, lithium, mercury, nickel, selenium, silver, sodium, strontium, tin, titanium, vanadium, and zinc.
- D. Fertility Testing: Soil-fertility analysis according to standard laboratory protocol of SSSA NAPT NCR-13, including the following:
1. Percentage of organic matter.
 2. CEC, calcium percent of CEC, and magnesium percent of CEC.
 3. Soil reaction (acidity/alkalinity pH value).
 4. Calcium ppm.
 5. Nitrogen ppm.
 6. Phosphorous ppm.
 7. Potassium ppm.
 8. Manganese ppm.
 9. Zinc ppm.
 10. Copper ppm.
 11. Sodium ppm.
 12. Soluble-salts ppm.
 13. Presence and quantities of problem materials including salts and metals cited in the Standard protocol. If such problem materials are present, provide additional recommendations for corrective action.
 14. Other deleterious materials, including their characteristics and content of each.
- E. Organic-Matter Content: Analysis using loss-by-ignition method according to SSSA's "Methods of Soil Analysis - Part 3- Chemical Methods."
- F. Recommendations: Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated to produce satisfactory planting soil suitable for healthy, viable plants indicated. Include, at a minimum, recommendations for nitrogen, phosphorous, and potassium fertilization, and for micronutrients.
1. Fertilizers and Soil Amendment Rates: State recommendations in weight per 1000 sq. ft.
 2. Soil Reaction: State the recommended liming rates for raising pH or sulfur for lowering pH according to the buffered acidity or buffered alkalinity in weight per 1000 sq. ft.
 3. Provide recommendation for each type of planting soil and associated planting condition.

1.11 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and compliance with state and Federal laws if applicable.
- B. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 - 3. Do not move or handle materials when they are wet or frozen.
 - 4. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

PART 2 - PRODUCTS

2.1 PLANTING SOILS

- A. General: Soil amendments, fertilizers, and rates of application specified in this article are guidelines that may need revision based on testing laboratory's recommendations after preconstruction soil analyses are performed.
- B. Planting-Soil Type: Imported, naturally formed soil from off-site sources and consisting of sandy loam according to USDA textures; and modified to produce viable planting soil.
 - 1. Sources: Take imported, unamended soil from sources that are naturally well-drained sites where topsoil occurs at least 4 inches deep, not from agricultural land, bogs, or marshes; and that do not contain undesirable organisms; disease-causing plant pathogens; or obnoxious weeds and invasive plants including, but not limited to, quackgrass, Johnsongrass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bentgrass, wild garlic, ground ivy, perennial sorrel, and brome grass.
 - 2. Unacceptable Properties: Clean soil of the following:
 - a. Unacceptable Materials: Concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
 - b. Unsuitable Materials: Stones, roots, plants, sod, clay lumps, and pockets of coarse sand that exceed a combined maximum of [8] <Insert number> percent by dry weight of the imported soil.

- c. Large Materials: Stones, clods, roots, clay lumps, and pockets of coarse sand exceeding 2 inches in any dimension.
3. Provide soil amendments and fertilizers of type, proportion and quantity according to recommendations in Soil Analysis Report.

2.2 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed- and invasive plant propagate- free organic matter produced by composting feedstock, and bearing USCC's "Seal of Testing Assurance," and as follows:
 1. Feedstock: [Limited to leaves] [May include sewage sludge] [May include animal waste] <Insert requirement>.
 2. Reaction: pH of 5.5 to 8.
 3. Soluble-Salt Concentration: Less than 4 dS/m.
 4. Moisture Content: 35 to 55 percent by weight.
 5. Organic-Matter Content: 30 to 40 percent of dry weight.
 6. Particle Size: Minimum of 98 percent passing through a 1/2-inch sieve.
 7. Carbon-to-Nitrogen Ratio: Less than 25:1.
 8. Pollutant Concentration: Limits below US EPA regulations.
- B. Wood Derivatives: Shredded and composted, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.
 1. Partially Decomposed Wood Derivatives: In lieu of shredded and composted wood derivatives, mix shredded and partially decomposed wood derivatives with ammonium nitrate at a minimum rate of 0.15 lb/cu. ft. of loose sawdust or ground bark, or with ammonium sulfate at a minimum rate of 0.25 lb/cu. ft. of loose sawdust or ground bark.
- C. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

2.3 FERTILIZERS

- A. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of [20] [33] [50] percent available phosphoric acid.
- B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.
- C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified testing agency.
- D. Chelated Iron: Commercial-grade FeEDDHA for dicots and woody plants, and commercial-grade FeDTPA for ornamental grasses and monocots.

PART 3 - EXECUTION

3.1 GENERAL

- A. Place planting soil and fertilizers according to requirements herein.
- B. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in planting soil.
- C. Proceed with placement only after unsatisfactory conditions have been corrected.

3.2 PREPARATION OF STOCKPILED, UNAMENDED, ON-SITE TOPSOIL

- A. Unacceptable Materials: Clean soil of concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials that are harmful to plant growth.
- B. Unsuitable Materials: Clean soil to contain a maximum of 8 percent by dry weight of stones, roots, plants, sod, clay lumps, and pockets of coarse sand; and no soil clods or clumps greater than 2 inches in diameter.
- C. Screening: Pass unamended soil through a 1/2-inch sieve to remove large materials.
- D. Amendments: Apply and mix unamended soil with amendments and fertilizers in accordance with recommendations in Soil Analysis Report on-site to produce

required planting soil. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.

1. Apply amendments and fertilizers on surface of unamended soil and thoroughly blend to produce planting soil.

3.3 PLACING PLANTING SOIL OVER EXPOSED SUBGRADE

- A. General: Apply planting soil on-site in its final, blended condition. Do not apply materials or till if existing soil or subgrade is frozen, muddy, or excessively wet.
- B. Subgrade Preparation: Till subgrade to a minimum depth of 6 inches. Remove stones larger than 1/2 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 1. Apply approximately half the thickness of planting soil over prepared, loosened subgrade. Mix thoroughly with tilled subgrade. Spread remainder of planting soil.
- C. Application: Spread planting soil to total depth indicated on Drawings, but not less than required to meet finish grades after natural settlement. Do not spread if soil or subgrade is frozen, muddy, or excessively wet.
 1. Lifts: Apply planting soil in lifts not exceeding 6 inches in loose depth for material compacted by compaction equipment, and not more than
- D. Compaction: Compact each lift of planting soil to 75 percent of maximum Standard Proctor density according to ASTM D 698.
- E. Finish Grading: Grade planting soil to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.4 PROTECTION

- A. Protection Zone: Identify protection zones according to Section 015639 "Temporary Tree and Plant Protection" and as delineated on Drawings.
- B. Protect areas of in-place soil from additional compaction, disturbance, and contamination. Prohibit the following practices within these areas except as required to perform planting operations:
 1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Vehicle traffic.
 4. Foot traffic.

Soil Preparation

5. Erection of sheds or structures.
 6. Impoundment of water.
 7. Excavation or other digging unless otherwise indicated.
- C. If planting soil or subgrade is overcompacted, disturbed, or contaminated by foreign or deleterious materials or liquids, remove the planting soil and contamination; restore the subgrade as directed by State's Representative and replace contaminated planting soil with new planting soil.

3.5 CLEANING

- A. Protect areas adjacent to planting-soil preparation and placement areas from contamination. Keep adjacent paving and construction clean and work area in an orderly condition.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable materials, trash, and debris and legally dispose of them off Owner's property unless otherwise indicated.
1. Dispose of excess subsoil and unsuitable materials on-site where directed by Owner.

END OF SECTION 329113

SECTION 329200 SEEDING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Apply specified treatments to areas as specified on the plans.

1.2 SUBMITTALS

- A. Prior to seeding, submit manufacturer's letters of compliance, samples and manufacturer's literature for:
 - 1. Seed mixes
 - 2. Fertilizers
- B. Prior to planting, furnish vendor's statement certifying that each container of seed delivered meets the specification requirements.
- C. All submittals required prior to seeding shall be forwarded in a single package to the State's Representative.
- D. Invoices furnished to the State Representative shall include the weight quantity of seed delivered for use on the project along with the purchase certificates indicating the seed source.

1.3 QUALITY ASSURANCE

- A. All seed shall be in conformance with the California State Seed Law of the Department of Agriculture. Each seed bag shall be delivered to the site sealed and clearly marked as to species, purity, percent germination, dealer's guarantee, and dates of test.
- B. Prior to seeding, contractor shall provide a letter of certification and original Association of Official Seed Analysts (AOSA) seed test results.
- C. Seed shall be of a quality which has a minimum pure live seed (PLS) content (percent purity x percent germination). Weed seed shall not exceed 0.5 percent of the aggregate of PLS and other material.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. All products shall be delivered to the site in manufacturer's unopened standard containers bearing original labels showing quantity, analysis and name of manufacturer.

- B. All materials shall be stored in designated areas and in such a manner as to protect them from weather or other conditions that might damage or impair the effectiveness of the product. Storage facilities shall be cool, clean, dry and free from other seed sources such as weeds or agricultural products. Seed shall not be stored where temperatures exceed 80 degrees F.

PART 2 - PRODUCTS

2.1 SEED

- A. Contractor may acquire seed from any supplier that provides seed compatible with these specifications. Conforming seed is available from: Pacific Coast Seed, 533 Hawthorne Place, Livermore, CA 94551, (925) 373-4417, www.pcseed.com.
- B. Noxious weed seed shall not be allowed.
- C. Seed treated with mercury compounds shall not be used.
- E. Inert material shall not exceed 8 percent by weight of any seed variety or the total seed mix.
- F. All legume seed shall be pellet-inoculated as provided in Bulletin AXT-280 of the University of California Cooperative Extension, "Pellet Inoculation of Legume Seed." Inoculant sources shall be species specific and shall be applied at a rate of 2 pound of inoculant per one hundred pounds of seed.
- G. Seed shall consist of the following design mix: drought tolerant, mixture of annual and perennial wildflowers native to elevations above 4000 ft., providing several months of color. Contents and application as indicated on the Drawings:

1. CUSTOM SIERRA WILDFLOWER MIX

Species	Common Name
Achillea millefolium	White Yarrow
Camassia quamash	Camassia quamash
Epilobium angustifolia	Fireweed
Eriogonum umbellatum	Sulphur Buckwheat
Eriophyllum lanatum	Wooly Yarrow
Gnaphalium canescens	Fragrant Cudweed
Helianthella californica	
Mimulus lewisii	Lewis Monkeyflower
Penstemon newberryi	Mountain Pride
Potentilla gracilis	Potentilla
Phalcelia mutabilis	Mt Blue Bell

Spirea densiflorus	Mt Spirea
Wyethia mollis	Mules Ears

- H. Submit alternate seed to State Representative for approval if specified seed will not likely germinate or provide adequate cover in the season scheduled to plant.

2.2 WATER

- A. Water shall be furnished by State and is available at the site. Water shall be of potable quality.

2.7 COMPOST MULCH

- A. Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2- inch sieve.

PART 3 - EXECUTION

3.1 SEEDBED PREPARATION

- A. Seed to be placed in the fall.
- B. Verify that all areas to receive seed are free of vegetation, and other objectionable material, including stones larger than 1-1/2 inches. Do not mix into surface soil.
- C. Finish Grading: Grade planting areas to within plus or minus 1/2 inch of finish elevation. Limit fine grading to areas that can be planted in the immediate future.
- D. Loosen surface soil to a depth of at least of 6 inches. Leave rough and uneven to create seed pockets.
- E. Moisten prepared seed areas before planting to a depth of one inch below the soil surface. Do not create muddy soil.

3.2 BROADCAST SEEDING

- A. Apply seed by uniformly broadcasting by hand or with hand-held or mechanical seeders. Rake seed lightly into top 1/2-inch of topsoil, apply 1/2-inch of compost mulch, roll lightly and water thoroughly with fine spray to dissolve fertilizer.

1. Broadcast seeding operations shall not take place when wind prevents uniform distribution or allows seed to become windborne, or when soil temperature is below 40 degrees F.

3.4 WATERING

- A. Contractor shall regularly water seed bed to establish mix unless sufficient rainfall occurs.
 1. Irrigation shall be accomplished by sprinkling the seeded areas by hand with low pressure, low precipitation rate hose nozzles.

3.5 CLEANUP

- A. Remove any seed mix or compost material from buildings, paving, and other features.
- B. Remove all excess fertilizer, seed, and bags and ties from site.

3.6 PROTECTION

- A. Protection and Repair of Seeded Areas:
 1. Areas susceptible to traffic of any kind shall be protected by erecting barriers and/or signs as necessary to prevent damage to seed beds.
 2. In the event that continued construction operations or traffic disturb seeded areas, the Contractor shall repair areas that become damaged in the same manner as the initial seeding, at no additional expense to State.

3.7 ESTABLISHMENT PERIOD

- A. Perform maintenance for a minimum of 60 days, including watering, weeding, removal of debris and trash in seed bed and other activities as required to germinate a dense stand of specified vegetation.

END OF SECTION 329200

SECTION 329300
EXTERIOR PLANTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Trees.
2. Shrubs.
3. Guying
4. Staking

1.2 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: All mulches indicated.
- C. Product certificates.
- D. Images and listing of quantity and species of plants ordered, nursery supplier(s), any plant material not available at that time, or proposed substitutions to be reviewed.
- E. Provide maintenance instructions after installation of spaded trees including watering requirements, pruning, etc. necessary over the next year for the health of the trees.

- F. Installer Qualifications: Name of installer, Company, Experience stated on 3 or more projects over one year's time, Reference contact information, including contact name, phone number, and installation address for above projects.
- G. All submittals shall be forwarded in a single package to the State Representative.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Planting - A qualified landscape installer who maintains an experienced full-time supervisor on Project site when exterior planting is in progress. Spading – A qualified landscape installer who has successfully spaded conifer trees for a minimum of one year.
- B. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."
- C. Plants shall be subject to inspection and approval by State Representative upon delivery. Such approval shall not negate the right of inspection and rejection during progress of the work.
- D. Substitutions of plant materials will not be permitted unless authorized in writing by the State Representative. If proof is submitted that any plant material specified is not obtainable, a proposal will be considered for use of the nearest equivalent size, species, cultivar, or variety. These provisions shall not relieve the Contractor of the responsibility of obtaining specified materials in advance if special growing conditions or other arrangements must be made in order to supply specified materials.
- E. Contractor shall request the following site observations prior to progressing with the work:
 - 1. Planting areas prior to finish grading.
 - 2. Plant material approval and layout
 - 3. Substantial completion to initiate warranty period.
 - 4. Final, at end of warranty period.
- F. Pre-installation Conference: Conduct conference at Project site. Spaded tree on-site source locations to be identified prior to commencement of work.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald,

drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery or installation.

- B. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants in shade, protect from weather and mechanical damage, and keep roots moist. Replace plants immediately if stressed or dying due to delayed installation.

1.6 WARRANTY

- A. Special Warranty: Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by State, or incidents that are beyond Contractor's control.
 - 1. Warranty Period for Purchased Plants: Sixty (60) days from date of Substantial Completion.

1.7 MAINTENANCE

- A. Maintain during warranty period by cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Prune only broken or damaged limbs, maintaining the natural form and character.

PART 2 - PRODUCTS

2.1 EXTERIOR PLANTS

- A. Tree and Shrub Material: Furnish nursery-grown trees and shrubs from plant stock or local nursery complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as sun scald, injuries, abrasions, and disfigurement.
 - 1. Provide spaded trees from on-site source.
 - 2. Provide container-grown trees and shrubs from nursery selling local plant stock or from local nursery where plants have been raised in and acclimated to the immediate Truckee area

- B. Perennials: Provide healthy, container-grown plants from a commercial nursery, of species and variety shown or listed.
- C. Local plants available from: The Villager Nursery, 10678 Donner Pass Rd., Truckee, CA 96161, 530-587-0771, or approved equal.

2.2 PLANTING MATERIALS

- A. Soil Materials, General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Verify suitability of surface soil to produce topsoil. Amend existing in-place surface soil to produce topsoil. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources.
- C. Organic Soil Amendments:
 - 1. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve.
 - 2. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
 - 3. Calcium: Natural Gypsum in powder form.
- D. Fertilizer:
 - 1. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - a. Composition: 20-20-20
 - 2. Fertilizer, Tablets: 21-gram tablet consisting of nitrogen, phosphorous, and potassium, by weight.
 - a. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
 - b. Product: Agriform, or approved equal.
 - c. Quantity as shown on planting details

E. Mulches:

1. Organic Mulch: stockpiled on-site duff from construction operations.

2.3 PLANTING SOIL MIXES

- A. Planting Soil Mix: Mix the top 6" of planting soil with the following soil amendments and fertilizers in the following quantities:
1. Ratio of Loose Compost to Topsoil by Volume: 1:4
 2. Weight of Slow-Release Fertilizer per 1000 Sq. Ft.: 3.0 lbs of actual nitrogen, 3.0 lbs of actual phosphorous, and 3.0 lbs of actual potassium, by weight.

2.4 STAKES

- A. For trees up to 10-12 feet in height use round wood 2 inch diameter stakes, 5 feet minimum. Submit product data (cut) sheet for approval prior to installation.

2.5 TRUNK ATTACHMENT MATERIAL

- A. Smooth, flexible surface material, min. 1" wide consisting of any of the following: Wide canvas strapping, strips of burlap, foam or rubber tree wrap, or bicycle inner tubes. Submit material for approval prior to installation.

2.6 GUY WIRE

- A. Coated black, No. 9 or larger, wire for outdoor use, or ArborTie green woven polypropylene 900 lb. test strength tree staking material, available from Gemplers, www.gemplers.com, or approved equal. Submit product data (cut) sheet for approval prior to installation.

2.7 ANCHORS

- A. Auger style rod, minimum 1/2 inch diameter, with eye on top and 4" helix, powder coated green or black. Submit product data (cut) sheet for approval prior to installation.

PART 3 - EXECUTION

A. EXTERIOR PLANTING

1. Bed Establishment:
 - i. Loosen subgrade of planting beds in other areas to a

minimum depth of 8 inches.

- ii. Remove stones larger than 4 inches in any dimension and sticks, roots, rubbish, and other extraneous matter.
- iii. Apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
- iv. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

2. Trees and Shrubs

- i. Pits: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
- ii. Set trees and shrubs plumb and in center of pit with top of root ball above adjacent finish grades.

- 1. Container Grown: Carefully remove root ball from container without damaging root ball or plant.
- 2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.

- 3. Tree and Shrub Pruning: Prune only to remove injured or dead branches or to correct structural deficiencies. Retain the natural character of each plant.

4. Mulching:

- i. Apply specified mulch to each planting area as indicated on the Drawings and finish level with adjacent finish grades.

- ii. Do not place mulch against plant stems.

- 5. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting to the satisfaction of the State Representative.

B. TRUNK ATTACHMENT

1. Wrap suitable trunk attachment material around the tree stem and attach to the stake or guy ropes, wires or cables.
2. Do not insert wires through trunk attachment material.
3. For staking trees - the trunk attachment materials should be placed either 1/3 or 2/3 the distance from the ground up to the first set of branches. Never place the attachments directly beneath the first set of branches.
4. For guying trees - The attachments should be made on the canopy stem, i.e., around the stem above the first set of branches.

C. TREE STAKING AND GUYING

1. Place the stakes running parallel to prevailing winds.
2. Drive the stake or guy anchors into the outer edge of the planting hole, safely away from the root system but still within the mulched planting area.
3. Drive anchor into ground so only 1" of the anchor loop is exposed.
4. Trim excess stake material 6' above the trunk attachment. Sand or smooth stake to eliminate rough hazardous edges.
5. When attaching the tree to stakes or guying anchors, the rope, wires or cable should not come into contact with tree stems or branches.
6. Attach the stem to the stakes or anchors loosely, with some flexibility at the point of attachment to the stem as well as the attachment of the ropes/wires to the stakes or anchors.

D. CLEAN UP

1. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris. Dispose in accordance with Section 01700.

END OF SECTION 329300