

RESOLUTION NO. 2011-573

Adopted by the Sacramento City Council

October 18, 2011

CONTRACT AWARD FOR INTERSTATE 5 CORRIDOR LANDSCAPE PROJECT – PHASE 2 (W14004100)

BACKGROUND

- A. The North Natomas Community Plan, implemented in 1994, envisioned a landscape buffer along the Interstate 5/Highway 99 freeway frontages. In 2004 City Council adopted Resolution No. 2004-634 approving the North Natomas Landscape Corridor Guidelines.
- B. The Interstate 5/Highway 99 freeway landscape improvements are programmed into and funded via the North Natomas Finance Plan. Maintenance costs for the freeway landscape improvements are funded via the North Natomas Community Facilities District #3.
- C. Phase 1 of the Interstate 5 Corridor Landscape Project was begun in July 2005 and completed in January 2010.
- D. City staff prepared the plans and contract specifications for Phase 2 of the project, to construct landscaping within the 100 feet wide freeway corridor from Arena Boulevard to Snowy Egret Boulevard on the west side of Interstate 5, and from Allaire Circle to Seatuck Court on the east side of Highway 99. The project was advertised and nine (9) bids were received on September 21, 2011.
- E. Olympic Landscaping was the lowest responsive and responsible bidder.
- F. Based on the low bid of \$826,941, the total project cost including design, construction management, and contingency is estimated to be \$1,100,000. There are sufficient North Natomas Development Impact Fee funds (Fund 3201) available in the project to award the contract and complete the project.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The contract plans and specifications for the Freeway Corridor Landscape Phase 2 project (W14004100) are approved and the contract is awarded to Olympic Construction, for an amount not to exceed \$826,941.37.
- Section 2. Exhibit A is made a part of this Resolution.

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Exhibit A - Freeway Corridor Landscape Phase 2 project contract

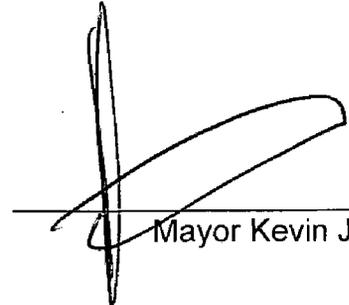
Adopted by the City of Sacramento City Council on October 18, 2011 by the following vote:

Ayes: Councilmembers Ashby, Cohn, D Fong, R Fong, McCarty, Pannell, Schenirer, Sheedy, and Mayor Johnson.

Noes: None.

Abstain: None.

Absent: None.



Mayor Kevin Johnson

Attest:



Shirley Concolino
Shirley Concolino, City Clerk



CITY OF SACRAMENTO
DEPARTMENT OF UTILITIES

ENGINEERING SERVICES DIVISION

**CONTRACT SPECIFICATIONS
FOR**

FREEWAY LANDSCAPE BUFFER - PHASE 2

PN: W14004101

B123331009

Engineer's Estimate: \$ 864,000

Non-Refundable Fee
\$40.00

For Pre-Bid Information Call:

Mark Elliott
Associate Engineer
(916) 808-8894

No Separate Plans

Bid to be received before 2:00 PM
September 7, 2011
Historic City Hall, City Clerk's Office
915 I Street, 1st Floor
Sacramento, CA 95814

ESBE Program Goals

For information on meeting the City of Sacramento's Small Business Enterprise (SBE) and Emerging Business Enterprise (EBE) project goals, please contact Noreen James at (916) 808-5470, or visit the City of Sacramento's small business web site at: http://dev.cityofsacramento.org/econdev/business-open/Sub_small-business-certificaiton.cfm

FREEWAY LANDSCAPE BUFFER - PHASE 2

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CONTRACT FORMS (Only for successful Bidder)

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- o

**EXCERPTS FROM THE CALIFORNIA LABOR CODE RELATING TO APPRENTICES ON
PUBLIC WORKS CHAPTER 1 OF DIVISION 2 ([HTTP://WWW.DIR.CA.GOV/DAS/DAS-10.PDF](http://www.dir.ca.gov/DAS/DAS-10.PDF))**

TAX FORMS (REQUIRED UPON AWARD)

W-9 Page 1 of 1

CA Form 590 Page 1 of 1

SPECIAL PROVISIONS

ESBD PRE-BID CONFERENCE

The City of Sacramento Code Section 3.60.270 requires all bidding contractors to meet or exceed the City's Emerging and Small Business Development (ESBD) participation goals established for this project in order to qualify as a responsible bidder. Attendance is recommended at the ESBD program meeting within 180 calendar days of the bid opening date.

Effective July 2010, the meetings are scheduled as requested:

For information on meeting the City of Sacramento's Small Business Enterprise (SBE) and Emerging Business Enterprise (EBE) project goals, please contact Noreen James at (916) 808-5470, or visit the City of Sacramento's small business web site at: http://dev.cityofsacramento.org/econdev/business-open/Sub_small-business-certificaiton.cfm

NOTICE TO CONTRACTORS

CITY OF SACRAMENTO

Sealed Proposals will be received by the City Clerk of the City of Sacramento at the Office of the City Clerk, Historic City Hall, located at 915 I Street, 1st Floor, up to the hour of 2:00 p.m. on **September 7, 2011** and opened at 2:00 p.m. **September 7, 2011**, or as soon thereafter as business allows, in the Hearing Room, Historic City Hall, 2nd Floor, for construction of:

FREEWAY LANDSCAPE BUFFER - PHASE 2

(PN: W14004101) (B123331009)

as set forth in the Construction Documents.

Proposals received and work performed thereunder shall comply with the requirement of Chapter 3 of the Sacramento City Code. Each Bid Proposal shall be accompanied by bid security of at least 10% of the sum the Bid Proposal. The right to reject proposals or to waive any error or omission in any Bid Proposal received is reserved by the City. Signed proposals shall be submitted on the printed forms contained herein and enclosed in an envelope marked:

SEALED PROPOSAL FOR FREEWAY LANDSCAPE BUFFER - PHASE 2

(PN: W14004101) (B123331009)

Copies of the contract documents are available at:

Signature Reprographics
620 Sunbeam Avenue
Sacramento, CA 95814
(916) 454-0800

A non-refundable fee of \$40.00 will be charged.

Subcontractors shall comply with the rates of wages currently established by the Director of Industrial Relations under provisions of Sections 1773 of the Labor Code of the State of California, a copy of which is on file in the office of the City Clerk. In accordance with the Sacramento City Code Section 3.60.180 and Section 1771.5 of the California Labor Code, the payment of the general prevailing rate of per diem wages or the general prevailing rate of per diem wages for holiday and overtime is not required for any Public Construction project of \$25,000 or less, or Public Maintenance project of \$15,000 or less. The City of Sacramento has an approved Labor Compliance Program. **Electronic Web submittal of Labor Compliance Reports is effective May 1, 2008.** Each contractor and every lower-tier subcontractor is required to submit certified payrolls and labor compliance documentation electronically at the discretion of and in the manner specified by the City of Sacramento.

Electronic submittal will be web-based system, accessed on the World Wide Web by a web browser. Each contractor and subcontractor will be given a Log On identification and password to access the City of Sacramento reporting system.

Use of the system may entail additional data entry of weekly payroll information including; employee identification labor classification, total hours worked and hours worked on this project, wage and benefit rates paid, etc. The contractor's payroll and accounting software might be capable of generating a 'comma delimited file' that will interface with the software.

This requirement will be "flowed down" to every lower-tier subcontractor and vendor required to provide labor compliance documentation.

All questions regarding the Labor Compliance Program should be directed to the Labor Compliance Section at (916) 808-5524.

Pursuant to Sacramento City Code Section 3.60.250, any agreement awarded pursuant to this Invitation to Bid shall contain a provision permitting the substitution of securities for any monies withheld to ensure performance under the Agreement. The terms of such provisions shall be according to the requirements and the form required by the City.

Bid protests must be filed and maintained in accordance with the provisions of Chapter 3.60.460 through 3.60.560 of the Sacramento City Code. Bid protests that do not comply with Chapter 3.60.040 through 3.60.560 of the Sacramento City Code shall be invalid and shall not be considered. A bid protest fee of \$750.00 is required at the time of filing to be considered valid in accordance with City of Sacramento Resolution No. 2003-231 dated April 29, 2003. As used herein, the term "bid protests" includes any bid protest that (1) claims that one or more bidders on this contract should be disqualified or rejected for any reason, or (2) contests a City staff recommendation to award this contract to a particular bidder, or (3) contests a City staff recommendation to disqualify or reject one or more bidders on this contract. A copy of Chapter 3.60.010 of the Sacramento City Code may be obtained from the Project Manager or from the Office of the City Clerk, located at 915 I Street, 1st Floor, Sacramento, CA 95814.

The right to reject any and all bids or to waive any informality in any bid received is reserved by the City Council.

THE FOLLOWING DOCUMENTS
ARE TO BE COMPLETED AND
SUBMITTED WITH THE BID PACKAGE

Contractor's Name: _____
 (Please print)

CITY OF SACRAMENTO

SEALED PROPOSAL

(MUST BE SIGNED BY BIDDER)

The Sealed Proposal will be received not later than **September 7, 2011**, at the Office of the City Clerk, Historic City Hall, at 915 I Street, 1st Floor, Sacramento, California and opened at **2:00 PM**, or as soon thereafter as business allows, on **September 7, 2011**, by the Office of the City Clerk, 915 I Street, Historic City Hall, Hearing Room 2nd Floor, Sacramento, California.

TO THE HONORABLE CITY COUNCIL:

The undersigned hereby proposes and agrees to furnish any and all required labor, material, transportation, and services for

FREEWAY LANDSCAPE BUFFER - PHASE 2

(PN: W14004101) (B123331009)

in the City and County of Sacramento, California.

TOTAL BID: _____ (\$ _____).

(TOTAL BID = Bid items 1-53 plus Add Alternates 1, 2 and 3.) The lowest responsible bidder will be determined based on the Total Bid amount. The City reserves the right to award the contract with or without Add Alternates 1, 2 and/or 3. The work herein described is to be performed in strict conformity with the Plans, City of Sacramento Standard Specifications (Resolution No. 89-216) and these Special Provisions, all as on file in the Office of the City Clerk, at the following unit prices.

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total
1	Mobilization (not to exceed 5% of total bid)	1	LS	\$ _____	\$ _____
2	SWPP Compliance	1	LS	\$ _____	\$ _____
3	Clearing and Grubbing	1	LS	\$ _____	\$ _____
4	Finish and Grading	203,371	SF	\$ _____	\$ _____
5	Soil Amendment (Base bid shrub areas)	544	SF	\$ _____	\$ _____
6	2-Inch Tap with Meter	1	LS	\$ _____	\$ _____
7	Electrical POC for Irrigation	1	LS	\$ _____	\$ _____
8	2-Inch Backflow Preventer	1	EA	\$ _____	\$ _____
9	Booster Pump	1	LS	\$ _____	\$ _____
10	Irrigation Controller Assembly (inc. FS/MV)	1	EA	\$ _____	\$ _____
11	Air Relief Valve (1-Inch)	1	EA	\$ _____	\$ _____
12	Remote Control Valve Assembly, 2-Inch	20	EA	\$ _____	\$ _____
13	Remote Control Valve Assembly, 1½ -Inch	8	EA	\$ _____	\$ _____
14	Remote Control Valve Assembly, 1-Inch	15	EA	\$ _____	\$ _____
15	Automatic Irrigation System, Rotor	191,623	SF	\$ _____	\$ _____
16	Automatic Irrigation System, Inline Drip	11,748	SF	\$ _____	\$ _____
17	Quick Coupling Valve Assembly	8	EA	\$ _____	\$ _____
18	Decomposed Granite (4-Inch Depth)	1	CY	\$ _____	\$ _____
19	Tree Bubblers	155	EA	\$ _____	\$ _____
20	Weed Control	1	LS	\$ _____	\$ _____
21	Trees – 15 Gallon	155	EA	\$ _____	\$ _____
22	Shrubs – 1 Gallon	736	EA	\$ _____	\$ _____

23	Shrubs – 5 Gallon	7	EA	\$	\$
24	Plugs (36-Inch O. C.)	494	EA	\$	\$
25	Native Grass Drill Seeding Area	191,623	SF	\$	\$
26	Bark Mulch (2-Inch Depth)	77	CY	\$	\$
27	Maintenance Period (2-Years)	1	LS	\$	\$
East Side Highway 99					
28	Clearing and Grubbing	1	LS	\$	\$
29	Site Layout/Staking	1	LS	\$	\$
30	Rough Grading	326,926	SF	\$	\$
31	Finish Grading	326,926	SF	\$	\$
32	Soil Amendment (<i>Base Bid Shrub Areas</i>)	439	SF	\$	\$
33	12-Inch Wide AB Access Road (8-Inch Depth)	240	CY	\$	\$
34	2-Inch Meter	1	LS	\$	\$
35	Electrical POC for Irrigation	2	LS	\$	\$
36	2-Inch Backflow Preventer	2	EA	\$	\$
37	Booster Pump	2	EA	\$	\$
38	Irrigation Controller Assembly (Inc. FS/MV)	2	EA	\$	\$
39	Air Relief Valve (1-Inch)	2	EA	\$	\$
40	Remote Control Valve Assembly, 2-Inch	51	EA	\$	\$
41	Remote Control Valve Assembly, 1 ½-Inch	4	EA	\$	\$
42	Remote Control Valve Assembly, 1-Inch	1	EA	\$	\$
43	Remote Control Valve Assembly, ¾ -Inch	1	EA	\$	\$
44	Automatic Irrigation System, Rotor	326,926	SF	\$	\$
45	Automatic Irrigation System, MP Rotator	12,571	SF	\$	\$
46	Quick Coupling Valve Assembly	3	EA	\$	\$
47	Tree Bubblers	281	EA	\$	\$
48	Weed Control	1	LS	\$	\$
49	Trees – 5 Gallon	281	EA	\$	\$
50	Shrubs – 1 Gallon	24	EA	\$	\$
51	Plugs	1,104	EA	\$	\$
52	Native Grass Drill Seeding Area	326,926	SF	\$	\$
53	Maintenance Period (2 Years)	1	LS	\$	\$
Total Items 1 through 53					\$
ADD ALTERNATE 1					
1	Tree Planting Pits with Augured Holes	1	LS	\$	\$
Total of Add Alternate 1					\$
ADD ALTERNATE 2 (WEST)					
1	Remote Control Valve Assembly, 1-Inch	9	EA	\$	\$
2	Automatic Irrigation System, In-Line Drip	28,758	SF	\$	\$
3	Soil Amendment	28,758	SF	\$	\$
4	Shrubs – 1 Gallon	1,067	EA	\$	\$
5	Shrubs – 5 Gallon	326	EA	\$	\$
6	Bark Mulch (2-Inch Depth)	170	CY	\$	\$
7	Deduct Drill Seeding	28,758	SF	\$	\$

		Total of Add Alternate 2			\$
	ADD ALTERNATE 3 (EAST)				
1	Remote Control Valve Assembly, 1-Inch	5	EA	\$	\$
2	Automatic Irrigation System, In-Line Drip	18,217	SF	\$	\$
3	Soil Amendment	18,217	SF	\$	\$
4	Shrubs -- 1 Gallon	489	EA	\$	\$
5	Shrubs -- 5 Gallon	195	EA	\$	\$
6	Bark Mulch (2-Inch Depth)	108	CY	\$	\$
7	Deduct MP Rotator System	12,524	SF	\$	\$
8	Deduct Drill Seeding	18,217	SF	\$	\$
		Total of Add Alternate 3			\$

GRAND TOTAL (ITEMS 1-53 PLUS ADD ALTERNATES 1, 2 AND 3): \$ _____
 Bring this Amount to page 1 of bid items

If awarded the contract, the undersigned shall execute said contract and furnish the necessary bonds within ten (10) days after the notice of award of said contract and begin work within fifteen (15) days after the signing of the contract by the Contractor and the City or the Notice to Proceed has been prepared, whichever is applicable.

In determining the amount bid by each bidder, City shall disregard mathematical errors in addition, subtraction, multiplication and division that appear obvious on the face of the Proposal. When such a mathematical error appears on the Proposal, the City shall have the right to correct such error and to compute the total amount bid by said bidder on the basis of the corrected figure or figures.

When the unit price of an item is required to be set forth in the Proposal, and the total for the item set forth separately does not agree with a figure derived by multiplying the item unit price times the Engineer's estimate of the quantity of work to be performed for said item, the item unit price shall prevail over the sum set forth as the total for the item unless, in the sole discretion of the City, such a procedure would be inconsistent with the policy of the City's bidding procedures. The total paid for each such item of work shall be based upon the item unit price and not the total price.

Should the Proposal contain only a total price for an item and the item unit price is omitted, the City shall determine the item unit price by dividing the total price of the item by the Engineer's estimate of the quantity of work to be performed for the item of work.

If the Proposal contains neither the item price nor the total price for the item, then it shall be deemed incomplete and the Proposal shall be disregarded.

It is understood that this bid is based upon completion of the work within a period of **Phase 1 two hundred ten (210) calendar; Phase 2 seven hundred thirty (730) calendar days** commencing on the date specified in the Notice to Proceed.

The amount of liquidated damages to be paid by the Contractor for failure to complete the work by the completion date (as extended, if applicable) shall be **five hundred dollars (\$500.00) for each calendar day**, continuing to the time at which the work is completed. Such amount is the actual cash value agreed upon as the loss to the City resulting from the default of the Contractor.

The undersigned represents and warrants that he/she has examined the location of the proposed work and is familiar with the conditions at the place where the work is to be done. The undersigned further represents that he/she has reviewed and understands the Plans, Special Provisions, and other contract documents, and the undersigned is satisfied with all conditions for the performance of the work.

Additionally, the undersigned shall include written documentation with the Sealed Proposal of previous satisfactory experience in the establishment of seeded native grass, in accordance with the following requirements:

- **Contractor shall have successfully completed at least 3 projects of similar scope and complexity within the past 5 years. Provide written documentation (maximum of 3 pages) including references, for such experience.**
- **A Sealed Proposal that does not include the above required documentation may be rejected as non-responsive.**

The undersigned has carefully checked all of the above figures and understands that the City of Sacramento will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

This proposal shall not be withdrawn for the time periods specified in Section 3-2 of the City of Sacramento Standard Specifications for award of contract to respective low bidders. This proposal is submitted in accordance with Chapter 3.60 of the Sacramento City Code and Sections 1, 2, and 3 of the City of Sacramento Standard Specifications.

In accordance with Standard Specification Section 3-2, the City shall award this contract to the lowest responsible bidder, if such award is made, within forty-five (45) working days after opening of the Proposals. The City reserves the right to reject any and all bids.

BID DEPOSIT ENCLOSED IN THE FOLLOWING FORM:

\$ _____ not less than ten (10) percent of amount bid.

____ CERTIFIED CHECK

____ MONEY ORDER

____ CASHIERS'S CHECK

____ BID BOND

FOR CITY USE ONLY

TYPE OF DEPOSIT

- Bid Bond
- Cashier/Certified Check
- Other _____

Reviewer's Initials: _____

CONTRACTOR

Addendum No. 1 _____

Addendum No. 2 _____ By: _____

(Signature)

Addendum No. 3 _____ Title: _____

Addendum No. 4 _____ Address: _____

No PO Box – Physical Address ONLY

City STATE ZIP Code

Telephone No. _____

Fax No. _____

Email _____

(Federal Tax ID # or Social Security #)

Under penalty of perjury, I certify that the Taxpayer Identification Number and all other information provided here are correct.

Valid Contractor's License No. _____, Classification _____ is held by the bidder.

Expiration date _____. Representation made herein are true and correct under penalty or perjury

PN: W14004101 (B123331009)

KNOW ALL MEN BY THESE PRESENTS,

That we, _____

as Principal, and _____

a corporation duly organized under the laws of the State of _____ and duly licensed to become sole surety on bonds required or authorized by the State of California, as Surety, are held and firmly bound unto the City of Sacramento, hereinafter called the City, in the penal sum of ten percent (10%) of the (BASE OR LUMP SUM) Proposal of the Principal above named, or other amount as set forth in the Invitation to Bidders, submitted by said Principal to the City 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 proposal to the City, for which Proposals are to be opened in the Office of the City Clerk, Historic City Hall, Hearing Room 2nd Floor, 915 I Street, Sacramento, California, on **September 7, 2011**, for the Work specifically described as follows:

FREEWAY LANDSCAPE BUFFER - PHASE 2
(PN: W14004101) (B123331009)

NOW, THEREFORE, if the aforesaid Principal is award the Agreement and within the time and manner required under the Contract Documents, enters into a written Agreement, in the prescribed form, in accordance with the Proposal, and files two (2) bonds with the City, one to guarantee faithful performance and the other to guarantee payment for labor and materials, and files the required insurance policies with the City, all as required by the Contract Documents or by law, then the obligation shall be null and void; otherwise it shall be and remain in full force and effect.

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, which sums shall be additional to the principal amount of this bond.

IN WITNESS THEREOF, We have hereunto set our hands and seal this _____ day of _____, 2011.

PRINCIPAL Seal

By: _____

Title

SURETY Seal

By _____

Title

Agent Name and Address

Agent Phone #

Surety Phone #

California License #

DRUG-FREE WORKPLACE POLICY AND AFFIDAVIT

BID MAY BE DECLARED NONRESPONSIVE IF THIS FORM (COMPLETED) IS NOT ATTACHED.
Pursuant to City Council Resolution CC90-498 dated 6/26/90 the following is required.

The undersigned contractor certifies that it and all subcontractors performing under this contract will provide a drug-free workplace by:

1. Publishing a "Drug-Free Workplace" statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Establishing a Drug-Free Awareness Program to inform employees about:
 - a. The dangers of drug abuse in the workplace.
 - b. The contractor's policy of maintaining a drug-free workplace.
 - c. Any available drug counseling, rehabilitation, and employee assistance program.
 - d. The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.
3. Notify employees that as a condition of employment under this contract, employees will be expected to:
 - a. Abide by the terms of the statement.
 - b. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace.
4. Making it a requirement that each employee to be engaged in the performance of the contract be given a copy on the "Drug-Free Workplace" statement.
5. Taking one of the following appropriate actions, within thirty (30) days of receiving notice from an employee or otherwise receiving such notice, that said employee has received a drug conviction for a violation occurring in the workplace:
 - a. Taking appropriate disciplinary action against such an employee, up to and including termination; or
 - b. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a federal, state, or local health, law enforcement or other appropriate agency.

* I certify that no person employed by this company, corporation, or business has been convicted of any criminal drug statute violation on any job site or project where this company, corporation, or business was performing work within three years of the date of my signature below.

EXCEPTION:

Date	Violation Type	Place of Occurrence
If additional space is required use back of this form.		

*The above statement will also be incorporated as a part of each subcontract agreement for any and all subcontractors selected for performance on this project.

IN THE EVENT THIS COMPANY, CORPORATION, OR BUSINESS IS AWARDED THIS CONSTRUCTION CONTRACT, AS A RESULT OF THIS BID; THE CONTRACTOR WITH HIS/HER SIGNATURE REPRESENTS TO THE CITY THAT THE INFORMATION DISCLOSED IN THIS DOCUMENT IS COMPLETE AND ACCURATE. IT IS UNDERSTOOD AND AGREED THAT FALSE CERTIFICATION IS SUBJECT TO IMMEDIATE TERMINATION BY THE CITY.

The Representations Made Herein On This Document Are Made Under Penalty Of Perjury.

CONTRACTOR'S NAME: _____

BY: _____ Date: _____
Signature Title

Effects of violations: a. Suspension of payments under this contract. b. Suspension or termination of the contract. c. Suspension or debarment of the contractor from receiving any contract from the City of Sacramento for a period not to exceed five years.
FM 681 7/10/9

MINIMUM QUALIFICATIONS QUESTIONNAIRE

Sacramento City Code Section 3.60.020 authorizes the Sacramento City Council to adopt standard minimum qualifications for bidders on competitively bid public works construction projects, and requires, among other provisions, that a bidder meet such minimum qualifications at the time of bid opening in order to bid. On July 31, 2007, the City Council adopted Resolution No. 2007-574 establishing these standard minimum qualifications. Pursuant to City Code section 3.60.020, a bidder failing to meet these minimum qualifications at the time of bid opening shall not be considered a responsible bidder for purposes of bidding on the subject project.

All bidders must demonstrate compliance with the minimum qualifications established by Resolution No. 2007-574 by completing all of the questions contained in this questionnaire. Bidder responses shall be limited to those operating business units, offices, branches and/or subsidiary divisions of the bidder that will be involved with the performance of any project work if awarded the contract. If a bidder answers "yes" to any single question, fails to submit a fully completed questionnaire, or submits false information, this will result in a determination that the minimum qualifications are not met, and the bidder shall not be considered a qualified bidder for purposes of bidding on this contract. If two or more entities submit a bid on a contract as a Joint Venture, each entity within the Joint Venture must separately meet these minimum qualifications for the Joint Venture to be considered a qualified bidder.

The City of Sacramento ("City") shall make its determination on the basis of the submitted questionnaire, as well as any relevant information that is obtained from others or as a result of investigation by the City. While it is the intent of this questionnaire to assist the City in determining whether bidders possess the minimum qualifications necessary to submit bids on the City's competitively bid public works construction contracts, the fact that a bidder submits a questionnaire demonstrating that it meets these minimum qualifications shall not in any way limit or affect the City's ability to: (1) review other information contained in the bid submitted by the bidder, and additional relevant information, and determine whether the contractor is a responsive and/or responsible bidder; or (2) establish pre-qualification requirements for a specific contract or contracts.

By submitting this questionnaire, the bidder consents to the disclosure of its questionnaire answers: (i) to third parties for purposes of verification and investigation; (ii) in connection with any protest, challenge or appeal of any action taken by the City; and (iii) as required by any law or regulation, including without limitation the California Public Records Act (Calif. Gov't Code sections 6250 et seq.). Each questionnaire must be signed under penalty of perjury in the manner designated at the end of the form, by an individual who has the legal authority to bind the bidder submitting the questionnaire. If any information provided by a bidder becomes inaccurate, the bidder shall immediately notify the City and provide updated accurate information in writing, under penalty of perjury.

QUESTIONNAIRE

NOTICE: For firms that maintain other operating business units, offices, branches and/or subsidiary divisions that will not be involved with the performance of any project work if the firm is awarded the contract, references hereafter to "your firm" shall mean only those operating business units, offices, branches and/or subsidiary divisions that will be involved with the performance of any project work.

All of the following questions regarding "your firm" refer to the firm (corporation, partnership or sole proprietor) submitting this questionnaire, as well as any firm(s) with which any of your firm's owners, officers, or partners are or have been associated as an owner, officer, partner or similar position within the last five years

The firm submitting this questionnaire shall not be considered a responsible bidder if the answer to any of these questions is "yes", or if the firm submits a questionnaire that is not fully completed or contains false information.

1. **Classification & Expiration Date(s) of California Contractor's License Number(s) held by firm:**

2. Has a contractor's license held by your firm and/or any owner, officer or partner of your firm been revoked at anytime in the last five years?
 Yes No
3. Within the last five years, has a surety firm completed a contract on your firm's behalf, or paid for completion of a contract to which your firm was a party, because your firm was considered to be in default or was terminated for cause by the project owner?
 Yes No
4. At the time of submitting this minimum qualifications questionnaire, is your firm ineligible to bid on or be awarded a public works contract, or perform as a subcontractor on a public works contract, pursuant to either California Labor Code section 1777.1 (prevailing wage violations) or Labor Code section 1777.7 (apprenticeship violations)?
 Yes No
5. At any time during the last five years, has your firm, or any of its owners, officers or partners been convicted of a crime involving the awarding of a contract for a government construction project, or the bidding or performance of a government contract?
 Yes No

6. Answer either subsection A or B, as applicable:

A. Your firm has completed three or more government construction contracts in Sacramento County within the last five years: Within those five years, has your firm been assessed liquidated damages on three or more government construction contracts in Sacramento County for failure to complete contract work on time?

NOTE: If there is a pending administrative or court action challenging the assessment of liquidated damages on a government contract within the last five years, you need not include that contract in responding to this question.

Yes

No

Not applicable

OR

B. Your firm has not completed at least three government construction contracts in Sacramento County within the last five years: Within the last three years, has your firm been assessed liquidated damages on three or more government construction contracts for failure to complete contract work on time?

NOTE: If there is a pending administrative or court action challenging an assessment of liquidated damages on a government contract within the last three years, you need not include that contract in responding to this question.

Yes

No

Not applicable

7. In the last three years has your firm been debarred from bidding on, or completing, any government agency or public works construction contract for any reason?

NOTE: If there is a pending administrative or court action challenging a debarment, you need not include that debarment in responding to this question.

Yes

No

8. Has CAL OSHA assessed a total of three or more penalties against your firm for any "serious" or "willful" violation occurring on construction projects performed in Sacramento County at any time within the last three years?

NOTE: If there is a pending administrative or court action appealing a penalty assessment, you need not include that penalty assessment in responding to this question.

Yes

No

9. Answer either subsection A or B, as preferred:

A. In the last three years has your firm had a three year average Workers' Compensation experience modification rate exceeding 1.1?

Yes No

OR

B. In the last three years has your firm had a three-year average incident rate for total lost workday cases exceeding 10?

NOTE: Incident rates represent the number of lost workday cases per 100 full-time workers and is to be calculated as: $(N/EH) \times 200,000$, where

N = number of lost workday cases (as defined by the U.S. Dept. of Labor, Bureau of Labor Statistics)
EH = total hours worked by all employees during the calendar year
200,000 = base for 100 equivalent full-time working (working 40 hours per week, 50 weeks per year)

Yes No

10. In the past three years, has the federal EPA, Region IX or a California Air Quality Management District or Regional Water Quality Control Board assessed penalties three or more times, either against your firm, or against the project owner for a violation resulting in whole or in part from any action or omission by your firm on a project on which your firm was a contractor in Sacramento County?

NOTE: If there is a pending administrative or court action appealing a penalty assessment, you need not include that penalty assessment in responding to this question.

Yes No

11. In the past three years, has the federal EPA, Region IX or a California Air Quality Management District or Regional Water Quality Control Board assessed a single penalty of \$100,000 or more, either against your firm, or against the project owner for a violation resulting in whole or in part from any action or omission by your firm on a project on which your firm was the contractor in Sacramento County?

NOTE: If there is a pending administrative or court action appealing a penalty assessment, you need not include that penalty assessment in responding to this question.

Yes No

12. In the past three years, have civil penalties been assessed against your firm pursuant to California Labor Code 1777.7 for violation of California public works apprenticeship requirements, three or more times?

NOTE: If there is a pending administrative or court action appealing a penalty assessment, you need not include that penalty assessment in responding to this question.

Yes No

13. In the past three years, has a public agency in California withheld contract payments or assessed penalties against your firm for violation of public works prevailing wage requirements, three or more times?

NOTE: If there is a pending administrative or court action appealing a withholding or penalty assessment, you need not include that withholding or penalty assessment in responding to this question.

Yes No

14. Has your firm been assessed penalties for violation of public works prevailing wage requirements in California, in an aggregate amount for the past three years of \$50,000 or more?

NOTE: If there is a pending administrative or court action appealing a penalty assessment, you need not include that penalty assessment in responding to this question.

Yes No

VERIFICATION AND SIGNATURE

I, the undersigned, certify and declare that I have read all the foregoing answers to this Minimum Qualifications Questionnaire, and know their contents. The matters stated in these Questionnaire answers are true of my own knowledge and belief, except as to those matters stated on information and belief, and as to those matters I believe them to be true. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signed at _____, on _____.
(Location) (Date)

Signature: _____

Print name: _____

Title: _____

NOTE: If two or more entities submit a bid on a contract as a Joint Venture, each entity within the Joint Venture must submit a separate Minimum Qualifications Questionnaire.

REQUIREMENTS OF THE NON-DISCRIMINATION IN EMPLOYEE BENEFITS CODE

INTRODUCTION

The Sacramento Non-Discrimination In Employee Benefits Code (the "Ordinance"), codified as Sacramento City Code Chapter 3.54, prohibits City contractors from discriminating in the provision of employee benefits between employees with spouses and employees with domestic partners, and between the spouses and domestic partners of employees.

APPLICATION

The provisions of the Ordinance apply to any contract or agreement (as defined below), between a Contractor and the City of Sacramento, in an amount exceeding \$25,000.00. The Ordinance applies to that portion of a contractor's operations that occur: (i) within the City of Sacramento; (ii) on real property outside the City of Sacramento if the property is owned by the City or if the City has a right to occupy the property; or (iii) at any location where a significant amount of work related to a City contract is being performed.

The Ordinance does not apply: to subcontractors or subcontracts of any Contractor or contractors; to transactions entered into pursuant to cooperative purchasing agreements approved by the Sacramento City Council; to legal contracts of other governmental jurisdictions or public agencies without separate competitive bidding by the City; where the requirements of the ordinance will violate or are inconsistent with the terms or conditions of a grant, subvention or agreement with a public agency or the instructions of an authorized representative of any such agency with respect to any such grant, subvention or agreement; to permits for excavation or street construction; or to agreements for the use of City right-of-way where a contracting utility has the power of eminent domain.

DEFINITIONS

As set forth in the Ordinance, the following definitions apply:

"Contract" means an agreement for public works or improvements to be performed, or for goods or services to be purchased or grants to be provided, at the expense of the City or to be paid out of moneys deposited in the treasury or out of the trust money under the control or collected by the City. "Contract" also means a written agreement for the exclusive use ("exclusive use" means the right to use or occupy real property to the exclusion of others, other than the right reserved by the fee owner) or occupancy of real property for a term exceeding 29 days in any calendar year, whether by singular or cumulative instrument, (i) for the operation or use by others of real property owned or controlled by the City for the operation of a business, social, or other establishment or organization, including leases, concessions, franchises and easements, or (ii) for the City's use or occupancy of real property owned by others, including leases, concessions, franchises and easements.

"Contract" shall not include: a revocable at-will use or encroachment permit for the use of or encroachment on City property regardless of the ultimate duration of such permit; excavation, street construction or street use permits; agreements for the use of City right-of-way where a contracting utility has the power of eminent domain; or agreements governing the use of City property that constitute a public forum for activities that are primarily for the purpose of espousing or advocating causes or ideas and that are generally protected by the First Amendment to the United States Constitution or that are primarily recreational in nature.

"Contractor" means any person or persons, firm partnership or corporation, company, or combination thereof, that enters into a Contract with the City. "Contractor" does not include a public entity.

"Domestic Partner" means any person who has a currently registered domestic partnership with a governmental entity pursuant to state or local law authorizing the registration.

"Employee Benefits" means bereavement leave; disability, life, and other types of insurance; family medical leave; health benefits; membership or membership discounts; moving expenses; pension and retirement benefits; vacation; travel benefits; and any other benefit given to employees. "Employee benefits" shall not include benefits to the extent that the application of the requirements of this chapter to such benefits may be preempted by federal or state.

CONTRACTOR'S OBLIGATION TO PROVIDE THE CITY WITH DOCUMENTATION AND INFORMATION

Contractor shall provide the City with documentation and information verifying its compliance with the requirements of the Ordinance within ten (10) days of receipt of a request from the City. Contractors shall keep accurate payroll records, showing, for each City Contract, the employee's name, address, Social Security number, work classification, straight time pay rate, overtime pay rate, overtime hours worked, status and exemptions, and benefits for each day and pay period that the employee works on the City Contract. Each request for payroll records shall be accompanied by an affidavit to be completed and returned by the Contractor, as stated, attesting that the information contained in the payroll records is true and correct, and that the Contractor has complied with the requirements of the Ordinance. A violation of the Ordinance or noncompliance with the requirements of the Ordinance shall constitute a breach of contract.

EMPLOYER COMPLIANCE CERTIFICATE AND NOTICE REQUIREMENTS

- (a) All contractors seeking a Contract subject to the Ordinance shall submit a completed Declaration of Compliance Form (attachment "A"), signed by an authorized representative, with each proposal, bid or application. The Declaration of Compliance shall be made a part of the executed contract, and will be made available for public inspection and copying during regular business hours.
- (b) The Contractor shall give each existing employee working directly on a City contract, and (at the time of hire), each new employee, a copy of the notification provided as attachment "B."
- (c) Contractor shall post, in a place visible to all employees, a copy of the notice provided as attachment "C."

**DECLARATION OF COMPLIANCE
Equal Benefits Ordinance**

Name of Contractor

Address

The above named contractor ("Contractor") hereby declares and agrees as follows:

1. I have read and understand the Requirements of the Non-Discrimination In Employee Benefits Code (the "Requirements") provided to me by the City of Sacramento ("City") in connection with the City's request for proposals or other solicitations for the performance of services, or for the provision of commodities, under a City contract or agreement ("Contract").
2. As a condition of receiving the City Contract, I agree to fully comply with the Requirements, as well as any additional requirements that may be specified in the City's Non-Discrimination in Employee Benefits Code codified at Chapter 3.54 of the Sacramento City Code (the "Ordinance").
3. I understand, to the extent that such benefits are not preempted or prohibited by federal or state law, employee benefits covered by the Ordinance, are any of the following:
 - a. Bereavement Leave
 - b. Disability, life, and other types of insurance
 - c. Family medical leave
 - d. Health benefits
 - e. Membership or membership discounts
 - f. Moving expenses
 - g. Pension and retirement benefits
 - h. Vacation
 - i. Travel benefits
 - j. Any other benefit offered to employees

I agree that should I offer any of the above listed employee benefits, that I will offer those benefits, without discrimination between employees with spouses and employees with domestic partners, and without discrimination between the spouses and domestic partners of such employees.

4. I understand that I will not be considered to be discriminating in the provision or application of employee benefits under the following conditions or circumstances:
 - a. In the event that the actual cost of providing a benefit to a domestic partner or spouse, exceeds the cost of providing the same benefit to a spouse or domestic partner of an employee, I will not be required to provide the benefit, nor shall it be deemed discriminatory, if I require the employee to pay the monetary difference in order to provide the benefit to the domestic partner or to the spouse.
 - b. In the event I am unable to provide a certain benefit, despite taking reasonable measures to do so, if I provide the employee with a cash equivalent, I will not be deemed to be discriminating in the application of that benefit.
 - c. If I provide employee benefits neither to employee's spouses nor to employee's domestic partners.
 - d. If I provide employee benefits to employees on a basis unrelated to marital or domestic partner status.
 - e. If I submit, to the Program Coordinator, written evidence of making reasonable efforts to end discrimination in employee benefits by implementing policies which are to be enacted before the

first effective date after the first open enrollment process following the date the Contract is executed with the City.

I understand that any delay in the implementation of such policies may not exceed one (1) year from the date the Contract is executed with the City, and applies only to those employee benefits for which an open enrollment process is applicable.

- f. Until administrative steps can be taken to incorporate, in the infrastructure, nondiscrimination in employee benefits

The time allotted for these administrative steps will apply only to those employee benefits for which administrative steps are necessary and may not exceed three (3) months from the date the Contract is executed with the City.

- g. Until the expiration of a current collective bargaining agreement(s) where, in fact, employee benefits are governed by a collective bargaining agreement(s).

- h. I take all reasonable measures to end discrimination in employee benefits by either requesting the union(s) involved agree to reopen the agreement(s) in order for me to take whatever steps are necessary to end discrimination in employee benefits or by my ending discrimination in employee benefits without reopening the collective bargaining agreement(s).

- i. In the event I cannot end discrimination in employee benefits despite taking all reasonable measures to do so, I provide a cash equivalent to eligible employees for whom employee benefits (as listed previously), are not available.

Unless otherwise authorized in writing by the City Manager, I understand this cash equivalent must begin at the time the union(s) refuse to allow the collective bargaining agreement(s) to be reopened or no longer than three (3) months from the date the Contract is executed with the City.

5. I understand that failure to comply with the provisions of Section 4. (a) through 4. (i), above, will subject me to possible suspension and/or termination of this Contract for cause; repayment of any or all of the Contract amount disbursed by the City; debarment for future contracts until all penalties and restitution have been paid in full; deemed ineligible for future contracts for up to two (2) years; the imposition of a penalty, payable to the City, in the sum of \$50.00 for each employee, for each calendar day during which the employee was discriminated against in violation of the provisions of the Ordinance.
6. I understand and do hereby agree to provide each current employee and, within ten (10) days of hire, each new employee, of their rights under the Ordinance. I further agree to maintain a copy of each such letter provided, in an appropriate file for possible inspection by an authorized representative of the City. I also agree to prominently display a poster informing each employee of these rights.
7. I understand that I have the right to request an exemption to the benefit provisions of the Ordinance when such a request is submitted to the Procurement Services Division, in writing with sufficient justification for resolution, prior to contract award.

I further understand that the City may request a waiver or exemption to the provisions or requirements of the Ordinance, when only one contractor is available to enter into a contract or agreement to occupy and use City property on terms and conditions established by the City; when sole source conditions exist for goods, services, public project or improvements and related construction services; when there are no responsive bidders to the Ordinance requirements and the contract is for essential goods or services; when emergency conditions with public health and safety implications exist; or when the contract is for specialized legal services if in the best interest of the City.

8. In consideration of the foregoing, I shall defend, indemnify and hold harmless, the City, its officers and employees, against any claims, actions, damages, costs (including reasonable attorney fees), or other liabilities of any kind arising from any violation of the Requirements or of the Ordinance by me.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am authorized to bind the Contractor to the provisions of this Declaration.

Signature of Authorized Representative

Date

Print Name

Title



**YOUR RIGHTS UNDER THE CITY OF SACRAMENTO'S
NON-DISCRIMINATION IN EMPLOYEE BENEFITS BY CITY CONTRACTORS ORDINANCE**

On (date), your employer (the "Employer") entered into a contract with the City of Sacramento (the "City") for (contract details), and as a condition of that contract, agreed to abide by the requirements of the City's Non-Discrimination In Employee Benefits By City Contractors Ordinance (Sacramento City Code Section 3.54).

The Ordinance does not require the Employer to provide employee benefits. The Ordinance does require that if certain employee benefits are provided by the Employer, that those benefits be provided without discrimination between employees with spouses and employees with domestic partners, and without discrimination between the spouse or domestic partner of employees.

The Ordinance covers any employee working on the specific contract referenced above, but only for the period of time while those employees are actually working on this specific contract.

The included employee benefits are:

- Bereavement leave
- Disability, life and other types of insurance
- Family medical leave
- Health benefits
- Membership or membership discounts
- Moving expenses
- Pension and retirement benefits
- Vacation
- Travel benefits
- Any other benefits given to employees

(Employee Benefits does not include benefits that may be preempted by federal or state law.)

If you feel you have been discriminated or retaliated against by your employer in the terms and conditions of your application for employment, or in your employment, or in the application of these employee benefits, because of your status as an applicant or as an employee protected by the Ordinance, or because you reported a violation of the Ordinance, and after having exhausted all remedies with your employer,

You May . . .

- Submit a written complaint to the City of Sacramento, Contract Services Unit, containing the details of the alleged violation. The address is:

City of Sacramento
Contract Services Unit
915 I St., 2nd Floor
Sacramento, CA 95814

- Bring an action in the appropriate division of the Superior Court of the State of California against the Employer and obtain the following remedies:
 - Reinstatement, injunctive relief, compensatory damages and punitive damages
 - Reasonable attorney's fees and costs



YOUR RIGHTS UNDER THE CITY OF SACRAMENTO'S
NON-DISCRIMINATION IN EMPLOYEE BENEFITS BY CITY CONTRACTORS ORDINANCE

If your employer provides employee benefits, they must be provided to those employees working on a City of Sacramento contract without discriminating between employees with spouses and employees with domestic partners.

The included employee benefits are:

- Bereavement leave
- Disability, life and other types of insurance
- Family medical leave
- Health benefits
- Membership or membership discounts
- Moving expenses
- Pension and retirement benefits
- Vacation
- Travel benefits
- Any other benefits given to employees

If you feel you have been discriminated against by your employer . . .

You May . . .

- o Submit a written complaint to the City of Sacramento, Contract Services Unit, containing the details of the alleged violation. The address is:

City of Sacramento
Contract Services Unit
915 I St., 2nd Floor
Sacramento, CA 95814
- o Bring an action in the appropriate division of the Superior Court of the State of California against the employer and obtain reinstatement, injunctive relief, compensatory damages, punitive damages and reasonable attorney's fees and costs.

Discrimination and Retaliation Prohibited.

If you feel you have been discriminated or retaliated against by your employer in the terms and conditions of your application for employment, or in your employment, because of your status as an applicant or as an employee protected by the Ordinance, or because you reported a violation of this Ordinance . . .

You May Also . . .

Submit a written complaint to the City of Sacramento, Contract Services Unit, at the same address, containing the details of the alleged violation.

Construction and Demolition (C&D) Debris Recycling Requirements

As a condition of receiving this Contract, Contractor agrees to fully comply with the requirements specified herein for all demolition projects, as well as projects with a valuation of \$250,000 or more:

1. **Definitions.** For purposes of this section, the following terms, words and phrases shall have the following meanings:

"Certified C&D sorting facility" means a facility that receives C&D debris and/or processes C&D debris into its component material types for reuse, recycling, and disposal of residuals and possesses a valid certificate as a C&D sorting facility from the Sacramento Regional County Solid Waste Authority.

"Construction and demolition debris" or "C&D debris" means used or commonly discarded materials resulting from construction, repair, remodel or demolition operations on any pavement, house, building, or other structure, or from landscaping that are not hazardous as defined in California Health and Safety Code section 25100 et seq. Such materials include, but are not limited to, concrete, asphalt, wood, metal, brick, dirt, sand, rock, gravel, plaster, glass, gypsum wallboard, cardboard and other associated packaging, roofing material, ceramic tile, carpeting, masonry, plastic pipe, trees, and other vegetative matter resulting from land clearing and landscaping.

"Divert" or "diversion" means to use materials for any purpose other than disposal in a landfill or transformation facility. Methods to divert materials include on-site reuse of the materials, delivery of materials from the project site to a certified C&D sorting facility or a recycling facility, or other methods as approved in regulations promulgated by the City Department of Utilities.

"Franchised waste hauler" means a person who possesses a valid commercial solid waste collection franchise issued by the Sacramento Regional County Solid Waste Authority.

"Mixed C&D debris" means loads that include commingled recyclable and non-recyclable C&D debris generated at a project site.

"Recyclable C&D debris" means C&D debris required to be diverted from landfills as specified in the Waste Management Plan and returned to the economic mainstream in the form of raw material for new, reused or reconstituted products that meet the quality standards necessary to be used in the marketplace.

"Recycling facility" means a facility or operation that receives, processes, and transfers source-separated recyclable materials.

"Source-separated C&D debris" means recyclable C&D debris that is separately sorted and containerized at the site of generation by individual material type and segregated from mixed C&D debris prior to collection and transporting.

"Waste log" means a record detailing the management of C&D debris generated by the covered project, including the date and weight/volume of material by type that was salvaged, reused, recycled or disposed.

2. **Waste Management Plan.** A completed WMP (see **Attachment 1**) must be submitted to and approved by the City prior to commencing any work on the project. The WMP must specify the types of C&D debris that will be generated from the project; the manner in which C&D debris will be managed and/or stored on the project site; the manner in which recyclable C&D debris generated from the project will be recycled or reuse; the person who will haul, collect or transport the recyclable C&D debris from the project site; and the certified C&D sorting facility or recycling facility where recyclable C&D debris will be delivered. The WMP must be approved by the City prior to commencing any work on the project.

3. Contractor shall be solely responsible for diverting the recyclable C&D materials specified on the WMP. Mixed C&D debris shall be delivered to a SWA-certified C&D sorting facility only. Only the permit holder, the person who generates the waste, a franchised waste hauler, or the City of Sacramento can transport or haul mixed C&D debris. Source-separated C&D debris may be delivered by any person to any recycling facility that accepts such materials. (See **Attachment 2** for list of C&D Debris Haulers and Facilities).

4. During the course of the project, Contractor shall maintain a waste log (see Attachment 3), and keep all weight tickets or weight receipts, for all C&D debris hauled away from the project. At a minimum, the waste log shall specify the C&D debris generated by the project; the manner in which C&D debris was recycled or re-used; and the facility where the C&D debris was delivered.

5. Within 30 days after submitting the project completion report, Contractor shall submit to the City a completed waste log, along with copies of supporting weight tickets. Contractor shall maintain and keep accurate and complete records of all bills, weight receipts or weight tickets that were issued for the collection, transport or disposal of C&D debris for a period of one-year after submittal of the waste log. The records shall be made available for inspection, examination and audit by the City during the one-year retention period to validate the information provided in the WMP and in the waste log. If the City determines noncompliance by the Contractor after an audit has been conducted, Contractor shall reimburse the City for all costs incurred in performing the audit.

6. Failure by Contractor to comply with any provisions specified herein will subject Contractor to possible suspension and/or termination of this Contract for cause; repayment of any or all of the Contract amount disbursed by the City; imposition of a penalty, payable to the City (\$50-\$250 for first offense, \$251-\$500 for second offense, and \$501-\$1500 for subsequent offenses); and/or submission of a performance security deposit fee when submitting a permit application to the City for a project within one year of imposition of the penalty.

For questions or to obtain more information about the Recycling Requirements for C&D debris, contact the City of Sacramento, Solid Waste Services Division, 2812 Meadowview Road, Building 1, Sacramento, CA 95832, or telephone (916) 808-4833, or email C&D@cityofsacramento.org

C&D Debris Waste Management Plan

C&D Debris Waste Management Plan
City of Sacramento Solid Waste Services
2812 Meadowview Road, Building 1
Sacramento, CA 95832
Phone: (916) 808-4839 / Fax: (916) 808-4999
C&D@cityofsacramento.org

Form
submitted by:

Please attach a business card, or put your name with a phone number and/or an email address.

This Waste Management Plan (WMP) must be submitted and approved before work can begin. Only one WMP is required for each public construction project. The administration fee and, if applicable, a security deposit must be submitted with this form to be approved. Administration fee is 0.04% of project bid amount (min \$40, max \$800); security deposit, if applicable, is 1% of bid amount (max \$10,000). The accompanying Waste Log must be submitted within 30 days of the project completion report, or a penalty may be imposed.

A. Building Project Information:

Job Address: _____
Contractor: _____
Address: _____

Engineering
Estimate: _____
Phone: _____
Email: _____

B. Briefly describe the project:

C. Materials Required to be Recycled

50% of all debris must be recycled if generated during the course of your project. You can either source-separate them, which may be hauled by anyone, or mix them in one container and send the mixed C&D debris load to a Certified Mixed C&D Sorting Facility. Mixed C&D loads can only be hauled by a franchised hauler or self-hauled. Please see the Definitions section, on the next page, for more information.

50%
of all debris
must be recycled

D. Material Management.

1. How will C&D debris will be stored on the project site: _____ Mixed C&D _____ Source-Separated
2. Company to haul away debris: _____
3. Facilities to receive debris: _____

C&D Debris Waste Management Plan

C&D Debris Waste Management Plan
City of Sacramento Solid Waste Services
2812 Meadowview Road, Building 1
Sacramento, CA 95832
Phone: (916) 808-4839 / Fax: (916) 808-4999
C&D@cityofsacramento.org

E. Definitions.

Please read and understand these terms. Call Solid Waste at (916) 808-4833 if these terms are not clear to you. More information is also available online at <http://www.cityofsacramento.org/utilities/>.

1. **Self-haul or self-hauling:** This is when the general contractor or a subcontractor who is doing work on the project hauls their own waste materials for recycling or disposal. Note that a jobsite cleanup crew is not doing other work on the project and is not self-hauling. Jobsite cleanup crews need to be franchised in order to haul mixed C&D debris away.
2. **Franchised hauler:** Check the Department of Utilities (DOU) website for a list of these haulers. Only these companies and the City of Sacramento can collect and haul mixed C&D debris generated within the City for a fee.
3. **Source separation:** This means keeping wood, metal, cardboard, or other recyclables in separate containers, and sending the materials to an authorized recycler. A list of authorized recyclers can be found on the DOU web site. Source-separated materials may be hauled by anyone.
4. **Mixed C&D debris:** This means putting all recyclable debris into one container. Mixed materials must be sent to a certified mixed C&D sorting facility. Mixed materials may be either self-hauled or hauled by a franchised hauler. If your job site is crowded, this option saves the most space.
5. **Certified Mixed C&D Sorting Facility:** See the DOU web site for a list. These facilities have been certified by the Sacramento Regional Solid Waste Authority (SWA) to extract recyclable materials from mixed C&D debris.

F. Terms and Conditions

- Your approved Waste Management Plan and Waste Log must be kept on the job site for the duration of the project.
- City of Sacramento Solid Waste Services staff may enter the jobsite to inspect waste collection areas.
- **ALL Clean Wood Waste** (unpainted, untreated lumber, plywood and OSB), **Inert Materials** (concrete, asphalt paving, brick, block, and dirt), **Wooden Pallets**, **Scrap Metal**, and **Corrugated Cardboard** must be recycled.
- Only SWA-Certified Mixed C&D Sorting Facilities may be used to recycle these materials if mixed with other materials.
- Only the City of Sacramento, SWA-Franchised Haulers, or self-haulers (as defined above) may collect and transport mixed C&D material from the jobsite.
- C&D Debris may not be burned or dumped illegally.
- Your Waste Log must be completed and submitted, with supporting weight tickets, within 30 days of submitting your project completion report. All waste hauling and disposal or recycling activity must be entered on the Waste Log, including information from any subcontractors who self-hauled their own debris off-site.
- You must keep all receipts or weight-tickets from your project for a period of one year from the submittal of your waste log.
- Failure to comply with these terms and conditions may result in a fine and payment of a security deposit on future projects

C&D Debris Haulers & Facilities

C&D Debris Waste Management Plan
City of Sacramento Solid Waste Services
2812 Meadowview Road, Building 1
Sacramento, CA 95832
Phone: (916) 808-4833 / Fax: (916) 808-4999
C&D@cityofsacramento.org

Certified Mixed C&D Facilities

Allied Waste / Elder Creek Transfer and Recovery	(916) 387-8425
Florin-Perkins Public Disposal	(916) 443-5120
L&D Landfill	(916) 737-8640
Waste Management / K&M Recycle America	(916) 452-0142

Franchised Haulers

ACES Waste Services, Inc.	(866) 488-8837	Elk Grove Waste Management, LLC	(916) 689-4052
Allied Waste Services	(916) 631-0600	Mini Drops, Inc.	(916) 686-8785
All Waste Systems, Inc.	(916) 456-1555	Norcal Waste Services of Sacramento	(916) 381-5300
Atlas Disposal Industries, LLC	(916) 455-2800	North West Recyclers	(916) 686-8575
California Waste Recovery Systems	(916) 441-1985	Waste Management of Sacramento	(916) 387-1400
Central Valley Waste Services, Inc.	(209) 369-8274	Waste Removal & Recycling	(916) 453-1400
City of Sacramento Solid Waste	(916) 808-4839	Western Strategic Materials, Inc.	(916) 388-1076

Recyclers*		Recovery Stations & Landfills	
Bell Marine	(916) 442-9089	Elder Creek Recovery & Transfer Station	(916) 387-8425
C & C Paper Recycling	(916) 920-2673	Kiefer Landfill	(916) 875-5555
EBI Aggregates	(916) 372-7580	L & D Landfill	(916) 383-9420
International Paper	(916) 371-4634	North Area Recovery Station	(916) 875-5555
Modern Waste Solutions	(916) 447-6800	Sacramento Recycling & Transfer Station	(916) 379-0500
PRIDE Industries, Inc.	(916) 640-1300	Waste Management Recycle America	(916) 452-0142
Recycling Industries, Inc.	(916) 452-3961		
Sacramento Local Conservation Corps	(916) 386-8394		
Smurfit-Stone Container Corporation	(916) 381-3340		
Southside Art Center	(916) 387-8080		
Spencer Building Maintenance, Inc.	(916) 922-1900		

More updated information can be found online at:
<http://www.cityofsacramento.org/utilities/>

* Please note that any facility may receive source-separated recyclable materials as long as it is authorized to do so by the State of California. This is not meant to be a complete list.

Voluntary Green Contracting Fleet Inventory List (On-Road Equipment)

In partnership with the City of Sacramento and the Sacramento Metropolitan Air Quality Management District

**Green Contracting Survey
(Voluntary)**

The City of Sacramento and the Sacramento Metropolitan Air Quality District (SMAQMD) are conducting a joint pilot project to help meet Federal Clean Air Standards for the Sacramento region.

Attached is a Green Contracting Fleet Inventory Form. Please complete the form, remove it from the bid package and return it to SMAQMD in the postage paid envelope provided with the bid package. Please do not return the Green Contracting Fleet Inventory Form to the City of Sacramento with the bid documents or otherwise.

A limited amount of funds and other financial incentives may be available to qualified contractors participating in this joint project to assist qualified contractors with upgrading and/or replacing equipment and/or trucks.

Completing and returning the Green Contracting Fleet Inventory Form is strictly voluntary

Voluntary Green Contracting Fleet Inventory List (On-Road Equipment)

In partnership with the City of Sacramento and the Sacramento Metropolitan Air Quality Management District

Company Name:

Contact Name:

Company Address:

City, State, ZIP:

Company Phone:

City Bid Information	
Department	<input type="text"/>
Project #	<input type="text"/>
ESBE/SBE?	<input type="text"/>

Instructions:

- Please enter the vehicle / equipment information for each unit used in conjunction with your City of Sacramento Bid.
- All fields are required for both on-road heavy-duty vehicles and off-road construction equipment over 50 HP.
- Electronic version available at <http://www.airquality.org/ceqa/index.shtml>
For additional questions, please call (916) 874-4892
- 4892

Please Submit To:

Kristian Damkier, P.E.
 Sacramento Metropolitan AQMD
 777 12th St, 3rd Floor
 Sacramento, CA 95814-1908

#	VIN	License Plate	Vehicle Information			Engine Information				Annual Usage (miles)	Received Funding
			Make	Model	Year	Make	Model	Year	HP		
(ex)	1XP5AAC35RG339402	1T45678	Kenworth	T-300	2002	Cummins	ISB	2002	250	35,000	No

Voluntary Green Contracting Fleet Inventory List (On-Road Equipment)

In partnership with the City of Sacramento and the Sacramento Metropolitan Air Quality Management District

Company Name:

Contact Name:

Company Address:

City, State, ZIP:

Company Phone:

City Bid Information	
Department	<input type="text"/>
Project #	<input type="text"/>
ESBE/SBE?	<input type="text"/>

Instructions:

- a) Please enter the vehicle / equipment information for each unit used in conjunction with your City of Sacramento Bid.
- b) All fields are required for both on-road heavy-duty vehicles and off-road construction equipment over 50 HP.
Electronic version is available at <http://www.airquality.org/ceqa/index.shtml>
- c) For additional questions, please call (916) 874-4892
- d) 4892

Please Submit To:
Kristian Damkier, P.E. Sacramento Metropolitan AQMD 777 12th St, 3rd Floor Sacramento, CA 95814-1908

Equipment Serial Number	Equipment Information				Engine Information				Annual Usage (hours)
	Make	Model	Type	Year	Make	Model	Year	HP	
48W34456	Caterpillar	631G	Scraper	2003	Caterpillar	3408E	2003	485	1,600

Guidelines for City of Sacramento Boycott of Arizona and Arizona-Headquartered Businesses

Sacramento City Council Resolution No. 2010-346 calls for a boycott of the State of Arizona and businesses headquartered in Arizona. The boycott provisions prohibit employee travel to Arizona at City expense, and restrict the purchase of goods and services with Arizona headquartered businesses.

Resolution No. 2010-346 provides that "where **practicable** and where there is no **significant** additional cost to the City, the City of Sacramento shall not enter into any new, amended, extended or supplemental contracts to purchase or procure goods or services from any business or entity that is **headquartered** in Arizona ..."

The guidelines below are provided to city staff for implementing the Resolution.

• Definitions

- **Headquartered:** State in which a company is headquartered. This may be different than the state of incorporation, where subsidiaries are located. You may determine a company headquarters from the declaration provided in a solicitation response or by calling the company directly.
- **Practicable:** The proposed or existing vendor can be replaced without interruption to services and/or supplies, and the replacement of the vendor does not adversely affect the Sacramento economy. For example, excluding a company headquartered in Arizona, but with a Sacramento-area office would not be practicable, as it would adversely affect the local economy. The cost of transition should not be significant.
- **Significant:** Costs that exceed the following percentages or dollar thresholds:
 - o For contracts valued \$250k and less – the lesser of 10% or \$25k
 - o For contracts valued between \$250k and \$1m – the lesser of 10% or \$100k
 - o For contracts valued between \$1m and 10m – the lesser of 8% or \$100k
 - o For contracts valued at \$10m and more – the lesser of 6% or 100k
- **Related companies, subcontractors:** The policy applies only to the company with which the City enters into a contract.

• Exceptions Checklist

If the lowest bidder is headquartered in Arizona, in order to have a valid exception to the boycott Resolution, you must be able to answer yes to **at least** one of the following questions:

- Is the difference between the low bid and the second low bid "significant"? (see definitions) OR if the vendor has a current contract and we evaluating a renewal, is there a significant cost to switch vendors?
- Does the lowest bidder have a local office in Sacramento, providing benefit to the local economy, if awarded the contract?
- Is the vendor the sole-source for this particular service/commodity?
- Is the contract award or extension in the "best interest of the City" for reasons not listed above?

City of Sacramento Boycott of Arizona-Headquartered Businesses

On June 15, 2010, the Sacramento City Council adopted Resolution No. 2010-346 opposing two Arizona laws (SB 1070 and HB 2162) that will allow Arizona police to arrest individuals suspected of being unlawfully present in the United States and to charge immigrants with a state crime for not carrying immigration documents. Sacramento City Council Resolution No. 2010-346 also called for a boycott of the State of Arizona and businesses headquartered in Arizona until Arizona repeals or a court nullifies SB 1070 and HB 1262. Resolution No. 2010-346 provides, in pertinent part, that "where practicable and where there is no significant additional cost to the City, the City of Sacramento shall not enter into any new, amended, extended or supplemental contracts to purchase or procure goods or services from any business or entity that is headquartered in Arizona ..."

Pursuant to the provisions of Resolution No. 2010-346, the City may determine that a bid from a business or entity that is headquartered in Arizona is nonresponsive and the City may reject the bid on that basis.

Bidders that are headquartered in the United States shall certify in the space below the state where the bidder is headquartered:

State Where Firm is Headquartered

Signature of Authorized Representative

Date

Print Name

Title

This Page to be completed and submitted with bid proposal

ESBE REQUIREMENTS

(City Contracts no Federal Funds Used)

I. ESBE PARTICIPATION REQUIREMENT

On February 9, 1999, the Sacramento City Council adopted an Emerging and Small Business Development (ESBD) program to provide enhanced opportunities for the participation of small business enterprises (SBEs) and emerging business enterprises (EBEs) in the City's contracting and procurement activities. The ESBD program establishes an annual emerging and small business enterprise (ESBE) participation goal for the City's contracts, and authorizes City departments to require minimum ESBE participation levels in individual contracts so that the annual ESBE participation goal can be met. Under City Code section 3.60.270, when the bid specifications for a City contract establishes a minimum participation level for ESBEs, no bidder on the contract shall be considered a responsive bidder unless its bid meets the minimum ESBE participation level required by the bid specifications.

The City has established a **minimum 20% participation level for ESBEs on this contract**. Pursuant to City code Section 3.60.270, no bidder on this contract shall be considered a responsive bidder unless its bid meets or exceeds this minimum participation level.

Bidders shall include copies of their Certification as a SBE or EBE and the SBE or EBE Certifications for each subcontractor, trucker, material supplier, or other business entity listed on the forms submitted within two (2) working days of submitting the sealed proposal. Failure to submit the required ESBE information will be grounds for finding the bid non-responsive.

II. ESBE CERTIFICATION

- A. A SBE designated in the bid must be certified as such by the State of California, Department of General Services, or by the City, as defined herein, prior to the time bids are received.
- B. An EBE designated in the bid must be certified as such by the City, as defined herein, prior to the time bids are received.

III. DETERMINATION OF ESBE PARTICIPATION LEVEL

- A. The percent of ESBE participation shall be determined based on the dollar value of the work to be performed or supplies to be furnished by certified ESBEs designated in the bidder's Subcontractor and ESBE Participation Verification Form, relative to the total dollar amount of the bid.
- B. To receive credit for participation, an ESBE must perform a commercially useful function; i.e., must be responsible for the execution of a distinct element of the work and must carry its responsibility by actually performing, managing, or supervising the work.

- C. ESBE Bidders: The dollar value listed for an ESBE bidder on the bidder's Subcontractor and ESBE Participation Verification Form shall include only the amount of work to be performed by the ESBE bidder, and shall not include any amount to be paid by the ESBE bidder for the cost of materials or supplies.
- D. Suppliers: Credit for an ESBE vendor of materials or supplies is counted as one hundred (100) percent of the amount paid to the vendor for the material or supplies. To receive this credit, ESBE vendors of supplies and materials must be listed on the bidder's Subcontractor and ESBE Participation Verification Form.
- E. Truckers: Credit for an ESBE trucker is counted as one hundred (100) percent of the amount paid to the trucker for trucking services, not including any amount paid to the trucker for the cost of any materials or supplies being transported by the trucker.
- F. Subcontractors (including truckers): To receive credit for an ESBE subcontractor, the subcontractor must be listed on the bidder's Subcontractor and ESBE Participation Verification Form. The dollar value listed for a subcontractor on the bidder's Subcontractor and ESBE Participation Verification Form shall not include any amount to be paid to the subcontractor for the cost of materials or supplies.

IV. **ESBE REQUIREMENTS FOR CONTRACTOR**

- A. ESBE Records: The Contractor shall maintain records of all subcontracts with certified ESBE subcontractors and records of materials purchased from certified ESBE vendors/suppliers for one (1) year after receiving final payment from the City. Such records shall show the name and business address of each ESBE subcontractor or vendor/supplier and the total dollar amount actually paid each ESBE subcontractor or vendor/supplier.

Upon completion of the contract, a summary of these records shall be prepared, certified correct by the Contractor's authorized representative and furnished to the City. The Contractor shall provide such other information, records, reports, certifications or other documents as may be required by City, to determine compliance with any provision of the ESD program or these specifications.

- B. Reporting Requirements and Sanctions: Failure to provide specific information, records, reports, certifications, or any other documents required for compliance with these specifications shall be considered noncompliance with the contract. If the Contractor fails to correct a deficiency within fifteen (15) days after notification, a deduction may be made from the contract amount. The deduction shall be ten (10) percent of the estimated value of the work performed during the month, not to be less than \$1,000 nor exceed \$10,000 and shall be deducted from the next progress payment.
- C. Performance of ESBE Subcontractors and Suppliers: The ESBEs listed by the Contractor shall perform the work and supply the materials for which they are listed unless the Contractor has received prior written authorization from the City to perform the work with other forces or to obtain the material from other sources. Reasons for requesting such authorization would include:

1. The listed ESBE fails to execute a written contract based upon the general terms, conditions, plans, and specifications for the project.
2. The listed ESBE becomes bankrupt or insolvent.
3. The listed ESBE subcontractor fails to meet the bond requirements of the Contractor.
4. The work performed by the listed ESBE subcontractor is unsatisfactory and/or is not in accordance with the plans and specifications, or the subcontractor fails to perform his/her obligations under the subcontractor contract.
5. It would be in the best interest of the City.

The Contractor shall not be entitled to any payment for such work or materials unless it is performed or supplied by the listed SBE or EBE or other forces (including those of the Contractor) authorized by the City in writing.

- D. Subcontractor Substitution: No substitution of an ESBE subcontractor shall be made at any time without compliance with the Subcontracting Listing Law and the written consent of the City. If an ESBE subcontractor is unable to perform successfully and is to be replaced, the Contractor will be required to make good faith efforts to replace the original ESBE subcontractor with another certified ESBE subcontractor. The new ESBE subcontractor must be certified at the time of substitution.

V. DEFINITIONS

- A. **Emerging Business Enterprise (EBE)**: The City shall certify EBEs utilizing the small business certification criteria and standards of the State of California, General Services Department, Office of Small Business Certification and Resources, that were in effect on December 1, 1998, provided that the size standard, industry by industry, shall be set at 50% of the State small business certification criteria and standards that were in effect on December 1, 1998.
- B. **Small Business Enterprise (SBE)**: The City shall certify SBEs utilizing the small business certification criteria and standards of the State of California, General Services Department, Office of Small Business Certification and Resources. The City will also accept State certified SBEs.
- C. **Contractor**: The individual, partnership, corporation, joint venture or other legal entity entering into a contract with the City of Sacramento.
- D. **Subcontractor**: The individual, partnership, corporation, or other legal entity entering into a contract with the prime contractor to perform a portion of the work.

FOLLOWING FORMS TO BE FILLED OUT AND SIGNED

ONLY

IF AWARDED CONTRACT

WORKER'S COMPENSATION INSURANCE CERTIFICATION

TO THE CITY OF SACRAMENTO:

The undersigned does hereby certify that he is aware of the provisions of Section 3700 et seq. of the Labor Code which require every employer to be insured against liability for worker's compensation claims or to undertake self-insurance in accordance with the provisions of said Code, and that he/she will comply with such provisions before commencing the performance of the work on this contract.

_____ Bidder

BY: _____

Title: _____

Address: _____

_____ Date: _____

PLEASE READ CAREFULLY BEFORE SIGNING

To be signed by authorized corporate officer or partner or individual submitting the bid. If bidder is: (example)

1. An individual using a firm name, sign: "John Doe, and individual doing business as Blank Company".
2. An individual doing business under his own name, sign: Your name only.
3. A co-partnership, sign: "John Doe and Richard Doe, co-partners doing business as Blank Company, by, John Doe, Co-Partner".
4. A corporation, sign: "Blank Company, by John Doe, Secretary". (Or other title)

AGREEMENT
(Construction Contract Over \$25,000)

THIS AGREEMENT, dated for identification _____, 20__, is made and entered into between the CITY OF SACRAMENTO, a municipal corporation ("City"), and

("Contractor").

The City and Contractor hereby mutually agree as follows:

1. CONTRACT DOCUMENTS

The Contract Documents, sometimes also referred to as the "Contract," consist of the following items, which are hereby incorporated by reference as if set forth in full in this Agreement:

- The Notice to Contractors
- The Proposal Form submitted by the Contractor
- The Instructions to Bidders
- The Emerging and Small Business Enterprise (ESBE) Requirements
- The Requirements for the Non-Discrimination in Employee Benefits by City Contractors Ordinance and the Declaration of Compliance
- The City's Reference Guide for Construction Contracts
- The Addenda, if any
- This Agreement
- The Standard Specifications
- The Special Provisions
- The Plans and Technical Specifications
- The drawings and other data and all developments thereof prepared by City pursuant to the Contract
- Any modifications of any of the foregoing made or approved by City, including but not limited to duly authorized change orders.

Unless specifically noted otherwise, references to the "Standard Specifications" shall mean and refer to the Standard Specifications for Public Construction of the City of Sacramento approved by the Sacramento City Council on June 4, 2007 (Resolution No. 2007-350), and any subsequent amendments thereto approved by the Sacramento City Council or the Sacramento City Manager. Work called for in any one Contract Document and not mentioned in another is to be performed and executed as if mentioned in all Contract Documents. The table of contents, titles and headings contained in the Contract Documents are provided solely to facilitate reference to various provisions of the Contract Documents and in no way affect or limit the interpretation of the provisions to which they refer.

2. DEFINITIONS

Unless otherwise specifically provided herein, all words and phrases defined in the Standard Specifications shall have the same meaning and intent in this Agreement.

3. AGREEMENT CONTROLS

In the event of a conflict between any of the terms and conditions set forth in this Agreement and the terms and conditions set forth in other Contract Documents, the terms

and conditions set forth in this Agreement shall prevail, except that the provisions of any duly authorized change order shall prevail over any conflicting provisions of this Agreement.

4. SCOPE OF CONTRACT

Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor, material and transportation necessary to perform and complete in a good and workmanlike manner to the satisfaction of City, all the Work called for in the Contract Documents entitled:

FREEWAY LANDSCAPE BUFFER - PHASE 2 (PN:W14004101)

including the Work called for in the following alternative bid items described in the Proposal Form:

Contractor agrees to perform such Work in the manner designated in and in strict conformity with the Contract Documents.

5. CONTRACT AMOUNT AND PAYMENTS

City agrees to pay and Contractor agrees to accept, as complete payment for the above Work, in accordance with the schedule and procedures set forth in the Contract Documents and subject to deductions, withholdings and additions as specified in the Contract Documents, a total sum that shall not exceed the total bid amount set forth in Contractor's Proposal Form. In addition, subject to deductions, withholdings and additions as specified in the Contract Documents, payment for individual items of the Work shall be computed as follows:

(A) For items of the Work for which a lump sum price is specified in Contractor's Proposal Form, Contractor shall be paid the lump sum price(s) specified in Contractor's Proposal Form; and

(B) For items of the Work for which a unit price is specified in Contractor's Proposal Form, Contractor shall be paid the sum computed at such unit price, or computed at a different price if such different price is determined by City in accordance with the Standard Specifications, based on the actual amount of each such item performed and/or furnished and incorporated in the Work; provided that in no event shall the total sum for a unit price item exceed the total bid amount set forth for such item in the Contractor's Proposal Form, unless authorized by Change Order.

6. PROGRESS PAYMENTS

Subject to the terms and conditions of the Contract, City shall cause payments to be made upon demand of Contractor as follows:

(A) On or about the first of the month, the Engineer shall present to the Contractor a statement showing the amount of labor and materials incorporated in the Work through the twentieth (20) calendar day of the preceding month. After both Contractor and Engineer approve the statement in writing, and the City's labor compliance officer provides written approval, the City shall issue a certificate for ninety (90) percent of the

amount it shall find to be due, subject to any deductions or withholdings authorized or required under the Contract or any applicable Laws or Regulations.

(B) No inaccuracy or error in said monthly estimates shall operate to release Contractor from damages arising from such Work or from enforcement of each and every provision of the Contract Documents, and City shall have the right subsequently to correct any error made in any estimate for payment.

(C) Contractor shall not be paid for any defective or improper Work.

(D) The remaining ten (10) percent of the value of the Work performed under the Contract, if unencumbered and subject to any deductions or withholdings authorized or required under the Contract or any applicable Laws or Regulations, shall be due and payable beginning thirty-five (35) days after completion and final acceptance of the Work by City; provided that the City may determine, in its sole discretion, to release up to fifty (50) % of such retention, in whole or in part, at any time. Acceptance by Contractor of the final payment shall constitute a waiver of all claims against the City arising under the Contract Documents, except for disputed claims in stated amounts that the Contractor specifically reserves in writing, but only to the extent that the Contractor has complied with all procedures and requirements applicable to the presentation and processing of such claim(s) under the Contract Documents. Contractor shall be entitled to substitute securities for retention or to direct that payments of retention be made into escrow, as provided in Public Contract Code Section 22300, upon execution of the City's Escrow Agreement for Security Deposits in Lieu of Retention.

(E) The parties agree that, for purposes of the timely progress payment requirements specified in Public Contract Code Section 20104.50, the date that the City receives a statement jointly approved by the Contractor and the Engineer as provided above shall be deemed to constitute the date that City receives an undisputed and properly submitted payment request from the Contractor. Progress payments not made within 30 days after this date may be subject to payment of interest as provided in Section 20104.50.

7. RETENTION OF SUMS CHARGED AGAINST CONTRACTOR

When, under the provisions of this Contract or any applicable Laws or Regulations, City is authorized or required to withhold, deduct or charge any sum of money against Contractor, City may deduct and retain the amount of such charge from the amount of the next succeeding progress estimate(s), or from any other moneys due or that may become due Contractor from City. If, on completion or termination of the Contract, sums due Contractor are insufficient to pay City's charges, City shall have the right to recover the balance from Contractor or its Sureties.

8. COMMENCEMENT AND PROSECUTION OF WORK

Contractor shall commence the Work not later than fifteen (15) working days after the date of the written Notice to Proceed from City to Contractor and shall diligently prosecute the Work to final completion. The phrase "commence the Work" means to engage in a continuous program on-site including, but not limited to, site clearance, grading, dredging, land filling and the fabrications, erection, or installation of the Work. The Notice to Proceed shall be issued within fifteen (15) calendar days following execution of the Agreement by the City and the filing by Contractor of the required Bonds and proof of insurance, provided that the Engineer may delay issuance of the Notice to Proceed if the Engineer determines in the Engineer's sole discretion that conditions on the site of the

Work are unsuitable for commencement of the Work. After the Notice to Proceed is issued, the continuous prosecution of Work by Contractor shall be subject only to Excusable Delays as defined in this Agreement.

9. TIME OF COMPLETION

The entire Work shall be brought to completion in the manner provided for in the Contract Documents on or before: Phase 1 two hundred ten (210) calendar; Phase 2 seven hundred thirty (730) calendar days from the date of the Notice to Proceed (hereinafter called the "Completion Date") unless extensions of time are granted in accordance with the Contract Documents.

Failure to complete the entire Work by the Completion Date and in the manner provided for in the Contract Documents shall subject Contractor to liquidated damages as provided in this Agreement. Time is and shall be of the essence in the performance of the Contract and the Work.

10. PAYMENTS DO NOT IMPLY ACCEPTANCE OF WORK

The payment of any progress payment, or the acceptance thereof by Contractor, shall not constitute acceptance of the Work or any portion thereof and shall in no way reduce the liability of Contractor to replace unsatisfactory work or material, whether or not the unsatisfactory character of such work or material was apparent or detected at the time such payment was made.

11. ACCEPTANCE NOT RELEASE

Contractor shall correct immediately any defective or imperfect work or materials that may be discovered before final acceptance of the entire Work, whether or not such defect or imperfection was previously noticed or identified by the City. The inspection of the Work, or any part thereof, shall not relieve Contractor of any of its obligations to perform satisfactory work as herein specified.

Failure or neglect on the part of City or any of its officers, employees or authorized agents to discover, identify, condemn or reject defective or imperfect work or materials shall not be construed to imply an acceptance of such work or materials, if such defect or imperfection becomes evident at any time prior to final acceptance of the entire Work, nor shall such failure or neglect be construed as barring City from enforcing Contractor's warranty(ies) or otherwise recovering damages or such a sum of money as may be required to repair or rebuild the defective or imperfect work or materials whenever City may discover the same, subject only to any statutes of limitation that may apply to any such claim.

12. CITY'S RIGHT TO TAKE POSSESSION OF THE WORK IN WHOLE OR IN PART

The City shall have the right at any time to enter upon the Work and perform work not covered by this Contract, or to occupy and use a portion of the Work, prior to the date of the final acceptance of the Work as a whole, without in any way relieving Contractor of any obligations under this Contract.

13. NO WAIVER OF REMEDIES

Neither the inspection by City, its officers, employees or agents, nor any certificate or other approval for the payment of money, nor any payment for, nor acceptance of the whole or any part of the Work by City, nor any extensions of time, nor any position taken by City, its officers, employees or its agents shall operate as a waiver of any provision of the Contract Documents nor of any power herein reserved to City or any right to damages herein provided, nor shall any waiver of any breach of this Agreement be held to be a waiver of any other or subsequent breach. All remedies provided in the Contract Documents shall be taken and construed as cumulative; in addition to each and every other remedy herein provided, the City shall have any and all equitable and legal remedies that it would in any case have.

14. WARRANTY

Except as otherwise expressly provided in the Contract Documents, and excepting only items of routine maintenance, ordinary wear and tear and unusual abuse or neglect by City, Contractor warrants and guarantees all Work executed and all supplies, materials and devices of whatsoever nature incorporated in or attached to the Work, or otherwise provided as a part of the Work pursuant to the Contract, to be absolutely free of all defects of workmanship and materials for a period of one year after final acceptance of the entire Work by the City. Contractor shall repair or replace all work or material, together with any other work or material that may be displaced or damaged in so doing, that may prove defective in workmanship or material within this one year warranty period without expense or charge of any nature whatsoever to City.

In the event that Contractor shall fail to comply with the conditions of the foregoing warranty within ten (10) days after being notified of the defect in writing, City shall have the right, but shall not be obligated, to repair, or obtain the repair of, the defect and Contractor shall pay to City on demand all costs and expense of such repair. Notwithstanding anything herein to the contrary, in the event that any defect in workmanship or material covered by the foregoing warranty results in a condition that constitutes an immediate hazard to public health or safety, or any property interest, or any person, City shall have the right to immediately repair, or cause to be repaired, such defect, and Contractor shall pay to City on demand all costs and expense of such repair. The foregoing statement relating to hazards to health, safety or property shall be deemed to include both temporary and permanent repairs that may be required as determined in the sole discretion and judgment of City.

In addition to the above, the Contractor shall make a written assignment of all manufacturer's and other product warranties to the City, prior to completion and final acceptance of the Work by City.

The Contractor's Performance Bond shall secure the performance of the Contractor's obligations under this Section 14, and the Contractor and its Surety shall be jointly and severally liable for these obligations.

15. LIQUIDATED DAMAGES IF WORK NOT COMPLETED ON TIME

(A) The actual fact of the occurrence of damages and the actual amount of the damages that City would suffer if the entire Work, and/or any specified portion thereof, were not completed within the time(s) specified herein are dependent upon many circumstances and conditions that could prevail in various combinations, and for this

reason, it is impracticable and extremely difficult to fix the actual damages. Damages that City would suffer in the event of such delay include: loss of the use of the project; expenses of prolonged assignment to the project of an architectural and/or engineering staff; prolonged costs of administration, inspection, and supervision; increased operational expenses and/or impaired operation of other facilities dependent upon completion of the project; and the loss and inconvenience suffered by the public within the City of Sacramento by reason of the delay in the completion of the project or portion thereof. Accordingly, the parties agree, and by execution of this Agreement, Contractor acknowledges that it understands and agrees, that the amount(s) set forth herein as liquidated damages reflect the parties' best efforts at the time of entering into the Contract to estimate the damages that may be incurred by City and the public due to the Contractor's delay in completion of the Work and/or any specified portion thereof, and shall be presumed to be the amount of damages sustained by the failure of Contractor to complete the entire Work and/or any specified portion thereof within the time(s) specified herein.

(B) Contractor shall pay liquidated damages to City for failure to complete the entire Work by the Completion Date (as extended in accordance with the Contract Documents, if applicable) in the amount of five hundred dollars (\$500.00) for each calendar day after the Completion Date (as extended in accordance with the Contract Documents, if applicable), continuing to the time at which the entire Work is completed. Such amount is the actual cash value agreed upon by the City and Contractor as the loss to City and the public resulting from Contractor's default.

The parties agree, and by execution of this Agreement, Contractor acknowledges that it understands and agrees, that the foregoing provisions provide for the imposition of liquidated damages from the Completion Date (as extended in accordance with the Contract Documents, if applicable) until the date of completion of the entire Work as determined by the Engineer in accordance with Section 8-4 of the Standard Specifications, whether or not the Work or any portion thereof is claimed or determined to be substantially complete prior to such date of completion.

(C) In the event Contractor shall become liable for liquidated damages, City, in addition to all other remedies provided by law, shall have the right to withhold any and all payments that otherwise would be or become due Contractor until the liability of Contractor under this section is finally determined. City shall have the right to use and apply such payments, in whole or in part, to reimburse City for all liquidated damages due or to become due to City. Any remaining balance of such payments shall be paid to Contractor only after discharge in full of all liability incurred by Contractor under this section or otherwise under any provision of the Contract Documents or any applicable Law or Regulation. If the sum so retained by City is not sufficient to discharge all such liabilities of Contractor, Contractor shall continue to remain liable to City until all such liabilities are satisfied in full. No failure by City to withhold any payment as specified above shall in any manner be construed to constitute a release of any such liabilities nor a waiver of the City's right to withhold payment for such liabilities.

16. INDEMNITY AND HOLD HARMLESS

(A) Contractor shall defend, hold harmless and indemnify the City, its officers, employees, and agents, and each and every one of them, from and against any and all actions, damages, costs, liabilities, claims, demands, losses, judgments, penalties, costs and expenses of every type and description, whether arising on or off the site of the Work, including, but not limited to, any fees and/or costs reasonably incurred by City's staff

attorneys or outside attorneys and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as "Liabilities"), including but not limited to Liabilities arising from personal injury or death, damage to personal, real or intellectual property or the environment, contractual or other economic damages, or regulatory penalties, arising out of or in any way connected with performance of or failure to perform the Work by the Contractor, any subcontractor or agent, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, whether or not (i) such Liabilities are caused in part by a party indemnified hereunder, or (ii) such Liabilities are litigated, settled or reduced to judgment; provided that the foregoing indemnity does not apply to liability for damages for death or bodily injury to persons, injury to property, or other loss, damage or expense to the extent arising from (i) the sole negligence or willful misconduct of, or defects in design furnished by, City, its agents, servants, or independent contractors who are directly responsible to City, or (ii) the active negligence of City.

(B) The existence or acceptance by City of any of the insurance policies or coverages described in this Agreement shall not affect or limit any of City's rights under this Section 16, nor shall the limits of such insurance limit the liability of Contractor hereunder. The provisions of this Section 16 shall survive any expiration or termination of the Contract.

17. CONTRACTOR SHALL ASSUME RISKS

Until the completion and final acceptance by City of all Work under this Contract, the Work shall be under Contractor's responsible care and charge, and Contractor, at no cost to City, shall rebuild, repair, restore and make good all injuries, damages, re-erections, and repairs occasioned or rendered necessary by accidental causes of any nature, to all or any portions of the Work.

18. GENERAL LIABILITY OF CONTRACTOR

Except as otherwise herein expressly stipulated, Contractor shall perform all the Work and furnish all the labor, materials, tools, equipment, apparatus, facilities, transportation, power and light, and appliances, necessary or proper for performing and completing the Work herein required in the manner and within the time herein specified. The mention of any specific duty or liability of Contractor shall not be construed as a limitation or restriction of any general liability or duty of Contractor, and any reference to any specific duty or liability shall be construed to be solely for the purpose of explanation.

19. INSURANCE

During the entire term of this Contract and until completion and final acceptance of the Work as provided in the Contract Documents, Contractor shall maintain in full force and effect the insurance coverage described in this section.

Full compensation for all premiums that Contractor is required to pay for the insurance coverage described herein shall be included in the compensation specified for performance of the Work under the Contract. No additional compensation will be provided for Contractor's insurance premiums.

It is understood and agreed by the Contractor that its liability to the City shall not in any way be limited to or affected by the amount of insurance coverage required of or carried

by the Contractor.

(A) Minimum Scope and Limits of Insurance Coverage

(1) Commercial General Liability Insurance, providing coverage at least as broad as ISO CGL Form 00 01 on an occurrence basis for bodily injury, including death, of one or more persons, property damage and personal injury, with limits of not less than one million dollars (\$1,000,000) per occurrence. The policy shall provide contractual liability and products and completed operations coverage for the term of the policy.

(2) Automobile Liability Insurance providing coverage at least as broad as ISO Form CA 00 01 on an occurrence basis for bodily injury, including death, of one or more persons, property damage and personal injury, with limits of not less than one million dollars (\$1,000,000) per occurrence. The policy shall provide coverage for owned, non-owned and/or hired autos as appropriate to the operations of the Contractor.

(3) Workers' Compensation Insurance with statutory limits, and Employers' Liability Insurance with limits of not less than one million dollars (\$1,000,000). The Worker's Compensation policy shall include a waiver of subrogation.

(B) Additional Insured Coverage

(1) Commercial General Liability Insurance: The City, its officials, employees and volunteers shall be covered by policy terms or endorsement as additional insureds as respects general liability arising out of activities performed by or on behalf of Contractor, products and completed operations of Contractor, and premises owned, leased or used by Contractor. The general liability additional insured endorsement must be signed by an authorized representative of the insurance carrier.

If the policy includes a blanket additional insured endorsement or contractual additional insured coverage, the above signature requirement may be fulfilled by submitting that document with a signed declaration page referencing the blanket endorsement or policy form.

(2) Automobile Liability Insurance: The City, its officials, employees and volunteers shall be covered by policy terms or endorsement as additional insureds as respects auto liability.

(C) Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

(1) Contractor's insurance coverage shall be primary insurance as respects City, its officials, employees and volunteers. Any insurance or self-insurance maintained by City, its officials, employees or volunteers shall be in excess of Contractor's insurance and shall not contribute with it.

(2) Any failure to comply with reporting provisions of the policies shall not affect

coverage provided to City, its officials, employees or volunteers.

(3) Coverage shall state that Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(4) City will be provided with thirty (30) days written notice of cancellation or material change in the policy language or terms.

(D) Acceptability of Insurance

Insurance shall be placed with insurers with a Bests' rating of not less than A:V. Self-insured retentions, policy terms or other variations that do not comply with the requirements of this Section 19 must be declared to and approved by the City Risk Management Division in writing prior to execution of this Agreement.

(E) Verification of Coverage

(1) Contractor shall furnish City with certificates and required endorsements evidencing the insurance required. The certificates and endorsements shall be forwarded to the City representative designated by City. Copies of policies shall be delivered to the City on demand. Certificates of insurance shall be signed by an authorized representative of the insurance carrier.

(2) The City may withdraw its offer of contract or cancel the Contract if the certificates of insurance and endorsements required have not been provided prior to execution of this Agreement. The City may withhold payments to Contractor and/or cancel the Contract if the insurance is canceled or Contractor otherwise ceases to be insured as required herein.

(F) Subcontractors

Contractor shall require and verify that all subcontractors maintain insurance coverage that meets the minimum scope and limits of insurance coverage specified in subsection A, above.

20. **FAILURE TO MAINTAIN BONDS OR INSURANCE**

If, at any time during the performance of this Contract, Contractor fails to maintain any item of the bonds and/or insurance required under the Contract in full force and effect, Contractor shall immediately suspend all work under the Contract and notify City in writing of such failure. After such notice is provided, or if City discovers such failure and notifies Contractor, the City thereafter may withhold all Contract payments due or that become due until notice is received by City that such bonds and/or insurance have been restored in full force and effect and that the premiums therefor have been paid for a period satisfactory to the Division of Risk Management. Contractor shall not resume work until notified by City to do so, and the City shall have no responsibility or liability for any costs incurred by Contractor as a result of such suspension of Work.

In addition to the foregoing, any failure to maintain any item of the required bonds and/or insurance at any time during the performance of this Contract will be sufficient cause for termination of the Contract by City.

The Contractor shall be solely responsible for, and shall defend, indemnify and hold harmless the City, its officers, employees and agents against and from, any and all damages, claims, losses, actions, costs or other expenses of any kind incurred by any party as a direct or indirect result of any suspension of Work or termination of the Contract under the provisions of this Section.

21. EXCUSABLE DELAYS

For the purpose of these Contract Documents, the term "Excusable Delay" shall mean, and is limited to, delay caused directly by: acts of God; acts of a public enemy; fires; inclement weather as determined by the Engineer; riots; insurrections; epidemics; quarantine restrictions; strikes; lockouts; sitdowns; acts of a governmental agency; priorities or privileges established for the manufacture, assemble, or allotment of materials necessary in the Work by order, decree or otherwise of the United States or by any department, bureau, commission, committee, agent, or administrator of any legally constituted public authority; changes in the Work ordered by City insofar as they necessarily require additional time in which to complete the Work; the prevention of Contractor from commencing or prosecuting the Work because of the acts of others, excepting Contractor's subcontractors or suppliers; or the prevention of Contractor from commencing or prosecuting the Work because of a Citywide failure of public utility service.

The term "Excusable Delay" shall specifically not include: (i) any delay that could have been avoided by the exercise of care, prudence, foresight and diligence on the part of Contractor; (ii) any delay in the prosecution of any part of the Work that does not constitute a Controlling Operation, whether or not such delay is unavoidable; (iii) any reasonable delay resulting from time required by City for review of any Contractor submittals and for the making of surveys, measurements and inspection; and, (iv) any delay arising from an interruption in the prosecution of the Work on account of reasonable interference by other Contractors employed by City that does not necessarily prevent the completion of the entire Work within the time specified. Excusable Delays, if any, shall operate only to extend the Completion Date (not in excess of the period of such delay as determined by City) and shall not under any circumstances increase the amount City is required to pay Contractor except as otherwise provided in these Contract Documents.

22. CONTRACTOR TO SERVE NOTICE OF DELAYS

Whenever Contractor foresees any delay in the prosecution of the Work, and in any event as soon as possible (not to exceed a period of ten (10) calendar days) after the initial occurrence of any delay that Contractor regards as or may later claim to be an Excusable Delay, the Contractor shall notify the Engineer in writing of such delay and its cause, in order that the Engineer: (i) may take immediate steps to prevent if possible the occurrence or continuance of the delay; or (ii) if this cannot be done, may determine whether the delay is to be considered excusable, how long it continues, and to what extent the prosecution and completion of the Work are delayed thereby. Said written notice shall constitute an application for an extension of time only if the notice requests such an extension and sets forth the Contractor's estimate of the additional time required together with a full description of the cause of the delay relied upon.

After the completion of any part or whole of the Work, the Engineer, in estimating the amount due Contractor, will assume that any and all delays that may have occurred in its prosecution and completion were not Excusable Delays, except for such delays for which the Contractor has provided timely written notice as required herein, and that the Engineer has found to be excusable. Contractor shall not be entitled to claim Excusable Delay for any delay for which the Contractor failed to provide such timely written notice.

23. EXTENSION OF TIME

If the Contractor complies with Section 22, above, and the Engineer finds a delay claimed by the Contractor to be an Excusable Delay, the Contractor shall be allowed an extension of time to complete the Work that is proportional to the period of Excusable Delay determined by the Engineer, subject to the approval by City of a change order granting such time extension. During a duly authorized extension for an Excusable Delay, City shall not charge liquidated damages against the Contractor for such delay.

If the City extends the time to complete the Work as provided herein, such extension shall in no way release any warranty or guarantee given by Contractor pursuant to the provisions of the Contract Documents, nor shall such extension of time relieve or release the sureties of the Bonds provided pursuant to the Contract Documents. By executing such Bonds, the Sureties shall be deemed to have expressly agreed to any such extension of time. The granting of any extension of time as provided herein shall in no way operate as a waiver on the part of City of its rights under this Contract, excepting only extension of the Completion Date for such period of Excusable Delay as may be determined by the Engineer and approved by a duly authorized change order.

24. NO PAYMENT FOR DELAYS

No damages or compensation of any kind shall be paid to Contractor or any subcontractor because of delays in the progress of the Work whether or not such delays qualify for extension of time under this Agreement; except that this provision shall not preclude the recovery of damages for a delay caused by the City that is unreasonable under the circumstances and that is not within the contemplation of the parties, provided that the Contractor timely submits all such written notice(s) and fully complies with such other procedures as may be specified in the Contract Documents or any Laws or Regulations for Contractor to claim damages for such delay.

25. CHANGES IN THE WORK

Changes in the Work authorized or directed in accordance with the Contract Documents and extensions of time of completion made necessary by reason thereof shall not in any way release any warranty or guarantee given by Contractor pursuant to the provisions of the Contract Documents, nor shall such changes in the Work relieve or release the Sureties on Bonds provided pursuant to the Contract Documents. By executing such Bonds, the Sureties shall be deemed to have expressly agreed to any such change in Work and to any extension of time made by reason thereof.

26. TERMINATION AFTER COMPLETION DATE

In addition to any other rights City may have, if any services or work required under the Contract (including but not limited to punch list items) are not completed as of the Completion Date (as adjusted by any extensions of time for Excusable Delays granted pursuant to the Contract Documents), City may terminate the Contract at any time after

the Completion Date (as adjusted by any extensions of time for Excusable Delays granted pursuant to the Contract Documents), by providing a written notice to Contractor specifying the date of termination. Such notice also may specify conditions or requirements that Contractor must meet to avoid termination of the Contract on such date. If Contractor fails to fulfill all such conditions and requirements by such termination date, or, if no such conditions or requirements are specified, Contractor shall cease rendering services and performing work on such termination date, and shall not be entitled to receive any compensation for services rendered or work performed after such termination date. In the event of such termination, Contractor shall remain liable to City for liquidated damages incurred for any period of time prior to the termination date.

In addition to any other charges, withholdings or deductions authorized under the Contract or any Laws or Regulations, if City terminates the Contract pursuant to this section, City may withhold and deduct from any payment and/or retention funds otherwise due Contractor any sum necessary to pay the City's cost of completing or correcting, or contracting for the completion or correction of, any services or work under the Contract that are not completed to the satisfaction of the City or that otherwise are deficient or require correction as of such termination date, including but not limited to incomplete punch list items. Such costs shall include all of the City's direct and indirect costs incurred to complete or correct such services or work, including the City's administrative and overhead costs. If the amount of payment(s) and/or retention funds otherwise due the Contractor are insufficient to pay such costs, City shall have the right to recover the balance of such costs from the Contractor and/or its Surety(ies).

27. TERMINATION FOR CONVENIENCE

Upon written notice to the Contractor, the City may at any time, without cause and without prejudice to any other right or remedy of the City, elect to terminate the Contract for the convenience of City. In such case, the Contractor shall be paid (without duplication of any items, and after deduction and/or withholding of any amounts authorized to be deducted or withheld by the Contract Documents or any Laws or Regulations):

(A) For Work executed in accordance with the Contract Documents prior to the effective date of termination and determined to be acceptable by the Engineer, including fair and reasonable sums for overhead and profit on such Work;

(B) For reasonable claims, costs, losses, and damages incurred in settlement of terminated contracts with subcontractors, suppliers, and others; and

(C) For reasonable expenses directly attributable to termination.

Contractor shall not be paid for any loss of anticipated profits or revenue for any Work not performed prior to termination, nor for any economic loss arising out of or resulting from such termination, except for the payments listed in this section. Contractor's warranty under Section 14 of this Agreement shall apply, and Contractor shall remain responsible for all obligations related to such warranty, with respect to all portions of the Work performed prior to the effective date of the termination for convenience pursuant to this section. The City shall be entitled to have any or all remaining Work performed by other contractors or by any other means at any time after the effective date of a termination for convenience pursuant to this section.

28. TERMINATION FOR BREACH OF CONTRACT

If Contractor abandons the Work under this Contract, or if the Contract or any portion of the Contract is sublet or assigned without the consent of the City, or if the Engineer determines in the Engineer's sole discretion that the conditions of the Contract in respect to the rate of progress of the Work are not being fulfilled or any part thereof is unnecessarily delayed, or if Contractor violates or breaches, or fails to execute in good faith, any of the terms or conditions of the Contract, or if Contractor refuses or fails to supply enough properly skilled labor or materials or refuses or fails to make prompt payment to subcontractors for material or labor, or if Contractor disregards any Laws or Regulations or proper instruction or orders of the Engineer, then, notwithstanding any provision to the contrary herein, the City may give Contractor and its Sureties written notification to immediately correct the situation or the Contract shall be terminated.

In the event that such notice is given, and, in the event such situation is not corrected, or arrangements for correction satisfactory to the City are not made, within ten (10) calendar days from the date of such notice or within such other period of time as may be specified by the City in the notice, the Contract shall upon the expiration of said period cease and terminate. In the event of any such termination, City may take over the Work and prosecute the Work to completion, or otherwise, and the Contractor and its Sureties shall be liable to City for any cost occasioned City thereby, as hereinafter set forth.

In the event City completes the Work, or causes the Work to be completed, no payment of any kind shall be made to Contractor until the Work is complete. The cost of completing the Work, including but not limited to, extra costs of project administration and management incurred by City, both direct or indirect, shall be deducted from any sum then due, or that becomes due, to Contractor from City. If sums due to Contractor from City are less than the cost of completing the Work, Contractor and its Sureties shall pay City a sum equal to this difference on demand. In the event City completes the Work, and there is a sum remaining due to Contractor after City deducts the costs of completing the Work, then City shall pay such sum to Contractor. The Contractor and Contractor's Sureties shall be jointly and severally liable for all obligations imposed on Contractor hereunder.

No act by City before the Work is finally accepted, including, but not limited to, exercise of other rights under the Contract, actions at law or in equity, extensions of time, payments, assessments of liquidated damages, occupation or acceptance of any part of the Work, waiver of any prior breach of the Contract or failure to take action pursuant to this section upon the happening of any prior default or breach of Contractor, shall be construed to be a waiver or estoppel of the City's right to act pursuant to this Section upon any subsequent event, occurrence or failure by Contractor to fulfill the terms and conditions of the Contract. The rights of City to terminate the Contract pursuant to this Section and pursuant to Sections 26 and 27 are cumulative and are in addition to all other rights of City pursuant to the Contract and at law or in equity.

29. CONTRACTOR BANKRUPT

If Contractor should commence any bankruptcy proceeding, or if Contractor is adjudged a bankrupt, or if Contractor makes any assignment for the benefit of creditors, or if a receiver is appointed on account of Contractor's insolvency, then the City may, without prejudice to any other right or remedy, terminate the Contract and complete the work by giving notice as provided in Section 28 above.

30. SURETIES' OBLIGATIONS UPON TERMINATION

If the City terminates the Contract pursuant to Section 28 or Section 29 above:

(A) The Surety under Contractor's performance bond shall be fully responsible for all of the Contractor's remaining obligations of performance under the Contract as if the Surety were a party to the Contract, including without limitation Contractor's obligations, as provided in the Contract Documents, to complete and provide a one-year warranty of the entire Work, pay liquidated damages and indemnify, defend and hold harmless City, up to the full amount of the performance bond.

(B) The Surety under Contractor's payment bond shall be fully responsible for the performance of all of the Contractor's remaining payment obligations for work, services, equipment or materials performed or provided in connection with the Work or any portion thereof, up to the full amount of the payment bond.

31. ACCOUNTING RECORDS OF CONTRACTOR

During performance of the Contract and for a period of three (3) years after completing the entire Work, Contractor shall maintain all accounting and financial records related to the Contract and performance of the Work in accordance with generally accepted accounting practices, and shall keep and make such records available for inspection and audit by representatives of the City upon reasonable written notice.

32. USE TAX REQUIREMENTS

(A) Use Tax Direct Payment Permit For all leases and purchases of materials, equipment, supplies, or other tangible personal property used to perform the Contract and shipped from outside California, the Contractor and any subcontractors leasing or purchasing such materials, equipment, supplies or other tangible personal property shall obtain a Use Tax Direct Payment Permit from the California State Board of Equalization ("SBE") in accordance with the applicable SBE criteria and requirements.

(B) Sellers Permit For any construction contract and any construction subcontract in the amount of \$5,000,000 or more, Contractor and the subcontractor(s) shall obtain sellers permits from the SBE and shall register the jobsite as the place of business for the purpose of allocating local sales and use tax to the City. Contractor and its subcontractors shall remit the self-accrued use tax to the SBE, and shall provide a copy of each remittance to the City.

(C) The above provisions shall apply in all instances unless prohibited by the funding source for the Contract.

IN WITNESS WHEREOF, the parties hereto have signed this Agreement on the date set for opposite their names.

CONTRACTOR

Under penalty of perjury, I certify that the taxpayer identification number and all other information provided here are correct.

DATE _____

BY _____

Print Name

Title

BY _____

Print Name

Title

Federal ID#

State ID#

City of Sacramento Business Operation Tax Certificate No. (City will not award contract until Certificate Number is obtained)

Type of Business Entity (*check one*):

- _____ Individual/Sole Proprietor
- _____ Partnership
- _____ Corporation
- _____ Limited Liability Company
- _____ Other

(please

specify: _____)

CITY OF SACRAMENTO
a municipal corporation

DATE _____

BY _____

For: William H. Edgar, Interim City Manager

Original Approved As To Form:

Attest:

City Attorney

**CITY OF SACRAMENTO
PERFORMANCE BOND**
Department of Utilities

Bond #: _____
Premium: _____
Page 1 of 1

WHEREAS, the City of Sacramento, in the State of California, hereinafter called City has conditionally awarded to (*here insert full name and address of Contractor*):

as principal, hereinafter called Contractor, an agreement for construction of:

**FREEWAY LANDSCAPE BUFFER - PHASE 2
(PN: W14004101) (B123331009)**

in accordance with the plans, specifications, drawings, conditions, and project manual prepared therefore, which agreement is by reference made a part hereof, and is hereinafter referred to as the Contract; and

WHEREAS, under the terms of the Contract, Contractor is required to furnish a bond for the faithful performance of the Contract.

NOW, THEREFORE, we the Contractor and (*here insert full name and address of Surety*):

_____, a corporation duly authorized and admitted to transact business and issue surety bonds in the State of California, hereinafter called Surety, are held and firmly bound unto the City, as obligee, in the sum of _____ DOLLARS \$ _____), for the payment of which sum well and truly to be made, we the Contractor and Surety bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally. The condition of this obligation is such that, if the Contractor, Contractor's heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and fully perform all covenants, conditions and agreements required to be kept and performed by Contractor in the Contract and any changes, additions or alterations made thereto, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meanings, and shall indemnify and save harmless the City, its officers, employees and agents, as therein provided, then this obligation shall be null and void; otherwise shall be and remain in full force and effect. This obligation shall remain in full force and effect until (1) the date that the Contractor no longer has any remaining obligation of performance under the Contract, or (2) the date that is one year after the date that the work to be performed under the Contract is accepted as complete by the City, whichever occurs later.

As part of the obligation secured hereby and in addition to the sum specified above, there shall be included all costs, expenses and fees, including attorney's fees, reasonably incurred by City in successfully enforcing such obligation, all to be taxed as costs and included in any judgement rendered.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder, or to the specifications accompanying the same, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by authorized representatives of the Contractor and Surety.
SIGNED AND SEALED on _____, 2011.

(Contractor) (Seal)

By _____

Title _____

ORIGINAL APPROVED AS TO FORM:

City Attorney

(Surety) (Seal)

By _____

Title _____

Agent Name and Address _____

Agent Phone # _____

Surety Phone # _____

California License # _____

Surety Email: _____

CITY OF SACRAMENTO
PAYMENT BOND
Department of Utilities

Bond No: _____
Premium: _____
Page 1 of 1

WHEREAS, the City of Sacramento, in the State of California, hereinafter called City, has conditionally awarded to:

hereinafter called Contractor, an agreement for construction of:

FREEWAY LANDSCAPE BUFFER - PHASE 2
(PN: W14004101) (B123331009)

in accordance with the plans, specifications, drawings, conditions, and project manual prepared therefor, which agreement is by reference made a part hereof, and is hereinafter referred to as the Contract; and

WHEREAS, under the terms of the Contract, Contractor is required to furnish a good and sufficient payment bond to secure the claims to which reference is made in Title 15(commencing with Section 3082) of Part 4 of Division 3 of the California Civil Code.

NOW, THEREFORE, we the Contractor and (*here insert full name and address of Surety*):

_____, a corporation duly authorized and admitted to transact business and issue surety bonds in the State of California, hereinafter called Surety, are held and firmly bound unto the City, and unto all subcontractors, laborers, materialmen and other persons employed in the performance of the Contract and referred to in the aforesaid Civil Code in the sum of _____ DOLLARS (\$_____), on the condition that if Contractor shall fail to pay for any materials or equipment furnished or used in performance of the Contract, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Franchise Tax Board from the wages of employees of the Contractor and all subcontractors with respect to such work or labor, then the Surety shall pay the same in an amount not exceeding the sum specified above. If suit is brought upon this bond, Surety shall pay, in addition to the above sum, all costs, expenses and fees, including attorney's fees, reasonably incurred by any party in successfully enforcing the obligation secured hereby, all to be taxed as costs and included in any judgment rendered. Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect, and shall bind Contractor, Surety, their heirs, executors, administrators, successors and assigns, jointly and severally.

It is hereby stipulated and agreed that this bond shall inure to the benefit of all persons, companies, corporations, political subdivisions and State agencies entitled to file claim under Title 15 (commencing with Section 3082) of Part 4 of Division 3 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond. The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or to the specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by authorized representatives of the Contractor and Surety. SIGNED AND SEALED on _____, 2011.

(Contractor) (Seal)

By _____

Title _____

ORIGINAL APPROVED AS TO FORM:

City Attorney

(Surety) (Seal)

By _____

Title _____

Agent Name and Address _____

Agent Phone # _____

Surety Phone # _____

California License # _____

Surety Email: _____

**Request for Taxpayer
 Identification Number and Certification**

Give form to the
 requester. Do not
 send to the IRS.

Name (as shown on your income tax return)

Business name, if different from above

Check appropriate box: Individual/sole proprietor Corporation Partnership
 Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ Exempt payee
 Other (see instructions) ▶

Address (number, street, and apt. or suite no.) Requester's name and address (optional)

City, state, and ZIP code

List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 4. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note: If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number

OR

Employer identification number

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here Signature of U.S. person ▶ Date ▶

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued).
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,

YEAR

Withholding Exemption Certificate

CALIFORNIA FORM

2011

(This form can only be used to certify exemption from nonresident withholding under California Revenue and Taxation Code (R&TC) Section 18662. Do not use this form for exemption from wage withholding.)

590

File this form with your withholding agent. (Please type or print)

Withholding agent's name

Payee's name

Payee's

SSN or ITIN

SOS file no.

CA corp. no.

FEIN

Address (number and street, PO Box, or P.M.B. no.)

Apt. no./Bldg. no.

City

State

ZIP Code

Read the following carefully and check the box that applies to the payee.

I certify that for the reasons checked below, the payee named on this form is exempt from the California income tax withholding requirement on payment(s) made to the entity or individual.

Individuals — Certification of Residency:

I am a resident of California and I reside at the address shown above. If I become a nonresident at any time, I will promptly notify the withholding agent. See instructions for General Information D, Who is a Resident, for the definition of a resident.

Corporations:

The above-named corporation has a permanent place of business in California at the address shown above or is qualified through the California Secretary of State (SOS) to do business in California. The corporation will file a California tax return and withhold on payments of California source income to nonresidents when required. If this corporation ceases to have a permanent place of business in California or ceases to do any of the above, I will promptly notify the withholding agent. See instructions for General Information F, What is a Permanent Place of Business, for the definition of permanent place of business.

Partnerships or limited liability companies (LLC):

The above-named partnership or LLC has a permanent place of business in California at the address shown above or is registered with the California SOS, and is subject to the laws of California. The partnership or LLC will file a California tax return and will withhold on foreign and domestic nonresident partners or members when required. If the partnership or LLC ceases to do any of the above, I will promptly inform the withholding agent. For withholding purposes, a limited liability partnership (LLP) is treated like any other partnership.

Tax-Exempt Entities:

The above-named entity is exempt from tax under California Revenue and Taxation Code (R&TC) Section 23701 _____ (insert letter) or Internal Revenue Code Section 501(c) _____ (insert number). The tax-exempt entity will withhold on payments of California source income to nonresidents when required. If this entity ceases to be exempt from tax, I will promptly notify the withholding agent. Individuals cannot be tax-exempt entities.

Insurance Companies, Individual Retirement Arrangements (IRAs), or Qualified Pension/Profit Sharing Plans:

The above-named entity is an insurance company, IRA, or a federally qualified pension or profit-sharing plan.

California Trusts:

At least one trustee and one noncontingent beneficiary of the above-named trust is a California resident. The trust will file a California fiduciary tax return and will withhold on foreign and domestic nonresident beneficiaries when required. If the trustee becomes a nonresident at any time, I will promptly notify the withholding agent.

Estates — Certification of Residency of Deceased Person:

I am the executor of the above-named person's estate. The decedent was a California resident at the time of death. The estate will file a California fiduciary tax return and will withhold on foreign and domestic nonresident beneficiaries when required.

Nonmilitary Spouse of a Military Servicemember:

I am a nonmilitary spouse of a military servicemember and I meet the Military Spouse Residency Relief Act (MSRRA) requirements. See instructions for General Information E, MSRRA.

CERTIFICATE: Please complete and sign below.

Under penalties of perjury, I hereby certify that the information provided in this document is, to the best of my knowledge, true and correct. If conditions change, I will promptly notify the withholding agent.

Payee's name and title (type or print) _____ Daytime telephone no. _____

Payee's signature ► _____ Date _____

**EXCERPTS FROM THE CALIFORNIA LABOR CODE RELATING TO
APPRENTICES ON PUBLIC WORKS
Chapter 1 of Division 2
APPRENTICES ON PUBLIC WORKS**

1773.3. An awarding agency whose public works contract falls within the jurisdiction of Section 1777.5 shall, within five days of the award, send a copy of the award to the Division of Apprenticeship Standards. When specifically requested by a local joint apprenticeship committee, the division shall notify the local joint apprenticeship committee regarding all such awards applicable to the joint apprenticeship committee making the request. Within five days of a finding of any discrepancy regarding the ratio of apprentices to journeymen, pursuant to the certificated fixed number of apprentices to journeymen, the awarding agency shall notify the Division of Apprenticeship Standards.

1776. (a) Each contractor and subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following: (1) The information contained in the payroll record is true and correct. (2) The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the contractor on the following basis: (1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request. (2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations. (3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the contractor.

(c) The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.

(d) A contractor or subcontractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested the records within 10 days after receipt of a written request.

(e) Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address, and social security number. The name and address of the contractor awarded the contract or the subcontractor performing the contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent disclosure of an individual's name and social security number. A joint labor management committee may maintain an action in a court of competent jurisdiction against an employer who fails to comply with Section 1774. The court may award restitution to an employee for unpaid wages and may award the joint labor management committee reasonable attorney's fee and costs incurred in maintaining the action. An action under this subdivision may not be based on the employer's misclassification of the craft of a worker on its certified payroll records. Nothing in this subdivision limits any other available remedies for a violation of this chapter.

(f) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

(g) The contractor or subcontractor shall have 10 days in which to comply subsequent to receipt of a written notice requesting the records enumerated in subdivision (a). In the event that the contractor or subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

(h) The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section.

(i) The director shall adopt rules consistent with the California Public Records Act, (Chapter 3.5 (commencing with Section 6250), Division 7, Title 1, Government Code) and the Information Practices Act of 1977, (Title 1.8 (commencing with Section 1798), Part 4, Division 3, Civil Code) governing the release of these records, including the establishment of reasonable fees to be charged for reproducing copies of records required by this section.

(j) This section shall remain in effect only until January 1, 2003, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2003, deletes or extends that date.

1776. (a) Each contractor and subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, and straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the contractor on the following basis: (1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request. (2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations. (3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested

payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the contractor, subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the contractor.

(c) The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.

(d) Each contractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested the records within 10 days after receipt of a written request.

(e) Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address, and social security number. The name and address of the contractor awarded the contract or performing the contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent disclosure of an individual's social security number.

(f) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

(g) The contractor shall have 10 days in which to comply subsequent to receipt of written notice specifying in what respects the contractor must comply with this section. In the event that the contractor fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

(h) The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section. These stipulations shall fix the responsibility for compliance with this section on the prime contractor.

(i) The director shall adopt rules consistent with the California Public Records Act, (Chapter 3.5 (commencing with Section 6250), Division 7, Title 1, Government Code) and the Information Practices Act of 1977, (Title 1.8 (commencing with Section 1798), Part 4, Division 3, Civil Code) governing the release of these records, including the establishment of reasonable fees to be charged for reproducing copies of records required by this section.

(j) This section shall become operative January 1, 2003.

1777.5. (a) Nothing in this chapter shall prevent the employment of properly registered apprentices upon public works.

(b) Every apprentice employed upon public works shall be paid the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered and shall be employed only at the work of the craft or trade to which he or she is registered.

(c) Only apprentices, as defined in Section 3077, who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards and who are parties to written apprentice agreements under Chapter 4 (commencing with Section 3070) of Division 3 are eligible to be employed at the apprentice wage rate on public works. The employment and training of each apprentice shall be in accordance with either (1) the apprenticeship standards and apprentice agreements under which he or she is training or (2) the rules and regulations of the California Apprenticeship Council.

(d) When the contractor to whom the contract is awarded by the state or any political subdivision, in performing any of the work under the contract, employs workers in any apprenticeable craft or trade, the contractor shall employ apprentices in at least the ratio set forth in this section and may apply to any apprenticeship program in the craft or trade that can provide apprentices to the site of the public work for a certificate approving the contractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected. However, the decision of the apprenticeship program to approve or deny a certificate shall be subject to review by the Administrator of Apprenticeship. The apprenticeship program or programs, upon approving the contractor, shall arrange for the dispatch of apprentices to the contractor. A contractor covered by an apprenticeship program's standards shall not be required to submit any additional application in order to include additional public works contracts under that program.

"Apprenticeable craft or trade," as used in this section, means a craft or trade determined as an apprenticeable occupation in accordance with rules and regulations prescribed by the California Apprenticeship Council. As used in this section, "contractor" includes any subcontractor under a contractor who performs any public works not excluded by subdivision (c).

(e) Prior to commencing work on a contract for public works, every contractor shall submit contract award information to an applicable apprenticeship program that can supply apprentices to the site of the public work. The information submitted shall include an estimate of journeyman hours to be performed under the contract, the number of apprentices proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to the awarding body if requested by the awarding body. Within 60 days after concluding work on the contract, each contractor and subcontractor shall submit to the awarding body, if requested, and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the contract. The information under this subdivision shall be public. The apprenticeship programs shall retain this information for 12 months.

(f) The apprenticeship program that can supply apprentices to the area of the site of the public work shall ensure equal employment and affirmative action in apprenticeship for women and minorities.

(g) The ratio of work performed by apprentices to journeymen employed in a particular craft or trade on the public work may be no higher than the ratio stipulated in the apprenticeship standards under which the apprenticeship program operates where the contractor agrees to be bound by those standards, but, except as otherwise provided in this section, in no case shall the ratio be less than one hour of apprentice work for every five hours of journeyman work.

(h) This ratio of apprentice work to journeyman work shall apply during any day or portion of a day when any journeyman is employed at the jobsite and shall be computed on the basis of the hours worked during the day by journeymen so employed. Any work performed by a journeyman in excess of eight hours per day or 40 hours per week shall not be used to calculate the ratio. The contractor shall employ apprentices for the number of hours computed as above before the end of the contract or, in the case of a subcontractor, before the end of the subcontract. However, the contractor shall endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the jobsite. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Chief of the Division of Apprenticeship Standards, upon application of an apprenticeship program, may order a minimum ratio of not less than one apprentice for each five journeymen in a craft or trade classification.

(i) A contractor covered by this section that has agreed to be covered by an apprenticeship program's standards upon the issuance of the approval certificate, or that has been previously approved for an apprenticeship program in the craft or trade, shall

employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the applicable apprenticeship standards, but in no event less than the 1-to-5 ratio required by subdivision (g).

(j) Upon proper showing by a contractor that he or she employs apprentices in a particular craft or trade in the state on all of his or her contracts on an annual average of not less than one hour of apprentice work for every five hours of labor performed by journeymen, the Chief of the Division of Apprenticeship Standards may grant a certificate exempting the contractor from the 1-to-5 hourly ratio, as set forth in this section for that craft or trade.

(k) An apprenticeship program has the discretion to grant to a participating contractor or contractor association a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting the contractor from the 1-to-5 ratio set forth in this section when it finds that any one of the following conditions is met: (1)

Unemployment for the previous three-month period in the area exceeds an average of 15 percent. (2) The number of apprentices in training in the area exceeds a ratio of 1 to 5. (3) There is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth of its journeymen annually through apprenticeship training, either on a statewide basis or on a local basis. (4) Assignment of an apprentice to any work performed under a public works contract would create a condition that would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large, or the specific task to which the apprentice is to be assigned is of a nature that training cannot be provided by a journeyman.

(l) When an exemption is granted pursuant to subdivision (k) to an organization that represents contractors in a specific trade from the 1-to-5 ratio on a local or statewide basis, the member contractors will not be required to submit individual applications for approval to local joint apprenticeship committees, if they are already covered by the local apprenticeship standards.

(m) (1) A contractor to whom a contract is awarded, who, in performing any of the work under the contract, employs journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council the same amount that the director determines is the prevailing amount of apprenticeship training contributions in the area of the public works site. A contractor may take as a credit for payments to the council any amounts paid by the contractor to an approved apprenticeship program that can supply apprentices to the site of the public works project. The contractor may add the amount of the contributions in computing his or her bid for the contract.

(2) At the conclusion of each fiscal year, the California Apprenticeship Council shall distribute training contributions received by the council under this subdivision, less the expenses of the Division of Apprenticeship Standards for administering this subdivision, by making grants to approved apprenticeship programs for the purpose of training apprentices. The funds shall be distributed as follows: (A) If there is an approved multiemployer apprenticeship program serving the same craft or trade and geographic area for which the training contributions were made to the council, a grant to that program shall be made. (B) If there are two or more approved multiemployer apprenticeship programs serving the same craft or trade and geographic area for which the training contributions were made to the council, the grant shall be divided among those programs based on the number of apprentices registered in each program. (C) All training contributions not distributed under subparagraphs (A) and (B) shall be used to defray the future expenses of administering this subdivision. (3) All training contributions received pursuant to this subdivision shall be deposited in the Apprenticeship Training Contribution Fund, which fund is hereby created in the State Treasury. Notwithstanding Section 13340 of the Government Code, all money in the Apprenticeship Training Contribution Fund is hereby continuously appropriated for the purpose of carrying out this subdivision and to pay the expenses of the division in administering this subdivision.

(n) The body awarding the contract shall cause to be inserted in the contract stipulations to effectuate this section. The stipulations shall fix the responsibility of compliance with this section for all apprenticeable occupations with the prime contractor.

(o) This section does not apply to contracts of general contractors or to contracts of specialty contractors not bidding for work through a general or prime contractor when the contracts of general contractors or those specialty contractors involve less than thirty thousand dollars (\$30,000).

(p) All decisions of an apprenticeship program under this section are subject to Section 3081.

1777.6. It shall be unlawful for an employer or a labor union to refuse to accept otherwise qualified employees as registered apprentices on any public works, on the ground of the race, religious creed, color, national origin, ancestry, sex, or age, except as provided in Section 3077, of such employee.

1777.7. (a) (1) A contractor or subcontractor that is determined by the Chief of the Division of Apprenticeship Standards to have knowingly violated Section 1777.5 shall forfeit as a civil penalty an amount not exceeding one hundred dollars (\$100) for each full calendar day of noncompliance. The amount of this penalty may be reduced by the Chief if the amount of the penalty would be disproportionate to the severity of the violation. A contractor or subcontractor that knowingly commits a second or subsequent violation of Section 1777.5 within a three-year period, where the noncompliance results in apprenticeship training not being provided as required by this chapter, shall forfeit as a civil penalty the sum of not more than three hundred dollars (\$300) for each full calendar day of noncompliance.

Notwithstanding Section 1727, upon receipt of a determination that a civil penalty has been imposed by the Chief, the awarding body shall withhold the amount of the civil penalty from contract progress payments then due or to become due. (2) In lieu of the penalty provided for in this subdivision, the Chief may, for a first-time violation and with the concurrence of an apprenticeship program described in subdivision (d), order the contractor or subcontractor to provide apprentice employment equivalent to the work hours that would have been provided for apprentices during the period of noncompliance.

(b) In the event a contractor or subcontractor is determined by the Chief to have knowingly committed a serious violation of any provision of Section 1777.5, the Chief may also deny to the contractor or subcontractor, and to its responsible officers, the right to bid on or be awarded or perform work as a subcontractor on any public works Contract for a period of up to one year for the first violation and for a period of up to three years for a second or subsequent violation. Each period of debarment shall run from the date the determination of noncompliance by the Chief becomes a final order of the Administrator of Apprenticeship.

(c) (1) An affected contractor, subcontractor, or responsible officer may obtain a review of the determination of the Chief imposing the debarment or civil penalty by transmitting a written request to the office of the Administrator within 30 days after service of the determination of debarment or civil penalty. A copy of this report shall also be served on the Chief. If the Administrator does not receive a timely request for review of the determination of debarment or civil penalty made by the Chief, the order shall become the final order of the Administrator. (2) Within 20 days of the timely receipt of a request for review, the Chief shall provide the contractor, subcontractor, or responsible officer the opportunity to review any evidence the Chief may offer at the hearing. The Chief shall also promptly disclose any nonprivileged documents obtained after the 20-day time limit at a time set forth for exchange of evidence by the Administrator. (3) Within 90 days of the timely receipt of a request for review, a hearing shall be commenced before the

Administrator or an impartial hearing officer designated by the Administrator and possessing the qualifications of an administrative law judge pursuant to subdivision (b) of Section 11502 of the Government Code. The affected contractor, subcontractor, or responsible officer shall have the burden of providing evidence of compliance with Section

1777.5. (4) Within 45 days of the conclusion of the hearing, the Administrator shall issue a written decision affirming, modifying, or dismissing the determination of debarment or civil penalty. The decision shall contain a statement of the factual and legal basis for the decision and an order. This decision shall be served on all parties and the awarding body pursuant to Section 1013 of the Code of Civil Procedure by first-class mail at the last known address of the party that the party has filed with the Administrator. Within 15 days of issuance of the decision, the Administrator may reconsider or modify the decision to correct an error, except that a clerical error may be corrected at any time. (5) An affected contractor, subcontractor, or responsible officer who has timely requested review and obtained a decision under paragraph (4) may obtain review of the decision of the Administrator by filing a petition for a writ of mandate to the appropriate superior court pursuant to Section 1094.5 of the Code of Civil Procedure within 45 days after service of the final decision. If no timely petition for a writ of mandate is filed, the decision shall become the final order of the Administrator. The decision of the Administrator shall be affirmed unless the petitioner shows that the Administrator abused his or her discretion. If the petitioner claims that the findings are not supported by the evidence, abuse of discretion is established if the court determines that the findings are not supported by substantial evidence in light of the entire record. (6) The Chief may certify a copy of the final order of the Administrator and file it with the clerk of the superior court in any county in which the affected contractor or subcontractor has property or has or had a place of business. The clerk, immediately upon the filing, shall enter judgment for the state against the person assessed in the amount shown on the certified order. A judgment entered pursuant to this section shall bear the same rate of interest and shall have the same effect as other judgments and be given the same preference allowed by the law on other judgments rendered for claims for taxes. The clerk shall not charge for the service performed by him or her pursuant to this section. An awarding body that has withheld funds in response to a determination by the Chief imposing a penalty under this section shall, upon receipt of a certified copy of a final order of the Administrator, promptly transmit the withheld funds, up to the amount of the certified order, to the Administrator.

(d) If a subcontractor is found to have violated Section 1777.5, the prime contractor of the project is not liable for any penalties under subdivision (a), unless the prime contractor had knowledge of the subcontractor's failure to comply with the provisions of Section 1777.5 or unless the prime contractor fails to comply with any of the following requirements: (1) The contract executed between the contractor and the subcontractor or the performance of work on the public works project shall include a copy of the provisions of Sections 1771, 1775, 1776, 1777.5, 1813, and 1815.

(2) The contractor shall continually monitor a subcontractor's use of apprentices required to be employed on the public works project pursuant to subdivision (d) of Section 1777.5, including, but not limited to, periodic review of the certified payroll of the subcontractor. (3) Upon becoming aware of a failure of the subcontractor to employ the required number of apprentices, the contractor shall take corrective action, including, but not limited to, retaining funds due the subcontractor for work performed on the public works project until the failure is corrected. (4) Prior to making the final payment to the subcontractor for work performed on the public works project, the contractor shall obtain a declaration signed under penalty of perjury from the subcontractor that the subcontractor has employed the required number of apprentices on the public works project.

(e) Any funds withheld by the awarding body pursuant to this section shall be deposited in the General Fund if the awarding body is a state entity, or in the equivalent fund of an awarding body if the awarding body is an entity other than the state.

(f) The Chief shall consider, in setting the amount of a monetary penalty, in determining whether a violation is serious, and in determining whether and for how long a party should be debarred for violating this section, all of the following circumstances: (1) Whether the violation was intentional. (2) Whether the party has committed other violations of Section 1777.5. (3) Whether, upon notice of the violation, the party took steps to voluntarily remedy the violation. (4) Whether, and to what extent, the violation resulted in lost training opportunities for apprentices. (5) Whether, and to what extent, the violation otherwise harmed apprentices or apprenticeship programs. If a party seeks review of a decision by the Chief to impose a monetary penalty or period of debarment, the Administrator shall decide de novo the appropriate penalty, by considering the same factors set forth above.

(g) The interpretation of Section 1777.5 and this section shall be in accordance with the regulations of the California Apprenticeship Council. The Administrator may adopt regulations to establish guidelines for the imposition of monetary penalties and periods of debarment and may designate precedential decisions under Section 11425.60 of the Government Code.

**NOTE: THE ABOVE CALIFORNIA LABOR CODE SECTIONS ARE AVAILABLE FROM THE INTERNET @ www.dir.ca.gov/.
DAS 10 (Rev. 04-02)**

SPECIAL PROVISIONS

TECHNICAL SPECIFICATIONS FOR
**City of Sacramento
Freeway Landscape Buffer
Phase 2**

August 15, 2011

Prepared for:

City of Sacramento
Department of Utilities
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Fax: 916.447.8270
Contact: David Campbell

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Freeway Buffer Landscape Corridor - Phase 2

GR-01 STANDARD SPECIFICATIONS

The work to be performed under this contract shall be done in accordance with the Special Provisions contained herein. In these Special Provisions, reference is made to the Standard Specifications of the City of Sacramento, adopted June 2007, referred to herein as "Standard Specifications". The City of Sacramento Standard Specifications shall apply to all work except as superseded herein. The general requirements of this contract shall be governed by these Special Provisions first, followed by Sections 1 through 8 of the Standard Specifications. Other standards or specifications specified in these Special Provisions govern only the applicable technical specifications.

GR-02 SCOPE OF WORK

The work is to be performed in the City of Sacramento and shall include but not be limited to water and electrical services, minor fencing, excavation, pavement cutting and removal, asphalt paving, concrete pads, aggregate base maintenance road, irrigation system, landscape planting, native grass establishment, and maintenance. The Contractor shall provide all labor, materials, tools and equipment, and shall perform all work necessary to complete the subject project as shown on the Plans and specified herein.

Contractor or subcontractor shall have successfully completed at least 3 projects of similar scope (particularly the establishment of seeded native grass) and complexity within the past 5 years. Provide written documentation (maximum of 3 pages), including references, for such experience.

GR-03 PRE-BID INTERPRETATION OF CONTRACT DOCUMENTS

Requests for interpretation of Contract Documents shall be made in writing and delivered to the City at least seven (7) days before the time announced for opening the proposals. Interpretation, where necessary, will be made by the City in the form of an addendum to the contract documents and, when issued, will be sent as promptly as is practicable to all parties to whom the bid documents have been issued. All such addenda shall become part of the contract. Requests for information regarding this procedure or other similar information shall be directed to Mark Elliott of the Engineering Division, Department of Utilities, 1395 35th Avenue, Sacramento, CA 95822 (916) 808-8894.

It shall be the bidder's responsibility to call to the attention of the Engineer any missing pages or drawings in the contract documents including the addenda. These items shall be brought to the attention of the Engineer at least one (1) week prior to the bid opening date. Prior to bidding the Contractor shall visit the project site to thoroughly acquaint himself with all items of work.

GR-04 MOBILIZATION

Mobilization, complete as specified, shall include Contractor's participation in the assessment of pre-construction condition and post construction damage assessment of the job site, move in of equipment, tools, supplies, materials, and manpower to the job site; power (including lighting for night work), water, and sanitary facilities; flow barriers and fencing around storage areas; daily clean up of job site; move out and final cleanup of job site after the project is completed and accepted by the City. The item bid price for mobilization shall not exceed five percent (5%) of the total amount bid for the project.

GR-05 ADMINISTRATIVE PENALTY ORDINANCE

The Contractor shall become familiar with Chapter 12.20 of the City Code (available at www.cityofsacramento.org) which contains minimum requirements for construction within the City right of way and establishes administrative penalties for non-compliance. The Contractor may be assessed an administrative penalty for each violation of any provision addressed by this ordinance, unless modified herein, and amount of penalty will be deducted from the Contract. The following General Requirements contain some, but not all, of the provisions of the ordinance:

- Public Notification
- Maintenance of Traffic, Public Safety and Convenience
- Traffic Control Plan
- Working hours for the City's "Primary Streets"
- Access to private property
- Maintenance of Construction Areas
- Protection of Existing Improvements

GR-06 TIME OF COMPLETION

The completion date established for Phase 1 Work for this project shall be two hundred ten (210) calendar days after the Contractor receives notification to proceed from the City. The completion date established for Phase 2 Work shall be seven hundred thirty (730) calendar days after acceptance of Phase 1 Work. Acceptance of each Phase shall proceed as stated in Section 8-4 of the Standard Specifications and the Agreement.

GR-07 PRE-JOB CONFERENCE AND CONSTRUCTION SCHEDULE

The Contractor, after delivery of the contract and at least three (3) days before beginning work, shall notify the Engineer and arrange a pre-job conference.

The Contractor shall submit a detailed schedule using a critical path method which clearly shows the order of work and time anticipated to complete this project prior to the start of construction. The schedule shall be submitted, reviewed and updated in accordance with Section 7-2 of the Standard Specifications. No progress payments will be made for work completed prior to acceptance of the schedule.

Weekend work will be done in accordance with Section 7-4 of the Standard Specifications.

GR-08 UTILITIES INFORMATION AND REQUIREMENTS

Existing Utilities

Unless otherwise noted, the location, alignment, and depth of existing underground utilities as shown on the Plans is taken from public records and no responsibility is assumed for the accuracy thereof. For the most part, underground utility services are not shown on the Plans.

Attention is directed to the provisions in Section 6-19, "Main and Trunk Line Utilities", of the Standard Specifications.

The cost of relocating existing overhead and/or underground utilities not specified on the Plans to be relocated, but which the Contractor elects to relocate or cut and reconnect at his/her own convenience shall be borne by the Contractor.

Maintaining Existing Drainage

The Contractor shall be responsible for maintaining existing drainage flows until new drainage improvements are complete and functioning. No compensation will be paid to the Contractor for maintenance of existing facilities; the cost of this work shall be included in the various contract items of work.

Temporary Diversion of Drainage Flows

Should it become necessary for the Contractor to temporarily divert, bypass, or impound flows carried by existing drainage systems through or around the construction operations within the limits of this project, the Contractor shall prepare a plan of such diversion, bypass, or impoundment and submit the plan to the Engineer for approval.

The Plans shall be sufficiently detailed to illustrate the concept proposed. The plan shall also provide information on the quantity of flow to be conveyed by the diversion or bypass system or the volume to be impounded. The plan shall also indicate the number, size and configuration of any channel, and the size and configuration of any impoundment basin to be used.

The plan for temporary diversion or bypassing of existing drainage flows shall be submitted to the Engineer a minimum of ten(10) working days prior to the start of work on any temporary system. The Contractor shall not begin work on temporary diversion, bypass, or impoundment system until an approved plan is on file with the Engineer.

Maintaining Existing Water Systems and Services

The Contractor shall be responsible for maintaining existing water systems and service to all developed properties within the limits of the project until any new water improvements to be constructed by the project are completed in-place and functioning.

The Contractor, at his/her option, may cut existing water services or tunnel beneath them. All water services to be cut by trench excavation or other construction activities

shall become the responsibility of the Contractor to repair. The maximum time of interruption of water service to any residence or business shall be four (4) hours.

Should the Contractor choose to cut existing water services rather than tunnel beneath them, the Contractor shall notify the engineer at least three (3) working days in advance to allow City crews to give residences and business twenty-four (24) hour notice of the interruption in water service.

Work Performed by City Crews

The Contractor is advised that the City retains the option of performing with City crews all or a portion of any work involved in relocating, repairing, or otherwise restoring existing sewer, water, and drainage systems and services to developed properties within the limits of the project that may be in conflict with the proposed project improvements. Any such work performed by City forces will be at the discretion and convenience of the City. If work performed by City crews was to be done under the contract, work performed and materials provided by the City will be paid for by the Contractor or removed from the contract at no additional cost to the City.

GR-09 PROOF OF COMPLIANCE WITH CONTRACT

In order that the Engineer may determine whether the Contractor has complied with the requirements of the contract documents not readily determinable through inspection and tests of plant, equipment, work, or materials, the Contractor shall at any time when requested, at the Contractor's expense, submit to the Engineer properly authenticated documents or other satisfactory proofs as to his compliance with such requirements.

GR-10 MAINTENANCE OF TRAFFIC, PUBLIC SAFETY AND CONVENIENCE

The Contractor's attention is directed to Sections 6-6, 6-7, 6-8, 6-9 and 7-4 of the Standard Specifications.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately by the Contractor at his expense. Water or dust palliative shall be applied if ordered by the Engineer for the alleviation or prevention of dust nuisance.

The Contractor shall insure that utility services to customers in the project are maintained.

State of California, Public Utilities Commission regulations shall be in effect at railroad grade crossings. Railroad operating requirements are not to be impaired by contract operations. The Contractor shall contact the railroad prior to construction.

The Contractor shall be required to establish traffic scheduling and control measures acceptable to the Engineer prior to starting any work within a public right of way. The Contractor shall submit to the Engineer for review and approval a plan showing proposed traffic control measures and/or detours for vehicles and pedestrians affected by the construction work. This plan shall be submitted a minimum of ten (10) working days prior to the scheduled commencement of any work by the Contractor. **The Contractor will not be allowed to begin work until an approved plan is on file with the Engineer.** All advance warning and traffic delineation shall conform to the latest edition of "Work Area and Traffic Control Handbook", (WATCH).

The Contractor shall be solely and completely responsible for furnishing, installing, and maintaining all warning signs and devices necessary to safeguard the general public and the work, and to provide for the safe and proper routing of all vehicular and pedestrian traffic during the performance of the work. The requirement shall apply continuously and shall not be limited to normal working hours.

TRAFFIC CONTROL PLAN

The Contractor's traffic control plan shall provide:

1. The name and business address of the Contractor included on the plan.
2. A diagram showing the location of the proposed work area.
3. A diagram showing the location of areas where the public right-of-way will be closed or obstructed.
4. A diagram showing the placement of traffic control devices necessary to perform the work.
5. The proposed phases of traffic control.
6. The time period when the traffic control will be in effect.
7. The time periods when work will prohibit access to private property from a public right-of-way, locations and times when on-street parking will be eliminated.
8. A statement that the applicant will comply with the City's noise ordinance during performance of all work.
9. A statement that the applicant understands that the plan may be modified by the Engineer at any time in order to eliminate or avoid traffic conditions that are hazardous to the safety of the public.

The Contractor and the terms of the Traffic Control Plan shall insure that:

1. Access shall be provided to all existing driveways at all times unless other arrangements are made with the property owner. Access for emergency vehicles shall be available on all streets within the construction area at all times.
2. Rear access to buildings and existing parking areas behind buildings shall be maintained. If arrangements have been made with property owners, the Contractor may close such access for a limited time. Contractor shall give property owners forty-eight (48) hours notice in advance of the closure.
3. Walkways for pedestrian traffic shall be provided at all times except where closures are approved in advance by the Engineer.
4. For work done before 7:00 A.M. or after 6:00 P.M., or during all daylight hours between 6:00 P.M. Friday to 7:00 A.M. Monday, the street may be closed provided

proper detours are provided and only if arrangements have been made with the property owners in advance and approved by the Engineer. A minimum of five (5) working days notice shall be given to property owners in advance of closure.

6. At night and at other times when work is not in progress, the entire roadway and alley shall be open to the public for traffic.

IMPLEMENTATION OF TRAFFIC CONTROL PLAN

1. Except when performing emergency repairs, no person shall perform any work that will obstruct vehicular or pedestrian traffic on a City street unless a traffic control plan has been approved by the Director.
2. If the work to be performed under the approved traffic control plan is not commenced and completed within the times specified in the plan, the plan shall be deemed to have expired, and shall be void, and a new plan shall be required prior to commencing or continuing work.
3. When implementing traffic control measures, the Contractor shall have the traffic control plan available at the site for inspection by the Engineer.

REMOVAL OF ON-STREET PARKING

In locations where the Contractor's operations require removal of on-street parking, such removal shall be in accordance with Section 6-18 "On Street Parking Removal."

Failure to comply with this section will prevent the City from towing vehicles parked in the proposed work area.

CLOSURE OF STREET OR ALLEY

Contractor shall perform the following notification procedures prior to closing a street/alley to through traffic:

1. Police Department - Provide the Police Communications Center with the street/alley closure limits and estimated duration of closure, by calling 264-5025 and faxing the information to 264-7770 one (1) working day prior to the closure.
2. Fire Department - Provide the Fire Communications Center with the street/alley closure limits and estimated duration of closure, by calling 228-3035 and faxing the this information to 228-3075 one(1) working day prior to the closure.
3. Solid Waste Division - Provide the street/alley closure limits and estimated duration of closure, by calling 808-4952 and faxing the information to 808-1494 five (5) working days prior to the street closure.
4. On Street Parking Division - Provide the street/alley closure limits and estimated duration of closure, by calling 808-5874 and faxing the information to 808-7501 five (5) working prior to the street closure.

The information faxed to the above described City Departments/Divisions shall include:

1. Name of Project
2. Project Number
3. Contractor Name
4. Department of Utilities Project
5. Name and Limits of Street being closed
6. Duration of closure

GR-11 CONTRACTOR'S WORK AREA

The areas available for the Contractor's work and storage shall be located at locations agreed to by Owner and Contractor in the vicinity of the work. No other area will be provided by the Owner for operations under this Contract.

GR-12 ACCESS TO PRIVATE PROPERTY

All pipe and appurtenances constructed as part of this project are to be placed within public street rights-of-way and easements. The Contractor shall confine his or her operations within the limits of existing street right-of-way or easements as much as practicable.

In the event the Contractor finds it necessary to encroach onto adjoining private property the Contractor shall make all necessary arrangements with the owner of the property for such encroachment. A copy of any written agreements entered into between the Contractor and the property owner concerning encroachment onto private property shall be provided to the Engineer prior to beginning any work on the property described in the agreement.

GR-13 MAINTENANCE OF CONSTRUCTION AREAS

The Contractor shall adhere to the following requirements, as stipulated in City Ordinance Chapter 12.20:

- The Contractor shall not cause public right-of-way, public property, or public easements to be covered with construction related trash, debris, garbage, waste material, or soil. Areas affected by the construction shall be cleaned to the satisfaction of the Engineer prior to re-opening to the public.

GR-14 CONSTRUCTION SEQUENCING

A. REQUIREMENT FOR CONTINUOUS OPERATION

1. As part of the subsequent requirements for submittal of progress schedules, prepare and submit a written plan detailing the materials, methods and scheduling proposed for making connections to existing facilities.

B. ORDER OF CONSTRUCTION

1. Submit a Sequence of Construction:
 - a. Detail the materials, methods, tie-ins and scheduling proposed to meet the requirements of this section.

- b. The proposed sequence must meet the requirements for time of completion as stated in Special Provision GR-06, Time of Completion.
- c. Anticipated sequence: The Owner has anticipated that all site work, rough grading, irrigation, and tree planting will be completed throughout the fall 2011. Fine grading, soil amendment, groundcover, shrub planting, and drill seeding may occur in the spring of 2012.

GR-15 ENVIRONMENTAL RESOURCES

The Contractor is advised that should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any construction activities, work shall be suspended and the City of Sacramento Construction Inspection Division shall be immediately notified. In addition, pursuant to Section 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work shall stop and the City Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.

GR-16 PROJECT SIGNS

Prior to beginning any onsite work the Contractor shall install a total of two project signs. The signs shall be supplied by the City and are approximately 30 inches by 54 inches. Location and height of sign installation shall be as directed by the Engineer. In general, the signs shall be installed a minimum of 7 feet and maximum of 10 feet above surrounding grade. If acceptable to the Engineer an existing sign post may be used, otherwise, the Contractor shall be required to install a new post for each sign. Signs shall be maintained in a good condition throughout construction, shall not be bent and shall remain legible to traffic. Any damage shall be repaired by the Contractor. The sign(s) and post(s) installed by the Contractor shall be removed at the end of the project and the sign(s) returned to the City.

GR-17 CONTRACTOR'S TEMPORARY FACILITIES

The Contractor shall be responsible for providing and maintaining his own construction staging area and temporary facilities. These facilities shall include potable water and sanitary facilities. The Contractor shall maintain a mailing address and field file of shop drawings, record drawings, and posted contract drawings and specifications.

GR-18 CONSTRUCTION PROGRESS MEETINGS

The Contractor shall attend and participate in a pre-construction conference. In addition, during construction, the Contractor will hold prescheduled weekly meetings with the Landscape Architect, Owner, and City representatives to review the construction status and schedule. Subcontractors shall also attend as necessary. Contractors shall provide a two-week look-ahead construction schedule every week. The Owner shall prepare and distribute a meeting agenda 48 hours prior to the meeting.

GR-19 WARRANTY

The Contractor shall warranty his work for a period of 2 years after final acceptance of Phase 1 Work.

GR-20 COORDINATION WITH WORK BY OTHERS

Contractor shall prepare a construction schedule to be reviewed and approved by the Owner per the Section 7-2 of the CSSS. The schedule of the Work shall be compatible with the work concurrently being performed, by others, under separate agreements with the Owner

GR-21 HEALTH AND SAFETY

The Contractor shall be solely and completely responsible for conditions of the job site, including health and safety of all persons (including employees, subcontractors, service personnel and site visitors) and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. Health and safety provisions shall conform to U.S. Safety Orders, Title 8, U.S. Environmental Protection Agency Standard Operations Safety Guides, and all other applicable federal, State, City, and local laws, ordinances, codes, the requirements set forth below, and any regulations that may be detailed in other parts of these Documents. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve him from compliance with the obligations and penalties set forth herein.

GR-22 STORM WATER POLLUTION PREVENTION PLAN

The Owner has developed a project wide Storm Water Pollution Prevention Plan (SWPPP) that meets the requirements of the State Water Resources Control Board General Permit for Storm Water Discharges Associated with Construction Activities (General Permit).

The Owner will prepare, file, and pay fees for the Notice of Intent (NOI), and obtain a State Storm Water Construction Permit. A copy will be furnished to the Contractor.

The Contractor shall conduct all operations in accordance with the SWPPP and General Erosion Control Notes included in the Plans. The Contractor shall maintain a copy of the NOI, SWPPP, and General Permit at the construction site at all times.

The Contractor must utilize a State certified Qualified Stormwater Developer(QSD) in implementing the State Storm Water Construction Permit. Upon award of contract the Stormwater Construction permit will be amended by the Owner to indicate the Contractor's QSD. The City will provide a Qualified SWPPP Practitioner (QSP) to fulfill the applicable Permit requirements in the SWPPP.

Contractor shall immediately repair or correct any erosion control facilities that are damaged or require corrective action. The Contractor is expected to include in their bids, all costs for SWPPP implementation including but not limited to standard best management practices to control erosion, sediment and pollutants from their respective work areas and procedures, equipment, etc. during the project.

GR-23 RECORD DRAWINGS

The Contractor shall record on a set of working drawings provided by the City's Representative dimensioned locations of all buried and concealed piping, conduit, valves, stubouts, etc., and shall deliver same to the City's Representative upon completion of the job. Said drawings shall also show all changes made in actual construction from that shown on the Contract drawings. These drawings shall have all dimensions and corrections shown. The Contractor shall submit these drawings to the City for review and approval.

GR-24 PERMITS AND ENVIRONMENTAL

Permits Secured by the City

All permits from public agencies that pertain to the project that have been obtained by the City are included herein in the appendix. The Contractor shall conform to all requirements contained in the permits and shall pay all costs for complying with special requirements of permits and shall give notice necessary and incident to the prosecution of the Work. For any permits obtained by the City after the Contract Bid Date, an adjustment (add or deduct) in the Contract price, as appropriate, will be made by change order, to account for all costs incurred in complying with the requirements of the respective permit.

- Rule 8020 Fugitive Dust Requirements for Control of Fine Particulate Matter (PM-10) from Construction, Demolition, Excavation, and Extraction Activities; and Section 15.40.050 of the Sacramento City Code: The Contractor shall meet the terms and conditions of these rules. The cost of water for dust control shall be included in other items of work, and no additional payment will be made therefore.
- CEQA: The City of Sacramento has prepared and circulated a Categorical Exemption for the Project. The Contractor shall comply with all environmental mitigation measures identified in the Categorical Exemption.

Permits secured by the Contractor

The Contractor will pay the fees for any permits and licenses for the construction of the Work required by the City of Sacramento; the Contractor will be responsible for obtaining said permits in a timely manner. For those permits and licenses generally required to work or do business as a Contractor, the Contractor shall procure the permit or license and pay all charges and fees.

The Contractor shall obtain additional permits or easements for use of private property for storage or equipment use or for right-of-entry and shall be responsible to the property owner for any use of private property.

- **Contractor's License:** The Contractor shall possess at the time of bid and maintain throughout the duration of the contract, a valid California Class A Contractor License.

- **Business License:** The Contractor shall possess prior to the execution of the contract and maintain throughout the duration of the contract, a valid City of Sacramento business license.

Water used during construction shall conform to Section 15 of the Standard Specifications.

GR-25 PROTECTION OF EXISTING IMPROVEMENTS

Existing improvements, utilities and adjacent property shall be protected from damage resulting from the Contractor's operations. All trees, lawn, shrubbery, fences, walls, irrigation systems, and other improvements including, but not limited to, existing pavements, sidewalks, street improvements and underground utilities and other improvements not to be removed under this contract shall be protected from damage by the Contractor throughout the construction period.

All signs and street marking damage caused by or related to the construction of this project shall be replaced in kind by the Contractor. In the case of partial damage to lane stripes and traffic lettering the whole stripe or letter shall be replaced. Temporary markings and striping shall be installed within 72 hours (3 working days) of damage.

All painted or other disfiguring markings on the pavement, sidewalk or gutters used for constructing the project shall be removed by the Contractor before acceptance of the work.

Contractor shall assume maintenance responsibility for all existing landscape areas on City Property at the East Buffer, adjacent to Seatuck Court and Ternhaven Way. Within 30 days of the issuance of a notice to proceed, Contractor shall photograph existing condition of these areas and provide digital copies for Owner's reference. Maintenance of these areas shall conform to the requirements and specifications of this contract, and extend until final acceptance of this project.

Contractor shall be responsible for repairing damages to existing improvements to their previous condition or better.

GR-26 STORAGE OF MATERIALS AND EQUIPMENT

Materials and equipment shall be stored so as to insure the preservation of their quality and fitness for the work. Stores of equipment and materials shall be located so as to facilitate inspection. The Contractor shall be responsible for all damages that occur in connection with the care and protection of all materials and equipment until the completion and final acceptance of the work by the City.

END OF SECTION

SECTION 01 11 20

GENERAL SITE WORK REQUIREMENTS

PART 1 – GENERAL

1.01 GENERAL CONDITIONS

- A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this Section.

1.02 PRINCIPAL WORK IN THIS SECTIONS

- A. Furnish all labor, materials, tools, equipment, and incidentals, and do all site work involved in executing the Contract in a satisfactory manner. Unless otherwise noted on the approved drawings or in these specifications, all work shall conform to these specifications, and the Standard Specifications, latest edition, and State Standard Specifications, latest edition. These Standard Specifications are a part of the Construction Documents, but will not be supplied as part of the plan distribution. Prior to submitting a bid, the Contractor shall obtain and review these documents.
- B. A copy of the construction documents, a copy of the Standard Specifications, and a copy of these specifications shall be kept at the construction site at all times.

1.03 REFERENCE STANDARDS AND SPECIFICATIONS

- A. The term "Standard Specifications" is understood to refer to the City of Sacramento Standard Specifications, latest edition.
 - 1. Provisions for measurement and payment specified within the Standard Specifications and the Contract shall govern.
- B. The term "State Standard Specifications" is understood to refer to the Standard Specifications of the State of California, Business and Transportation Agency, Department of Transportation (Caltrans), latest edition.
- C. CAL/OSHA Construction Safety Orders.

1.04 LANDS BY OWNERS

- A. Owner will provide the lands, sites, right-of-way and easements upon which the work under the contract is to be constructed, together with the right-of-access onto such lands.
- B. Contractor may store equipment and materials within the site, however, he/she shall not unreasonably encumber the premises with his equipment or materials, and he shall use only those areas approved by the Owner to stage his construction work.

1.05 CONSTRUCTION SAFETY

- A. Follow construction procedures necessary to provide a safe working condition through all phases of the project. Said procedures shall conform to the Safety Order, Division of Industrial Safety, Title 8, California Administrative Code.
- B. Conform to all applicable requirements of the Federal Occupational Safety and Health Administration.

- C. Contractor is solely responsible for outlining the safety procedures to be followed by his workmen, all subcontractors, and related trades working on his job. He will always provide for the safety of the public both day and night where they are exposed to his construction operation.
- D. The Landscape Architect, Architect, Engineer, and Owner's Representative are not hired to review or approve safety procedures followed by Contractor.

1.06 BY-PASS OPERATIONS

- A. Ensure uninterrupted service of all existing roads and utilities during construction. Determine location of all such facilities, whether shown on the plan or not, and coordinate by-pass of these facilities with appropriate agency.

1.07 EXISTING FACILITIES

- A. The types, locations, sizes and/or depths of existing overhead and underground utilities shown on the improvement plans were obtained from sources of varying reliability. The Contractor is cautioned that only actual excavation will reveal the types, locations, sizes and/or depths of said utilities. The contractor is solely responsible for locating existing facilities and advising the Owner's Representative if conflicts exist.
- B. The Contractor shall exercise extreme care when working near, over or under existing utility facilities. All work near, over under, or connecting to existing facilities shall be done in accordance with the affected utility jurisdiction's requirements.

1.08 WATERING

- A. See Section 15 of the Standard Specifications.
- B. Watering shall include all dust control and site excavation and fills for compaction.

1.09 CLEAN UP

- A. During progress of work, keep job site in clean and orderly condition. Excess or unsuitable material, broken material, or waste material shall be removed from job site. Spillage resulting from hauling along or across existing streets or roads shall be removed immediately. All gutters and roadside ditches shall be kept clean and free from obstructions. Any deviation from this practice shall have prior approval from the Owner's Representative.
- B. The Contractor shall repair any damage to new or existing facilities resulting from work done as part of this contract.

1.10 FINISHING WORK

- A. Upon completion of all construction and prior to the final inspection, all work shall be finished as specified in Section 22 of the State Standard Specifications, except as modified or supplemented in the following paragraphs:
 - 1. Finishing work shall comprise cleaning the entire project area, including all roads, ditches, plant sites, material site, right-of-way, easements, areas disturbed by Contractor's operations and occupied or affected by him in connection with the work, all rubbish, excess material, falsework, temporary structures and equipment, and shall include furnishing all labor, materials, tools, equipment, and incidentals, and doing all work involved in finishing the entire project. Remove all temporary warning, regulatory, and guide signs prior to final acceptance of contract by Owner.

2. Full compensation for finishing work shall be considered as included in the prices paid for other items for work, and not additional or separate compensation will be allowed therefore.

END OF SECTION

SECTION 01 33 00

SUBMITTALS

PART 1 – GENERAL

1.01 RELATED REQUIREMENTS

- A. City of Sacramento Standard Construction Specifications.
- B. Submittals shall be made as required by other Sections of these Technical Specifications.

1.02 STANDARD COMPLIANCE

- A. When materials or equipment must conform to the standards of organizations such as, but not limited to, the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), National Electrical Manufacturers Association and Underwriter's Laboratories (UL) (NEMA), documents showing, or proving, conformance shall be submitted.

If an organization uses a label or listing to indicate compliance with a particular standard, the label or listing will be acceptable evidence, unless otherwise specified in the individual sections. In lieu of the label or listing, the Contractor shall submit a certificate from an independent testing organization, which is competent to perform acceptable tests, and is approved by the Owner's Representative. The certificate shall state that the item has been tested in accordance with the specified organization's standard. For materials and equipment whose compliance with organizational standards or specifications is not regulated by an organization using its own listing or label as proof of compliance, a certificate of compliance from the manufacturer shall be submitted for approval. The certificate shall identify the manufacturer, the product, and the referenced standard and shall state that the manufacturer certifies that the product conforms to all requirements of the project specification and of the referenced standards listed.

1.03 ADMINISTRATIVE PROCEDURES

- A. Sequentially number the submittals. Revised submittals shall be designated by the original number and a sequential alphabetic suffix.
- B. Submit the quantity of submittal copies which the Contractor requires to be returned plus two additional copies which will be retained by the Owner's Representative and/or City.
- C. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Contract Documents.
- D. Schedule submittals to expedite the Project, and deliver to Owner's Representative. Coordinate submission of related items.
- E. For each submittal for review, allow up to 30 calendar days excluding delivery time to and from the Contractor. If selected submittals must be returned in a timely fashion to meet Project schedules, notify the Owner's Representative during the preconstruction meeting of specific submittals that will require an expedited review. Select submittals shall be reviewed within 10 calendar days.
- F. Transmit each item under cover letter or form. Identify Project Contractor, subcontractor, major supplier; identify pertinent Drawing sheet and detail number; and Specification section number, as appropriate. Identify deviations from Contract Documents. Provide space for

Contractor and Owner's Representative's review stamps.

- G. Comply with progress schedule for submittals related to Work progress. Coordinate submittal of related items.
- H. After Owner's Representative's review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
- I. Distribute copies of reviewed submittals to concerned persons, instruct recipients to promptly report in writing any inability to comply with provisions.

1.05 CONSTRUCTION PROGRESS SCHEDULES

- A. Provide anticipated construction schedule from beginning of work to completion, with milestones, subordinate activities, and timelines in MS project or equivalent format. Provide updates to the schedule to the Owner's Representative at monthly intervals and within 24 hours of any deviation from the schedule.

1.06 SHOP DRAWINGS

Not Used

1.07 MANUFACTURER'S DATA

- A. Submittals for each manufactured item shall be comprised of manufacturer's descriptive literature, drawings, diagrams, performance and characteristic curves and catalog cuts. Manufacturer's name, trade name, model or catalog number, nameplate data, size, layout dimensions, capacity, project specification references, and any other additional information necessary to establish contract compliance shall be clearly indicated.
- B. Mark each copy to clearly identify applicable products, models, options, and other data; supplement manufacturers' standard data to provide information unique to the Work. Include manufacturers' installation instructions when required by the Specification section. Failure to mark applicable products and to cross out non-applicable products shall cause rejection of the entire submittal.
- C. Submit the quantity of submittal copies that the Contractor requires plus six additional copies, which will be retained by the Project Owner's Representative and the Owner's Representative.
- D. Manufacturer's product data submittals shall include:
 - 1. Concrete mix design
 - 2. Expansion joint materials
 - 4. Sprinkler heads
 - 5. Quick couplers
 - 6. Valve boxes and lids
 - 7. Swing joint assemblies
 - 8. Mainline and lateral pipe

9. Wire connectors
10. PVC fittings
11. Solvent weld for PVC
12. Soil amendments
13. Pre-emergent and herbicides
14. Bark mulch
15. Native seed mix, tags and receipts
16. Plant materials
17. Electrical materials
18. Finish materials & color

1.08 MANUFACTURERS INSTALLATION INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.09 MANUFACTURERS CERTIFICATES

- A. When specified in individual specification sections, submit certification by manufacturer in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Owner's Representative.

1.10 SAMPLES

- A. Submittals for each item shall include manufacturer's name, trade name, model or catalogue number, name plate data, size, layout dimensions, capacity, project specification references and any additional information necessary to establish contract compliance shall be clearly indicated.
- B. Mark each copy to clearly identify applicable products, models, options, and other data; supplement manufacturers' standard data to provide information unique to the Work. Include manufacturers' installation instructions when required by the Specification section. Failure to mark applicable products and to cross out non-applicable products shall cause rejection of the entire submittal.
- C. Submit the quantity of submittal copies that the Contractor requires plus six additional copies, which will be retained by the Project Owner's Representative and/or City.

D. Samples shall be provided for:

1. Bark mulch
2. Native seed mix, tags and receipts
3. Soil amendments
4. Decomposed Granite
5. All other materials as required by the Construction Drawings.

PART 2 -- PRODUCTS

Not Used

PART 3 -- EXECUTION

3.01 SUBMITTAL PROCEDURE

- A. At least (thirty) 30-days prior to the Contractors need for approval, Contractor shall forward to the Owner's Representative all submittals required by the individual Sections of the Specifications.
- B. All submittals shall be identified by submittal number on the letter of transmittal. Specification number shall also be identified on the letter of transmittal. Submittals shall be numbered consecutively and resubmittals shall have a letter suffix. For example:
 1. 1st submittal: 2
 2. 1st resubmittal: 2A
 3. 2nd resubmittal: 2B, etc.
- C. Review of Contractor's Information
 1. When review and checking for acceptance is required of any drawing, or information regarding materials and equipment, the Contractor shall prepare or secure, and submit for review, the quantity of submittal copies, which the Contractor requires, plus, six additional copies that will be retained by the Project Owner's Representative and/or the City

Within three (3) weeks after receipt of said submittal copies, the Owner's Representative will return the marked copies indicating one of the following four (4) responses:

- a. If review and checking indicates no exceptions, copies will be returned marked "APPROVED AS SUBMITTED" and work may begin immediately on incorporating the material and equipment covered by the submittal into the work.
- b. If review and checking indicates limited corrections are required, copies will be returned marked "APPROVED AS NOTED". Work may begin immediately on incorporating into the work the material and equipment covered by the corrected submittal.
- c. If review and checking indicates insufficient, or incorrect data, has been submitted, copies will be returned marked "RETURNED FOR CORRECTIONS". No work may

begin on incorporating the material and equipment covered by this submittal into the work until the submittal is revised, resubmitted, and returned marked either "APPROVED AS SUBMITTED" or "APPROVED AS NOTED".

- d. If review and checking indicates the material and equipment submittal is unacceptable, copies will be returned marked "RESUBMIT". No work may begin on incorporating the material and equipment covered by this submittal into the work until a new submittal is made and returned marked either "APPROVED AS SUBMITTED" or "APPROVED AS NOTED".
2. Approval by the Owner's Representative shall not relieve Contractor from responsibility for any errors or omissions in such drawings; or from responsibility of complying with requirements of this Contract.
3. If Shop Drawings show variations from Contract requirements, Contractor shall describe such variations in writing, separate from the drawings, at time of submission. All such variations must be approved by the Owner's Representative.

D. Contractor Submittals

1. Items to be submitted are specified in individual Sections of these Specifications. Submittals for each Section shall be bound together in one book. Individual items shall be sequentially numbered in a clear, legible, & consistent manner. Submittals that are related to, or affect, each other shall be forwarded simultaneously as a package to facilitate coordinated review. Uncoordinated submittals will be rejected. Do not combine unrelated materials in the same submittal. Submittals shall be arranged in same order as they appear in the Specification Section. Items shall be clearly marked with the same identification number as indicated on the drawings. The Contractor shall include an appropriate submittal time within each item of work on the Construction Schedule.

3.02 PROJECT AS-BUILT DRAWINGS

- A. During the prosecution of the Work, using colored ink, make changes on a set of clean prints of original drawings. Show all changes and revisions to the original design that affect the permanent structures and will exist in the completed work. Reference underground utilities to semi-permanent or permanent physical objects. Reference water, piping, conduit and electric lines to corners of structures. Include schematic diagrams for all electrical equipment with terminal numbers shown. These prints shall have all dimensions and corrections initialed by the Owner's Representative.
- B. Irrigation As-Built: The Contractor shall dimension from two (2) permanent points of reference, building corners, sidewalk, or road intersections, etc., the location of the following items:
 1. Connection to existing water lines and point of connection.
 2. Connection to existing electrical power.
 3. Gate valves.
 4. Backflow preventer and water meter.
 5. Routing of irrigation pressure lines (dimension maximum 100' along routing).
 6. Sleeves.
 7. Irrigation control valves.
 8. Routing for control wiring.
 9. Quick coupling valves.
 10. Irrigation controllers
 11. Booster pumps
 12. Other related equipment as directed by the Owner's Representative.

- C. Upon completion of the Project, those revisions to show changes made in actual construction from that shown on Contract drawings shall be legibly and neatly transferred to a clean bond set. Stamp each sheet "AS-BUILT", with the contractor's company name, address, contact information, and name of responsible person.
- D. On or before the date of the final observation, the Contractor shall deliver the corrected and completed prints to the Owner's Representative. Delivery of the as-built plans shall not relieve the Contractor of the responsibility of furnishing required information that may be omitted from the prints.
- E. Two (2) bond copies and one electronic copy (scans) on CD of the project as-built drawings, including prints and final reproducible, are the property of the City and shall be delivered to the Project Owner's Representative before Contract closeout.

END OF SECTION

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Building wires and cables rated 600 V and less.
2. Connectors, splices, and terminations rated 600 V and less.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.3 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

- A. Copper Conductors: Comply with NEMA WC 70/ICEA S-95-658.
- B. Conductor Insulation: Comply with NEMA WC 70/ICEA S-95-658 for Type THW-2 Type THHN-2-THWN-2 Type XHHW-2.

2.2 CONNECTORS AND SPLICES

- A. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.

2.3 SYSTEM DESCRIPTION

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS

- A. Feeders: Copper. Solid for No. 10 AWG and smaller; stranded for No. 8 AWG and larger.
- B. Branch Circuits: Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger.

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

- A. Service Entrance: Type THHN-2-THWN-2, single conductors in raceway Type XHHW-2, single conductors in raceway.
- B. Feeders Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-2-THWN-2, single conductors in raceway Type XHHW-2, single conductors in raceway.
- C. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THHN-2-THWN-2, single conductors in raceway Type XHHW-2, single conductors in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLES

- A. Complete raceway installation between conductor and cable termination points according to Section 260533 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.
- B. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

3.4 CONNECTIONS

- A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.
- B. Make splices, terminations, and taps that are compatible with conductor material.

3.5 IDENTIFICATION

- A. Identify and color-code conductors and cables per industry standard.
- B. Identify each spare conductor at each end with identity number and location of other end of conductor, and identify as spare conductor.

3.6 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
 - 1. After installing conductors and cables and before electrical circuitry has been energized, test service entrance and feeder conductors for compliance with requirements.
 - 2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
- B. Test and Inspection Reports: Prepare a written report to record the following:
 - 1. Procedures used.
 - 2. Results that comply with requirements.
 - 3. Results that do not comply with requirements and corrective action taken to achieve compliance with requirements.
- C. Cables will be considered defective if they do not pass tests and inspections.

END OF SECTION

SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes grounding and bonding systems and equipment.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Burndy; Part of Hubbell Electrical Systems.
 2. Dossert; AFL Telecommunications LLC.
 3. ERICO International Corporation.
 4. Fushi Copperweld Inc.
 5. Galvan Industries, Inc.; Electrical Products Division, LLC.
 6. Harger Lightning and Grounding.
 7. ILSCO.
 8. O-Z/Gedney; A Brand of the EGS Electrical Group.
 9. Robbins Lightning, Inc.
 10. Siemens Power Transmission & Distribution, Inc.

2.2 SYSTEM DESCRIPTION

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with UL 467 for grounding and bonding materials and equipment.

2.3 CONDUCTORS

- A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.
- B. Bare Copper Conductors:
 1. Solid Conductors: ASTM B 3.

2. Stranded Conductors: ASTM B 8.
3. Tinned Conductors: ASTM B 33.
4. Bonding Cable: 28 kcmil, 14 strands of No. 17 AWG conductor, 1/4 inch in diameter.
5. Bonding Conductor: No. 4 or No. 6 AWG, stranded conductor.
6. Bonding Jumper: Copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.
7. Tinned Bonding Jumper: Tinned-copper tape, braided conductors terminated with copper ferrules; 1-5/8 inches wide and 1/16 inch thick.

2.4 CONNECTORS

- A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.
- B. Bolted Connectors for Conductors and Pipes: Copper or copper alloy.
- C. Welded Connectors: Exothermic-welding kits of types recommended by kit manufacturer for materials being joined and installation conditions.
- D. Bus-Bar Connectors: Mechanical type, cast silicon bronze, solderless compression-type wire terminals, and long-barrel, two-bolt connection to ground bus bar.

2.5 GROUNDING ELECTRODES

- A. Ground Rods: Copper-clad steel; 3/4 inch by 10 feet.

PART 3 - EXECUTION

3.1 APPLICATIONS

- A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.
- B. Conductor Terminations and Connections:
 1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.
 2. Underground Connections: Welded connectors except at test wells and as otherwise indicated.
 3. Connections to Ground Rods at Test Wells: Bolted connectors.
 4. Connections to Structural Steel: Welded connectors.

3.2 GROUNDING AT THE SERVICE

- A. Equipment grounding conductors and grounding electrode conductors shall be connected to the ground bus. Install a main bonding jumper between the neutral and ground buses.

3.3 EQUIPMENT GROUNDING

- A. Install insulated equipment grounding conductors with all feeders and branch circuits.
- B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:
 - 1. Feeders and branch circuits.
 - 2. Receptacle circuits.
 - 3. Single-phase motor and appliance branch circuits.
 - 4. Three-phase motor and appliance branch circuits.

3.4 INSTALLATION

- A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.
- B. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor, and install in conduit.
- C. Ground Rods: Drive rods until tops are 2 inches below final grade unless otherwise indicated.
 - 1. Interconnect ground rods with grounding electrode conductor below grade and as otherwise indicated. Make connections without exposing steel or damaging coating if any.
 - 2. For grounding electrode system, if required install at three rods spaced at least one-rod length from each other and located at least the same distance from other grounding electrodes, and connect to the service grounding electrode conductor.
- D. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.
 - 1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.
 - 2. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.
- E. Grounding and Bonding for Piping:
 - 1. Metal Water Service Pipe: Install insulated copper grounding conductors, in conduit, from building's main service equipment, or grounding bus, to main metal water service entrances to building. Connect grounding conductors to main metal water service pipes; use a bolted clamp connector or bolt a lug-type connector to a pipe flange by using one of the lug bolts of the flange. Where a dielectric main water fitting is installed, connect grounding conductor on street side of fitting. Bond metal grounding conductor conduit or sleeve to conductor at each end.
 - 2. Water Meter Piping: Use braided-type bonding jumpers to electrically bypass water meters. Connect to pipe with a bolted connector.
 - 3. Bond each aboveground portion of gas piping system downstream from equipment shutoff valve.

3.5 FIELD QUALITY CONTROL

- A. Perform tests and inspections. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.

END OF SECTION

SECTION 26 05 33

RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Nonmetal conduits, tubing, and fittings.
 - 2. Handholes and boxes for exterior underground cabling.

PART 2 - PRODUCTS

2.1 NONMETALLIC CONDUITS, TUBING, AND FITTINGS

- A. Listing and Labeling: Nonmetallic conduits, tubing, and fittings shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. RNC: Type EPC-40-PVC, complying with NEMA TC 2 and UL 651 unless otherwise indicated.
- C. Fittings for RNC: Comply with NEMA TC 3; match to conduit type and material.
- D. Solvent cements and adhesive primers shall have a VOC content of 510 and 550 g/L or less, respectively, when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- E. Solvent cements and adhesive primers shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

2.2 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

- A. General Requirements for Handholes and Boxes:
 - 1. Boxes and handholes for use in underground systems shall be designed and identified as defined in NFPA 70, for intended location and application.
 - 2. Boxes installed in wet areas shall be listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Polymer-Concrete Handholes and Boxes with Polymer-Concrete Cover: Molded of sand and aggregate, bound together with polymer resin, and reinforced with steel, fiberglass; or a combination of the two.
 - 1. Standard: Comply with SCTE 77.
 - 2. Configuration: Designed for flush burial with bottom unless otherwise indicated.
 - 3. Cover: Weatherproof, secured by tamper-resistant locking devices and having structural load rating consistent with enclosure and handhole location.

4. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
5. Cover Legend: Molded lettering, "ELECTRIC." or as required by Local Jurisdiction.
6. Conduit Entrance Provisions: Conduit-terminating fittings shall mate with entering ducts for secure, fixed installation in enclosure wall.

PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

- A. Outdoors: Apply raceway products as specified below unless otherwise indicated:
 1. Underground Conduit: RNC, Type EPC-40-PVC.
- B. Minimum Raceway Size: 1-inch trade size.
- C. Do not install aluminum conduits, boxes, or fittings in contact with concrete or earth.
- D. Do not install nonmetallic conduit where ambient temperature exceeds 120 deg F.

3.2 INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NECA 102 for aluminum conduits. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.
- B. Arrange stub-ups so curved portions of bends are not visible above finished slab.
- C. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches of changes in direction.
- D. Support conduit within 12 inches of enclosures to which attached.
- E. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

- A. Direct-Buried Conduit:
 1. Excavate trench bottom to provide firm and uniform support for conduit. Prepare trench bottom as specified in Section 31 22 00 GRADING for pipe less than 6 inches in nominal diameter.
 2. Install backfill as specified in Section 31 22 00 GRADING.
 3. After installing conduit, backfill and compact. Start at tie-in point, and work toward end of conduit run, leaving conduit at end of run free to move with expansion and contraction as temperature changes during this process. Firmly hand tamp backfill around conduit to provide maximum supporting strength. After placing controlled backfill to within 12 inches

of finished grade, make final conduit connection at end of run and complete backfilling with normal compaction as specified in Section 312200 GRADING.

4. Install manufactured duct elbows for stub-up at poles and equipment and at building entrances through floor unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
5. Install manufactured rigid steel conduit elbows for stub-ups at poles and equipment and at building entrances through floor.
 - a. Couple steel conduits to ducts with adapters designed for this purpose, and encase coupling with 3 inches of concrete for a minimum of 12 inches on each side of the coupling.
 - b. For stub-ups at equipment mounted on outdoor concrete bases and where conduits penetrate building foundations, extend steel conduit horizontally a minimum of 60 inches from edge of foundation or equipment base. Install insulated grounding bushings on terminations at equipment.
6. Underground Warning Tape: Comply with requirements indicated on drawings.

3.4 INSTALLATION OF UNDERGROUND HANDHOLES AND BOXES

- A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.
- B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
- C. Elevation: In paved areas, set so cover surface will be flush with finished grade. Set covers of other enclosures 1 inch above finished grade.
- D. Field-cut openings for conduits according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

3.5 PROTECTION

- A. Protect coatings, finishes, and cabinets from damage and deterioration.
 1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
 2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

END OF SECTION

SECTION 26 24 16

PANELBOARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes distribution panelboards and lighting and appliance branch-circuit panelboards.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For each panelboard and related equipment.
1. Include dimensioned plans, elevations, sections, and details. Show tabulations of installed devices, equipment features, and ratings.
 2. Detail enclosure types and details for types other than NEMA 250, Type 1.
 3. Detail bus configuration, current, and voltage ratings.
 4. Short-circuit current rating of panelboards and overcurrent protective devices.
 5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
 6. Include wiring diagrams for power, signal, and control wiring.

1.3 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.
- B. Panelboard schedules for installation in panelboards.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and maintenance data.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NEMA PB 1.
- C. Comply with NFPA 70.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace transient voltage suppression devices that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS FOR PANELBOARDS

- A. Enclosures: Pedestal mounted cabinets.
 - 1. Rated for environmental conditions at installed location.
 - a. Outdoor Locations: NEMA 250, Type 3R.
 - 2. Directory Card: Inside panelboard door, mounted in transparent card holder.
 - 3. See drawings for construction requirements.
- B. Incoming Mains Location: Bottom.
- C. Phase, Neutral, and Ground Buses: Hard-drawn copper, 98 percent conductivity.
- D. Conductor Connectors: Suitable for use with conductor material and sizes.
 - 1. Material: Hard-drawn copper, 98 percent conductivity.
 - 2. Main and Neutral Lugs: Mechanical type.
 - 3. Ground Lugs and Bus Configured Terminators: Mechanical type.
 - 1. See drawings for construction requirements.
- E. Service Equipment Label: NRTL labeled for use as service equipment for panelboards with one or more main service disconnecting and overcurrent protective devices.
- F. Future Devices: Mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.
- G. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals.

2.2 DISTRIBUTION PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
 - 1. Tesco Controls, Inc.
 - 2. Approved equivalent.
- B. Panelboards: NEMA PB 1, power and feeder distribution type.
- C. Doors: Secured with vault-type latch with tumbler lock; keyed alike.
- D. Mains: Circuit breaker.

- E. Branch Overcurrent Protective Devices: For Circuit-Breaker Frame Sizes 125 A and Smaller: Plug-in circuit breakers.

2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Tesco Controls, Inc standard devices by Siemens.
 - 2. Approved equivalent.
- B. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with series-connected rating or fully rated as required to meet available fault currents.
 - 1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads, and instantaneous magnetic trip element for short circuits.
 - 2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
 - 3. Current-Limiting Circuit Breakers: Frame sizes 400 A and smaller; let-through ratings less than NEMA FU 1, RK-5.
 - 4. GFCI Circuit Breakers: Single- and two-pole configurations with Class A ground-fault protection (6-mA trip).
 - 5. Molded-Case Circuit-Breaker (MCCB) Features and Accessories:
 - a. Standard frame sizes, trip ratings, and number of poles.
 - b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor materials.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Receive, inspect, handle, store and install panelboards and accessories according to NEMA PB 1.1.
- B. Install filler plates in unused spaces.
- C. Stub four 1-inch empty conduits from panelboard into accessible ceiling space or space designated to be ceiling space in the future. Stub four 1-inch empty conduits into raised floor space or below slab not on grade.
- D. Arrange conductors in gutters into groups and bundle and wrap with wire ties.

3.2 IDENTIFICATION

- A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with industry standards.

3.3 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
- B. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- C. Tests and Inspections:
 - 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
- D. Panelboards will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION

SECTION 26 27 13
ELECTRICITY METERING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes equipment for electricity metering by utility company.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Dimensioned plans and sections or elevation layouts and wiring diagrams.

1.3 INFORMATIONAL SUBMITTALS

- A. Field quality-control reports.

1.4 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data. Operation and Maintenance Data, integrated with branch circuit panelboard.

1.5 QUALITY ASSURANCE

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

PART 2 - PRODUCTS

2.1 EQUIPMENT FOR ELECTRICITY METERING BY UTILITY COMPANY

- A. Meters will be furnished by utility company.
- B. Meter Sockets: Comply with requirements of electrical-power utility company.
- C. Meter Sockets: Steady-state and short-circuit current ratings shall meet indicated circuit ratings.
- D. Modular Meter Center: Factory-coordinated assembly of a main service disconnect device, wireways, tenant meter socket modules, and tenant feeder circuit breakers arranged in adjacent vertical sections. Assembly shall be complete with interconnecting buses and other features as specified below.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Tesco Controls, Inc.
 - b. Approved equivalent.
2. Housing: NEMA 250, Type 3R enclosure.
3. Minimum Short-Circuit Rating: As indicated on the plans subject to coordination with serving utility available fault current.
4. Main Disconnect Device: Circuit breaker, fully rated for use with downstream branch circuit breakers.
5. Meter Socket: Rating coordinated with indicated tenant feeder circuit rating.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with equipment installation requirements in NECA 1.
- B. Install meters furnished by utility company. Install raceways and equipment according to utility company's written requirements. Extend grounding connections as required by utility company.

3.2 FIELD QUALITY CONTROL

- A. Perform tests and inspections.

END OF SECTION

SECTION 31 22 00

GRADING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Rough Grading and sculpting of contours, berms, and depressions.
 - 2. Base courses for paving
 - 3. Excavating and backfilling trenches for buried utilities.
 - 4. Finish Grading

1.03 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.
- C. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- D. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Architect. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be without additional compensation.
- E. Fill: Soil materials used to raise existing grades.
- F. Structures: Buildings, footings, foundations, slabs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- G. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill

or backfill.

- H. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.04 GEOTECHNICAL REPORT

- A. A Geotechnical report was prepared for property included in this project, entitled, "Shumacher Property WKA 5406.02, dated 3.18.2003. A copy of this report may be obtained from the city for reference upon request.

1.05 JOB CONDITIONS

- A. Visit the project site and examine the existing conditions under which the Work is to be performed. Note all conditions as to character and extent of Work involved.

1.06 EXISTING UTILITIES

- A. The City of Sacramento is a member of the Common Ground Alliance one call program. The Contractor is responsible to contact C.G.A. at 811 and mark the location of all existing utilities before commencing work.
- B. Refer to the Civil Engineer and Landscape Irrigation Drawings for information on proposed site utilities and their locations.
- C. Retain and protect in operating condition all active utilities traversing the site designated to remain.
- D. Where existing utilities not indicated on the Drawings are encountered, support, shore up, protect same and immediately contact the Owner's Representative for continuance and/or relocation of such services.

1.07 PROTECTION OF EXISTING CONDITIONS and ADJACENT PROPERTIES

- A. Use all means necessary to protect existing conditions designated to remain, newly constructed conditions and adjacent properties. Avoid any encroachment on adjacent properties.
- B. Prevent damage to existing bench marks, pavement, utility lines. In the event of damage or loss immediately make all repairs and replacements required to the Owner's representative approval at no additional cost to the Owner.
- C. Use all means necessary to protect the protected zone radices (PZR), defined as the largest dripline rails plus one (1) foot of all existing oak trees.
 - 1. Do not use PZR as equipment or material storage areas, or as travel routes for equipment.
 - 2. Grading within PZR shall be restricted to finished grading of the top 6" of soil to ensure positive surface drainage away from existing oak trees, and to fill any existing low spots that may cause surface pooling within PZR.
 - 3. Notify the Project Landscape Architect and a certified arborist at least 48 hours prior to grading within PZR of existing oak trees. The Project Landscape Architect and a certified arborist shall oversee and approve all grading within these areas.

1.08 QUALITY ASSURANCE

- A. Finish grade shall conform to contours, grades, lines and shapes, as indicated on Drawings, with uniform slopes between finish grades or between finish grades and existing grades.
- B. Establish finish landscape grades in a continuous, uniform line, resulting in a uniform surface with no ridges or water pockets.
- C. Finish landscape grade tolerance shall be .04 feet plus or minus of final grades indicated on Drawings.
- D. Slope grade a minimum of two (2) percent away from paved surfaces to drainage inlet unless otherwise indicated on Drawings.
- E. Codes and Standards: Perform excavation work in compliance with applicable requirements of authorities having jurisdiction.
- F. Testing and Inspection Service: Owner will employ and pay for a qualified independent geotechnical testing and inspection laboratory to perform soil testing and inspection service during earthwork operations.

1.09 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Owner and then only after arranging to provide temporary utility services according to requirements indicated.
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Owner's written permission.
 - 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.
- C. Use of Explosives: Use of explosives is not permitted.
- D. Protection of Persons and Property: Barricade open excavations occurring as part of this work with warning lights.
 - 1. Operate warning lights as recommended by authorities having jurisdiction.
 - 2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

1.10 DUST CONTROL

- A. The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of co-defendants, for all claims related to dust or windblown materials attributable to his work.

PART 2 – PRODUCTS

2.01 ONSITE FILL MATERIAL

- A. Existing rough graded soil is acceptable fill material for landscape areas.

2.02 ONSITE EXISTING STOCKPILED TOPSOIL

- A. None existing.

2.03 IMPORTED TOPSOIL

- A. Imported topsoil: Contractor shall provide soil analysis of imported topsoil from source for approval. Topsoil shall be friable loam free from all noxious weeds and grasses, refuse, roots, heavy or stiff clay, brush or other deleterious materials and no rocks or clods greater than one half (1/2) inch in diameter. Acidity range (ph) of 6.5 to 7.5 with a minimum of 4% and a maximum of 25% organic matter.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.02 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.
 - 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.03 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.04 EXCAVATION, GENERAL

- A. Excavation: Excavate to subgrade elevations regardless of the character of surface and

subsurface conditions encountered. 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.

- B. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

3.05 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). 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.
 - 2. Avoid the drying of soils exposed in the footing excavations. The moisture content of the foundation soils materials shall be maintained at or above the optimum moisture content. Foundation materials shall be moisture conditioned by periodic sprinkling or flooding to achieve the recommended moisture content.

3.06 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
 - 1. For pipes and conduit less than 6 inches (150 mm) in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
 - 2. For pipes and conduit 6 inches (150 mm) or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
 - 3. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.07 SUBGRADE INSPECTION

- A. Notify Testing Agency when excavations have reached required subgrade.
- B. If Testing Agency 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 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, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph (5 km/h).
 2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Testing Agency, and replace with compacted backfill or fill as directed.
- D. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Testing Agency, without additional compensation.

3.08 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 (17.2 MPa), may be used when approved by Architect.
1. Fill unauthorized excavations under other construction or utility pipe as directed by Architect.

3.09 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.

3.10 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
1. Construction below finish grade including, where applicable, subdrainage, damp-proofing, waterproofing, and perimeter insulation.
 2. Surveying locations of underground utilities for Record Documents.
 3. Testing and inspecting underground utilities.
 4. Removing concrete formwork.
 5. Removing trash and debris.
 6. Removing temporary shoring and bracing, and sheeting.
 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.11 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under footings and within 18 inches (450 mm) of bottom of

footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in the Standard Specifications.

- D. Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the utility pipe or conduit.
 - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- E. Backfill voids with satisfactory soil while installing and removing shoring and bracing.
- F. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- G. Install warning tape directly above utilities, 12 inches (300 mm) below finished grade, except 6 inches (150 mm) below subgrade under pavements and slabs.

3.12 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under building slabs, use engineered fill, allow for required base courses.
 - 2. Under footings and foundations, use engineered fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.13 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction at or above 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 is too wet to compact to specified dry unit weight.

3.14 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches (200 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry density according to ASTM D 1557:
 - 1. All areas to receive engineered fill, and the structural pads at grade, shall be scarified to a minimum depth of 8 inches, moisture conditioned, and recompacted to 90 percent of the maximum dry density, as determined by the ASTM D1557 test method (latest edition).

The moisture content of the scarified soils to be recompacted shall be at or above the optimum moisture content at the time of compaction.

2. Under structures, building slabs and utility trenches, all structural fills shall be compacted to a relative compaction of 90 percent of the maximum dry density, at a uniform moisture content at or above the optimum moisture content at the time of compaction. Compaction shall be increased to at least 95 percent in the upper six inches.

3.15 ROUGH 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 1 inch (25 mm).
 2. Pavements and Walks: Plus or minus 1/2 inch (13 mm).

3.16 SUBGRADE PREPARATION

- A. Cut out areas, to subgrade elevation, which are to receive paving including base courses.
- B. Scarify subgrade to a depth of eight (8) inches and bring to a uniform moisture content.
- C. Bring subgrade to required levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- D. Slope grade away from building minimum two-and-one-half (2-1/2) inches in ten (10) feet (2%) unless indicated otherwise on Drawings.
- E. Compact subgrade to the following:
 1. 90% relative compaction in accordance with ASTM D1557-78 for pavement areas.
 2. 85% relative compaction in accordance with ASTM D1557-78 for landscape areas.

3.17 FINISH LANDSCAPE GRADING

- A. Scarify or rototill to a 6" depth all planting areas prior to finish grade operations and work until uniform and free from large clods larger than one (1) inch in greatest dimension.
- B. Finish grade shall conform, after compaction, to shapes, spot elevations and contours as indicated on Drawings, with uniform levels or slopes between finish elevations or between finish elevations and existing elevations.
- C. Soil amendment and preparation shall comply with other Sections.
- D. Spread excess soil material excavated from plant pits in surrounding planting areas.

- E. Top six (6) inches of all areas to be planted shall be free of stones, stumps or other deleterious matter one (1) inch in greatest dimension.
- F. Compact soil in planting areas to 85% relative compaction in accordance with ASTM D1557-78.
- G. Fine grade all planting areas to a smooth, loose and uniform surface. Eliminate uneven areas, ridges and depressions.
- H. Shrub/ground cover planting areas shall be graded two and one-half (2-1/2) inches below adjacent paved areas, sidewalks, valve boxes, mow bands, drains, etc. in order to receive two (2) inch depth of mulch, establishing final grade one-half (1/2) inches below these surfaces.
- I. Native grass areas shall be graded 1/2" below adjacent paved area, sidewalks, valve boxes, mow bands, drains, top of seat walls etc. in order to receive seed.

3.18 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will 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 the Testing Agency.
- 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. Trench Backfill: At each compacted initial and final backfill layer, at least 1 test for each 150 feet or less of trench length, but no fewer than two 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.

3.17 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. 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 that removes all material that has lost compaction; reshape and recompact.
- C. 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.

3.18 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.

END OF SECTION

SECTION 32 15 40

DECOMPOSED GRANITE PAVING

PART 1 – GENERAL

1.01 SCOPE OF WORK

- A. Section includes: Decomposed granite paving.

1.02 SUBMITTALS

- A. Submit the following in accordance with SECTION 01 33 00 – SUBMITTALS:

1. Product data for decomposed granite and herbicide.
2. Samples: Half (1/2) a pound for each size and color range of decomposed granite.

1.03 QUALITY ASSURANCE

- A. Qualifications: Submit certified documentation of successful experience of no less than three (3) years in the installation of similar crushed stone paving.
- B. Performance standards: Compaction in accordance with ASTM D 1557.
- C. Any subsidence greater than 1/2" throughout the project, including the maintenance period, shall be clear evidence of un-satisfactory work and shall be repaired to the satisfaction of the owner's representative.

PART 2 – PRODUCTS

2.01 Decomposed granite:

- A. 1/4" minus aggregate surface:

	<u>Screen size</u>	<u>Passing</u>
	3/8"	100
(a)	No. 4	95-100
(b)	No. 8	75-80
(c)	No. 16	55-65
(d)	No. 30	40-50
(e)	No. 50	25-35
(f)	No. 100	20-25
(g)	No. 200	5-15

- B. Color: "Light Tan" or "California Gold" as distributed by :

1. A & A Stepping Stone
10291 Ophir Road
Newcastle, CA 95658
(530) 885-7481 (or)
2. Cascade Rock
8585 Keifer Blvd.
Sacramento, CA 95826
(916) 383-1300 (or)

3. Equal.
- 2.02 Stabilizer: Non-toxic organic binder that is a colorless, odorless concentrated powder that naturally binds Crushed Aggregate Screenings (CAS) to produce a firm surface,
- A. Manufactured by:
 1. Stabilizer Solutions
33 S 28th Street
Phoenix, AZ 85034
602.225.5900
info@stabilizersolutions.com (or)
 2. Equal.
- 2.03 Water: Clean, fresh, potable water.

PART 3– EXECUTION

- 3.01 After completion of soil sterilization, compact sub-grade to minimum 90% compaction or as otherwise noted in soils report.
- 3.02 Stabilized decomposed granite paving:
- A. Sub-grades shall be rough graded to within 0.1 ft. of finish grade less depth of decomposed granite paving.
 - B. Lines and levels:
 1. Install in maximum 2" lifts.
 2. Provide a finished surface uniform in texture and appearance. Do not permit finished work to vary more than 1/8" in 10 ft. from true profile and cross section.
 - C. Mixing:
 1. Paving shall consist of a mixture of decomposed granite, stabilizer and water, using batch-type equipment with revolving blades or drum. Mix at a rate of 8 lbs. of stabilizer per ton of crushed aggregate screenings.
 2. Adjust quantity of water added to the mixture to permit maximum compaction of the materials when placed on the sub-grade. Moisture shall permeate full depth. After water application test with a minimum of one core sample per 1,000 sq. ft.; repair sample area to match adjacent section.
 3. The stabilizer shall be mixed for a minimum of 15 minutes at the rate noted, using a truck mounted mixer or portable mixer. Mixing stabilizer by rototilling is not acceptable.
 - D. Compacting: Thoroughly compact each lift to a minimum 90 percent with a 5 ton roller. Compact each area with at least 4 passes of the compacting equipment. After compacting, screed smooth. Do not use a wacker or vibratory roller to compact the D.G.

- E. Grading: When surface areas have been rolled and it becomes necessary to add a thin layer of material to bring the surface to grade, the previously rolled or compacted area shall be raked to provide a bond with the added material.
- F. Finish paving surface: Provide a uniform texture and color and without a cement mortar film on the exposed surface. Finish surface shall not vary more than 0.02 foot from the lower edges when measured with an 8-foot straight edge.
- G. Curing: After installation, keep moist for a period of seven days. Apply water in a fine mist or spray and in such a manner that it will not damage the finished surface.
- H. Damaged or defective installation: Repair and replace in accordance with these Specifications at no additional cost to the Owner.
- I. If compression tests of samples fail to meet specified compressive strength, immediately remove and replace decomposed granite paving with material conforming to this Specification at no cost to Owner.

END OF SECTION

SECTION 32 84 00

LANDSCAPE IRRIGATION

PART 1 - GENERAL

1.01 CONDITIONS

The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this Section.

1.02 SCOPE OF WORK

- A. Furnish all labor, materials, and equipment necessary to complete the irrigation system work as indicated on the Drawings and specified herein.
- B. Test the entire irrigation system to assure proper operation.

1.03 QUALITY ASSURANCE & REQUIREMENTS

- A. The Contractor shall obtain and pay for any and all permits, fees and all observations as required.
- B. Manufacturers' directions and the Drawings shall be followed in all cases where the manufacturers of articles used in this Contract furnish directions covering points not shown in the Drawings and Specifications.
- C. Ordinances and Regulations
 - 1. All local, municipal and state laws, and rules and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these Specifications and their provisions shall be carried out by the Contractor. Anything contained in these Specifications shall not be construed to conflict with any of the above rules and regulations or requirements of the same. However, when these Specifications and Drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above rules and regulations, the provisions of the Specifications and Drawings shall take precedence.
 - 2. The materials and work of this section shall conform to all applicable provisions of the latest editions of the California Plumbing Code, the National Electrical Code, and all codes properly governing the materials and work at the project site.
 - 3. All electrical materials and work shall conform to California Code of Regulations, Title 24.
 - 4. Work referenced in this section shall comply with the Owner or Local Agency Standards for water meters and backflow preventers.
- D. Explanation of Drawings
 - 1. All offsets, fittings, sleeves, etc., which may be required are not indicated. Carefully investigate the structural and finish conditions affecting all of the work and plan the work accordingly furnishing such fittings; etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, sleeves, etc., which may be required to complete the irrigation system.
 - 2. Before proceeding with any work, the Contractor shall check and verify all dimensions and quantities and shall immediately inform the Owner's Representative of any discrepancy

between the drawing and/or the Specifications and actual conditions. No work shall be done in any area where there is such a discrepancy until written approval for the same has been given by the Owner's Representative. The Contractor shall assume full responsibility for work installed without approval.

3. The materials and work shall be installed in such a manner as to avoid conflicts between irrigation system and planting, existing or proposed utilities, and all other construction features.
4. Contractor shall verify prior to and during construction, that his contract documents reflect the latest revisions, change orders, and plan checks. Contractor shall be able to produce such documents at the request of the Owner's Representative at any time during construction.
5. Pipe sizes indicated on the Drawings are minimum allowable.

1.04 EXISTING CONDITIONS

- A. Contractor shall verify locations of all existing utilities, whether shown on plans or not. The Contractor shall notify members of C.G.A two (2) working days in advance of performing any excavation work by calling the toll-free number 811.
- B. Information on the Drawings relative to existing conditions is approximate only. Deviations found necessary during construction to conform to actual conditions, as approved by the Owner's Representative, shall be made without additional cost.
- C. Exercise extreme care in excavating and working near existing utilities. Contractor shall be responsible for damages to existing utilities, which are caused by his operation or neglect and shall pay all costs to repair or replace utilities damaged by his work.
- D. Where it is necessary to excavate adjacent to an existing tree, the Contractor shall use all possible care to avoid injury to trees and tree roots. Excavation in areas where two (2) inch and larger roots occur shall be done by hand. All roots two (2) inches in diameter, except directly in the path of a pipe conduit, shall be tunneled under and shall be heavily wrapped with burlap to prevent scarring or excessive drying. Where a ditching machine is run close to trees having roots smaller than two (2) inches in diameter, the wall of the trench adjacent to the tree shall be hand-trimmed, making clean cuts through. Trenches adjacent to trees should be closed within 24 hours, and where this is not possible, the side of the trench adjacent to the tree shall be kept shaded with burlap or canvas. In case of damage to existing trees, the Contractor shall forfeit an amount in proportion to extent of damage determined by the Owner, which amount shall not exceed \$10,000 per tree total loss.

1.05 SUBMITTALS

- A. Material List
 1. Contractor shall furnish the articles, equipment, materials, or processes specified by name in the Drawings and Specifications.
 2. Complete material list shall be submitted prior to performing any work. Material list shall include the manufacturer, model number and description of all materials and equipment to be used.
 3. Equipment or materials installed or furnished without prior approval of the Owner's Representative shall be rejected and the Contractor required to remove such materials from the site at his own expense.

4. Approval of any item, alternate or substitute indicates only that the product or products apparently meet the requirements of the Drawings and Specifications on the basis of the information or samples submitted. The Contractor shall assume full responsibility (in written form) for the performance of any substitutions. The Owner's Representative's decision for approval or rejection of any substitution is final.

B. As-Built Drawings

1. Refer to Section 01 33 00 - SUBMITTALS

C. Controller Charts

1. As-Built Drawings shall be approved by the Owner's Representative before controller charts are prepared.
2. Provide one (1) controller chart for each controller supplied.
3. The chart shall show by using a different color, the area controlled by each remote control valve. Chart shall be the maximum size, which the controller door will allow.
4. The chart shall be a reduced drawing of the actual record drawing system. In the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a size that is readable.
5. When completed and approved, the chart shall be hermetically sealed between two (2) pieces of plastic, each piece being a minimum ten (10) mils thick.
6. These charts shall be completed and approved prior to final observation of the irrigation system.

D. Operation and Maintenance Manuals

1. Prepare and deliver two (2) operation manuals in prepared binders and one copy electronic copy on CD as specified and as follows:
 - a. Catalog and parts sheets on every material and equipment installed under this contract.
 - b. Guarantee statement.
 - c. Complete operating and maintenance instructions on all major equipment.
2. In addition to the above-mentioned maintenance manuals, provide evidence in writing to the Owner's Representative at the conclusion of the project that the above services have been rendered.

E. Equipment to be Furnished

1. Supply as a part of this Contract the following tools:
 - a. Two (2) sets of special tools required for removing, disassembling and adjusting each type of sprinkler and valve supplied on this project.
 - b. Two (2) five (5) foot valve keys for operation of gate valves.
 - c. Two (2) keys for each automatic controller.
 - d. Two (2) quick coupler keys and matching hose swivels for each type of quick coupling valve installed.
 - e. Two (2) Sprinklers (with complete set of nozzles) of each type specified.
 - f. Two (2) valve box keys.
 - g. Five (5) complete drip emitter kits including distribution tubing, stakes and bug caps.

2. The above-mentioned equipment shall be turned over to the Owner at the conclusion of the project. Before final observation can occur, written evidence that the owner has received material must be provided to the Owner's Representative.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Handling of PVC Pipe and Fittings: The Contractor is cautioned to exercise care in handling, loading, unloading, and storing of PVC pipe and fittings. All PVC pipe shall be transported in a vehicle which allows the length of pipe to lie flat so as not to subject it to undue bending or concentrated external load at any point. Any section of pipe that has been dented or damaged will be discarded and if installed replaced with new.

1.07 GUARANTEE

- A. The guarantee for the irrigation system shall be made in accordance with the form shown in this document. A copy of the guarantee form shall be included in the operations and maintenance manual. The guarantee form shall be re-typed onto the Contractor's letterhead and contain the following information:

GUARANTEE FOR IRRIGATION SYSTEM

We hereby guarantee that the irrigation system we have furnished and installed is free from defects in materials and workmanship, and the work has been completed in accordance with the Drawings and Specifications, ordinary wear and tear and unusual abuse or neglect excepted. We agree to repair or replace any defects in material or workmanship which may develop during the period of one (1) year from date of final acceptance and also to repair or replace with originally specified materials. Any damage resulting from the repairing or replacing of such defects will be repaired at no additional cost to the Owner. We shall make such repairs or replacements within a 48 hour period, after receipt of written notice. In the event of our failure to make such repairs or replacements within said period of time after receipt of written notice from the Owner, we authorize the Owner to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefore upon demand.

PROJECT: _____

LOCATION: _____

FIRM NAME: _____

SIGNED BY: _____

PRINT NAME: _____

POSITION WITH FIRM: _____

ADDRESS: _____

PHONE: _____

DATE OF ACCEPTANCE: _____

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Use only new materials of brands and types noted on the Drawings specified herein or approved equals.
- B. Backfill Material
 - 1. Existing site material, if approved by the Owner's Representative, shall be used for backfill material. Backfill material shall be free from organic materials, large clods of earth or rocks larger than one (1) inch diameter, trash, debris, rubbish, broken cement, asphalt material or other objectionable substances.
 - 2. Imported backfill material, if required, shall be clean soil consisting of earth, sand, sandy clay, loam or other approved materials, with no large clods of earth or rocks larger than one (1) inch diameter.
 - 3. Sand bedding shall be a fine, granular sand material backfill containing no foreign matter larger than one-half (1/2) inch in size.
- C. Drainage Fill Material
 - 1. Drainage fill material shall be maximum three-quarter (3/4) inch washed and screened aggregate, hard and durable, fragments of screened or broken stone or gravel.
- D. Irrigation Pipe Sleeving
 - 1. PVC Schedule 40 pipe 2 times the diameter of pipe being sleeved.
- E. PVC Pressure Main Line Pipe and Fittings.
 - 1. Pressure main line piping for sizes:
 - a. One-and one-half (1-1/2) inch and smaller shall be PVC Schedule 40 with solvent-welded joints.
 - b. Pipe shall be made from NSF approved Type I, Grade I, PVC compound conforming to ASTM resin specification D1785. All pipe shall meet requirements set forth in Federal Specification PS-21-70. (Solvent-weld Pipe).
 - c. Pressure main line piping for sizes two (2) inches through three (3) inches shall be PVC Class 315 with solvent weld joints.
 - d. Mainline four (4) inch or larger shall be PVC Class 315 with bell and gasket joints.
 - e. Pipe shall be made from an NSF (National Sanitation Foundation) approved Type I, Grade I, PVC compound conforming to ASTM resin specification D2241. All pipe shall meet requirements as set forth in Federal Specification PS-22-70, with an appropriate standard dimension ratio (S.D.R./ (Solvent-weld Pipe).
 - 2. PVC solvent-weld fittings shall be Schedule 40, NSF approved conforming to ASTM D2466.
 - 3. Joint restraints for 4" or larger main line shall be Leemco, or equal.
 - 4. Strap saddle taps for remote control valves located along 3" mainlines shall be painted saddle with stainless steel straps, style 202NS Strap saddle taps for remote control valves located along 4" and larger mainline shall be bronze style with double stainless steel straps, style 202BS manufactured by Romac, or equal.

5. Solvent cement and primer for PVC solvent-weld pipe and fittings shall be of the type and installation methods specified by the manufacturers for each type of pipe.
 6. All PVC pipe shall be marked continuously and permanently with the following information: Manufacturer's name, nominal pipe size, schedule or class of pipe, pressure rating in P.S.I. extrusion, NSF approval and date of extrusion.
 7. All fittings shall bear the manufacturer's name or trademark, material designation, size, applicable I.P.S. schedule and NSF seal of approval.
- F. PVC Non-Pressure Lateral Line Piping
1. Non-pressure buried lateral line piping shall be PVC Class 200 with solvent-weld joints.
 - a. Pipe shall be made from NSF approved, Type I, Grade II, PVC compound conforming to ASTM resin specification D1784. All pipe shall meet requirements set forth in Federal Specification PS-22-70, with an appropriate standard dimension ratio.
 2. Except as noted in paragraph 1 of Section 2.01F, all requirements for non-pressure lateral line pipe and fittings shall be the same as for solvent-weld pressure main line pipe and fittings as set forth in Section 2.01E of these Specifications.
 3. All offsets shall be a minimum three-quarter (3/4) inch unless contractor receives written approval from the Owner's Representative.
- G. PVC Threaded Nipples: PVC Schedule 80.
- H. Automatic controller assemblies
1. Controller D – 42 station: DX42-SPED/DX-RADIO-KIT/DX-ANT-DISC/DX-FLOW/PMRKIT (Rain Master 42 station DX controller in top-entry stainless steel enclosure, radio communication, disc antenna, flow board, Pro-Max receiver). Include one PM-XMTR (Rain Master Pro-Max hand held transmitter)
 2. Controller E – 42 station: DX42-SPED/DX-RADIO-KIT/DX-ANT-DISC/DX-FLOW/PMRKIT (Rain Master 42 station DX controller in top-entry stainless steel enclosure, radio communication, disc antenna, flow board, Pro-Max receiver)
 3. Controller F – 36 station: DX36-SPED/DX-RADIO-KIT/DX-ANT-DISC/DX-FLOW/PMRKIT (Rain Master 42 station DX controller in top-entry stainless steel enclosure, radio communication, disc antenna, flow board, Pro-Max receiver)
- I. Control Wiring
1. Connections between the automatic controllers and the electric control valves shall be made with direct burial copper wire AWG-U.F. 600-volt. Pilot wires shall be a different color wire for each automatic controller. Common wires shall be white with a different color stripe for each automatic controller. Size wire in accordance with valve manufacturer's specifications and wire chart. In no case shall wire size be less than #14.
 2. All splices shall be made with 3M DBY/DBR, Rainbird snap-tie wire connector or approved equal.
- J. Control Wire Conduit
1. Gray PVC Schedule 40 electrical conduit ASTM F-512 size as required.
- K. Electric Remote Control Valves

1. All electric remote control valves shall be of the same type, manufacturer and sizes as indicated on the Drawings and/or as specified herein or approved by the Owner's Representative.
2. All remote control valves shall have a manual flow adjustment.

L. Electric Remote Control Valve Boxes

1. Control valve boxes shall be Brooks, rectangular Model #1419 with bolt down green cover, or approved equal. Install extension Model #1419 6IN, if required.

M. Sprinklers

1. All sprinklers shall be of the same size, type and deliver the same rate of precipitation with the diameter (or radius) of throw, pressure, and discharge as shown on the plans and/or specified herein, or approved by the Owner's Representative.
2. Sprinklers shall have a screw radius adjustment.

N. Backflow Prevention Units

1. Backflow prevention units shall be of size and type indicated on the irrigation Drawings.
2. Backflow prevention device shall meet the performance Specifications of AWWA, ASSE, IAMPO, the USC Foundation for Cross Connection Control, Public Health Officials and Sanitary Engineers.
3. Backflow preventer enclosure shall be of size and type as indicated on Drawings.
4. Enclosures and/or Freeze protection shall of the type indicated on Drawings.

O. Brass Pipe and Fittings

1. Where indicated on the Drawings, use red brass threaded pipe conforming to Federal Specification WW-P-351.
2. Fittings shall be red brass conforming to Federal Specification WW-P-460.

P. Gate Valves

1. Gate valves 3" and smaller shall be bronze with threaded ends and be 200 WOG and equipped with a bronze hand wheel, screw-in bonnet non-rising stem and solid wedge disc.

Q. Gate Valve Box

1. Gate valve box shall be Brooks Model #1419 with bolt down cover or approved equal. Install extension if required.

R. Quick Coupling Valves

1. Quick coupling valves shall have a brass two-piece body designed for working pressure of 125 P.S.I. operable with quick coupler. Key size and type shall be as shown on the Drawings.

S. Quick Coupling Valve Box

1. Quick coupling valve box shall be Brooks Model #910 with bolt down cover or approved equal. Install extension if required.

T. ADV (Anti-drain valves) / Check Valves

1. Anti-drain valves shall be of heavy-duty virgin PVC construction with F.I.P. thread inlet and outlet. Internal parts shall be stainless steel and neoprene. Anti-drain valves shall be field adjustable against drainout from 5' to 40' of head. The anti-drain valve shall be similar to the Valcon ADV or approved equal.
2. Sprinkler heads with internal check valves shall be installed to eliminate low head drainage.

U. Drip Equipment, In-line

1. The emitter line shall be polyethylene and have an in-line, pre-installed drip emitter every eighteen (18") inches. Each emitter shall be individually pressure compensating, self flushing and have a discharge rate of 0.92 gallons per hour.
2. Filter shall be a disc type with a minimum 140 mesh filtration.
3. Automatic flush valve shall be a hydraulic type, normally open valve allowing for automatic flushing at the beginning of each irrigation cycle.
4. Automatic air release valve shall automatically release air from lines in which water flows under pressure.

- V. Master valve shall be normally open with a 24 V solenoid with size and type as shown on the drawings, Superior 3100 series or equal. Size per manufacturer's sizing guidelines for flow range of system(s).

- W. Flow sensor shall be an insertion type with a nonmagnetic spinning impeller (paddle wheel) as the only moving part. The sensor shall operate in flow of one (1) foot per second up to thirty (30') feet per second. The sensor shall be a 2" flow sensor in 2" PVC slip fitting, with a 10-200gpm recommended flow, and 100psi max working pressure. Flow sensor shall be a Data Industrial FS-200, Rainmaster FS-200, or equal.

1. Flow sensor cable shall be constructed of 20 AWG or larger copper conductors twisted into pairs of verifying lengths to prevent crosstalk. Conductors shall be insulated with Polyethylene or Propylene with a suggested working voltage of 350 volts. The cable shall feature an aluminum-polyester shield and be finished with high density Polyethylene Jacket. The cable should be equivalent to Manhattan type M390109.
2. Flow sensor cable connectors shall be an Epoxy-type wire connector kit. Connectors should be equivalent to 3M DBY/DBR.

X. Booster Pumps

1. Booster Pump Assembly for POC "D": Custom *flow* Quality Booster Package™ Model: 10HLA05122011-31VFD; or approved equal. Booster pump assembly has been designed for West Landscape Buffer Phase II irrigation pump, Reference Number: 10HLA05122011-31VFD. Assembly, testing, startup, and service by Custom Pump & Power, Inc. Electrical supply to power the booster pump assembly shall be provided by the Contractor. Three-Phase: 208-Volt: 60-Amp breaker for 31-amp load. Conditions: Maximum flow: 80-GPM with 80-PSI boost: Electrical service 208 -volt: Three-phase: 24VAC-pump start assembled and mounted above ground in a weatherproof enclosure.

2. Booster Pump Assembly for POC "E": Customflow Quality Booster Package™ Model: 10HLA05122011-31VFD; or approved equal. Booster pump assembly has been designed for East #1 Landscape Buffer Phase II irrigation pump, Reference Number: 10HLA05122011-31VFD. Assembly, testing, startup, and service by Custom Pump & Power, Inc. Electrical supply to power the booster pump assembly shall be provided by the Contractor. Three- Phase: 208-Volt: 60-Amp breaker for 31-amp load. Conditions: Maximum flow: 80-GPM with 80- PSI boost: Electrical service 208 -volt: Three-phase: 24VAC-pump start assembled and mounted above ground in a weatherproof enclosure.
3. Booster Pump Assembly for POC "F": Customflow Quality Booster Package™ Model: 10HLA05122011-31VFD; or approved equal. Booster pump assembly has been designed for East #1 Landscape Buffer Phase II irrigation pump, Reference Number: 10HLA05122011-31VFD. Assembly, testing, startup, and service by Custom Pump & Power, Inc. Electrical supply to power the booster pump assembly shall be provided by the Contractor. Three- Phase: 208-Volt: 60-Amp breaker for 31-amp load. Conditions: Maximum flow: 80-GPM with 80- PSI boost: Electrical service 208 -volt: Three-phase: 24VAC-pump start assembled and mounted above ground in a weatherproof enclosure.

PART 3 - EXECUTION

3.01 OBSERVATION OF SITE

A. Site Conditions

1. All scaled dimensions are approximate. The Contractor shall check and verify all site dimensions and notify the Owner's Representative if site conditions have changed.
2. The Contractor shall carefully check all grades to satisfy him that he may safely proceed before starting work on the irrigation system.

3.02 PREPARATION

A. Physical Layout

1. Prior to installation, the Contractor shall stake out all pressure supply lines, routing and location of sprinkler heads.
2. All layouts shall be approved by the Owner's Representative prior to installation. If equipment is incorrectly located without said approval, it is the Contractor's responsibility to relocate it as per the Owner's Representative's directions without additional cost.

3.03 WATER AND ELECTRICAL SERVICES

A. Water Supply

1. Irrigation system shall be connected to water supply points of connection as indicated on the drawings. Field verify connection point. Contractor is responsible for any changes caused by actual site conditions. Notify Owner's Representative in writing of any discrepancies prior to beginning construction.
2. Contractor shall notify City representative ten working days prior to initiation of excavation for each tap. Contractor shall acquire encroachment permits and provide traffic control as required by City. Fees shall be paid at 300 Richards Blvd, 3rd floor, Utility Department. The City will pay fees for new permanent irrigation water connections prior to the project start date. City Crews to tap existing water mains and install 2" irrigation water service tap to the point of service, provide and install meter. Contractor to expose main per City detail W-404, backfill and repave as necessary, provide and install approved backflow preventer per detail W-606.

3. The Contractor shall conduct a water analysis prior to the installation of any drip equipment. The water analysis conducted shall include total dissolved solids (TDS), hardness, iron and sulfides. If the analysis shows levels unacceptable to the manufacturer's recommendations, the Owner's Representative shall be notified in writing. In the event this notification is not performed, the Contractor shall assume full liability for any revisions necessary.

B. Electrical Supply

1. Contractor shall provide all materials and connections to supply electrical power for irrigation controllers and pump stations.
2. Connection shall be made at approximate location(s) as indicated on the Electrical Drawings. The Contractor is responsible for minor changes caused by actual site conditions and for the coordination of all electrical service connections to the controller(s).
3. All electrical work and materials shall conform to local codes, ordinances and governing authorities having jurisdiction.
4. 120-volt power connection to the automatic controller shall be provided by the Contractor. The Contractor shall provide all materials and connections to supply power to the controllers.
5. Power connection to the irrigation booster pumps shall be provided by the Contractor. The Contractor shall provide materials and connections to supply power to the booster pumps.

3.04 INSTALLATION

- A. Trenching: Dig trenches straight and support pipe continuously on bottom of trench. Lay pipe to an even grade. Trenching excavation shall follow layout indicated on the Drawings and as noted. Provide the following minimum depths:

1. Non-constant pressure lateral lines: twelve (12) inches cover
2. Constant pressure main lines: eighteen (18) inches cover
3. In-line drip emitter and polyethylene drip distribution tubing: at grade.
4. Control wiring: eighteen (18) inches cover
5. All lines and wires under auto circulation: twenty-four (24) inches of cover

B. Backfilling

1. The trenches shall not be backfilled until all required tests are performed. Trenches shall be carefully backfilled with the excavated materials approved for backfilling. Backfill shall be mechanically compacted in landscaped areas to a dry density equal to adjacent undisturbed soil in planting areas. Backfill shall conform to adjacent grades without dips, sunken areas, humps or other surface irregularities.
2. Where excavated native soil contains greater than 50% rock or other material one (1) inch diameter or larger imported backfill or sand bedding shall be placed three (3) inches in depth around all pipes.

3. Flooding of trenches shall be permitted only with approval of the Owner's Representative.
4. If settlement occurs and subsequent adjustments in pipe, valves, sprinklers heads, lawn or planting, or other construction are necessary, the Contractor will make all the required adjustments without cost to the Owner.

C. Trenching and Backfilling Under Paving

1. Trenches located under areas where paving, asphaltic concrete or concrete shall be installed, shall be backfilled with sand (a layer six (6) inches below the pipe and three (3) inches above the pipe and compacted in layers to 90% compaction, using manual or mechanical tamping devices). All trenches shall be left flush with the adjoining grade. The Contractor shall set in place, cap and pressure test all piping under paving prior to the paving work.
2. Generally piping under existing walks is done by jacking, boring or hydraulic driving, but where any cutting or breaking of sidewalks and/or concrete is necessary, it shall be done and replaced by the Contractor as part of the Contract cost. Permission to cut or break sidewalks and/or concrete shall be obtained from the Owner. No hydraulic driving shall be permitted under concrete paving.

D. Sleeving

1. Install all irrigation and/or electrical sleeving as indicated on the Drawings. Contractor shall coordinate the installation of sleeving with the work of other trades.

E. PVC Pipe

1. Routing of irrigation pipe as indicated on the Drawings is diagrammatic. Install lines and various assemblies to conform with the details shown on the Drawings.
2. Install no multiple assemblies on plastic lines. Provide each assembly with its own outlet.
3. Install all assemblies specified herein in accordance with respective detail. In absence of detail Drawings or Specifications pertaining to specific items required to complete work, perform such work in accordance with best standard practice with prior approval of the Owner's Representative.
4. PVC pipe and fittings shall be thoroughly cleaned of dirt, dust and moisture before installation. Installation and solvent welding methods shall be as recommended by the pipe and fitting manufacturer.
5. PVC pipe shall be installed so that there will be a small amount of excess length in the pipe to compensate for contraction and expansion of the pipe. This shall be accomplished by "snaking" the pipe in the trench during installation.
6. On PVC to metal connections, the Contractor shall work the metal connections first. Teflon tape or approved equal shall be used on all threaded PVC to PVC, and on all threaded PVC to metal joints. Light wrench pressure is all that is required. Where threaded PVC connections are required, use threaded PVC adapters into which the pipe may be welded.
7. In changing pipe depth, 45° elbows shall be used.

F. Line Clearance

All lines shall have a minimum clearance of three (3) inches from each other and from lines of other trades. Parallel lines shall not be installed directly over one another.

G. Automatic Controller

1. Install as per the irrigation details and manufacturer's specifications.
2. Controller shall be securely mounted in the location as indicated on the Drawings or approved by the Owner's Representative in such a manner that all normal operations can be conveniently made by the operator.
3. The Contractor shall properly ground the controllers in accordance with local codes.
4. The Contractor shall take all control wires to the controller and make all required connections for their installation.
5. All electrical and control wires installed above ground shall be placed in metal conduit or other approved materials and securely mounted. Paint conduit as per the Owner's Representative's directions and/or as indicated on the Drawings.

H. Control Wiring

1. Wiring shall occupy the same trench and shall be installed along the same route as pressure supply or lateral lines wherever possible.
2. Where more than one (1) wire is placed in a trench, the wiring shall be taped together at intervals of ten (10) feet.
3. An expansion curl shall be provided within three (3) feet of each wire connection. Expansion curl shall be of 18 inches in length at each splice connection and at each electric control, so that in case of repair, the valve bonnet may be brought to the surface without disconnection of the control wires. Control wires shall be laid loosely in trench without stress or stretching of control wire conductors.
4. All control wire spliced shall be completely waterproof.
5. Use one splice per connector sealing pack.

I. Electric Remote Control Valves

1. Install as per the irrigation details and manufacturer's specifications.
2. Install where shown on Drawings. Locate valve boxes 12 inches from walk, curb, headerboard, etc., for easy access. Boxes shall be uniformly aligned and oriented relative to hardscape.
3. Install one (1) remote control valves per valve box. Provide extension units as required. Install valve boxes in shrub planting areas whenever possible.
4. Provide eighteen (18) inch expansion loop at all electrical connections within control valve boxes.

J. Flushing of System

1. After new irrigation pipe lines and risers are in place and connected, all necessary diversion work is complete, and prior to installation of irrigation heads, the control valves shall be opened and a full head of water shall be used to flush out the system.

K. Sprinklers

1. Install the sprinklers as detailed on the Drawings. Irrigation sprinklers to be installed in this work shall be as per approved submittals.
2. Spacing of sprinklers shall not exceed the maximum indicated on the Drawings. In no case shall the spacing exceed the maximum recommended by the manufacturer.
3. Contractor shall install turf sprinklers where adjacent to fixed objects such as headerboards, curbs, or mowing strips, so that power edging tools can pass between the turf sprinkler and the fixed object without difficulty.
4. Riser units shall be fabricated in accordance with the irrigation details.
5. Riser nipples for all sprinklers shall be the same size as the riser opening in the sprinkler body.
6. Install sprinklers with internal check valves as required to eliminate low head drainage.

L. Backflow Preventer

1. Install backflow prevention assemblies as detailed on the Drawings and as per all applicable local governing codes and ordinances.
2. Do not locate assemblies in turf areas. Assemblies shall be screened with plant materials, as indicated on the Drawings and as directed by the Owner's Representative.
3. Do not use PVC piping in backflow prevention assemblies.
4. Exact location of unit shall be approved by the Owner's Representative prior to installation.
5. Install on a concrete pad inside of a vandal proof enclosure.

M. Gate Valves

1. Install as per the irrigation details and manufacturer's specifications.
2. Install where shown on Drawings. Locate, in valve boxes, 12 inches from walk, curb, headerboard, etc., for easy access.
3. Install one gate valve per valve box. Provide extension units as required. Install valve boxes in shrub planting areas whenever possible.

N. Quick Coupling Valves

1. Install as per the irrigation details and manufacturer's specification.
2. Install where shown on Drawings. Locate, in valve boxes, 12 inches from walk, curb, headerboard in shrub planting areas whenever possible.
3. Install one quick coupling valve per valve box. Provide box extension units as required. Install valve boxes in shrub planting areas whenever possible.

O. ADV (Anti-Drain Valves) / Check Valves

1. Prior to installation, the Contractor shall verify the on-site grades.
2. If there is an elevation difference of 24" or more between the highest head and lowest head on a system, the ADV's shall be installed on the riser.

P. Drip Equipment, In-line

1. When backfilling dripperline, only use clean backfill free of rocks, the soil is not to be wet or muddy. Dripperline to be pressurized and inspected for leaks before backfilling.
2. The filter shall be installed per the Irrigation Details and manufacturer's recommendations.
3. The flush valve shall be installed per the Irrigation Details and manufacturer's recommendations.
4. The air release valve shall be installed at high points on the line per the direction and approval of the Owner's Representative. Install the air release valve per the manufacturer's recommendations and inside a valve box.
5. The PVC sub-mains and dripperline shall be flushed clean of dirt, rocks, etc. prior to the installation of automatic flush valves and automatic air release valves.

R. Booster Pump Stations

1. Install on reinforced concrete pad of sufficient size. Connect the required wires to controller and pump panel.
2. Install as per manufacturer's specifications.
3. The contractor shall properly ground the pump in accordance with local codes.

S. Water Meters

1. Install as per City of Sacramento Specifications.

T. Master Valve

1. Install as per the irrigation details and manufacturer's specifications.

U. Flow Sensor and Output Transmitter

1. Install the sensor as per the irrigation details and manufacturer's specifications.
2. Pulse output transmitter shall be installed per the manufacturer's specifications.

3.05 TEMPORARY REPAIRS

- A. The Owner reserves the right to make temporary repairs as necessary to keep the irrigation system in operating condition. The exercise of this right shall not relieve the Contractor of his responsibilities under the terms of the guarantee as herein specified.

3.06 FIELD QUALITY CONTROL

- A. Adjustment of the System

1. The Contractor shall adjust all pressure regulating devices on the remote control valves.
2. The Contractor shall flush and adjust all sprinklers for optimum performance and to prevent overspray onto walks, windows, roadways, and buildings as much as possible.
3. If it is determined that adjustments in the irrigation equipment shall provide proper and more adequate coverage, the Contractor shall make such adjustments after written approval by the Owner's Representative. Adjustments shall include changes and additions of sprinklers, nozzle size and degrees of arc as required without additional contract costs.
4. If it is determined that any irrigation equipment is improperly installed, then adjustments shall be made to conform to construction documents without additional contract costs.
5. All sprinklers shall be set perpendicular to finished grades unless otherwise designated on the Drawings.

B. Testing of Irrigation System

1. The Contractor shall request the presence of the Owner's Representative at least 48 hours in advance of testing.
2. Test all pressure lines under hydrostatic pressure of 125 pounds per square inch prior to installation of remote control valves. A minimum of three pressure gauges equally spaced along the main line is required.
3. All piping under paved areas shall be tested under hydrostatic pressure of 125 pounds per square inch prior to paving.
4. Sustain pressure in lines for not less than two (2) hours. If leaks develop, replace joints and repeat test until entire system is proven watertight. At the end of the test the system shall be drained in the presence of the Owner's Representative.
5. All hydrostatic tests shall be made only in the presence of the Owner's Representative. Center load pipe in trench exposing all joints for pressure test. No pipe shall be backfilled until it has been observed, tested and approved in writing by the Owner's Representative. Should any work be covered up before such observation and tests are completed, the Contractor shall, at his own expense, uncover the work; and after it has been observed, tested and approved, he then shall make all repairs with such materials as required to restore all work disturbed to original and proper condition.
6. Furnish necessary force pump and all other test equipment. All equipment shall be present during the test.
7. The emitter system shall be tested and approved by the Owner's Representative prior to backfilling any trenches. Should any work be covered up before such observation and tests are completed, the contractor shall, at his own expense, uncover the work; and after it has been observed, tested and approved, he then shall make all repairs with such materials as required to restore all work disturbed to original and proper condition.
8. When the irrigation system is completed, perform a coverage test in the presence of the Owner's Representative to determine if the water coverage for landscape areas is complete and adequate. Furnish all materials and perform all work required to correct any inadequacies of coverage due to deviations from the Drawings or where the system has been willfully installed as indicated on the Drawings, when it is obviously inadequate without bringing this to the attention of the Owner's Representative. This test shall be accomplished before any landscape is planted.

3.07 MAINTENANCE

- A. Provide maintenance as per SECTION 32 98 00 - LANDSCAPE MAINTENANCE.

3.08 CLEAN-UP

- A. Clean up shall be made as each portion of work progresses. Refuse and excess dirt shall be removed from site. All walks and paving shall be broomed or washed down, and any damage sustained to the work of others shall be repaired to original conditions acceptable to the Owner and the Owner's Representative.

3.09 OBSERVATION PRIOR TO FINAL ACCEPTANCE

- A. The Contractor shall operate each system in its entirety for the Owner's Representative at time of final observation. Any items deemed not acceptable shall be reworked at no additional contract cost, to the complete satisfaction of the Owner's Representative.
- B. The Contractor shall show evidence to the Owner's Representative that the Owner has received all accessories, charts, Record Drawings and equipment as required before final observation can occur.

3.10 OBSERVATION SCHEDULE

- A. Normal progress observations shall be requested by the Contractor from the Owner's Representative as per observations listed in specifications SECTION 32 93 00 -- LANDSCAPE INSTALLATION.
- B. No final observation shall commence without Record Drawings. In the event the Contractor calls for an observation without Record Drawings, without completing previously noted corrections or without preparing the system for observations, he shall be responsible for reimbursing the Owner's Representative at the hourly rate in effect at the time of the observation (plus transportation costs) for the inconvenience. No further observations will be scheduled until this charge has been paid.

END OF SECTION

SECTION 32 92 20

LANDSCAPE NATIVE GRASS

PART 1 – GENERAL

1.01 CONDITIONS

- A. The general provisions of the contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this section

1.02 SCOPE OF WORK

- A. Furnish all labor, material, equipment and services necessary to provide all work, complete and in place, as indicated on Drawings and specified herein.
- B. Work specified in this Section includes, but is not limited to the following:
 - 1. Preparation
 - 2. Weed Control
 - 3. Plugging
 - 4. Drill Seeding
 - 5. Hydroseeding
 - 6. Clean-up

1.03 QUALITY ASSURANCE

- A. Contractor or subcontractor shall have successfully completed at least 3 projects of similar scope (particularly the establishment of seeded native grass) and complexity within the past 5 years. Provide written documentation, including references, for such experience.
- B. Source Quality Control
 - 1. Native Grass seeds shall be from the same ecotype as the project.
 - 2. Information regarding the seed mixture shall be provided by the seed vendor on each standard sealed container label. The labels shall include the following information:
 - a. Seed mixture name
 - b. Lot number
 - c. Total net weight and PLS weight of each seed type
 - d. Percentages of purity and germination
 - e. Seed coverage, in acres, on a PLS basis
 - f. Percentage of maximum weed seed content clearly marked for each seed type.

3. Seed for drill seeding shall be packaged by the vendor such that the acre coverage of each container is equal for convenience of inventory.
 4. Seed shall be provided from and mixed by a certified dealer. Seed mixture shall be labeled with manufacturer's guaranteed analysis, germination rate and purity rate.
- C. All materials shall be of standard, approved and first-grade quality and shall be in prime condition when installed and accepted. Any commercially processed or packaged material shall be delivered to the site in the original unopened container bearing the manufacturer's guaranteed analysis. Contractor shall supply Owner's Representative with a sample of all supplied materials accompanied by analytical data from an approved laboratory source illustrating compliance of bearing the manufacturer's guaranteed analysis.
- D. Established native grass areas shall exhibit a uniform stand in good health and vigor, free of noxious or invasive weeds, and demonstrating 90% coverage, or effective competitiveness against non-native species at the time of final acceptance.

1.04 SUBMITTALS

- A. Refer to Section 01 33 00 -- SUBMITTALS for instructions.
- B. Submit written documentation to Owner's Representative within 30 days of Contract award that all seed species required are available. Any substitutions required due to unavailability must be requested in writing prior to ordering.
- C. If required, within 30 days of award of contract, furnish source of imported topsoil to Owner's representative for purpose of soil sampling. Contractor is required to provide adequate sampling and analysis of imported material at his expense.
- D. Material List
1. Contractor shall furnish the articles, equipment, materials, or processes specified by name in the Drawings and Specifications.
 2. Complete material list (6 copies) shall be submitted prior to performing any work. Material list shall include the manufacturer, model number and description of all materials, products, and equipment to be used.
 3. Equipment or materials installed or furnished without prior approval of the Owner's Representative shall be rejected and the Contractor required to remove such materials from the site at this own expense.
 4. Approval of any item, alternate or substitute indicates only that the product or products apparently meet the requirements of the Drawings and Specifications on the basis of the information or samples submitted. The Contractor shall assume full responsibility (in written form) for the performance of any substitutions. The Owner's Representative's decision for approval or rejection of any substitution is final.
- E. Soils fertility analysis shall be submitted within 30 days of award of contract.
- F. Seed certifications shall be submitted within 30 days of award of contract.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. The Contractor, upon request by Owner's Representative, shall provide receipts, delivery tickets, load tickets, etc. of all items delivered to the job site to verify products and total quantities.
- B. Deliver fertilizer and other packaged products to site in original unopened containers bearing manufacturer's guaranteed chemical analysis, name trademark, and conformance to State Law.
- C. Each seed container shall be labeled by grower or manufacturer as separate items.
- D. Seed shall be kept in dry storage away from contaminants, moisture, and pests.
- E. Seed that has become wet, moldy, or otherwise damaged in transit or storage will be rejected.

1.06 JOB CONDITIONS

- A. Perform work only when weather and soil conditions are suitable in accordance with locally accepted practice. Native grasses seeding shall occur during the following timeframe: October 1 to March 25.
- B. Install grasses after irrigation system is operable and has been accepted.
- C. Protect work and materials from damage due to construction operations by other contractors and trades and by vandalism. Maintain protection during installation and maintenance period.
- D. Hydroseeding operations shall not take place if any of the following conditions are predicted in the next 24 hours:
 - 1. Temperatures exceed 95°F.
 - 2. Temperatures fall below 55°F.
 - 3. Windspeeds are at or above 20 mph.
 - 4. Rain is imminent.

1.07 SAMPLES AND TESTS

- A. Owner's Representative reserves the right to take and analyze samples of materials for conformity to specifications. The Contractor shall furnish samples upon request by the Owner's Representative. Rejected materials shall be removed from the site at Contractor's expense. Cost of testing of materials not meeting specifications shall be paid by Contractor.
- B. Seed Certification:
 - 1. Seed shall be tested according to the Association of Official Seed Analysts, International Seed Testing Association, and the Federal Seed Act standards. Tested seed shall be accompanied by a certificate of analysis furnished by a certified testing laboratory. All seed shall be subject to inspection and concurrence by the Contractor before the subcontractor is authorized to proceed with the seeding operation.
 - 2. Certify as tested the following individual seed types:

- a. Purity and Germination: Before seed is used, retest for germination all seed stored over six months from the date of the original acceptance test, and resubmit the results for inspection.
 - b. Prohibited Noxious Weed Seed: Seed shall contain no federal- or state-listed prohibited noxious weed seed (an amount within the tolerance of zero percent) as determined by a standard purity test.
 - c. Restricted Noxious Weed Seed: Seed shall contain no more than 40 seeds per pound of any. Single species or 150 seeds per pound of all species combined, of restricted noxious weed seed. Restricted noxious weed seed is considered to be component of other crop and weed seed with limitations specified.
 - d. Weed Seed: Seed shall contain no more than 1 percent by weight, of weed seed of other crops and plant species as determined by standard purity tests.
3. All certifications shall include:
- a. the name and address of the laboratory;
 - b. the date of test; and
 - c. the lot number of each seed type.

C. Agronomic Soils Testing

1. To ensure a suitable growing medium for plants, employ services of a certified agronomic soils testing laboratory to perform soil testing at selective locations only on-grade. For bidding purposes there shall be a minimum of four (4) test locations. Contractor is to provide documented locations for review by Owner's Authorized Representative for approval before testing can proceed. Contractor is responsible for agronomic soil testing costs.
2. Perform soil sampling and testing once clearing and grubbing and all rough grading operations have been completed, and prior to seeding.
3. Amendment recommendations based on soils testing will take precedence over soil amendment procedures specified in this section.
4. Take samples of site soil at following depths and quantity:
 - a. Native grass areas: 6 inches, 4 locations (two per side)
5. Provide the following at each test location:
 - a. Chemical analysis report of each soil sample location to include the following:
 - i. Percentage of organic matter.
 - ii. salinity.
 - iii. PH.

- iv. Mineral nutrients, including concentrations of nitrogen, phosphorus, potassium, calcium, and magnesium.
- v. Potential hazards of impediments to plant growth from salinity; sodium, boron, impaired soil structure or drainage.
- b. Request testing for fertility and suitability analysis with written recommendations for soil amendment application rates.
- c. Soil percolation rates.

1.08 GUARANTEE AND REPLACEMENT

- A. All plant material and other materials installed under the Contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for the duration of the maintenance period. Any plant found to be dead or not in a satisfactory or healthy condition due to faulty materials, workmanship, acts of God, or improper maintenance as determined by the Owner's Representative prior to or during the maintenance period, shall be replaced immediately by the contractor at his expense.
- B. The Owner's Representative shall be the sole judge as to the condition of material. Material to be replaced within the guarantee period shall be replaced by the Contractor within fifteen (15) days of written notification by the Owner. All replacement materials and installation shall comply with the Plans and Specification.

PART 2- PRODUCTS

2.01

A. Soil Conditioner

- 1. Gro-Power Plus: Humus (bacteria included) based fertilizer and soil conditioner with soil penetrant shall consist of the following percents by weight:
 - a. 5% nitrogen
 - b. 3% phosphoric acid
 - c. 1% potash
 - d. 50% humus
 - e. 15% humic acids

B. Soil Amendment

- 1. Nitrogen Stabilized Shavings: 0.56 to 0.84% N based on dry weight for redwood sawdust treated with relative form of nitrogen (N H 3).
 - a. Particle Size:
 - i. 95% - 100% passing 6.35 mm standard sieve.
 - ii. 80% - 100% passing 2.33 mm standard sieve.

iii. 10% - 20% passing 0.50 mm standard sieve.

b. Salinity: The saturation extract conductivity shall not exceed 3.5 millimhos/centimeter at 25 degrees (25°) centigrade as determined by saturation extract method.

c. Iron Content: Minimum 0.08% dilute acid soluble Fe on dry weight basis.

d. Ash: 0 - 25% (dry weight)

e. pH Range: 5.5 - 7.5

f. Actual organic matter content: minimum 280 pounds per cubic yard.

C. Fertilizer (Organic)

1. Fertilizer with greater than 80% organic substance, suitable for hydroseed applications, which contains the following percents by weight:

a. 8% nitrogen

b. 2% phosphoric acid

c. 3% potash

2. Biosol as manufactured by Rocky Mountain Bio Products, 888-696-8960 or approved equal.

D. Mulch- Blown on (Organic)

1. Mulch shall be weed-free rice straw

a. Mulch shall not be brittle, molded, or rotted and shall be free of weed seeds classified noxious or troublesome.

b. Mulch shall be in air-dry condition and suitable for placing with mulch blowing equipment.

c. The mulch will be subject to inspection and approval by the Owner's Representative prior to application.

E. Mulch - Hydromulch (for erosion control in hydroseed applications)

1. Mulch shall be specially prepared wood cellulose fibers with no growth or germination inhibiting factors, and dyed green to facilitate visual metering during application. Wood cellulose fiber shall have additional characteristics:

a. Dispersing rapidly in water to form homogeneous slurry and remain in such state when agitated in the hydraulic mulching unit.

b. Produced from natural straw fiber (minimum 90%).

c. No more than 15% of any additives.

d. Free from plastics or other non biodegradable substances.

e. Wood cellulose fiber mulch shall be supplied compressed in packages containing fifty (50) pounds of material having an equilibrium air dry moisture content at time of manufacture of 12% plus or minus 2.

2. Mulch shall be Hydrostraw as manufactured by HydroStraw LLC, 800-545-1755 or approved equal.

F. Hydromulch: Wood Cellulose Fiber Mulch

1. Mulch shall be specially prepared wood cellulose fibers with no growth or germination inhibiting factors, and dyed green to facilitate visual metering during application. Mulch shall be equal to Silva-Fiber as manufactured by Weyerhaeuser Company, Tacoma, Washington. Wood cellulose fiber shall have additional characteristics of dispersing rapidly in water to form homogeneous slurry and remain in such state when agitated in the hydraulic mulching unit.

2. Wood cellulose fiber mulch shall be supplied compressed in packages containing fifty (50) pounds of material having an equilibrium air dry moisture content at time of manufacture of 12% plus or minus 2.

G. Seed Mix:

1. Drill Seed Mix shall consist of the following::

a. *Hordeum californicum* Calif. Barley 15 lbs/acre

i. *Yolo bypass ecotype*

b. *Nassella pulchra* Purple Needlegrass 20 lbs/acre

i. *Yolo bypass ecotype*

c. Microrizobial Inoculum (Endo) 60 lbs/acre

2. Hydroseed mix for remediation of deficient areas shall consist of the following:

a. *Hordeum californicum* Calif. Barley 30 lbs/acre

i. *Yolo bypass ecotype*

b. *Nassella pulchra* Purple Needlegrass 40 lbs/acre

i. *Yolo bypass ecotype*

c. Hydromulch 4000 lbs/acre

d. Fertilizer 1000 lbs/acre

e. Microrizobial Inoculum Endo 20 20 lbs/acre

f. Hydromulch Tackifier Guar 100 lbs/acre

3. Other seed mixes shall be as specified on the Drawings.

H. Binders/Tackifiers

1. Natural Guar-based organic polysaccharide tackifier to bind hydromulch to prevent erosion.

I. Fungicide

1. "Subdue" (Ciba-Geigy) or approved equal.

J. Weed Control

1. Not Used.

K. Mycorrhizial Inoculant

1. Granular formulation of endomycorrhizal species totaling 60,000 propagules per pound.
2. MycoApply "Endo" or equal.

2.02 EQUIPMENT

A. Drill Seeder for native seed:

1. A specially designed rangeland-type no-till drill equipped with double coulter furrow openers and depth bands followed by packer wheels.
2. Drill seeder shall be capable of evenly seeding fluffy, chaffy native seed mixes over the entire area to be drill seeded.
3. Drill seeder shall as manufactured by Nesbit (San Angelo, TX); Horizon (now Miller Grass Drill); Crust Buster (Spearville, KA); Miller Grass Drill (Hereford, TX); or Truax Drill (Minneapolis).

B. Hydro-Seeder:

1. Equipment used for application of slurry shall be a commercial-type Hydro-Seeder and have a built-in agitation system with an operation capacity sufficient to agitate, suspend and homogeneously mix slurry.
2. Tank capacity shall be a minimum of 1,500 gallons and shall be mounted on a truck to allow access to the site.
3. Distribution Lines: Large enough to prevent stoppage and allow for even distribution of slurry over the site.
4. The pump shall be able to generate 150 psi at the nozzle.

PART 3 - EXECUTION

3.01 OBSERVATION

- A. Prior to the work in this Section, examine previously installed work from other trades and verify that such work is complete and as required, to the point where this installation may commence properly.

- B. Contractor to review the conditions of site for planting. Verify that final grades have been established prior to beginning planting operations. Contractor is responsible to inform Owners Authorized Representative of conditions of the site that are not suitable for planting.

3.02 PREPARATION

A. General

1. Pre-Plant Weed Control / Soil Amendment

- a. Clear and remove existing weeds by mowing and grubbing to at least 1/4 inch below the soil surface. Bag, collect, and legally dispose of all weeds off-site.
- b. Fertilize areas to receive planting with urea 46-0-0 commercial fertilizer at the rate of 1/2 pound per 1,000 square feet.
- c. Water area thoroughly for 2 weeks. Employ a specific watering duration and frequency program designed to germinate all residual weed seeds.
- d. After sufficient weed germination is present, apply a post-emergent contact weed killer according to the directions of the manufacturer.
- e. Allow for a sufficient period of time to ensure that the weeds are dead and the weed killer has dissipated before applying a second weed kill.
- f. Thoroughly cross-rip to a minimum depth of 8 inches. Avoid all utility lines and irrigation lines, if irrigation system has already been installed.
- g. Evenly spread all recommended amendments over the surface. Use the specific rates based on the soils fertility analysis performed by the Contractor and as approved by the Owner's Representative. Thoroughly cultivate into the top 6" of existing soil by a minimum of two passes in alternating directions by a mechanical roto tiller.
- h. Water all planting areas thoroughly for 2 weeks. Discontinue the watering process for 1 day prior to the second application of the herbicide. Reapply the spraying operation with a direct contact weed killer according to the pest control adviser's recommendations. Avoid any irrigation for a minimum of 4 days for effective weed kill.
- i. After the last weed kill, water planting areas to thoroughly saturate upper layers of soil prior to commencing planting operations.

2. Final Grades

- a. Finished grading shall insure proper drainage of the site. Conform to Section 31 22 00 - EARTHWORK
- b. Establish finish grades in a continuous uniform line resulting in a uniform surface with no ridges or water pockets.
- c. The Contractor shall avoid any additional soil compaction, and shall not permit vehicular or equipment traffic over such areas. In the event of such compaction, the Contractor shall be required to recultivate any areas thus compacted.

3.03 HYDROSEEDING – NATIVE GRASSES (for remediation only)

- A. Apply hydroseed in two separate applications as follows:
 - 1. Apply all seed, fertilizer, mycorrhizobial inoculum, and 25% of hydromulch.
 - 2. Apply 75% of hydromulch and 100% of tackifier/binder.
- B. All hydroseed shall be watered immediately after planting. After the first watering, water shall be applied to all plants as conditions may require to keep the plants in a healthy and vigorous growing condition until the completion of the Contract.
- C. Replace all dead or unhealthy stands of grass with equal material as directed by the Owner's Representative.

3.04 DRILL SEEDING

- A. Perform seeding within 10 days of seedbed preparation.
- B. Drill seed to an average depth of .25 inches, but not deeper than .50 inches.
- C. Use row markers with drill seeder
- D. Perform seeding in two perpendicular directions, each direction at half the total rate specified. Calibrate the seed drill to the specified seeding rate in the presence of the contractor.
- E. If inspection by the Owner's Representative indicates that areas have been skipped or seeded at less than the specified rate, Contractor will be required to apply additional seed on these areas.
- F. Contractor shall use temporary barricades as required to protect work from damage due to landscape operations, operation by other contractors, trades, and trespassers. Maintain protection during installation and maintenance period.
- G. Following drill seeding, lightly mulch (soil visible through mulch) all drill-seeded areas using mulch-blowing equipment. Mix and application rates:
 - 1. Organic straw mulch: 3,000lbs/acre
 - 2. Cellulose fiber: 500 lbs/acre
 - 3. Tackifier: 100 lbs/acre
 - 4. Fertilizer (Biosol) 500 lbs/acre

3.05 CLEAN UP

- A. Per Section 32 93 00 – LANDSCAPE INSTALLATION

3.06 OBSERVATION SCHEDULE

- A. Per Section 32 93 00 – LANDSCAPE INSTALLATION

3.07 MAINTENANCE

- A. Per Section 33 98 00 – LANDSCAPE MAINTENANCE

END OF SECTION

SECTION 32 93 00

LANDSCAPE INSTALLATION

PART I – GENERAL

1.01 CONDITIONS

- A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this Section.

1.02 SCOPE OF WORK

- A. Furnish all labor, material, equipment and services necessary to provide all landscape work, complete and in place, as indicated on Drawings and specified herein.

Work specified in this Section, but is not limited to the following:

1. Soil preparation
2. Planting
4. Staking
5. Clean-up

1.03 QUALITY ASSURANCE

A. Source Quality Control

1. Submit documentation to the Owner's Representative at least thirty (30) days prior to start of planting that all plant material has been ordered. Arrange procedure for observation of plant material with the Owner's Representative at time of submission.
2. Plants shall be subject to observation and approval by the Owner's Representative upon delivery for conformity to specifications. Such approval shall not impair the right of observation and rejection during progress of work.

1.04 SUBMITTALS

A. Material List

1. Contractor shall furnish the articles, equipment, materials or processes specified by name in the Drawings and specifications.
2. Complete material list (6 copies) shall be submitted prior to performing any work. Material list shall include the manufacturer, model number and description of all materials and equipment to be used.
3. Equipment or materials installed or furnished without prior approval of the Owner's Representative shall be rejected and the Contractor required to remove such materials from the site at his own expense.
4. Approval of any item, alternate or substitute indicates only that the product or products apparently meet the requirements of the Drawings and Specifications on the basis of the information or samples submitted. The Contractor shall assume full responsibility (in

written form) for the performance of any substitutions. The Owner's Representative's decision for approval or rejection of any substitution is final.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery

1. The Contractor, upon request by the Owner's Representative, shall provide receipts, delivery tickets, load tickets, etc. of all items delivered to the job site to verify products and total quantities.
2. Deliver fertilizer to site in original unopened containers bearing manufacturer's guaranteed chemical analysis, name trademark, and conformance to State Law.
3. Deliver plants with legible identification labels.
 - a. Label trees, evergreens, bundles of containers of like shrubs, or ground cover plants.
 - b. State correct plant name and size indicated on plant list.
 - c. Use durable waterproof labels with water-resistant ink which will remain legible for at least sixty (60) days.
4. Protect plant material during delivery to prevent damage to rootball or desiccation of leaves.
5. The Contractor shall notify the Owner's Representative forty-eight (48) hours in advance of delivery of all plant materials for observation.

B. Storage

1. Store plant material in shade and protect from weather.
2. Maintain and protect plant material as required.

C. Handling

1. Do not drop plant materials.
2. Do not pick up container plant material by stems or trunks.

1.06 JOB CONDITIONS

- A. Perform actual planting only when weather and soil conditions are suitable in accordance with locally accepted practice.
- B. Install trees, shrubs, and ground cover plant material before native grass areas are installed and after irrigation system is operable.
- C. Protect work and materials from damage due to construction operations by other contractors and trades and by vandalism. Maintain protection during installation and maintenance period.

1.07 SAMPLES AND TESTS

- A. The Owner's Representative reserves the right to take and analyze samples of materials for conformity to specifications. The Contractor shall furnish samples upon request by the Owner's Representative. Rejected materials shall be removed from the site at Contractor's expense. Cost of testing of materials not meeting specifications shall be paid by the Contractor.

B. Agronomic Soils Testing

- a. To ensure a suitable growing medium for plants, employ services of a certified agronomic soils testing laboratory to perform soil testing at selective locations only on-grade. For bidding purposes there shall be a minimum of four (4) test locations. Contractor is to provide documented locations for review by Owner's Authorized Representative for approval before testing can proceed. Contractor is responsible for agronomic soil testing costs.
- b. Perform soil sampling and testing once rough grading operations have been completed, and prior to seeding.
- c. Amendment recommendations based on soils testing will take precedence over soil amendment procedures specified in this section.
- d. Take samples of site soil at following depths and quantity:
 - i. Shrub/Groundcover areas: 6 inches, 4 locations (two per side)
- e. Provide the following at each test location:
 - i. Chemical analysis report of each soil sample location to include the following:
 - a. Percentage of organic matter.
 - b. Salinity.
 - c. PH.
 - d. Mineral nutrients, including concentrations of nitrogen, phosphorus, potassium, calcium, and magnesium.
 - e. Potential hazards of impediments to plant growth from salinity; sodium, boron, impaired soil structure or drainage.
 - ii. Request testing for fertility and suitability analysis with written recommendations for soil amendment application rates.
 - iii. Soil percolation rates.

1.08 GUARANTEE AND REPLACEMENT

- A. All plant material and other materials installed under the Contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for the duration of the maintenance period. Any plant found to be dead or not in a satisfactory or healthy condition due to faulty materials, workmanship, act of God, or improper maintenance as determined by the Owner's Representative shall be replaced immediately by the Contractor at his expense.
- B. The Owner's Representative shall be the sole judge as to the condition of material. Material to be replaced within the guarantee period shall be replaced by the Contractor within fifteen (15) days of written notification by the Owner. All replacement materials and installation shall comply with the Drawings and Specifications.

PART 2 – PRODUCTS

2.01 GENERAL

All materials shall be of standard, approved and first-grade quality and shall be in prime condition when installed and accepted. Any commercially processed or packaged material shall be delivered to the site in the original unopened container bearing the manufacturer's guaranteed analysis. The Contractor shall supply the Owner's Representative with a sample of all supplied materials accompanied by analytical data from an approved laboratory source illustrating compliance of bearing the manufacturer's guaranteed analysis.

2.02 PRODUCTS

A. Soil Conditioner

1. Gro-Power Plus: Humus (bacteria included based fertilizer and soil conditioner with soil penetrant shall consist of the following percents by weight:

5 %	nitrogen
3 %	phosphoric acid
1 %	potash
50 %	humus
15 %	humic acids

B. Soil Amendment

1. Nitrogen Stabilized Shavings: 0.56 to 0.84% N based on dry weight for fir bark mulch, treated with relative form of nitrogen (NH₃), 1/2" or less in size.
 - a. Particle Size: 95% - 100% passing 6.35 mm standard sieve.
80% - 100% passing 2.33 mm standard sieve.
10% - 20% passing 0.50 mm standard sieve.
 - b. Salinity: The saturation extract conductivity shall not exceed 3.5 millimhos/centimeter at 25 degrees (25°) centigrade as determined by saturation extract method.
 - c. Iron Content: Minimum 0.08% dilute acid soluble Fe on dry weight basis.
 - d. Ash: 0 - 25% (dry weight)
 - e. pH range: 5.5 - 7.5
 - f. Actual organic matter content: minimum 280 pounds per cubic yard

C. Soil Amendment Fertilizer

1. General NPK fertilizer which contains the following percents by weight:

6%	nitrogen
20%	phosphoric acid
20%	potash

D. Special Fertilizer:

1. Planting Pit Fertilizer: Gro-Power Plus (bacteria included) with soil penetrant and shall consist of the following percents by weight:

5%	nitrogen
3%	phosphoric acid
1%	potash
50%	humus
15%	humic acid

2. Planting Tablets: Slow-release 21 gram tablets as manufactured by Agriform or approved equal, containing the following percentages of nutrients by weight:

20 %	nitrogen
10 %	phosphoric acid
5 %	potash

E. Imported Soil

1. Imported soil shall be obtained from source approved by the Owner's Representative. Submit soil fertility analysis of soil with imported soil submittal.
2. Imported soil shall be of friable sandy-loam texture free of refuse, roots, heavy or stiff clay, rocks, sticks, brush or other deleterious materials. Soil shall be free of all noxious weeds. Soil samples and analysis shall be submitted to the Owner's Representative for approval prior to delivery of any soil to the project site. Should the Owner's Representative reject any portion of the delivered soil, for any reason, it shall be removed immediately at no cost to the Owner.

F. Plant Material

1. The plant material indicated on the Drawings by the listed names shall conform to "Standard Plant Names," second edition, except for names not covered therein, the established customs of the nursery trade is followed. All plants shall be true to name, and above one of each bundle or lot shall be tagged with the name and size of the plant, in accordance with the standards of practice recommended by the American Association of Nurserymen. All plant materials shall meet the specifications of Federal, State and County laws, requiring inspection for plant diseases and insect infestations. Plants shall be symmetrical, typical for variety and species, sound, healthy, vigorous, free from plant diseases, insect pests or other eggs, and shall have healthy, normal root systems, while filling their containers, but not to the point of being root bound. Plants with roots which encircle root balls or trunks, or which are girdling trunks, will not be accepted. Use only plant materials that are first class representative of the species and cultivars specified and that conform to all State and local laws governing the sale, transportation and inspection of plant materials. Plants shall have straight, single trunks, unless otherwise specified on the Drawings. Those specified to be multi-trunk shall have at least three leaders from the base. Any plants that have encircling roots (not root bound) shall have root balls lightly slashed on a minimum of three (3) sides to stop encircling root growth. The height and spread of all plant materials shall be measured with branches in their normal position. Sizes of plants shall be as stated on the plant list, 5 and 15 gallon can containers stock shall have been grown in that container not less than six (6) months, but shall not have been overgrown in the containers so as to have become root bound.
2. The size of the plants will correspond with that normally expected for species and variety of commercially available nursery stock or as specified in the Special Conditions or Drawings. The minimum acceptable size of all plants, measured before pruning with the branches in normal position, shall conform with the measurements, if any, specified on the Drawings in the list of plants to be furnished. Plants larger in size than specified may be used with the approval of the Owner's Representative, but if the use of larger plants is approved, the ball of earth or spread of roots for each plant will be increased proportionally. Plant material shall conform to the following Specifications for container stock:

SHRUBS					
SIZE	TYPE	EXAMPLE	HEIGHT	SPREAD	CALIPER
1 Gal.	Low growing	Pitt. tobira	8-10"	6-8"	
1 Gal.	Tall growing	Pitt. eugen.	10-12"	6-8"	
5 Gal.	Low growing	Pitt. tobira	15-18"	15-18"	
5 Gal.	Tall growing	Pitt. eugen.	24-30"	15-18"	
15 Gal.	Low growing	Pitt. tobira	30-36"	30-36"	

15 Gal.	Tall growing	Pitt. eugen.	42-48"	36-42"
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TREES

SIZE	TYPE	EXAMPLE	HEIGHT	SPREAD	CALIPER
5 Gal.	Slow growing	Quercus	5-6'	12-18"	¼ - ½"
5 Gal.	Fast growing	Euc. - Prunus	6-7'	12-18"	½ - ¾"
15 Gal.	Slow growing	Quercus - Pyrus	7-8'	24-30"	¾ - 1"
15 Gal.	Fast growing	Euc. - Prunus	8-10'	30-36"	1 - 1 ¼"
24" Box	Slow growing	Euc. - Prunus	8-10'	3-4'	1 ½ - 1 ¾"
24" Box	Fast growing	Quercus - Pyrus	10-12'	4-5'	1 ¾ - 2 ½"
30" Box	Slow growing	Quercus - Pyrus	12-14'	6-7'	2 ½ - 3"
30" Box	Fast growing	Euc. - Prunus	12-14'	6-7'	2 ½ - 3"
36" Box	Slow growing	Quercus - Pyrus	14-16'	8-10'	2 ½ - 3"
36" Box	Fast growing	Euc. - Prunus	14-16'	8-10'	2 ½ - 3"

3. Plants not conforming to the requirements shall be considered defective and such plants, whether in place or not, shall be marked as rejected and immediately removed from the site of the work and replaced with new plants at the Contractor's expense. Plants shall be of the species, variety, size and condition specified herein or as shown on the Drawings. Under no conditions will there be any substitution of plants or sizes listed on the plans, except with the expressed written approval of the Owner's Representative.
4. The central leaders of all specified trees shall remain intact. Any tree which has had its central leader cut or removed is subject to rejection.
5. At no time shall trees or plant materials be pruned, trimmed or topped prior to delivery and any alteration of their shape shall be conducted only with the approval and when in the presence of the Owner's Representative and/or as noted on the Planting Specifications.
6. Nursery Grown and Collected Stock
 - a. Plant materials shall conform to the best edition of ANSI Z60.1 American Standard for Nursery Stock.
 - b. Grown under climatic conditions similar to those in locality of project.
 - c. Container-grown stock in vigorous, healthy condition, not root bound or with root system hardened off.
 - d. Use only linear stock plant material which is well established in removable containers or formed homogeneous soil sections.
7. Ground cover plants shall be grown in 1 gallon containers, flats or liners, as indicated on the plans. Flat grown plants (rooted cuttings) shall remain in those flats until transplanting. The flat's soil shall contain sufficient moisture so that it will not fall apart when lifting the plants.

G. Tree Staking Material

1. Stakes for Tree Support
 - a. Wood Tree Stakes: Lodgepole pine stakes. Minimum nominal size: two inches in diameter x length as required and pointed at one (1) end (adjust length to fit tree). Stakes shall be free from knots, checks, splits, or disfigurements.
2. Ties
 - a. 24" length cinch tie as manufactured by V.I.T. Company (714) 871-2309 or approved equal.

H. Mulch

1. Mulch shall be walk-on fir bark mulch as manufactured by Redi-Gro Corporation, Sacramento, California (916) 381-6063 or approved equal.
2. The mulch shall consist of fibrous, woody bark mixture of varied particle size such that maximum particle length be 3".
 - a. Physical properties:

<u>Percent Passing</u>	<u>Sieve Size</u>
90-100	1" (25.4 mm) Dia.
80-100	1/2" (12.7 mm) Dia.
20-60	1/4" (6.35 mm) Dia.
 - b. Chemistry:
 - 1) Acid in reaction, max pH 5.0
 - 2) Maximum ash 7% based on dry weight.
 - 3) Minimum moisture 35% at time of delivery based on fresh weight.

I. Wood Headerboards

1. Not Used.

J. Weed Control

1. Enide (Upjohn), Dymid (Elanco Products Co.), Treflan, Eptan, Surflan or approved equal.

K. Root Barriers:

1. Not Used. Do not plant trees within 5' of paved surfaces, structures, or other objects. Adjust tree locations in field as required.

PART 3 – EXECUTION

3.01 OBSERVATION

Verify that final grades have been established prior to beginning planting operations. Observe trees, shrubs and liner stock plant material for injury, insect infestation and trees and shrubs for improper pruning. Do not begin planting of trees until deficiencies are corrected or plants replaced.

3.02 LAYOUT OF PLANTING AREAS

- A. Stake or mark with lime, locations for plants and outline of planting beds on ground. Do not begin excavation until plant locations and plant beds are acceptable to the Owner's Representative. The irrigation system shall be operational and approved prior to planting.
- B. Locations for plants and outlines of areas to be planted shall be marked on the ground by the Contractor before any plant pits are dug. All such locations shall be approved by the Owner's Representative. If an underground construction or utility line is discovered prior to work, other locations for planting may be selected by the Owner's Representative.

3.03 PREPARATION

A. Preparation of Planting Areas (Shrub and Groundcover areas only)

1. Eradicate and remove weeds by means of post emergent herbicide. Apply herbicide as per manufacturer's recommendations.

2. After approximate finished grades have been established, soil shall be conditioned and fertilized in the following manner. Soil conditioner shall, at the following rate, be uniformly spread and cultivated thoroughly by means of mechanical tiller into the top six (6) inches of soil. Existing planting areas shall be cultivated by hand tools.

Application Rates (for bidding only; actual application rates to be determined based on soils fertility testing by contractor):

- a. One hundred seventy five (175) pounds of soil conditioner per 1,000 square feet.
 - b. Twenty five (25) pounds of soil sulphur per 1,000 square feet
 - c. Three (3) cubic yards of soil amendment per 1,000 square feet.
 - d. Ten (10) pounds of soil amendment fertilizer per 1,000 square feet.
3. All soil areas shall be compacted and settled by application of heavy irrigation to a minimum depth of twelve (12) inches.
 4. At time of planting, the top six (6) inches of all areas to be planted shall be free of stones, stumps, or other deleterious matter one (1) inch in diameter or larger, and shall be free from all wire plaster, or similar objects that would be a hindrance to planting and maintenance.

B. Final Grades

1. Conform to Section 31 22 00 - GRADING

C. Wood Headerboards

1. Not Used

3.04 PLANT INSTALLATION

A. General

1. Actual planting shall be performed during those periods when weather and soil conditions are suitable and in accordance with locally accepted practice, as approved by the Owner's Representative.
2. Only as many plants as can be planted and watered that same day shall be planted.
2. Container shall be opened and plants shall be removed in such a manner that the ball of earth surrounding the roots is not broken and they shall be planted and watered as herein specified immediately after removal from the containers. Containers shall not be opened prior to placing the plants in the planting area.

B. Root Barrier Installation

1. Not Used

C. Planting of Trees and Shrubs

1. Excavation for planting shall include the stripping and stocking of all acceptable topsoil encountered within the areas to be excavated for trenches, tree holes, plant pits and planting beds.
2. Excess soil generated from the planting holes and not used as backfill or in establishing the final grades shall be removed from the site.

3. Excavating for Planting
 - a. Shape
 - 1) Vertical sides with bottom raised in center, tapering to edges of pit.
 - 2) Plant pits to be square for box material, circular for canned material.
 - 3) Scarify sides and bottom of each pit.
 - b. All trees and shrubs shall have planting pits dug twice the diameter of the rootball. Backfill around the rootball with prepared backfill mix.
 - c. Protect all areas from excessive compaction when trucking plants or other materials to planting site.
 - d. Can Removal
 - 1) Cut cans on two (2) sides with an acceptable can cutter.
 - 2) Do not injure the rootball.
 - 3) Do not cut cans with spade or ax.
 - 4) Carefully remove plants without injury or damage to rootball.
 - 5) After removing plant, superficially cut edgeroots with knife on three (3) sides.
 - e. Box Removal
 - 1) Remove bottom of plant boxes before planting.
 - 2) Remove sides of box without damage to rootball after positioning plant and partially backfilling.
 - f. Center plant in pit.
 - g. Face plants with fullest growth into prevailing wind.
 - h. Set plant plumb and hold rigidly in position until soil has been tamped firmly around ball roots.
 - i. Crowns of rootballs shall be installed above finish grade.
 - j. Remainder of planting pit shall be backfilled with:
 - 1) Three (3) parts rock-free native soil
 - 2) One (1) part nitrogen stabilized shavings
 - 3) Fifteen to eighteen (15-18) pounds Gro-Power Plus planting pit fertilizer per cubic yard of mix.
 - 4) Specified type and quantity of planting tablets.
 - k. All plants which settle shall be raised to the correct level. After the plant has been placed, additional backfill shall be added to the hole to cover approximately one-half (1/2) of the height of the rootball. Water shall be added to the top of the partly filled hole to thoroughly saturate the rootball and adjacent soil.
 - l. After the water has completely drained, planting tablets shall be placed adjacent to but not in contact with rootball.
 - One (1) tablet per 1-gallon container
 - Two (2) tablets per 5-gallon container
 - Three (3) tablets per 15-gallon container
 - Four (4) tablets per 24" box
 - Five (5) tablets per 30" box
 - Six (6) tablets per 36" box
 - Seven (7) tablets per 42" box
 - Eight (8) tablets per 48" box and larger box sizes
 - m. The remainder of the hole shall be backfilled.
 - n. After backfilling an earthen basin shall be constructed around each plant. Each basin shall be of a depth sufficient to hold at least two (2) inches of water. Basin shall be of a size suitable for the individual plant. In no case shall the basin for fifteen (15) gallon plant be less than four (4) feet in diameter; a five (5) gallon plant less than three (3) feet in diameter. The basins shall be constructed of amended backfill materials, and shall not be constructed for trees in turf areas.
 - o. Pruning

Pruning shall be limited to the minimum necessary to removed injured twigs and branches and to compensate for loss of roots during transplanting, but never to exceed one-third (1/3) of the branching structure. Upon approval of the Owner's Representative, pruning may be done before delivery of plant, but not before plants

have been observed and approved. Prune as per specifications SECTION 32 98 00 - LANDSCAPE MAINTENANCE.

p. Staking

- 1) Staking of all trees shall conform to tree staking details.
- 2) One (1) tree of each size shall be staked and approved by the Owner's Representative prior to continued staking.

D. Planting of Ground Cover

1. Ground cover shall be planted in straight rows and evenly spaced, unless otherwise noted, and at intervals called out in the Drawings. Triangular spacing shall be used unless otherwise noted on the Drawing.
2. Each rooted plant shall be planted with its proportionate amount of flat soil or in a peat pot in a manner that will insure minimum disturbance of the root system, but in no case shall this depth be less than two (2) nodes. To avoid drying out, planting shall be immediately irrigated after planting until the entire area is soaked to the full depth of each hole, unless otherwise noted on the Drawing.
3. Care shall be exercised at all times to protect the plants after planting. Any damage to plants by trampling or other operations of this Contract shall be repaired immediately.

E. Mulch Cover

1. All planting areas, with the exception of native grass areas, shall be top-dressed with a two (2) inch layer of mulch.

F. Weed Control

1. Apply weed control to all non-native grass areas after completion of all planting and one (1) complete watering (to "set" plants). Apply as per manufacturer's recommendations.

G. Hardpan Conditions

1. Where hardpan exists, whether it is in the form of caliche or other impervious clay, and it is within the top two-and-one-half feet (2-1/2') of soil, use powered equipment to break through completely at each tree location to allow drainage and root growth. Remove hardpan at least one-and-one-half feet (1-1/2') greater than the rootball diameter of tree. Backfill with soil mix as specified.
2. Where hardpan is within the first twelve (12) inches of soil, it shall be completely penetrated for all trees and shrubs.

3.05 OBSERVATION SCHEDULE

- A. The Contractor shall be responsible for notifying the Owner's Representative in advance for the following observations according to the time indicated:
1. Pre-construction conference - 7 days.
 3. Irrigation pressure line and lateral line installation and testing - 7 days.
 3. Irrigation sprinkler coverage test - 7 days.
 4. Finish grade review - 7 days

5. Plant material review: 7 days
6. Soil preparation, plant layout, and planting operations. One (1) tree of each size specified shall be approved prior to planting of trees: 7 days.
7. End of landscape installation: 7 days.
8. Progress Inspections during maintenance period: 7 days
9. End of landscape maintenance/final acceptance: 7 days.

No site visits shall commence without all items noted in previous Field Reports either completed or remedied, unless such compliance has been waived. Failure to accomplish punch list tasks or prepare adequately for desired observations shall make the Contractor responsible for reimbursing the Owner's Representative at their current billing rate per hour, plus transportation costs.

3.06 CLEAN UP

After all planting operations have been completed; remove all trash, excess soil, empty plant containers or rubbish from the property. All scars, ruts or other marks in the ground caused by this work shall be repaired and the ground left in a neat and orderly condition throughout the site. The Contractor shall pick-up all trash resulting from this work no less frequently than each Friday before leaving the site, once a week, and/or the last working day of each week. All trash shall be removed completely from the site. The Contractor shall leave the site area broom-clean and shall wash down all paved areas within the Contract area, leaving the premises in a clean condition acceptable to the Owner and the Owner's Representative.

3.07 PHASE 1 WORK ACCEPTANCE

Determination of completion and acceptance by City for Phase 1 Work (irrigation, electrical, and landscape installation) shall proceed as stated in CSSS Section 8-4. Retention release and final payment for Phase 1 Work shall proceed per the Agreement upon issuance of written acceptance of Phase 1 Work by City.

3.08 PHASE 2 WORK - LANDSCAPE MAINTENANCE

Provide Landscape Maintenance as per SECTION 32 98 00 - LANDSCAPE MAINTENANCE.

END OF SECTION

SECTION 32 98 00

PHASE 2 WORK - LANDSCAPE MAINTENANCE

PART 1 - GENERAL

1.01 CONDITIONS

- A. The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the Work specified in this Section.

1.02 SCOPE OF WORK

- A. Furnish all labor, material, equipment and services required to maintain landscape in a healthy growing condition and in a neat and attractive appearance throughout the maintenance period.

1.03 QUALITY ASSURANCE

- A. The Contractor shall be experienced in horticulture and landscape maintenance, practices and techniques, and shall provide sufficient number of workers with adequate equipment to perform the work during the maintenance period.

1.04 MAINTENANCE PERIOD

- A. Maintain the entire project area during progress of work and during the two year (730 day) maintenance period or until final acceptance of the project. Maintenance shall continue beyond the maintenance period, as required, until final acceptance is given by the Owner's Representative and Owner.
- B. Maintenance period shall not start until all elements of construction, planting and irrigation for the entire project are in accordance with Plans and Specifications. A requirement is that all landscape areas be planted and that all native grass areas show an even, healthy stand of grass seedlings, a minimum of .75" in height. If such criteria are met to the satisfaction of the Owner's Representative, written notification shall be issued to establish the effective beginning date of maintenance period.
- C. Any day of substandard or improper maintenance, as determined by the Owner's Representative, shall not be credited as an acceptable maintenance period day. The maintenance period shall be extended on a daily basis if the work is not in accordance to the Plans and Specifications.
- D. Project shall not be segmented into maintenance areas or phases, unless authorization of the Owner's Representative is obtained.
- E. Failure to complete or substandard completion of any regular scheduled maintenance activity or activities shall be considered as evidence of non-performance of the Agreement and may result in forfeiture of payment to the Contractor for that month in which the maintenance activity did not occur.
- F. Contractor shall provide protection to the project site during the maintenance period. Any damage caused by the lack of adequate site protection shall be repaired or replaced at no additional cost to the Owner.

1.05 GUARANTEE AND REPLACEMENT

- A. All plant material and other materials installed under the Contract shall be guaranteed for the duration of the landscape maintenance period against any and all poor, inadequate or inferior materials and/or workmanship, acts of God, animal or insect damage or improper maintenance, as determined by the Owner's Representative. Material shall be replaced by the Contractor at his expense.
- B. Any materials found to be dead, missing, or not in a satisfactory or healthy condition during the maintenance period shall be replaced immediately. The Owner's Representative shall be the sole judge as to the condition of material. Material to be replaced within the guarantee period shall be replaced by the Contractor within five (5) days of written notification by the Owner. All replacement materials and installations shall comply with the Plans and Specifications. Any plant missing due to suspected theft shall be replaced by the Contractor.

1.06 OBSERVATION SCHEDULE

- A. Observations shall be requested by the Contractor from the Owner's Representative as per observations listed in specifications SECTION 32 93 00 - LANDSCAPE INSTALLATION.

1.07 FINAL ACCEPTANCE OF THE PROJECT

- A. Determination of completion and acceptance by City for Phase 2 Work (Landscape Maintenance) shall proceed as stated in CSSS Section 8-4. Contractor shall provide the Owner's Representative with all Record Drawings, turnover items, and written Guarantee Statement in accordance with the Plans and Specifications prior to the initial job walk for final project acceptance.
- B. Where observed work does not comply with the Plans and Specifications, replace rejected work and continue specified maintenance period until reinspected by the Owner's Representative and determined to be acceptable. All replacement materials and installations shall be in accordance with the Plans and Specifications. Remove rejected work and materials immediately from project.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. All materials used shall conform to the Specifications or shall otherwise be acceptable to the Owner. Each month during the maintenance period the Owner shall be given a list specifying the types and amounts of fertilizers, herbicides, insecticides, disease control chemicals, locations, and dates when these products are used.
- B. General fertility maintenance fertilizer shall consist of the following percents by weight:
 - 16% nitrogen
 - 6% phosphoric acid
 - 8% potash
- C. Slow release fertilizer shall consist of organic materials with the following minimum percents by weight:
 - 14% nitrogen
 - 3% phosphoric acid
 - 5% potash

PART 3 - EXECUTION

3.01 GENERAL

- A. Maintenance shall be according to the following standards. All areas shall be weeded and cultivated at intervals of not more than ten (10) days. Watering, trash and debris removal, mowing, rolling, edging, trimming, fertilization, spraying and pest control, as required, shall be included in the maintenance period. Street gutters and sidewalks shall be included. The Contractor shall be responsible for maintaining adequate protection of the area. Damaged areas shall be repaired at the Contractor's expense. Replenish mulch to originally specified depth on a monthly basis, or more frequently as required.

3.02 TREE AND SHRUB CARE

A. Watering

- 1. Maintain a large enough water basin around plants so that enough water can be applied to establish moisture through the major root zone. When hand watering use a water wand.

B. Pruning

- 1. Trees:
 - a. Prune trees only as required to select and develop permanent scaffold branches that are smaller in diameter than the trunk or branch to which they are attached and which have a vertical spacing of from 18" to 48" and radial orientation so as not to overlay one another; to eliminate diseased or damaged growth; to eliminate narrow V-shaped branch forks that lack strength; to reduce toppling and wind damage by thinning out crowns; to maintain growth within space limitations; to maintain a natural appearance to balance crown with roots.
 - b. Evergreen trees shall be thinned out and shaped when necessary to prevent wind and storm damage.
 - c. The primary pruning of deciduous trees shall be done during the dormant season. Damaged trees or those that constitute health or safety hazards shall be pruned at any time of the year as required.
- 2. Shrubs:
 - a. The objectives of shrub pruning are the same as trees. Under no circumstances shall shrubs be clipped into balled or boxed forms.
 - b. All pruning cuts shall be made to lateral branches or buds or flush with the trunk. "Stubbing" will not be permitted.

C. Staking

Stakes shall remain in place through acceptance and are to be inspected to prevent girdling of trunks or branches and to prevent rubbing that causes bark wounds. Stakes are expected to be removed when trees have developed sufficient structure and strength to be self-supporting, and except in extreme cases, just prior to the end of the maintenance period.

D. Weed Control

Keep basins and areas between plants free of weeds. Use recommended, legally approved herbicides. Avoid frequent soil cultivation that destroys shallow roots. Use mulches to help prevent weed germination.

E. Insect and Disease Control

1. Maintain a reasonable control with approved materials.

F. Fertilization

1. Fertilize all planting areas with the following:
 - a. Commencement of maintenance period - 5 lbs. per 1,000 square feet with organic slow release fertilizer.
 - b. At the end of the each 30-day interval - 5 lbs. per 1,000 square feet with same.
 - c. At the end of the maintenance period and at 30-day intervals should maintenance period be extended - 10 lbs. per 1,000 square feet with slow release fertilizer.
2. Avoid applying fertilizer to the root ball and base of main stem; rather, spread evenly under plant to drip line. Rates will vary from about a cup of nitrate fertilizer (depending on nitrogen percentage) around a newly installed small plant to about one-half (1/2) lb. of actual nitrogen per inch of trunk diameter measured four feet from the ground for mature trees.

G. Replacement of Plants

1. Replace dead, dying and missing plants with plants of a size, condition and variety to match plants acceptable to Owner at Contractor's expense under the conditions stated in the Guarantee and Replacement section of these specifications.

3.03 GROUND COVER CARE

A. Weed Control

1. Control weeds, preferably with preemergent herbicides, but also with selective systemic herbicides. Hoe weeds as little as possible since this may result in plant damage.

B. Watering

1. Water enough that moisture penetrates throughout root zone and only as frequently as necessary to maintain healthy growth. Refer to irrigation schedule as noted on Plans.

C. Trash

1. Remove trash and debris weekly. Dispose in a legal manner.

D. Edging and Trimming

1. Edge ground cover to keep in bounds and trim growth as necessary to achieve an overall even appearance.

E. Replacement

1. Replace dead and/or missing plants at Contractor's expense per the conditions stated in the Guarantee and Replacement section of these Specifications.

3.04 TURF CARE

A. Not Used

3.05 NATIVE GRASS CARE

To facilitate a full, healthy, and competitive stand of native grasses, the following maintenance regime is anticipated. Maintenance procedures listed below are a minimum, and other practices may be incorporated.

A. Watering

1. Grasses shall be watered at such frequency as weather conditions require to replenish soil moisture in the root zone and to establish healthy stands of grass.

B. Weed Control

1. Spot Spray non-native and/or invasive weeds at anytime using an approved non-selective herbicide. Exercise extreme care so as not to allow contact of the herbicide with native grasses.
2. Utilize a wick applicator to apply non-selective herbicide to non-native weeds when the following condition occurs: Native grasses are recently germinated and 80% are under 3" in height and significant populations of non-native weeds are 6" in height or greater. Exercise extreme care so as not to allow contact of the herbicide with native grasses.
3. Upon consultation with the Owner's representative, apply a selective broadleaf herbicide when native grasses are sufficiently mature to withstand the application (typically February – March).
3. Upon consultation with the Owner's representative, apply a pre-emergent herbicide following hydroseeding (typically October – December).
4. Perform regular hand-weeding at intervals such that non-planted species are not allowed to develop seed; but in no case less than monthly. Substantial weed growth (greater than 5% of the project's seeded area) that results in weed seed development will be evidence of non-performance of the Contract. Quantification of excessive weed seed development shall be determined by the Owner's Representative in the presence of the Contractor.
5. Kill and remove all invasive species immediately (Bermuda grass, etc.). Plants identified as invasive species shall include but not be limited to those listed by the California Invasive Plant Council, (<http://www.cal-ipc.org/ip/inventory/index.php#inventory>).
6. Areas larger than 12' x 12' in which non-planted species have become dominant (50% or greater of the overall plant population), and areas larger than 4' x 4' in which invasive species have become dominant, shall be killed with a non-selective foliar herbicide and re-seeded. If native grasses are not established in these areas prior to the end of the maintenance period, the maintenance period for the entire project will be extended until they are established.

C. Mowing

1. Mowing shall be timed and mowing height adjusted to (1) promote additional foliar growth, and/or (2) cut weeds that are growing above the general level of the desired species.
2. Only upon consultation with the owner's representative, perform a close (4-6") mowing during the spring following the drill seed application, including bagging and disposing of all clippings (March – June).

2. Only upon consultation with the owner's representative, perform a close (4-6") mowing during the fall following the initial drill seed application, including bagging and disposing of all clippings (October – December).

D. Re-Application

1. Apply remedial hydroseed mix any bare or weak areas the fall following the initial drill seeded application (October – December).

E. Fertilization

1. Apply slow-release organic fertilizer within 30 days of seeding and again within 60 days of seeding at a rate of 5 lbs/1,000sf.
2. Provide one application of slow-release organic fertilizer in late winter/early spring during the growing period at a rate of 5 lbs/1,000sf.

3.06 IRRIGATION SYSTEM

A. System Observation

1. The Contractor shall check all systems for proper operation. Lateral lines shall be flushed out by removing the last sprinkler head at each end of the lateral. All heads are to be adjusted as necessary for unimpeded, head to head coverage.

B. Controllers

1. Set and program automatic controllers for seasonal water requirements. Give the Owner's representative instructions on how to turn off system in case of emergency.

C. Repairs

1. Repair all damages to irrigation system at the Contractor's expense. Repairs shall be made within twenty-four (24) hours.

END OF SECTION