

CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR

**SENIOR CENTER COURTYARD LANDSCAPE RENOVATION
PROJECT, PF-007**



CITY OF CULVER CITY

BID NO. #1623

Public Works Department
City of Culver City

9770 Culver Boulevard

Culver City, CA 90232-0507

(310) 253-5600

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NOTICE INVITING BIDS

**CITY OF CULVER CITY
NOTICE INVITING SEALED BIDS
FOR**

SENIOR CENTER COURTYARD LANDSCAPE RENOVATION PROJECT, BID NO. #1623

1. ANNOUNCEMENT

Notice is hereby given that sealed bids will be accepted by the City of Culver City, California, for furnishing all labor, services, materials, and equipment, and performing all work to provide for a complete and acceptable project for:

SENIOR CENTER COURTYARD LANDSCAPE RENOVATION PROJECT, PF-007, BID NO. #1623

In the City of Culver City and in strict accordance with the plans and specifications in the Office of the Public Works Director and City Engineer of the City of Culver City, 9770 Culver Boulevard, Culver City, CA. 90232.

2. DESCRIPTION OF WORK:

The work to be done consists of furnishing all materials, equipment, tools, labor and incidentals as required in the specifications and contract documents, for the following project: **"2016 Senior Center Courtyard Landscape Renovation Project, PF-007 "**.

3. COMPLETION OF WORK:

All work to be done under this contract shall be completed within **one hundred thirty (130) working days**, beginning on the date stipulated in the written "Notice to Proceed" issued by the City Engineer.

4. BIDDING PROCEDURES

All bids and bidding procedures must comply with the "Instruction to Bidders", Section B of the Bid Documents.

5. SUBMISSION OF BIDS

Bids must be filed with the Office of the City Clerk, at 9770 Culver Boulevard, Culver City, CA. 90232, not later than **3:00 PM** on **02/16/2017** at which time they will be publicly opened in the City Council Chambers. Bids will later be referred to the City Council of the City of Culver City for the appropriate action.

6. BID SECURITY

Each Bidder shall submit a form of Bid Guaranty such as a money order, a cashier's check, certified check, cash, or surety bond for the sum of ten percent (10%) of the total amount of the bid and made payable to the City of Culver City as a guaranty that the Bidder, if its bid is accepted, will enter into a satisfactory contract and furnish a bond for the faithful performance thereof, and for the payment of labor and materials costs, and insurance in accordance with the requirements of the contract documents.

7. BID DOCUMENTS

A copy of the plans and specifications (contained on a CD) shall be obtained only from the Engineering Division counter, 9770 Culver Blvd., Culver City, Ca 90232, 2nd floor in City Hall only, (310) 253-5600, for a **\$15.00** fee. There is a **\$15.00** mailing fee in addition to the non-refundable fee, or your Federal Express number. Addendum will be e-mailed and/or faxed only to the bid holders that have obtained the bid package directly from the City's Engineering Division.

8. PRE-BID CONFERENCE (non-mandatory)

A pre-bid conference will be held at **3 pm on Thursday, February 9, 2017** at Patacchia Conference Room, first Floor, City Hall, Culver City, California 90230.

9. FORM AND STYLE OF BIDS

Bids must be prepared on the forms provided with the BID DOCUMENTS and must be in compliance with the INSTRUCTIONS TO BIDDERS. Bidders shall not change the wording of the forms provided, except as required by Addendum.

10. QUESTIONS/REQUESTS FOR INTERPRETATION

Pursuant to Section B-4, all questions shall be directed to Sammy Romo, P.E., Project Manager, at (310) 253-5619 or sammy.romo@culvercity.org.

11. RIGHT TO REJECT BIDS

The Owner reserves the right to reject any or all bids as the best interests of the Owner may dictate. Bidders are referred to Section B-18 of the "INSTRUCTIONS TO BIDDERS," for additional qualification requirements.

12. WAGE RATES

In accordance with the California Labor Code, no worker employed in work under contract to the Owner shall be paid less than the State of California prevailing wage rate referenced hereinafter. Copies of the current prevailing rate of per diem wages are on file in the Culver City, City Engineer's Office in the City Hall and is available for review to any interested person upon request. Said prevailing wage rates are hereby incorporated in and made part of the specifications by this reference.

13. CONTRACTOR'S LICENSE

All bidders shall be licensed under provisions of Chapter 9, Division 3 of the Business and Professions Code of the State of California to do the type of work contemplated in the project. In accordance with provisions of California Public Contract Code Section 3300, the Owner has determined that the Contractor shall possess a valid Class "A", "C-12", or "C-27" License at the time that the bid is submitted. Failure to possess the specified license shall render the bid as non-responsive

BY ORDER OF THE COUNCIL OF THE CITY OF CULVER CITY, CALIFORNIA

By: _____
Jeremy Green, City Clerk

PUBLISHED: Culver City News Thursday, February 2 and February 9, 2017

--End of Section--

SECTION B

SECTION B

INSTRUCTIONS TO BIDDERS

SECTION B - INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

Alternate Bid

"Alternate Bid" shall mean an amount stated in the Bid as set forth in the supplementary bid forms, to be added to or deducted from the Total Base Bid, if the corresponding substitution or change in the Work, materials or other items as described in the Bid Documents, is accepted by Owner.

Total Base Bid

"Total Base Bid" shall mean the sum stated in the Total Base Bid Form for which the Bidder offers to perform the Work described in the Bidding Documents. The Total Base Bid is the base to which work, materials, or other items may be added to or from which work, materials, or other items may be deleted, for sums stated in the Alternate Bid form.

Bid Date

"Bid Date" shall mean the deadline (including date and time) set forth in the Notice Inviting Bids accompany these Instructions.

Bid Form

"Bid Forms" shall mean the Total Base Bid Form, the Supplementary Bid Forms, and other additions attached hereto, all of which constitute part of the Bid Documents.

Bid Documents

"Bid Documents" shall mean all documents provided by Owner to Bidder for Bidder's use and consideration in preparation of its Bid. Bidding documents include the Notice Inviting Bids, these Instructions to Bidders and any supplements or additions hereto, the Bid Proposal Form, the Supplementary Bid Forms, the Statement of Contractor's Qualifications, other sample bid and contract forms, the Contract Documents, Drawings, Plans, and Specifications, all documents referenced in the Contract Documents, and all Addenda issued prior to execution of the Contract.

Bidder

"Bidder" shall mean any individual, firm, partnership, corporation, or combination thereof, submitting a Bid for the work, acting directly or through a duly authorized representative.

Sub-bidder

"Sub-bidder" shall mean a person or entity who submits a Bid to a Bidder for materials, equipment or labor (including quantity surveyors) for a portion of the Work and who is identified on the appropriate Supplementary Bid Form.

Contract Documents

"Contract Documents" shall mean all documents executed by Owner and Bidder to evidence their agreements relating to the Work. The Contract Documents include, but are not limited to, the Owner-Contractor Agreement; any supplementary and other conditions or provisions; the Drawings, the Plans, the Specifications and all Addenda issued prior to execution of the Owner-Contractor Agreement; and all modifications thereof.

Unit Price

"Unit Price" shall mean an amount stated in the Supplementary Bid Form as a price unit of measurement for materials, equipment and/or services or a portion of the Work as described in the Bid Documents, and shall include all elements of the described portion of the Work, including materials, labor, overhead and profit.

Work

"Work" shall mean the construction required by the Contract Documents and includes all tools, materials, and labor necessary to produce such construction and all materials and equipment incorporated or to be incorporated in such construction.

2. BID AND BID FORMS

Owner Supplied Forms

Bid forms (Section C, "Bid Forms") have been provided with this document by the Office of the Public Works Director/City Engineer of the City of Culver City. All bids for this project must be submitted on said original supplied by the Office of the City Engineer of the City of Culver City. Bid forms shall be completely filled out and signed by the Bidder or, if a partnership, by all partners or, if a corporation, by its President, Secretary and Treasurer, in the designated spaces.

Filling-in Forms

All blank spaces for unit prices, extensions and totals must be filled in. Signatures shall be completely and personally executed. If erasures are made, they must be initialed by the Bidder over his signature.

Modifications Prohibited

Bids shall not contain any recapitulation, inserted by the Bidder, of work to be done. Alternative proposals will not be considered unless specifically requested. No oral or telephone modifications will be considered.

Submitting Bids

All bids must be submitted in sealed envelopes bearing on the outside the name of the Bidder, the Bidder's business address and the name of the project for which the bid is submitted. Any bid received after the scheduled closing time for receipt of bids will be returned to the Bidder unopened. It is the sole responsibility of the Bidder to see that his bid is timely received.

ALTERNATE BIDS

The Contractor shall complete bid schedules for all Alternate Bids. Failure to complete all bid schedules will be considered a non-responsive bid.

Bids May Be Rejected

Bids may be rejected if there is any alteration of the bid form, additions not called for, conditional bids, qualifying provisions, incomplete entries, or irregularities of any kind. The Owner reserves the right to reject any or all bids.

3. ADDENDA

3.1 Addenda

Addenda will be e-mailed and/or faxed to all bidders who have received complete sets of Bid documents from the Engineering Division counter, 9770 Culver Blvd., Culver City, Ca 90232. Copies of Addenda will be made available for inspection in the Office of the Public Works Director/City Engineer at 9770 Culver Boulevard, Culver City, California, 90232.

It is the bidder's responsibility to provide its e-mail and fax number to ensure timely delivery of addenda.

3.2 Acknowledgment of Addenda

Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge its receipt in the Bid Form. Failure to acknowledge all addenda may result the bid proposal being deemed as non-responsive by the City.

4. INTERPRETATION OF PLANS AND SPECIFICATIONS

If any person contemplating submitting a bid for the project is in doubt as to the meaning of any requirement of plans or specifications or finds any discrepancies in or omissions from the plans or specifications, he may submit to the Public Works Director/City Engineer a written request for an interpretation or correction thereof. The person making the request will be responsible for its prompt delivery. Interpretations or corrections will be made by addenda to specifications or by dated revisions of plans with a copy of each addition or change being furnished, through the Public Works Director/City Engineer or Construction Manager, to each known prospective Bidder. Questions concerning the contract form, bonding requirements or similar documents shall be directed to the City Attorney through the Office of the City Engineer.

5. EXAMINATION OF SITE, PLANS, SPECIFICATIONS AND OTHER DOCUMENTS

Each Bidder shall carefully examine the plans, these specifications and the forms for all other contract documents, and shall visit the site of the proposed work to fully inform him/herself of all existing conditions and limitations that may affect the execution and cost of work under the contract. He/She shall include in the individual bid prices the cost of all labor, materials, supplies, overhead and profit for each such bid item. The failure or omission of any Bidder to obtain and examine the plans or specifications, any form, instrument, addendum, or any other document, or to visit and acquaint him/herself with conditions at the construction site, shall in no respect relieve him/her from any obligation imposed by his/her bid or by award or execution of the contract. The submission of a bid shall be taken as prima facie evidence that the Bidder has read, understands and agrees to comply with all instructions contained herein.

6. COMPLETE BIDDING AND CONTRACT DOCUMENTS

A complete set of Bid documents contains the following documents:

1. Notice Inviting Bids, Section A;
2. Instruction to Bidders, Section B;
3. Any or all addenda/addendum;
4. Bid Forms, Section C;
5. Award and Execution of Contract, Section D;
6. Special Provisions, Section E;
7. Technical Specifications, Section F, appendices and appended drawings.

7. BID GUARANTY

Bid Guaranty Enclosed With Bid

Each bid shall be presented under sealed cover and be accompanied by an approved form of Bid Guaranty such as a cashier's check, money order, certified check or cash, or surety bond in favor of the Owner for an amount of at least ten percent (10%) of the amount of the bid as a guaranty that the Bidder will provide bonds and insurance, and enter into a contract with the Owner for construction of the project. No bid shall be considered, unless such Bid Guaranty is enclosed.

In lieu of the foregoing, any bid may be accompanied by a surety bond in said amount, furnished by a surety authorized to do surety business in the State of California, guaranteeing that said bidder will enter into the contract and file the required bonds within the designated period.

Owner to Enforce Bid Guaranty

If within the time frame specified in Section B-18 of these Specifications, the successful bidder fails or neglects to enter into the contract and file the required bonds, the Owner may deposit in its treasury said bid security and not return it to the defaulting bidder.

Bid Guaranty Return

Upon execution of the contract with the successful Bidder, the Bid Guaranties of all Bidders will be returned by the City Clerk of the City of Culver City.

8. REJECTION OF BIDS

The Owner reserves the right to reject any or all bids and to waive any apparent clerical errors or discrepancies, or minor informalities if to do so seems to best serve the interests of the Owner.

9. WITHDRAWAL OF BIDS

Any Bidder may withdraw his/her bid, without obligation, either personally or by written request, at any time prior to the scheduled closing time for receipt of bids, provided that such personal or written request is delivered to the place specified in Section 5 of the "NOTICE INVITING BIDS" for receipt of Bids, prior to the Bid Date.

10. FACSIMILE MODIFICATION OF BIDS

No facsimile modification of bids will be allowed.

11. OPENING OF BIDS

Bid will be opened and publicly read aloud at the time and place designated in the Notice Inviting Bids.

12. BIDDERS INTERESTED IN MORE THAN ONE BID

No person, firm or corporation shall be allowed to make, or file, or be interested in, more than one bid for the same work, unless alternative bids are specifically requested. A person, firm or corporation that has submitted a sub proposal to a Bidder or that has quoted prices of materials to a Bidder is not hereby disqualified from submitting a sub proposal or quoting prices to other Bidders.

13. NON-COLLUSION AFFIDAVITS

The Owner requires all Bidders to execute a Non-Collusion Affidavit in the form included in the Bid Documents. The Owner also reserves the right to require that the Bidder shall, before awarding any subcontract, obtain from any or all proposed Subcontractors a Non-Collusion Affidavit in the form included in the Bid Documents.

14. LIST OF SUBCONTRACTORS FILED WITH BID

In accordance with the provisions of the Public Contracts Code of the State of California relating to listing of subcontractors, each Bidder must submit with his bid the name and location of place of business of each proposed Subcontractor who will perform work or labor or render service to the Bidder for the construction of the project covered by the bid, in an amount in excess of one-half of one percent (0.5%) of the Bidder's bid and shall state the portion of the work which will be done by each Subcontractor.

15. LICENSING OF CONTRACTORS

All Bidders and Subcontractors submitting bids shall be licensed in accordance with the provisions of the Business and Professions Code of the State of California pertaining to the licensing of contractors. The license shall be valid and active at the time of submitting a bid, and remain so throughout the duration of the Contract for the successful bidder and sub-bidders.

16. APPROXIMATE ESTIMATES

The quantities set forth on the bid form, if any, are approximate only, being given as a basis for the comparison of bids; and the Owner does not, expressly or by implication, agree that these will be the final quantities. The Bidder agrees that the Owner will not be responsible if any of said quantities are found to be incorrect; and the Bidder agrees not to make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission or misstatement shall be discovered in the estimated quantities, the same shall not invalidate the contract executed pursuant to this bid or release the Bidder from the execution and completion of the whole or part of the work herein specified, in accordance with these specifications and the plans herein mentioned and the prices herein agreed upon and fixed therefore, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation otherwise than as provided for in the contract executed pursuant to this bid.

17. GENERAL REQUIREMENTS

It is the purpose of the Owner, pursuant to these specifications, to realize work on a project, which is complete in every detail and respect. The Bidder shall furnish all equipment, materials and labor and perform all work required to accomplish this purpose. The Bidder shall not omit any item of work or fail to furnish any element, component or part thereof, whether or not such is specifically called for in the Contract Documents, which is necessary for a satisfactory completion of the project.

18. AWARD OF CONTRACT

The contract will be awarded to the lowest responsible and responsive Bidder. If award is made, it will be based on the lowest responsive and responsible total base bid Contract price. Selection of any or all alternates shall be at the sole discretion of the Owner. The Owner, however, reserves the right to reject any or all bids, and, so far as permitted by law, to waive any informality in the bids received in order to serve the best interests of the Owner. If an award is made, the contract shall be awarded within ninety (90) days after the opening of the bids. Within ten (10) days of the mailing by the Owner of notification of award of contract and the contract form, Bidder shall provide and return to the Owner all required bonds and insurance documents and the executed formal contract. In determining if a Bidder is a responsive bidder, the Owner shall consider the following in addition to other requirements in these bid documents:

- a. Quality of services offered.
- b. Proven capacity of the Bidder to perform the contract or provide the supplies or services required in a timely and competent manner. The evaluation of the Contractor's capacity to perform the contract or provide the supplies or services required in a timely and competent manner shall be based on the information provided by the Contractor in Section C-5 "Declaration of Bidder's Qualifications," as well as other pertinent data available to the Owner.
- c. Character, integrity, reputation, judgment, experience and efficiency of the Bidder.

19. BONDS

The successful bidder will be required to file and pay for costs of bonds in the proper sums from a bonding company acceptable to the Owner. Forms for these bonds are included in Section D. The "Labor and Materials Payment Bond" and "Faithful Performance Bond" shall be for one hundred percent (100%) of the contract price (including base bid, adjustments and addenda).

20. INSURANCE CERTIFICATES AND POLICIES

Proof of insurance in an amount required by the Bid Specifications Section D-6 must be provided and endorsed to name: the City of Culver City, members of its City Council, its boards and commissions, officers, agents, and employees as additional insured for the particular operations of the insured which affect the Owner.

21. HOLD HARMLESS.

To the fullest extent permitted by law, Contractor shall indemnify, defend (at Contractor's sole expense, with legal counsel approved by CITY) and hold harmless the City of Culver City, members of its City Council, its boards and commissions, officers, agents, and employees (hereinafter, "Indemnitees"), from and against all loss, damage, cost, expense, liability, claims, demands, suits, attorneys' fees and judgments arising from or in any manner connected to Consultant's or its employees or agent's wrongful or negligent acts, errors or omissions related to this Agreement. This indemnification includes, but is not limited to, tort liability to a third person for bodily injury and property damage.

Contractor agrees that this obligation to indemnify, defend and hold harmless extends to liability and/or claims arising from INDEMNITEES' active or passive negligence.

Notwithstanding the foregoing, nothing herein shall be construed to require Consultant to indemnify an INDEMNITEE from any claim arising from the sole negligence or willful misconduct of that INDEMNITEE.

The duty to defend referenced herein is wholly independent from the duty to indemnify, arises upon written notice by City to Contractor of a claim within the potential scope of this indemnification provision, and exists regardless of any determination of the ultimate liability of Contractor, City or any Indemnatee.

22. ASSIGNMENT OF CONTRACT RESTRICTED

No assignment by the Bidder of any contract to be entered into in accordance with Notice Inviting Bids and these instructions or any part thereof, or of funds to be received there under, will be recognized by the Owner unless such assignment had prior written approval of the Owner and the surety on all bonds had notice of such assignment in writing and has consented thereto in writing.

In entering into the Contract or any Subcontract for the Project, the Contractor and Subcontractor offer and agree to assign to the Owner all right, title and interest in and to all causes of action they may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from the Contract or any Subcontract. This assignment shall be deemed made and effective at the time the Owner tenders final payment to the Contractor, without further acknowledgment by the parties.

23. SHORING

Pursuant to the provisions of the California Labor Code Section 6707, each bid submitted in response to this Invitation to Bid shall contain, as a bid item, adequate sheeting, shoring, and bracing, or equivalent method, for protection of life and limb in trenches and open excavation, which shall conform to applicable safety orders. By listing this sum, the bidder warrants that its action does not convey tort liability to the Owner, the Engineer, the Construction Manager, and their employees, agents and subconsultants.

24. OTHER PERMITS, FEES AND LICENSES

The Contractor shall, prior to the start of construction, obtain, pay, and comply with all necessary permits as required as the result of its work, including but not limited to the permit(s) described herein and as attached in the appendix.

In addition to the requirements above noted, the Contractor **shall possess a valid City of Culver City business license** at the time of contract agreement execution and for the duration of the contract. The fee for said business license shall be based upon the total amount bid for the contract. Amount of fee may be obtained from the City of Culver City, Finance Department, Treasury Division at (310) 253-5870.

All bidders are encouraged to utilize Culver City subcontractors and suppliers to the extent they are available, competitive and qualified. However, no bid will be affected either positively or negatively by the inclusion or exclusion of such Culver City businesses.

-- End of Section --

SECTION C

SECTION C

BID FORMS

BID FORM**FIRM
NAME** _____**ADDRESS** _____
_____**TELEPHONE** _____**FAX NUMBER** _____**FOR****SENIOR CENTER COURTYARD LANDSCAPE RENOVATION PROJECT, PF-007****FOR****CITY OF CULVER CITY
CULVER CITY, CALIFORNIA****BID NO. #1623****1 TOTAL BID BASE FORM****TO THE HONORABLE CITY COUNCIL
CITY OF CULVER CITY, CALIFORNIA**

This Bid is submitted in accordance with the advertised "Notice Inviting Bids" requesting sealed bids for furnishing all labor, services, materials and equipment and performing all work necessary for: **Senior Center Courtyard Landscape Renovation Project, PF-007.**

Having carefully examined the location of the proposed work and the Bid Documents for same and read the accompanying proposed requirements, and attended the pre-bid conference, the undersigned Bidder hereby proposes and agrees to enter into a contract to furnish all equipment, materials and labor necessary to complete all work described in the Bid Documents for the project under the supervision of the City Engineer of the City of Culver City for the sum set forth in the following schedule **2016 Senior Center Courtyard Landscape Renovation Project, PF-007 .**

The undersigned further agrees, in case of award, to execute the contract for the within described work and improvements, within ten (10) days following written notice of award of contract. All work to be done under this contract shall be completed within **one hundred thirty (130) working days**, beginning on the date stipulated in the written Notice to Proceed issued by the City Engineer.

Liquidated damages of **\$1,000** per calendar day shall be assessed based upon the applicable number of days noted above. The Contract Time shall commence on the date the Contractor actually commences the Work or on the tenth (10th) day after the issuance of the Notice to Proceed, whichever comes first. The Contractor shall retain the right to fully complete (including Final Completion, Punch List Correction and project Close-Out) the Work in less days than established by above, however, neither shall a reduction or increase to the Contract Sum be made, if the Work is so fully completed in less days than established by this Section C-1, nor shall a Claim be made or granted for Compensable Delay, or any other increase in Contract Sum, if, for any reason,

including but not limited to delay caused by the Owner, the Contractor does not so fully complete the Work in less days than established herein.

(NOTE: All amounts and totals given in the Bid Schedule are subject to verification by the Owner.)

BID SCHEDULE:

2016 Senior Center Courtyard Landscape Renovation Project, PF-007 BASE BID And ADDITIVE ALTERNATE NO. 1

ITEM	DESCRIPTION	EST QTY.	UNIT	UNIT COST	TOTAL
1	Mobilization (Max 5% total base bid)	1	LS		
2	Bonds	1	LS		
3	Permits and fees	1	LS		
4	Tree removal – Palm Trees	12	EA		
5	Shrub Removal	1500	SF		
6	Sawcuts	75	LF		
7	Remove Courtyard concrete, seat walls, curbs	3,350	SF		
8	Remove Fountain	250	SF		
9	Repair building waterproofing	270	LF		
10	Integral color courtyard concrete paving	4,200	SF		
11	Stone accent paving	120	SF		
12	Stone fountain, Basin and connections	1	EA		
13	Fountain stones 3" deep	50	SF		
14	60" Round tree grates	5	EA		
15	LED bollard path lights	5	EA		
16	Tree well lights	10	EA		
17	LED uplights	9	EA		
18	Lighting and electrical reconfiguration	1	LS		
19	Drip Irrigation	900	SF		

20	Soil testing, amendment and rototilling	900	SF		
21	Weed Abatement	900	SF		
22	Trees – 48" Box	2	EA		
23	Box and replant miniature palms	6	EA		
24	Shrubs – 15 Gallon	30	EA		
25	Shrubs – 5 Gallon	100	EA		
26	Shrubs – 1 Gallon	150	EA		
27	Shredded wood mulch	900	SF		
28	90 – Day landscape maintenance	900	SF		
29	Install new shade sails	1	LS		
	ADDITIVE ALTERNATE 1				
30	Remove and replace door grates	5	EA		
Total Bid Amount (Bid Items 1~30):					

TOTAL BASE BID PRICE WRITTEN IN WORDS:

Note to Bidders:

1.	The contract will be awarded to the responsible contractor who submits the lowest Total Base Bid Amount (including the deletable items), with responsive bid proposal. The contract award amount by the City may or may not include the deletable items, based on available budget and priorities.
2.	The Prime Contractor shall perform, with its own organization, contract work amounting to at least 50% of the contract price. Any items designated as specialty items by the City and performed by Subcontractors shall be deducted from the contract price before computing the amount of the work required to be performed by the Prime Contractor with its own forces. This percentage shall be of the original contract price, exclusive of specialty items performed by Subcontractors, but include the cost of materials and manufactured products purchased or produced by the Prime Contractor.

The undersigned has carefully checked the above figures and understands that the City, or any officer thereof, will not be responsible for any errors or omissions on the part of the undersigned in submitting this bid. In case of a discrepancy between words and figures, the figures shall prevail, and in case of a discrepancy between unit prices and totals, the unit prices shall prevail. The unit price amounts for each item shall include all indirect costs (i.e., permit fee, business license fee, mobilization, coordination, supervision, overhead and profit, etc.), incidental work (i.e. traffic control, safety devices, protection of utilities, utility investigation and "pot holes," work necessary for the protection of life and limb, etc.) and other work required by the contract but not listed above.

Payment for all work on the above items shall be made subject to verification in the field of the actual quantity of work performed.

Exclusions: Includes everything necessary to complete the project with the following exceptions only:

2 RECEIPT AND ACKNOWLEDGMENT OF ADDENDUM

We acknowledge that the following addenda numbers have been received and have been examined as part of the Contract Documents. Failure to acknowledge any or all addenda or addendum may result the bid proposal being deemed as non-responsive by the City.

Addenda Number	Date Received	Initials

3 CERTIFICATION

The undersigned Bidder certifies that:

1. Bidder has, by investigation of the site of the work and otherwise, understands the nature and location of the work and has fully informed the Owner as to all conditions and matters, which can in any way affect the work or cost thereof.
2. Bidder will cooperate fully with the Owner to ensure the Owner's best interests are protected and the work expedited to completion. In the event of any disagreement, the City Engineer shall fully review the matter and provide a determination. His judgment shall be final and binding upon all parties concerned.
3. Where demolition is necessary for the project described herein, the successfully awarded Contractor shall conform with the South Coast Air Quality Management District (S.C.A.Q.M.D.) Rule 1403, as amended. The Contractor shall mail the Rule 1403 Notification within five (5) calendar days after the Notice to Commence Work is mailed by the Owner. Once the S.C.A.Q.M.D Rule 1403 Notification has been post marked and mailed, the Contractor shall begin work no later than fifteen (15) calendar days after the

mailing date. The duration set for the completion of this project will begin on the date work actually commences by the Contractor. In any case, the work shall not begin later than twenty (20) days after the date in which the Owner mailed the Notification to Commence Work.

4. All bonds, certificates, endorsement forms shall be submitted at the time of the execution of the contract.

THE UNDERSIGNED BIDDER IS AWARE OF THE FACT THAT THE OWNER RESERVES THE RIGHT TO REJECT ANY OR ALL BIDS BUT THAT IF A BID IS ACCEPTED, THE CONTRACT WILL BE AWARDED TO THE LOWEST RESPONSIBLE AND RESPONSIVE BIDDER.

4 BIDDER INFORMATION

Name of Individual Bidder: _____

Bid Prepared By: _____

Business Address: _____

Business Telephone Number: _____

Fax Number: _____

Contractor License No: _____ Class: _____

OR:

Name of Partnership Bidder: _____

Bid Prepared By: _____

Business Address: _____

Fax Number: _____

Business Telephone Number: _____

List Names and Business addresses of All Partners Below:

If the Bidder is a Corporation, list corporate information below:

Name of Corporate Bidder: _____

By: _____
(Signature of President of Corporation)

By: _____

(Signature of Secretary of Corporation)

By: _____
(Signature of Treasurer of Corporation)

Business Address: _____

Business Telephone Number: _____

Fax Number: _____

Corporation organized under laws of State of: _____

Contractor License No: _____ Class: _____

5 DECLARATION OF BIDDER'S QUALIFICATIONS

Each Bidder must be properly licensed and must submit the following information on this form. If necessary, include supplement information as a separate package.

5.1 Authorization and Declaration

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by Owner or their designated representative in verification of the recitals comprising this Declaration of Bidder's Qualifications. The undersigned declares under penalty of perjury that all of the qualification information submitted with this form is true and correct and that this Declaration was executed in

(City, County) of California, on _____ (Date).

Signature: _____

Title (Printed): _____

5.2 Business Name, Address, Telephone Numbers (if different than Section C-4)

Business _____ Name:

Business _____ Address:

Business Telephone & Fax Numbers:

5.3 License

Bidders must be licenses in the State of California as **"A" or "C-12" or "C-27" Contractor.**

Complete the information requested below.

_____ License Number	_____ Class	_____ Date Issued	_____ Expiration Date
_____ License Number	_____ Class	_____ Date Issued	_____ Expiration Date
_____ License Number	_____ Class	_____ Date Issued	_____ Expiration Date

5.4 Surety

- A. Indicate the names of all surety companies utilized by Bidder in last five (5) years and state if the Surety(ies) bonding the Bidder's jobs have had to complete any part of Bidder's Contract (attach separate sheet if necessary).

_____ Surety Name & Address	_____ Period Covered
--------------------------------	-------------------------

Jobs Completed by Surety

_____ Surety Name & Address	_____ Period Covered
--------------------------------	-------------------------

Jobs Completed by Surety

- B. If a Bid Guaranty (Section C-7) is provided in lieu of a Bid Bond (Section C-6), the Bidder shall attach a notarized statement from Surety(ies) proposed to be utilized on the project, indicating Bidder's total bonding capacity and certifying that: (1) currently available bonding capacity exceeds **\$1,000,000** and (2) Surety(ies) will provide bonding in the event that Bidder is awarded the project.

- C. Indicate below that the surety is licensed and admitted as a surety insurer in the State of California.

Surety Name and Address

Licensed & Admitted in CA
(Y/N)

Surety Name and Address

Licensed & Admitted in CA
(Y/N)

Surety Name and Address

Licensed & Admitted in CA
(Y/N)

- D. Indicate below those projects with disputed amounts in excess of \$50,000 or portions of any such project, which have been terminated by an Owner, Owner's representative, or other contracting party and which required completion by another party in the last five (5) years. State the project Name, Location, Owner, with address and phone number, contract amount, and reason for disputed amount or termination (attach separate sheet if necessary.)

Project Name and Location

Owner

Contract Value

Reasons for Disputed Amount or Termination

Disputed Amount

5.5 Insurance

- A. Provide a notarized statement from the Worker's Compensation carrier specifying Contractor's current Experience Modification Rate for Worker's Compensation for the State of California. In addition, provide a list of the above referenced ratings and corresponding company for the last three (3) years.
- B. Provide statement from insurance carrier indicating that the minimum scope and limits of insurance will be provided as required in Section D-4, of this document.
- C. Indicate below that the surety is licensed and admitted as a surety insurer in the State of California.

Ins. Co. Name and Address

Licensed & Admitted in CA/Y/N

Ins. Co. Name and Address

Licensed & Admitted in CA/Y/N

5.6.1 Construction Experience

Furnish a list of at least three (3) similar projects completed in the past five (5) years, two (2) of which must have been built in the State of California. Provide the following information for each project on the attached form. Copy additional forms as required.

- i* Project name and location
- ii* Contact name, address and telephone number for Owner & Architect/Engineer
- iii* Base and final contract amounts
- iv* Type of project and major project components. Provide approximate percent of construction cost associated with each construction component.
- v* Date project was completed (i.e., date of filing of Notice of Completion, etc.).
- vi* Indicate completion rate of projects by showing initial contract time, time extensions, and number of days that project was completed early or late, all expressed in calendar days.

SIMILAR PROJECTS FOR LAST FIVE (5) YEARS

1. _____
Project Name and Location

Owner

Engineer

Address and telephone

Project Components

Contract Amounts (\$)

Date Completed

2. _____
Project Name and Location

Owner

Engineer

Address and telephone

Project Components

Contract Amounts (\$)

Date Completed

3. _____
Project Name and Location

 Owner

 Engineer

 Address and telephone

 Project Components

 Contract Amounts (\$)

 Date Completed

4.

 Project Name and Location

 Owner

 Engineer

 Address and telephone

 Project Components

 Contract Amounts (\$)

 Date Completed

5.

 Project Name and Location

 Owner

 Engineer

 Address and telephone

 Project Components

 Contract Amounts (\$)

 Date Completed

5.7

Staff Roster/Functions

List all members of your staff that will be assigned to or responsible for work on this project (except clerical) and show their job titles/functions. Include Company Officers.

 Name

 Function

 Years
w/Firm

 Years
Total

 Name

 Function

 Years
w/Firm

 Years
Total

Name	Function	Years w/Firm	Years Total
Name	Function	Years w/Firm	Years Total
Name	Function	Years w/Firm	Years Total

5.8 Arbitration and Litigation History

Indicate below all arbitration and/or litigation against bidder in the last five (5) years, including all claims by owners. Indicate yes or no (Y/N) which claims were resolved against bidder in litigation or arbitration or which resulted against in any payment by the Bidder or its insurers/sureties or reduction in compensation on any Bidder. Failure to provide this information on any contract undertaken in the past five (5) years may result in disqualification. Indicate final status (Resolved or Unresolved) of each claim. Attach separate sheet if necessary.

Project Name	Amount of Claim	
Nature of Claim	Resolution (Y/N) Against Bidder	Final Status

Project Name	Amount of Claim	
Nature of Claim	Resolution (Y/N) Against Bidder	Final Status

Project Name	Amount of Claim	
Nature of Claim	Resolution (Y/N) Against Bidder	Final Status

6 BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety (Local Agent Contact Telephone Number , _____), are held and firmly bound unto the Owner in the sum of _____ Dollars (\$ _____) to be paid to said Owner its successors and assigns, for which payment well and truly will be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH:

That if the certain Bid of the above-bounden Principal submitted for the following improvement project:

**2016 SENIOR CENTER COURTYARD LANDSCAPE RENOVATION
PROJECT, PF-007**

is accepted by the Owner through action of its legally constituted contracting authorities and if the above-bounden Principal, its heirs, executors, administrators, successors and assigns shall duly enter into and execute a contract for such construction in strict accordance with the specifications and drawings on file at the office of the City Engineer, in the City Hall, Culver City, and shall execute and deliver the required Faithful Performance Bond and Payment Bond, and Insurance Certificates within ten (10) days after the date of notification by and from said Owner that said contract is ready for execution, then this obligation shall become null and void; otherwise, it shall be and remain in full force and virtue.

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

Signature

Surety

Title

By: _____

Company

7 BID GUARANTY**BID GUARANTY**

Note: The following statement shall be used if other than a bid surety bond accompanies bid.

"Accompanying this proposal is a money order*, certified check*, cashier's check*, cash*, payable to the order of the Owner in the amount of Dollars (\$ _____) which is ten percent (10%) of the total amount of this bid. The proceeds of this bid guaranty shall become the property of said Owner provided this bid is accepted by said Owner, through action of its legally constituted contracting authorities, and the undersigned fails to execute a contract and furnish the required bonds within the stipulated time. Otherwise, the proceeds of this bid guaranty shall be returned to the undersigned."

Signature

Title

Company

(*Delete the inapplicable words)

8 NONCOLLUSION DECLARATION**NONCOLLUSION DECLARATION**

(To Be Executed By Bidder and Submitted With Bid)

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

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

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

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ [date], at _____ [city], _____ [state].

Name: _____

Title: _____

Signature of Bidder

9 SUPPLEMENTARY BID FORMS, NO. 1**SUPPLEMENTARY BID FORM NO. 1****LISTING OF PROPOSED SUBCONTRACTORS**

Pursuant to **INSTRUCTIONS TO BIDDERS** for the Work titled:

2016 SENIOR CENTER COURTYARD LANDSCAPE RENOVATION PROJECT, PF-007

For portions of the Work equaling or exceeding 1/2 of one percent (0.5%) of the Base Bid, the undersigned Bidder proposes to use the subcontractors listed below. Except as otherwise approved by the Owner, the undersigned Bidder shall perform all other portions of the Work with his own forces.

Portion of the Work

Subcontractor Name, Address, & License Number:

Bid Number & \$ amount of subcontracting work

The signature must
be identical to that
shown on the Bid.

Bidder: _____

By: _____

If additional sheets
are required, you must
copy this form.

Its: _____

SECTION D

AGREEMENT, BONDS AND INSURANCES

SECTION D - AWARD AND EXECUTION OF CONTRACT**1 SAMPLE AGREEMENT****CULVER CITY PUBLIC WORKS DEPARTMENT
AGREEMENT WITH****Contractor**

This Agreement is made and entered into by and between the City of Culver City (City) and Name of Contractor (Contractor)

WHEREAS, Contractor submitted its total base bid the total lump sum for: Amount of Bid Dollars (\$00.00) for the completion of the Name of Project (Project. No. P-) as further described in the Scope of Services; and

WHEREAS, Contractor represents it has that degree of specialized expertise and holds all licenses necessary to practice and perform the service contemplated; and

WHEREAS, after reviewing all bids submitted and declaring that the Contractor submitted the lowest responsible and responsive bid, City's City Council, at its meeting of meeting date, awarded the contract for the work to Contractor.

NOW, THEREFORE, THE PARTIES HERETO AGREE as follows:

SCOPE OF SERVICES

Contractor shall provide all services described in accordance with the Contract Documents, as defined below, relating to the Name of Project (Project. No. P-) and follow the work schedules defined therein.

CONTRACT DOCUMENTS

The documents comprising the entire agreement between City and Contractor shall be collectively referred to as the "CONTRACT DOCUMENTS," and shall consist of and include the following:

This Agreement – including:

- / Schedule of Values;
- / List of Subcontractors;
- / Labor and Materials Payment Bond;
- / Faithful Performance Bond (including agent's Power of Attorney for each Bond);
- / Non-Collusion affidavit ;
- / Certificates of Insurance;
- / Plans and Specifications for "Project name P-XXX)", Bid # ____ Dates ____
- / All addenda setting forth any modifications or interpretations of those documents, (Addenda by number and date: Addendum No. x dated xxx);
- / All documents incorporated into the foregoing;
- / Change Orders;
- / Notice to Proceed; and
- / Notice of Completion

All the Contract Documents are intended to complement one another, so that any work called for in one and not mentioned in another is to be performed as if mentioned in all documents.

The terms of this Agreement shall prevail over any inconsistent provision of the other Contract Documents.

The Contract Documents constitute the entire agreement between the parties and supersede any and all other writings and oral negotiations.

NOTICE

All notices shall be in writing and delivered in person or sent by certified mail, postage prepaid. Notices required to be given to City shall be addressed as follows:

Charles D. Herbertson
Public Works Director/City Engineer
Public Works Department
City of Culver City
9770 Culver Blvd.
Culver City, CA 90232

Notices required to be given to the Contractor shall be addressed as follows:

Contractor
Address

It shall be the duty of Contractor to notify all subcontractors of the above Notice provisions.

CONTRACT PRICE

For Contractor's satisfactory completion of the scope of services, City shall pay Contractor a total sum of Amount of Compensation Dollars (\$00.00) lawful money of the United States of America provided, that City's Public Works Director, in the exercise of his sole discretion, is authorized to increase that total fee by up to xxx Thousand Four xxx Dollars (\$xx,xxx.00) for additional services due to unexpected causes.

EFFECTIVE DATE

The effective date of this agreement is the date it is signed on behalf of City.

IN WITNESS WHEREOF, the parties hereto have caused their names to be hereunto subscribed.

CONTRACTOR

Dated: _____

By: _____

Its _____

By: _____

Its _____

CITY OF CULVER CITY, CALIFORNIA

Dated: _____

By: _____

John Nachbar
City Manager

APPROVED AS TO CONTENT:

APPROVED AS TO FORM:

Charles D. Herbertson
Public Works Director/City Engineer

Carol A. Schwab
City Attorney

APPROVED AS TO FINANCING:

APPROVED AS TO BUSINESS
TAX CERTIFICATE:

Jeff Muir
Chief Financial Officer

Treasury Division

2 LABOR AND MATERIALS PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

WHEREAS, THE City of Culver City, County of Los Angeles, State of California, has awarded to:

hereinafter designated as the Principal, a contract for:

2016 Senior Center Courtyard Landscape Renovation Project, PF-007

in the City of Culver City, California, which contract is incorporated wherein by this reference; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract, providing that if said Principal or any of his or its Subcontractors shall fail to pay for any materials, provisions, equipment or supplies used in, upon or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, the Surety on this bond will pay the same to extent hereinafter set forth;

NOW, THEREFORE, WE, _____

as Principal and _____

as Surety, are held and firmly bound unto the City of Culver City, hereinafter called the Owner in the sum of: _____ Dollars (\$ _____) lawful money of the United States of America for the payment of which sum 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 if said Principal, his or its heirs, executors, administrators, successors or assigns shall fail to pay for any materials, provisions or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, as required by the provisions of an act of the Legislature of the State of California entitled, "An Act to secure the payment of claims or persons employed by Contractors upon public works, and the claim of persons who furnish materials, supplies, teams, implements or machinery used or consumed by such Contractors in the performance of such work, and prescribing the duties of certain public officers with respect thereto," approved May 10, 1919, as amended, and provided that the persons, companies or corporations so furnishing said materials, provisions or other supplies, appliances or power used in, upon, for or about the performance of the work contracted to be executed or performed, or any person, company or corporation renting or hiring implements, machinery or power for or contributing to said work to be done, or any person who performs work or labor upon the same, or any person who supplies both work or labor upon the same, or any person who supplies both work and material therefor, shall have complied with the provision of said Act, then said Surety will pay the same in or to an amount not exceeding the amount herein above set forth, and also will pay in case suit is brought upon this bond, such reasonable attorneys' fees, as shall be fixed by the court, awarded and taxed as in aforementioned Statute provided. This bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under said Act, so as to give a right of action to them or their assigns in any suit brought upon this bond.

FURTHER, the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or modification of the contract documents or of the work to be performed thereunder shall in any way affect its obligations on this bond and it does hereby waive notice of any such change, extension of time, alteration or modifications of the contract documents or of work to be performed thereunder.

IN WITNESS WHEREOF, three (3) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety herein named, on the _____ day of _____, 20___. The name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

Principal

By: _____

Surety

By: _____

3 FAITHFUL PERFORMANCE BOND**FAITHFUL PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: that

WHEREAS, the City of Culver City, in the County of Los Angeles, State of California, has awarded to:

_____ herein designated as the Principal, a contract for the construction of

2016 Senior Center Courtyard Landscape Renovation Project, PF-007

in the City of Culver City, California, which contract is incorporated herein by this reference; and

WHEREAS, said Principal is required under the terms of said contract to furnish a bond for the faithful performance of said contract;

NOW, THEREFORE, WE _____

as Principal and _____
as Surety, are held and firmly bound unto the City of Culver City, hereinafter called the Owner in the sum of:

_____ Dollars (\$_____) lawful money of the United States of America for payment of which sum 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, if the hereby bound Principal, his or its heirs, executors, administrators, successors or assigns shall in all things stand to and abide by and well and truly keep and perform all the undertakings, terms, covenants, conditions and agreements in the said contract and any alteration thereof, made as therein provided, all within the time and in the manner therein designated and in all respects according to their true intent and meaning, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

FURTHER, the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or modification of the contract documents or of the work to be performed thereunder, shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or modification of the contract documents or of work to be performed thereunder.

IN WITNESS WHEREOF, three (3) identical counterparts of this instrument, each of which shall for purposes be deemed an original thereof, have been duly executed by the Principal and Surety herein named on the ____ day of _____, 20__. The name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

Principal

By: _____

Surety

By: _____

4 INSURANCE REQUIREMENTS

A. Policy Requirements.

Contractor/ Consultant shall submit duly executed certificates of insurance for the following:

1. An occurrence based Comprehensive General Liability ("CGL") policy, at least as broad as ISO Form CG 0001, in the minimum amount of One Million Dollars (\$1,000,000) each occurrence, with not less than Two Million Dollars (\$2,000,000) in annual aggregate coverage.

The CGL Policy shall have the following requirements:

- a. The policy shall provide coverage for personal injury, bodily injury, death, accident and property damage and advertising injury, as those terms are understood in the context of a CGL policy. The coverage shall not be excess or contributing with respect to City's self-insurance or any pooled risk arrangements;
 - b. The policy shall provide \$1,000,000 combined single limit coverage for owned, hired and non-owned automobile liability;
 - c. The policy shall include coverage for liability undertaken by contract covering, to the maximum extent permitted by law. Consultant's obligation to indemnify the Indemnitees as required under Paragraph 6 of this agreement;
 - d. The Policy shall not exclude coverage for Completed Operations Hazards or Athletic or Sports Participants; and
 - e. The City of Culver City, members of its City Council, its boards and commissions, officers, agents, and employees will be named as an additional insured in an endorsement to the policy, which shall be provided to the City and approved by the City Attorney.
2. Business Automobile Liability Insurance coverage in the amount of One Million Dollars (\$1,000,000), providing coverage for use of mobile equipment (i.e. heavy mobile equipment or vehicles primarily for use in an off-road environment), to the extent that (1) such mobile equipment will be used within the City limits or on City business, and (2) coverage for mobile equipment is not otherwise covered by the CGL policy listed in subparagraph (a), above.
 3. For Professional Services: Professional/Negligent Acts, Errors and Omissions Insurance in the minimum amount of One Million Dollars (\$1,000,000) per claim, and shall include coverage for separate "personal injury" alleged to have been committed in the course of rendering professional services, unless such coverage is provided by the CGL policy listed in subparagraph (a), above.
 4. Workers' Compensation limits as required by the Labor Code of the State of California with Employers' Liability limits of One Million Dollars (\$1,000,000.00) per accident, if the Agreement will have Consultant employees working within the City limits.

B. Waiver by City.

City may waive one or more of the coverages listed in Section A, above. This waiver must be express and in writing, and will only be made upon a showing by the Consultant that its operations in and with respect to City are not such as to impose liability within the scope of that particular coverage.

C. Additional Insurance Requirements.

1. All insurance listed in Paragraph A shall be issued by companies licensed to do business in the State of California, with a claims paying ability rating of "BBB" or better by S&P (and the equivalent by any other Rating Agency) and a rating of A:VII or better in the current Best's Insurance Reports;
2. Consultant shall provide City with at least thirty (30) days prior written notice of any modification, reduction or cancellation of any of the Policies required in Paragraph A, or a minimum of ten (10) days notice for cancellation due to non-payment.
3. City may increase the scope or dollar amount of coverage required under any of the policies described above, or may require different or additional coverages, upon prior written notice Consultant.

SECTION E

SPECIAL PROVISIONS

(SUPPLEMENTS AND MODIFICATIONS TO
THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

SECTION 1 -- TERMS, DEFINITIONS, ABBREVIATIONS & SYMBOLS

Except as modified by the Special Provisions, Technical Provisions, Standard Drawings and the Project Plans, all work shall be in accordance with the Provisions of the latest edition of the STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION (SSPWC), including all Supplemental Amendments, as published by Building News, Inc., Los Angeles, California, which Specifications are hereinafter referred to as the Standard Specifications.

The herein stated Special Provisions supplement and revise the aforementioned standard Specifications. Any reference to "Section" or "Subsection" in these Special Provisions shall refer to the aforementioned Standard Specifications unless noted otherwise.

1-2 DEFINITIONS

In this subsection, substitute where applicable, or add the following:

Agency	The City of Culver City, for which the work is being performed.
Board	The City Council of the City of Culver City.
City	The City of Culver City.
Engineer (or) City Engineer	The City Engineer of the City of Culver City or other person designated by the City Engineer acting either directly or through authorized agents.
Service Lateral Connection (SLC)	The interface of the House Connection Sewer (HCS) with the host (main) pipe.

SECTION 2 -- SCOPE AND CONTROL OF THE WORK

2-1 AWARD AND EXECUTION OF CONTRACT Add the following:

The Bidder is required to examine carefully the site of work, Proposal forms and all other Contract documents for the work contemplated. The Submission of a Bidder's Proposal shall be considered conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality and quantities of work to be performed and materials to be furnished, and as to the requirements of all the above documents.

2-5 PLANS AND SPECIFICATIONS

2-5.1. General Add the following:

Except as modified by the Special Provisions, Technical Provisions, Standard Drawings and the Project Plans, all work shall be in accordance with the Provisions of the latest edition of the STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION (SSPWC), including all Supplemental Amendments, as published by Building News, Inc., Los Angeles, California, which Specifications are hereinafter referred to as the Standard Specifications, except the following:

Traffic Signal, Lighting, Pavement Striping and Makers, Roadside Sign Work

For roadside sign, traffic striping and pavement marking, pavement markers, and traffic signal and lighting work, the technical provisions provided within Section 56-2, "Roadside

Signs," Section 84," Traffic Stripes and Pavement Markings", Section 85, "Pavement Markers", and Section 86, "Signals, Lighting and Electrical Systems," of the State of California Department of Transportation (Caltrans) Standard Specifications, latest edition, hereafter "State Specification" or "State Standard Specification," shall supersede related provisions of the SSPWC. Except as otherwise specified on the Plans or in these General or Technical Provisions, all work relating to traffic signals and street lighting, including all equipment, materials, components, and the installation thereof, shall be in accordance with the latest edition of the State Standard Plans and Section 86, of the latest edition of the State Standard Specifications. The order of precedence for said State Standard Plans shall be lower than that of the Special Provisions and Plans but higher than that of the Standard Plans and Specifications.

Storm Drain Work

In addition to the SSPWC, Los Angeles County Flood Control District's "Part C, General Provisions; Part D, Additions and Amendments to the Standard Specifications; and Parts E through M, Additional Provisions," (The "Gray Book") shall be considered a part of the Specification for storm drain construction.

If the contractor, in the course of the work, becomes aware of any claimed errors or omissions in the contract documents or in the City's field work, it shall immediately inform the City Engineer. The City Engineer shall promptly review the matter, and if he/she finds an error or omission has been made, he/she shall determine the corrective actions and advise the Contractor accordingly. If the corrective work associated with an error or omission increase or decrease the amount of work called for in the Contract, the City shall issue an appropriate Change Order. After discovery of an error or omission by the Contractor, any related work performed by the Contractor shall be done at its risk unless authorized by the City Engineer.

Where applicable, the latest edition of the Uniform Building Code (UBC), and Amendments and the Culver City Municipal Code shall be adhered to.

Comply with the provisions for safety practices set forth in the "Manual of Accident Prevention on Construction", published by the Associated General Contractors of America (AGC) 213/263-1500, and to comply with the State of California Occupational Safety and Health Act (Cal-OSHA).

2-5.3.3 Shop Drawings Add the following:

Within fourteen (14) calendar days after the Award of Contract, the Contractor shall, at his or her expense, transmit by letter to the Engineer for review and acceptance, shop drawings and/or other available instructive and descriptive information from the manufacturer, when and as required by the Plans or Special Provisions, or requested by the Engineer. Shop drawings will normally not be required for standard items in common use for which adequate manufacturers' literature is available.

The Contractor shall consecutively number, thoroughly check, approve and sign each Shop Drawing and transmit the Shop Drawings by letter to the Engineer for review. In the event that certain Shop Drawings are unacceptable to the City, they will be rejected by the Engineer. The Contractor shall thereafter, correct said drawings and resubmit same in quadruplicate within seven (7) calendar days.

In the event that in the process of development of the Shop Drawings, it is discovered that there are defects and/or errors on the Plans, resulting in conflict between said Plans and the Shop Drawings, or if the Shop Drawings show variation from the Plans and/or Contract requirements because of standard shop practice or other reasons, the Contractor shall thoroughly describe and explain said defects and/or conflicts in his transmittal letter to the Engineer.

The Engineer's review of the Shop Drawings will be for general design and arrangement only, and shall not relieve the Contractor from responsibility for errors of any sort in the Shop Drawings or of the responsibility for executing the work in accordance with the Contract. The Contractor shall be solely responsible for the correctness of the drawings, for shop fits and field connections, and for the results obtained by use of such drawings. The Contractor shall verify and be fully responsible for all dimensions and job-site conditions affecting the work and shall be responsible for furnishing and installing the proper materials required by the Contract, whether or not indicated on the Shop Drawings when reviewed.

2-11 INSPECTION Add the following:

The City Engineer, or his authorized agent, shall at all times have access to work during construction, and shall be furnished with every reasonable facility for ascertaining full knowledge regarding the process, workmanship, and character or materials used and employed in the work. Whenever required, the Contractor shall furnish to the City for test, and free of charge, samples of any one of the materials proposed to be used in the work. Said samples shall be delivered by the Contractor at the place within the City of Culver City designated by the City Engineer. Rejected material must be immediately removed from the work by the Contractor and shall not again be brought back to the site of the improvement.

No work shall be done between the hours of 5 p.m. and 8 a.m. without prior written approval of the Public Works Director/City Engineer. The Owner shall charge the Contractor for all engineering and inspection expenses incurred by the Owner in connection with any overtime work performed by the Contractor beyond the Contractor's normal eight-hour workday and for any time worked on Saturdays, Sundays and legal holidays. The amount of such overtime engineering and inspection expenses shall be determined on the basis of the current hourly rate of pay for the employee(s) multiplied by a factor of two. On Saturdays, Sundays and legal holidays, the employee's or inspector's time shall be computed from when he/she leaves home to when he/she returns to his/her residence. If such time is four hours or less, he/she shall be compensated for a minimum of four hours; and if such time is more than four hours, but less than eight hours, he/she shall be compensated for a minimum of eight hours. Overtime charges as noted in the above paragraphs shall be deducted from the periodic and final payments to the Contractor by the Owner for work completed if invoices for overtime work remain unpaid at the end of each billing period.

Twenty-Four Hour Notice

The Contractor shall give at least twenty-four (24) hours advance notice of the time when Contractor or Contractor's subcontractor will start or resume the various units of operations of the work as per the contract, or resume said units of operations when they have been suspended per the contract.

The above notice is to be directed to the City Engineer, and to the Building Official through the Construction Manager, and is to be given during working hours (8 a.m. to 5 p.m.; closed alternate Fridays), exclusive of Saturday, Sunday or holidays for the purpose of permitting the Engineer to make necessary assignments of the Engineer's representative or inspector on the work.

Uncovering of Uninspected Work

Any work performed in conflict with said notice, without the presence or approval of the inspector, or work covered up without notice, approval or consent may be rejected or ordered to be uncovered for examination at Contractor's expense and shall be removed at Contractor's expense, if so ordered by the City Engineer or his/her representative or inspector on the work. Any unauthorized or defective work, defective material or workmanship or any deficient work that may be discovered shall be corrected immediately without extra charge even though it may have been overlooked in previous inspections and estimates.

Changes Authorized in Writing

All authorized alterations affecting the requirements and information given on the approved plans shall be in writing. No changes shall be made on any original plan or drawing after the same has

been approved by the Engineer. Deviations from the approved plans, as may be required by the exigencies of construction, will be determined in all cases by the Engineer and authorized in writing.

Protests

If the Contractor considers any work demanded of Contractor to be outside the requirements of the Contract, or if Contractor considers any instruction, ruling or decision of the Inspector or Engineer to be unfair, Contractor shall within three (3) calendar days after any such demand is made, or instruction, ruling or decision is given, state clearly and in detail the Contractor's objections and reasons therefore. Except for such protest and objections as are made of record, in the manner and within the time above stated, the Contractor shall be deemed to have waived and does thereby waive all claims for extra work, damages and extensions of time on account of demands, instructions, rulings and decisions of the Public Works Director/City Engineer.

Upon receipt of any such protest from the Contractor, the Engineer shall review the demand, instruction, ruling or decision objected to and shall promptly advise the Contractor, in writing, of Public Works Director/City Engineer's final decision, which shall be binding on all parties, unless within the ten (10) calendar days thereafter the Contractor shall file with the Owner, a formal protest against said decision of the Public Works Director/City Engineer. The Owner shall consider and render a final decision on any such protest within thirty (30) calendar days of receipt of same.

SECTION 3 - CHANGES IN WORK

3-3 EXTRA WORK

3-3.1 General Add the following:

The Contractor shall not perform any extra work prior to written authorization from the Engineer.

3-3.2.3 Markup Delete the entire paragraph and substitute the following:

Work by Contractor When extra work is to be paid for on a force account basis, the labor, materials, equipment rental and other items of expenditures, the percentage of markup applied to the Contractor's direct cost for all overhead and profit shall be as follows:

(1)	Labor.....	12
(2)	Materials.....	12
(3)	Equipment Rental.....	12
(4)	Other Items and Expenditure.....	12

Work by Subcontractor. When all or any part of the extra work is performed by a Subcontractor, the markup established above in this section shall be applied to the Subcontractor's actual cost of such work. A markup of 10 percent on the first \$5,000 of the subcontracted portion of the extra work and a markup of 5 percent on work added in excess of \$5,000 of the subcontracted portion of the extra work may be added by the Contractor.

To the sum of the coats and markups provided for in this section, 1% shall be added as compensation for bonding.

3-3.3 Daily Reports By Contractor Add the following:

Material charges shall be substantiated by valid copies of vendor's invoices. Such invoices shall be submitted with the daily extra work reports, or if not available, they shall be submitted with subsequent daily extra work reports. When these daily extra work reports are agreed upon and signed by both parties, said reports shall become the basis of payment for the work performed.

3-4 CHANGED CONDITIONS Add the following after the last paragraph:

This subsection shall not apply to utilities.

3-5 DISPUTED WORK Add the following:

All claims which do not exceed the sum of three hundred seventy-five thousand dollars (\$375,000) shall be resolved pursuant to the provisions of Public Contract Code Section 20104 through 20104.6, "Resolution of Construction Claims".

Notice - The Contractor shall notify the Public Works Director/City Engineer, in writing, of its intention to make claim. Claims pertaining to decisions provided above for such other determinations by the Construction Manager shall be filed in writing to the Public Works Director/City Engineer prior to the commencement of such work. Written notice shall use the words "Notice of Potential Claim". Such Notice of Potential Claim shall state the circumstances and the reasons for the claim, but need not state the amount.

Additionally, no claim for additional compensation or extension of time for a delay will be considered unless the above provisions are complied with. No claim filed after the date of final payment will be considered.

It is agreed that unless notice is properly given, the Contractor shall not recover costs incurred by it as a result of the alleged extra work, changed work or other situation which had proper notice been given would have given rise to right for additional compensation. The Contractor should understand that timely notice of potential claim is of great importance to the Public Works Director/City Engineer and Owner, and is not merely a formality. Such notice allows the Owner to consider preventative action, to monitor the Contractor's increased costs resulting from the situation, to marshal facts, and to plan its affairs. Such notice by the Contractor, and the fact that the Public Works Director/City Engineer has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim.

Records of Disputed Work - In proceeding with a disputed portion of the Work, the Contractor shall keep accurate records of its costs and shall make available, to the Public Works Director/City Engineer, a daily summary of the hours and classification of equipment and labor utilized on the disputed work, as well as a summary of any materials or any specialized services which are used. Such information shall be submitted to the Public Works Director/City Engineer on a monthly basis, receipt of which shall not be construed as an authorization for or acceptance of the disputed work.

Submission of Claim Costs - Within 30 days after the last cost of work for which the Contractor contends it is due additional compensation is incurred, but if costs are incurred over a span of more than 30 days, then within 15 days after the thirtieth day and every month thereafter, the Contractor shall submit to the Public Works Director/City Engineer as best the Contractor is able its costs incurred for the claimed matter. Claims shall be made in itemized detail and should the Public Works Director/City Engineer be dissatisfied with format or detail of presentation, upon request for more or different information, the Contractor will promptly comply, to the satisfaction of the Public Works Director/City Engineer. If the additional costs are in any respect not quantifiable with certainty, they shall be estimated as best can be done. In case the claim is found to be just, it shall be allowed and paid for as provided in the Standard Specification.

SECTION 4 - CONTROL OF MATERIALS

4-1 MATERIALS AND WORKMANSHIP Add the following:

No materials, supplies or equipment for the work under this Contract shall be purchased subject to any security agreement or other agreement by which an interest therein or any part thereof is retained by the seller or supplier. The Contractor warrants clear and good title to all materials, supplies and equipment installed and incorporated in the work, and agrees upon completion of all work to deliver the premises, together with all improvements and appurtenances constructed or

placed thereon by Contractor, to the Owner free from any claims, liens, encumbrances or charges, and further agrees that neither Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by the Contract shall have any right to a lien upon the premises or any improvement or appurtenance thereon, provided that this shall not preclude the Contractor from installing metering devices or other equipment of utility companies the title of which is commonly retained by the utility company. Nothing contained in this article, however, shall defeat or impair the right of such persons furnishing materials or labor under any bond given by the Contractor for their protection of any right under any law permitting such persons to look to funds due the Contractor in the hands of the Owner.

The provisions of this Section shall be inserted in all subcontracts and material contracts, and notices of its provisions shall be given to all persons furnishing materials for the work when no formal contracts are entered into for such materials.

4-1.2 Protection of Work And Materials Add the following:

Until acceptance of the Work, the Contractor shall have the charge and care of the Work and Materials to be used therein and shall bear the risk of injury, loss, or damage, to any part thereof (regardless of whether partial payments have been made on such damaged portions of the Work) by the action of the elements or from any other cause, whether or not arising from the non-execution of the Work. The Contractor shall rebuild, repair and restore and make good all injuries, losses, or damages to any portions of the Work or materials occasioned by any cause before its completion and acceptance and shall bear the expense thereof, except for such injuries, losses or damages as are directly and proximately caused by the acts of the Owner.

4-1.3 Inspection Requirements

4-1.4 Tests of Materials The third sentence of the first paragraph shall be deemed revised to read as follows:

Unless otherwise called for hereinafter in these Special Provisions, all testing will be performed by the City in such number and at such locations as deemed necessary by the Engineer to insure compliance with the Plans and Specifications; the cost of all initial testing will be borne by the City; the cost of all retesting will be borne by the Contractor, and the amount due the City for said retesting will be deducted from the Contractor's progress payments.

4-1.6 Trade Names or Equals Delete the last sentence of the second paragraph and substitute the following:

Wherever catalog numbers and specific brands or trade names not preceded by designation "similar and equal" nor followed by the designation "or equal" are used in conjunction with a designated material, product thing, installation, or service mentioned in these Specifications, to ensure compatibility with existing facilities, no substitutions will be favorably reviewed.

Within ten (10) working days from the date of bid opening, the Contractor shall, at his expense, submit a written request to the Engineer for each desired substitution, accompanied by complete descriptive information from the manufacturer, samples as requested by the Engineer, complete detailed test results from a licensed independent testing laboratory of the City's choice if requested by the Engineer, and if requested by the Engineer, an evaluation report from a qualified licensed professional engineer, all for final evaluation by the Engineer. If in the Engineer's opinion, the requested substitution is of lesser quality or in variance with that specified, or if the information submitted is insufficient or incomplete, the requested substitution will be disallowed and the specified materials or equipment shall be furnished. Except as hereafter provided, no request for substitutions submitted, after the 10-working -day deadline specified will be considered.

If alternative named or substitutions are proposed by the Contractor and favorably reviewed by the City, the Contractor is responsible for providing at no additional cost to the Owner, any engineering designs, any electrical, mechanical, structural, or other related changes or testing that may be required to accommodate or provide the particular material or equipment the Contractor desires to

use. Any deviation from the Specifications or the Drawings resulting from the type of material or equipment to be used shall not be the basis for any "extra charges" above and in excess of the original bid price of the work.

In addition the Contractor is responsible for all additional costs to the Owner, and its agents and representatives, for evaluation of data submitted by the Contractor for alternative named or substitutions and any redesign necessary. The Owner shall deduct said costs from the Contract monies due the Contractor.

In the event that a substitute is favorably reviewed, fifty percent (50%) of all savings shall be credited to the Owner.

SECTION 5 - UTILITIES

5-1 LOCATION Add the following:

Prior to performing any excavation, the Contractor shall determine, by potholing, the location and depth of all utilities, including service connections, which have been marked by the respective owners and which may affect or be affected by its operations. Contractor shall locate all existing utilities, including storm and sewer main and laterals, within the project vicinity and shall exercise due care to ensure that existing utility facilities are not damaged during his operations. The existence of sewer mains or storm drains is evidenced by the manhole structures and catch basins. When in doubt, the Contractor shall contact the utility operator concerned before proceeding further.

Pipelines, conduits and other facilities may be buried within the limits of the work or adjacent thereto and may or may not be shown or indicated on the Plans. The Public Works Director/City Engineer possesses records of certain utility facilities located within the public right-of-way. These records are available for inspection by the Contractor at the Engineer's Office. In making these records available, the Owner does not warrant or guarantee the accuracy or completeness of the information contained therein and does not represent that the facilities shown on said records actually exist at the locations shown or elsewhere or that the Contractor may not encounter facilities not identified in said records. The sewer service laterals are owned by the property owners and will not be marked by the City. Sewer system atlas sheet is available upon request for contractor's reference. However, the City shall not guarantee the accuracy of the information. It shall be the Contractor's responsibility to locate and pothole all laterals. The Contractor at its expense shall repair sewer laterals that are damaged as the result of contractor's activities.

The Contractor shall immediately notify the Engineer of any potential conflict with the proposed improvements. The cost of repair to any utility damaged by the contractor due to failure to determine location and depth as required herein shall be borne by the Contractor. Full compensation for determining location and depth of utilities shall be considered as included in the prices bid for other items of work, and no additional compensation will be allowed.

5-2 PROTECTION Add the following:

The contractor shall adjust all existing sewer, storm drain, and other utility manhole lids and covers, water meter boxes and covers, gas meter boxes and covers, valve covers, etc. to grade unless specifically designated for adjustment by others on the Plans. Payment for adjustment of said items to grade shall be considered as part of related bid items for which payment is made and no separate payment will be made therefore.

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF THE WORK**6-1 CONSTRUCTION SCHEDULE AND COMMENCEMENT OF WORK** Add the following:

The Contractor must provide to the Engineer's Representative within five (5) days after receiving the "Notice to Proceed", a Critical Path Method (CPM) construction schedule in the format of a Gantt Chart and revised schedules thereafter as required by the Engineer when the Contractor's activities differ or are expected to differ from the latest existing schedule.

In addition, if requested by the Engineer, the Contractor shall submit a detailed "two-week look-ahead" schedule bi-weekly, including a narrative report, showing the activities or portions of activities completed and look ahead during the reporting period. The report shall state the percentage of the work completed and scheduled, the remaining duration, and the progress along the critical path in terms of days ahead or behind the allowable dates as of the report date. Any changes made by the Contractor to the schedule shall be listed.

If, in the opinion of the Construction Manager, the project is behind schedule, the Contractor shall also submit a narrative report with each updated analysis which shall include but not be limited to a description of current and anticipated problem areas, delaying factors and their impact, and an explanation of corrective actions taken or proposed.

6-3 SUSPENSION OF WORK Add the following:

If the Contractor fails to correct defective or unauthorized work as required by the Contract Documents or fails to carry out the Work in accordance with the Contract Documents or any other applicable rules and regulations, the Owner, by a written order of the Owner's representative or signed personally by an agent specifically so empowered by the Owner, in writing, may order the Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity. All delays in the Work occasioned by such stoppage shall not relieve the Contractor of any duty to perform the Work or serve to extend the time for its completion. Any and all necessary corrective work done in order to comply with the Contract Documents shall be performed at no cost to the Owner.

In the event that a suspension of Work is ordered, as provided in this paragraph, the Contractor, at its expense, shall perform all work necessary to provide a safe, smooth, and unobstructed passageway through construction for use by public, pedestrian, and vehicular traffic, during the period of such use by suspension. Should the Contractor fail to perform the Work as specified, the Owner may perform such work and the cost thereof may be deducted from monies due the Contractor under the Contract.

The Owner shall also have authority to suspend the Work wholly or in part, for such period as the Owner may deem necessary, due to unsuitable weather, or to such other conditions as are considered unfavorable for the suitable prosecution of the Work. Such temporary suspension of the Work will be considered justification for time extensions to the Contract in an amount equal to the period of such suspension if such suspended work includes the current critical activity on the latest favorably reviewed progress schedule.

6-4 DEFAULT BY CONTRACTOR Add the following:

The Contract may be canceled by the Owner without liability for damage when, in the Owner's opinion, the Contractor is not complying in good faith, has become insolvent, or has assigned or subcontracted any part of the work without the Owner's consent. In the event of such cancellation, the Contractor will be paid the actual amount due based on the quantity of work satisfactorily completed at the time of cancellation, less damages caused to the Owner by acts of the Contractor causing the cancellation. The Contractor, in having tendered a bid, shall be deemed to have

waived any and all claims for damages because of cancellation of the Contract for any such reason. If the Owner declares the Contract canceled, for any of the above reasons, written notice to that effect shall be served upon the Surety. The Surety shall, within five (5) working days, assume control and perform the work as successor to the Contractor.

If the Contractor fails to begin delivery of material and equipment, to commence work within the time specified, to maintain the rate of delivery of material, to execute the work in the manner and at such locations as specified, or fails to maintain a work program which will ensure the Owner's interest or, if the Contractor is not carrying out the intent of the Contract, the Public Works Director/City Engineer's written notice may be served upon Contractor, and the Surety on Contractor's faithful performance bond, demanding satisfactory compliance with the Contract.

If the Contractor or Contractor's Surety does not comply with such notice within five (5) working days after receiving it, or after starting to comply fails to continue, the Owner may exclude the Contractor from the premises and take possession of all material and equipment, and complete the work by Owner forces or by letting the unfinished work to another contractor, or by a combination of such methods. In any event, the cost of completing the work will be charged against the Contractor and Contractor's Surety, and may be deducted from any money due or becoming due from the Owner. If the sums under the Contract are insufficient for completion, the Contractor or Surety shall pay to the Owner within five (5) working days after the completion, all costs in excess of the Contract price.

If the Surety assumes any part of the work, Surety shall take the Contractor's place in all respects for that part, and shall be paid by the Owner for all work performed by Surety in accordance with the Contract. If the Surety assumes the entire Contract, all money due the Contractor at the time of Contractor's default shall be payable to the Surety as the work progresses subject to the terms of the Contract.

The provisions of this Section shall be in addition to all other rights and remedies available to the Owner under law.

6-5 TERMINATION OF CONTRACT Add the following:

The Owner may terminate the Contract at its own discretion or when conditions encountered during the work make it impossible or impracticable to proceed, or when the Owner is prevented from proceeding with the Contract by law, or by official action of a public authority. The Contractor will be compensated for works satisfactorily completed up to the date of termination of the contract by the Owner.

If all or any part of the work shall be damaged or destroyed by war, or acts of foreign aggression, fire, storm, lighting, flood, earthquake, settlement of defective soil, expansion or contraction, cracking or deflection, tidal wave, water, oil (surface or subsurface), mob violence or other casualty before the final completion of the work, the Contractor, upon notice from the Owner, shall resume construction and proceed in accordance with the Plans and Specifications. Provided that such damage or destruction was not caused by any condition related to Contractor's non-conformance with the provisions of these contract documents, the Owner will bear the total cost of removing and/or replacing all damaged and/or destroyed work. However, if the Owner exercises its option to abandon the project because of damage or destruction to the work by any of the above-mentioned causes, Owner may terminate this Contract upon three days' notice to the Contractor. Within 30 days after the date of such termination, the Contractor shall be paid all actual costs of the work to the date of termination for which it had not been previously paid.

If the owner abandons the project, the owner shall have the right, at any time, to terminate this Contract by notice to the Contractor, in which event, the owner shall pay the contractor pro rata for all work actually provided up to the date of such notice, for which it had not been previously paid, and the Owner shall have no further liability or obligations under this contract.

6-6 DELAYS AND EXTENSION OF TIME Add the following:

When the Contractor foresees a delay in the prosecution of the Work and, in any event, immediately upon the occurrence of a delay, the Contractor shall notify the Public Works Director/City Engineer in writing of the probability of the occurrence and the estimated extent of the delay, and its cause. The Contractor shall take immediate steps to prevent, if possible, the occurrence or continuance of the delay. The Contractor agrees that no claim shall be made for delays which are not called to the attention of the Public Works Director/City Engineer at the time of their occurrence.

Non-excusable delays in the prosecution of the Work shall include delays which could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its subcontractors, at any tier level, or suppliers.

Only the physical shortage of material, caused by unusual circumstances, will be considered under these provisions as a cause for extension of time, and no consideration will be given to any claim that material could not be obtained at a reasonable, practical, or economical cost or price, unless it is shown to the satisfaction of the Public Works Director/City Engineer that such material could have been obtained only at exorbitant prices entirely out of line with current rates, taking into account the quantities involved and usual practices in obtaining such quantities. A time extension for shortage of material will not be considered for material ordered or delivered late or whose availability is affected by virtue of the mishandling of procurement. The above provisions apply equally to equipment to be installed in the work.

6-7 TIME OF COMPLETION

6-7.2 Working Day Add the following:

The following days have been designated as holidays by the City of Culver City:

New Year's Day	January 1
Martin Luther King, Jr. Day	3rd Monday in January
Memorial Day	Last Monday in May
Independence Day	July 4
Labor Day	1st Monday in September
Thanksgiving	4th Thursday in November
Day after Thanksgiving	
Christmas Day	December 25

In addition, Culver City observes a "Holiday Slowdown" during which no work may take place within the public right-of-way. On arterial streets and commercial streets, Holiday slowdown will be observed during the Thanksgiving week, the Christmas week, and the New Year's week; On all other streets, Holiday slowdown will be observed during the Thanksgiving days(including the days before and after), the Christmas days (including the days before and after), and the New Year's Days (and the days before). During the slowdown, the Contractor shall maintain job site and public safety and schedule to perform work outside the public right-of-way. No time extension will be granted due to the failure of the Contractor to schedule the work appropriately. Any deviation from the Holiday Slowdown shall be approved by the City Engineer. If no critical path work is performed during the "Holiday Slowdown" period, no working days will be charged against the contractor.

Add the following subsection:

6-7.4 Work Hours

Normal work hours shall be from 8:00 AM until 5:00 PM on all work days. Workdays are defined in Section 6-7.2 of the Standard Specifications and as modified above. Work hours other than normal work hours will not be allowed without prior consent of the City Engineer. The Public Works Director/City Engineer shall approve, in writing, overtime work requiring inspection proposed to be

performed by the Contractor. The decision with regard to the type of work requiring inspection shall be the sole responsibility of the Public Works Director/City Engineer.

If work is approved and performed at night, the Contractor shall provide adequate light for proper prosecution of the work for the safety of the workmen and the public, and for proper inspection.

Contractor shall comply with Section 7-10.1, "**Traffic and Access**" of the Special Provisions and "**MOBILIZATION AND TRAFFIC CONTROL**" of the Technical Specifications regarding lane closure restrictions that may impact working hours on certain streets.

In addition, weekend or night work may be necessary at locations as described in amended Section 6-7.2. The cost for weekend or outside normal working hours shall be included in various bid items of work, and no additional or separate compensation is allowed.

6-8 COMPLETION, ACCEPTANCE, AND WARRANTY Add the following:

Completion Date: The project is considered complete and the counting of days for time of completion ends when the City's Project Manager confirms in writing that the Contractor has completed the Work in accordance with the Contract, including completion of all physical work and punch list items, and cleanup work including removal of construction materials/equipment/signage, and does not including warranties or maintenance. Any documentation required in the Contract and by Law does not necessarily need to be furnished by the Contractor by completion date but must be received prior to final payment.

Final Acceptance Date: The date on which the City Council accepts the Work as complete.

The Contractor shall warranty that all work performed by him under this Contract fully meets the requirements thereof as to quality of workmanship and materials furnished. If any defects in materials or workmanship become evident within a period of one year from the date of the acceptance of the work by the City Council, the Contractor shall, at his or her own expense, make any repair or replacement necessary, including repair of settled backfill and resurfacing, pay administrative costs relative to inspection, testing, Contract administration, and attorney fees to restore the work to full compliance with the Plans and Specifications.

The guarantees and agreements set forth hereof shall be secured by a surety bond. Said bond the Contractor may, at his option, provide for the faithful performance bond furnished under the contract to remain in force and effect for said amount until the expiration of said one-year period.

Such repair and replacement shall be made promptly upon receipt of written notice from the Engineer. If the Contractor fails to make such repair and replacement promptly, the Engineer may cause the work to be done and the costs incurred thereby shall become the liability of the Contractor and his or her Surety.

If in the opinion of the Engineer, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the City or to prevent interruption of operations of the City, the City will attempt to give the notice required by this article. If the Contractor cannot be contacted or does not comply with the Engineer's request for correction within a reasonable time as determined by the Engineer, the City may, notwithstanding the Provisions of this article, proceed to make such correction or provide such attention, and the costs of such correction or attention shall be charged against the Contractor.

This article does not in any way limit the warranty on any items for which a longer warranty is specified or on any items for which a manufacturer gives a guarantee for a longer period, nor does it limit other remedies of the City in respect to latent defect, fraud implied warranties, or assigned claims.

6-9 LIQUIDATED DAMAGES Delete the entire subsection and substitute the following:

Failure of the Contractor to complete the Work within the time allowed will result in damages being sustained by the Agency. Such damages are, and will continue to be, impracticable and extremely difficult to determine. For each consecutive calendar day in excess of the time specified for completion of the Work, as adjusted in accordance with 6-6, the Contractor shall pay to the Agency, or have withheld from moneys due it, the sum of **\$1,000**. Execution of the contract under these Specifications shall constitute agreement by the Agency and Contractor that **\$1,000** per calendar day is the minimum value of the costs and actual damage caused by failure of the Contractor to complete the Work within the allotted time. Such sum is liquidated damages and shall not be construed as a penalty, and may be deducted from payments due the Contractor if such delay occurs.

In addition to the liquidated damages specified, if the Contractor fails to complete the work within the time specified for completion, plus any authorized time extensions, the Agency shall have the right to charge to the Contract all or any part, as it may deem proper, of the actual costs of inspection, supervision and other overhead expenses that are directly chargeable to the project and that accrue after the expiration of such specified time for completion plus authorized extensions. This charge will be addition to the payment of liquidated damages.

6-11 LEGAL ACTIONS AGAINST THE CITY Add the following subsection:

In the event litigation is brought against the City concerning compliance by the City with State or Federal laws, rules or regulations applicable to highway work, the provisions of this section shall apply.

a. If, pursuant to court order, the City prohibits the Contractor from performing all or any portion of the work, the delay will be considered a right of way delay within the meaning of Subsection 6-6 of the Standard Specification unless the contract is terminated as hereinafter provided, in which event compensation payable to the Contractor shall be determined in accordance with said termination provisions.

b. If, pursuant to court order (other than an order to show cause) the City is prohibited from requiring the Contractor to perform all or any portion of the work, the City may, if it so elects, eliminate the enjoined work pursuant to Section 3 of the Standard Specifications or terminate the contract in accordance with Subsections 6-3 and 6-5 of the Standard Specifications.

c. If the final judgment in the action prohibits the City from requiring the Contractor to perform all or any portion of the work, the City will either eliminate the enjoined work pursuant to Sections 3 of the Standard Specifications or terminate the Contract in accordance with Subsections 6-3 and 6-5 of the Standard Specifications.

d. Termination of the Contract and the total compensation payable to the Contractor in the event of termination shall be governed by the following:

- (1) The Engineer will issue the Contractor a written notice specifying that the Contract is to be terminated. Upon receipt of said written notice and, except as otherwise directed in writing by the Engineer, the Contractor shall:
 - a. Stop all work under the contract, except that specifically directed to be completed prior to acceptance.
 - b. Perform work the Engineer deems necessary to secure the project for termination.
 - c. Remove equipment and plan from the site of the work.
 - d. Take such action as is necessary to protect materials from damage.
 - e. Notify all Subcontractors and suppliers that the contract is being terminated and that their contracts or orders are not to be further performed unless otherwise authorized in writing by the Engineer.
 - f. Provide the Engineer with an inventory list of all materials previously produced, purchased or ordered from suppliers for use in the work and not yet used in the

- work, including its storage location and such other information as the Engineer may request.
- g. Dispose of materials not yet used in the work as directed by Engineer. It shall be the Contractor's responsibility to provide the City with good title to all materials purchased by the City hereunder, including materials for which partial payment has been made as provided in Subsection 9-3.2 of the Standard Specifications, and with bills of sale or other documents of title for such materials.
 - h. Subject to the prior written approval of the Engineer, settle all outstanding liabilities and all claims arising out of subcontracts or orders for materials terminated hereunder. To the extent directed by the Engineer, the Contractor shall assign to the City all the right title and interest of the Contractor under subcontracts or orders for materials terminated hereunder.
 - i. Furnish the Engineer with the documentation required to be furnished by the Contractor under the provisions of the contract including, on projects as to which Federal funds are involved, all documentation required under the Federal requirements included in the contract.
 - j. Take such other actions as the Engineer may direct.
- (2) Acceptance of the Contract as hereinafter specified shall not relieve the Contractor of responsibility for damage to materials except as follows:
- A. The Contractor's responsibility for damage to materials for which partial payment has been made as provided in Subsection 9-3.2 of the Standard Specifications, and for materials furnished by the City for use in the work and unused, shall terminate when the Engineer certifies that such materials have been stored in the manner and at the locations he has directed.
 - B. The Contractor's responsibility for damage to materials purchased by the City subsequent to the issuance of the notice that the contract is to be terminated shall terminate when title and delivery of the materials has been taken by the City.
 - C. When the Engineer determines that the Contractor has completed the work under the contract directed to be completed prior to termination and such other work as may have been ordered to secure the project for termination, he will recommend that the Engineer formally accept the Contract, and immediately upon and after such acceptance by the Engineer, the Contractor will not be required to perform any further work thereon and shall be relieved of his contractual responsibilities for injury to persons or property which occurs after the formal acceptance of the project by the Engineer.
- (3) The total compensation to be paid to the Contractor shall be determined by the Engineer on the basis of the following:
- a. The reasonable cost to the Contractor, without profit, for all work performed under the contract, including mobilization, demobilization and work done to secure the project for termination. Reasonable cost will include a reasonable allowance for project overhead and general administrative overhead not to exceed a total of seven percent (7%) of direct costs of such work.
- When in the opinion of the Engineer, the cost of a contract item of work is excessively high due to costs incurred to remedy or replace defective or rejected work, the reasonable cost to be allowed will be the estimated reasonable cost of performing such work in compliance with the requirements of the Plans and Specifications and the excessive actual cost shall be disallowed.
- b. A reasonable allowance for profit on the cost of the work performed as determined under Subsection (a), provided the Contractor establishes to the satisfaction of the Engineer that it is reasonably probable that he would have made a profit had the contract been completed and provided further that the profit allowed shall in no event exceed four percent (4%) of said cost.

- c. The reasonable cost to the Contractor of handling material returned to the vendor, delivered to the City or otherwise disposed of as directed by the Engineer.
- d. A reasonable allowance for the Contractor's administrative costs in determining the amount payable due to termination of the contract.

All records of the Contractor and his Subcontractors, necessary to determine compensation in accordance with the provisions of this section, shall be open to inspection or audit by representatives of the City at all times after issuance of the notice that the contract is to be terminated and for a period of three years, and such records shall be retained for that period.

After acceptance of the work by the Engineer, the Engineer may make payments on the basis of interim estimates pending issuance of the Final Estimate when in his opinion the amount thus paid, together with all amounts previously paid allowed, will not result in total compensation in excess of that to which the Contractor will be entitled. All payments, including payment upon the Final Estimate shall be subject to deduction for prior payments and amounts, if any, to be kept or retained under the provisions of the contract.

The provisions of this section shall be included in all subcontracts.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-1 CONTRACTOR'S EQUIPMENT AND FACILITIES Add the following:

The routing of trucks with gross vehicle weight exceeding 6,000 pounds through Culver City shall be subject to the provision of City Code Section 7.02.210 and the Contract Documents. Contractor shall submit a proposed haul route plan to the Engineer for approval. Said plan shall be approved prior to mobilization. **The Contractor is advised of that any violation of the California Vehicle Code and Culver City Code (such as truck routing, overweight, improper licensing, etc.) will result in citation and fines by the Police Department.** Contractor shall be responsible for the immediate cleanup of all spills of any nature resulting from his operation.

Parking of Contractor's employee's vehicles or any other vehicles not utilized in the construction activity will be restricted during construction and shall not take place in public parking areas outside of the construction zone, unless shown otherwise on the plan or unless by arrangement with the Engineer.

Any commercial vehicle, the laden or unladen weight of which exceeds six thousand (6,000) pounds, shall use the following streets designated as truck routes:

- A. Adams Boulevard.
- B. Centinela Avenue.
- C. Culver Boulevard, between west City boundary and Sepulveda Boulevard.
- D. Fairfax Avenue.
- E. Higuera Street, between Hayden Avenue/Place and Jefferson Boulevard.
- F. Jefferson Boulevard.
- G. La Cienega Boulevard.
- H. National Boulevard.
- I. Sawtelle Boulevard, between Culver/ Washington off-ramp of the San Diego Freeway and Braddock Drive.
- J. Sawtelle Boulevard, between Matteson Avenue and Venice Boulevard.
- K. Sepulveda Boulevard.
- L. Slauson Avenue, east of Jefferson Boulevard.

- M. Venice Boulevard.
- N. Washington Boulevard, east of La Cienega Boulevard.

Most direct route shall be used to and from the restricted street from the truck route.

7-1.2 Temporary Utility Services Add the following:

Contractor is responsible to obtain and pay for construction water. Any water drawn from fire hydrant shall be coordinated through Golden State Water Company (Contact telephone No. 310.838.1324) located at 5839 Green Valley Circle, Suite 106, Culver City, CA 90230).

7-2 LABOR

7-2.2 LAWS

Contractor shall comply with all other Federal, State and local laws related to labor.

7-5 PERMITS Add the following:

The Contractor shall secure all necessary permits from all governing agencies having authority over any portion of the work. The Contractor shall obtain and pay for all other permits.

The Contractor shall obtain, pay, and comply with all permits, including but not limited to the permits requirements as shown in the "Instruction to Bidders" part of this contract document, and give all notices necessary and incident to the due and lawful prosecution of the work and to the preservation of the public health and safety.

7-6 THE CONTRACTOR'S REPRESENTATIVE Add the following:

When and as directed by the City Engineer, the Contractor shall attend all conferences and meetings which the City Engineer deems necessary for the proper progress of work under this contract.

7-8 PROJECT SITE MAINTENANCE

7-8.1 General Add the following:

When and as often as required by the Engineer, the Contractor shall furnish and operate self-loading motor sweepers with spray nozzles, to keep paved areas affected by the work acceptably clean and dust free.

The Contractor shall remove graffiti from all work, materials, equipment, and signs within the project. Equipment, materials, or signs containing graffiti shall not be brought to the project. Any graffiti found on work, materials, equipment, or signs shall be cleaned or removed from the project within 24 hours from its discovery. The cost of graffiti removal shall be borne by the Contractor, and shall be considered as being included in the various Contract items.

Upon project completion, the contractor shall remove all dig-alert utility markings.

The Contractor shall have sole responsibility for providing security for his materials and equipment on and about the work site against theft and vandalism at all times for the duration of the contract. Contractor shall immediately replace all furniture, equipment, supplies, etc., which is being used or owned by the Owner or his/her designee at or on the project site or other areas under the security

of the Contractor that is stolen, lost or damaged through theft, vandalism, graffiti, Contractor's negligence or any similar activity.

7-8.2 Air Pollution Control Add the following:

The Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes which apply to any work performed pursuant to the Contract, including any air pollution control rules, regulations, ordinances and statutes, specified in Section 11017 of the Government Code.

In the absence of any applicable air pollution control rules, regulations, ordinances or statutes governing solvents, all solvents, including but not limited to the solvent portions of paints, thinners, curing compounds, and liquid asphalt used on the Project shall comply with the applicable material requirements of the South Coast Air Quality Management District (SCAQMD). All containers of paint, thinner, curing compound or liquid asphalt shall be labeled to indicate that the contents fully comply with said requirements.

Material to be disposed of shall not be burned, either inside or outside of the premises. The provisions of Section 300-1.3, "Removal and Disposal of Materials", of the SSPWC permitting disposal of material by burning shall not apply.

7-8.3 Noise Control Add the following:

The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract.

The noise level requirements shall apply to all equipment on the job or related to the job, including, but not limited to, trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. Each internal combustion engine used for any purpose on the job shall be equipped with a muffler of a type recommended by the manufacturer. The noise level shall be in compliance with Chapter 9, Section 9.07 of the Culver City Municipal Code.

Residential Restrictions

For residential zones, hours of work shall be limited, in accordance with the Culver City Municipal Code pertaining to Mechanical Noise or Construction Noise near Residential Zones, which prohibits:

- (a) The use or operation of any automobile, motorcycle, engine, machine or mechanical device, or other contrivance or facility, or the carrying on of any trade or business, causing between the hours of 8:00 p.m. and 8:00 a.m., any loud or unusual noise or sound, disturbing the peace of residents of a residentially zoned neighborhood.
- (b) The use of any of the foregoing in construction or excavation work between the hours of 8:00 p.m. and 8:00 a.m., on weekday, or between the hours of 7:00 p.m. and 9:00 a.m. on a Saturday, or between the hours of 7:00 p.m. and 10:00 a.m. on a Sunday, which cause any loud or unusual noise or sound disturbing the peace of residents of a residentially zoned neighborhood.

Interference with Business Prohibited

Contractor must comply with Section 9.04.020(D) of the Culver City Municipal Code pertaining to Mechanical Devices, etc., Interfering with Business or Industrial Operations, which prohibits: The operation of any automobile, motorcycle, engine, machine or mechanical device or other contrivance or facility, or the carrying on of any trade or business, any loud or unusual noise or sound from which interferes with the transaction or conduct of any business or industrial operation in the surrounding area, unless the making of such noise is incident to the construction or repair of

buildings or equipment or is otherwise necessary to the protection or preservation of the property from which such noise or sound emanates.

7-8.4 Storage of Equipment and Materials Add the following:

It shall be the Contractor's responsibility to locate any storage sites for materials and equipment needed and such sites must be approved in advance by the City Engineer, and must be free of objectionable material. The Contractor must submit to the City Engineer for approval any and all agreement(s) between the Contractor and the property owner(s) of said storage site(s) and/or construction site(s) for approval prior to the start of construction. Said agreement(s) must provide for the restoration of the site(s) by the Contractor prior to the filing of "Notice of Completion" by the City Engineer.

Stockpiling or storage of materials on any public right-of-way or parking areas will not be permitted without the approval of the Engineer. Materials spilled along or on said right-of-way or parking areas shall be removed completely and promptly. All stockpile and storage areas shall be kept in a safe, neat, clean, and orderly fashion, and shall be restored to equal or better than original condition upon completion of the work.

Contractor shall only use a haul route approved in writing by the Engineer. The Contractor shall keep the work site as well as the route to and from the disposal site clean at all times. The Contractor shall immediately remove and haul away all materials included in the various items of removals.

7-8.6 Water Pollution Control Add the following:

The Contractor shall comply with the requirements of Subsection 7-8.6 of the Standard Specifications and shall conduct his operations so as to prevent Portland cement, mud, silt or other materials from entering the surface drainage structures of the adjoining street and any underground storm drainage system. Contractor shall comply with the requirements of project specific Storm Water Pollution Prevention Plan (SWPPP).

In addition to complying with all applicable federal, state and local laws and regulations, the Contractor shall take note of the NPDES (National Pollution Discharge Elimination System) Requirements. The Contractor shall take all precautionary actions and implement all necessary BMPs to prevent sewer discharges to any portion of the storm drain conveyance system including discharge of pollutants from activities such as paving operations, concrete waste washouts, cold-milling, vehicle and equipment fueling from entering storm drain systems. At the minimum, the following shall be implemented:

1. Handle, store, and dispose of materials properly.
2. Avoid excavation and grading activities during wet weather.
3. Construct diversion dikes and drainage swales around working sites.
4. Cover stockpiles and excavated soil with secured tarps or plastic sheeting.
5. Develop and implement erosion control plans (if applicable).
6. Check and repair leaking equipment away from construction sites.
7. Designate a location away from storm drains for refueling.
8. Cover and seal catch basins if work in their vicinity may allow debris or deleterious liquids to enter.
9. Use vacuum with all concrete sawing operations.
10. Never wash excess material from aggregate, concrete, or equipment onto a street.
11. Catch drips from paving equipment with drip pans or absorbent material.
12. Clean up all spills using dry methods.

7-9 PROTECTION AND RESTORATION OF EXISTING IMPROVEMENTS Add the following subsection:

The Contractor shall examine all adjoining premises (including for the purposes hereof, streets and sidewalks) and buildings, and ascertain, before beginning work, the depth of cellars, materials and construction of buildings and all existing conditions of such premises and the buildings thereon, and shall be governed thereby for the necessary, thorough, safe and satisfactory execution of all work called for herein, whether indicated on Plans and/or specified, or not, and all work and protective measures necessary to keep and leave the said premises and buildings in the same condition as they were before commencing work shall be done without any addition to the Contract Price. Wherever any parts of the existing adjoining buildings interfere with or are interfered with by the work to be performed hereunder, the Contractor shall make whatever changes necessary thereby, whether shown on the Plans, called for in the Specifications, or not shown or not called for. The Contractor, before commencing work on the premises, shall, if he sees fit, make a written report of the conditions as found at that time, noting particularly any defects in evidence, taking photographs of the exteriors, and, if necessary, photographs of interiors, and shall deliver to the Owner a copy of the written report of the examination and copies of photographs with the date of taking thereon. The Contractor shall invite the Owner and the owners of the respective properties and buildings to join with them in the examination of the premises and buildings. The Owner may, at its option, be present during the examination. If the Contractor fails to make the examination and report as herein specified, it will be deemed that the adjoining buildings and premises are in good condition, and all claims for damages, repairs and replacements must be treated by the Contractor on the basis that the buildings and premises were in good condition before work began.

The Contractor shall shore up, brace, underpin, secure, and protect all foundations, improvements, and other parts of existing structures adjacent to the work site, which may in any way be affected by excavation or other operations in connection with the work to be performed under this contract. The Contractor shall be responsible for giving all required notices to any joining property owner or other party before commencement of work.

7-10 PUBLIC CONVENIENCE AND SAFETY

7-10.1 Traffic and Access Add the following:

Traffic and access, including but not limited to vehicular and pedestrian traffic controls, maintenance of vehicular and pedestrian access, detours, and street closures, shall be in accordance with Subsection 7-10, of the latest edition of the Standard Specifications for Public Works Construction, including all its subsequent amendments; the latest edition of the Work Area Traffic Control Handbook ("WATCH") as published by the Building News, Inc., 990 Park Center Drive, Suite E, Vista, California 92081, and the following Special Provisions. In the event of conflict, the Special Provisions shall take precedence over the Work Area Traffic Control Handbook ("WATCH") and the Standard Specifications, and the Work Area Traffic Control Handbook ("WATCH") shall take precedence over the Standard Specifications.

The Contractor is solely responsible for the traffic control safety of pedestrians and vehicles on the public right-of-way within the Contractor's work area. The Contractor shall hold harmless and indemnify the Owner, and each of its officers and employees, for any and all damages to persons and property due to the Contractor's failure to maintain adequate traffic control and safety. It is the affirmative duty of the Contractor to maintain all of his traffic control devices on the project at all times, including night and/or weekends.

The Contractor shall notify by printed notice, the occupants of all properties within the construction zone of any access, parking and circulation restrictions and limitations that will be created by the construction at least 7 calendar days in advance of the commencement of construction. This notice shall be prepared by the City of Culver City, but be distributed by the Contractor.

Traffic Control Plan (TCP)

The Contractor shall submit detailed Traffic Control Plan (TCP) on 24" x 36" sheet which shall clearly show and describe all proposed lights, warning signs, barricades, delineators, temporary lane markings, temporary traffic signals or signs, and any and all other facilities proposed to be installed. TCP shall be prepared by a Registered Civil or Traffic Engineer and shall show all lane closures, restrictions, tapers, and other disruptions of normal traffic flow, including pedestrian and vehicular detours. A schedule and/or sequencing diagram shall be included. TCP shall be submitted to the Engineer for approval no later than two (2) weeks after the award of contract. It shall be the Contractor's responsibility to immediately revise the TCP at the direction of the Engineer, and the Contractor hereby agrees that such Plan shall be strictly adhered to, and the Contractor hereby understands and agrees that its failure to provide any facility or device as shown on the TCP, or its deviation from said Plan, shall constitute a breach of contract. Traffic control set up in the field shall be inspected and approved by the City Engineer's Representative prior to commencement of any construction activity.

Lane Closure Hours

Unless directed otherwise, the Contractor shall provide and maintain portable programmable signboards throughout the construction on all major arterial streets. The signboards shall be installed one week prior to begin construction. The text shall be approved by the City. The cost shall be included in the various bid items.

Pedestrian and vehicular access shall be maintained to businesses fronting the Work except when construction of areas immediately fronting a business entrance precludes such access. Contractor shall notify affected business three (3) business days in advance of construction.

Contractor shall make provisions for deliveries to business including temporary loading zones

Convenient and safe pedestrian access to occupied residential and business property shall be maintained at all times. Access to mailboxes must be maintained at all times such that the postal delivery service is not interrupted. Trash pick-up service shall not be interrupted. Access to vacant and unused property may be restricted when approved by the Engineer. Both vehicular and pedestrian access shall be maintained at all times to all other property except as otherwise specifically authorized in writing by the City's Engineer.

Temporary No Parking

The Contractor shall notify in writing residents of property adjoining the location of the work at least forty-eight (48) hours before the start of construction on that street. The Contractor is responsible for posting "temporary no-parking" signs at least forty-eight (48) hours before using the parking lane for construction purposes. "Temporary No Parking" signs must contain information as shown in the Appendix "Standard Plans". When necessary, the Contractor shall furnish posts. The Contractor shall be responsible for furnishing, posting, and removing temporary "No Parking" and "No Driving" signs (as applicable) along project streets. Signs shall be posted on each side of the street with a maximum of 200 feet between signs.

The Contractor shall coordinate with postal authorities for the temporary relocation of mailboxes. Contractor shall provide signage directing pedestrian and vehicular traffic to temporary mailbox locations.

In the case of work requiring excavation of the roadway which may interfere with the use by residents or businesses of their driveways, suitable provisions shall be made by the Contractor at such time as the exigencies of construction may demand a temporary blocking of said driveways. Efforts shall be made by the Contractor to minimize the duration of said blocking and to notify the residents of this need well in advance. Further, the Contractor shall provide access to each residential or commercial establishment each evening. Any trench or excavation in the street or alley which remains open after work hours shall be covered by steel plates.

The Contractor shall conduct his operations in such a manner as to provide reasonable access to the adjacent properties and shall have no greater length or quantity of work under construction than he can properly prosecute with a minimum of inconvenience to the public and other contractors engaged on adjacent or related work.

7-10.3 Street Closures, Detours, Barricades Add the following:

No closure of any street shall be allowed unless prior written permission is obtained from the City Engineer. If permission to close a street is granted, then the Contractor is required to notify in writing at least five (5) working days in advance of street closures, all emergency services, and school bus services shall be notified by the contractor in writing of the locations, time, and date of the closures. In case of schedule changes, the emergency services, etc., shall be notified by telephone at least two (2) days in advance of the street closure.

7-10.4.1 Safety Orders, Add the following:

Safety Orders and Safety Control

The Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U.S. Department of Labor (OSHA), the California Occupational Safety and Health Act, and all other applicable Federal, State, County, and local laws, ordinances, codes, the requirements set forth below, and any regulations that may be detailed in other parts of these Contract Documents. Where any of these are in conflict, the more stringent requirements shall be followed.

No provision of the Contract Documents shall act to make the Owner, the Engineer or any other party than the Contractor responsible for safety. The Engineer shall not have authority for safety on the project. The Contractor shall indemnify, defend and hold harmless the Owner, Engineer, or other authorized representatives of the Owner, from and against any and all actions, damages, fines, suits and losses arising from the Contractor's failure to meet all safety requirements and/or provide a safe work site.

If death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Engineer and the Owner. In addition, the Contractor must promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the Work whether on, or adjacent to, the Site, giving full details and statements of witnesses. The Contractor shall make all reports as are, or may be, required by authority having jurisdiction, and permit all safety inspections of the work being performed under this Contract.

If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing to the Engineer, giving full details of the claim.

Safety Program

The Contractor shall establish, implement, and maintain a written injury prevention program as required by Labor Code Section 6401.7. Before beginning the Work the Contractor shall prepare and submit to the Engineer a Contractor Safety Program that provides for the implementation of all the Contractor's safety responsibilities in connection with the Work at the site and the coordination of that program and its associated procedures and precautions with the safety programs, precautions and procedures of each of its subcontractors and other prime Contractors performing work at the site. The Contractor shall be solely responsible for initiating, maintaining, monitoring, coordinating, and supervising all safety programs, precautions and procedures in connection with the Work and for coordinating its programs, precautions and procedures of the subcontractors and other prime contractors performing Work at the site. The Safety Program should contain all the necessary elements for the Contractor to administer its program on site.

The Contractor's compliance with requirements for safety and/or the Engineer's review of the Contractor's Safety Program shall not relieve or decrease the liability of the Contractor for safety. The Engineer's review of the Contractor's Safety Program is only to determine if the above listed elements are included in the program.

Safety Supervisor

The Contractor shall appoint an employee as safety supervisor who is qualified and authorized to supervise and enforce compliance with the Safety Program. The Contractor shall notify the Engineer in writing prior to the commencement of work of the name of the person who will act as the Contractor's safety supervisor and furnish the safety supervisor's resume to the Engineer.

The Contractor, will, through and with his Safety Supervisor, ensure that all of its employees and its subcontractors of any tier, fully comply with the Project Safety Policies. The Safety Supervisor shall be a full time employee of the Contractor whose responsibility shall be for supervising compliance with applicable safety requirements on the work site and for developing and implementing safety training classes for all job personnel. The Owner shall have the authority to request removal of the Contractor's Safety Supervisor if that representative is judged to be improperly or inadequately performing the duties; however, this authority shall not in any way affect the Contractor's sole responsibility for performing this work safely, nor shall it impose any obligation upon the Owner to ensure the Contractor perform its work safely.

Safety and Protection

The Contractor shall take all necessary protection to prevent damage, injury and loss to:

All employees on the Project, employees of all subcontractors, and other persons and organizations who may be affected thereby;

All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and of underground facilities and utility owners when prosecution of the Work may affect them and shall cooperate with them in the protection, removal, relocation and replacement of their property. All injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor, supplier or any other person or organization part, by the Contractor, any subcontractor, supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the Contractor. The Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and the Owner has issued a notice of final completion to the Contractor.

Safety Emergencies

In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Engineer, is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give the Engineer prompt written notice if the Contractor believes that any significant changes in the Work or variations from the Contract have been caused thereby.

Safety Violations

Should the Contractor fail to correct an unsafe condition, the Engineer shall immediately notify the Owner of the Contractor's failure to correct the unsafe condition. The Owner shall then notify the Contractor through the Engineer that the unsafe condition must be corrected or the work in question

will be stopped until the condition is corrected to the satisfaction of the Owner. No extension of time or additional compensation will be granted as a result of any stop order so issued.

The Owner shall have the authority to require the removal from the project of the foreman and/or superintendent in responsible charge of the work where safety violations occur.

Equipment Safety Provisions

The completed Work shall include all necessary permanent safety devices, such as machinery guards and similar ordinary safety items, required by the State and Federal (OSHA) industrial authorities and applicable local and national codes. Further, any features of the Work, including Owner-selected equipment subject to such safety regulations shall be fabricated, furnished, and installed in compliance with these requirements. All equipment furnished shall be grounded and provided guards and protection as required by safety codes, and where vapor-tight or explosion-proof electrical installation is required by safety codes, this shall be provided. Contractors and manufacturers of equipment shall be held responsible for compliance with the requirements included herein. The Contractor shall notify all equipment suppliers and subcontractors of the provisions of this paragraph.

On-Site Copies Required

The Contractor shall have at the work site copies or suitable extracts of: Construction Safety Orders, and General Industrial Safety Orders issued by the State Division of Industrial Safety.

Compliance Required

Contractor shall comply with provision of these and all other applicable laws, ordinances, and regulations, including but not limited to the Occupational Safety and Health Act of 1970 and current amendments, if any, to which particular attention is directed.

Clearance from Power Lines

To help prevent injuries and electrical service interruptions, Contractors are reminded CAL/OSHA requires tools, machinery equipment, apparatus, materials, or supplies must be kept at least 10 feet from voltage lines energized at 50,000 volts or less and even greater distances for lines in excess of 50,000 volts. In addition, the Penal Code of the State of California, Section 385, makes it a misdemeanor to violate certain clearances from high voltage lines.

Prior to starting work in which the aforementioned clearances will be impaired, it will be necessary to contact the Southern California Edison (SCE) Company Business Office nearest the proposed work location and request assistance. SCE will take appropriate action to assist in maintaining required clearances. Such action will be at Contractor's expense. Sufficient lead time to permit planning and scheduling of any necessary work will be required.

Special Hazardous Substance and Process

Contractor acknowledges that Contractor is aware of and in compliance with the provisions of the Hazard Communication Standards (California Administrative Code, Title 8, Section 4194). Contractor shall, at the request of the Owner, demonstrate that Contractor is in complete compliance with the Hazard Communication Standards.

In addition, Contractor shall, at the request of the Public Works Director/City Engineer, provide to the Owner a Material Safety Data Sheet for any product handled or used by the Contractor on Owner property or in an area where an Owner's employee is working.

7-13 LAWS TO BE OBSERVED

The Contractor shall keep fully informed of all existing and future State and Federal laws and county and municipal ordinances and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over

the same. Contractor shall at all times observe and comply with, and shall cause all his or her agents and employees to observe and comply with, all such existing and future laws, ordinances, regulations, orders, and decrees of bodies or tribunals having any jurisdiction or authority over the work; and shall protect and indemnify the Owner, and all its officers and employees connected with the work, and including but not limited to the Public Works Director/City Engineer, against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by Contractor or Contractor's employees.

If any discrepancy or inconsistency is discovered in the Plans, Drawings, Specifications, or Contract for the work in relation to any such law, ordinance, regulation, order or decree the Contractor shall forthwith report the same to the Engineer in writing.

7-15 RECORD DRAWINGS Add the following section:

At the beginning of the project, one blueline print of each applicable drawing will be issued by the City for use in preparing record drawings.

Actual construction conditions shall be accurately and completely recorded on the blueline prints as the project progresses. Contractor shall make complete, current, Record Drawings available for review by the City during the time the Contractor's Application for Payment is being reviewed. Incomplete Record Drawings may delay approval of said Application. Upon completion of the work, the Contractor shall sign the record drawings and shall submit same to the City's Inspector for checking and approval prior to the Notice of Completion is filed.

SECTION 8 -- FACILITIES FOR AGENCY PERSONNEL

Facilities for Agency Personnel will not be required on this project unless specified otherwise in technical Provisions.

SECTION 9 -- MEASUREMENT AND PAYMENT

9-3 PAYMENT

9-3.1 General. Add the following at the end of the second paragraph:

Payment for cost of work to comply with the General Provisions of the Standard Specification for Public Works Construction and this Special Provision of this Contract shall be included in the various bid items, and no additional payment will be made.

Bid prices provided on the appropriate Bid Form will remain in force as Unit Prices under the Contract Documents until the Contract has been fully performed. No cost escalation is allowed due to material price increase for the term of the project.

When an item of work is not listed in the "bid schedule" in the bid proposal, the cost of such work shall be considered to be included in the cost of the other Work that is listed. The Contractor is to provide all labor, material, and equipment necessary to complete the Project in accordance with the plans and specifications including, but not limited to the following:

- a. All "Special Provisions" work required to complete the Project in a safe and orderly manner including, but without being limited to, safety measures, hoists, flagmen, clean-up, barricades, fences, temporary utilities, (includes temporary power coordination and fees assessed by Southern California Edison), utility fees and

charges, parking for the Contractor's and Subcontractor's personnel, and temporary facilities as may apply to this Work;

- b. All insurance in accordance with the insurance requirements of the Contract;
- c. Maintain and update current record drawings on-site. Upon project completion provide the Owner a legible set of record drawings, operation and maintenance manuals, warranties, and guarantees;
- d. All permits required;
- e. Construction schedule indicating material lead times, shop drawings, order dates, start and end dates, milestone dates. The schedule shall be updated monthly;
- f. Monthly project status report; Attend weekly project meetings;
- g. All engineering, testing and inspection costs for defective work, and work performed outside of the work hours set forth in Section 6-7 of the Special Provisions;
- h. Repair or replace all existing improvements (public or private) damaged by the Contractor. The Contractor is responsible to provide evidence of pre-existing conditions;
- i. All utility connections and fees for utility connections including but not limited to electrical services (for street lighting, traffic signals, and irrigation controllers) and water services (for irrigation). Contractor shall also be responsible for scheduling of said connections;
- j. All construction survey necessary to set grade and coordinate location relationships as stipulated in the Technical Specifications (Section F), should any Alternates be awarded by the Owner. The survey provider shall be appropriately licensed by the State of California and is subject to approval by the Owner;
- k. Watchman or security service, as necessary;
- l. Perimeter fencing of work zones and staging area as necessary for public safety and protection of equipment and materials;
- m. Dust control, street cleaning, and protection and/or replacement of existing surfaces or properties;
- n. Unless waived by the Owner, the Contractor shall provide for and erect one 4' x 8' project sign per each project, another Owner Project, the design of which is to be submitted to Owner for approval prior to construction of said sign; and
- o. Submittal Log of all submittals required to the Owner including but not limited to shop drawings and traffic control and phasing plans. Said log shall be updated for each weekly project meeting.

All costs for the preceding shall be included in the other items for which bids are entered.

The City may keep any monies which would otherwise be payable at any time hereunder and apply the same, or so much as may be necessary therefore, to the payment of any expense, losses or damages, as determined by the Engineer, incurred by the City, for which the Contractor is liable under the Contract.

Other Withholds

In addition to the amount which the Owner may otherwise retain under the Contract, the Owner may withhold a sufficient amount or amounts of any payment or payments otherwise due the Contractor, as in its judgment may be necessary to cover:

- a. Payments which may be past due and payable for just claims against the Contractor or any subcontractor for labor or materials furnished for the performance of this Contract.
- b. Defective work not remedied.
- c. Failure of the Contractor to make proper payments to its subcontractors or suppliers.
- d. A reasonable doubt that the Contract can be completed for the balance remaining.
- e. Damage to another Contractor or third party, or to private or City property.
- f. Failure of the Contractor to keep its work progressing in accordance with its progress schedule or maintaining current Record Drawings.
- g. The Owner's costs for the Contractor's failure to complete work within the allowed time.
- h. Cost of insurance arranged by the Owner due to cancellation or reduction of the Contractor's insurance.
- i. Failure of the Contractor to make proper submissions, as herein specified.
- j. Failure to submit, revise, resubmit, or otherwise conform to the requirements herein for preparing and maintaining a construction schedule.
- k. Payments due the Owner from the Contractor.
- l. Provisions of law that enable or require the Owner to withhold such payments in whole or in part.

The Owner in its discretion may apply any withheld amount or amounts to the payment of valid claims. In so doing, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the Contract by the Owner to the Contractor, and the Owner shall not be liable to the Contractor for such payment made in good faith. Such payments may be made without prior judicial determination of the claim or claims. The Owner will render to the Contractor a proper accounting of such funds disbursed in behalf of the Contractor.

Pursuant to Public Contract Code Section 22300, for monies earned by the Contractor and withheld by the Owner to ensure the performance of the Contract, the Contractor, may, at its option, choose to substitute securities meeting the requirements of said Public Contract Code Section 22300. There would be an associated administrative charge of \$75 per each Contractor's Progress Invoice.

9-3.3 Delivered Materials Add the following:

Unless included in the Bid Schedule, or unless otherwise called for in Technical Provisions, no payment will be made for materials or equipment delivered but not yet incorporated in the work.

SECTION F

TECHNICAL PROVISIONS

(SUPPLEMENTS AND MODIFICATIONS TO
THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION)

SECTION F – TECHNICAL SPECIFICATIONS

BID ITEM No. 1-3. MOBILIZATION AND TRAFFIC CONTROL, BONDS, PERMITS AND FEES

GENERAL

MOBILIZATION

Mobilization and traffic control shall conform to the provisions of Sections 9-3.4 of the Standard Specifications and Special Provisions of this specification.

The scope of the work shall include the obtaining of all bonds, insurance, and permits; moving onto the site of all project work areas and equipment; and the furnishing of other construction facilities; all as required for the proper performance and completion of the Work. Mobilization shall include but not be limited to the following principal items:

1. Project notification to residents and/or businesses.
2. The movement of personnel, equipment, supplies and incidentals to the project site.
3. Furnishing, installing, and maintaining all storage yards or sheds required for temporary storage of products, equipment, or materials that have not yet been installed in the Work.
4. Obtaining and paying for all required permits.
5. Posting all OSHA required notices and establishment of safety programs.
6. Have the Contractor's superintendent at the job site full time.
7. Submittal of required construction schedule as specified.
8. Implement BMP to prevent soil leaving the site and entering to the street or other areas. Protect all catch basin openings during construction.
9. Facilitate and coordinate with City's street weekly sweeping and trash pickups during construction.

A designated portion of the Senior Center parking lot may be used for storage and mobilization. The Contractor shall determine if the lot is suitable for its operation and the City of Culver City is not responsible for any liability under any circumstances should the contractor choose to use the City property.

Traffic access between the Overland and Culver entrances to the parking lot shall be remain open and safely passable during construction. ADA accessible parking spaces are to remain unobstructed.

TRAFFIC CONTROL

Traffic Control shall conform to the provisions of Sections 7-8 and 7-10 of the Standard Specifications and Special Provisions of this specification, and the contractor shall at its cost prepare and obtain approved traffic control plans, and the implementation thereof.

The CONTRACTOR shall submit a traffic control plan for review and approval for the work to be performed on all arterial streets.

Two changeable message signs (CMS) are required throughout the construction duration where traffic will be disrupted. The contractor shall install the CMS at least one week prior to construction beginning.

The CONTRACTOR shall provide all traffic controls necessary to provide for the safe and

expeditious movement of traffic, motorized and non-motorized (including pedestrian traffic), through the construction zones, as well as those necessary to provide for the safety of the work force performing the construction.

The CONTRACTOR shall provide adequate pedestrian and vehicular traffic controls for the duration of the work in accordance with the Contract Documents including Subsection 7-10 of the SSPWC, the Work Area Traffic Control Handbook (WATCH), Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones (Chapter 5 of the Traffic Manual, hereafter "Manual of Traffic Controls"), and the City of Culver City.

The CONTRACTOR shall include any temporary pavement necessary for the safe and expeditious movement of traffic.

SIGNS

All excavations required for the purpose of installing traffic control signs, including construction area signs, shall be performed by hand methods without the use of power equipment, except that power equipment may be used if it is determined there are not utility facilities in the area of the proposed holes. CONTRACTOR shall notify Underground Service Alert - Southern California (USA) at 800/422-4133 at least 2 working days, but no more than 14 calendar days, prior to commencing any excavation for said signposts.

All signage conflicting with required traffic control signage shall be removed or suitably covered. Said signs shall be replaced unless designated for removal or relocation on the Plan.

This item shall include the temporary relocation of existing signs as necessary. Additionally, signs shall be posted directing pedestrians to detour safely around construction work.

TEMPORARY PAVEMENT DELINEATION

Temporary pavement delineation shall be furnished, placed, maintained and removed in accordance with the provisions in Section 12-3.01, "General", of the Caltrans Standard Specifications and these special provisions. Nothing in these special provisions shall be construed as to reduce the minimum standards specified in the Manual of Traffic Controls published by Caltrans or as relieving the CONTRACTOR from his responsibility as provided in the SSPWC. Temporary pavement delineation shall be either paint or tape unless otherwise approved by the Engineer.

Whenever the work causes obliteration of pavement delineation, temporary or permanent pavement delineation shall be in place prior to opening the traveled way to public traffic. Lane line or centerline pavement delineation shall be provided at all times for traveled ways open to public traffic.

All work necessary, including any required lines or marks, to establish the alignment of temporary pavement delineation shall be performed by the CONTRACTOR. Surfaces to receive temporary pavement delineation shall be dry and free of dirt and loose material. Temporary pavement delineation shall not be applied over existing pavement delineation or other temporary pavement delineation. Temporary pavement delineation shall be maintained until superseded or replaced with a new pattern of temporary pavement delineation or permanent pavement delineation.

Temporary pavement markers and removable traffic type tape which conflicts with a new traffic pattern or which is applied to the final layer of surfacing or existing pavement to remain in place shall be removed when no longer required for the direction of public traffic, as determined by the Engineer.

The mobilization and traffic control for the deletable bid items shall be paid as part of the respective deletable construction items, and shall be excluded in the lump sum Bid Item No.1.

PAYMENT

Payment for **BID ITEM NO. 1-3 – MOBILIZATION, TRAFFIC CONTROL, BONDS, PERMITS AND FEES** shall be at the contract lump sum (LS) price and shall include full compensation for all labor, materials, tools, equipment, and incidentals necessary to do all the work thereof including, but not limited to mobilization (including various subcontractors for multiple mobilizations as necessary), traffic control plans, traffic detour and traffic control, including the two changeable message signs. Payment on this lump sum bid item shall be made with each progress payment in direct proportion to the amount of the total contract amount earned to date.

BID ITEM NO. 4 – TREE REMOVAL - 12 PALM TREESGENERAL

Remove and dispose of designated palm trees. Trees, stumps and roots to be completely removed per section 31 1000 Site Clearing.

PAYMENT

Payment for **BID ITEM NO. 4 – TREE REMOVAL** shall be at the contract bid item price tree and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 5 – SHRUB REMOVALGENERAL

Remove all shrubs and planting material except trees to remain per section 31 1000 Site Clearing. Box miniature palms described in item 23 prior to shrub removal. Clear and grub all planting areas.

PAYMENT

Payment for **BID ITEM NO. 5 – SHRUB REMOVAL** shall be at the contract bid square foot price and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 6 – SAWCUTSGENERAL

Sawcut concrete at project join line. Sawcut planter curbs under building columns per details. Protect all existing paving and elements to remain.

PAYMENT

Payment for **BID ITEM NO. 6 – SAW CUTS** shall be at the contract bid linear foot price and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 7 – REMOVE COURTYARD CONCRETE, SEAT WALLS, CURBS, BASEGENERAL

Remove and dispose of all courtyard concrete as indicated on plans, including curbs, seat walls, paving, rebar, plastic film and sand base. Protect building waterproofing and footings and existing utilities. Remove fountain equipment vault. Remove tree grates, and lighting and return to City.

Protect shade structure poles, lighting poles, key card entry posts and associated footings. Protect door-mats to remain if additive alternate is not accepted.

Protect utilities in place and/or adjust as required per sheet D1.50, L1.10 and Irrigation Plans. Maintain existing grades and drainage pattern.

PAYMENT

Payment for **BID ITEM NO. 7 – REMOVE COURTYARD CONCRETE, SEAT WALLS, CURBS, BASE** shall be at the contract price and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof, complete, including adjustment of utilities, complete, in place, and accepted.

BID ITEM NO. 8 – REMOVE FOUNTAINGENERAL

Remove and dispose of all concrete and tile. Return salvageable lights and boulders to City for reuse. Remove dedication plaque for reinstallation.

PAYMENT

Payment for **BID ITEM NO. 8 – REMOVE FOUNTAIN** shall be at the contract price and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 9 – REPAIR BUILDING WATERPROOFINGGENERAL

Test and repair existing building waterproofing at edge of courtyard per City standards and original plans

PAYMENT

Payment for **BID ITEM NO. 9 – REPAIR BUILDING WATERPROOFING** shall be at the contract bid item price and shall include full compensation for all labor, materials, tools, equipment, and incidentals necessary to do all the work involved thereof, including adjustment of utility covers, lids, and boxes to grade, complete, in place, and accepted.

BID ITEM NO. 10 – INTEGRAL COLOR COURTYARD CONCRETE PAVING

GENERAL

Install color concrete paving per plans. Note that 4' x 4' samples of each color in 2 retardant finishes are to be constructed on site for owner review prior to installation. Form patterns to be approved in field prior to installation.

Install per plans and specification sections 32 13 13 and 32 13 13.01, 32 13 13.02 and 32 13 13.03

PAYMENT

Payment for **BID ITEM NO. 10 – INTEGRAL COLOR CONCRETE COURTYARD PAVING** shall be at the contract bid item price per square foot (SF) price and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof complete, in place and accepted.

BID ITEM NO. 11 – STONE ACCENT PAVINGGENERAL

Install stone accent paving to align with curved stone wall element, according to plans and details. Note that that sample of stone paving is to be supplied on site for final review prior to purchase.

PAYMENT

Payment for **BID ITEM NO. 11 – STONE ACCENT PAVING** shall be at the contract bid item price per square foot (SF) price and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof, in place and accepted.

BID ITEM NO. 12 – STONE FOUNTAIN, BASIN AND CONNECTIONSGENERAL

Purchase and install Blue Thumb Ponds water feature kit per plans and specifications.

3 Basalt columns and 3 basalt stones to be selected by Landscape Architect. Total weight of stones not to exceed 2,000 lbs.

Connect pool autofill to irrigation mainline and drainage to existing sanitary sewer line per Utility layout, D1.50

PAYMENT

Payment for **BID ITEM NO. 12 – STONE FOUNTAIN, BASIN AND CONNECTIONS** shall be at the contract bid item lump sum (LS) price and shall include full compensation for all labor, materials, tools, equipment, transportation, and incidentals necessary to do all the work involved thereof, in place and accepted.

BID ITEM NO. 13 – FOUNTAIN STONES – 3" DEEP

GENERAL

Provide a 3" deep layer of fountain stones per plan. Submit sample for approval prior to purchase.

PAYMENT

Payment for **BID ITEM NO. 13 – FOUNTAIN STONES – 3" DEEP** shall be at the contract bid price per each (EA) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 14 – 60" ROUND TREE GRATESGENERAL

Purchase and install tree grates and frame per plans and details. Note that tree well uprights are to be installed in grates.

PAYMENT

Payment for **BID ITEM NO. 14 – 60" ROUND TREE GRATES** shall be at the contract bid price per each (EA) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEMS 15-18 LIGHTING AND ELECTRICAL RECONFIGURATION**BID ITEM NO. 15 – LED BOLLARD PATH LIGHTS****BID ITEM NO. 16 – TREE WELL UPLIGHTS****BID ITEM NO. 17 – LED UPLIGHTS****BID ITEM NO. 18 – LIGHTING AND ELECTRICAL RECONFIGURATION**GENERAL

Purchase and install LED bollard path lights, tree well uprights and LED uprights per plans. Reconfigure existing circuits to accommodate new lights and fountain pump. Licensed electrical contractor to submit shop drawings showing all electrical utility work.

PAYMENT

Payment for **BID ITEM NO. 15-18 – LIGHTING AND ELECTRICAL RECONFIGURATION** shall be at the contract bid price per each (EA) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 19 – DRIP IRRIGATIONGENERAL

Provide equipment as called out on plans and in specification 32 84 00, Irrigation. Preserve low

voltage wires to connect new irrigation valves to existing controller. Reroute existing mainline within project scope as needed to accommodate new layout.

Includes all work necessary to complete the irrigation system not otherwise spelled out in bid items.

PAYMENT

Payment for **BID ITEM NO. 19 – DRIP IRRIGATION** shall be at the lump sum contract bid price (LS) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 20 – SOIL TESTING, AMMENDMENT AND ROTOTILLING

GENERAL

Includes landscape earthwork, soil testing and soil preparation in planting areas as described in the plans and specifications.

PAYMENT

Payment for **BID ITEM NO. 20 – SOIL TESTING, AMMENDMENT AND ROTOTILLING** shall be at the contract bid price per square foot (SF) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 21 – WEED ABATEMENT

GENERAL

Provide for continuous removal of weeds in planting areas per specifications.

PAYMENT

Payment for **BID ITEM NO. 21 – WEED ABATEMENT** shall be at the contract bid price per square foot (SF) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEMS 22-27 PLANT MATERIALS

BID ITEM NO. 22 – TREES – 48” BOX

BID ITEM NO. 23 – BOX AND REPLANT 6 MINIATURE PALMS

BID ITEM NO. 24 – 15 GALLON SHRUBS

BID ITEM NO. 25 – 5 GALLON SHRUBS

BID ITEM NO. 26 – 1 GALLON SHRUBS

BID ITEM NO. 27 – SHREDDED WOOD MULCH

GENERAL

Landscape planting improvements per plans, details and specification section 32 93 00
Landscaping

PAYMENT

Payment for **BID ITEMS NO. 22-27 – PLANT MATERIALS**, shall be at the contract bid price per each (EA) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 28 – 90-DAY MAINTENANCE LANDSCAPE MAINTENANCE

GENERAL

Provide all operations necessary for the continuous care and upkeep of the landscape per specifications 32 93 00

PAYMENT

Payment for **BID ITEM NO. 28 – 90-DAY MAINTENANCE LANDSCAPE MAINTENANCE** shall be at the contract bid price per each (EA) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

BID ITEM NO. 29 – NEW SHADE SAILS

GENERAL

Install new shade sails on existing posts and building supports per sheet L1.40 of plans. Existing supports and engineering by Van Nuys Awning are approved for reuse in new configuration per plans. Contact Joe Eisenreich (818) 782-8607.

PAYMENT

Payment for **BID ITEM NO. 29 – NEW SHADE SAILS** shall be at the lump sum contract bid price (LS) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

The following item is a deletable item:

The contract will be awarded to the responsible contractor who submits the lowest Total Base Bid Amount (including the deletable items), with responsive bid proposal. The contract award amount by the City may or may not include the deletable items, based on available budget and priorities.

BID ITEM NO. 30 – REMOVE AND REPLACE DOOR GRATES

GENERAL

Remove and replace door grates in kind and in place per original 2001 plans. Drainage is to remain in place.

PAYMENT

Payment for **BID ITEM NO. 30 – REMOVE AND REPLACE DOOR GRATES** shall be at the contract bid price per each (EA) and shall include full compensation for all labor, materials, tools, equipment and incidentals necessary to do all the work involved thereof, complete, in place, and accepted.

TREE AND PLANT PROTECTION
SECTION 01 56 39

PART 1 - GENERAL**1.01 WORK INCLUDED**

- A. Provide labor, materials and protection devices necessary to assure that trees and plants that remain are protected in a healthy condition.

1.02 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Related Specification Sections:
Section 329300 - PLANTING

PART 2 - PRODUCTS**2.01 MATERIALS**

- A. Not used.

PART 3 - EXECUTION**3.01 GENERAL PROTECTION OF TREES AND PLANTS**

- A. All duff, mulch, chips, and leaves within the drip line of existing trees are to remain in place. Remove all foreign debris from within the protection zone.
- B. The Contractor shall exercise extreme care to preserve and protect existing trees from damage. Protect tops, trunks and roots of trees from damage as directed. Do not place materials, debris, earth, equipment, vehicles or temporary structures under spread of trees. Do not dump excess concrete, chemicals or other liquid wastes within 10 feet of drip line of trees. Do not operate vehicles or equipment within the spread of trees. If branch or root pruning is required, such pruning shall be performed under the direction of the Landscape Architect.
- C. Protective fencing: Erect a 5 foot high protection fence secured to heavy-gauge posts 8 feet on center along the construction side of each tree to remain, as identified on the plan. This protection fence is to be installed 5 feet outside the drip line of the tree, or if construction is to occur within the drip line, the fencing shall be installed 12 inches inside the new footing or trenching line. The fence shall be maintained upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.
- D. Where excavating, filling or grading is required within the branch spread of trees that are to remain, the work shall be performed as follows:
 - 1. When trenching occurs around trees to remain, the tree roots shall not be cut but the trench shall be tunneled under or around the roots by careful hand digging and without injury to the roots. After clearly identifying the extent of required root pruning, if any, said pruning shall be performed under the direction of the Landscape Architect.
 - 2. Grade changes, including adding fill, are not permitted within the tree protection zone.

- E. Notify the Owner and Landscape Architect in advance of any condition that requires vehicles or equipment to operate within the spread of trees. The Owner and Landscape Architect will advise the Contractor of protective measures such as fencing or planking, which must be followed to avoid damage to root, trunk and branch structures where contract work must be performed in the vicinity of trees. The Contractor will be responsible for replacing existing trees, in size, that are damaged as a result of work under this contract.
- F. In the case that is deemed by the Owner and the Landscape Architect that irreparable damage is done to any tree or trees, their value shall be determined in accordance with the International Society of Arboriculture "Guide for Plant Appraisal", current edition.

3.02 CLEAN UP

- A. At the end of each workday enclose or barricade the work area, tools, equipment and supplies as necessary to ensure safety. Daily and upon completion of the work, remove from the site and adjacent streets all surplus materials, tools, equipment, debris or refuse and excess dirt resulting from the work in this Section. Sweep clean all walks and paving.

END SECTION 01 56 39

**SECTION 31 10 00
SITE CLEARING****PART 1 - GENERAL****1.1 WORK INCLUDED**

- A. Clearing and removal of existing structures, paving and vegetative growth as identified on the Demolition Drawings.
- B. Stockpile topsoil for reuse.
- C. Stripping shall include the removal of all organic sod, topsoil, grass and grass roots, all evidence of surface improvements and other objectionable material remaining after clearing and grubbing from the areas designated to be stripped.

1.2 RELATED DOCUMENTS

- B. Related Specification Sections:

Section 01 56 39 – TREE AND PLANT PROTECTION

Section 32 90 00 - PLANTING

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. NOT USED

PART 3 - EXECUTION**3.1 INSPECTION**

- B. Verify existing grades and site conditions, and advise the Landscape Architect of any irregularities affecting the work of this Section.
- C. Beginning the work of this Section constitutes acceptance of existing conditions.

3.2 PROTECTION

- A. Protect survey bench marks, grade and layout stakes and existing work from damage or displacement.
- B. Maintain designated site access for vehicle and pedestrian traffic.
- C. The Contractor shall be responsible for the protection of tops, trunks and roots of existing trees on the project site that are to remain. Existing trees subject to construction damage shall be boxed and relocated, fenced or otherwise protected before any work is started. Review specific requirements with the Landscape Architect. Do not permit any equipment or material stockpiles within the branch spread. Any required branch or root pruning shall be as specified herein and in the Planting Section of these Specifications.

- D. When trenching occurs around trees to remain, the tree roots shall not be cut but the trench shall be tunneled under or around the roots by careful hand digging and without injury to the roots.
- E. Trees marked for preservation that are located more than 6 in. above proposed grades shall stand on broad rounded mounds and be graded smoothly into the lower level. Exposed or broken roots shall be cut cleanly at grade, with shallow backfill placed over them.
- F. Existing trees in areas where the new finish grade is to be lowered, shall have re-grading work done by hand to the elevation as indicated. Roots shall be cleanly cut as required 3 in. below finish grade.

3.3 MATERIAL REMOVALS

- A. Clearing shall consist of the removal and disposal of structures, paving, fences, walls, vegetative growth, debris and other items identified on the Demolition Drawings.
- B. Trees, shrubs and ground covers indicated to be preserved are to be carefully protected and maintained.
- C. Tree removal shall include all branches, leaves, roots and entire stump.
- D. Stripping shall include the removal of all ground covers, weeds, grass, roots, and other objectionable material remaining after clearing and grubbing from the areas designated to be stripped.
- E. Fill and compact holes resulting from removals in accordance with the Earthwork and Planting sections of these Specifications.

3.4 MATERIAL DISPOSAL

- A. Remove waste materials, including unacceptable excavated material, surplus topsoil, trash, deleterious materials, debris and all other materials generated from site demolition and dispose of legally off-site.
- B. Leave material stockpile areas completely free of excess materials.

3.5 CLEAN UP

- A. At the end of each workday enclose or barricade the work area, tools, equipment and supplies as necessary to ensure safety. Daily and upon completion of the work, remove from the site and adjacent streets all surplus materials, tools, equipment, debris or refuse and excess dirt resulting from the work in this Section. Sweep clean all walks and paving.

END OF SECTION 31 10 00

**SECTION 32 13 13
CONCRETE PAVING****PART 1 – GENERAL****1.1 SUMMARY**

- A. This section includes exterior cement concrete for walkways.

1.2 RELATED SECTIONS

- A. Section 32 13 13.01 Sitework Concrete Reinforcement.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated, including admixtures.
- B. Design Mixtures: For each concrete pavement mixture.

1.3 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents..
- C. All work to be performed and materials to be used shall be in accordance with the Standard Specifications for Public Works Construction (SSWPC), latest edition and supplements.
- D. The Contractor shall have one copy of the Standard Specifications at the job site.
- E. The Standard Specifications apply only to performance and materials and how they are to be incorporated into the Work. The legal/contractual relationship sections and the measurement and pavement sections do not apply to this document.

PART 2 - PRODUCTS**2.1 STEEL REINFORCEMENT**

- A. Plain-Steel Welded Wire Reinforcement: ASTM A 185, fabricated from as-drawn steel wire into flat sheets.
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.
- C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice."

2.2 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source throughout the Project:
 - 1. Portland Cement: ASTM C 150, Type II, low alkali. Supplement with the following:

Pozzolan: ASTM C 618, Class F or N Fly Ash, 100 pounds maximum per cubic yard, containing one percent or less carbon. Fly ash shall not be used in excess of 15 percent by weight of total cement quantity.
- B. Combined Aggregates: Gradation "C" conforming to SSPWC Section 201-1.3.2.

2.3 CURING MATERIALS

- A. Liquid Curing Compound: ASTM C309, fugitive dye dissipating type, complying with Rule II 13 of the South Coast Air Quality Management District and Federal Air Quality Regulation 40 CFR 52.254.
- B. Moisture-Retaining Cover (Curing Sheet): ASTM C 171, non-staining polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.
- D. Evaporation Retarder: Waterborne, monomolecular film forming; manufactured for application to fresh concrete.

2.4 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
- B. Slip-Resistive Aggregate Finish: Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery with emery aggregate containing not less than 50 percent aluminum oxide and not less than 20 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.
- C. Pavement-Marking Paint: Latex, waterborne emulsion, lead and chromate free, ready mixed, complying with FS TT-P-1952, with drying time of less than 45 minutes. Color as indicated.

2.5 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, with the following properties:
 - 1. Compressive Strength (28 days): 2500 psi
 - 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.60
 - 3. Slump Limit: 4 inches, plus or minus 1 inch.

2.6 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates to Inspector for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 PREPARATION

- A. The Contractor will obtain a soil report for the areas to be paved, targeting the compactability and structural capacity of the soil to support the intended use. The Contractor shall comply with the recommendations of the report when preparing the paving subbase.

3.2 EXAMINATION

- A. Proof-roll prepared subbase surface below concrete pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.

3.5 JOINTS

- A. General: Form construction, isolation, and control joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
- D. Control Joints: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least one-fourth of the concrete thickness to match jointing of existing adjacent concrete pavement..

- E. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

- A. Moisten subbase to provide a uniform dampened condition at time concrete is placed.
- B. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- D. Screed pavement surfaces with a straightedge and strike off.
- E. Commence initial floating using bull floats or darbies to impart an open textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats, or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Medium-to-Fine-Textured Broom Finish: Draw a soft bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.
- C. Slip-Resistive Aggregate Finish: Before final floating, spread slip-resistive aggregate finish on pavement surface according to manufacturer's written instructions.
 - 1. Cure concrete with curing compound recommended by slip-resistive aggregate manufacturer. Apply curing compound immediately after final finishing.
 - 2. After curing, lightly work surface with a steel wire brush or abrasive stone and water to expose nonslip aggregate.

3.8 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturers written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, moisture-retaining-cover curing, curing compound or a combination of these methods.

3.9 PAVEMENT TOLERANCES

- A. Comply with tolerances as follows:
 - 1. Elevation: $\frac{1}{4}$ inch
 - 2. Thickness: Plus $\frac{3}{8}$ inch minus $\frac{1}{4}$ inch
 - 3. Surface: Gap below 10-foot-long, unleveled straightedge not to exceed $\frac{1}{4}$ inch.

3.10 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with the Owner.
- B. Allow concrete pavement to cure for 28 days and be dry before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply paint with mechanical equipment to produce pavement markings of dimensions indicated with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils..

3.11 REPAIRS AND PROTECTION

- A. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.
- B. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement.
- C. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 32 13 13

**SECTION 32 13 13.01
SITWORK CONCRETE FORMS**

PART 1 - GENERAL**1.01 WORK INCLUDED**

- A. The design and construction of formwork for concrete.
- B. The setting in forms of all anchor bolts, metal inserts, sleeves, etc., embedded in concrete.
- C. Miscellaneous concrete work, including but not limited to cast-in-place boxes, equipment bases, and other items as shown and as required to complete the Work.

1.02 RELATED SECTIONS

- A. Section 32 13 13 – Sitework Cast-in-Place Concrete
- B. Section 32 13 13.02 – Sitework Concrete Reinforcement
- C. Section 32 13 13.03 – Sitework Concrete Finishes

1.03 QUALITY ASSURANCE

- A. Construct form according to ACI 347 "Recommended Practice for Concrete Formwork", as applicable, unless exceeded by requirements of regulatory agencies or otherwise indicated or specified.

1.04 SUBMITTALS

- A. Submit shop drawings showing form pattern layouts of all exposed concrete walls, dimensioned to precisely locate grooves, form panel jointing and similar features. Review and approval will not include form strength and adequacy.

1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials in a timely manner to ensure uninterrupted progress of the Work. Sort materials by methods that prevent damage and permit ready access for inspection and identification.

PART 2 - PRODUCTS**2.01 MATERIALS**

Furnish materials conforming to the following requirements:

- A. Form lumber shall be WWPA No. 1 or better, or equal.
- B. Form plywood shall be PS 1-83, Group 1, Exterior Grade B-B Plyform or better, minimum 5-ply and 3/4 in. thick for exposed locations and not less than 5/8 in. thick for unexposed locations, grade marked, not mill oiled. Plywood having high density overlay shall be used for retaining walls, and medium or high density overlay is acceptable for other concrete surfaces.
- C. Form ties shall be prefabricated rod flat band wire, internally threaded disconnecting type, or equal, not leaving metal within 1-1/2 in. of concrete surface.
- D. Forms for curbs, gutters, swales and similar shall be wood, steel or other material or size and strength to resist displacement during concrete placement. Use flexible spring steel forms or laminated boards to form radius bends.
- E. Form coating shall be a clear coating free from oil, silicone, wax, and not grain-raising, "Formshield" by A. C. Horn, Inc., or equal. Where form liners are used, provide coating as recommended by the form liner manufacturer.

PART 3 - EXECUTION

3.01 WORKMANSHIP

- A. Rigidly construct forms to prevent mortar leakage, sagging, displacement or bulging between studs. Use clean, sound, approved form material, coated with specific materials only, not oil. Provide backing on all plywood joints. Sides of all footings shall be formed, unless permission is obtained to place concrete directly against earth. Where this permission is granted, the footing dimension shall be increased 3 in. Remove formwork prior to backfilling operations.

3.02 FORM ERECTION AND REMOVAL

- A. Coat forms with the specified resin coating, not form oil. Construct forms to exact shapes, sizes, lines, and dimensions required to obtain level, plumb, and straight surfaces. Provide openings, offset, keys, anchorages, recesses, chamfers, blocking, and all other required features. Make forms easily removable without hammering or prying against concrete. Space forms apart with metal spreaders. Construct forms to accurate alignment, location and grades, and provide against sagging, leakage of concrete mortar, or displacement occurring during and placing of concrete. Coordinate installation of inserts and anchors in forms according to Shop Drawings and requirements for work of other sections.
- B. Provide 3/4 in. by 3/4 in. beveled chamfer strips for all exposed concrete corners and angles unless otherwise indicated. Form concealed concrete corners and angles square unless otherwise indicated.
- C. Fill joints to produce smooth surfaces, intersections, and arrises. Use polymer foam or equivalent fillers at joints and where forms abut or overlap existing concrete to prevent leakage of mortar.
- D. Locate form ties in the pattern as directed for retaining walls and other exposed concrete.
- E. Provide temporary openings in all wall forms and other vertical forms for cleaning and inspection. Clean forms and surfaces to receive concrete prior to placing.
- F. Clean and recondition form material before reuse.
- G. Do not remove concrete forms until the concrete attains sufficient strength to support its own weight and all superimposed loads. Leave all bottom forms in place until concrete has attained at least 66% of required strength, but not less than 10 days.

3.03 FORMWORK TOLERANCES

- A. Position formwork to maintain hardened concrete finish line within following permissible deviations.
 - 1. Maximum variation from plumb shall be 1/3 in. in 10 ft., and 3/4 in. in 40 ft. or more.
 - 2. Maximum variation from level or grades indicated shall be 1/4 in. in 10 ft., and 3/4 in. in 40 ft. or more
 - 3. Maximum cross sectional dimension variation shall be minus 1/4 in., and plus 1/2 in.

3.04 CLEAN UP

- A. At the end of each workday enclose or barricade the work area, tools, equipment and supplies as necessary to ensure safety. Daily and upon completion of the work, remove from the site and adjacent streets all surplus materials, tools, equipment, debris or refuse and excess dirt resulting from the work in this Section. Sweep clean all walks and paving.

END OF SECTION 32 13 13.01

**SECTION 32 13 13.02
SITWORK CONCRETE REINFORCEMENT**

PART 1 - GENERAL**1.01 WORK INCLUDED**

- D. Reinforcing bars and welded steel wire fabric for cast-in-place concrete.
- E. Reinforcing for miscellaneous concrete work, including but not limited to cast-in-place boxes, equipment bases, and other items as shown or required to complete all Work.

1.02 RELATED SECTIONS

- D. Section 32 13 13 – Sitework Cast-in-Place Concrete
- E. Section 32 13 13.01 – Sitework Concrete Forms
- F. Section 32 13 13.03 – Sitework Concrete Finishes

1.03 QUALITY ASSURANCE

- B. Reinforcing bars are to be obtained from bundles as delivered from the mill, identified as to heat number, accompanied by mill analyses and mill test reports, and properly tagged with an identification certificate so as to be readily identified. Submit mill reports as requested, when samples are selected.

1.04 SUBMITTALS

- A. Submittals shall include complete layout, sections, and details for congested conditions, typical bending diagrams and offsets, splice lengths and locations, and the proposed layout where vertical and horizontal bars intersect, detailed to conform to AWS and code requirements. After approval of the initial submission, subsequent submittals may be waived.

1.05 MARKING AND SHIPPING

- A. Bundle bars, tag with identification, and transport and store so as not to damage any material. Keep a sufficient supply of tested and approved bars at site to avoid delays.

PART 2 - PRODUCTS**2.01 MATERIALS**

- F. Reinforcing bars conforming to ASTM A615, Grade 60 for No. 5 and larger, Grade 40 for No. 4 and smaller, unless otherwise indicated on the Drawings.
- G. Welded steel wire fabric conforming to ASTM A185, plain type in coiled roll, un-coated finish.
- H. Tie wire conforming to ASTM A82, annealed copper-bearing steel, 16 gauge minimum.

2.02 FABRICATION OF REINFORCING BARS

- A. Fabricate bars of the indicated sizes and bend and form to the required shapes and lengths by methods not injurious to materials. Do not heat reinforcement for bending. Bend bars No. 6 and larger in the shop only. Bars with unscheduled kinks or bends are subject to rejection. Use only tested and approved bar materials.

PART 3 - EXECUTION

3.01 INSTALLATION OF REINFORCING

- A. Before placing bars, and again before concrete is placed, clean bars of loose mill scale, oil, or any other coating that might destroy or reduce the bond.
- B. Accurately place bars and wire ties in the precise positions where the bars cross. Bend ends of wire ties sway from the forms. Wire tie bars to corners of ties and stirrups. Support bars according to the current edition of "Recommended Practice for Placing Bar Supports" of the Concrete Reinforcing Steel Institute, using approved accessories and chairs. Place precast concrete cubes with embedded wire ties to support reinforcing steel bars in concrete placed on grade and in footings.
- C. Provide stainless steel or exterior quality vinyl plastic tipped chairs, bolsters and accessories where exposed on exterior or interior concrete surfaces not to be painted or permanently covered.
- D. Maintain minimum clear distances between reinforcing bars and face of concrete as indicated or directed.
- E. Do not splice reinforcing bars at the points of maximum stress except where indicated. Lap splices as shown or required to develop the full strength or stress of bars. Stagger splices in horizontal wall bars at least 48 in. longitudinally in alternate bars and opposite faces.
- F. Take adequate precautions to assure that the reinforcing position and spacing is maintained during placement of concrete.
- G. Splice devices shall be of the type and manufacture noted on the Drawings. If a substitution is requested, the Contractor is to supply manufacturer's calculations and supporting data showing that the proposed substitution conforms to the requirements indicated and supplied.
- H. Splice in a manner developing at least 125% of the yielding strength of the bar.

3.02 FIELD QUALITY CONTROL

- A. Obtain inspection and approval of reinforcing before concrete is placed.

3.03 CLEAN UP

- A. At the end of each workday enclose or barricade the work area, tools, equipment and supplies as necessary to ensure safety. Daily and upon completion of the work, remove from the site and adjacent streets all surplus materials, tools, equipment, debris or refuse and excess dirt resulting from the work in this Section. Sweep clean all walks and paving.

END OF SECTION 32 13 13.02

**SECTION 32 13 13.03
SITEWORK CONCRETE FINISHES**

PART 1 - GENERAL**1.01 WORK INCLUDED**

- A. Finishing of exposed formed concrete retaining walls and other exterior exposed concrete.
- B. Final slab finishing and curing.

1.02 RELATED SECTIONS

- G. Section 32 13 13 – Sitework Cast-in-Place Concrete
- H. Section 32 13 13.01 – Sitework Concrete Forms
- I. Section 32 13 13.02 – Sitework Concrete Reinforcement

1.03 QUALITY ASSURANCE

- A. All materials shall comply with the current rules and regulations of the South Coast Air Quality Management District and with the FDA rules and regulations for dangerous substances in construction products, and volatile organic compounds.

1.04 SUBMITTALS

- A. Prepare the following samples at the site, cast in the directed locations and orientations. prepare as many samples of each type of concrete as are required for approval. Remove samples from the site when no longer needed and removal is approved. Approved samples may be part of permanent construction if meeting all other requirements shown and specified and are so approved. Use form and concrete materials previously approved under Sections 32 13 13 and 32 13 13.01.
 - 1. Construct and finish a section of the planter walls in the location as directed. Sample section shall be 6 ft. long, full height, and shall include one joint and one corner. Cure and apply the required finish. Demonstrate methods to be used to produce acceptable repairs, filling of tie holes, and finishing.
 - 2. Prepare minimum 4 ft. square samples of each required slab finish. Include color, transverse expansion joints, scoring, and edging.
 - 3. Prepare minimum 4 ft. long samples of each curb and gutter profile, with finish as specified

PART 2 - PRODUCTS**2.01 MATERIALS**

- I. Liquid curing compound shall conform to ASTM C309, Master Builders "Mastercure W", or equal, clear.
- J. Curing-sealer-hardener shall conform to ASTM C309, Curecrete Chemical Company, Inc., "Ashford Formula", or equal, applied and warranted as specified herein.
- C. Color admix shall be by L. M. Scofield Co., "Chromix", "Davis" or equal.

PART 3 - EXECUTION**3.01 FINISHING EXPOSED FORMED CONCRETE**

- A. Surface patching and initial curing of formed concrete are specified in Section 03 30 00. Rub surfaces with a carborundum brick or equal until smooth and free of form marks, offsets, and other defects, and in uniform planes. Wet rubbed surface and then brush coat with cement grout consisting of one part light-colored Portland cement to two parts fine aggregate and mixed with water to the consistency of thick paint. Cork or wood float grout to fill all pits, air bubbles, and surface holes. Scrape off excess grout and rub surface with burlap or equal to remove all grout film. After grout sets, again coat with same grout, cure, then brick and burlap rub as necessary to eliminate remaining defects and blemishes, and damp cure surfaces for not less than three days or longer if required for complete curing of concrete. Finish, clean, and cure each surface as a continuous operation. Produce uniformly plane, smooth surfaces free of grout film, grout or rubbing marks, defects, or blemishes, after painting or covering with a flexible type finish material. Unless otherwise indicated or specified, apply this finish on exposed concrete.

3.02 SLAB FINISHES

- B. Produce finish slab surfaces level or sloped as shown with a maximum deviation of 1/8 in. from a 10 ft. straightedge. Keep surface moist with a fine fog spray of water as necessary. Dusting with dry cement or sand during finishing operations is not permitted. Finish all slab edges and joints with an edging tool. Match the approved sample slab. Apply the following finishes as indicated, specified, directed, and applicable.
- C. After initial set, coarse broom slab surfaces and expose coarse aggregate. Apply on slabs to receive sand beds for pavers, and as the first layer of double poured slabs.
- D. For slab and flatwork surfaces not indicated or specified to receive another finish, apply a monolithic trowel finish. After surface water disappears and floated surfaces are adequately hardened, steel trowel and retrowel concrete to a smooth surface. After concrete has set sufficiently to ring the steel trowel, retrowel twice to a smooth uniform finish free of trowel marks and blemishes. Avoid excessive retroweling that produces burnished areas.
- E. Provide integrally-colored concrete for the surfaces as indicated on the Construction Plans and Details.
- F. Broom finish shall be the same as for monolithic steel trowel finish, less the second retroweling. When ready, apply approved coarse texture finish by sliding a wire or stiff bristle broom in one direction along a straightedge guide set at right angles to the direction of traffic. At walking areas, smooth finish 1 in. wide at edges, expansion joints, and scoring. Texture of brooms shall be as directed, note that more than one texture may be required.
- G. Provide "Topcast" surface retardant finish on slabs where indicated on the Construction Plans and Details.
- H. Sandblast finish shall be applied to surfaces where indicated on the Construction Plans and Details. Employ only skilled and experienced sandblast finishing mechanics to perform finishing. Finish concrete surfaces at the same age after casting. Produce finished surfaces of uniform texture and appearance, matching approved samples. Sandblast concrete surfaces with a medium finish, the surface sandblasted from 1/8 in. to a nominal 3/16 in. depth exposing only small areas of individual coarse aggregate particles in a uniform distribution.
- I. Provide scoring where shown or directed, using tools of approved size and profile. Run score lines straight and of uniform appearance. If scoring is not indicated, request instructions from the Landscape Architect not less than 14 days before slab concrete is placed.

3.03 SLAB CURING

- A. Promptly apply curing media as soon as finishing is complete, without marring surfaces, and in any case on the same day. Apply liquid compound in accordance with the manufacturer's published application rates; apply two spray coats, with second coat at right angle to first coat. Cover adjoining surfaces. Equip spray nozzles with a windshield suitable for wind conditions.
- B. Maintain all curing media intact and sealed for 10 days minimum after application. Keep foot traffic on the curing surfaces to the minimum possible, and completely off liquid compound cured surfaces. Vehicular traffic is not permitted on the surfaces until curing is completed. Immediately restore all damaged or defective curing media.
- C. Use liquid membrane-forming curing compound on exterior slabs, curbs, gutters, walks and paving. Use neutral or black colored compound on colored concrete.
- D. Use the specified curing sheet material. Seal all laps and edges with plastic pressure-sensitive tape, and immediately repair tears during the curing period. Verify that surfaces remain damp for the full curing period; if necessary, lift sheet, wet surfaces with clean water, then replace and reseal the sheeting. Use on surfaces where curing compound is not permitted.
- E. Water curing shall be an option to either a liquid membrane-forming curing compound or sheet curing method. Keep the concrete continuously wet for the entire curing period.

3.04 CLEAN UP

- A. At the end of each workday enclose or barricade the work area, tools, equipment and supplies as necessary to ensure safety. Daily and upon completion of the work, remove from the site and adjacent streets all surplus materials, tools, equipment, debris or refuse and excess dirt resulting from the work in this Section. Sweep clean all walks and paving.

END OF SECTION 32 13 13.03

**SECTION 32 84 00
LANDSCAPE IRRIGATION SYSTEM**

1.00 GENERAL**1.01 DESCRIPTION:**

Division 1 applies to this Section. Provide all labor, materials, appliances, tools, equipment, facilities, transportation, and services necessary for and incidental to performing all operations in connection with furnishing, delivery, and installation of the Work of this Section, complete as shown on the Drawings and/or specified herein.

Work In This Section: Principal items include:

1. Irrigation mains.
2. Laterals.
3. Sprinkler heads.
4. Control valves.
5. Coupler valves, etc.
6. Automatic controllers.
7. 90-Day maintenance period.

Related Work Not In This Section: Examine all Sections for Work related to Work of this Section; principal items of which are:

1. Planting - refer to Section 32 93 00
2. Landscape Maintenance - refer to Section 32 93 90

Definition: The word Architect as used herein shall refer to the Landscape Architect or the Owner.

1.02 QUALITY ASSURANCE AND REQUIREMENTS:

- A. **Permits and Fees:** Contractor shall obtain and pay for any and all permits and all inspections as required.
- B. **Manufacturer's Directions:** The manufacturer's directions and detailed 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:** 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 these Specifications and Drawings shall take precedence.
- D. **Explanation of Drawings:**
 1. Due to the scale of the Drawings, it is not possible to indicate all offsets, fittings, sleeves, etc. which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of his Work and plan his Work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are diagrammatic and indicative of the Work to be

installed. The Work shall be installed in such a manner as to avoid conflicts between Irrigation systems, planting, and architectural features.

2. All Work called for on the Drawings by notes or details shall be furnished and installed whether or not specifically mentioned in Specifications.
 3. Contractor shall not willfully install the irrigation system as shown on the Drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Owner's authorized representative. In the event this notification is not performed, Contractor shall assume full responsibility for any revision necessary.
 4. Work of this Section which is allied with the Work of other trades shall be coordinated as necessary.
- E. Underwriters Laboratories: Electrical wiring, controls, motors, and devices shall be UL listed and so labeled.

1.04 SUBMITTALS: Refer to Section 1 for procedures.

A. (SD-60) Materials List:

1. The Contractor shall furnish the articles, equipment, materials, or processes specified by name in Drawings and Specifications. No substitutions will be allowed without prior written acceptance by the Architect.
2. Complete material list shall be submitted prior to performing any Work. Material list shall include 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 Architect may be rejected and the Contractor required removing such materials from the site at his own expense.
4. Approval of any item, alternate, or substitute indicated only that the product or products apparently meet the requirements of the Drawings and Specifications of the basis of the information or samples submitted.
5. Manufacturer's warranties shall not relieve Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.
6. If equipment is as specified, no manufacturer descriptive catalogs are necessary in submittal.

B. Landscape Record Drawings

1. Contractor shall provide and keep up to date and complete "as-built" record set of black line Xerox prints or CAD files which shall be corrected daily and shown every change from the original Drawings and Specifications and exact "as-built" locations, sizes, and kinds of equipment. Prints for these purposes may be obtained from the Architect at cost. This set of Drawings shall be kept on the site and shall be used only as a record set.

2. These Drawings shall also serve as Work progress sheets and shall be the basis for measurement and payment for Work completed. These Drawings shall be available at all times for site reviews and shall be kept in a location designated by the Architect. Should the record drawings or CAD file as-built progress sheets not be available for review or not up to date at the time of any site reviews, it will be assumed that no Work has been completed and the Contractor will be assessed the cost of that site visit at the current billing rate of the Architect. No other inspections shall take place prior to payment of that assessment.
3. The Contractor shall make neat and legible notations on the as-built progress sheets daily as Work proceeds, showing the Work as actually installed. For example, should a piece of equipment be installed in a location that does not match the plan, the Contractor must indicate that equipment has been relocated in a graphic manner so as to match the original symbols as indicated in the irrigation legend. The relocated equipment and dimensions will then be transferred to the original as built plan at the proper time.
4. Before the date of the final site review, Contractor shall create a transparency or CAD drawing showing all information from the as-built prints. The dimensions shall be made so as to be easily readable even on the final controller chart (See section C below).
5. The Contractor shall dimension from two permanent points of reference, building corners, sidewalk, or road intersections, etc., the location of the following items:
 - a. Connection to existing water lines.
 - b. Connection to existing electrical power.
 - c. Gate valves.
 - d. Routing of sprinkler pressure lines. (Dimension max. 100' along routing.)
 - e. Sprinkler control valves.
 - f. Routing of control wiring.
 - g. Quick coupling valves.
 - h. Other related equipment as directed by the Architect.
6. On or before the date of the final site review, the Contractor shall deliver the corrected and completed transparencies or CAD drawings to the Architect. Delivery will not relieve the Contractor of the responsibility of furnishing required information that may be omitted from the Drawings.

C. Controller Charts:

1. Record Drawings shall be approved by the Architect before controller charts are prepared.
2. Provide one controller chart for each controller supplied.
3. The chart shall show the area controlled by the automatic controller and shall be the maximum size which the controller door will allow.
4. The chart is to be a reduced drawing of the actual as-built system, of a maximum size that will fit inside controller housing, double sided if required for readability.

5. The chart shall be a blackline print and a different color shall be used to indicate area of coverage for each station, using pastel or transparent colors.
6. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils.
7. These charts shall be completed and approved prior to final acceptance of the irrigation system.

D. Operation and Maintenance Manuals:

1. Prepare and deliver to the Architect within 10 calendar days prior to completion of construction, two hard cover binders with three rings containing the following information:
 - a. Index sheets stating Contractor's address and telephone number, list of equipment with name and addresses of local manufacturer's representative.
 - b. Catalog and part sheets on all materials and equipment installed under this Contract.
 - c. Guarantee statement.
 - d. Complete operating and maintenance instruction on all major equipment.
2. In addition to the above mentioned maintenance manuals, provide the Owner's maintenance personnel with instructions for major equipment, and show evidence in writing to the Architect at the conclusion of the project that this service has been rendered.

E. Equipment to Be Furnished:

1. At time of final acceptance, Irrigation Contractor shall deliver to the City:
 - a. Two keys for opening valve boxes.
 - b. Two keys for each automatic controller.
 - c. Hose and Swivel Assemblies: Supply one (1) set of hose and swivel assemblies for every five (5) quick coupling valves installed.
 - d. Two special wrenches suitable for operating each type of shut-off valve installed.
 - e. Operating instructions and parts lists, as printed by each manufacturer of each type of equipment installed. Refer to "Material" section of the specifications and legend on the drawings.
 - f. List of equipment with names and addresses of local manufacturer representatives.
 - g. "As-built" drawings and controller charts.
2. The above mentioned equipment shall be turned over to the Owner at the conclusion of the project. Before final acceptance can occur, evidence that the Owner has received material must be shown to Architect.

1.05 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. 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 shall be replaced with new piping.

1.06 SUBSTITUTIONS:

- A. Substitutions: If the Irrigation Contractor wishes to substitute any equipment or materials for those equipment or materials listed on the Irrigation Drawings and Specifications, he may do so by providing the following information to the Architect for approval, in conformance with Section 01340:
1. Provide a statement indicating the reason for making the substitution. Use a separate sheet of paper for each item to be substituted.
 2. Provide descriptive catalog literature, performance charts and flow charts for each item to be substituted.
 3. Provide the amount of cost savings if the substituted item is approved.
 4. Approval of any item as a substitution or alternate is for design only, based on information or samples provided by the Contractor.
 5. Contractor shall be responsible for the total performance of such substitution to equal or surpass the original in every respect.
 6. If the substitution proves to be unsatisfactory in the opinion of the Architect, Contractor shall remove such Work and replace it with originally specified item, including installation as part of the Work of this Section.
- B. Architect Responsibility: Architect shall have the sole responsibility for accepting or rejecting any substituted item as approved equal to equipment and materials listed on the Irrigation Drawings and Specifications.

1.06 GUARANTEE:

- A. The one (1) year guarantee for irrigation system shall be made in accordance with Section 01700. A copy of the guarantee form shall be included in the operations and maintenance manual.

2.00 PRODUCTS

2.01 MATERIALS:

- A. Materials for irrigation installation shall be new materials and as specified unless specifically approved in writing by the Owner's representative as equal products. They shall conform to provisions of the Drawings and Specifications.
- B. Pipe & Fittings:
1. Pressure Main Line Piping and Fittings: Sizes 2-1/2" and smaller shall be Schedule 40 PVC, on surface Schedule 40 galvanized pipe and fittings.

2. Non-Pressure Lines (buried): Shall be PVC Schedule 40.
3. Plastic fitting shall be the schedule of pipe being fitted (Sch. 40 and 80), PVC II, N.S.F. rated. Plastic fitting shall be polyvinyl chloride (PVC) high impact, extruded from B.F. Goodrich Geon 8700 A similar and equal to Lasco Industries, Sloane Mfg. Co., or equal, and PVC solvent weld cement as recommended by pipe manufacturers.
4. All pipe and fittings shall conform to specific requirements as follows:
 - a. PVC (Solvent Weld):
 - (i) Pipe: Manufactured from virgin polyvinyl chloride compound in accordance with ASTM D 1785 or ASTM D 2241, cell classification 12454B, and hydrostatic design stress rating not less than 2,000 P.S.I.
 - (ii) Fittings (Solvent weld or thread) Standard weight, Schedule 40, side gated, injection molded PVC complying with ASTM D 2466, cell classification 12454B, including threads when required.
 - (iii) PVC nipples shall be Schedule 80 with machine threads.
 - (iv) All PVC pipe must be labeled with the following markings:
 - (a) Manufacturer's name.
 - (b) Nominal pipe size.
 - (c) Schedule or class.
 - (d) Pressure rating in A.S.T. (Not required on drip tubing).
 - (e) NSF National Sanitation Foundation) approval (Not required on drip tubing).
 - (f) Date of extrusion.
 - (v) Solvent cement and primer for PVC solvent-weld pipe and fittings shall be of type and installation method prescribed by the manufacturer.
 - (vi) Galvanized Pipe and Fittings:
 - (a) Pipe shall be galvanized steel, American National Standard Institute (ANSI), Schedule 40 galvanized, mild steel screwed pipe.
 - (b) Fittings: Screwed beaded malleable iron, or 125 pound cast iron, flanged.
 - (c) Unions (2" and Smaller): Ground joint pattern.
 - (d) Unions (Larger Than 2"): Flanged type, packed with 1/16" thick fiber gaskets.
- C. Quick Coupling Valves: Valves shall be as shown in legend and details.
- D. Hose and Swivel Assemblies: Supply 1 set of hose and swivel assemblies for every 5 quick coupling valves.
- E. Sprinkler Heads: Heads shall be of the adjustable type, sizes, and designations as shown on Drawings, or equal, and shall be sized, selected, and placed in a manner to achieve complete water coverage of areas to be watered.
- F. Gate Valves: Valves shall be as shown in the legend and details.

- G. Gate Valve Boxes: Boxes shall be round plastic valve boxes with locking covers, manufactured by Brooks or Carson or equal, and shall be of size and type as called out on the Drawings and in the details.
- H. Remote Controller and Valves: Shall be as indicated in the legend and on the drawings.
- I. Boxes For Remote Control Valves: Boxes shall be rectangular plastic boxes with locking covers, manufactured by Brooks or Carson or equal.
- J. Sleeving: Contractor to install sleeving for all irrigation as shown on the drawings. Sleeves are sized 3", 4" and 6" Schedule 80 PVC
- K. Electrical:
 - 1. High Voltage: All high voltage electrical service required for automatic controller and other equipment noted on Drawing for irrigation system will be provided by Utility. Irrigation Contractor shall be responsible for final connection.
 - 2. Low Voltage: Connections between controller and remote control valves shall be made with direct burial AWG-UF, 600 volt wire, insulation thickness 3/64", utilizing low density high molecular weight polyethylene insulation. Splices, where permitted, shall be waterproofed using Rainbird, Pen-tite, or 3M-DBY connectors or fusible heat shrinking tubing and housed in a box. Boxes for other irrigation may be utilized for this purpose. Wire sizing shall be a minimum of #14 "UF. 600 volt underground wiring. Common wire is to be white in color, and all others a different color.
- L. Copper Pipe and Copper Fittings: Pipe and fittings shall be provided wherever local codes require its use, as for example under building slabs and attached to parking structure roofs.

3.00 EXECUTION

3.01 WORK PROCEDURES:

- A. Contractor shall follow local building codes, customary practices and as follows:
- B. General: The Contractor shall connect to existing water supply as shown on the Drawings and as necessary to carry out the intent of the Drawings and Specifications. Check location of lines, valves, other underground utilities, etc., and receive approval of Owner's representative before any installation. The Contractor shall check and verify existing water pressure and available gallonage before starting Work and shall inform the Architect if not adequate as designed.
- C. Trenches, Subgrades, and Backfill: Excavate trenches, prepare subgrades and backfill true to line and grade with sufficient room for pipe fittings, testing, and inspection operations. Cut bottom of trench so that pipe barrel rests uniformly on trench bottom. Do not backfill until pipe system has been subjected to a hydrostatic test as specified.
- D. Depth: Depth of coverage for irrigation piping shall be as follows:
 - 1. Main lines - 18 inches minimum depth, in planting areas where feasible.

2. Lateral lines - 12 inches minimum depth (except where trenched between medians; minimum 24 inches below surface).
 3. Where subslab conflicts, install as deep as possible.
 4. 24 inch depth for all lines under driveways.
- E. Backfill: Backfill trenches after acceptance of Work with suitable approved material, amping soil around pipe, and thoroughly water settling all trench fills. Trenches under walks and roads shall be backfilled in accordance with General and Special Conditions of the Specifications. Wherever subsidence of trenches occurs, the Contractor shall be responsible for restoring all to final grade.
- F. Control Valves: Locate control valves in close proximity to walks or to accessible areas; control valves shall never be more than 12" from walks or nearest access as indicated on Drawings and in a manner to make them accessible to manual operations without interference of water spray from heads.
- G. Quick Coupling Valves: Install all quick coupling valves as indicated on Drawings and to conform to the full intent and meaning of the Drawings and the Specifications.
- H. Pipe: All pipe shall be laid true and accurate to grade with full length of pipe section lying solidly on a firm base. If grade or joint of pipe is disturbed after laying, it shall be taken up and relaid.
1. Clean interior of pipe thoroughly and remove all dirt or foreign matter before lowering pipe into trench, and keep clean during operations by plugs or other approved method. The ends of all threaded pipe shall be reamed out full size and with a long taper reamer so as to be partially bell-mouthed and perfectly smooth. All offsets shall be made with fittings. All water lines shall be thoroughly flushed out before the heads are installed.
 2. Threads on pipe shall be cut with sharp clean dies to conform to American Standards Association Specifications and so that not more than 2 threads are left exposed on the pipe.
 3. Joints in all screwed metallic and metallic to plastic piping shall be made by applying specified pipe joint compound tape to the threaded end with one-half inch lapping before screwing joints together.
 4. Do not lay pipe in water or mud. Keep ends of pipe securely closed when work is not in operations to prevent water or other matter from entering the lines.
 5. Long runs of PVC pipe shall be slightly snaked in the trench to allow for contraction.
 6. Replace without cost to the Owner any pipe that is found to be defective.
 7. Provide unions and fittings as necessary to make all connections to existing lines and to complete Work as intended on the Drawings.
 8. Install dielectric couplings and flanges as required at the junction of pipes or fittings made of dissimilar metal.

9. Risers to sprinkler heads shall be Schedule 80 PVC, or as shown in the details, and offset from laterals as indicated on the Drawings.
10. All sprinkler heads next to walks, paths, parking areas, and any areas where people normally walk shall be the pop-up type. No fixed sprinkler risers shall be installed next to such walks, paths, or parking areas.
11. Solvent weld joints will be made as follows:
 - i. Good square cuts, clean and free of debris and shavings and moisture.
 - ii. Main Line Only: Apply p-70 Weldon or equal. Finish make up of joint using Weldon 711 or equal. Hot glue will not be permitted.
- I. Tests: Test all sprinkler mains after pipe is laid and joint completed by submitting o a pressure test of 125 p.s.i. static pressure in the presence of the Owner's representative. Do not backfill any trench until the Owner's representative has approved the test. Repair any leaks until lines meet test requirements and the Owner's representative's approval. All laterals shall be tested under main pressure for leaks; any leaks shall be repaired. All tests with the exception of the laterals shall be for the duration of 4 hours with a maximum drop of 4 psi allowed.
- J. Flushing of System:
 1. After all new sprinkler pipe lines and risers are in place and connected, all necessary diversion Work has been completed, and prior to installation of heads and drip tubing, the control valves shall be opened and full head of water used to flush out the system.
 2. Heads and drip lines shall be installed only after flushing of the system has been accomplished to the complete satisfaction of the Architect.
- K. Finish Grade: Bring all areas excavated for the installation to a neat and true finish grade to match adjoining areas.
- L. Completion: Leave entire installation in complete working order, free from any and all defects in material, workmanship, or finish, regardless of any discrepancies and/or omissions in Drawings and Specifications.

3.02 TEMPORARY REPAIRS:

Owner reserves the right to make temporary repairs as necessary to keep the sprinkler system equipment in operating condition. The exercise of this right by the Owner shall not relieve the Contractor of his responsibility under the terms of the guarantee as herein specified.

3.03 MAINTENANCE:

- A. The entire irrigation system shall be under full automatic operation for a period of seven days prior to any planting.
- B. System Inspection: Contractor shall continuously check all systems for proper operation. Lateral lines shall be flushed out after removing the last sprinkler head or two at each of the lateral. All heads are to be continuously adjusted as necessary for proper coverage and to eliminate over-spray on buildings or paving. Contractor's regular maintenance personnel shall test, observe, and adjust each sprinkler system no less than once per month.

- C. Maintenance of the irrigation system during installation and through the 90-day landscape maintenance period per the Planting Section of these Specifications, includes but is not limited to the following:
1. Cleaning of plugged irrigation nozzles and strainers.
 2. Adjustment of root water bodies and drip tubing, for optimum volume and uniformity of water being applied.
 3. Controller scheduling. Set and program automatic controller for seasonal water requirements and minimum optimum water use. Give Owner a key to the controllers and instructions on how to turn off system in case of emergency.
 4. Repair of leaks and damaged equipment.
 5. Problems that occur after installation which are directly attributed to the irrigation system.
 6. Repair or replacement of equipment due to acts of vandalism, theft or pest damage.
 7. Repair all damage to the irrigation system at Contractor's expense. Repairs shall be made within one watering period.

3.04 CLEANUP:

Clean-up shall be performed as each portion of Work progresses. Refuse and excess dirt shall be removed from the site, all walks and paving shall be broomed or washed down, and any damage sustained to the Work of others shall be repaired and Work returned to its original condition.

END OF SECTION 32 84 00

**SECTION 32 93 00
PLANTING**

1.00 - GENERAL

1.01 DESCRIPTION:

- A. Division 1 applies to this Section. Provide all labor, materials, appliances, tools, equipment, facilities, transportation, and services necessary for and incidental to performing all operations in connection with the installation of the Work of this Section, complete as shown on the Drawings and/or specified herein.
- B. Work In This Section: Principal items include:
 - 1. Examine all other Sections for Work related to those other Sections and required to be included in this Section.
 - 2. Fine grading in landscaping areas.
 - 3. Landscaping.
 - 4. 90-Day maintenance period.
- C. Related Work Not In This Section:
 - 1. Section 32 84 00 - Landscape Irrigation
 - 2. Landscape Maintenance - refer to Section 32 93 90
- D. Definition: The word Landscape Architect as used herein shall refer to the Landscape Architect or the Owner.

1.02 SUBMITTALS: Refer to Section 01300 for procedures.

- A. Samples of Materials: Submit Samples as required by the City Arborist or Owner's Representative and store on the site until furnishing of material is complete. Delivery may begin upon approval of Samples or as directed by Owner's Representative. Samples required are listed below:
 - 1. Irrigation Equipment (see Section 32 84 00)
 - 2. Samples of Bark Mulch and Soil Amendments
 - 3. Tree Root Control Barriers
 - 4. Tree Stakes
 - 5. Tree and Plant Material Photographs
 - a. There shall be photographs of each tree and at least one (1) photograph of each species of shrub and ground cover to be planted
 - b. All photographs shall be taken with a person/or a scale in each photo next to the plant
 - c. Include with the photographs of all trees a notation of caliper, canopy width and brown trunk and overall height of each species of palm tree, If there are multiple boxes or gallon sizes of the same plant, include separate information for each container sized tree
 - d. Before final selection, Landscape Architect shall approve trees from photographs of material at the Nursery site, prior to delivery.
 - 6. Fertilizer Analysis: also provide labels of each fertilizer used and the quantities used in each application.
 - 7. Soil Amendment Analysis

8. Analysis of Imported Topsoil
 9. Herbicides, Pesticides and Fungicides: Furnish manufacturer's certification by the USDA, description of ingredients, and recommendations for usage and application rates for each material to be used and dates of application
 10. Samples of decomposed granite
- B. Site Visits: The Landscape Architect will make site visits to observe the irrigation and planting process. The City Arborist will also need to observe the planting process of the trees. The Contractor shall give a minimum 48 hours advance notice before the requested visit.

1.03 GUARANTEES AND REPLACEMENTS: Refer to Section 01780.

- A. Shrubs: Guarantee shrubs until end of Maintenance Period.
- B. Trees: Guarantee all trees to live in a healthy condition for one year after planting. Dead or unhealthy trees shall be replaced within 10 days after notification of Contractor by the Owner's Representative or the Landscape Architect.
- C. Dead and Non-Vigorous Plants: As soon as weather permits, replace all dead plants and all plants not in a vigorous condition as noted at the end of the Maintenance Period.
- D. Replacements: Plants used for replacement shall be the same kind and size as specified on the Planting Plan. They shall be furnished, planted, and fertilized as specified at no additional cost to the Owner.

PART 2 - PRODUCTS

2.01 SOIL ADDITIVES, FERTILIZERS, AND HERBICIDES:

- A. Mulch: Mulch shall be nitrolized, shredded fir, pine or redwood bark. Particle size range shall be 95% from 2" to 3-1/2". Samples shall be submitted to the Landscape Architect for approval.
- B. Prepared Planting Mix: Mix shall be the following materials thoroughly mixed:
 1. By volume: 30% Gro Mulch 70% excavated soil
 2. Plus 2 lb. 12-12-12 commercial fertilizer per cubic yard of mix.
- C. Ammonium Sulfate: Shall be standard brand (NH₄)₂SO₄.
- D. Agricultural Gypsum: Gypsum shall be agricultural calcium sulfate CaSO₄ approved by Landscape Architect. This shall only be used in clay or adobe soils.
- E. Urea Formaldehyde: 35-0-0 shall be standard brand, as approved by the Landscape Architect.
- F. Vitamin B1 Root Hormone: Hormone shall be Superthrive, Hormex, or equal approved by the Landscape Architect.
- G. Nitrolized Fir bark Fines: Fines shall be "Forest Humus" as sold by Kellogg Company, or equal approved by the Landscape Architect.

- H. Commercial Fertilizer: Fertilizer shall be 12-12-12, standard commercial brand as approved by the Landscape Architect. Nitrogen for this mix shall be derived from 2% ammoniac, 5% urea, and 14% urea formaldehyde.
- I. Gro Mulch: Mulch shall be as manufactured by the Kellogg Co.
- J. Herbicide: Herbicide shall be Roundup or equal approved by the Landscape Architect.
- K. Fertilizer Planting Tablets: Agriform fertilizer tablets per manufacturer's recommendations.

L. Soil and Backfill Mixes:

1. Site Soil used to form landscape planting areas or backfill planters shall be clean, fertile, loamy soil, free of stones, sticks, stumps, or other deleterious matter one inch in diameter or larger. It shall be free from all wire, plaster, construction debris of any kind or similar objects that would be a hindrance to planting or maintenance.
2. Landscape Architect shall approve the suitability of the soil on the site after reviewing the results of the soil tests.
3. Backfill for Trees and Shrubs: Shall be as follows unless superseded by the soils report. Backfill shall be the following materials, thoroughly mixed:
 - a. By volume: 30% GroMulch.
 - b. 70% excavated soil free of construction debris.
 - c. 2 lbs. 12-12-12 commercial fertilizer per cubic yard of soil mix.

2.02 ROOT BARRIERS:

- A. Root Control Barrier: Install root barriers as shown in Plans and Planting Noted. All trees planted adjacent to hardscape areas (street curbs, driveways and sidewalks) shall include linear root barriers; root barriers shall extend five (5) feet on either side of tree trunk. Linear root barriers from DeepRoot, (800) 766-8835.

2.03 PLANT MATERIALS:

A. Quality and Size:

1. Quality and size of all plants shall be No. 1 grade. They shall be fresh, vigorous, of normal growth, free of disease, insects, insect eggs and larvae, with strong root systems.
2. Sizes of plants shall be as stated on the planting plan. No root bound or undersized materials shall be allowed.

- B. Pruning: Pruning shall not be done prior to delivery except by special approval of the Landscape Architect.

- C. Inspection: Inspection of plant materials required by City, State, or Federal authorities shall be a responsibility of the Contractor, and he shall obtain permits or certificates prior to delivery of plants to site.

- C. Plant Marking: Each plant shall be clearly marked with a waterproof tag as to its botanical name as required by California State Agricultural Laws.

2.04 IMPORTED TOP SOILS:

- A. General: A good Class A Topsoil should be used as in the flowing definition. If necessary, the soil can be conditioned to help improve the physical soil properties.

B. Suitable Borrowed Topsoil or Reclaimed Soil:

1. Topsoil shall be free of roots, clods and stones larger have 1 inch (in the upper 8" of soil), pockets of coarse sand, noxious weeds such as nut grass roots and nodules, sticks, brush and other litter. It shall not be infested with nematodes or other undesirable insects or plant disease organisms and/or pathogens.

2. Topsoil shall be friable and have sufficient structure in order to give good tilth and aeration to the soil.
3. Gradation limits: Soil shall be a sandy loam. The definition of soil texture shall be per the USDA classification scheme. Gravel over ¼ inch in diameter shall be less than 10% by weight.
4. Permeability rate: Hydraulic conductivity rate shall be not less than one inch per hour nor more than 20 inches per hour when tested in accordance with the USDA Handbook Number 60, method 34b or other approved methods.
5. Fertility: The range of the essential elemental concentration in soil shall be as follows:

Ammonium Bicarbonate/DTPA Extraction
parts per million (mg/kilogram)
dry weight basis

phosphorus	2 - 40
potassium	40 - 220
iron	2 - 35
manganese	0.3 - 6
zinc	0.6 - 8
copper	0.1 - 5
boron	0.2 - 1
magnesium	50 - 150
sodium	0 - 100
sulfur	25 - 500
molybdenum	0.1 - 2

Soil may need to be amended and conditioned to optimize plant growth. The above listed fertility is for soil selection.

Concentration of nutrients for final acceptance:

Ammonium Bicarbonate/DTPA Extraction
parts per million (mg/kilogram)
dry weight basis

phosphorus	10 - 40
potassium	100 - 220
iron	24- 35
manganese	0.6 - 6
zinc	1 - 8
copper	0.3 - 5
boron	0.2 - 1
magnesium	50 - 150
sodium	0 - 100
sulfur	25 - 500
molybdenum	0.1 - 2

6. Acidity: The soil pH range measured in the saturation extract (Method 21a, USDA Handbook Number 60) shall be 6.0 - 7.9.
7. Salinity: The salinity range measured in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 0.5 - 2.5 dS/m.
8. Chloride: The maximum concentration of soluble chloride in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 150 mg/l (parts per million).

9. Boron: The maximum concentration of soluble boron in the saturation extract (Method 3a, USDA Handbook Number 60) shall be 1 mg/l (parts per million).
10. Sodium Adsorption Ratio (SAR): The maximum SAR shall be 3 measured per Method 20b, USDA Handbook Number 60.
11. Aluminum: Available aluminum measured with the Ammonium Bicarbonate/DTPA Extraction shall be less than 3 parts per million.
12. Soil Organic Matter Content: Sufficient soil organic matter shall be present to impart good physical soil properties but not be excessive to cause toxicity or cause excessive reduction in the volume of soil due to decomposition of organic matter. The desirable range is 3% to 7%. The carbon/nitrogen ratio should be about 10. A high carbon/nitrogen ratio can indicate the presence of hydrocarbons or non-humified organic matter.
13. Calcium Carbonate Content: Free calcium carbonate (limestone) shall not be present for acid-loving plants.
14. Heavy Metals: The maximum permissible elemental concentration in the soil shall not exceed the following concentrations:

Ammonium Bicarbonate/DTPA Extraction
parts per million (mg/kilogram)
dry weight basis

arsenic	1
cadmium	1
chromium	10
cobalt	2
lead	30
mercury	1
nickel	5
selenium	3
silver	0.5
vanadium	3

If the soil pH is between 6 and 7, the maximum permissible elemental concentration shall be reduced 50%. If the soil pH is less than 6.0, the maximum permissible elemental concentration shall be reduced 75%. No more than three metals shall be present at 50% or more of the above values.

15. Phytotoxic constituent, herbicides, hydrocarbons, etc: Germination and growth of monocots and dicots shall not be restricted more than 10% compared to the reference soil. Total petroleum hydrocarbons shall not exceed 50 mg/kg dry soil measured per the modified EPA Method No. 8015. Total aromatic volatile organic hydrocarbons (benzene, toluene, xylene and ethylbenzene) shall not exceed 0.5 mg/kg dry soil measured per EPA Methods No. 8020.
- C. Quality controls: All topsoils to be imported for the planting areas shall receive an "Agricultural Suitability Analysis of Soil" at source, on-site before being placed in the planting areas and once again after amending takes place. These tests are to be collected, analyzed and recommendations made by Wallace Laboratories, 365 Coral Circle, El Segundo CA 90245, Ph. (310) 615-0116, Fax (310)640-6863, or approved equal. Cost for these services will be paid for by the Contractor. Tests shall be submitted to the Landscape

Architect for approval before placing soils. Contractor shall allow two weeks for each round of soil testing to take place. Tests shall include the following:

1. Must include pH measurement in the Saturation Extract, Electroconductivity of the saturation extract and Sodium Adsorption Ratio of the saturation extract. The approved procedures are the following:

PH	Method 21
Saturation Extract	Method 2
Sodium Adsorption Ratio	Method 20b

Methods of the *United States Salinity Laboratory* as published in the Agricultural Handbook Number 60 entitled "*Diagnosis and Improvement of Saline and Alkali Soils*".

2. The following nutrients and elements must be determined with an approved extraction method. Interpretation data must be given citing concentrations which are considered to be low, medium and high: boron, calcium, copper, iron, magnesium, Manganese, molybdenum, phosphorus, potassium, sodium, sulfur, and zinc.
3. The approved methods are those cited by the Council on Soil Testing and Plant Analysis and those methods currently used by soil scientists and agronomists and published in *Communications in Soil Science and Plant Analysis*, *Soil Science and Soil Science Society of America Journal*. Approved methods are Mehlich Number 3, Bray P1, Bray P2, Olsen P, DTPA, ammonium acetate, ammonium bicarbonate-DTPA, with hot water extract for boron.
4. The saturated extract must be analyzed for calcium, magnesium, sodium, boron, chloride, nitrate, and sulfate.
5. The following trace metals must be measured by the DTPA extract: Aluminum, arsenic, cadmium, chromium, cobalt, lead, lithium, nickel, selenium, silver, strontium, tin and vanadium.
6. The presence of calcium carbonate and/or magnesium carbonate must be determined by commonly used methods.
7. Soil Texture (gravel, sand, silt and clay) and percent gravel must be determined.
8. Determine organic matter content by the measurement of organic carbon. The quality of the organic matter shall be determined by measuring organic carbon and total nitrogen.
9. Interpretation of nutritional deficiencies or excesses and potential toxicities must be given.
10. Water Infiltration Rate: determined using Method 34b of Agricultural Handbook Number 60.
11. Growth Test for Toxic Constituents and/or Poor Physical Properties. Grow a dicot plant species and a monocot species with and without activated charcoal. Measure yield and percent of germination for all treatments. Report conclusions and finding.
12. Approved methods: the American Society of Agronomy as published in the *Methods of Soil Analysis*, methods of the United States Salinity Laboratory as published in the Agricultural Handbook Number 60 entitled "*Diagnosis and*

Improvement Of Saline and Alkali Soils," Base Saturation – Methods 18 and 20 of Agricultural Handbook Number 60, Cation Exchange Capacity - Methods 18 and 20 of Agricultural Handbook Number 60 and bulk density of clods by the Method published in *Soil Science*, vol 155, 325-330 (1993):

- D. Possible sources of Class A Topsoil:
1. Excavations or grading of native topsoil from undeveloped areas.
 2. Excavations or grading of topsoil from previously landscaped or farmed areas.
 3. Excavations or grading of topsoil from previously non-landscaped or non-farmed areas if the soil is thoroughly evaluated for potential toxic materials.
 4. Soil supply companies supplying natural topsoil without excessive amending.
 5. Manufacturing of topsoil with less desirable soil as long as the soil has matured and developed the characteristics of a Class A Topsoil.
- E. Contractor Responsibilities:
1. Provide inspections, tests and similar quality control services as specified below; see 2(G) Submittals below. Cost for these services will be paid by the Contractor.
 2. Employ and pay an independent agency to perform specified quality control services.
 3. Owner will engage and pay for services of an independent agency to perform inspections and tests, which are not required by the specification.
 4. Retest where results of required inspections, tests or similar services prove unsatisfactory workmanship and materials and do not indicate compliance with specifications regardless of whether the tests and services were not the responsibility of the Contractor will be paid by the Contractor.
- F. Owner Responsibilities: Owner will provide and pay for inspections, tests and similar quality control services not specified.
- G. Duties of the Testing Agency:
1. Retest where results of required inspections, tests or similar services prove unsatisfactory workmanship and materials and do not indicate compliance with specifications regardless of whether the tests and services were not the responsibility of the Contractor will be paid by the Contractor.
 2. Independent testing agency engaged to perform inspections, sampling and testing of materials shall cooperate with Landscape Architect and Contractor in performance of its duties and shall provide qualified personnel to perform required inspections and tests.
 3. Agency shall notify Landscape Architect, Owner and Contractor promptly of irregularities or deficiencies observed in the work or materials during performance of its services.
 4. Agency is not authorized to release, revoke, alter or enlarge requirements or specifications or approve or accept any portion of the work or materials.
 5. Agency shall not perform the duties of the Contractor.

H. Submittals:

1. Independent testing agency shall submit written report of each inspection, test or similar service to Landscape Architect and Owner unless Contractor is responsible for service. If Contractor is responsible for service, submit written report of each inspection, test of similar service through Contractor.
2. Each source of topsoil shall be tested with representative submittal samples and at various depths. Soil shall be tested from the source site. There shall be one (1) test from each source site. After delivery to site the soil shall again receive one (1) soil test before final placement. The Owner reserves the right to test delivered materials at Owner's expense. If any delivered material fails to meet the specifications, the material will be promptly removed from the site at the Contractor's expense. The Contractor shall pay for the testing of any materials not meeting specifications.

PART 3 - EXECUTION

3.01 SEQUENCE OF THE WORK:

- A. Place soil tested import topsoil and rough grading to approximate finish grade, de-rock upper 8" for rocks and foreign material larger than ½" in size.
- B. Re-test soil to verify specified amendments are adequate for existing soil conditions: Refer to Section 02900, Article 3.03A.
- C. Install Irrigation System: Refer to Section 02810, Landscape Irrigation.
- D. Cultivate upper 12" de-rock upper 8" for rocks and foreign material larger than ½" in size and fine grade per Section 02900, Article 3.02.
- E. Install and/or adjust irrigation heads; make irrigation system operational; obtain approval of irrigation coverage test: Refer to Section 02810, Landscape Irrigation.
- F. Complete weed abatement (weed and kill process for eight (8) weeks): Refer to Section 02900, Article 3.03.
- G. Prep and amend soil, including cultivating and fine grading: Refer to Section 2900, Article 3.02.
- H. Test soils to confirm specified amendments have been installed; re-amend as necessary: Refer to Section 02900, Article 3.03.
- I. Install all plant materials: Refer to Section 02900, Article 3.04
- J. Maintenance Period: Refer to Section 02900, Article 3.11 – 3.13.

3.02 FINE GRADING:

- A. Where any portion of the irrigation system is installed after grading and fertilizing has been performed, refill and re-fertilize the upper portion of the backfill as specified herein.
- B. Fine Grading: Upon completion of rough and finished grading, perform the required fine grading of planting areas as follows:

1. Before and during preliminary fine grading, dig out and remove all weeds and grasses. Dispose of these and all items listed below off-site at Contractor's expense.
 2. Remove all rocks and foreign matter larger than ½" in the upper 8" of soil.
 3. Do not work the soil when the moisture content is such that excessive compaction will occur, nor when the soil is so dry that clods will not break readily.
 4. Apply water, if necessary, to provide ideal density for cross tilling and for planting.
 5. Grade so as to anticipate or match the certified finished grades.
 - a. Remove or redistribute excess soil before the application of fertilizer and mulch.
 - b. Where the soil is to be replaced by plants and/or mulch, make allowance to prevent deficiency in the depth of mulch when final grading is completed.
- C. Grades and Elevations: When soil preparation is completed, including weeding and fertilizing, and the soil has dried so as to be readily worked, fine grading planting areas to elevations shown on Construction Documents.
1. Where grades are not otherwise indicated, provide uniform levels or slopes between points where elevations are given.
 2. Make minor adjustments or grade where so requested by Landscape Architect.
 3. Provide finished grades which are even, uniform and without abrupt change of surface.
 4. Slope soil areas away from structures at 2% gradient minimum to allow natural runoff of water, regrade swale surfaces as required for a minimum 2% run-off, or as indicated on plans. Grade low spots and swales when the soil is at optimum moisture content for working.
 5. Provide final finished grades in planter areas receiving shrubs and groundcover 2 inches below paving, curbs or top of walls, or as shown in the Construction Documents. Finished grade in concrete raised planter beds shall be 1" below waterproofing.

3.03 SOIL TESTING, CONDITIONING, FERTILIZING, AND WEED ABATEMENT:

- A. Soil Testing: This median project will have a total of three (3) soil tests to be conducted by Wallace Laboratories, 365 Coral Circle, El Segundo CA 90245, Ph. (310) 615-0116, Fax (310)640-6863, or approved equal. Cost for these services will be paid for by the Contractor. Anticipate 3 weeks for completion of tests. Copies of tests shall be submitted to the Landscape Architect. Tests shall include the following:
1. Must include pH measurement in the Saturation Extract, Electroconductivity of the saturation extract and Sodium Adsorption Ratio of the saturation extract. The approved procedures are the following:

PH	Method 21
Saturation Extract	Method 2
Sodium Adsorption Ratio	Method 20b

Methods of the *United States Salinity Laboratory* as published in the Agricultural Handbook Number 60 entitled "*Diagnosis and Improvement of Saline and Alkali Soils*".

2. The following nutrients and elements must be determined with an approved extraction method. Interpretation data must be given citing concentrations which are considered to be low, medium and high: boron, calcium, copper, iron, magnesium, Manganese, molybdenum, phosphorus, potassium, sodium, sulfur, and zinc.
3. The approved methods are those cited by the Council on Soil Testing and Plant Analysis and those methods currently used by soil scientists and agronomists and published in *Communications in Soil Science and Plant Analysis*, *Soil Science and Soil Science Society of America Journal*. Approved methods are Mehlich Number 3, Bray P1, Bray P2, Olsen P, DTPA, ammonium acetate, ammonium bicarbonate-DTPA, with hot water extract for boron.
4. The saturated extract must be analyzed for calcium, magnesium, sodium, boron, chloride, nitrate, and sulfate.
5. The following trace metals must be measured by the DTPA extract: Aluminum, arsenic, cadmium, chromium, cobalt, lead, lithium, nickel, selenium, silver, strontium, tin and vanadium.
6. The presence of calcium carbonate and/or magnesium carbonate must be determined by commonly used methods.
7. Soil Texture and Organic Matter content may be estimated or determined by commonly used methods. Interpretation of nutritional deficiencies or excesses and potential toxicities must be given.
8. If required, determine the following by methods approved by the American Society of Agronomy as published in the *Methods of Soil Analysis*, methods of the United States Salinity Laboratory as published in the Agricultural Handbook Number 60 entitled "*Diagnosis and Improvement Of Saline and Alkali Soils*," and bulk density of clods by the method published in *Soil Science*, vol 155, 325-330 (1993):
 - Exchangeable Ammonium cation
 - Base Saturation
 - Cation Exchange Capacity
 - Carbonates Determination
 - Soil Bulk Density (Compaction)
 - Sand, Silt and Clay determination
 - Water Infiltration Rate
 - Elemental determinations to be made according to methods approved by the EPA or by the American Society of Agronomy.
9. Optional - Growth Test for Toxic Constituents and/or Poor Physical Properties
Grow a dicot plant species and a monocot species with and without activated charcoal. Measure yield and percent of germination for all treatments. Report conclusions and findings.

- B. Tilling: All planting areas shall be cultivated to a minimum depth of 12" below grade and reduce soil clods to a maximum diameter of 1" – ½" in the top 8" of soil. Remove rocks and foreign matter larger than ½" in diameter in the upper 8" of soil. Planting areas too small for power equipment shall be hand dug and tilled to a depth of 12" below grade. All tilling shall be completed prior to installation of irrigation mainlines and lateral lines, and conditioners and fertilizers.
- C. Planting Areas: The following amendments are anticipated. Exact mix and quantities shall be per the recommendations from soil testing results. All planting areas shall receive the following:
 - 1. Gro Mulch: 3 cubic yards per 1,000 square feet thoroughly mixed into the top 6" of soil for lawn, and 5 cubic yards per 1,000 square feet mixed into top 12" for shrubs and ground cover.
 - 2. Gypsum: 200 lbs./1,000 square feet thoroughly mixed into the top 2" of soil (if in adobe or heavy clay soils.)
 - 3. Commercial fertilizer: 20 lbs./1,000 square feet thoroughly mixed into the top 2" of soil.
- D. Weed Abatement (Herbicide): Spray all areas to receive groundcover or shrubs with an herbicide, prior to planting, following the manufacturer's recommendations.
- E. If rodents and vermin are present, control shall be undertaken before planting by a licensed pest control applicator.

3.04 PLANTING:

- A. Plant all materials as soon as site is available and weather conditions are suitable. Do not plant when weather conditions are unfavorable to good Work.
- B. Shrub Installation:
 - 1. Plant shrubs in areas as designated on the Drawings.
 - 2. Grade shrub and ground cover areas 2" below top of walks and curb. Float to a smooth, uniform grade as shown on Drawings. All areas shall slope to drain.
 - 3. Where no grades are shown, establish a smooth and continuous grade between existing or fixed controls such as walks, curbs, catch basins and elevations at steps or buildings. Roll, scarify, rake and level as necessary to make a true, even surface. All finish grades shall meet the approval of the Landscape Architect or Owner's Representative before installation of ground cover. All grades shall slope to drain.
 - 4. Loosen soil to a depth of 12" in shrub area and grade to remove ridges and depressions. Remove stones and foreign matter over ½" in diameter from upper 8" of soil. Float areas to finish grade. Apply soil conditioners as specified above, mixing thoroughly into the soil to the depths indicated.
 - 5. Do not pile soil around the crown of any plant. Smooth soil around plants and leave all areas in a neat and clean condition.
 - 6. Water in with a light spray.
- C. Tree Planting:

1. Trees shall be planted under site observation by the Landscape Architect and City Arborist. Contractor shall notify the Construction Manager forty-eight (48) hours prior to the placing and planting of trees to arrange the date and time of the site visit.
2. Stake all plant locations and get approval before excavating pits, make necessary adjustments as directed. Excavate all one gallon and larger plant pits to dimensions shown below.
3. Excavate pits for all plants as shown on the planting details. Tree pits shall be of such a depth that after planting and settling, the crown of the plant shall be at or slightly above its original line of grade and the ball shall sit on compacted soil. The following are minimum sizes for shrub and tree pits:
 - a. 1 gallon plants: 12" diameter hole, depth per detail.
 - b. 5 gallon plants: 24" diameter hole, depth per detail.
 - c. 15 gallon plants: 30" diameter hole, depth per detail.
 - d. Boxed trees shall be twice the width of the root ball or a minimum of one foot all around, whichever is greater.
4. Compact backfill in bottom of pit and tamp firmly. Set plants in center of pits in vertical position so that the soil level of the crown of the plant is flush with or slightly higher than the finish grade after the soil has settled. Backfill with prepared soil mix as described above.
5. Form a shallow basin around the edge of tree ball by depressing the soil slightly below the finish grade. Do not raise basin rims above general finished grade. Keep basin within the edges of the tree ball.
6. Apply root hormone to each tree as follows:
 - a. Construct tree basins at rim or outer edge of the tree ball so that the water will stay on the top of the ball.
 - b. Apply root hormone at a rate of 2 ounces to 2 gallons of water. Pour it on the top of the tree ball within the basin rim. Immediately after applying root hormone, fill the tree basin with water and allow it to settle within the soil. Repeat applications of clear water once or twice, depending on the condition of the tree ball or as directed by the Landscape Architect or Owner's Representative.
 - c. Tree balls shall be set in their pits before application of root hormone and shall be mulched immediately after its application and its irrigation into the ball.
 - e. Apply a second feeding of root hormone in the same manner and amount as above during the maintenance period or within 30 days after the tree is planted, whichever is longer.

3.05 MULCHING:

- A. Apply mulch to all planting areas to a depth of three inches (3"). Mulch shall not be piled up on plant stems and trunks.

3.06 GRADING:

- A. Grade areas around plants to finish grades and dispose of excess soil off the site.

3.07 PRUNING:

- B. Prune plants as directed by the Landscape Architect and/or City Arborist following standard horticultural practice as outlined by the International Society of Arboriculture (ISA) – *Tree Pruning Guidelines*.

3.08 ROOT BARRIERS:

- A. Install linear root barriers along all pavements including: sidewalks, curbs, wall or similar hardscape areas within 10' from all planted trees. Root barriers shall extend 5' on either side of the trunk. Install per manufacturer's specifications.

3.09 PRE-EMERGENT HERBICIDE:

- A. Apply in all shrub and groundcover areas as per manufacturer's instructions.

3.10 INSPECTION, START OF MAINTENANCE:

- A. Inspection: An inspection shall be made of all planted areas by the Owner's Representative or by the Landscape Architect when the landscape installation is complete. The maintenance period will begin after approval by the Owner's Representative or the Landscape Architect. Contractor shall give at least 7 days' notice in advance of the inspection time.
- B. Maintenance Period:
 - 1. The 90 days Maintenance Period begins at the end of the substantial construction completion date for the entire project.
 - 2. The Maintenance Period shall be 90 days.

3.11 MAINTENANCE:

- A. Maintenance:
 - 1. Before the start of the 90-day Maintenance Period, the Contractor is responsible for maintaining the installation. This period of maintenance responsibility is not part of the 90-day Maintenance Period that begins when the entire project is installed, inspected, and approved for "Start of Maintenance." If the Contractor fails the final inspection, the 90-day Maintenance Period will begin when the Owner's Representative and the Landscape Architect are satisfied that the project is ready for "Start of Maintenance."
 - 2. If the Maintenance Period is extended beyond the 90 days time because of rejection by the Owner's Representative or by the Landscape Architect, or for whatever reason, then the entire installation will remain the responsibility of the Contractor unless otherwise determined by the Owner's Representative.
 - 3. The year's guarantee of the trees begins at the end of the Maintenance Period. Any rejected material shall be replaced and the 90-day Maintenance Period shall be started from that time for the replaced material only.

4. Maintain trees and plants in a vigorous, thriving condition by watering, cultivating, pruning, spraying, and any other necessary operation. Keep all planted areas free of weeds. Remove weed roots and stolons from the soil before planting and as necessary after planting. Also keep both the planted areas and within three (3) feet of the face of curbs and gutters around each landscaped median free of paper and debris.
5. Maintain all planting areas by watering, weeding, replanting, and other necessary operations. Keep planting areas free from weeds by removing roots and stolons and keeping the area in a clean and acceptable condition through the end of the Maintenance Period.

3.14 CLEAN-UP:

- A. Upon completion of all construction and before final acceptance, the Contractor shall broom clean entire paved area. All tools, surplus materials, equipment, debris, and rubbish shall be removed from the site and the site shall be left in a clean, neat condition such as to meet the approval of the Owner's Representative and/or the Landscape Architect.

END OF SECTION 32 93 00

END OF SECTION F