

CITY OF UPLAND



CONTRACT DOCUMENTS FOR

TOM THOMAS MAGNOLIA PLAZA

PROJECT NO. 82338

BID NO. 2025-04

**CITY OF UPLAND
Development Services Department
460 N. Euclid Avenue
Upland, CA 91786**

Issue Date: October 10, 2025

Due Date: November 3, 2025 3:00 PM

Reviewed: Alan French

Principal Engineer, Alan French, PE, PLS

Date: October 10, 2025

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NOTICE INVITING BIDS

NOTICE IS HEREBY GIVEN that the **CITY OF UPLAND**, with its principal place of business at 460 N. Euclid Avenue Upland, California 91786 ("City") invites and will receive **Electronic Bids** (online only) via the City of Upland's PlanetBids portal at <https://vendors.planetbids.com/portal/66713/portal-home> up to but not later than **3:00 pm Monday, November 3, 2025**. Immediately following the close of the bidding period, all bids received for this project will be publicly opened via the City of Upland's PlanetBids portal. Late bids will not be accepted. The City reserves the right to reject any or all bids, to waive irregularity, and award contracts in the best interest of the City.

Bids shall be for the furnishing to City of all labor, equipment, materials, tools, services, transportation, permits, utilities, and all other items necessary for the **Tom Thomas Magnolia Plaza** (the "Project").

The work to be performed under this Contract generally consists of the removal of existing items, site grading, drainage, installation of new paving, walls, signage, site structures, site amenities, site lighting, irrigation, and planting; and all appurtenant work necessary for the proper construction of contemplated improvements in accordance with the Plans and Specifications entitled Tom Thomas Magnolia Plaza, Project No. 82338.

Bidders may also obtain a copy of the Contract Documents from <https://www.uplandca.gov/rfps-bids>. To the extent required by section 20103.7 of the Public Contract Code, upon request from a contractor plan room service, City shall provide an electronic copy of the Contract Documents at no charge to the contractor plan room.

It is the responsibility of each prospective Bidder to download and print all Bid Documents for review and to verify the completeness of Bid Documents before submitting a bid. Any Addenda will be posted on <https://www.uplandca.gov/rfps-bids>. It is the responsibility of each prospective Bidder to check the website on a daily basis through the close of Bids for any applicable Addenda or updates. City does not assume any liability or responsibility based on any defective or incomplete copying, excerpting, scanning, faxing, emailing, downloading or printing of the Bid Documents. Information on the website may change without notice to prospective Bidders. The Contract Documents shall supersede any information posted or transmitted by the website.

Each Bid shall be accompanied by cash, a certified or cashier's check, or Bid Bond secured from a surety company satisfactory to the City, the amount of which shall not be less than ten percent (10%) of the submitted Total Bid Price, made payable to City of Upland as bid security. The bid security shall be provided as a guarantee that within ten (10) days after City provides the successful bidder the Notice of Award, the successful Bidder will enter into a contract and provide the necessary bonds and certificates of insurance. The bid security will be declared forfeited if the successful Bidder fails to comply within said time. No interest will be paid on funds deposited with City.

All requests for information (RFI) from bidders shall be in writing and sent no later than **October 27th, 2025, by 3:00 p.m.** to:

Yesenia Diaz, Associate Engineer
460 North Euclid Avenue
Upland, CA 91786

(909) 931-4137
(909) 931-4321 Fax
ydiaz@uplandca.gov

The successful Bidder will be required to furnish a Faithful Performance Bond and a Labor and Material Payment Bond each in an amount equal to one hundred percent (100%) of the Contract Price. Each bond shall be in the forms set forth herein, shall be secured from a surety company that meets all State of California bonding requirements, as defined in California Code of Civil Procedure Section 995.120, and that is a California admitted surety insurer.

Pursuant to Section 22300 of the Public Contract Code of the State of California, the successful Bidder may substitute certain securities for funds withheld by City to ensure its performance under the Contract.

Pursuant to Labor Code Section 1773, City has obtained the prevailing rate of per diem wages and the prevailing wage rate for holiday and overtime work applicable in San Bernardino County from the Director of the Department of Industrial Relations for each craft, classification, or type of worker needed to execute this contract. A copy of these prevailing wage rates may be obtained via the internet at: www.dir.ca.gov/oprl/

In addition, a copy of the prevailing rate of per diem wages is available at City's **Office of City Clerk** and shall be made available to interested parties upon request. The successful Bidder shall post a copy of the prevailing wage rates at each job site. It shall be mandatory upon the Bidder to whom the Contract is awarded, and upon any subcontractors, to comply with all Labor Code provisions, which include but are not limited to the payment of not less than the said specified prevailing wage rates to all workers employed by them in the execution of the Contract, employment of apprentices, hours of labor and debarment of contractors and subcontractors.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No Bid will be accepted nor any Contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. In bidding on this Project, it shall be the Bidder's sole responsibility to evaluate and include the cost of complying with all labor compliance requirements under this contract and applicable law in its Bid.

Unless otherwise provided in the Instructions for Bidders, each Bidder shall be a licensed contractor pursuant to sections 7000 et seq. of the Business and Professions Code in the following classification(s) throughout the time it submits its Bid and for the duration of the Contract: **Class "A" License (General Engineering Contractor)**.

Substitution requests shall be made within 35 calendar days after the award of the Contract. Pursuant to Public Contract Code Section 3400(b), City may make findings designating that certain additional materials, methods or services by specific brand or trade name other than those listed in the Contract Documents be used for the Project. Such findings, if any, as well as the materials, methods or services and their specific brand or trade names that must be used for the Project may be found in the Special Conditions.

Pursuant to Public Contract Code section 3400(b), if City has made any findings designating certain materials, products, things, or services by specific brand or trade name, such findings and the materials, products, things, or services and their specific brand or trade names will be set forth in the Special Provisions.

City shall award the contract for the Project to the lowest responsive, responsible Bidder as determined by City from the **Base Bid Alone**. City reserves the right to reject any or all Bids or to waive any irregularities or informalities in any Bids or in the bidding process.

For further information, contact:

Yesenia Diaz, Associate Engineer

460 North Euclid Avenue

Upland, CA 91786

(909) 931-4137

(909) 931-4321 Fax

ydiaz@uplandca.gov

END OF NOTICE INVITING BIDS

PUBLISH: FRIDAY, OCTOBER 10, 2025

FRIDAY, OCTOBER 17, 2025

00 21 13 – INSTRUCTIONS TO BIDDERS

ARTICLE 1. SECURING DOCUMENTS

Bids must be submitted electronically via the City of Upland's PlanetBids portal at <https://vendors.planetbids.com/portal/66713/portal-home> on the Bid Forms which are a part of the Contract Documents for the Project. Prospective bidders may download a complete set of contract documents at no charge from the city's PlanetBids portal or from the City of Upland website at <https://www.uplandca.gov/rfps-bids>.

City may also make the Contract Documents available for review at one or more plan rooms and have registered with Planet Bids, as indicated in the Notice Inviting Bids. Please Note: Prospective Bidders can review the Contract Documents at a plan room must register as a vendor on the City's portal on PlanetBids, download the Contract Documents and submit a Bid electronically.

ARTICLE 2. EXAMINATION OF SITE AND CONTRACT DOCUMENTS

At its own expense and prior to submitting its Bid, each Bidder shall visit the site of the proposed work and fully acquaint itself with the conditions relating to the construction and labor required so that the Bidder may fully understand the work, including but not limited to difficulties and restrictions attending the execution of the work under the Contract. Each Bidder shall carefully examine the Drawings, and shall read the Specifications, Contract, and all other documents referenced herein and made part of the Contract Documents. Each Bidder shall also determine the local conditions which may in any way affect the performance of the work, including local tax structure, contractors' licensing requirements, availability of required insurance, the prevailing wages and other relevant cost factors, shall familiarize itself with all federal, state and local laws, ordinances, rules, regulations and codes affecting the performance of the work, including the cost of permits and licenses required for the work, and shall make such surveys and investigations, including investigations of subsurface or latent physical conditions at the site or where work is to be performed as may be required. Bidders are responsible for consulting the standards referenced in the Contract Documents. The failure or omission of any Bidder to receive or examine the Contract Documents, forms, instruments, addenda, or other documents, or to visit the site and acquaint itself with conditions there existing shall in no way relieve any Bidder from any obligation with respect to its Bid or to the Contract and no relief for error or omission will be given except as required under state law. The submission of a Bid shall be taken as conclusive evidence of compliance with this Article.

ARTICLE 3. INTERPRETATION OF DRAWINGS AND DOCUMENTS

Prospective Bidders unclear as to the true meaning of any part of the Drawings, Specifications or other Contract Documents may submit a written request for interpretation. The prospective Bidder submitting the request is responsible for prompt delivery. Interpretation of the Drawings, Specifications or other Contract Documents will be made only by a written Addendum duly issued and a copy of such Addenda will be mailed or delivered to each prospective Bidder who has purchased a set of Contract Documents. The City will not be responsible for any other explanation or interpretations of the Contract Documents. If a prospective Bidders becomes aware of any errors or omissions in any part of the Contract Documents, it is the obligation of the prospective Bidder to promptly bring it to the attention of the City.

ARTICLE 4. PRE-BID CONFERENCE

No Pre-Bid Conference will be held for this project. Oral statements regarding this Bid at the Pre-Bid Conference should be considered unverified information unless confirmed in writing.

ARTICLE 5. ADDENDA

The City reserves the right to revise the Contract Documents prior to the Bid opening date. Revisions, if any, shall be made by written Addenda. All Addenda issued by the City shall be included in the Bid and made part of the Contract Documents. Pursuant to Public Contract Code Section 4104.5, if the City issues an Addendum which includes material changes to the Project less than 72 hours prior to the deadline for submission of Bids, the City will extend the deadline for submission of Bids. The City may determine, in its sole discretion, whether an Addendum warrants postponement of the Bid submission date. Each prospective Bidder shall provide the City a name, address, email address, and facsimile number to which Addenda may be sent, as well as a telephone number by which the City can contact the Bidder. Copies of Addenda will be furnished by email, facsimile, first class mail, express mail or other proper means of delivery without charge to all parties who have obtained a copy of the Contract Documents and provided such current information. Please Note: Bidders are responsible for ensuring that they have received any and all Addenda. To this end, the electronic bid management system requires each bidder acknowledge receipt of all addenda before submission of the bid.

ARTICLE 6. ADDITIVE BID ALTERNATES

There are no Additive Bid Alternates for this project.

ARTICLE 7. COMPLETION OF BID FORMS

Bids shall only be prepared using copies of the Bid Forms which are included in the Contract Documents and available on the electronic bid management system, PlanetBids. The use of substitute Bid Forms will not be permitted. Bids shall be executed by an authorized signatory as described in these Instructions to Bidders. In addition, Bidders shall fill in all blank spaces (including inserting "N/A" where applicable). Deviations in the Bid Forms may result in the Bid being deemed non-responsive.

ARTICLE 8. ELECTRONIC SUBMISSION REQUIREMENTS

The bidder must enter pricing in the electronic bid form for any and all line items or a lump sum bid amount, as required. The pricing provided in the electronic bid form will be the only valid bid pricing for determination of low bid. The costs of any work shown or required in the Contract Documents, but not specifically identified as a line item are to be included in related line items and no additional compensation shall be due the selected contractor. The estimated quantities for unit price items are for purposes of comparing Bids only and City makes no representation that the actual quantities of work performed will not vary from the estimates.

The bidder must enter subcontractor information in the electronic bid form. The subcontractor information provided electronically will be the only valid subcontractor information.

The bidder must attach a pdf file(s) to the electronic bid submission containing all of the completed

and signed Bid Documents including a Bid Bond. The following is a list of Bid Documents that must be completed and uploaded to PlanetBids as a single PDF file:

- A. Bid Form
- B. Bid Security, as a bid bond using the form included in the bidding documents, cash, or a cashier's check
- C. Completed Designation of Subcontractors Form.
- D. Non-Collusion Declaration Form
- E. Iran Contracting Act Certification Form
- F. Public Works Contractor DIR Registration Certification Form
- G. Contractor's Certificate Regarding Workers' Compensation Form
- H. Bidder Information and Experience Form
- I. Fleet Compliance Form
- J. California Levine Act Disclosure Statement

ARTICLE 9. MODIFICATIONS OF BIDS

Each Bidder shall submit its Bid in strict conformity with the requirements of the Contract Documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a Bid may render it non-responsive and may cause its rejection. Bidders shall not delete, modify, or supplement the printed matter on the Bid Forms, or make substitutions thereon. Oral, telephonic and electronic modifications will not be considered.

ARTICLE 10. SUBCONTRACTORS

Bidder shall set forth the name, address of the place of business, contractor license number, and public works contractor registration number of each subcontractor who will perform work, labor, furnish materials or render services to the bidder on said contract and each subcontractor licensed by the State of California who, under subcontract to bidder, specially fabricates and installs a portion of the Work described in the Contract Documents in an amount in excess of one half of one percent (0.5%) of the total bid price, and shall indicate the portion of the work to be done by such subcontractor in accordance with Public Contract Code Section 4104. Notwithstanding the foregoing, if the work involves the construction of streets and highways, then the Bidder shall list each subcontractor who will perform work or labor or render service to the Bidder in or about the work in an amount in excess of one-half of one percent (0.5%) of the Bidder's Total Bid Price or \$10,000, whichever is greater. If a Bidder fails to specify a subcontractor or if a Bidder specifies more than one subcontractor for the same portion of work, then the Bidder shall be deemed to have agreed that it is fully qualified to perform that portion of work and that it shall perform that portion itself. Substitution of listed subcontractors shall only be permitted in accordance with Public Contract Code Section 4107.

ARTICLE 11. LICENSING REQUIREMENTS

Pursuant to Business and Professions Code Section 7028.15 and Public Contract Code Section 3300, all Bidders must possess proper licenses for performance of this Contract. Subcontractors must possess the appropriate licenses for each specialty subcontracted. Pursuant to Business and Professions Code Section 7028.5, the City shall consider any Bid submitted by a Bidder not currently licensed in accordance with state law and pursuant to the requirements found in the Contract Documents to be nonresponsive, and the City shall reject the Bid. The City shall have

the right to request, and Bidders shall provide within ten (10) calendar days, evidence satisfactory to the City of all valid license(s) currently held by that Bidder and each of the Bidder's subcontractors, before awarding the Contract.

Notwithstanding anything contained herein, if the Work involves federal funds, the Contractor shall be properly licensed by the time the Contract is awarded, pursuant to the provisions of Public Contract Code section 20103.5.

ARTICLE 12. BID GUARANTEE (BOND)

Each Bid shall be accompanied by: (a) cash; (b) a certified or cashier's check made payable to **City of Upland**; or (c) a Bid Bond secured from a surety company satisfactory to the City, the amount of which shall not be less than ten percent (10%) of the Total Bid Price, made payable to **City of Upland** as bid security. Personal sureties and unregistered surety companies are unacceptable. The surety insurer shall be California admitted surety insurer, as defined in Code of Civil Procedure Section 995.120. The bid security shall be provided as a guarantee that within ten (10) Days after the City provides the successful Bidder the Notice of Award, the successful Bidder will enter into a Contract and provide the necessary bonds and certificates of insurance. The bid security will be declared forfeited if the successful Bidder fails to comply within said time, and the City may enter into a Contract with the next lowest responsive responsible bidder, or may call for new Bids. No interest shall be paid on funds deposited with the City. The City will return the security accompanying the Bids of all unsuccessful Bidders no later than 60 calendar days after award of the contract.

ARTICLE 13. IRAN CONTRACTING ACT OF 2010

In accordance with Public Contract Code Section 2200 *et seq.*, the City requires that any person that submits a Bid with the City of one million dollars (\$1,000,000) or more, certify at the time the Bid is submitted that the person is not identified on a list created pursuant to subdivision (b) of Public Contract Code Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Public Contract Code Section 2202.5, or as a person described in subdivision (b) of Public Contract Code Section 2202.5, as applicable.

The form of such Iran Contracting Certificate is included with the Bid Forms and must be signed and dated under penalty of perjury.

ARTICLE 14. NONCOLLUSION DECLARATION

Bidders on all public works contracts are required to submit a declaration of noncollusion with their Bid. This form is included with the Bid Forms and must be signed and dated under penalty of perjury.

ARTICLE 15. PUBLIC WORKS CONTRACTOR DIR REGISTRATION CERTIFICATION

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No Bid will be accepted nor any Contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. To this end, Bidder shall sign and submit with its Bid

the Public Works Contractor DIR Registration Certification on the form provided, attesting to the facts contained therein. Failure to submit this form may render the bid non-responsive. In addition, each Bidder shall provide the registration number for each listed subcontractor in the space provided in the Designation of Subcontractors form.

ARTICLE 16. BIDDER INFORMATION AND EXPERIENCE FORM

Each Bidder shall complete the questionnaire provided herein and shall submit the questionnaire along with its Bid. Failure to provide all information requested within the questionnaire along with the Bid may cause the bid to be rejected as non-responsive. The City reserves the right to reject any Bid if an investigation of the information submitted does not satisfy the City that the Bidder is qualified to properly carry out the terms of the Contract.

ARTICLE 17. WORKERS' COMPENSATION CERTIFICATION

In accordance with the provisions of Labor Code Section 3700, Contractor shall secure the payment of compensation to its employees. Contractor shall sign and file with the City a Workers' Compensation Certificate prior to performing the work under this Contract. The form of such Workers' Compensation Certificate is included as part of the Bid Forms.

ARTICLE 18. SIGNING OF BIDS

All Bids submitted shall be executed by the Bidder or its authorized representative. Bidders may be asked to provide evidence in the form of an authenticated resolution of its Board of Directors or a Power of Attorney evidencing the capacity of the person signing the Bid to bind the Bidder to each Bid and to any Contract arising therefrom.

If a Bidder is a joint venture or partnership, it may be asked to submit an authenticated Power of Attorney executed by each joint venturer or partner appointing and designating one of the joint venturers or partners as a management sponsor to execute the Bid on behalf of Bidder. Only that joint venturer or partner shall execute the Bid. The Power of Attorney shall also: (1) authorize that particular joint venturer or partner to act for and bind Bidder in all matters relating to the Bid; and (2) provide that each venturer or partner shall be jointly and severally liable for any and all of the duties and obligations of Bidder assumed under the Bid and under any Contract arising therefrom. The Bid shall be executed by the designated joint venturer or partner on behalf of the joint venture or partnership in its legal name.

ARTICLE 19. SUBMISSION OF ELECTRONIC BIDS

Once the Bid and supporting documents have been completed and submitted electronically via PlanetBids before the time and day set for the receipt of Bids. No oral or telephonic bids will be considered. No forms transmitted via e-mail, facsimile, or any other means will be considered. Bids received after the time and day set for the receipt of Bids will not be accepted.

Only where expressly permitted in the Notice Inviting Bids may bidders submit their bids via electronic transmission pursuant to Public Contract Code sections 1600 and 1601. Any acceptable method(s) of electronic transmission shall be stated in the Notice Inviting Bids. The City may reject any Bid not strictly complying with the City's designated methods for delivery.

ARTICLE 20. OPENING OF BIDS

At the time and place set for the opening and reading of Bids, or any time thereafter, each and every Bid received prior to the time and day set for the receipt of Bids will be opened. The City will not accept any Bid received after the specified date and time. It is the Bidder's sole responsibility to ensure that its Bid is uploaded and received by PlanetBids. Bids may be submitted earlier than the date(s) and time(s) indicated.

The City may, in its sole discretion, elect to postpone the opening of the submitted Bids. The City reserves the right to reject any or all Bids and to waive any informality or irregularity in any Bid.

ARTICLE 21. WITHDRAWAL OF BID

Any Bid may be withdrawn at any time prior to the scheduled closing time for receipt of Bids. Withdrawn Bids may be resubmitted until the time and day set for the receipt of Bids, provided that resubmitted Bids are in conformance with the instructions herein.

Bids may be withdrawn after Bid opening only by providing written notice to the City within five (5) working days of the Bid opening and in compliance with Public Contract Code Section 5100 *et seq.*, or as otherwise may be allowed with the consent of the City.

ARTICLE 22. BIDDERS INTERESTED IN MORE THAN ONE BID

No Bidder shall be allowed to make, file or be interested in more than one Bid for the same work unless alternate Bids are specifically called for. 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 thereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or from simultaneously submitting its own Bid as a prime contractor.

ARTICLE 23. SUBSTITUTION OF SECURITY

The Contract Documents call for monthly progress payments for the Work completed. The City will retain a percentage of each progress payment as provided by the Contract Documents. At the request and expense of the successful Bidder, the City will substitute securities for the amount so retained in accordance with Public Contract Code Section 22300.

ARTICLE 24. PREVAILING WAGES

The City has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages in the locality in which this work is to be performed for each craft or type of worker needed to execute the Contract. These rates are available at the **Office of the City Clerk** of the City of Upland or may be obtained online at <http://www.dir.ca.gov>. Bidders are advised that a copy of these rates must be posted by the successful Bidder at the job site(s).

ARTICLE 25. DEBARMENT OF CONTRACTORS AND SUBCONTRACTORS

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Labor Code Sections 1777.1 or 1777.7. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work

as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to the City. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

ARTICLE 26. INSURANCE REQUIREMENTS

Prior to commencing work, the successful bidder shall purchase and maintain insurance as set forth in the General Conditions.

ARTICLE 27. PERFORMANCE BOND AND PAYMENT BOND REQUIREMENTS

The successful Bidder will be required to furnish a Labor and Material Payment Bond and a Faithful Performance Bond each in an amount equal to one hundred percent (100%) of the contract price. Each bond shall be secured from a surety company that meets all State of California bonding requirements, as defined in California Code of Civil Procedure Section 995.120 and is admitted by the State of California. Each bond shall be accompanied, upon the request of the City, with all documents required by California Code of Civil Procedure Section 995.660 to the extent required by law. All bonding and insurance requirements shall be completed and submitted to the City within ten (10) Days from the date the City provides the successful bidder with the Notice of Award.

ARTICLE 28. SALES AND OTHER APPLICABLE TAXES, PERMITS, LICENSES AND FEES

Contractor and its subcontractors performing work under this Contract will be required to pay California sales tax and other applicable taxes, and to pay for permits, licenses and fees required by the agencies with authority in the jurisdiction in which the Work will be located, unless otherwise expressly provided by the Contract Documents.

ARTICLE 29. FILING OF BID PROTESTS

Bidders may file a "protest" of a Bid with the City's Representative. In order for a Bidder's protest to be considered valid, the protest must:

- A. Be filed in writing within five (5) calendar days after the bid opening date or any City determination or recommendation regarding the Bidder's bid;
- B. Clearly identify the specific irregularity or accusation;
- C. Clearly identify the specific City staff determination or recommendation being protested;
- D. Specify in detail the grounds for protest and the facts supporting the protest; and
- E. Include all relevant, supporting documentation with the protest at time of filing.

If the protest does not comply with each of these requirements, the City may reject the protest without further review.

If the protest is timely and complies with the above requirements, the City's Representative, or other designated City staff member, shall review the protest, any response from the challenged Bidder(s), and all other relevant information. The Representative will provide a written decision

to the protestor.

The procedure and time limits set forth in this Article are mandatory and are the sole and exclusive remedy in the event of a Bid protest. Failure to comply with these procedures shall constitute a failure to exhaust administrative remedies and a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings.

ARTICLE 30. BASIS OF AWARD; BALANCED BID

The City shall award the Contract to the lowest responsible Bidder submitting a responsive Bid. The lowest Bid will be determined on the basis of the **Total Base Bid Price**.

The City may reject any Bid which, in its opinion when compared to other Bids received or to the City's internal estimates, does not accurately reflect the cost to perform the Work. The City may reject as non-responsive any Bid which unevenly weights or allocates costs, including but not limited to overhead and profit to one or more particular bid items.

ARTICLE 31. AWARD PROCESS

Once all Bids are opened and reviewed to determine the lowest responsive and responsible Bidder, the City Council may award the Contract. The apparent successful Bidder should begin to prepare the following documents: (1) the Performance Bond; (2) the Payment Bond; and (3) the required insurance certificates and endorsements. Once the City notifies the Bidder of the award, the Bidder will have ten (10) days from the date of this notification to execute the Contract and supply the City with all of the required documents and certifications. Once the City receives all of the properly drafted and executed documents and certifications from the Bidder, the City will issue a Notice to Proceed to that Bidder.

ARTICLE 32. EXECUTION OF CONTRACT

As required herein the Bidder to whom an award is made shall execute the Contract in the amount determined by the Contract Documents. The City may require appropriate evidence that the persons executing the Contract are duly empowered to do so. The Contract and bond forms to be executed by the successful Bidder are included within these Contract Documents and shall not be detached.

ARTICLE 33. QUESTIONS

Questions regarding this Notice Inviting Bids may be directed to **Yesenia Diaz, Associate Engineer** at **909-931-4137** or email at **ydiaz@uplandca.gov**. Questions may also be directed to Alan French, Principal Engineer at 909-931-4235 or email afrench@uplandca.gov. No other members of the City's staff or City Council should be contacted about this procurement during the bidding process. Any and all inquiries and comments regarding this Bid must be communicated in writing, unless otherwise instructed by the City. The City may, in its sole discretion, disqualify any Bidder who engages in any prohibited communications.

ARTICLE 34. FLEET COMPLIANCE

The City is a Public Works Awarding Body, as defined under Title 13 California Code of Regulations section 2449(c)(46). Accordingly, Bidders must submit, with their Bids, a valid Certificate of Reported Compliance ("CRC") for the Bidder's and its listed subcontractors fleet

(including any applicable leased equipment or vehicles). Bidder must complete and submit the Fleet Compliance Certification, included in the Bid Documents. Failure to provide a CRC for the Bidder, and for all listed subcontractors, or failure to complete the Fleet Compliance Certification, may render the Bid non-responsive

ARTICLE 35. LEVINE ACT DISCLOSURE STATEMENT

California Government Code Section 84308, commonly referred to as the "Levine Act," prohibits City Officers from participating in any action concerning a license, permit, other entitlement for use, franchise, or contract (collectively "license, permit, or contract") if they receive political contribution(s) from a party, or its agent(s), totaling more than \$250 within the twelve (12) months before the proceeding, while a proceeding is pending, and for twelve (12) months following the date of a final decision in a proceeding. The Levine Act also requires a member of the Upland City Council who has received such a contribution to disclose the contribution on the record of the proceeding and recuse themselves before the proceeding unless the violation has been properly cured.

00 41 43 – BID FORMS

BID ACKNOWLEDGMENT

Bids will be received at the Office of the City Clerk, until 3:00 pm on 30, October 2025.

PROJECT NO. 82338

BID NO. 2025-04

TOM THOMAS MAGNOLIA PLAZA

NAME OF BIDDER: _____

To the **CITY OF UPLAND**, with its principal place of business at 460 N. Euclid Avenue Upland, CA 91786.

- A. In response to the Notice Inviting Bids dated **October 10, 2025** and in accordance with the accompanying Instructions to Bidders, the undersigned hereby proposes to the City to furnish all labor, technical and professional services, supervision, materials and equipment, other than materials and equipment specified as furnished by the City, and to perform all operations necessary and required to construct the Project in accordance with the provisions of the Contract Documents and any addenda thereto, and at the prices stated opposite the respective items set forth in the Bid Schedule.
- B. This Bid constitutes a firm offer to the City which cannot be withdrawn for 90 days after the date set for opening of Bids, or until a Contract is executed by the City and a third party, whichever is earlier.
- C. The undersigned certifies that it has examined and is fully familiar with all of the provisions of the Contract Documents and any addenda thereto; that it has carefully checked all of the words and figures shown in its Bid Schedule; that it has carefully reviewed the accuracy of all statements in this Bid and attachments hereto; and that it understands and agrees that the City will not be responsible for any errors or omissions on the part of the undersigned in preparing this Bid.
- D. If awarded a Contract, the undersigned agrees to execute and deliver to the City within ten (10) days after date of receipt of Notice of Award, a signed Contract and the necessary Performance Bond, Payment Bond, and Certificates of Insurance and Endorsements.
- E. The following Bid Forms, which have been completed and executed by the undersigned Bidder, are incorporated by this reference and made a part of this Bid:
 - 1. Bid Schedule
 - 2. Bid Guarantee in the amount of not less than 10% of the Total Bid Price.

3. Completed Designation of Subcontractors Form.
 4. Fully executed Non-collusion Declaration Form.
 5. Completed Iran Contracting Act Certification Form.
 6. Completed Public Works Contractor DIR Registration Certification Form.
 7. Completed Contractor's Certificate Regarding Workers' Compensation Form.
 8. Completed Bidder Information and Experience Form.
 9. Fleet Compliance Form.
 10. California Levine Act Disclosure Statement
 11. Fleet Compliance Form.
- F. The undersigned is hereby representing that it is and will be properly licensed both at the time that it submits a Bid as well as at the time the Contract is awarded, if the Contract is awarded to the undersigned.

1. Individual Contractor. Undersigned certifies that it is now licensed in accordance with the provisions of the Contractor's License Law of the State of California.

License number _____

Expiration date _____

License classification _____

1. Joint Venture. Undersigned certifies that the individual members of the joint venture are now licensed in accordance with the provisions of the Contractor's License Law of the State of California.

Member No. 1

Name _____

License number _____

Expiration date _____

License classification _____

Member No. 2

Name _____

License number _____

Expiration date _____

License classification _____

(If there are more than two members of the joint venture, attach a page for the additional member(s) with the above information.)

The undersigned acknowledges receipt, understanding, and full consideration of the following addenda to the Contract Documents:

Addenda No. _____

[SIGNATURE ON FOLLOWING PAGE]

I hereby certify under penalty of perjury under the laws of the State of California that all of the information submitted in connection with this Bid and all of the representations made herein are true and correct.

BIDDER:

Bidder's Business Address:

(Company Name)

By _____
(Signature)

(Type or print name)

(Title)

(Where signed) (City, State)

(corporate seal)

Dated: _____, 20_____
State of Incorporation: _____

(If the Prime Contractor is a corporation, two signatures of corporate officers are required.)

Names and addresses of all partners or joint venturers:

Statement of the authority of signatory to bind Bidder:

BID SCHEDULE

TOM THOMAS MAGNOLIA PLAZA

Name of Bidder: _____

The undersigned, having examined the proposed Contracts and having visited the site and examined the conditions affecting the work, hereby and agrees to furnish all labor, materials, equipment, and appliances, and perform operations necessary to complete the work as required by said proposed Contract Documents, excluding work of alternates for.

08/19/2025

| BID ITEM | DESCRIPTION | Quantity | Unit | Unit Price | Total Price |
|-------------------------------------|---|----------|------|------------|-------------|
| MOBILIZATION | | | | | |
| 1 | Mobilization | 1 | LS | | |
| 2 | Temporary Items & Services | 1 | LS | | |
| GRADING & DRAINAGE ITEMS | | | | | |
| 3 | Fine Grading | 9828 | SF | | |
| 4 | 12" Concrete Catch Basin & Grate #2 | 4 | EA | | |
| 5 | 6" Round Area Drain With Atrium Grate #1 | 11 | EA | | |
| 6 | PVC 6" Drain Pipe #4 | 10 | LF | | |
| 7 | PVC 8" Drain Pipe #5 | 463 | LF | | |
| 8 | PVC 8" Perforated Drain Pipe #6 | 75 | LF | | |
| 9 | 6" Concrete Curb #3 | 80 | LF | | |
| 10 | Amended Soil Trench | 138 | LF | | |
| 11 | Infiltration Trench #9 | 75 | LF | | |
| DEMOLITION | | | | | |
| 12 | Saw Cut & Remove portion of bike trail #7 | 190 | SF | | |
| 13 | Bollard Removal #5 | 2 | EA | | |
| 14 | Remove portion of synthetic turf & base # 10 | 121 | SF | | |
| 15 | Asphalt & base removal #2 | 1235 | SF | | |
| 16 | Remove Utility box, cap lines #3 | 3 | EA | | |
| 17 | Remove concrete wheel stop #9 | 4 | EA | | |
| 18 | Remove sign post and footing #8 | 3 | EA | | |
| 19 | Cobble paving removal #1 | 989 | SF | | |
| 20 | Stacked Concrete removal #4 | 1 | LS | | |
| 21 | Salvage and stockpile existing boulders for reuse #S1 | 30 | EA | | |
| 22 | Salvage Store Light Post for reuse #S2 | 1 | EA | | |
| 23 | Remove Weeds, rubbish, and debris #6 | 1300 | SF | | |
| CONCRETE AND PAVING | | | | | |
| 24 | Concrete Header Installation C-21 | 693 | LF | | |
| 25 | Concrete Paving Installation- 5" Natural color med. broom finish P-14 | 3534 | SF | | |

| | | | | | |
|-----------------------|---|------|-----|--|--|
| 26 | Concrete Paving Installation Natural color with Sandblast Date P-13 | 260 | SF | | |
| 27 | Concrete Steps Installation P-11 | 17 | LF | | |
| 28 | Concrete Ramp Installation at Stage | 126 | SF | | |
| 29 | Integral Color Concrete Installation 5" broom finish P-15 | 3882 | SF | | |
| 30 | Decomposed Granite Paving P-62 | 3865 | SF | | |
| 31 | Swale - Dry Stream - A-92 | 227 | SF | | |
| 32 | CU-Structural Soil P-91 | 1692 | SF | | |
| MASONRY | | | | | |
| 33 | Tactile Warning Pavers P-31 | 180 | SF | | |
| 34 | Cobble Paving Grouted P-61 | 434 | SF | | |
| 35 | Brick & Pavers at Knotwork P-21 & P-22 | 290 | SF | | |
| 36 | CMU Columns for Pole Lights and String Light Poles W-15 & L-102 | 1 | LS | | |
| 37 | 6'-6" CMU Column W-14 | 1 | EA. | | |
| 38 | 18" Seat Wall with Cap W-11 | 68 | LF | | |
| 39 | 18" Retaining Wall W-21 | 50 | LF | | |
| 40 | 24" Retaining Wall W-22 | 62 | LF | | |
| 41 | 24" Cheek Wall @ Steps & Ramp W-12 W-13 | 24 | LF | | |
| 42 | Anti Skate Devices | 34 | EA. | | |
| STRUCTURES | | | | | |
| 43 | Cantilever Shade Structure SS-22 | 2 | EA | | |
| 44 | Entry Arch Sign with CMU Columns SS-11 | 1 | LS | | |
| SITE AMENITIES | | | | | |
| 46 | Tree Grate & Frame A-91 | 2 | EA | | |
| 48 | City provided Bike Repair Station - Installation Only A-15 | 1 | EA | | |
| 50 | Permanent Steel Bollard A-95 w/ R-7585 Cover | 3 | EA | | |
| 51 | Permanent Steel Bollard A-94 | 4 | EA | | |
| 52 | Removable Steel Bollard A-98 | 2 | EA | | |
| 53 | Precast Concrete Monument Sign at Stage S-42 | 1 | LS | | |
| 54 | Handrail at Steps & Ramp F-101 | 52 | LF | | |
| 55 | Bronze Plaque | 1 | EA | | |
| 56 | Concrete Plaque | 2 | EA | | |
| 58 | City provided Landscape Boulder - 18" to 24" - Installation Only A-61 | 5 | EA | | |
| 59 | City provided Landscape Boulder - 24" to 30" - Installation Only A-61 | 7 | EA | | |
| 60 | City provided Landscape Boulder - 30" to 36" - Installation Only A-61 | 18 | EA | | |
| 61 | City provided Landscape Boulder - 36" to 48" - Installation Only A-61 | 12 | EA | | |
| ELECTRICAL | | | | | |
| 62 | 12' 9" & 15' 3" Pole Lights (inc. wiring, controls) | 3 | EA. | | |
| 63 | Electrical Service | 1 | LS | | |
| 64 | Electrical Panel | 1 | LS | | |
| 65 | Lighting at Shade Structure | 2 | EA. | | |

| | | | | | |
|-----------------------------|--|-------|-----|--|--|
| 66 | Lighting Control | 1 | LS | | |
| 67 | Mural Uplights | 5 | EA. | | |
| 68 | LED at Column | 2 | EA. | | |
| 69 | LED Linear UP Light | 2 | EA. | | |
| 70 | 20' String Light Poles | 4 | EA. | | |
| 71 | String Lights | 286 | LF | | |
| 72 | 3/4" & 1" 120 V Conduit with conductors and Pull Box | 1 | LS | | |
| LANDSCAPE IRRIGATION | | | | | |
| 73 | Drip Irrigation System | 5414 | SF | | |
| 74 | Irrigation Controller | 1 | LS | | |
| 75 | Backflow - 1" RP. Type & Enclosure | 1 | LS | | |
| 76 | Quick Coupler Valve in Valve Box - 1" | 5 | EA | | |
| 77 | Pressure Regulator | 1 | EA | | |
| 78 | Flow Meter - 1" in Valve Box | 1 | EA | | |
| 79 | Master Valve - 1" in Valve Box | 1 | EA | | |
| 80 | Ball Valve - in Valve Box | 5 | EA | | |
| 81 | Remote Control Valve - 1" in Valve Box | 15 | EA | | |
| 82 | Mainline & Control Wires | 360 | LF | | |
| 83 | Spray Head with Lateral Pipe | 56 | EA | | |
| 84 | RWS Bubbler with Lateral Pipe | 34 | EA | | |
| LANDSCAPE PLANTING | | | | | |
| 85 | 15 Gallon Tree | 13 | EA. | | |
| 86 | 36" Box Tree | 2 | EA. | | |
| 87 | 60" Box Tree | 2 | EA. | | |
| 88 | 1 Gallon Shrub | 1278 | EA. | | |
| 89 | 5 Gallon Shrub | 240 | EA. | | |
| 90 | 15 Gallon Shrub | 59 | EA. | | |
| 91 | Sod | 8476 | SF | | |
| 92 | Soil Amendment, Soil Preparation | 13890 | SF | | |
| 93 | 3" Shredded Mulch at Planter Areas | 6884 | SF | | |
| 94 | Tree Root Barriers | 80 | LF | | |
| 95 | 90 Day Maintenance Period | 1 | LS | | |

TOTAL BASE BID AMOUNT _____

| | |
|--|--|
| TOTAL BID PRICE BASED ON BID SCHEDULE | |
| \$ _____ | |
| Total Base Bid in Numbers | |

The costs for any Work shown or required in the Contract Documents, but not specifically identified as a line item are to be included in the related line items and no additional compensation shall be due to Contractor for the performance of the Work.

All blank spaces appearing above must be filled in. Failure to fill in any blank spaces may render the bid non-responsive. In case of discrepancy between the Unit Price and Item Cost set forth for a unit basis item, the Unit Price shall prevail and be utilized as the basis for determining the lowest responsive, responsible Bidder. However, if the amount set forth as a Unit Price is ambiguous, unintelligible, or uncertain for any cause, or is omitted, or is the same amount as the entry in the Item Cost column, then the amount set forth in the Item Cost column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the Unit Price.

For the purpose of evaluating Bids, the City will correct any apparent errors in the extension of unit prices and any apparent errors in the addition of lump sum and extended prices.

The estimated quantities for Unit Price items are for the purpose of comparing Bids only and the City makes no representation that the actual quantities of work performed will not vary from the estimates. Final payment shall be determined by the Engineer from measured quantities of work performed based upon the Unit Price.

The undersigned agrees that this Bid Schedule constitutes a firm offer to the City which cannot be withdrawn for the number of calendar days indicated in the Notice Inviting Bids from and after the Bid opening, or until a Contract for the Work is fully executed by the City and a third party, whichever is earlier.

If the Contract Documents specify Alternate Bid items, the City can choose to include any, all, or none of the Alternate Bid items in the Work. If the City selects any of the Alternate Bid items, the corresponding Alternate Bid prices shall be added to or deducted from Base Bid Price for the Work. The City can award/select Alternate Bid items at any time(s).

NOTES:

1. Determination of the lowest bidder will be based upon the **“TOTAL BASE BID”** price indicated in the Bid Schedule above.
2. All amounts and totals given in the Bid Schedule will be subject to verification by the Contractor. In case of variation between the unit cost and amount shown by bidder, the unit cost will be considered to be his/her bid.
3. The price bid shall include all State, Federal, and other taxes applicable to the project, and shall be a firm offer for a period of 90 calendar days after the date of bid opening.
4. Acknowledge receipt of all Addenda. The cover sheet of each addendum issued is signed by the Contractor and attached herewith.
5. Unbalanced bids will be considered sufficient grounds for rejection of the entire bid. An unbalanced bid is defined as a bid containing lump sum or unit bid items which do not reasonably reflect actual costs, plus reasonable share of the anticipated profits, overhead costs, and other indirect costs attributable to the performance of the work in question.
6. The quantities listed in the above Bid Form are estimates shown for bid comparison only. Payment will be made at the Contract Unit Price for the actual quantities constructed, based upon field measurements or certified weight tickets where appropriate. The City does not,

expressly or by implication, agree that the actual amount of work will correspond therewith, and reserves the right to increase or decrease the amount of any class or portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the Engineer. In case of variation between the unit cost and amount shown by bidder, the unit cost will be considered to be his/her bid.

7. The City reserves the right to delete one or more bid items, and/or to increase or decrease the quantities of any bid item.

The undersigned, under penalty of perjury, acknowledges that they are authorized by the bidding Contractor to submit a bid for said Contractor

Respectfully submitted:

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____

BID GUARANTEE

BID BOND

[Note: Not required when other form of Bidder's Security, e.g. cash, certified check or cashier's check, accompanies Bid.]

The makers of this bond are, _____, as Principal, and _____, as Surety and are held and firmly bound unto the CITY OF UPLAND , with its principal place of business at 460 N. Euclid Avenue, Upland, California 91786, hereinafter called the City, in the penal sum of TEN PERCENT (10%) OF THE TOTAL BID PRICE of the Principal submitted to the City for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted the accompanying bid dated _____, 20____, for **TOM THOMAS MAGNOLIA PLAZA**

If the Principal does not withdraw its Bid within the time specified in the Contract Documents; and if the Principal is awarded the Contract and provides all documents to the City as required by the Contract Documents; then this obligation shall be null and void. Otherwise, this bond will remain in full force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents shall affect its obligation under this bond, and Surety does hereby waive notice of any such changes.

In the event a lawsuit is brought upon this bond by the City and judgment is recovered, the Surety shall pay all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and expenses.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals this _____ day of _____, 20____, the name and corporate seal of each corporation.

(Corporate Seal)

Contractor/ Principal

By _____

Title _____

(Corporate Seal)

Surety

By _____

Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title _____

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of Agent or Representative for service of process in California, if different from above)

(Telephone number of Surety and Agent or Representative for service of process in California)

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

Name(s) of Signer(s)

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

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

WITNESS my hand and official seal.

 Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

DESCRIPTION OF ATTACHED DOCUMENT

- Individual
- Corporate Officer

 Title(s)

 Title or Type of Document

- Partner(s) Limited
- General

 Number of Pages

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

 Date of Document

Signer is representing:
 Name Of Person(s) Or Entity(ies)

 Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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

WITNESS my hand and official seal.

 Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

_____ Title(s)

- Partner(s) Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:
 Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

_____ Title or Type of Document

_____ Number of Pages

_____ Date of Document

_____ Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of-Attorney to local representatives of the bonding company must also be attached.

END OF BID BOND

DESIGNATION OF SUBCONTRACTORS

The subcontractor listed below will perform work or labor or render service to the contractor in or about the construction of the work or improvement, or are subcontractors licensed by the State of California who will, under subcontract to the contractor, specially fabricate and install a portion of the work or improvement according to detailed drawings contained in the Contract Documents, in an amount in excess of one-half of one percent (1/2 of 1%) of the contractor's total bid. Notwithstanding the foregoing, if the work involves the construction of streets and highways, then the Bidder shall list each subcontractor who will perform work or labor or render service to the Bidder in or about the work in an amount in excess of one-half of one percent (0.5%) of the Bidder's Total Bid Price or \$10,000, whichever is greater. No additional time shall be granted to provide the below requested information.

In compliance with the Subletting and Subcontracting Fair Practices Act Chapter 4 (commencing at Section 4100), Part 1, Division 2 of the California Public Contract Code, the Bidder shall set forth below:

- (a) The portion of the work to be done by the subcontractor;
- (b) The name and the location of the place of business;
- (c) The California contractor license number; and
- (d) The DIR public works contractor registration number.

If a Bidder fails to specify a subcontractor or if a Bidder specifies more than one subcontractor for the same portion of work, then the Bidder shall be deemed to have agreed that it is fully qualified to perform that portion of work and that it shall perform that portion itself.

| Portion of Work to be done by Subcontractor | Name of Subcontractor | Location of Business | CSLB Contractor License No. | DIR Registration Number |
|---|-----------------------|----------------------|-----------------------------|-------------------------|
| | | | | |
| | | | | |

| Portion of Work to be done by Subcontractor | Name of Subcontractor | Location of Business | CSLB Contractor License No. | DIR Registration Number |
|---|-----------------------|----------------------|-----------------------------|-------------------------|
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| | | | | |

(Attach additional sheets if necessary)

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____

BIDDER INFORMATION AND EXPERIENCE FORM

A. INFORMATION ABOUT BIDDER

(Indicate not applicable (“N/A”) where appropriate.)

NOTE: Where Bidder is a joint venture, pages shall be duplicated, and information provided for all parties to the joint venture.

1.0 Name of Bidder: _____

2.0 Type, if Entity: _____

3.0 Bidder Address: _____

Facsimile Number

Telephone Number

Email Address

4.0 How many years has Bidder’s organization been in business as a Contractor?

5.0 How many years has Bidder’s organization been in business under its present name? _____

5.1 Under what other or former names has Bidder’s organization operated?

6.0 If Bidder’s organization is a corporation, answer the following:

6.1 Date of Incorporation: _____

6.2 State of Incorporation: _____

6.3 President’s Name: _____

6.4 Vice-President’s Name(s): _____

6.5 Secretary’s Name: _____

6.6 Treasurer’s Name: _____

7.0 If an individual or a partnership, answer the following:

7.1 Date of Organization: _____

7.2 Name and address of all partners (state whether general or limited partnership):

8.0 If other than a corporation or partnership, describe organization and name principals:

9.0 List other states in which Bidder's organization is legally qualified to do business.

10.0 What type of work does the Bidder normally perform with its own forces?

11.0 Has Bidder ever failed to complete any work awarded to it? If so, note when, where, and why:

12.0 Within the last five years, has any officer or partner of Bidder's organization ever been an officer or partner of another organization when it failed to complete a contract? If so, attach a separate sheet of explanation:

13.0 List Trade References:

14.0 List Bank References (Bank and Branch Address):

15.0 Name of Bonding Company and Name and Address of Agent:

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C. LIST OF COMPLETED PROJECTS – LAST THREE YEARS

[**Duplicate Page if needed for listing additional completed projects.**]

Please include only those projects which are similar enough to demonstrate Bidder's ability to perform the required Work.

| Project | Client Reference (agency name/contact info) | Description of Bidder's Work | Completion Date | Cost of Bidder's Work |
|---------|--|---------------------------------|-----------------|--------------------------|
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D. EXPERIENCE AND TECHNICAL QUALIFICATIONS QUESTIONNAIRE

Personnel:

The Bidder shall identify the key personnel to be assigned to this project in a management, construction supervision or engineering capacity.

1. List each person's job title, name and percent of time to be allocated to this project:

2. Summarize each person's specialized education:

3. List each person's years of construction experience relevant to the project:

4. Summarize such experience:

Bidder agrees that personnel named in this Bid will remain on this Project until completion of all relevant Work, unless substituted by personnel of equivalent experience and qualifications approved in advance by the City.

E. ADDITIONAL BIDDER'S STATEMENTS:

If the Bidder feels that there is additional information which has not been included in the questionnaire above, and which would contribute to the qualification review, it may add that information in a statement here or on an attached sheet, appropriately marked:

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____

NON-COLLUSION DECLARATION

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 of Bidder _____

Signature _____

Name and Title _____

Dated _____

IRAN CONTRACTING ACT CERTIFICATION.

(Public Contract Code section 2200 et seq.)

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 *et seq.*) is true and correct:

The Contractor is not:

- (1) identified on the current list of person and entities engaged in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or
- (2) a financial instruction that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran.

The City has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, the City will be unable to obtain the goods and/or services to be provided pursuant to the Contract.

The amount of the Contract payable to the Contractor for the Project does not exceed \$1,000,000.

Signature: _____

Printed Name: _____

Title: _____

Firm Name: _____

Date: _____

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract amount, termination of the Contract and/or ineligibility to bid on contracts for three years.

PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATION

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for additional information.

No Bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Bidder hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.¹

Name of Bidder: _____

DIR Registration Number: _____

DIR Registration Expiration: _____

Small Project Exemption: _____ Yes or _____ No

Unless Bidder is exempt pursuant to the small project exemption, Bidder further acknowledges:

1. Bidder shall maintain a current DIR registration for the duration of the project.
2. Bidder shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
3. Failure to submit this form or comply with any of the above requirements may result in a finding that the bid is non-responsive.

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____

¹ If the Project is exempt from the contractor registration requirements pursuant to the small project exemption under Labor Code Sections 1725.5 and 1771.1, please mark "Yes" in response to "Small Project Exemption."

CONTRACTOR'S CERTIFICATE REGARDING WORKERS' COMPENSATION.

I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract.

Name of Bidder _____

Signature _____

Name and Title _____

Dated _____

FLEET COMPLIANCE CERTIFICATION

Bidder hereby acknowledges that they have reviewed the California Air Resources Board's policies, rules and regulations and are familiar with the requirements of Title 13, California Code of Regulations, Division 3, Chapter 9, effective on January 1, 2024 (the "Regulation"). Bidder hereby certifies, subject to penalty for perjury, that the option checked below relating to the Bidder's fleet, and/or that of their subcontractor(s) ("Fleet") is true and correct:

- The Fleet is subject to the requirements of the Regulation, and the appropriate Certificate(s) of Reported Compliance have been attached hereto.
- The Fleet is exempt from the Regulation under section 2449.1(f)(2), and a signed description of the subject vehicles, and reasoning for exemption has been attached hereto.
- Bidder and/or their subcontractor is unable to procure R99 or R100 renewable diesel fuel as defined in the Regulation pursuant to section 2449.1(f)(3). Bidder shall keep detailed records describing the normal refueling methods, their attempts to procure renewable diesel fuel and proof that shows they were not able to procure renewable diesel (i.e. third party correspondence or vendor bids).
- The Fleet is exempt from the requirements of the Regulation pursuant to section 2449(i)(4) because this Project has been deemed an Emergency, as defined under section 2449(c)(18). Bidder shall only operate the exempted vehicles in the emergency situation and records of the exempted vehicles must be maintained, pursuant to section 2449(i)(4).
- The Fleet does not fall under the Regulation or are otherwise exempted and a detailed reasoning is attached hereto.

Name of Bidder: _____

Signature: _____

Name: _____

Title: _____

Date: _____



LEVINE ACT DISCLOSURE STATEMENT

CA LEVINE ACT DISCLOSURE STATEMENT

California Government Code Section 84308, commonly referred to as the "Levine Act," prohibits City Officers from participating in any action concerning a license, permit, other entitlement for use, franchise, or contract (collectively "license, permit, or contract") if they receive political contribution(s) from a party, or its agent(s), totaling more than \$250 within the twelve (12) months before the proceeding, while a proceeding is pending, and for twelve (12) months following the date of a final decision in a proceeding.

The Levine Act also requires a member of the Upland City Council who has received such a contribution to disclose the contribution on the record of the proceeding and recuse themselves before the proceeding unless the violation has been properly cured.

Current Upland City Council Members are listed at:

<https://www.uplandca.gov/city-council-treasurer>

Parties and their Agents are responsible for accessing the link to review the names and disclosing their applicable contributions to City Officers on the record of a proceeding.

As a party to a proceeding, you are also required to provide information below about contributions made by you, your agents on behalf of you or your organization, your organization subject to the proceeding with the City, and any organization you direct or control pursuant to the aggregation rules at FPPC Reg. § 18438.5, except for uncompensated officers of a nonprofit organization. This form is to be submitted to the City of Upland and is a public record. If you have any questions about this form, please contact your City representative for assistance.

1. Have you or your company, or any agent/board member on behalf of you or your company/entity, made any political contributions of more than \$250 to any Upland City Council Member in the 12 months preceding the date of the submission of your proposal or application, or the anticipated date of any Council action?

YES If yes, please identify the Council Member(s): _____

NO

2. Do you or your company/entity, or any agency on behalf of you or your company/entity, anticipate or plan to make any political contribution of more than \$250 to any Upland City Council Member in the 12 months following any Council action related to your proposal or application?

YES If yes, please identify the Council Member(s): _____

NO

Answering yes to either of the two questions above does not preclude the Upland City Council from awarding a contract or approving an application or any subsequent action. It does, however, preclude the identified Council Member(s) from participating in any actions related to your proposal or application.

Date

Signature of authorized individual

Company/Applicant Name

(Levine Act definitions on reverse side)

LEVINE ACT DISCLOSURE STATEMENT DEFINITIONS

| Term | Definition | Law |
|-------------------------------------|---|---|
| Covered "proceedings" | A proceeding to grant, deny, revoke, restrict, or modify a license, permit or other entitlement for use, that does not solely involve purely ministerial decisions and is: (1) Applied for by the party; (2) Formally or informally requested by the party; or (3) A contract between the agency and the party or a franchisee granted by the agency to the party, other than a contract that is competitively bid , a labor contract , or a personal employment contract . | FPPC Reg 18438.2(a) |
| Party | Any person who files an application for, or is the subject of, a proceeding involving a license, permit, or other entitlement for use. | Gov. Code 84308(a)(1) |
| Participant | Any person who is not a party but who actively supports or opposes a particular decision in a proceeding involving a license, permit, or other entitlement for use and who has a financial interest in the decision. A person actively supports or opposes a particular decision in a proceeding if that person lobbies in person the officers or employees of the agency, testifies in person before the agency, or otherwise acts to influence officers of the agency. | Gov. Code 84308(a)(2) FPPC Reg 18438.4 |
| Agent | A person who represents a party or participant for compensation and appears before or otherwise communicates with the governmental agency for the purpose of influencing the pending proceeding. See FPPC Reg 18438.3 for exceptions for certain consultants. | FPPC Reg 18438.3 |
| Competitively Bid | A contract required by law to be awarded to the lowest responsible bidder with a responsive bid, or, if the successful bidder refuses or fails to execute the contract, to the next lowest bidder with a responsive bid. | FPPC Reg 18438.2(a)(3)(A) |
| Labor Contract | A contract or agreement reached through collective bargaining or with a representative group regarding the salary, benefits, or terms and conditions under an employment or retirement policy for employees or retirees, including a project labor agreement entered under Public Contract Code Section 2500. | FPPC Reg 18438.2(a)(3)(B) |
| Personal Employment Contract | A contract for employment, including the terms and conditions of employment, between the agency and an agency employee. A contract with an independent contractor is NOT a personal employment contract. | FPPC Reg 18438.2(a)(3)(C)-(D) |

00 52 13 – CONTRACT FOR CONSTRUCTION

This Contract for Construction (“Contract”), No. _____ is made and entered into this _____ day of _____, 2024 by and between the CITY OF UPLAND , with its principal place of business at 460 N. Euclid Avenue, Upland, California 91786 sometimes hereinafter called the “City” and _____, sometimes hereinafter called “Contractor.”

WITNESSETH: That the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree with each other as follows:

ARTICLE 1. SCOPE OF WORK.

The Contractor shall perform all Work within the time stipulated in the Contract, and shall provide all labor, materials, equipment, tools, utility services, and transportation to complete all of the Work required in strict compliance with the Contract Documents as specified in Article 5, below, for the following Project:

PROJECT NO. 82338

BID NO. 2025-04

TOM THOMAS MAGNOLIA PLAZA

The contractor is an independent contractor and not an agent of the City. The Contractor and its surety shall be liable to the City for any damages arising as a result of the Contractor’s failure to comply with this obligation.

ARTICLE 2. TIME FOR COMPLETION.

Time is of the essence in the performance of the Work. The Work shall be commenced on the date stated in the City’s Notice to Proceed. The Contractor shall complete all Work required by the Contract Documents within **240 calendar days** from the commencement date stated in the Notice to Proceed. By its signature hereunder, Contractor agrees the time for completion set forth above is adequate and reasonable to complete the Work.

ARTICLE 3. CONTRACT PRICE.

The City shall pay to the Contractor as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the sum of _____ (DOLLAR AMOUNT IN WORDS) _____ Dollars (\$ _____). Payment shall be made as set forth in the General Conditions. The City will pay to Contractor compensation based upon the prices set forth in the Bid Schedule.

ARTICLE 4. LIQUIDATED DAMAGES.

Contractor acknowledges that the City will sustain actual damages for each and every day completion of the Project is delayed beyond the Contract Time. Because of the nature of the Project, it would be impracticable or extremely difficult to determine the City’s actual damages.

Accordingly, in accordance with Government Code section 53069.85, it is agreed that the Contractor will pay the City the sum of **\$250** for each and every calendar day of delay beyond the time prescribed in the Contract Documents for finishing the Work, as Liquidated Damages and not as a penalty or forfeiture. In the event this is not paid, the Contractor agrees the City may deduct that amount from any money due or that may become due the Contractor under the Contract. This Section does not exclude recovery of other damages specified in the Contract Documents. Liquidated damages may be deducted from progress payments due Contractor, Project retention or may be collected directly from Contractor, or from Contractor's surety. These provisions for liquidated damages shall not prevent the City, in case of Contractor's default, from terminating the Contractor.

Consistent with Public Contract Code Section 7102, Contractor will be compensated for damages incurred due to delays for which the City is responsible. The parties agree that determining Contractor's exact delay damages is and will continue to be impracticable and extremely difficult. As such, for each calendar day in excess of the Contract Time, the City shall pay to the Contractor **\$250 per day** as Reverse Liquidated Damages and not as a penalty or forfeiture. Such amount shall constitute the only payment allowed for any City caused delays and shall necessarily include all overhead, all profits, all administrative costs, all bond costs, all labor, materials, equipment and rental costs and any other costs, expenses and fees incurred or sustained as a result of such delays. Notice of requests for delay damages and additional days shall be provided to the City within five (5) Days from the discovery of the circumstances giving rise to any delay or three (3) Days from the discovery of any latent or subsurface conditions giving rise to a delay.

ARTICLE 5. COMPONENT PARTS OF THE CONTRACT.

The "Contract Documents" include the following:

- Notice Inviting Bids
- Instructions to Bidders
- Bid Forms
- Bid Acknowledgement
- Bid Schedule
- Bid Guarantee
- Designation of Subcontractors
- Information Required of Bidders
- Non-Collusion Declaration Form
- Iran Contracting Act Certification
- Public Works Contractor DIR Registration Certification
- California Levine Act Disclosure Statement
- Fleet Compliance Form
- Performance Bond
- Payment (Labor and Materials) Bond Contract for Construction
- Contract for Construction
- General Conditions
- Special Conditions
- Specifications
- Addenda
- Construction Plans and Drawings
- Standard Specifications for Public Works Construction "Greenbook", 2018 edition, Except Sections 1-9
- Applicable Local Agency Standards and Specifications, as last revised

Reference Specifications
Approved and fully executed Change Orders
Permits
Any other documents contained in or incorporated into the Contract

The Contractor shall complete the Work in strict accordance with all of the Contract Documents.

All of the Contract Documents are intended to be complementary. Work required by one of the Contract Documents and not by others shall be done as if required by all. In the event of conflict, the various Contract Documents will be given effect in the order set forth in the General Conditions. This Contract shall supersede any prior agreement of the parties.

ARTICLE 6. PROVISIONS REQUIRED BY LAW AND CONTRACTOR COMPLIANCE.

Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of applicable federal, state and local laws, rules and regulations, including, but not limited to, the provisions of the California Labor Code and California Public Contract Code which are applicable to this Work.

ARTICLE 7. INDEMNIFICATION.

Contractor shall provide indemnification and defense as set forth in the General Conditions.

ARTICLE 8. PREVAILING WAGES.

Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at the City's Office or may be obtained online at <http://www.dir.ca.gov> and which must be posted at the job site.

ARTICLE 9. FALSE CLAIMS.

Contractor acknowledges that if a false claim is submitted to the City, it may be considered fraud and Contractor may be subject to criminal prosecution. Contractor acknowledges that the False Claims Act, California Government Code sections 12650, et seq., provides for civil penalties where a person knowingly submits a false claim to a public entity. These provisions include within their scope false claims made with deliberate ignorance of the false information or in reckless disregard of the truth or falsity of the information. In the event the City seeks to recover penalties pursuant to the False Claims Act, it is entitled to recover its litigation costs, including attorneys' fees. Contractor hereby acknowledges that the filing of a false claim may the Contractor to an administrative debarment proceeding wherein Contractor may be prevented from further bidding on public contracts for a period of up to five (5) years.

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IN WITNESS WHEREOF, this Contract has been duly executed by the above-named parties, on the day and year above written.

CITY OF UPLAND

NAME OF CONTRACTOR

By: _____
Bill Velto, Mayor

[IF CORPORATION, TWO SIGNATURES,
PRESENT **OR** VICE PRESIDENT **AND**
SECRETARY **OR** TREASURER **REQUIRED**]

ATTEST:

By: _____

Its:

By: _____
Keri Johnson, City Clerk

Printed Name:

APPROVED AS TO FORM:

[SECONDARY SIGNATURE LINE IF
APPLICABLE]

By: _____

Its:

By: _____
Stephen Deitsch
Best Best & Krieger LLP
City Attorney

Printed Name:

Contractor's License Number and
Classification

DIR Registration Number

**(CONTRACTOR'S SIGNATURE MUST BE
NOTARIZED AND CORPORATE
SEAL AFFIXED, IF APPLICABLE)**

END OF CONTRACT

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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

WITNESS my hand and official seal.

Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

Title(s)

- Partner(s) Limited General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:
Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

Title or Type of Document

Number of Pages

Date of Document

Signer(s) Other Than Named Above

00 61 13 – BOND FORMS

Performance Bond

KNOW ALL PERSONS BY THESE PRESENTS:

THAT WHEREAS, the CITY OF UPLAND , with its principal place of business at 460 N. Euclid Avenue, Upland, California 91786 (hereinafter referred to as the "City") has awarded to _____, (hereinafter referred to as the "Contractor") an agreement for **Contract No. 82338**, (hereinafter referred to as the "Project").

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, the Contractor is required by said Contract Documents to perform the terms thereof and to furnish a bond for the faithful performance of said Contract Documents.

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

THE CONDITION OF THIS OBLIGATION IS SUCH, that, if the Contractor, 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 the covenants, conditions and agreements in the Contract Documents and any alteration thereof made as therein provided, on its part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill all obligations including the one (1) year guarantee of all materials and workmanship; and shall indemnify and save harmless the City, its officials, officers, employees, and authorized volunteers, as stipulated in said Contract Documents, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of the obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees including reasonable attorney's fees, incurred by the City in enforcing such obligation.

As a condition precedent to the satisfactory completion of the Contract Documents, unless otherwise provided for in the Contract Documents, the above obligation shall hold good for a period of one (1) year after the acceptance of the work by the City, during which time if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the City from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the City's rights or the Contractor or Surety's

obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure Section 337.15.

Whenever Contractor shall be, and is declared by the City to be, in default under the Contract Documents, the Surety shall remedy the default pursuant to the Contract Documents, or shall promptly, at the City's option:

- i. Take over and complete the Project in accordance with all terms and conditions in the Contract Documents; or
- ii. Obtain a bid or bids for completing the Project in accordance with all terms and conditions in the Contract Documents and upon determination by Surety of the lowest responsive and responsible bidder, arrange for a Contract between such bidder, the Surety and the City, and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.
- iii. Permit the City to complete the Project in any manner consistent with California law and make available as work progresses sufficient funds to pay the cost of completion of the Project, less the balance of the contract price, including other costs and damages for which Surety may be liable. The term "balance of the contract price" as used in this paragraph shall mean the total amount payable to Contractor by the City under the Contract and any modification thereto, less any amount previously paid by the City to the Contractor and any other set offs pursuant to the Contract Documents.

Surety expressly agrees that the City may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Contractor.

Surety shall not utilize Contractor in completing the Project nor shall Surety accept a bid from Contractor for completion of the Project if the City, when declaring the Contractor in default, notifies Surety of the City's objection to Contractor's further participation in the completion of the Project.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract Documents or to the Project 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 addition to the terms of the Contract Documents or to the Project.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

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

(Corporate Seal)

Contractor/ Principal

By _____

Title _____

(Corporate Seal)

Surety

By _____
Attorney-in-Fact

Title _____

(Attach Attorney-in-Fact Certificate)

The rate of premium on this bond is _____ per thousand. The total amount of premium charges is \$_____.
(The above must be filled in by corporate attorney.)

THIS IS A REQUIRED FORM

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of Agent or Representative for service of process in California, if different from above)

(Telephone number of Surety and Agent or Representative for service of process in California)

Notary Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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

WITNESS my hand and official seal.

 Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

CAPACITY CLAIMED BY SIGNER

- Individual
- Corporate Officer

_____ Title(s)

- Partner(s) Limited
- General

- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other:

Signer is representing:
 Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

_____ Title or Type of Document

_____ Number of Pages

_____ Date of Document

_____ Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

Notary Acknowledgment

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 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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Signer is representing:
 Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

_____ Title or Type of Document

_____ Number of Pages

_____ Date of Document

_____ Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for the Attorney-in-Fact. The Power-of Attorney to local representatives of the bonding company must also be attached.

END OF PERFORMANCE BOND

Payment Bond (Labor and Materials).

KNOW ALL MEN BY THESE PRESENTS That

WHEREAS, the CITY OF UPLAND , with its principal place of business at 460 N. Euclid Avenue, Upland, California 91786 (hereinafter designated as the "City"), by action taken or a resolution passed _____, 20_____, has awarded to _____ hereinafter designated as the "Principal," a contract for the work described as follows: **Contract No. 82338** (the "Project"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in the Contract Documents for the Project dated _____, (hereinafter referred to as "Contract Documents"), the terms and conditions of which are expressly incorporated herein by reference; and

WHEREAS, said Principal is required to furnish a bond in connection with said contract; providing that if said Principal or any of its Subcontractors shall fail to pay for any materials, provisions, provender, equipment, or other supplies used in, upon, for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Code or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of said Principal and its Subcontractors with respect to such work or labor the Surety on this bond will pay for the same to the extent hereinafter set forth.

NOW THEREFORE, we, the Principal and _____ as Surety, are held and firmly bound unto the City in the penal 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, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, his or its subcontractors, heirs, executors, administrators, successors or assigns, shall fail to pay any of the persons named in Civil Code Section 9100, fail to pay for any materials, provisions or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department or Franchise Tax Board from the wages of employees of the contractor and his subcontractors pursuant to Revenue and Taxation Code Section 18663, with respect to such work and labor the Surety or Sureties will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, all litigation expenses incurred by the City in such suit, including reasonable attorneys' fees, court costs, expert witness fees and investigation expenses.

This bond shall inure to the benefit of any of the persons named in Civil Code Section 9100 so as to give a right of action to such persons or their assigns in any suit brought upon this bond.

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

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

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract 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 addition to the terms of Contract, including but not limited to, the provisions of Sections 2819 and 2845 of the California Civil Code.

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

(Corporate Seal)

Contractor/ Principal

By _____

Title _____

(Corporate Seal)

Surety

By _____
Attorney-in-Fact

(Attach Attorney-in-Fact Certificate)

Title _____

Notary Acknowledgment

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STATE OF CALIFORNIA
 COUNTY OF _____

On _____, 20____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory

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

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

WITNESS my hand and official seal.

 Signature of Notary Public

OPTIONAL

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- Other:

Signer is representing:
 Name Of Person(s) Or Entity(ies)

DESCRIPTION OF ATTACHED DOCUMENT

_____ Title or Type of Document

_____ Number of Pages

_____ Date of Document

_____ Signer(s) Other Than Named Above

NOTE: This acknowledgment is to be completed for Contractor/Principal.

00 72 00 – GENERAL PROVISIONS

The Standard Specifications for the City of Upland shall be the latest edition of the **STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), 2018 EDITION** (sometimes hereinafter referred to as the Greenbook), written and promulgated by the Southern California Chapter, American Public Works Association, and Southern California Districts Associated General Contractors of California Joint Cooperative Committee, including all published amendments thereto except for the following amendments, deletions and modifications.

Any conflict arising between these modifications and the Standard Specifications for Public Works Construction shall be resolved by the Engineer, whose decision shall be final.

Modifications to the Standard Specifications for Public Works Construction

The following amendments, additions and deletions shall be incorporated into the Greenbook:

ARTICLE 1 -TERMS; DEFINITIONS

1.1 Defined Terms

- A. Whenever used in the Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined below, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. Act of God – An earthquake of magnitude of 3.5 or higher on the Richter scale or a tidal wave.
 2. Addenda -- Written or graphic instruments issued prior to the submission of Bids which clarify, correct, or change the Contract Documents.
 3. Additional Work -- New or unforeseen work will be classified as “Additional Work” when the Engineer determines that it is not covered by the Contract.
 4. Applicable Laws -- The laws, statutes, ordinances, rules, codes, regulations, permits, and licenses of any kind, issued by local, state or federal governmental authorities or private authorities with jurisdiction (including utilities), to the extent they apply to the Work.
 5. Bid -- The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices and other terms for the Work to be performed.
 6. Bid Guarantee -- The Bid Bond, cashier’s check, or certified check to be made by the Bidder, which is to accompany the Bid as a guaranty of good faith to enter into a written contract.
 7. Bidder -- The individual or entity who submits a Bid directly to the City.

8. Change Order ("CO") -- A document that authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Contract, in accordance with the Contract Documents and in the form contained in the Contract Documents.
9. Change Order Request ("COR") -- A request made by the Contractor for an adjustment in the Contract Price and/or Contract Times as the result of a Contractor-claimed change to the Work. This term may also be referred to as a Change Order Proposal ("COP"), or Request for Change ("RFC").
10. City's Representative -- The City Engineer and/or his/her designee, and acting through properly authorized agents, such as the Engineer or such other agents acting within the scope of the particular duties entrusted to them. Also sometimes referred to as the "City's Representative" or "Representative" in the Contract Documents. The terms the City and Owner may be used interchangeably
11. Claim -- A demand or assertion by the City or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
12. Contract -- The entire integrated written agreement between the City and Contractor concerning the Work. "Contract" may be used interchangeably with "Agreement" in the Contract Documents. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral, and includes all Contract Documents.
13. Contract Documents -- The documents listed in Section 00 52 13, Article 5 of the Contract for Construction. Some documents provided by the City to the Bidders and Contractor, including but not limited to reports and drawings of subsurface and physical conditions are not Contract Documents.
14. Contract Price -- Amount to be paid by the City to the Contractor as full compensation for the performance of the Contract and completion of the Work, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs.
15. Contract Time -- The number of days or the dates stated in the Contract Documents to: achieve defined milestones, if any; and to complete the Work so that it is ready for final payment.
16. Contractor -- The individual or entity with which the City has contracted for performance of the Work.
17. Contractor's Designated On-Site Representative -- The Contractor's Designated On-Site Representative will be identified by the Contractor and shall not be changed without prior written consent of the City.
18. Critical Supply Shortage -- An unusual shortage in materials that is (a) supported by documented proof that Contractor made every effort to obtain such materials from all available sources; (b) such shortage is due to the fact that such materials are not physically available from single or multiple sources or could have been

obtained only at exorbitant prices entirely inconsistent with current and standard rates taking into account the quantities involved and the usual industry practices in obtaining such quantities; and (c) such shortages and the difficulties in obtaining alternate sources of materials could not have been known or anticipated by Contractor at the time it submitted its bid or entered the Contract. Market fluctuations in prices of materials, whether or not resulting from a Force Majeure Event, does not constitute a Critical Supply Shortage.

19. Daily Rate -- The Daily Rate stipulated in the Contract Documents as full compensation to the Contractor due to the City's unreasonable delay to the Project that was not contemplated by the parties.
20. Day -- A calendar day of 24 hours measured from midnight to the next midnight.
21. Defective Work -- Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referenced in the Contract Documents.
22. Demobilization -- The complete dismantling and removal by the Contractor of all of the Contractor's temporary facilities, equipment, and personnel at the Site.
23. Drawings -- That part of the Contract Documents prepared by of the Engineer of Record which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor Submittals are not Drawings as so defined.
24. Effective Date of the Contract -- The date indicated in the Contract on which it becomes effective, but if no such date is indicated, it means the date on which the Contract is signed and delivered by the last of the two parties to sign and deliver.
25. Engineer -- Whenever not qualified, shall mean the City Engineer or the Engineer authorized to act for and in behalf of the City, acting either directly or through properly authorized agents, such agents acting severally within the scope of the particular duties entrusted to them.
26. Force Majeure Event -- An event that materially affects a party's performance and is one or more of the following: (1) Acts of God or other natural disasters occurring at the Site; (2) terrorism or other acts of a public enemy; (3) orders of governmental authorities (including, without limitation, unreasonable and unforeseeable delay in the issuance of permits or approvals by governmental authorities that are required for the Work); (4) pandemics, epidemics or quarantine restrictions; (5) strikes and other organized labor action occurring at the Site and the effects thereof on the Work, only to the extent such strikes and other organized labor action are beyond the control of Contractor and its Subcontractors, of every Tier, and to the extent the effects thereof cannot be avoided by use of replacement workers; and (6) a Critical Supply Shortage. For purposes of this section, "orders of governmental authorities," includes ordinances, emergency proclamations and orders, rules to protect the public health, welfare and safety, and other actions of the City in its capacity as a municipal authority.

27. Hazardous Waste -- The term "Hazardous Waste" shall have the meaning provided in Section 104 of the Solid Waste Disposal Act (42 U.S.C. § 6903) as amended from time to time, or any substance or material identified as hazardous under any state or federal statute governing handling, disposal and/or cleanup of any such substance or material, whichever is more restrictive.

28. Holiday – Holidays occur on:

New Year's Day - January 1
Martin Luther King, Jr. Day – Third Monday in January
President's Day – Third Monday in February
Memorial Day - Last Monday in May
Independence Day - July 5
Labor Day - First Monday in September
Thanksgiving Day - Fourth Thursday in November
Friday after Thanksgiving
Christmas Day - December 25
Day After Christmas – December 26
The City is also closed from December 25 to January 2
New Year's Eve – December 31

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

29. Notice of Award -- The written notice by the City to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, the City will sign and deliver the Contract.

30. Notice of Completion -- The form which may be executed by the City constituting final acceptance of the Project.

31. Notice to Proceed -- A written notice given by the City to Contractor fixing the date on which the Contractor may proceed with the Work and when Contract Times will commence to run.

32. Project -- The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

33. Record Drawings – The record set of as-builts prepared by the Contractor during the Work in accordance with the requirements of the General Conditions.

34. Recyclable Waste Materials -- Materials removed from the Site which are required to be diverted to a recycling center rather than an area landfill. Recyclable Waste Materials include, but are not limited to, asphalt, concrete, brick, concrete block, and rock.

35. Sample -- A physical example furnished by the Contractor to illustrate materials, equipment or workmanship; to establish standards by which the Work will be judged.

36. Schedule of Submittals -- A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to facilitate scheduled performance of related construction activities.
37. Shop Drawings -- All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
38. Site -- Lands or areas indicated in the Contract Documents as being furnished by the City upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by the City which are designated for the use of Contractor.
39. Specifications -- That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
40. Stop Payment Notice -- A written notice as defined in Civil Code section 8044.
41. Subcontractor -- An individual or entity other than a Contractor having a contract with any other entity than the City for performance of any portion of the Work at the Site.
42. Submittal -- Written and graphic information and physical samples prepared and supplied by the Contractor demonstrating various portions of the Work.
43. Successful Bidder -- The responsible Bidder submitting a responsive Bid to whom the City makes an award.
44. Supplier -- A manufacturer, fabricator, supplier, distributor, material man, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment used in the performance of the Work or to be incorporated in the Work.
45. Underground Facilities -- All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. Unit Price Work -- Work to be paid for on the basis of unit prices as provided by the Contractor in its Bid or as adjusted in accordance with the Contract Documents.
47. Warranty -- A guarantee provided to the City by the Contractor that the Work will remain free of defects and suitable for its intended use for the period required by the Contract Documents or the longest period permitted by the law of this state, whichever is longer.

48. Work -- The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

1.2 Terminology.

- A. The words and terms below are not defined but, when used in the Contract Documents, have the indicated meaning.
1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. Regardless of whether "furnish," "install," "perform," or "provide" is used in connection with services, materials, or equipment, an obligation of Contractor is implied.
- B. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 -PRELIMINARY MATTERS

2.1 Delivery of Contract Documents

- A. Within ten (10) Days after receipt of the Notice of Award and before the City will execute the Contract, the Contractor shall furnish and file with the City a signed Contract and the necessary Performance Bond, Payment Bond, and Certificates of Insurance and Endorsements, as well as any other documents specified in the Contract Documents.

2.2 Bonds

- A. Contractor shall submit the bonds on the forms provided with the Contract Documents, duly executed by a responsible corporate surety admitted to transact surety business in the State of California, as defined in Code of Civil Procedure section 995.120, and listed in the United States Department of the Treasury circular entitled "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies," authorized to do

business in the State of California and acceptable to the City conditioned upon the faithful performance by the Contractor of all requirements of the Contract Documents. Each of the bonds shall be in a sum no less than one hundred percent (100%) of the Contract Price. Bonds shall be delivered to the City within ten (10) Days after receipt of the Notice of Award and before execution of the Contract by the City.

2.3 Evidence of Insurance

- A. Prior to commencing any Work but no later than ten (10) Days after receipt of the Notice of Award, the Contractor shall submit or cause to be submitted any and all Certificates of Insurance and Endorsements, showing that the Contractor has the required insurance, to the attention of the City. Such insurance is to be provided at the sole cost and expense of the Contractor. No Work shall be performed until all of the required insurance has been received and approved.

2.4 Execution of the Contract

- A. Upon receipt of the required Contract Documents, the City will execute the Contract, establishing the Effective Date of the Contract.

2.5 Contractor's Failure to Perform

- A. Should Contractor fail to comply with timelines provided above, the City shall retain the right to enforce and collect on the Contractor's Bid Guarantee, rescind award to the Contractor and award the Contract to the next lowest responsive, responsible bidder as determined by the City. If the City elects to accept bonds and insurance submitted late, the Contract Times will begin to run as of the date stated in the Notice to Proceed. However, the number of days beyond the original ten (10) Days it took to receive the properly executed Contract and related items may be deducted from the Contract Times.

2.6 Commencement of Contract Times; Notice to Proceed

- A. The City will not issue a Notice to Proceed until after the Effective Date of the Contract. Work shall commence within ten (10) Days of the date stated in the Notice to Proceed. The Contract Times begin to run on the date specified in the Notice to Proceed. No Work shall be done at the Site prior to the issuance of the Notice to Proceed.

2.7 Copies of Documents

- A. Contractor will be furnished, free of charge, five (5) copies of the Contract Documents. Additional copies may be obtained at cost of reproduction. Contractor shall maintain a clean, undamaged set of Contract Documents, including Submittals, at the Project site.

2.8 Substitution Requests, Schedule of Submittals, and Schedule

- A. Substitution Requests. Within fifteen (15) Days after Notice of Award (unless otherwise specified in the Contract Documents), Contractor shall provide all substitution requests as further described in Section 00 72 00, Article 6.5.

- B. Schedule of Submittals. Within five (5) Days after the issuance of the Notice of Proceed (unless otherwise specified in the Contract Documents), Contractor shall submit to the City a Schedule of Submittals that conforms with the requirements of Section 00 72 00, Article 5.21.
- C. Schedule. Within ten (10) days after the issuance of the Notice of Proceed (unless otherwise specified in the Contract Documents), the Contractor shall submit a construction schedule that conforms with the requirements of Section 00 72 00, Article 8.2.

2.9 Preconstruction Conference; Designation of Authorized Representatives.

- A. Before any Work at the Site is started, a conference attended by the City, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to herein, procedures for handling Submittals and Shop Drawings, processing applications for payment, and maintaining required records.
- B. At this conference the City and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.10 Subcontractor Mobilization Meeting.

- A. Prior to the start of each major Subcontractor's Site Work, the Contractor, the involved Subcontractor, and Engineer shall attend a pre-start meeting to discuss the schedule, coordination, procedures, and other administrative issues.

2.11 Authority of Board; Engineer

- A. The Board has the final authority in all matters affecting the Work. Within the scope of the Contract, the Engineer has the authority to enforce compliance with the Contract Documents. The Contractor shall promptly comply with instructions from the Engineer.
- B. The decision of the Engineer is final and binding on all questions relating to:
 - 1. quantities;
 - 2. acceptability of material, equipment, or work;
 - 3. execution, progress or sequence of work;
 - 4. interpretation of the Plans, Specifications, or other Contract Documents; and
 - 5. Any other areas specifically identified in the Contract Documents or under the law.
- C. Compliance with instructions from the Engineer shall be a condition precedent to any payment under the Contract, unless otherwise ordered by the Board.

2.12 Mobilization

- A. When a Bid item is included in the Bid Schedule for mobilization, the costs of Work in advance of construction operations and not directly attributable to any specific bid item will be included in the progress estimate. When no bid item is provided for mobilization payment for such costs will be deemed to be included in the other items of the Work.
- B. Payment for mobilization based on the lump sum provided in the Bid Schedule, shall constitute full compensation for all such Work. No payment for mobilization will be made until all of the listed items have been completed to the satisfaction of the Engineer. The scope of the Work included under mobilization shall include, but shall not be limited to, the following principal items:
1. Obtaining and paying for all bonds, insurance, and permits.
 2. Moving on to the Project Site of all Contractor's plant and equipment required for the first month's operations.
 3. Installing temporary construction power, wiring, and lighting facilities, as applicable.
 4. Establishing fire protection system, as applicable.
 5. Developing and installing a construction water supply, as applicable.
 6. Providing and maintaining the field office trailers for the Contractor, if necessary, and the Engineer (if specified), complete, with all specified furnishings and utility services.
 7. Providing on-site sanitary facilities and potable water facilities as specified per Cal-OSHA and these Contract Documents.
 8. Furnishing, installing, and maintaining all storage buildings or sheds required for temporary storage of products, equipment, or materials that have not yet been installed in the Work. All such storage shall meet manufacturer's specified storage requirements, and the specific provisions of the specifications, including temperature and humidity control, if recommended by the manufacturer, and for all security.
 9. Arranging for and erection of Contractor's work and storage yard.
 10. Posting all OSHA required notices and establishment of safety programs per Cal-OSHA.
 11. Full-time presence of Contractor's superintendent at the job Site as required herein.
 12. Submittal of construction schedule as required by the Contract Documents.

ARTICLE 3 -CONTRACT DOCUMENTS; INTENT

3.1 Examination of Drawings, Specifications, and Site of Work

- A. Examination of Contract Documents; Site. Before commencing any portion of the Work, Contractor shall again carefully examine all applicable Contract Documents, the Project Site, and other information given to Contractor as to materials and methods of construction and other Project requirements. Contractor shall immediately notify the Engineer of any potential error, inconsistency, ambiguity, conflict, or lack of detail or explanation. If Contractor performs, permits, or causes the performance of any Work which is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all resulting costs, including, without limitation, the cost of correction. In no case shall the Contractor or any Subcontractor proceed with Work if uncertain as to the applicable requirements.
- B. Additional Instructions. After notification of any error, inconsistency, ambiguity, conflict, or lack of detail or explanation, the Engineer will provide any required additional instructions, by means of drawings or other written direction, necessary for proper execution of Work.
- C. Quality of Parts, Construction and Finish. All parts of the Work shall be of the best quality of their respective kinds and the Contractor must use all diligence to inform itself fully as to the required construction and finish.
- D. Contractor's Variation from Contract Document Requirements. If it is found that the Contractor has varied from the requirements of the Contract Documents including the requirement to comply with all Applicable Laws, the Engineer may at any time, before or after completion of the Work, order the improper Work removed, remade or replaced by the Contractor at the Contractor's expense.

3.2 Intent of Contract Documents

- A. The Contract Documents are complementary; what is required by any one will be binding as if required by all. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to the City.
- B. The Contractor shall furnish, unless otherwise provided in the Contract Documents, all materials, implements, machinery, equipment, tools, supplies and labor necessary to the prosecution and completion of the Project.
- C. Clarifications and interpretations of the Contract Documents shall be issued by the Engineer as provided in these General Conditions.
- D. If utilities to equipment/fixtures are not shown but are necessary to operate the equipment/fixtures, the utilities service installation is considered to be part of the

Work. The implied Work will conform to the appropriate sections of the Contract Documents.

- E. Organization of the Contract Documents into divisions, sections, and articles, and arrangement of drawings shall not control the Contractor in dividing Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

3.3 Reference Standards.

A. Standards, Specifications, Codes, Laws, and Regulations.

1. Reference to federal specifications, federal standards, other standards, specifications, manuals, or codes of any technical society, organization, or association, or to Applicable Laws, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Applicable Laws in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of the City, Contractor, or any of their Subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to the City, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.4 Reporting and Resolving Discrepancies; Order of Precedence.

A. Reporting Discrepancies.

1. The Contract Documents are intended to be fully cooperative and complementary. Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to the City any conflict, error, ambiguity, or discrepancy which Contractor discovers, should have discovered, or has actual knowledge of, and shall obtain a written interpretation or clarification from the City before proceeding with any Work affected thereby. If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (i) any Applicable Law, (ii) any standard, specification, manual, or code, or (iii) any instruction of any Supplier, then Contractor shall promptly submit a written Request for Information (RFI) to the City. Contractor shall not proceed with the Work affected thereby (except in an emergency) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in the Contract Documents, and any Work performed by Contractor before receipt of an amendment or supplement shall be at Contractor's own risk.

B. Order of Precedence.

1. In case of conflicts between the Contract Documents, the order of precedence shall be as follows:
 - a. Permits from other agencies as may be required by law
 - b. Change Orders, most recent first
 - c. Contract
 - d. Addenda, most recent first
 - e. Special Conditions
 - f. Specifications
 - g. Construction Plans and Drawings(Contract Drawings)
 - h. General Conditions
 - i. Instructions to Bidders
 - j. Notice Inviting Bids
 - k. Contractor's Bid (Bid Forms)
 - l. Standard Specifications for Public Works Construction "Greenbook" latest edition (Sections 1-9 Excluded)
 - m. Applicable Local Agency Standards and Specifications
 - n. Standard Drawings
 - o. Reference Documents
2. With reference to the Drawings the order of precedence shall be as follows:
 - a. Figures govern over scaled dimensions
 - b. Detail drawings govern over general drawings
 - c. Addenda/Change Order drawings govern over Drawings
 - d. Contract Drawings govern over Standard Drawings
 - e. Contract Drawings govern over Shop Drawings
3. Notwithstanding the orders of precedence established above, in the event of conflicts, the higher standard, higher quality and most expensive shall always apply.

3.5 Amending and Supplementing Contract Documents.

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof only by Change Order or written amendment to the Contract duly executed by the parties.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized at no cost to the City, by one or more of the following ways:
 - 1. The City's review of a Submittal, Shop Drawing, Sample or substitution request without exception (subject to the provisions of the Contract Documents); or
 - 2. The City's issuance of a response to an RFI.
- C. However, no review or RFI response will reduce or modify the Contractor's obligation to fully satisfy and comply with the requirements of the Contract Documents.

3.6 Reuse of Documents.

- A. Contractor and any Subcontractor or Supplier shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer of Record or its consultants, including electronic media editions; or
 - 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of the City and Engineer of Record and specific written verification or adaptation by Engineer of Record.
- B. The prohibitions of this Article will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 -INDEMNIFICATION; INSURANCE

4.1 Indemnification

- A. To the fullest extent permitted by law, Contractor shall immediately defend (with counsel of the City's choosing), indemnify and hold harmless the City, its officials, officers, agents, employees, and representatives, and each of them from and against:
 - 1. Any and all claims, demands, causes of action, costs, expenses, injuries, losses or liabilities, in law or in equity, of every kind or nature whatsoever, but not limited to, injury to or death, including wrongful death, of any person, and damages to or destruction of property of any person, arising out of, related to, or in any manner directly or indirectly connected with the Work or this Contract, including claims made by subcontractors for nonpayment, including without limitation the payment

of all consequential damages and attorney's fees and other related costs and expenses, however caused, regardless of whether the allegations are false, fraudulent, or groundless, and regardless of any negligence of the City or its officers, employees, or authorized volunteers (including passive negligence), except the sole negligence or willful misconduct or active negligence of the City or its officials, officers, employees, or authorized volunteers.

2. Contractor's defense and indemnity obligation herein includes, but is not limited to damages, fines, penalties, attorney's fees and costs arising from claims under the Americans with Disabilities Act (ADA) or other federal or state disability access or discrimination laws arising from Contractor's Work during the course of construction of the improvements or after the Work is complete, as the result of defects or negligence in Contractor's construction of the improvements.
 3. Any and all actions, proceedings, damages, costs, expenses, fines, penalties or liabilities, in law or equity, of every kind or nature whatsoever, arising out of, resulting from, or on account of the violation of any governmental law or regulation, compliance with which is the responsibility of Contractor;
 4. Any and all losses, expenses, damages (including damages to the Work itself), attorney's fees, and other costs, including all costs of defense which any of them may incur with respect to the failure, neglect, or refusal of Contractor to faithfully perform the Work and all of Contractor's obligations under Contract. Such costs, expenses, and damages shall include all costs, including attorney's fees, incurred by the indemnified parties in any lawsuit to which they are a party.
- B. Contractor shall immediately defend, at Contractor's own cost, expense and risk, with the counsel of the City choosing, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against the City, its officials, officers, agents, employees and representatives. Contractor shall pay and satisfy any judgment, award or decree that may be rendered against the City, its officials, officers, employees, agents, employees and representatives, in any such suit, action or other legal proceeding. Contractor shall reimburse the City, its officials, officers, agents, employees and representatives for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. The only limitations on this provision shall be those imposed by Civil Code section 2782.
- C. The provisions of this Article shall survive the termination of this Contract howsoever caused, and no payment, partial payment, or acceptance of occupancy in whole or part of the Work shall waive or release any of the provisions of this Article.

4.2 Insurance

The Contractor shall obtain, and at all times during performance of the Work of Contract, maintain all of the insurance described in this Article. Contractor shall not commence Work under this Contract until it has provided evidence satisfactory to the City that it has secured all insurance required hereunder. Contractor shall not allow any Subcontractor to commence work on any subcontract until it has provided evidence satisfactory to the City that the subcontractor has secured all insurance required under this Article. Failure to provide and maintain all required insurance shall be grounds for the City to terminate this Contract for cause. Contractor shall

furnish the City with original certificates of insurance and endorsements effective coverage required by this Contract on forms satisfactory to the City. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms acceptable to the City. All certificates and endorsements must be received and approved by the City before Work commences.

- A. **Additional Insureds; Waiver of Subrogation.** The City, its officials, officers, employees, agents and authorized volunteers shall be named as Additional Insureds on Contractor's All Risk policy and on Contractor's and its subcontractors' policies of Commercial General Liability and Automobile Liability insurance using, for Contractor's policy/ies of Commercial General Liability insurance, ISO CG forms 20 10 and 20 37 (or endorsements providing the exact same coverage, including completed operations), and, for subcontractors' policies of Commercial General Liability insurance, ISO CG form 20 38 (or endorsements providing the exact same coverage). Notwithstanding the minimum limits set forth in this Contract for any type of insurance coverage, all available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as Additional Insureds hereunder. All insurance coverage maintained or procured pursuant to this Contract shall be endorsed to waive subrogation against the City, its officers, officials, agents, employees or volunteers or shall specifically allow Contractor - or others providing insurance evidence in compliance with these specifications - to waive their right of recovery prior to a loss. Contractor hereby waives its own right of recovery against the City, and shall require similar written express waivers and insurance clauses from each of its subcontractors. Copies of these waivers shall be submitted to the City prior to commencement of work.
- B. **Workers' Compensation Insurance.** The Contractor shall provide workers' compensation insurance for all of the employees engaged in Work under this Contract, on or at the Site, and, in case of any sublet Work, the Contractor shall require the subcontractor similarly to provide workers' compensation insurance for all the latter's employees as prescribed by State law. Any class of employee or employees not covered by a subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in work under this Contract, on or at the Site, is not protected under the Workers' Compensation Statutes, the Contractor shall provide or shall cause a subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected. The Contractor is required to secure payment of compensation to his employees in accordance with the provisions of section 3700 of the Labor Code. The Contractor shall file with the City certificates of his insurance protecting workers. Company or companies providing insurance coverage shall be acceptable to the City, if in the form and coverage as set forth in the Contract Documents.
- C. **Employer's Liability Insurance.** Contractor shall provide Employer's Liability Insurance, including Occupational Disease, in the amount of at least one million dollars (\$1,000,000.00) per person per accident. Contractor shall provide the City with a certificate of Employer's Liability Insurance. Such insurance shall comply with the provisions of the Contract Documents. The policy shall be endorsed, if applicable, to provide a Borrowed Servant/Alternate Employer Endorsement and contain a Waiver of Subrogation in favor of the City.

D. **Commercial General Liability Insurance.** Contractor shall provide “occurrence” form Commercial General Liability insurance coverage at least as broad as the most current ISO CGL Form 00 01, including but not limited to, premises liability, contractual liability, products/completed operations, personal and advertising injury which may arise from or out of Contractor’s operations, use, and management of the Site, or the performance of its obligations hereunder. The policy shall not contain any exclusion contrary to this Contract including but not limited to endorsements or provisions limiting coverage for (1) contractual liability (including but not limited to ISO CG 24 26 or 21 39); or (2) cross-liability for claims or suits against one insured against another. Policy limits shall not be less than \$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit. Defense costs shall be paid in addition to the limits.

1. Such policy shall comply with all the requirements of this Article. The limits set forth herein shall apply separately to each insured against whom claims are made or suits are brought, except with respect to the limits of liability. Further the limits set forth herein shall not be construed to relieve the Contractor from liability in excess of such coverage, nor shall it limit Contractor’s indemnification obligations to the City, and shall not preclude the City from taking such other actions available to the City under other provisions of the Contract Documents or law.
2. All general liability policies provided pursuant to the provisions of this Article shall comply with the provisions of the Contract Documents.
3. All general liability policies shall be written to apply to all bodily injury, including death, property damage, personal injury, owned and non-owned equipment, blanket contractual liability, completed operations liability, explosion, collapse, under-ground excavation, removal of lateral support, and other covered loss, however occasioned, occurring during the policy term, and shall specifically insure the performance by Contractor of that part of the indemnification contained in these General Conditions relating to liability for injury to or death of persons and damage to property.
4. If the coverage contains one or more aggregate limits, a minimum of 50% of any such aggregate limit must remain available at all times; if over 50% of any aggregate limit has been paid or reserved, the City may require additional coverage to be purchased by Contractor to restore the required limits. Contractor may combine primary, umbrella, and as broad as possible excess liability coverage to achieve the total limits indicated above. Any umbrella or excess liability policy shall include the additional insured endorsement described in the Contract Documents.
5. All policies of general liability insurance shall permit and Contractor does hereby waive any right of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss.

E. **Automobile Liability Insurance.** Contractor shall provide Automobile Liability Insurance at least as broad as ISO CA 00 01 (Any Auto) in the amount of, at least,

one million dollars (\$1,000,000) per accident for bodily injury and property damage. Such insurance shall provide coverage with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by Contractor or for which Contractor is responsible, in a form and with insurance companies acceptable to the City. All policies of automobile insurance shall permit and Contractor does hereby waive any right of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss.

F. Section Not Used

G. Section Not Used

H. Contractor shall require all tiers of Subcontractors working under this Contract to provide the insurance required under this Article unless otherwise agreed to in writing by the City. Contractor shall make certain that any and all Subcontractors hired by Contractor are insured in accordance with this Contract. If any Subcontractor's coverage does not comply with the foregoing provisions, Contractor shall indemnify and hold the City harmless from any damage, loss, cost, or expense, including attorneys' fees, incurred by the City as a result thereof.

I. Notwithstanding the minimum limits set forth in this Contract for any type of insurance coverage, if Contractor maintains higher limits than the minimums shown above, the City requires and shall be entitled to coverage for the higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

J. Form and Proof of Carriage of Insurance

1. Any insurance carrier providing insurance coverage required by the Contract Documents shall be admitted to and authorized to do business in the State of California unless waived, in writing, by the City's Risk Manager. Carrier(s) shall have an A.M. Best rating of not less than an A:VII. Insurance deductibles or self-insured retentions must be declared by the Contractor. At the election of the City the Contractor shall either 1) reduce or eliminate such deductibles or self-insured retentions, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses. If umbrella or excess liability coverage is used to meet any required limit(s) specified herein, the Contractor shall provide a "follow form" endorsement satisfactory to the City indicating that such coverage is subject to the same terms and conditions as the underlying liability policy.
2. Each insurance policy required by this Contract shall be endorsed to state that: (1) coverage shall not be suspended, voided, reduced or cancelled except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the City; and (2) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the City, its officials, officers, agents, employees, and volunteers.
3. The Certificates(s) and policies of insurance shall contain or shall be endorsed to contain the covenant of the insurance carrier(s) that it shall provide no less than

thirty (30) days written notice be given to the City prior to any material modification or cancellation of such insurance. In the event of a material modification or cancellation of coverage, the City may terminate the Contract or stop the Work in accordance with the Contract Documents, unless the City receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. Contractor shall not take possession, or use the Site, or commence operations under this Contract until the City has been furnished original Certificate(s) of Insurance and certified original copies of endorsements or policies of insurance including all endorsements and any and all other attachments as required in this Article. The original endorsements for each policy and the Certificate of Insurance shall be signed by an individual authorized by the insurance carrier to do so on its behalf.

4. The Certificate(s) of Insurance, policies and endorsements shall so covenant and shall be construed as primary, and the City's insurance and/or deductibles and/or self-insured retentions or self-insured programs shall not be construed as contributory.
5. The City reserves the right to adjust the monetary limits and types of insurance coverages during the term of this Contract including any extension thereof if, in the City's reasonable judgment, the amount or type of insurance carried by the Contractor becomes inadequate.
6. Contractor shall report to the City, in addition to the Contractor's insurer, any and all insurance claims submitted by the Contractor in connection with the Work under this Contract.
7. Products/completed operations coverage shall extend a minimum of three years after the project completion. Coverage shall be included on behalf of the insured for covered claims arising out of the actions of independent contractors. If the insured is using subcontractors, the policy must include work performed "by or on behalf" of the insured. Policy shall contain no language that would invalidate or remove the insurer's duty to defend or indemnify for claims or suits expressly excluded from coverage. Policy shall specifically provide for a duty to defend on the part of the insurer. The City, its officers, officials, agents employees, and volunteers shall be included as insureds under the policy.

ARTICLE 5 -CONTRACTOR RESPONSIBILITIES; REGULATORY REQUIREMENTS

5.1 Applicable Laws

- A. Contractor shall give all notices required by and shall comply with all Applicable Laws applicable to the performance of the Work. Except where otherwise expressly required by Applicable Laws, neither the City nor the City's Representative shall be responsible for monitoring Contractor's compliance with any Applicable Laws. If Contractor performs any Work knowing or having reason to know that it is contrary to Applicable Laws, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys,

and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work.

5.2 Permits and Licenses

- A. Permits and licenses necessary for prosecution of the Work shall be secured and paid for by Contractor, including, but not limited to, excavation permit, for plumbing, mechanical and electrical work and for operations in or over public streets or right of way under jurisdiction of public agencies other than the City, unless otherwise specified in the Contract Documents.
- B. The Contractor shall arrange and pay for all off-site inspection of the Work related to permits and licenses, including certification, required by the specifications, drawings, or by governing authorities, except for such off-site inspections delineated as the City's responsibility pursuant to the Contract Documents.
- C. Before acceptance of the Work, the Contractor shall submit all licenses, permits, certificates of inspection and required approvals to the City.

5.3 Taxes

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid in accordance with the Applicable Laws of the place of the Project which are applicable during the performance of the Work. In accordance with Revenue and Taxation Code section 107.6, the Contract Documents may create a possessory interest subject to personal property taxation for which Contractor will be responsible.

5.4 Traffic Control

- A. Traffic control plans, if required, shall be prepared at Contractor's expense. Traffic control shall be performed at Contractor's expense in accordance with the requirements of the City and/or the local agency with jurisdiction. Costs for traffic control plans, implementation of traffic control, or traffic signal services required by the City shall be included in the Contractor's Bid.
- B. All warning signs and safety devices used by the Contractor to perform the Work shall conform to the requirements contained in the State of California, Department of Transportation's current edition of "Manual of Traffic Controls for Construction and Maintenance Work Zones" or to the requirements of the local agency. The Contractor shall also be responsible for all traffic control required by the agency having jurisdiction over the Project on the intersecting streets. Contractor must submit a traffic control plan to the agency having jurisdiction over the Project for approval prior to starting Work.
- C. The Contractor's representative on the site responsible for traffic control shall produce evidence that he/she has completed training acceptable to the California Department of Transportation for safety through construction zones. All of the streets in which the Work will occur shall remain open to traffic and one lane of traffic maintained at all times unless otherwise directed by the agency of jurisdiction. Businesses and residences adjacent to the Work shall be notified forty-eight (48)

hours in advance of closing of driveways. The Contractor shall make every effort to minimize the amount of public parking temporarily eliminated due to construction in areas fronting businesses. No stockpiles of pipe or other material will be allowed in traveled right-of-ways after working hours unless otherwise approved by the Engineer.

5.5 Safety

- A. Contractor shall be solely responsible for all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety laws. Contractor shall comply with all Applicable Laws relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other 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.
- B. The Contractor shall maintain emergency first aid treatment for his employees which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 *et seq.*), and California Code of Regulations, Title 8, Industrial Relations Division 1, Department of Industrial Relations, Chapter 4. The Contractor shall ensure the availability of emergency medical services for its employees in accordance with California Code of Regulations, Title 8, Section 1512. The Contractor shall submit an Illness and Injury Prevention Program and a Project Site specific safety program to the City prior to beginning Work. Contractor shall maintain a confined space program that meets or exceeds the City's standards. Contractor needs to make themselves aware of the City's safety policies and procedures, and shall meet or exceed all City standards in areas where the City must enter to perform inspections.
- C. Hazard Communication Programs. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Applicable Laws.

5.6 Hazardous Materials

- A. The City shall not be responsible for any Hazardous Waste brought to the site by the Contractor. If the Contractor: (i) introduces and/or discharges a Hazardous Waste onto the site in a manner not specified by the Contract Documents; and/or (ii) disturbs a Hazardous Material identified in the Contract Documents, the Contractor shall hire a qualified remediation contractor at Contractor's sole cost to eliminate the condition as soon as possible. Under no circumstance shall the Contractor perform Work for which it is not qualified. The City, in its sole discretion, may require the Contractor to retain at Contractor's cost an independent testing laboratory.
- B. If the Contractor encounters a Hazardous Waste which may cause foreseeable injury or damage, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such material or substance (except in

an emergency situation); and (iii) notify the City (and promptly thereafter confirm such notice in writing).

- C. Subject to Contractor's compliance with this Article 5.6(B), the City shall verify the presence or absence of the Hazardous Waste reported by the Contractor, except as qualified under Article 5.6(A) and Article 5.6(B) in the event such material or substance is found to be present, verify that the levels of the hazardous material are below OSHA Permissible Exposure Levels and below levels which would classify the material as a state of California or federal hazardous waste. When the material falls below such levels, Work in the affected area shall resume upon direction by the City.
- D. Contractor shall indemnify and hold harmless the City from and against claims, damages, losses and expenses, arising from a Hazardous Waste on the Project Site, if such Hazardous Waste exceeded OSHA Permissible Exposure Levels or levels which would classify the material as a state of California or federal hazardous waste, and was either i) shown on the Contract Documents or information available to bidders; or (ii) brought to the site by Contractor. Nothing in this paragraph shall obligate the Contractor to indemnify the City in the event of the sole or active negligence or willful misconduct of the City, its officers, agents, or employees.

5.7 Sanitary Facilities.

- A. Contractor shall provide sanitary temporary toilet buildings and hand washing facilities for the use of all workers. All toilets and hand washing facilities shall comply with local codes and ordinances. Toilets shall be placed inside sealed secondary containment devices installed on a flat, level surface. Accumulated liquids in the secondary containment devices shall be properly removed and legally disposed without spillage onto the ground. Toilets shall be kept supplied with toilet paper and shall have workable door fasteners. Toilets and hand washing facilities shall be serviced no less than once weekly and shall be present in a quantity of not less than 1 per 20 workers as required by Cal/OSHA regulations. The toilets and hand washing facilities shall be maintained in a sanitary condition at all times. Use of toilet and hand washing facilities in the Work under construction shall not be permitted. Any other sanitary facilities required by Cal/OSHA shall be the responsibility of the Contractor.

5.8 Dust Control

- A. Contractor, at its expense, shall maintain all excavations, embankments, haul roads, permanent access roads, plant sites, waste disposal areas, borrow areas, and all other work areas free from dust. Industry accepted methods of dust control suitable for the area involved, such as sprinkling, chemical treatment, light bituminous treatment or similar methods, will be permitted.

5.9 Air Pollution Control

- A. Contractor shall comply with all air pollution control rules, regulations, ordinances and statutes. All containers of paint, thinner, curing compound, solvent or liquid asphalt shall be labeled to indicate that the contents fully comply with the applicable material requirements.

- B. Without limiting the foregoing, Contractor must fully comply with all applicable laws, rules and regulations in furnishing or using equipment and/or providing services, including, but not limited to, emissions limits and permitting requirements imposed by the Air Quality Management District with jurisdiction over the Project and/or California Air Resources Board (CARB). Contractor shall specifically be aware of the application of these limits and requirements to "portable equipment", which definition includes any item of equipment with a fuel-powered engine. Contractor shall indemnify the City against any fines or penalties imposed by the air quality management district, CARB, or any other governmental or regulatory agency for its violations of Applicable Laws as well as those of its subcontractors or others for whom Contractor is responsible under its indemnity obligations provided for in the Contract Documents.

5.10 Water Quality Management and Compliance

- A. Storm, surface, ground, nuisance, or other waters may be encountered at various times during construction of the Work. The Contractor hereby acknowledges that it has investigated the risk arising from such waters, has prepared its Bid accordingly, and assumes any and all risks and liabilities arising therefrom.
- B. Contractor shall keep itself and all subcontractors, staff, and employees fully informed of and in compliance with all local, state and federal laws, rules and regulations that may impact, or be implicated by the performance of the Work including, without limitation, all applicable provisions regulating discharges of storm water; the Federal Water Pollution Control Act (33 U.S.C. § 13000 et seq.); the California Porter-Cologne Water Quality Control Act (Cal Water Code §§ 13000-14950); and any and all regulations, policies, or permits issued pursuant to any such authority. These include, but are not limited to, California State Water Resources Control Board Order Number 2009-0009-DWQ (NPDES Permit No. CAS000002), as amended by Order Numbers 2010-0014-DWQ, 2012-0006-DWQ, and any subsequent amendment to or renewal thereof, State Water Resources Control Board Order No. 2013-0001-DWQ (NPDES Order No. CAS000004), Santa Ana Regional Water Quality Control Board No. R8-2010-0036 (NPDES No. CAS618036), and any amendment or renewal thereof.
- C. Contractor shall comply with all conditions of the State Water Resources Control Board ("State Water Board") National Pollutant Discharge Elimination System General Permit for Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity ("Construction General Permit") for all construction activity which results in the disturbance of in excess of one acre of total land area or which is part of a larger common area of development or sale. Contractor shall comply with the lawful requirements of the City, and any other applicable municipality, drainage district, or other local agency with jurisdiction over the location where the Work is to be conducted, regarding discharges of storm water to separate storm drain systems or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs.
- D. Unless otherwise specified in the Special Conditions or other portion of the Contract Documents, the City has not prepared a Storm Water Pollution Prevention Plan ("SWPPP") or other storm water compliance plan for the Project Site. Contractor shall be responsible for filing the Notice of Intent ("NOI") and for obtaining coverage

under the Construction General Permit. This includes filing all necessary documentation including the Permit Registration Documents (“PRDs”) through the Stormwater Multiple Applications and Report Tracking System (“SMARTS”); preparing and implementing a SWPPP for the Work site; implementing all other provisions, and monitoring and reporting requirements required by the Construction General Permit; and providing a Qualified SWPPP Developer (“QSD”) and Qualified SWPPP Practitioner (“QSP”), as necessary for all Work site activities, including but not limited to preparation and submittal of all reports, plans, inspections, and monitoring information in compliance with the Construction General Permit. All submittals shall be coordinated with the City’s Legally Responsible Person and Authorized Signatory as those terms are defined in the Construction General Permit. Before any NOI, PRD, SWPPP, or other Construction General Permit-related document may be submitted to the State Water Board or implemented on the Project site, it must first be reviewed and approved by the City and/or City’s designee. Contractor shall include all costs of compliance with specified requirements in the Contract Price.

- E. The City retains the right to develop its own documentation for the Project site, including but not limited to the SWPPP, and in the alternative may require Contractor to adopt and implement portions of the City developed SWPPP. The City expressly reserves the right to procure coverage under the Construction General Permit for the Work site if Contractor fails to draft satisfactory PRDs or SWPPP or otherwise fails to proceed in a manner that complies with the requirements of the Construction General Permit. The City additionally reserves the right to hire additional contractors to maintain compliance at the Work site. Whether Contractor has adequately maintained compliance with the Construction General Permit shall be the City’s sole determination. Any costs incurred by the City in procuring coverage under the Construction General Permit, or drafting and/or implementing a SWPPP for the Work site shall be paid by Contractor.
- F. Notwithstanding the above, for those Work sites where construction activity results in the disturbance of less than one acre of total land area and/or do not need coverage under the Construction General Permit, the Contractor shall be responsible for preparing and implementing an Erosion and Sediment Control Plan in accordance with State Water Resources Control Board Order No. 2013-0001-DWQ (NPDES Order No. CAS000004) and any amendment to or renewal thereof.
- G. Failure to comply with the Construction General Permit, laws, regulations, and ordinances listed in this Article is a violation of federal and state law. Notwithstanding any other indemnity contained in these Contract Documents, Contractor agrees to indemnify and hold harmless the City, its officials, officers, agents, employees and authorized volunteers from and against any and all claims, demands, fees, costs, expenses, or losses or liabilities of any kind or nature which the City, its officials, officers, agents, employees and authorized volunteers may sustain or incur for noncompliance with the Permit, laws, regulations, and ordinances listed above, arising out of or in connection with the Work, except for liability resulting from the sole established negligence, willful misconduct or active negligence of the City, its officials, officers, agents, employees or authorized volunteers.
- H. The City reserves the right to defend any enforcement action or civil action brought against the City for Contractor’s failure to comply with any applicable water quality

law, regulation, or policy. Contractor hereby agrees to be bound by, and to reimburse the City for the costs associated with, any settlement reached between the City and any relevant enforcement entity.

5.11 Environmental Quality Protection

- A. The Contractor shall comply with all requirements of applicable federal, state, and local environmental rules and regulations. Any infractions of said rules and regulations by the Contractor during the term of the Contract, which result in penalties, will be the responsibility of the Contractor. The City operates under a number of environmental permits issued by various agencies. If due to an action, inaction, or negligence by the Contractor, the City becomes subject to non-compliance penalties, the cost of such penalties shall be borne by the Contractor.
- B. The Contractor shall exercise care to preserve the natural landscape and vegetation, and shall conduct operations so as to prevent unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the Work. Movement of crews and equipment within the rights-of-way and over routes provided for access to the Work shall be performed in a manner to prevent damage to property. When no longer required, construction roads shall be restored to original contours. Upon completion of the Work, and following removal of construction facilities and required cleanup, land used for construction purposes and not required for the completed installation shall be scarified and regraded, as required, so that all surfaces are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.
- C. If, in the performance of the Work, evidence of the possible occurrence of any Federally listed threatened or endangered plant or animal is discovered, the Contractor shall notify the City Representative immediately, giving the location and nature of the findings. Written confirmation of the evidence, location and nature of the findings shall be forwarded to City within two (2) Days. The Contractor shall immediately cease all construction activities in the immediate area of the discovery to the extent necessary to protect the endangered plant or animal. If directed by the City Representative, Contractor will refrain from working in the immediate area, suspend the Work in its entirety, or alter its performance to ensure full compliance with all applicable permits, laws and regulations. Any City directed changes to the Work as a result of a siting will be pursuant to the Contract Documents. Any costs or delays incurred by City or the Contractor due to unreasonable or false notification of an endangered plant or animal will be borne by the Contractor.
- D. If, in the performance of the Work, Contractor should unearth cultural resources (for example, human remains, animal bones, stone tools, artifacts and/or midden deposits) through excavation, grading, watering or other means, the Contractor shall notify the construction/archeological monitor and/or the City Representative immediately, giving the location and nature of the findings. Written confirmation of the evidence, location and nature of the findings shall be forwarded to the construction/archeological monitor and/or City within two (2) Days. The Contractor shall immediately cease all construction activities in the immediate area of the discovery to the extent necessary to protect the cultural resource. If directed by the City Representative, Contractor will refrain from working in the immediate area, suspend the Work in its entirety, or re-sequence and/or alter its performance to

ensure full compliance with all applicable permits, laws and regulations. Should the presence of cultural resources be confirmed, the Contractor will assist the City Representative and the construction/archeological monitor in the preparation and implementation of a data recovery plan. The Contractor shall provide such cooperation and assistance as may be necessary to preserve the cultural resources for removal or other disposition. Any City directed changes to the Work as a result of the cultural resource will be pursuant to the Contract Documents. Should Contractor, without permission, injure, destroy, excavate, appropriate, or remove any cultural resource on or adjacent to the Site, it will be subject to disciplinary action, arrest and penalty under applicable law. The Contractor shall be principally responsible for all costs of mitigation and/or restoration of cultural resources related to the unauthorized actions identified above. Contractor shall be required to pay for unauthorized damage and mitigation costs to cultural resources (historical and archeological resources) as a result of unauthorized activities that damage cultural resources and shall indemnify City pursuant to the Contract Documents.

5.12 Excessive Noise

- A. Contractor shall use only such equipment on the Work and in such state of repair so that the emission of sound therefrom is within the noise tolerance level of that equipment as established by Cal/OSHA. Contractor shall comply with the most restrictive of the following: (1) local sound control and noise level rules, regulations and ordinances and (2) the requirements contained in these Contract Documents, including hours of operation requirements.
- B. No internal combustion engine shall be operated on the Project without a muffler of the type recommended by the manufacturer. Should any muffler or other control device sustain damage or be determined to be ineffective or defective, the Contractor shall promptly remove the equipment and shall not return said equipment to the job until the device is repaired or replaced. Said noise and vibration level requirements shall apply to all equipment on the job or related to the job, including but not limited to, trucks, transit mixers or transit equipment that may or may not be owned by the Contractor.

5.13 Diversion of Recyclable Waste Material

- A. In compliance with the applicable City's waste reduction and recycling efforts, Contractor shall divert all Recyclable Waste Materials to appropriate recycling centers as required for compliance with the local jurisdiction's waste diversion ordinances. Contractor will be required to submit weight tickets and written proof of diversion with its monthly progress payment requests. Contractor shall complete and execute any certification forms required by the City or other applicable agencies to document Contractor's compliance with these diversion requirements. All costs incurred for these waste diversion efforts shall be the responsibility of the Contractor.

5.14 Inspector's Field Office.

- A. If required by the City, the Contractor shall be responsible for providing the inspector's field office. The office shall be a substantial waterproof construction with adequate natural light and ventilation by means of stock design windows. Door shall have a key type lock or padlock clasp. The office shall have heating and air

conditioning and shall be equipped with a telephone, a telephone answering machine, an ability to connect to the internet, and a fax machine at Contractor's expense. The field office shall be provided within 20 Days of the Notice to Proceed.

- B. A table satisfactory for the study of plans and two chairs shall be provided by Contractor. Contractor shall provide and pay for adequate electric lights, local telephone service, and adequate heat and air conditioning for the field office until authorized removal.

5.15 Contractor's Supervision.

- A. Contractor shall continuously keep at the Project site, a competent and experienced full-time Project superintendent acceptable to the City. Superintendent must be able to proficiently speak, read and write in English and shall have the authority to make decisions on behalf of the Contractor. Contractor shall continuously provide efficient supervision of the Project.

5.16 Workers.

- A. Contractor shall at all times enforce strict discipline and good order among its employees. Contractor shall not employ on the Project any unfit person or any one not skilled in the Work assigned to him or her.
- B. Any person in the employ of the Contractor whom the City may deem incompetent or unfit shall be dismissed from the Work and shall not be employed on this Project.

5.17 Independent Contractors.

- A. Contractor shall be an independent contractor for the City and not an employee. Contractor understands and agrees that it and all of its employees shall not be considered officers, employees, or agents of the City and are not entitled to benefits of any kind normally provided employees of the City, including but not limited to, state unemployment compensation or workers' compensation. Contractor assumes full responsibility for the acts and omissions of its employees or agents related to the Work.
- B. In the event that Contractor or any employee, agent, or subcontractor of Contractor providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees Retirement System ("PERS") to be eligible for enrollment in PERS as an employee of the City, Contractor shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.
- C. Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in

PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits..

5.18 Verification of Employment Eligibility.

- A. By executing the Contract, Contractor verifies that it fully complies with all requirements and restrictions of state and federal law respecting the employment of undocumented aliens, including, but not limited to, the Immigration Reform and Control Act of 1986, as may be amended from time to time, and shall require all subcontractors, sub-subcontractors and consultants to comply with the same. Each person executing this Contract on behalf of Contractor verifies that he or she is a duly authorized officer of Contractor and that any of the following shall be grounds for the City to terminate the Contract for cause: (1) failure of the Contractor or its Subcontractors, sub-subcontractors or consultants to meet any of the requirements provided for in this Article; (2) any misrepresentation or material omission concerning compliance with such requirements; or (3) failure to immediately remove from the Work any person found not to be in compliance with such requirements.

5.19 Labor.

A. Hours of Work

1. As provided in Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, Contractor stipulates that eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the Contractor or by any subcontractor on any subcontract under this Contract upon the Work or upon any part of the Work contemplated by this Contract is limited and restricted to eight (8) hours during any one calendar day and 40 hours during any one calendar week, except as hereinafter provided. Notwithstanding the provisions herein above set forth, work performed by employees of Contractor in excess of eight (8) hours per day, and 40 hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.
2. The Contractor and every Subcontractor shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable hours to the inspection of the City and to the Division of Labor Law Enforcement, Department of Industrial Relations of the State of California.
3. The Contractor shall pay to the City a penalty of twenty-five dollars (\$25.00) for each worker employed in the execution of this Contract by the Contractor or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and 40 hours in any one calendar week in violation of the provisions of Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.

4. Any work necessary to be performed after regular working hours, or on Saturdays and Sundays or other holidays, shall be performed without additional expense to the City.
5. If Contractor gives notice of an inspection pursuant to the Contract Documents, the City will provide inspection during normal working hours from 7:00 a.m. to 3:30 p.m. Monday through Friday. Requested inspections before or after this time will be charged to the Contractor as reimbursable inspection time. Inspections on weekends requires two (2) Days' notice for review and approval. Upon written request and approval the 8.5 hour working day may be changed to other limits subject to city/county ordinance.
6. It shall be unlawful for any person to operate, permit, use, or cause to operate any of the following at the Project Site, other than between the hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, with no Work allowed on City-observed Holidays, unless otherwise approved by the City:
 - a. Powered Vehicles
 - b. Construction Equipment
 - c. Loading and Unloading Vehicles
 - d. Domestic Power Tools

B. Payroll Records; Labor Compliance

1. Pursuant to Labor Code section 1776, Contractor and all subcontractors shall maintain weekly certified payroll records, showing the names, addresses, Social Security numbers, work classifications, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by them in connection with the Work under this Contract. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require Subcontractor(s) to certify weekly payroll records under penalty of perjury.
2. In accordance with Labor Code section 1771.4, the Contractor and each Subcontractor shall furnish the certified payroll records directly to the Department of Industrial Relations ("DIR") on the specified interval and format prescribed by the DIR, which may include electronic submission. Contractor shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring and enforcement. The requirement to submit certified payroll records directly to the Labor Commissioner under Labor Code section 1771.4 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Section 1771.4.
3. Any stop orders issued by the DIR against Contractor or any Subcontractor that affect Contractor's performance of Work, including any delay, shall be Contractor's sole responsibility. Any delay arising out of or resulting from such stop orders shall be considered Contractor caused delay subject to any applicable liquidated

damages and shall not be compensable by the City. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and agents free and harmless from any claim or liability arising out of stop orders issued by the DIR against Contractor or any Subcontractor.

4. The payroll records described herein shall be certified and submitted by the Contractor at a time designated by the City. The Contractor shall also provide the following:
 - a. A certified copy of the employee's payroll records shall be made available for inspection or furnished to such employee or his or her authorized representative on request.
 - b. A certified copy of all payroll records described herein shall be made available for inspection or furnished upon request of the DIR.
5. Unless submitted electronically, the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") of the DIR or shall contain the same information as the forms provided by the DLSE.
6. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency, the City, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or performing the Contract shall not be marked or obliterated.
7. In the event of noncompliance with the requirements of this Article, the Contractor shall have ten (10) Days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this Article. Should noncompliance still be evident after such 10-day period, the Contractor shall pay a penalty of one hundred dollars (\$100.00) to the City for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payment then due.
8. The responsibility for compliance with this Article shall rest upon the Contractor.

C. Prevailing Rates of Wages

1. The Contractor is aware of the requirements of Labor Code sections 1720 *et seq.* and 1770 *et seq.*, as well as California Code of Regulations, Title 8, Section 16000 *et seq.* ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. Since this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is \$1,000 or more, Contractor agrees to fully comply with such Prevailing Wage Laws. The Contractor shall obtain a copy of the prevailing rates of per diem wages at the commencement of this Contract from the website of the

Division of Labor Statistics and Research of the Department of Industrial Relations located at www.dir.ca.gov. In the alternative, the Contractor may view a copy of the prevailing rate of per diem wages which are on file at the City's Administration Office and shall be made available to interested parties upon request. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification, or type of worker needed to perform work on the Project available to interested parties upon request, and shall post copies at the Contractor's principal place of business and at the Project site. Contractor shall defend, indemnify and hold the City, its officials, officers, employees and authorized volunteers free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2. The Contractor shall forfeit as a penalty to the City not more than Two Hundred Dollars (\$200.00), pursuant to Labor Code section 1775, for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate as determined by the Director of the DIR for such work or craft in which such worker is employed for any public work done under the Contract by it or by any Subcontractor under it. The difference between such prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof, for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by the Contractor.
3. Contractor shall post, at appropriate conspicuous points on the Project Site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

D. Public Works Contractor Registration

1. Pursuant to Labor Code sections 1725.5 and 1771.1, the Contractor and its Subcontractors must be registered with the DIR prior to the execution of a contract to perform public works. By entering into this Contract, Contractor represents that it is aware of the registration requirement and is currently registered with the DIR. Contractor shall maintain a current registration for the duration of the Project. Contractor shall further include the requirements of Labor Code sections 1725.5 and 1771.1 in any subcontract and ensure that all Subcontractors are registered at the time this Contract is entered into and maintain registration for the duration of the Project. Notwithstanding the foregoing, the contractor registration requirements mandated by Labor Code Sections 1725.5 and 1771.1 shall not apply to work performed on a public works project that is exempt pursuant to the small project exemption specified in Labor Code Sections 1725.5 and 1771.1.

E. Employment of Apprentices

1. Contractor and all Subcontractors shall comply with the requirements of Labor Code sections 1777.5 and 1777.6 in the employment of apprentices.
2. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

3. Knowing violations of Labor Code section 1777.5 will result in forfeiture not to exceed one hundred dollars (\$100.00) for each calendar day of non-compliance pursuant to Labor Code section 1777.7.

F. Nondiscrimination/Equal Employment Opportunity

1. Pursuant to Labor Code section 1735 and other applicable provisions of law, the Contractor and its Subcontractors shall not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law on this Project. The Contractor will take affirmative action to insure that employees are treated during employment or training without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law.

G. Debarment of Contractors and Subcontractors

1. Contractors or Subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Labor Code section 1777.1 or 1777.7. Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid, or may have been paid to a debarred subcontractor by a contractor on the project shall be returned to the City. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project.

5.20 Subcontracts.

- A. Contractor agrees to bind every Subcontractor to the terms of the Contract Documents as far as such terms are applicable to Subcontractor's portion of the Work. Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by its subcontractors, as Contractor is for acts and omissions of persons directly employed by Contractor. Nothing contained in these Contract Documents shall create any contractual relationship between any subcontractor and the City.
- B. The City reserves the right to accept all subcontractors. The City's acceptance of any Subcontractor under this Contract shall not in any way relieve Contractor of its obligations in the Contract Documents.
- C. Prior to substituting any Subcontractor listed in the Bid Forms, Contractor must comply with the requirements of the Subletting and Subcontracting Fair Practices Act pursuant to California Public Contract Code section 4100 et seq.

5.21 Progress Meetings

- A. The Contractor shall schedule and hold regular progress meetings at least weekly and at other times as requested by Engineer or as required by progress of the Work. The Contractor, City, and all Subcontractors active on the Site shall attend each meeting. Contractor may at its discretion request attendance by representatives of its Suppliers, manufacturers, and other Subcontractors. The City will preside at the progress meetings and will arrange for keeping and distributing the minutes. The purpose of the meetings is to review the progress of the Work, maintain coordination of efforts, discuss changes in scheduling, and resolve other problems which may develop. During each meeting, the Contractor shall present any issues which may impact its progress with a view to resolve these issues expeditiously.

5.22 Submittals

- A. Schedule of Submittals. Within five (5) Days after the Notice to Proceed (unless otherwise specified in the Contract Documents), Contractor will prepare and deliver a Schedule of Submittals to the City that has been fully integrated with the progress schedule and identifies each Submittal required by the Contract Documents as well as the date on which Contractor will deliver each Submittal to the City. Each Submittal must be delivered to the City at least thirty (30) Days prior to the date the material or equipment is scheduled to be incorporated into the Work. The Contractor is responsible for any schedule delays resulting from the Submittal process.
- B. Submittal Procedures.
1. Contractor will follow the following procedures for each Submittal, Shop Drawing and Sample required by the Contract Documents:
 - a. Submittals must be transmitted electronically.
 - b. Transmittals will be sequentially numbered. Contractor to mark revised Submittals with original number and sequential alphabetic suffix.
 - c. Each Submittal will identify the Project, Contractor, Subcontractor and Supplier, pertinent Drawing and detail number, and Specification Section number appropriate to Submittal.
 - d. By transmitting a Submittal, Contractor certifies it has reviewed and approved each Submittal, verified products required, field dimensions, adjacent construction Work, and that coordination of information is according to requirements of the Work and Contract Documents.
 - e. Identify variations in Contract Documents and product or system limitations that may differ and/or be detrimental to successful performance of completed Work.
 - f. When Submittal is revised for resubmission, Contractor shall promptly address the City's comments and resubmit. Contractor shall identify changes made since previous submission.

- g. The City's review of Shop Drawings shall not relieve Contractor from responsibility for deviations from the Contract Documents unless Contractor has, in writing, called the City's attention to such deviations at time of submission and the City has taken no exception to the deviation. The City's review of Shop Drawings shall not relieve Contractor from responsibility for errors in Shop Drawings.
 - h. Submittals not required by the Contract Documents or requested by the City will not be acknowledged or processed.
 - i. Incomplete Submittals will not be reviewed by the City. Delays resulting from incomplete Submittals are not the responsibility of the City.
 - j. Contractor shall not be entitled to any extension of the Contract Times as a result of the Submittal process.
 - k. Contractor shall allow a minimum of 20 working days for review of Submittals unless otherwise specified in the Contract Documents.
2. Where a Submittal, Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to the City review and approval of the pertinent submittal will be performed at the sole risk and expense and responsibility of Contractor.
- C. Schedule Milestone for Submittals. Contractor must submit all Submittals required by the Contract Documents in accordance with the Schedule of Submittals. If Contractor fails to submit the Submittals in accordance with the Schedule of Submittals, Contractor will be solely liable for any delays or impacts caused by the delayed Submittal, whether direct or indirect. Contractor will be liable for the time calculated from the date the Submittal is due until the date a compliant Submittal is made. A compliant Submittal will be one that is complete and satisfies the requirements of the Contract Documents.

5.23 Shop Drawings and Sample Submittal Procedures.

- A. Before submitting each Shop Drawing or Sample, Contractor shall have:
- 1. Reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - 2. Determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - 3. Determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

4. Determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
- B. With each Submittal, Contractor shall give the City specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample Submittal and, in addition, a specific notation made on each Shop Drawing or Sample submitted to the City for review and approval of each such variation.
- C. Shop Drawings.
1. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show the City the services, materials, and equipment Contractor proposes to provide and to enable the City to review the information for assessing conformance with information given and design concept expressed in Contract Documents.
 2. When required by individual Specification sections, provide Shop Drawings signed and sealed by a professional engineer responsible for designing components shown on Shop Drawings. Shop Drawings must include signed and sealed calculations to support design in a form suitable for submission to and approval by authorities having jurisdiction.
 3. Shop Drawings for steel structures shall consist of shop details, erection and other working Drawings showing details, dimensions, sizes of members and other information necessary for the complete fabrication and erection of the metal work.
 4. Shop Drawings of concrete structures shall consist of such detailed drawings as may reasonably be required for the successful prosecution of the Work and which are not included in the Drawings furnished by the Engineer. These may include drawings for false work, bracing, centering and form work, masonry layout diagrams, and diagrams for bent reinforcement.
 5. Contractor shall make revisions and provide additional information when required by authorities having jurisdiction.
- D. Samples. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as required to enable the City to review the submittal for assessing conformance with information given and design concept expressed in Contract Documents. Samples should be of appropriate size and detail to assess functional, aesthetic, color, texture, patterns and finish selection.
- E. City's Review.
1. The City will review Shop Drawings and Samples in accordance with the Schedule of Submittals. The City's review and acceptance will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible

with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. The City review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 3. The City's review and acceptance shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless the City has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample.
- F. Resubmittal Procedures. Contractor shall make corrections required by the City and shall return corrected Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by the City on previous Submittals.

5.24 Record ("As-Built") Drawings.

- A. The Contractor shall maintain one record set of Contract Documents at the Site or digitally in an acceptable format. On these, it shall mark all Project conditions, locations, configurations, and any other changes or deviations which may vary from the information represented in the original Contract Documents, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Drawings. For all Projects involving the installation of any pipeline, Contractor shall survey and record the top of the pipe at a minimum of every 100 linear feet, and at each bend, recording both the horizontal and vertical locations. Said Drawings shall be supplemented by any detailed sketches as necessary or directed to fully indicate the Work as actually constructed. Any required as-built drawings of civil engineering elements of the Work shall be prepared by a registered civil engineer.
- B. These master Record Drawings of the as-built conditions, including all revisions made necessary by Addenda and Change Orders, shall be maintained up-to-date during the progress of the Project. Red ink shall be used for alterations and notes. Notes shall identify relevant Change Orders by number and date. Record Drawings shall be accessible to the Engineer at all times during the construction period. Failure on the Contractor's part to keep Record Drawings current could result in withholding partial payment.
- C. Upon completion of the Project and as a condition of final acceptance, the Contractor shall finalize and deliver a complete set of Record Drawings to the Engineers. The information submitted by the Contractor will be assumed to be correct, and the Contractor shall be responsible for, and liable to the City, for the accuracy of such information, and for any errors or omissions which may or may not appear on the Record Drawings.

- D. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete the Record Drawings shall be included in Contractor's bid and distributed in the Bid Schedule. No additional compensation shall be made to the Contractor for this Work.

5.25 Layout and Field Engineering.

- A. The Contractor shall utilize a properly licensed surveyor to perform all layout surveys required for the control and completion of the Work, and all necessary surveys to compute quantities of Work performed.

5.26 Separate Contracts and Cooperation.

- A. Separate Contracts. The City reserves the right to let other contracts in connection with this Work or on the Project site. Contractor shall permit other contractors reasonable access and storage of their materials and execution of their work and shall properly connect and coordinate its Work with theirs. To ensure proper execution of its subsequent Work, Contractor shall immediately inspect work already in place and shall at once report to the Engineer any problems with the Work in place or discrepancies with the Contract Documents.

- B. Cooperation. Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by the City in prosecution of the Project to the end that Contractor may perform this Contract in the light of such other contracts, if any. Nothing herein contained shall be interpreted as granting to Contractor exclusive occupancy at site of the Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project. If simultaneous execution of any contract for the Project is likely to cause interference with performance of some other contract or contracts, the Engineer shall decide which Contractor shall cease Work temporarily and which contractor shall continue or whether work can be coordinated so that contractors may proceed simultaneously. The City shall not be responsible for any damages suffered or for extra costs incurred by Contractor resulting directly or indirectly from award, performance, or attempted performance of any other contract or contracts on the Project Site.

5.27 Work Site.

- A. Limitation of Use of Site and Other Areas. Rights-of-way, easements, or rights-of-entry for the Work will be provided by the City. Unless otherwise specified in the Special Provisions, the Contractor shall make arrangements, pay for, and assume all responsibility for acquiring, using, and disposing of additional work areas and facilities temporarily required. The Contractor shall indemnify and hold the City harmless from all claims for damages caused by such actions. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Applicable Laws, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to City or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

- B. Site Maintenance. During the progress of the Work, Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to Applicable Laws. The Contractor shall furnish trash bins for all debris from construction. All debris shall be placed in trash bins daily. Forms and false-work that are to be re-used shall be stacked neatly concurrently with their removal. Forms and false-work that are not to be re-used shall be disposed of concurrently with their removal.
- C. Cleaning. Prior to Completion of the Work, Contractor shall clean the Site and make it ready for utilization by the City. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

5.28 Utility Usage.

- A. All temporary utilities, including but not limited to electricity, water, gas, and telephone, used on the Work shall be furnished and paid for by Contractor. Contractor shall provide necessary temporary distribution systems, including meters, if necessary, from distribution points to points on the Work where the utility is needed. Upon completion of the Work, Contractor shall remove all temporary distribution systems. Contractor shall provide necessary and adequate utilities and pay all costs for water, electricity, gas, oil, and sewer charges required for completion of the Work, including but not limited to startup and testing required in the Contract Documents. All permanent meters installed shall be listed in the Contractor's name until the Work is accepted. For Work to be performed in existing City facilities, Contractor may use the City's existing utilities, provided such use is reasonable under the circumstances. If Contractor uses the City utilities, it will not need to compensate the City for reasonable consumption of utilities, but Contractor will be responsible for any excessive, unreasonable or wasteful utility usage. Amounts due the City under this section may be deducted from progress payments.

5.29 Protection of Work and Property.

- A. The Contractor shall digitally record video and take photographs of the Project site and adjacent improvements in a manner and quality that clearly depicts the existing condition of the Project Site and adjacent improvements immediately prior to the start of Work (minimum 1080p video and 4MP photo). All videos and photographs shall be date and time stamped. The Contractor shall submit the video and photos in digital format on a memory stick before the commencement of Work, along with a map outlining the route and locations of the videos and/or photographs. The Contractor shall be responsible for all damages to persons or property that occur as a result of the Work. Contractor shall be responsible for the proper care and protection of all materials delivered and Work performed until completion and final acceptance by the City. All Work shall be solely at the Contractor's risk.
- B. Contractor shall adequately protect adjacent property from settlement or loss of lateral support as necessary. Contractor shall comply with all applicable safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the Project site where Work is being performed. Contractor shall erect and

properly maintain at all times, as required by field conditions and progress of work, all necessary safeguards, signs, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created in the course of construction.

- C. Contractor shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions.
- D. Contractor shall take adequate precautions to protect existing sidewalks, curbs, pavements, utilities, and other adjoining property and structures, and to avoid damage thereto, and Contractor shall repair any damage thereto caused by the Work operations. Contractor shall:
 - 1. Enclose the working area with a substantial barricade, and arrange work to cause minimum amount of inconvenience and danger to the public.
 - 2. Provide substantial barricades around any shrubs or trees indicated to be preserved.
 - 3. Deliver materials to the Site over a route designated by the City.
 - 4. Provide any and all dust control required and follow the applicable air quality regulations as appropriate. If the Contractor does not comply immediately with a notice from the City or a public agency responsible for air quality, the City shall have the authority to provide dust control and deduct the cost from payments to the Contractor.
 - 5. Confine Contractor's apparatus, the storage of materials, and the operations of its workers to limits required by law, ordinances, permits, or directions of the City. Contractor shall not unreasonably encumber the Site with its materials.
 - 6. Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by a civil engineer or land surveyor acceptable to the City, at no cost to the City.
 - 7. Ensure that existing facilities, fences and other structures are all adequately protected and that, upon completion of all Work, all facilities that may have been damaged are restored to a condition acceptable to the City.
 - 8. Preserve and protect from injury all buildings, pole lines and all directional, warning and mileage signs that have been placed within the right-of-way.
 - 9. At the completion of work each day, leave the Work and the Site in a clean, safe condition.
 - 10. Comply with any stage construction and/or traffic handling plans. Access to residences and businesses shall be maintained at all times, except with the City's written approval. Any request for approval to reduce or restrict access to

residences and business must be submitted to the City at least seven (7) Days in advance, and the City may issue or withhold approval in its sole discretion.

- E. These precautionary measures will apply continuously and not be limited to normal working hours. Full compensation for the work involved in the protection and preservation of life, safety and property as above specified shall be considered as included in the prices paid for the various contract items of Work, and no additional allowance will be made therefor.
- F. Should damage to persons or property occur as a result of the Work, Contractor shall promptly notify the City, in writing. Contractor shall be responsible for proper investigation, documentation, including video or photography, to adequately memorialize and make a record of what transpired. The City shall be entitled to inspect and copy any such documentation, video, or photographs.
- G. Contractor shall maintain all investigation documentation including video and/or photographs for a minimum of four (4) years following completion of the Project.

5.30 Emergencies.

- A. In emergencies affecting the safety or protection of persons or the Work or Property at the Site or adjacent thereto, the Contractor, without special instruction or authorization from the City or 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 Documents have been caused thereby.

ARTICLE 6 -MATERIALS; INSPECTION

6.1 Access to Work.

- A. The City, Engineer, their consultants and other representatives and personnel, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs.

6.2 Materials.

- A. Except as otherwise specifically stated in the Contract Documents, Contractor shall provide and pay for all materials, labor, tools, equipment, water, lights, power, transportation, superintendence, temporary constructions of every nature, and all other services and facilities whatsoever necessary to execute and complete this Contract within the Contract Time. Unless otherwise specified, all materials, parts, and equipment furnished by the Contractor in the Work shall be new, the best of their respective kinds and grades as noted and/or specified, and workmanship shall be of good quality.
- B. No materials, supplies, or equipment for Work under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale or other

agreement by which an interest therein or in any part thereof is retained by the seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in the Work and agrees upon completion of all work to deliver the Project, to the City free from any claims, liens, or charges.

- C. Materials shall be furnished in ample quantities and at such times as to ensure uninterrupted progress of the Work and shall be stored properly and protected as required by the Contract Documents. Contractor shall be entirely responsible for damage or loss by weather or other causes to materials or Work. Materials shall be stored on the Project Site in such manner so as not to interfere with any operations of the City or any independent contractor.
- D. Contractor shall verify all measurements, dimensions, elevations, and quantities before ordering any materials or performing any Work, and the City shall not be liable for Contractor's failure to do so. Except for an adjustment to Unit Price Work for item overruns and underruns in accordance with the Contract Documents, no additional compensation, over and above payment for the actual quantities at the prices set out in the Bid Schedule, will be allowed because of differences between actual measurements, dimension, elevations and quantities and those indicated on the Plans and in the Specifications. Any difference therein shall be submitted to the Engineer for consideration before proceeding with the Work.

6.3 Test and Inspections.

A. Inspection and Testing of Work and Materials

- 1. If the Contract Documents, the Engineer, or any instructions, laws, ordinances, or public authority requires any part of the Work to be tested or approved, Contractor shall provide the Engineer at least two (2) working days' notice of its readiness for observation or inspection. If inspection is by a public authority other than the City, Contractor shall promptly inform the City of the date fixed for such inspection. Required certificates of inspection (or similar) shall be secured by Contractor. Costs for City testing and inspection shall be paid by the City. Costs of tests for Work found not to be in compliance shall be paid by the Contractor.
- 2. The Contractor shall pay for the cost of any minimum "show up" costs of a materials testing technician that was called for by the Contractor but ultimately the Contractor work was not ready for the inspection. Any such costs shall be deducted from any amounts due to the Contractor.
- 3. If any Work is done or covered up without the required testing or approval, the Contractor shall uncover or deconstruct the Work, and the Work shall be redone after completion of the testing at the Contractor's cost in compliance with the Contract Documents.
- 4. Where inspection and testing are to be conducted by an independent laboratory or agency, materials or samples of materials to be inspected or tested shall be selected by such laboratory or agency, or by the City, and not by Contractor. Unless otherwise stated and as provided by the Contract Documents, the City shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents. All tests

or inspections of materials shall be made in accordance with the commonly recognized standards of national organizations.

5. Reexamination of Work may be ordered by the City. If so ordered, Work must be uncovered or deconstructed by Contractor. If Work is found to be in accordance with the Contract Documents, the City shall pay the costs of reexamination and reconstruction. If such work is found not to be in accordance with the Contract Documents, Contractor shall pay all costs.

B. Testing of Materials

1. In advance of manufacture of materials to be supplied by Contractor which must be tested or inspected, Contractor shall notify the City so that the City may arrange for testing at the source of supply. Any materials which have not satisfactorily passed such testing and inspection shall not be incorporated into the Work.
2. If the manufacture of materials to be inspected or tested will occur in a plant or location greater than sixty (60) miles from the City, the Contractor shall pay for any excessive or unusual costs associated with such testing or inspection, including but not limited to excessive travel time, standby time and required lodging.
3. Unless otherwise specified in the Special Provisions, all initial testing and a reasonable amount of retesting will be performed under the direction of the Engineer, and at no expense to the Contractor. The Contractor shall notify the Engineer in writing, at least 15 days in advance, of its intention to use materials for which tests are specified, to allow sufficient time to perform the tests. The notice shall name the proposed supplier and source of material. If the notice of intent to use is sent before the materials are available for testing or inspection, or is sent so far in advance that the materials on hand at the time will not last but will be replaced by a new lot prior to use on the Work, it will be the Contractor's responsibility to re-notify the Engineer when samples which are representative may be obtained.
4. A Certificate of Compliance shall be furnished to the Engineer prior to the use of any material or assembled material for which these Specifications so require or if so required by the Engineer. The Engineer may waive the materials testing requirements and accept a Certificate of Compliance. Material test data may be required by the Engineer to be included with the submittal. Materials used on the basis of a Certificate of Compliance may be sampled and tested at any time. The submission of a Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating material into the Work which conforms to the requirements of the Contract Documents, and any material not conforming to the requirements will be subject to rejection by the Engineer whether in place or not.
5. Copies of mill certificates of composition and quality of all component materials (reinforcing steel, structural steel, lumber, etc.) incorporated in the construction of the Work shall be provided to the City at the time of delivery. City shall retain the right to reject any raw material not provided with a mill certificate at the time of delivery.
6. If, after incorporating such materials into the Work, it is found that sources of supply that have been approved do not furnish a uniform product, or if the product from

any source proves unacceptable at any time, the Contractor shall furnish approved material from other approved sources. If any product proves unacceptable after improper storage, handling or for any other reason it shall be rejected, not incorporated into the Work, and shall be removed from the Project Site all at the Contractor's expense.

6.4 Requests for Substitutions.

- A. For the purposes of this provision, the term "substitution" shall mean the substitution of any material, method or service substantially equal to or better in every respect to that indicated in the Standard Specifications or otherwise referenced herein.
- B. Pursuant to Public Contract Code section 3400(b), the City may make a finding that is described in the Notice Inviting Bids that designates certain products, things, or services by specific brand or trade name.
- C. Unless specifically designated in the Special Conditions, whenever any material, process, or article is indicated or specified by grade, patent, or proprietary name or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating the description of the material, process, or article desired and shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise stated, offer for substitution any material, process, or article which may be substantially equal to or better in every respect to that so indicated or specified in the Contract Documents. However, the City has adopted uniform standards for certain materials, processes, and articles.
- D. The Contractor shall submit substitution requests, together with substantiating data, for substitution of any "or equal" material, process, or article no later than thirty-five (35) calendar days after award of Contract. Provisions regarding submission of substitution requests shall not in any way authorize an extension of time for the performance of this Contract. If a substitution request is rejected by the City, the Contractor shall provide the material, method or service specified herein. The City shall not be responsible for any costs incurred by the Contractor associated with substitution requests. The burden of proof as to the equality of any material, process, or article shall rest with the Contractor. The Engineer has the complete and sole discretion to determine if a material, process, or article is substantially equal to or better than that specified and to approve or reject all substitution requests.
- E. Substantiating data as described above shall include, at a minimum, the following information:
 - 1. A signed affidavit from the Contractor stating that the material, process, or article proposed as a substitution is substantially equal to or better than that specified in every way except as may be listed on the affidavit.
 - 2. Illustrations, specifications, catalog cut sheets, and any other relevant data required to prove that the material, process, or article is substantially equal to or better than that specified.

3. A statement of the cost implications of the substitution being requested, indicating whether and why the proposed substitution will reduce or increase the amount of the contract.
 4. Information detailing the durability and lifecycle costs of the proposed substitution.
- F. Failure to submit all the required substantiating data detailed above in a timely manner so that the substitution request can be adequately reviewed may result in rejection of the substitution request. The Engineer is not obligated to review multiple submittals related the same substitution request resulting from the Contractor's failure to initially submit a complete package.
 - G. Time limitations within this Article shall be strictly complied with and in no case will an extension of time for completion of the contract be granted because of Contractor's failure to provide substitution requests at the time and in the manner described herein.
 - H. The Contractor shall bear the costs of all the City work associated with the review of substitution requests.
 - I. If substitution requests approved by the Engineer require that Contractor furnish materials, methods or services more expensive than that specified, the increased costs shall be borne by Contractor.

ARTICLE 7 -SUBSURFACE AND PHYSICAL CONDITIONS; UTILITIES

7.1 Soils Investigations.

- A. When a soils investigation report for the Site is available, such report is provided for informational purposes only. Any information obtained from such report as to subsurface soil condition, or to elevations of existing grades or elevations of underlying rock, is approximate only and is not guaranteed. Contractor acknowledges that any soils investigation report (including any borings) was prepared for purposes of design only and Contractor is required to examine the Site before submitting its Bid and must make whatever tests it deems appropriate to determine the condition of the soil.

7.2 Ownership of Site Materials Found.

- A. The title to water, soil, rock, gravel, sand, minerals, timber and any other materials developed or obtained in the excavation or other operations of Contractor or any of its Subcontractors in the performance of the Contract, and the right to use said items in carrying out the Contract, or to dispose of same, is hereby expressly reserved by the City. Neither Contractor nor any of its Subcontractors nor any of their representatives or employees shall have any right, title, or interest in said materials, nor shall they assert or make any claim thereto. Contractor will, as determined by the City's Representative, be permitted to use in the Work without charge, any such materials which meet the requirements of the Contract Documents, provided the City shall have the right to use or consume these materials without payment to a third party.

7.3 Existence of Utilities at the Work Site.

A. Existing Utilities

1. The location of known existing utilities and pipelines are shown on the Plans in their approximate locations. However, nothing herein shall be deemed to require the City to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the site of the project can be inferred from the presence of other visible facilities, such as buildings, cleanouts, meter and junction boxes, on or adjacent to the Site of the Project.
2. The City will assume the responsibility for the timely removal, relocation, or protection of existing main or trunk line utility facilities located on the Project site if such utilities are not identified by the City in the Contract Documents or which cannot reasonably be inferred from the presence of other visible facilities.

B. Utility Location

1. It shall be the Contractor's responsibility to determine the exact location and depth of all utilities, including service connections, which have been marked by the respective utility owners and which the Contractor believes may affect or be affected by the Contractor's operations. The Contractor shall not be entitled to additional compensation nor time extensions for work necessary to avoid interferences nor for repair to damaged utilities if the Contractor does not expose all such existing utilities as required by this Article.
2. The locating of utilities shall be in conformance with Government Code Section 4216 et seq. except for the City's utilities located on the City's property and not on public right-of-way.
3. A "High Priority Subsurface Installation" is defined in Government Code Section 4216 (j) as "high-pressure natural gas pipelines with normal operating pressures greater than 415kPA gauge (60psig) or greater than six inches nominal pipe diameter, petroleum pipelines, pressurized sewage pipelines, high-voltage electric supply lines, conductors, or cables that have a potential to ground of greater than or equal to 60kv, or hazardous materials pipelines that are potentially hazardous to workers or the public if damaged."
4. A "Subsurface Installation" is defined in Government Code Section 4216 (s) as "any underground pipeline, conduit, duct, wire, or other structure, except nonpressurized sewer lines, nonpressurized storm drains, or other nonpressurized drain lines."
5. Pursuant to Government Code Section 4216.2 the Contractor shall contact the appropriate regional notification center at least two (2) working days but not more than 14 Days before performing any excavation. The date of the notification shall not count as part of the two-working-day notice. Before notifying the appropriate regional notification center, the Contractor shall delineate the area to be excavated. The Contractor shall request that the utility owners conduct a utility survey and mark or otherwise indicate the location of their service. The Contractor

shall furnish to the Engineer written documentation of its contact(s) with the regional notification center prior to commencing excavation at such locations.

6. After the utility survey is completed, the Contractor shall commence "potholing" or hand digging to determine the actual location of the pipe, duct, or conduit and in accordance with Government Code Section 4216.4 if the excavation within the "tolerance zone" of a subsurface installation. The Engineer shall be given notice prior to commencing potholing operations. The Contractor shall uncover all piping and conduits, to a point one (1) foot below the pipe, where crossings, interferences, or connections are shown on the Drawings, prior to trenching or excavating for any pipe or structures, to determine actual elevations. New pipelines shall be laid to such grade as to clear all existing facilities, which are to remain in service for any period subsequent to the construction of the run of pipe involved.
7. The Contractor's attention is directed to the requirements of Government Code Section 4216.2 (c) which provides: "When the excavation is proposed within 10 feet of a high priority subsurface installation, the operator of the high priority subsurface installation shall notify the excavator of the existence of the high priority subsurface installation to set up an onsite meeting prior to the legal excavation start date and time or at a mutually agreed upon time to determine actions or activities required to verify the location and prevent damage to the high priority subsurface installation. As part of the meeting, the excavator shall discuss with the operator the method and tools that will be used during the excavation and the information the operator will provide to assist in verifying the location of the subsurface installation. The excavator shall not begin excavating until after the completion of the onsite meeting." The Contractor shall notify the Engineer in advance of this meeting.

C. Utility Relocation and Repair

1. If interferences occur at locations other than those indicated in the Contract Documents with reasonable accuracy, the Contractor shall notify the Engineer in writing. The Engineer will supply a method for correcting said interferences in accordance with the responsibilities of this section and Government Code Section 4215. To the extent any delay is caused thereby, Contractor shall submit a notice of delay within five (5) Days of discovery of the circumstances giving rise to the delay in accordance with Article 9.1 Change Orders and Time Extensions.
2. Care shall be exercised by the Contractor to prevent damage to adjacent existing facilities and public or private works; where equipment will pass over these obstructions, suitable planking shall be placed. If high priority subsurface installations are damaged and the operator cannot be contacted, the Contractor shall call 911 emergency services.
3. The City will compensate the Contractor for the costs of locating and repairing damage not due to the failure of the Contractor to exercise reasonable care, and for removing or relocating such main or trunk line utility facilities not indicated in the Contract Documents with reasonable accuracy, and for the cost of equipment on the Project necessarily idled during such work. The payment for such costs will be made as provided in Article 9.1 Change Orders and Time Extensions. The Contractor shall not be assessed liquidated damages for delay in completion of the

Project, when such delay is caused by the failure of the City or utility company to provide for removal or relocation of such utility facilities. Requests for extensions of time arising out of utility relocation or repair delays shall be filed in accordance with Article 9.1 Change Orders and Time Extensions and Article 9.3 Time for Completion and Liquidated Damages.

4. The public utility, where it is the owner of the affected utility, shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a reasonable price. The right is reserved to the City and the owners of utilities or their authorized agents to enter upon the Work area for the purpose of making such changes as are necessary for the rearrangement of their facilities or for making necessary connections or repairs to their properties. The Contractor shall cooperate with forces engaged in such work and shall conduct its operations in such a manner as to avoid any unnecessary delay or hindrance to the work being performed by such forces and shall allow the respective utilities time to relocate their facility.
5. When the Contract Documents indicate that a utility is to be relocated, altered or constructed by others, the City will conduct all negotiations with the utility company and the work will be done at no cost to the Contractor, unless otherwise stipulated in the Contract Documents.
6. Temporary or permanent relocation or alteration of utilities desired by the Contractor for its own convenience shall be the Contractor's responsibility and it shall make arrangements and bear all costs for such work.

D. Construction at Existing Utilities

1. Where the Work to be performed crosses or otherwise interferes with water, sewer, gas, or oil pipelines; buried cable; or other public or private utilities, the Contractor shall perform construction in such a manner so that no damage will result to either public or private utilities. It shall be the responsibility of the Contractor to determine the actual locations of, and make accommodations to maintain, all utilities.
2. Before any utility is taken out of service, permission shall be obtained by the Contractor from the owner. The owner, any impacted resident or business owner and the City Representative will be advised of the nature and duration of the utility outage as well as the Contractor's plan for providing temporary utilities if required by the owner. The Contractor shall be liable for all damage which may result from its failure to maintain utilities during the progress of the Work, and the Contractor shall indemnify City as required by the Contract Documents from all claims arising out of or connected with damage to utilities encountered during construction; damages resulting from disruption of service; and injury to persons or damage to property resulting from the negligent, accidental, or intentional breaching of utilities.
3. Unless otherwise called for by the Contract Documents, the cost of all material, equipment, and labor required to complete this work, shall be included in Contractor's bid and distributed in the schedule of pay Items. No additional compensation shall be made to the Contractor for this work.

7.4 Trenches

A. Trenches Five Feet or More in Depth.

1. Contractor shall submit to the Engineer at the preconstruction meeting, a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from hazards of caving ground during the excavation of any trench or trenches five feet or more in depth. If such plan varies from shoring system standards established by the Construction Safety Orders of the California Code of Regulations, Department of Industrial Relations, the plan shall be prepared by a California registered civil or structural engineer. The plan shall not be less effective than the shoring, bracing, sloping, or other provisions of the Construction Safety Orders, as defined in the California Code of Regulations. The Contractor shall designate in writing the "competent person" as defined in Title 8, California Code of Regulations, who shall be present at the Work Site each day that trenching/excavation is in progress. The "competent person" shall prepare and provide daily trenching/excavation inspection reports to the Engineer. Contractor shall also submit a copy of its annual California Occupational Safety and Health Administration (Cal/OSHA) trench/excavation permit.

B. Excavations Deeper than Four Feet.

1. If the Work involves excavating trenches or other excavations that extend deeper than four (4) feet below the surface, Contractor shall promptly within three (3) Days, and before the excavation is further disturbed, notify the City in writing of any of the following conditions:
 - a. Material that the Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
 - b. Subsurface or latent physical conditions at the site differing from those indicated.
 - c. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.
2. The City shall promptly investigate the conditions, and if it finds that the conditions do so materially differ, or do involve hazardous waste, and cause a decrease or increase in Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a Change Order under the procedures described in Article 9.1 Change Orders and Time Extensions.
3. In the event that a dispute arises between the City and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. Contractor shall retain any and all rights provided

either by contract or by law which pertain to the resolution of disputes and protests between the parties.

ARTICLE 8 -PROSECUTION OF THE WORK

8.1 Contractor's Means and Methods.

- A. Contractor is solely responsible for the means and methods utilized to perform the Work. In no case shall the Contractor's means and methods deviate from commonly used industry standards.

8.2 Construction Schedule.

- A. General Requirements. The schedule shall be prepared in a Critical Path Method ("CPM") format and in an electronic scheduling program acceptable to the City and as specified in the Contract Documents. Contractor shall deliver the schedule and all updates to the City in both paper and electronic form. The electronic versions shall be in the format and include all data used to prepare the schedule. Copies are not acceptable.
- B. Schedule. The receipt or approval of any schedules by the City shall not in any way relieve the Contractor of its obligations under the Contract Documents. The Contractor is fully responsible to determine and provide for any and all staffing and resources at levels which allow for good quality and timely completion of the Project. Contractor's failure to incorporate all elements of Work required for the performance of the Contract or any inaccuracy in the schedule shall not excuse the Contractor from performing all Work required for a completed Project within the specified Contract Time. If the required schedule is not received by the time the first payment under the Contract is due, Contractor shall not be paid until the schedule is received, reviewed and accepted by the City.
- C. Schedule Contents. The schedule shall allow enough time for inclement weather. The schedule shall indicate the beginning and completion dates of all phases of construction; critical path for all critical, sequential time related activities; and "float time" for all "slack" or "gaps" in the non-critical activities. The schedule shall include appropriate time allowances and constraints for submittals, items of interface with Work performed by others, and specified construction, start-up and performance tests. All float shall be owned by the Project. Schedules indicating early or late completion shall not modify or have any effect on the Contract Time, regardless of whether the schedules are reviewed and/or accepted by the City. For purposes of determining Liquidated Damages, the Contract Time shall control and may only be altered by a duly authorized Change Order.
- D. Schedule Updates. Contractor shall continuously update its construction schedule. Contractor shall submit an updated and accurate construction schedule to the City: (1) prior to the start of construction, if there are any changes to the initial schedule; (2) with each progress payment request; and (3) whenever requested to do so by the City. The City may withhold progress payments or other amounts due under the Contract Documents if Contractor fails to submit an updated and accurate construction schedule. Upon the City's request, Contractor shall submit any schedules or updates to the City in the native electronic format of the software used

to create the schedule. Contractor shall also submit schedules showing a two-week detailed look-ahead at weekly meetings conducted with the City. The two-week look-ahead schedule shall clearly identify all staffing and other resources which in the Contractor's judgment are needed to complete the Work within the Contract Time, and it shall clearly state the number of staff to be used on each daily segment of the Work.

E. Acceptance. Acceptance of the schedules by the City will not impose on responsibility for accuracy, for sequencing, scheduling, or progress of the Work, or compliance with the Contract Documents. Acceptance will not interfere with or relieve Contractor from Contractor's full responsibility therefor.

F. Recovery Schedule.

1. Should any of the following conditions exist, City may require Contractor to prepare, at no extra cost to City, a plan of action and a recovery schedule for completing the Work and achieving all contractual milestones within the allotted Contract Time:
 - a. The Contractor's monthly progress report indicates delays that are, in the opinion of City, of sufficient magnitude that City questions the Contractor's ability to complete the Work;
 - b. The schedule shows the Contractor to be thirty (30) or more days behind the critical path at any time during construction;
 - c. The Contractor desires to make changes in the logic or the planned duration of future activities of the schedule which, in the opinion of City, are major in nature.
2. The recovery schedule shall include proposed revisions to the Construction Schedule, demonstrating how Contractor intends to achieve all contractual milestones including Contract completion within the allotted Contract Time. The submittal shall include a narrative describing the actions planned by the Contractor to recover the schedule.
3. Contractor shall submit the Recovery Schedule within seven (7) Days of City's request. If Contractor asserts that City is responsible for the delay, failure to submit the recovery schedule within seven (7) Days of City's request, will be considered a concurrent delay event attributable to Contractor, and Contractor shall only be entitled to non-compensable adjustments to Contract Times. If Contractor is responsible for the delay, this provision will not limit or affect Contractor's liability and failure to submit the recovery schedule with seven (7) Days of City's request may result in City withholding progress payments or other amounts due under the Contract Documents.
4. Contractor is responsible for all costs associated with the preparation and execution of the recovery schedule, including any necessary recovery actions, which may include, but are not limited to, assignment of additional labor, and/or equipment, shift or overtime work, expediting of submittals or deliveries, overlapping of activities or sequencing changes to increase activity concurrence.

Regardless of whether City directs Contractor to prepare a recovery schedule pursuant to this Section, Contractor shall promptly undertake appropriate action at no additional cost to City to recover the schedule whenever the current construction schedule shows that the Contractor will not achieve a milestone and/or complete the Work within the allotted Contract Time.

8.3 Time for Completion and Liquidated Damages

- A. Time for Completion. The time for completion set forth in Article 2 of the Contract for Construction shall commence: (1) on the date stated in the Notice to Proceed, or (2) if the Notice to Proceed does not specify a commencement date, then on the date of the Notice to Proceed and shall be completed by Contractor in the time specified in the Contract Documents. The City is under no obligation to consider early completion of the Project; and the Contract completion date shall not be amended by the City's receipt or acceptance of the Contractor's proposed earlier completion date. Any difference in time between the Contractor's early completion and the Contract Time shall be considered a part of the Project float. Contractor shall not be entitled to compensation, and the City will not compensate Contractor, for delays which impact early completion. Contractor shall not, under any circumstances, receive additional compensation from the City (including but not limited to indirect, general, administrative or other forms of overhead costs) for the period between the time of earlier completion proposed by the Contractor and the Contract completion date.
- B. Liquidated Damages. If the Work is not completed within the Contract Time(s), it is understood that the City will suffer damage. In accordance with Government Code section 53069.85 and Public Contract Code section 7102, being impractical and infeasible to determine the amount of actual damage, it is agreed that Contractor shall pay to the City as fixed and liquidated damages, and not as a penalty, the sum stipulated in the Contract for each calendar day of delay until the Work is fully completed. Contractor and its surety shall be liable for any liquidated damages. Any money due or to become due the Contractor may be retained to cover liquidated damages.
- C. Inclement Weather. Contractor shall abide by the Engineer's determination of what constitutes inclement weather. Time extensions for inclement weather shall only be granted when the Work stopped during inclement weather is on the critical path of the Project schedule. Contractor shall not be entitled to reverse liquidated damages for time extensions resulting from inclement weather.
- D. Extension of Time. Contractor's entitlement to an extension of the Contract Time is limited to a City-caused extension of the critical path, reduced by the Contractor's concurrent delays, and established by a proper time impact analysis. Contractor shall not be charged liquidated damages because of any delays in completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of Contractor (or its Subcontractors or Suppliers). The City shall ascertain the facts and extent of delay and grant extension of time for completing the Work when, in its judgment, the facts justify such an extension. Contractor shall not be entitled to an adjustment in the Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

- E. Reverse Liquidated Damages. Consistent with Public Contract Code Section 7102, Contractor will be compensated for damages incurred due to unreasonable delays to the critical path for which the City is responsible. The parties agree that determining Contractor's exact delay damages are and will continue to be impracticable and extremely difficult. As such, for each calendar day in excess of the time for completion set forth in Article 2 of the Contract for Construction, the City shall pay to the Contractor the sum stipulated in the Contract per day. Such amount shall constitute the only payment allowed for any City-caused delays and shall necessarily include all overhead, all profits, all administrative costs, all bond costs, all labor, materials, equipment and rental costs and any other costs, expenses and fees incurred or sustained as a result of such delays. Contractor shall not be entitled to reverse liquidated damages for any change in the Work in which Contractor is compensated for overhead and profit through a change in Unit Price Work or a Change Order resulting in a lump sum or allowed mark-up for the additional Work. The amount of reverse liquidated damages shall be reduced by Contractor's concurrent delays.
- F. Force Majeure. In accordance with subparagraphs "D" and "E" above, the Contractor shall not be charged liquidated damages, and the City shall not be responsible, for any delays resulting from a Force Majeure Event. If a delay to the critical path results from a Force Majeure Event, the Contractor will be entitled to a time extension but will not receive an adjustment to the Contract Price or any other compensation. Such a non-compensable adjustment shall be Contractor's sole and exclusive remedy for such delays.
- G. No Damages for Reasonable Delay. The City's liability to Contractor for delays for which the City is responsible shall be limited to only an extension of time unless such delays were unreasonable under the circumstances. In no case shall the City be liable for any costs which are borne by the Contractor in the regular course of business, including, but not limited to, home office overhead and other ongoing costs. Damages caused by unreasonable City delay shall be based on actual costs only, no proportions or formulas shall be used to calculate any delay damages.
- H. Procedure for Time Extensions and Delay Damages. Contractor shall not be entitled to any extension of time or any reverse liquidated damages unless Contractor properly notices the delay and adjustment to compensation and requests a Change Order in accordance with Article 9.1 Change Orders and Time Extensions. Contractor's failure to timely and fully comply with the Change Order procedures in the Contract Documents shall constitute a waiver of Contractor's right to a time extension or reverse liquidated damages.

8.4 Contractor's Responsibility for Work.

- A. Until the acceptance of the Work by the Engineer as evidenced in writing, it shall be under the charge and care of the Contractor. The Contractor shall take every necessary precaution against injury or damage to any part thereof by the action of the elements or from any cause whether arising from the execution or non-execution of the Work. The Contractor shall rebuild, repair, restore and make good at its own expense all injuries or damages to any portion of the Work before its completion and acceptance. In the event of damage proximately caused by an Act of God, as

defined by Section 7105 of the Public Contract Code, the City will pay for repair or restoration to damaged Work in excess of 5% of the total Bid.

8.5 Occupancy.

- A. The City reserves the right to occupy or utilize any portion of the Work at any time before completion, and such occupancy or use shall not constitute acceptance of any part of Work covered by this Contract. This use shall not relieve the Contractor of its responsibilities under the Contract.

8.6 Securities for Money Withheld

- A. Pursuant to section 22300 of the Public Contract Code of the State of California, Contractor may request the City to make retention payments directly to an escrow agent or may substitute securities for any money withheld by the City to ensure performance under the contract. At the request and expense of Contractor, securities equivalent to the amount withheld shall be deposited with the City or with a state or federally chartered bank as the escrow agent who shall return such securities to Contractor upon satisfactory completion of the contract. Deposit of securities with an escrow agent shall be subject to a written agreement substantially in the form provided in section 22300 of the Public Contract Code.

8.7 The City's Right to Suspend/Terminate the Contract

A. Suspension of Work by the City

1. The City may, at its sole option, decide to suspend at any time the performance of all or any portion of the Work by notice in writing to Contractor. Such notice of suspension of Work will designate the amount and type of plant, labor, and equipment to be committed to the Project during the period of suspension. Contractor shall use its best efforts to utilize its plant, labor, and equipment in such a manner as to minimize costs associated with suspension.
2. Upon receipt of any such notice, Contractor shall, unless the notice requires otherwise:
 - a. Immediately discontinue Work on the date and to the extent specified in the notice;
 - b. Place no further orders or subcontracts for material, services, or facilities with respect to suspended Work other than to the extent required in the notice;
 - c. Promptly make every reasonable effort to obtain suspension upon terms satisfactory to the City's Representative of all orders, subcontracts, and rental agreements to the extent they relate to performance of Work suspended; and
 - d. Continue to protect and maintain the Work including those portions on which Work has been suspended.

3. Except as provided by this Article, as full and complete compensation for such suspension, Contractor shall be granted an adjustment in the Contract Price based on a negotiated daily rate that reflects the Contractor's actual costs associated with the demobilized condition of the Site and an extension of the Contract Times equal to the number of days performance of Work is suspended; provided, however, that no adjustment of Contract Price or extension of Contract Times shall be granted if the suspension results from Contractor's non-compliance with the requirements of the Contract.

B. Termination for Cause by the City:

1. In the sole estimation of the City, if the Contractor refuses or fails to prosecute the Work or any separable part thereof with such diligence as will insure its completion within the time specified by the Contract Documents, or any extension thereof, or fails to complete such Work within such time, or if the Contractor should be adjudged a bankrupt, or if it should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or the Contractor or any of its subcontractors should violate any of the provisions of this Contract, the City may serve written notice upon the Contractor and its surety of the City's intention to terminate this Contract. This notice of intent to terminate shall contain the reasons for such intention to terminate this Contract, and a statement to the effect that the Contractor's right to perform this Contract shall cease and terminate upon the expiration of ten (10) Days unless such violations have ceased and arrangements satisfactory to the City have been made for correction of said violations.
2. After expiration of the ten (10) Day period, the City may terminate the Contract by providing a Notice of Termination to the Contractor. The City may take over and complete the Work by any method it may deem appropriate, including enforcement of the Project performance bond. Contractor and its surety shall be liable to the City for any excess costs or other damages incurred by the City to complete the Work. If the City takes over the Work, the City may, without liability for so doing, take possession of and utilize in completing the Work such materials, appliances, plant, and other property belonging to the Contractor as may be on the Site.
3. Upon termination, Contractor shall not be entitled to receive any further payment from the City, except for Work which was duly performed prior to the effective date of the Notice of Termination. Contractor shall submit an invoice for final payment within thirty (30) Days of the effective date of the Notice of Termination. The City may withhold from final payment up to 150% of any disputed amounts, including any amounts which may be necessary to repair defective Work, complete unfinished Work, or are otherwise occasioned by Contractor's failure to perform its duties under the Contract.

C. Termination for Convenience by the City:

1. The City may terminate performance of the Work called for by the Contract Documents in whole or, from time to time, in part, upon ten (10) Days written notice if the City determines that a termination is in the City's interest.

2. The Contractor shall terminate all or any part of the Work upon delivery to the Contractor of a Notice of Termination specifying that the termination is for the convenience of the City, the extent of termination, and the effective date of such termination.
3. After receipt of Notice of Termination, and except as directed by the City's Representative, the Contractor shall, regardless of any delay in determining or adjusting any amounts due under this termination for convenience clause, immediately proceed with the following obligations:
 - a. Stop Work as specified in the Notice.
 - b. Complete any Work specified in the Notice of Termination in a least cost/shortest time manner while still maintaining the quality called for under the Contract Documents.
 - c. Leave the property upon which the Contractor was working and upon which the facility (or facilities) forming the basis of the Contract Document is situated in a safe and sanitary manner such that it does not pose any threat to the public health or safety.
 - d. Terminate all subcontracts to the extent that they relate to the portions of the Work terminated.
 - e. Place no further subcontracts or orders, except as necessary to complete the continued portion of the Contract.
 - f. Submit to the City's Representative, within ten (10) Days from the effective date of the Notice of Termination, all of the usual documentation called for by the Contract Documents to substantiate all costs incurred by the Contractor for labor, materials and equipment through the effective date of the Notice of Termination. Any documentation substantiating costs incurred by the Contractor solely as a result of the City's exercise of its right to terminate this Contract pursuant to this clause, which costs the contractor is authorized under the Contract documents to incur, shall: (1) be submitted to and received by the Engineer no later than 30 Days after the effective date of the Notice of Termination; (2) describe the costs incurred with particularity; and (3) be conspicuously identified as "Termination Costs occasioned by the City's Termination for Convenience." If the City rejects any costs, Contractor shall be deemed to waive the rejected costs unless Contractor files a Claim within thirty (30) Days of the rejection pursuant to Article 9.2.
 - g. Contractor shall be entitled to receive only the amounts payable under this Article, and Contractor specifically waives any claim for any other amounts or damages, including, but not limited to, any claim for consequential damages or lost profits. The provisions in this Article are in addition to and not in limitation of any other rights or remedies available to the City.

4. Termination of the Contract shall not relieve surety of its obligation for any just claims arising out of or relating to the Work performed.
5. Notwithstanding any other provision of this Article, when immediate action is necessary to protect life and safety or to reduce significant exposure or liability, the City may immediately order Contractor to cease Work on the Project until such safety or liability issues are addressed to the satisfaction of the City or the Contract is terminated.
6. If the City terminates Contractor for cause, and if it is later determined that the termination was wrongful, such default termination shall automatically be converted to and treated as a termination for convenience. In such event, Contractor shall be entitled to receive only the amounts payable under this section, and Contractor specifically waives any claim for any other amounts or damages, including, but not limited to, any claim for consequential damages or lost profits.

8.8 Completion and Acceptance of Work

- A. Final Inspection. Upon written notice from Contractor that the entire Work is complete, the Engineer will promptly make a final inspection with the City and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.
- B. Final Acceptance. The acceptance of the Work on behalf of the City will be made by the Engineer. Such acceptance by the City shall not constitute a waiver of defects. After Contractor has, in the opinion of the Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, Record Documents, and other documents required by the Contract Documents, the City shall execute a Notice of Completion, constituting final acceptance and completion of the Project, except as may be expressly noted.

8.9 Warranty and Guaranty of Work.

- A. Contractor hereby warrants that materials and Work shall be completed in conformance with the Contract Documents and that the materials and Work provided will fulfill the requirements of this Warranty. Contractor hereby agrees to repair or replace, at the discretion of the City, any or all Work that may prove to be defective in its workmanship, materials furnished, methods of installation or fail to conform to the Contract Document requirements together with any other Work which may be damaged or displaced by such defect(s) within a period of one (1) year (or as otherwise indicated in the Contract Documents or in any guarantee or warranty provided by any manufacturer or supplier of equipment or materials incorporated into the Work, whichever is later) from the date of the Notice of Completion of the Project without any expense whatever to the City, ordinary wear and tear and unusual abuse and neglect excepted. Contractor shall be required to promptly repair or replace defective equipment or materials, at Contractor's option. All costs associated with such corrective actions and testing, including the removal, replacement, and

reinstitution of equipment and materials necessary to gain access, shall be the sole responsibility of the Contractor.

- B. For any Work so corrected, Contractor's obligation hereunder to correct defective Work shall be reinstated for an additional one (1) year period, commencing with the date of acceptance of such corrected Work. The reinstatement of the one (1) year warranty shall apply only to that portion of work that was corrected. Contractor shall perform such tests as the City may require to verify that any corrective actions, including, without limitation, redesign, repairs, and replacements comply with the requirements of the Contract. In the event of Contractor's failure to comply with the above-mentioned conditions within ten (10) Days after being notified in writing of required repairs, to the reasonable satisfaction of the City, the City shall have the right to correct and replace any defective or non-conforming Work and any work damaged by such work or the replacement or correction thereof at Contractor's sole expense. Contractor shall be obligated to fully reimburse the City for any expenses incurred hereunder immediately upon demand.
- C. In addition to the warranty set forth in this Article, Contractor shall obtain for the City all warranties that would be given in normal commercial practice and assign to the City any and all manufacturer's or installer's warranties for equipment or materials not manufactured by Contractor and provided as part of the Work, to the extent that such third-party warranties are assignable and extend beyond the warranty period set forth in this Article. Contractor shall furnish the City with all warranty and guarantee documents prior to final acceptance of the Project by the City as required.
- D. When specifically indicated in the Contract Documents or when directed by the Engineer, the City may furnish materials or products to the Contractor for installation. In the event any act or failure to act by Contractor shall cause a warranty applicable to any materials or products purchased by the City for installation by the Contractor to be voided or reduced, Contractor shall indemnify the City from and against any cost, expense, or other liability arising therefrom, and shall be responsible to the City for the cost of any repairs, replacement or other costs that would have been covered by the warranty but for such act or failure to act by Contractor.
- E. The Contractor shall remedy at its expense any damage to City-owned or controlled real or personal property.
- F. The City shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage. The Contractor shall within ten (10) Days after being notified commence and perform with due diligence all necessary Work. If the Contractor fails to promptly remedy any defect or damage, the City shall have the right to replace, repair or otherwise remedy the defect, or damage at the Contractor's expense.
- G. In the event of any emergency constituting an immediate hazard to health, safety, property, or licensees, when caused by Work of the Contractor not in accordance with the Contract requirements, the City may undertake at Contractor's expense, and without prior notice, all Work necessary to correct such condition.
- H. Acceptance of Defective Work.

1. If, instead of requiring correction or removal and replacement of defective Work, the City prefers to accept it, the City may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to the City's evaluation of and determination to accept such defective Work and for the diminished value of the Work. If any acceptance of Defective Work occurs prior to release of the Project retention, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and the City shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work and all costs incurred by the City. If the acceptance of defective occurs after release of the Project retention, an appropriate amount will be paid by Contractor to the City.

I. The City May Correct Defective Work

1. If Contractor fails within a reasonable time after written notice from the City to correct Defective Work, or to remove and replace rejected Work as required by the City, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, the City may, after seven (7) Days written notice to Contractor, correct, or remedy any such deficiency.
2. In connection with such corrective or remedial action, the City may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which the City has paid Contractor but which are stored elsewhere. Contractor shall allow the City, and the agents, employees, other contractors, and consultants of each of them, access to the Site to enable the City to exercise the rights and remedies to correct the Defective Work.
3. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by the City correcting the Defective Work will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the City shall be entitled to an appropriate decrease in the Contract Price. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of defective Work.
4. If the Change Order is executed after all payments under the Contract have been paid by the City and the Project Retention is held in an escrow account as permitted by the Contract Documents, Contractor will promptly alert the escrow holder, in writing, of the amount of Retention to be paid to the City. If the Change Order is executed after release of the Project retention, an appropriate amount will be paid by Contractor to the City. Contractor shall not be allowed an extension of

the Contract Times because of any delay in the performance of the Work attributable to the City correcting Defective Work.

- J. Nothing in the warranty or in the Contract Documents shall be construed to limit the rights and remedies available to the City at law or in equity, including, but not limited to, Code of Civil Procedure section 337.15.

ARTICLE 9 -CHANGE ORDERS; DISPUTE RESOLUTION

9.1 Change Orders and Time Extensions

All changes to the Contract, including compensation increases and time extensions, shall be through a written Change Order in accordance with this Article. The City, without invalidating the Contract, may order changes in the Work consisting of additions, deletions or other revisions, and Contractor's compensation and the time for completion shall be adjusted accordingly. Whenever any change is made as provided for herein, such change shall be considered and treated as though originally included in the Contract, and shall be subject to all terms, conditions, and provisions of the original Contract. Contractor shall not be entitled to claim or bring suit for damages, whether for loss of profits or otherwise, on account of any decrease or omission of any item or portion of Work to be done. No dispute, disagreement, or failure of the parties to reach agreement on the terms of the Change Order shall relieve the Contractor from the obligation to proceed with performance of the Work, including Additional Work, promptly and expeditiously. Any alterations, extensions of time, Additional Work, or any other changes may be made without securing consent of the Contractor's surety or sureties.

A. Change in Contract Procedures

1. **City Directive.** The City may direct changes in the Work by delivering a written directive. To the extent the work directive results in a change to compensation or time, Contractor must timely request a Change Order and comply with all Change Order procedures in accordance with this Article. Notwithstanding issuance of a work directive, Contractor's failure to timely request a Change Order shall constitute a waiver by Contractor of any adjustment to compensation or time extension for Work performed under the directive. The City shall not be liable to Contractor for Work performed or omitted by Contractor in reliance on verbal orders.
2. **Contractor's Notice of Change/Delay.** If Contractor intends to initiate a Change Order Request, then Contractor shall provide the City with written notice of the underlying facts and circumstances that gave rise to the proposed change within the following times:
 - a. If due to unknown subsurface or latent physical conditions, within three (3) days from the discovery date or prior to the alterations of the conditions, whichever is earlier.
 - b. If due to a Force Majeure Event, as soon as reasonably practicable under the conditions, which shall be no longer than three (3) days from the date the Contractor discovers that the Force Majeure Event gives rise to a change, unless that the conditions are such that notice within three (3) days is not possible or practicable.

- c. If due to any other matter that may involve an adjustment to the Contract Time or the Contract Price, within seven (7) days from the discovery date.

To be considered valid and complete, the notice of change/delay shall include a general statement of the circumstances giving rise to the notice of change/delay and a reasonable order of magnitude estimate of the additional costs and/or time. If the circumstances give rise to both a cost adjustment and time extension, Contractor shall submit the notice of change and notice of delay concurrently.

- 3. Request for Change in Compensation and/or Extension of Time. Contractor shall submit a Change Order Request for any adjustment to Contractor's compensation and/or any extension of time. The Change Order Request shall be made prior to incurring any expense and within fourteen (14) Days from either Contractor's notice of change/delay or the City's directive ordering the change. The Change Order Request shall include all of the following information (unless inapplicable to the change):

- a. A detailed description of the circumstances giving rise to the request;
- b. A complete itemized cost proposal, including itemized pricing for first tier Subcontractors;
- c. Supporting documentation for all costs;
- d. A time impact analysis showing the impact of the delay to the critical path to completion;
- e. If any added costs or information cannot be determined at the time of the Change Order Request, the reason the costs or information cannot be determined at the time; and
- f. Certification to the accuracy of the Change Order Request under penalty of perjury.

The time impact analysis shall be in the critical path method format and shall show the sequencing of all critical and non-critical new activities and/or activity revisions affected by the delay, with logic ties to all affected existing activities noted on the schedule.

The City may demand, and Contractor shall provide, any additional information supporting the Change Order Request, including but not limited to native electronic format version of schedules and time impact analyses. Contractor shall provide the requested additional information within five (5) Days of the request.

For any costs or information that cannot be determined at the time Contractor submits the Change Order Request, Contractor shall submit to the City notice of the costs or information and all

supporting documentation within five (5) Days of when the costs or other information become subject to determination.

4. City's Final Decision on Change Order; Ordered Changes. If the City denies the Change Order Request or disagrees with the proposal submitted by Contractor, it will notify the Contractor, and the City will provide its opinion of the appropriate price and/or time extension. If no agreement can be reached, the City shall have the right to order the Work performed on a time and materials basis or to issue a unilateral Change Order setting forth the City's determination of the reasonable additions or savings in costs and time attributable to the extra or deleted work. The City shall also have the right to order changes in the Work to be performed promptly by the Contractor on a time and materials basis or to issue a unilateral Change Order setting forth the City's determination of the reasonable additions or savings in costs and time attributable to the extra or deleted work. The City's determination shall become final and binding if the Contractor fails to submit a Claim in writing to the City within fourteen (14) Days of the issuance of the unilateral Change Order, disputing the terms of the unilateral Change Order and providing such supporting documentation for its position as the City may reasonably require.
5. Contractor's Waiver of Further Relief. **CONTRACTOR'S FAILURE TO PROVIDE A COMPLETE AND TIMELY NOTICE OF CHANGE/DELAY AND/OR CHANGE ORDER REQUEST, OR TO COMPLY WITH ANY OTHER REQUIREMENT OF THIS ARTICLE, SHALL CONSTITUTE A WAIVER BY CONTRACTOR OF THE RIGHT TO A CONTRACT ADJUSTMENT ON ACCOUNT OF SUCH CIRCUMSTANCES AND A WAIVER OF ANY RIGHT TO FURTHER RECOURSE OR RECOVERY BY REASON OF OR RELATED TO SUCH CHANGE BY MEANS OF THE CLAIMS DISPUTE RESOLUTION PROCESS OR BY ANY OTHER LEGAL PROCESS OTHERWISE PROVIDED FOR UNDER APPLICABLE LAWS.**

Contractor recognizes and acknowledges that timely submission of a formal written notice of change/delay and Change Order Request, whether or not the circumstances of the change may be known to the City or available to the City through other means, is not a mere formality but is of crucial importance to the ability of the City to promptly identify, prioritize, evaluate and mitigate the potential effects of changes. Any form of informal notice, whether verbal or written (including, without limitation, statements in requests for information, statements in Submittals, statements at any job meeting or entries on monthly reports, daily logs or job meeting minutes), that does not strictly comply with the formal requirements of this Article, shall accordingly be insufficient.

6. Change Order Format
 - a. A Change Order signed by the Contractor indicates the Contractor's agreement therewith, including any adjustment in compensation or extension of time, and the full and final settlement of all costs (direct, indirect and overhead) related to the Work authorized by the Change Order.
 - b. The City may designate the forms to be used for notices, requests, and Change Orders. If so designated, Contractor may only use such forms. Contractor

shall not reserve a right to assert impact costs, extended job site costs, extended overhead, constructive acceleration and/or actual acceleration beyond what is stated in the Change Order. No Claims shall be allowed for impact, extended overhead costs, constructive acceleration and/or actual acceleration due to a multiplicity of changes and/or clarifications. The Contractor may not change or modify the City's Change Order form in an attempt to reserve additional rights.

B. Determining Adjustments to Compensation.

1. Limitation on Costs. Contractor shall not be entitled to any compensation for Work subject to a Change Order except as expressly set forth in this Article. The City Manager may approve Additional Work up to ten percent (10%) of the amount of the Agreement or fifty thousand dollars (\$50,000.00). In no event shall the total sum of the agreement (Contract Price and Additional Work) exceed fifty thousand dollars (\$50,000.00). Any additional work in excess of this amount shall be approved by the City Council. The mark-up added in instances of Additional Work shall constitute the entire amount of profit, any mark-ups, any field or home office overhead costs, including personnel, equipment or office space, any materials, or any costs of equipment idle time for such Work.
2. Unit Price Change Orders. When the actual quantity of a Unit Price Work item varies from the Bid Schedule, compensation for the change in quantity will be calculated by multiplying the actual quantity by the unit price. This calculation may result in either an additive or deductive Change Order. Bid items included on the Bid Schedule may be deducted from the Work in their entirety without any negotiated extra costs. Because Unit Price Work includes overhead and profit as determined by Contractor at the time of its Bid submission, no mark up or deduction for overhead and profit will be allowed.
3. Lump Sum Change Orders. Whenever possible, any changes affecting compensation shall be in a lump sum mutually agreed by the Contractor and the City.
4. Time and Materials Change Orders. The City may direct the Contractor to proceed with the Additional Work with payment to be made on the basis of actual cost of the labor and materials required to complete the Additional Work. If the Project is federally funded, a time and materials Change Order shall only be issued after a determination that no other Change Order is suitable and the Change Order shall include a ceiling price that the Contractor exceeds at its own risk.
5. Federally Funded Projects. For any change in price to the Contract, general and administrative expenses shall be negotiated and must conform to the cost principles set forth under at 2 C.F.R. Part 200, subpart E, and profit shall be negotiated as a separate element of the cost. To establish a fair and reasonable profit, consideration must be given to the complexity of the Additional Work to be performed, the risk borne by the Contractor, the Contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work.

6. Allowed Costs. Estimates for lump sum quotations and accounting for time-and-material work shall be limited to direct expenditures necessitated specifically by the change and shall be segregated as follows:
- a. Labor. The costs of labor will be the actual cost for wages prevailing locally for each craft or type of worker at the time the Additional Work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, state or local laws, as well as assessment or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the Additional Work cost will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.
 - b. Materials. The cost of materials reported shall be at the lowest current price at which such materials are locally available in the quantities involved, plus sales tax, freight and delivery. Materials costs shall be based upon supplier or manufacturer's invoice.
 - c. Tool and Equipment Use. Regardless of ownership, the rates to be used in determining equipment use shall not exceed listed rates prevailing locally at equipment rental agencies, or distributors, at the time the work is performed. The Contractor shall furnish cost data supporting the establishment of the rental rate. The rental rate to be applied for use of each items of equipment shall be the rate resulting in the least total cost to the City for the total period of use. The City shall the make the final determination as to an equitable rental rate for the equipment. No payment will be made for the use of small tools, which have a replacement value of \$1,000 or less.
 - (i) The rental time to be paid for equipment shall be the time the equipment is in productive operation on the Additional Work being performed. Rental time will not be allowed while equipment is inoperative due to breakdowns.
 - (ii) All equipment shall, in the opinion of the City, be in good working condition and suitable for the purpose for which the equipment is to be used. Equipment with no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.
 - (iii) Before construction equipment is used on any Additional Work, the Contractor shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the City, in duplicate, a description of the equipment and its identifying number.
 - (iv) When hourly rates are listed, any part of an hour less than 30 minutes of operation shall be considered to be 1/2-hour of operation, and any part of an hour greater than 30 minutes will be considered one hour of operation. When daily rates are listed, any part of a day less than 4 hours operation shall be considered to be 1/2-day of operation.

d. Allowed Mark-up. The allowed mark-up for any and all overhead (including supervision and home and field office costs) and profit on work added to the Contract shall be determined in accordance with the following provisions:

- (i) "Net Cost" is defined as the actual costs of labor, materials and tools and equipment only, excluding overhead and profit. The costs of applicable insurance and bond premium will be reimbursed to the Contractor and Subcontractors at cost only, without mark-up. Contractor shall provide the City with documentation of the costs, including but not limited to payroll records, invoices, and such other information as the City may reasonably request.
- (ii) For Work performed by the Contractor's forces the allowed mark-up shall not exceed fifteen (15%) percent of labor costs, ten percent (10%) of material costs, and ten percent (10%) of the cost of tools and equipment use.
- (iii) For Work performed by a Subcontractor, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the Subcontractor's Net Cost of the Work to which the Contractor may add up to five percent (5%) of the Subcontractor's Net Cost.
- (iv) For Work performed by a sub-subcontractor, the added cost for overhead and profit shall not exceed fifteen percent (15%) of the sub-subcontractor's Net Cost for Work to which the Subcontractor and Contractor may each add up to an additional five percent (5%) of the Net Cost of the lower tier subcontractor.
- (v) No additional mark-up will be allowed for lower tier subcontractors, and in no case shall the added cost for overhead and profit payable by the City exceed twenty-five percent (25%) of the Net Cost as defined herein, of the party that performs the Work.
- (vi) Calculation of the mark-up will be subject to the limitations above and to calculation as further detailed in (b)(B)(5) above.

e. Documentation of Time-and-Material Costs.

- (i) T&M Daily Sheets. Contractor must submit timesheets, materials invoices, records of equipment hours, and records of rental equipment hours to the City's for an approval signature each day that Work is performed on a time-and-material basis. The Engineer's signature on time sheets only serves as verification that the Work was performed and is not indicative of the City's agreement to Contractor's entitlement to the cost.
- (ii) T&M Summary Sheet. Contractor shall submit a T&M Summary Sheet, which shall include total actual costs, within five (5) Days following completion of Additional Work on a time-and-material basis. Contractor's total actual cost shall be presented in a summary table in an electronic spreadsheet file by labor, material, equipment, and any

other costs, along with documentation supporting the costs. Contractor's failure to submit the T&M Summary Sheet within five (5) Days of completion of the Additional Work will result in Contractor's waiver for any reimbursement of any costs associated with the Additional Work.

- f. Excluded Costs. The following costs or any other home or field office overhead costs, all of which are to be considered administrative costs covered by the Contractor's mark-up, shall not be allowed costs and shall not be included in any lump sum proposals or time-and-materials invoices:
- (i) Overhead Cost. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, timekeepers, clerks, and other personnel employed by Contractor whether at the Site or in Contractor's principal office or any branch office, material yard, or shop for general administration of the Work;
 - (ii) Office Expenses. Expenses of Contractor's principal and branch offices;
 - (iii) Capital Expenses. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Additional Work and charges against Contractor for delinquent payments;
 - (iv) Negligence. Costs due to the negligence of Contractor or any Subcontractor or Supplier, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including without limitation the correction of Defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property;
 - (v) Small Tools. Cost of small tools valued at less than \$1,000 and that remain the property of Contractor;
 - (vi) Administrative Costs. Costs associated with the preparation of Change Orders (whether or not ultimately authorized), cost estimates, or the preparation or filing of Claims;
 - (vii) Anticipated Lost Profits. Expenses of Contractor associated with anticipated lost profits or lost revenues, lost income or earnings, lost interest on earnings, or unpaid retention;
 - (viii) Home Office Overhead. Costs derived from the computation of a "home office overhead" rate by application of the *Eichleay, Allegheny*, burden fluctuation, or other similar methods;
 - (ix) Special Consultants and Attorneys. Costs of special consultants or attorneys, whether or not in the direct employ of Contractor, employed for services specifically related to the resolution of a Claim, dispute, or

other matter arising out of or relating to the performance of the Additional Work.

- (x) Other. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in the Contract Documents; including but not limited to: submittals, drawings, field drawings, shop drawings, including submissions of drawings; field inspection; general superintendence; computer services; reproduction services; salaries of project engineer, superintendent, timekeeper, storekeeper, and secretaries; janitorial services; small tools, incidentals and consumables; temporary on-site facilities (offices, telephones, high speed internet access, plumbing, electrical power, lighting; platforms, fencing, water); surveying; estimating; protection of work; handling and disposal fees; final cleanup; other incidental work; related warranties; insurance and bond premiums.
- (xi) Compliance with Federal Cost Principles. If the Project is federally funded, any costs that are not allowable, reasonable and allocable to the Project, under generally accepted accounting principles and the applicable federal requirements.

9.2 Procedure for Resolving Claims.

Contractor shall timely comply with any and all requirement of the Contract Documents pertaining to notices and requests for changes to the Contract Time or Contract Price, including but not limited to all requirements of Article 9.1, as a prerequisite to filing any claim governed by this Article. The failure to timely submit a notice of delay or notice of change, or to timely request a change to the time for completion or Contractor's compensation, or to timely provide any other notice or request required herein shall constitute a waiver of the right to further pursue the claim under the Contract or at law.

- A. Intent. Effective January 1, 1991, Section 20104 et seq., of the California Public Contract Code prescribes a process utilizing informal conferences, non-binding judicial supervised mediation, and judicial arbitration to resolve disputes on construction claims of \$375,000 or less. Effective January 1, 2017, Section 9204 of the Public Contract Code prescribes a process for negotiation and mediation to resolve disputes on construction claims. The intent of this Article is to implement Sections 20104 et seq. and Section 9204 of the California Public Contract Code. This Article shall be construed to be consistent with all applicable law, including but not limited to these statutes.
- B. Claims. For purposes of this Article, "Claim" means a separate demand by the Contractor for:
 - 1. An adjustment to the time for completion including, without limitation, for relief from damages or penalties for delay assessed by the City;
 - 2. Payment by the City of money or damages arising from Work done by or on behalf of the Contractor pursuant to the Contract, payment for which is not otherwise expressly provided or to which the Contractor is not otherwise entitled; or

3. An amount the payment of which is disputed by the City.

A "Claim" does not include any demand for payment for which the Contractor has failed to provide notice, request a Change Order, or otherwise failed to follow any procedures contained in the Contract Documents.

- C. Filing Claims. Claims governed by this Article may not be filed unless and until the Contractor completes any and all requirements of the Contract Documents pertaining to notices and requests for changes to the Contract Time or Contract Price, and Contractor's request for a change has been denied in whole or in part. Claims governed by this Article must be filed no later than thirty (30) Days after a request for change has been denied in whole or in part or after any other event giving rise to the Claim. The Claim shall be submitted in writing to the City and shall include on its first page the following words in 16 point capital font: "THIS IS A CLAIM." The Claim shall include the all information and documents necessary to substantiate the Claim, including but not limited to those identified below. Nothing in this Article is intended to extend the time limit or supersede notice requirements otherwise provided by Contract Documents. Failure to follow such contractual requirements shall bar any Claims or subsequent proceedings for compensation or payment thereon.

- D. **Documentation.** The Contractor shall submit all Claims in the following format:

1. Summary description of Claim including basis of entitlement, merit and amount of time or money requested, with specific reference to the Contract Document provisions pursuant to which the Claim is made
2. List of documents relating to Claim:
 - a. Specifications
 - b. Drawings
 - c. Clarifications (Requests for Information)
 - d. Schedules
 - e. Other
3. Chronology of events and correspondence
4. Narrative analysis of Claim merit
5. Analysis of Claim cost, including calculations and supporting documents
6. Time impact analysis in the form required by the Contract Documents or, if the Contract Documents do not require a particular format, CPM format, if an adjustment of the Contract Time is requested

- E. City's Response. Upon receipt of a Claim pursuant to this Article, the City shall conduct a reasonable review of the Claim and, within a period not to exceed 45 Days,

shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Any payment due on an undisputed portion of the Claim will be processed and made within 60 Days after the City issues its written statement.

1. If the City needs approval from its governing body to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim, and the City's governing body does not meet within the 45 Days or within the mutually agreed to extension of time following receipt of a Claim sent by registered mail or certified mail, return receipt requested, the City shall have up to three (3) Days following the next duly publicly noticed meeting of the City's governing body after the 45-Day period, or extension, expires to provide the Contractor a written statement identifying the disputed portion and the undisputed portion.
 2. Within 30 Days of receipt of a Claim, the City may request in writing additional documentation supporting the Claim or relating to defenses or Claims the City may have against the Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the City and the Contractor. The City's written response to the Claim, as further documented, shall be submitted to the Contractor within 30 Days (if the Claim is less than \$50,000, within 15 Days) after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor in producing the additional information or requested documentation, whichever is greater.
- F. Meet and Confer. If the Contractor disputes the City's written response, or the City fails to respond within the time prescribed, the Contractor may so notify the City, in writing, either within 15 Days of receipt of the City's response or within 15 Days of the City's failure to respond within the time prescribed, respectively, and demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand, the City shall schedule a meet and confer conference within 30 Days for settlement of the dispute.
- G. Mediation. Within 10 business days following the conclusion of the meet and confer conference, if the Claim or any portion of the Claim remains in dispute, the City shall provide the Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within 60 Days after the City issues its written statement. Any disputed portion of the Claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation, with the City and the Contractor sharing the associated costs equally. The public entity and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the Claim has been identified in writing, unless the parties agree to select a mediator at a later time.
1. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

2. For purposes of this Article, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this Article.
 3. Unless otherwise agreed to by the City and the Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
 4. The mediation shall be held no earlier than the date the Contractor completes the Work or the date that the Contractor last performs Work, whichever is earlier. All unresolved Claims shall be considered jointly in a single mediation, unless a new unrelated Claim arises after mediation is completed.
- H. Procedures After Mediation. If following the mediation, the Claim or any portion remains in dispute, the Contractor must file a Claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code prior to initiating litigation. For purposes of those provisions, the running of the period of time within which a Claim must be filed shall be tolled from the time the Contractor submits his or her written Claim pursuant to subdivision (a) until the time the Claim is denied, including any period of time utilized by the meet and confer conference.
- I. Civil Actions. The following procedures are established for all civil actions filed to resolve Claims of \$375,000 or less:
1. Within 60 Days, but no earlier than 30 Days, following the filing or responsive pleadings, the court shall submit the matter to non-binding mediation unless waived by mutual stipulation of both parties or unless mediation was held prior to commencement of the action in accordance with Public Contract Code section 9204 and the terms of this Contract. The mediation process shall provide for the selection within 15 Days by both parties of a disinterested third person as mediator, shall be commenced within 30 Days of the submittal, and shall be concluded within 15 Days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.
 2. If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1114.11 of that code. The Civil Discovery Act of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration. In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.
- J. Government Code Claim Procedures.

1. This Article does not apply to tort claims and nothing in this Article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.5 of Title 1 of the Government Code.
 2. In addition to any and all requirements of the Contract Documents pertaining to notices of and requests for adjustment to the Contract Time, Contract Price, or compensation or payment for Additional Work, disputed Work, construction claims and/or changed conditions, the Contractor must comply with the claim procedures set forth in Government Code Section 900, et seq. prior to filing any lawsuit against the City.
 3. Such Government Code claims and any subsequent lawsuit based upon the Government Code claims shall be limited to those matters that remain unresolved after all procedures pertaining to adjustment of the Contract Time or Contract Price for Additional Work, disputed Work, construction claims, and/or changed conditions have been followed by Contractor. If Contractor does not comply with the Government Code claim procedure or the prerequisite contractual requirements, Contractor may not file any action against the City.
 4. **A Government Code claim must be filed no earlier than the date the Work is completed or the date the Contractor last performs Work on the Project, whichever occurs first. A Government Code claim shall be inclusive of all unresolved Claims known to Contractor or that should reasonably be known to Contractor excepting only new unrelated Claims that arise after the Government Code claim is submitted.**
- K. Non-Waiver. The City's failure to respond to a Claim from the Contractor within the time periods described in this Article or to otherwise meet the time requirements of this Article shall result in the Claim being deemed rejected in its entirety, and shall not constitute a waiver of any rights under this Article.

ARTICLE 10 - MEASUREMENT; PAYMENT

10.1 Cost Breakdown.

A. Lump Sum Work.

1. Contractor shall furnish on forms approved by the City within ten (10) Days of the Notice to Proceed, a schedule of values allocating the entire Contract Price to the various portions of the Work and prepared in such a form and supported by such data to substantiate its accuracy as the Engineer may require. This schedule of values, unless objected to by the Engineer, shall be used as a basis for reviewing the Contractor's applications for payment. Contractor shall submit the schedule of values prior to submitting its first application for payment, and the City will not issue any payment until it receives and approves the schedule of values.

B. Unit Price Work.

1. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work multiplied by the estimated quantity of each item as indicated in the Contract. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and or profit for each separately identified item.
2. Unless otherwise specified, payment will be based on the actual quantities of Work as verified and approved by the Engineer, based on the price per unit as set forth in the Bid.
3. The City or Contractor may initiate a Change Order or Change Order Request to adjust the Contract Price in accordance with Contractor Documents based on actual quantities of Unit Price Work. The City or Contractor may make a claim for an adjustment in the Unit Price in accordance with the Contract Documents if:
 - a. the quantity of any item of Unit Price Work performed by Contractor differs by twenty-five percent (25%) or more from the estimated quantity of such item indicated in the Contract; and
 - b. there is no corresponding adjustment with respect to any other item of Work; and
 - c. Contractor believes that Contractor is entitled to an increase in unit price as a result of having incurred additional expense or the City believes that the City is entitled to a decrease in unit price and the parties are unable to agree as to the amount of any such increase or decrease.

10.2 Progress Estimates and Payment.

- A. By the tenth (10th) Day of the following calendar month, Contractor shall submit to Engineer a payment request which shall set forth in detail the value of the Work done for the period beginning with the date Work was first commenced and ending on the end of the calendar month for which the payment request is prepared. Contractor shall include an adjusted list of actual quantities, verified by the Engineer, for unit price items listed, if any, in the Bid. Contractor shall include any amount earned for authorized Additional Work. Contractor shall certify under penalty of perjury, that all cost breakdowns and periodic estimates accurately reflect the Work on the Project.
- B. From the total thus computed, a deduction shall be made in the amount of five percent (5%) for retention, except where the City has adopted a finding that the Work done under the Contract is substantially complex, and then the amount withheld as retention shall be the percentage specified in the Notice Inviting Bids. From the remainder a further deduction may be made in accordance with Section C below. The amount computed, less the amount withheld for retention and any amounts withheld as set forth below, shall be the amount of the Contractor's payment request.

- C. The City may withhold a sufficient amount or amounts of any payment or payments otherwise due to Contractor, as in its judgment may be necessary to cover:
1. Payments which may be past due and payable for just claims against Contractor or any Subcontractors for labor or materials furnished in and about the performance of work on the Project under this Contract.
 2. Defective work not remedied.
 3. Failure of Contractor to make proper payments to his Subcontractor or for material or labor.
 4. Completion of the Contract if there is a reasonable doubt that the Work can be completed for balance then unpaid.
 5. Damage to another contractor or a third party.
 6. Amounts which may be due the Count for claims against Contractor.
 7. Failure of Contractor to keep the Record Drawings up to date.
 8. Failure to provide update on construction schedule as required herein.
 9. Site cleanup.
 10. Failure to comply with Contract Documents.
 11. Liquidated damages.
 12. Legally permitted penalties.
- D. The City may apply such withheld amount or amounts to payment of such claims or obligations at its discretion with the exception of subsections (C)(1), (3), and (5) of this Article, which must be retained or applied in accordance with applicable law. In so doing, the City shall be deemed the agent of Contractor and any payment so made by the City shall be considered as a payment made under contract by the City to Contractor and the City shall not be liable to Contractor for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligations. The City will render Contractor a proper accounting of such funds disbursed on behalf of Contractor.
- E. Upon receipt, the Engineer shall review the payment request to determine whether it is undisputed and suitable for payment. If the payment request is determined to be unsuitable for payment, it shall be returned to Contractor as soon as practicable but not later than seven (7) Days after receipt, accompanied by a document setting forth in writing the reasons why the payment request is not proper. The City shall make the progress payment within 30 Days after the receipt of an undisputed and properly submitted payment request from Contractor, provided that a release of liens and claims has been received from the Contractor pursuant to Civil Code section 8132. The number of days available to the City to make a payment without incurring

interest pursuant to this paragraph shall be reduced by the number of Days by which the Engineer exceeds the seven (7) Day requirement.

- F. A payment request shall be considered properly executed if funds are available for payment of the payment request and payment is not delayed due to an audit inquiry by the financial officer of the City.
- G. The City shall have the right to adjust any estimate of quantity and to subsequently correct any error made in any estimate for payment.

10.3 Final Acceptance and Payment

- A. Following the City's acceptance of the Work, the Contractor shall submit to the City a written statement of the final quantities of unit price items for inclusion in the final payment request. The City shall have the right to adjust any estimate of quantity and to correct any error made in any estimate for payment.
- B. When the Work has been accepted there shall be paid to Contractor a sum equal to the Contract Price less any amounts previously paid Contractor and less any amounts withheld by the City from Contractor under the terms of the Contract. The final five percent (5%), or the percentage specified in the Notice Inviting Bids where the City has adopted a finding of substantially complete, shall not become due and payable until as required by Public Contract Code section 7107. If the Contractor has placed securities with the City as described herein, the Contractor shall be paid a sum equal to one hundred percent (100%) of the Contract Price less any amounts due the City under the terms of the Contract.
- C. Unless Contractor advises the City in writing prior to acceptance of the final five percent (5%) or the percentage specified in the Notice Inviting Bids where the City has adopted a finding of completion, or the return of securities held as described herein, said acceptance shall operate as a release to the City of all claims and all liability to Contractor for all things done or furnished in connection with this Work and for every act of negligence of the City and for all other claims relating to or arising out of this Work. If Contractor advises the City in writing prior to acceptance of final payment or return of the securities that there is a dispute regarding the amount due the Contractor, the City may pay the undisputed amount contingent upon the Contractor furnishing a release of all undisputed claims against the City with the disputed claims in stated amounts being specifically excluded by Contractor from the operation of the release. No payments, however, final or otherwise, shall operate to release Contractor or its sureties from the Faithful Performance Bond, Labor and Material Payment Bond, or from any other obligation under this Contract.
- D. In case of suspension of the Contract any unpaid balance shall be and become the sole and absolute property of the City to the extent necessary to repay the City any excess in the cost of the Work above the Contract Price.
- E. Final payment shall be made no later than 60 Days after the date of acceptance of the Work by the City or the date of occupation, beneficial use and enjoyment of the Work by the City including any operation only for testing, start-up or commissioning accompanied by cessation of labor on the Work, provided that a release of liens and claims has been received from the Contractor pursuant to Civil Code section 8136.

In the event of a dispute between the City and the Contractor, the City may withhold from the final payment an amount not to exceed 150% of the disputed amount.

- F. Within ten (10) Days from the time that all or any portion of the retention proceeds are received by Contractor, Contractor shall pay each of its Subcontractors from whom retention has been withheld each Subcontractor's share of the retention received. However, if a retention payment received by Contractor is specifically designated for a particular Subcontractor, payment of the retention shall be made to the designated Subcontractor if the payment is consistent with the terms of the subcontract.

ARTICLE 11 - MISCELLANEOUS

11.1 Patents.

- A. Contractor shall hold and save the City, officials, officers, employees, and authorized volunteers harmless from liability of any nature or kind of claim therefrom including costs and expenses for or on account of any patented or unpatented invention, article or appliance manufactured, furnished or used by Contractor in the performance of this Contract.

11.2 Document Retention & Examination

- A. In accordance with Government Code section 8546.7, records of both the City and the Contractor shall be subject to examination and audit by the State Auditor General for a period of three (3) years after final payment.
- B. Contractor shall make available to the City any of the Contractor's other documents related to the Project immediately upon request of the City.
- C. In addition to the State Auditor rights above, the City shall have the right to examine and audit all books, estimates, records, contracts, documents, bid documents, subcontracts, and other data of the Contractor (including computations and projections) related to negotiating, pricing, or performing the modification in order to evaluate the accuracy and completeness of the cost or pricing data at no additional cost to the City, for a period of four (4) years after final payment.

11.3 Notice.

- A. All notices shall be in writing and either served by personal delivery or mailed to the other party. Written notice to the Contractor shall be addressed to Contractor's principal place of business unless Contractor designates another address in writing for service of notice. Notice to the City shall be addressed to the City as designated in the Notice Inviting Bids unless the City designates another address in writing for service of notice. Notice shall be effective upon receipt or five (5) Days after being sent by first class mail, whichever is earlier. Notice given by facsimile shall not be effective unless acknowledged in writing by the receiving party.

11.4 Notice of Third Party Claims

- A. Pursuant to Public Contract Code section 9201, the City shall provide the Contractor with timely notification of the receipt of any third-party claims relating to the Contract. The City is entitled to recover reasonable costs incurred in providing such notification.

11.5 State License Board Notice

- A. Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four (4) years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within ten (10) years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

11.6 Assignment of Contract

- A. Contractor shall not assign, transfer, convey, sublet or otherwise dispose of the rights or title of interest of any or all of this contract without the prior written consent of the City. Any assignment or change of Contractor's name or legal entity without the written consent of the City shall be void. Any assignment of money due or to become due under this Contract shall be subject to a prior lien for services rendered or material supplied for performance of Work called for under the Contract Documents in favor of all persons, firms, or corporations rendering such services or supplying such materials to the extent that claims are filed pursuant to the Civil Code, the Code of Civil Procedure or the Government Code.

11.7 Change In Name And Nature Of Contractor's Legal Entity.

- A. Should a change be contemplated in the name or nature of the Contractor's legal entity, the Contractor shall first notify the City in order that proper steps may be taken to have the change reflected on the Contract and all related documents. No change of Contractor's name or nature will affect the City's rights under the Contract, including but not limited to the bonds.

11.8 Prohibited Interests

- A. No City official or representative who is authorized in such capacity and on behalf of City to negotiate, supervise, make, accept, or approve, or to take part in negotiating, supervising, making, accepting or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the project, shall be or become directly or indirectly interested financially in the Contract.

11.9 Controlling Law

- A. Notwithstanding any subcontract or other contract with any subcontractor, supplier, or other person or organization performing any part of the Work, this Contract shall

be governed by the law of the State of California excluding any choice of law provisions.

11.10 Jurisdiction; Venue

- A. Contractor and any subcontractor, supplier, or other person or organization performing any part of the Work agrees that any action or suits at law or in equity arising out of or related to the bidding, award, or performance of the Work shall be maintained in the Superior Court of San Bernardino County, California, and expressly consent to the jurisdiction of said court, regardless of residence or domicile, and agree that said court shall be a proper venue for any such action.

11.11 Cumulative Remedies.

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Applicable Laws, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Article will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

11.12 Survival of Obligations.

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

11.13 Headings.

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

11.14 Assignment of Antitrust Actions

- A. In accordance with §7103.5(b) of the California Public Contract Code, Contractor and Subcontractors must conform to the following requirements:
 - 1. In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, Contractor or Subcontractor offer and agree to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under §4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with §16700) of Part 2 of Division 7 of the Business and Professions Code) arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract.
 - 2. This assignment must be made and become effective at the time the awarding body tenders to Contractor, without further acknowledgment by the parties.

11.15 All Legal Provisions Included

- A. Contractor shall give all notices and comply with all federal, state and local laws, ordinances, rules and regulations bearing on conduct of work as indicated and specified by their terms. References to specific laws, rules or regulations in this Contract are for reference purposes only, and shall not limit or affect the applicability of provisions not specifically mentioned. If Contractor observes that drawings and specifications are at variance therewith, he shall promptly notify City in writing and any necessary changes shall be adjusted as provided for in this Contract for changes in Work. If Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to City, he shall bear all costs arising therefrom.
- B. Contractor shall be responsible for familiarity with the Americans with Disabilities Act ("ADA") (42 U.S.C. § 12101 et seq.). The Work will be performed in compliance with ADA laws, rules and regulations. Contractor shall comply with the Historic Building Code, including, but not limited to, as it relates to the ADA, whenever applicable.
- C. Contractor acknowledges and understands that, pursuant to Public Contract Code section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code section 2717(b) in order to supply mined material for this Contract.
- D. No City official or representative who is authorized in such capacity and on behalf of City to negotiate, supervise, make, accept, or approve, or to take part in negotiating, supervising, making, accepting or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the Work, shall be or become directly or indirectly interested financially in the Contract.
- E. All provisions of law required to be inserted in the Contract or Contract Documents pursuant to any Applicable Laws shall be and are inserted herein. If through mistake, neglect, oversight, or otherwise, any such provision is not herein inserted or inserted in improper form, upon the application of either party, the Contract or Contract Documents shall be changed by City, at no increase in Contract Price or extension in Contract Times, so as to strictly comply with the Applicable Laws and without prejudice to the rights of either party hereunder.

END OF GENERAL PROVISIONS

00 73 13 – SPECIAL PROVISIONS

ARTICLE 1 -SCOPE OF WORK

1.1 Location of the Project.

- A. **One site located on the Pacific Electric Bike Trail between 2nd and 3rd Avenues within Downtown Upland, California 91786**

1.2 Scope of Work.

- A. The Scope of Work consists of: Removal of existing items, site grading, drainage, installation of new paving, walls, signage, site structures, site amenities, site lighting, irrigation, and planting.

ARTICLE 2 -MODIFICATIONS TO THE GENERAL CONDITIONS

1.1 GENERAL

The Contractor shall furnish in accordance with the plans and specifications, all labor, equipment, time, and materials required for the construction of all work as outlined herein. All work shall comply with the **2018 edition** of the Standard Specifications for Public Works Construction (SSPWC), commonly known as the “Green Book”, the Standard Plans for Public Works Construction (SPPWC), and the latest edition of Caltrans Standard Specifications, and Caltrans Standard Plan.

The Contractor shall furnish in accordance with the plans and specifications, all labor, materials, tools, equipment, time, and incidentals required for the construction of all work as outlined herein.

Unless specifically covered under a separate bid item on Section 2, “Definition of Bid Items,” or noted below, full compensation for complying with all the requirements of this Section 1, “General Requirements,” shall be considered as included in the various bid items of work, and no additional compensation will be allowed or paid for.

1.2 DESCRIPTION OF WORK

The work to be performed under this Contract generally consists of clearing and removal of items noted, site grading, furnishing, and installing drainage, concrete paving, brick, decorative concrete, walls, signage, site structures, site amenities, site lighting, irrigation, planting, and providing plant maintenance as described and specified herein, on the plans, and in the specifications.

The Contractor will furnish all transportation, materials, tools, time, equipment, labor and supplies to complete the improvements, together with the appurtenant work necessary or incidental to complete, in a workmanlike manner, the improvements as contemplated and as intended by these Specifications.

1.3 CONCRETE MATERIAL

All transit mixed concrete delivered to the site for this project shall be obtained from Holiday Rock, 2193 W. Foothill Blvd., Upland, CA. The City of Upland will be responsible for payment to Holiday Rock for all transit mixed concrete ordered and delivered to the project site based on approved delivery tickets. The contractor will be responsible for the scheduling and ordering of concrete from Holiday Rock, including mix design, color additives, etc. All orders for concrete from Holiday Rock shall be approved by the City inspector prior to delivery. All installation and finishing of concrete, including pumping if required, shall be the contractor's responsibility.

1.4 UTILITIES

Existing utilities shown on the plans are based on available records and surface features; however, neither the City nor the Engineer assumes any responsibility for having completely and precisely shown all such existing utilities. The Contractor shall notify all utility companies and agencies serving the project area before beginning any excavations and shall coordinate all work with them.

The Contractor shall notify Underground Service Alert (USA) by calling 1-800-227-2600, at least two (2) working days prior to beginning any excavations. Following such notice, the Contractor shall submit to the Engineer the date of notice and corresponding assigned ticket number.

The California Department of Transportation is not required by Section 4216 of the California Government Code to become a member of the regional notification center. The Contractor shall contact Caltrans for location of their subsurface installations.

A. Utility Contacts

The following is a list of individuals or entities, which may have facilities that may be affected by the proposed improvements. This list is merely for the Contractor's information and may or may not be complete or inclusive. It is the Contractor's responsibility to coordinate his work with affected utility companies or agencies.

| Company / Entity | Contact | Phone Number |
|---------------------------------------|----------------------------|----------------------------------|
| City of Upland (Engineering Division) | Bob Critchfield | (909) 291-2946 |
| City of Upland (Water Division) | Mark Warner | (909) 291-2950 |
| City of Upland (Sewer & Storm Drain) | Nicole deMoet | (909) 291-2970 |
| AT&T | John Bradley | (909) 381-7385 |
| Metropolitan Water District (MWD) | John Osornia Mike Rubio | (909) 392-5095 (951) 776-2675 |
| San Antonio Water Company | Brian Lee | (909) 982-4107 |

| Company / Entity | Contact | Phone Number |
|---|-------------------|----------------|
| Southern California Edison Company | Isaac Dominguez | (909) 930-8562 |
| Sprint | | (909) 873-8022 |
| So Cal Gas Company | David Castellanos | (909) 335-7508 |
| Spectrum Communications | Customer Service | (888) 892-2253 |
| Underground Service Alert | | (800) 227-2600 |
| Frontier Communications (General Telephone) | | (909) 469-6369 |
| Water Facilities Authority | Terry Katlin | (909) 981-9454 |

It is the Contractor's responsibility to contact all utility agencies affected by the work to be completed, verify all utility information, and coordinate all work with respect to the utilities' possible obstructions and/or interference.

B. Location and Protection

The provisions of Section 5 "Utilities" of the SSPWC shall apply, except as modified and supplemented below:

The Contractor shall verify the existence and location of any underground utility pipes or structures that may be affected during the course of work. The Contractor will take due precautionary measures to protect the utilities shown, and other utilities or structures not shown on the plans that might be discovered during the process of the job.

Where underground main distribution conduits such as water, gas, sewer, electric power, telephone, cable television or traffic signal are shown on the Plans, the Contractor, for the purpose of preparing a Bid, shall assume that every property parcel will be served by a service connection for each type of utility.

The City of Upland Water Operations Division has water services and mains in the vicinity of where construction operations will be conducted by the Contractor. Care shall be taken by the Contractor not to disturb the water mains, services, meters, valves, etc. during construction operations. In the event that a water facility is damaged, the Contractor shall notify the Water Division and the Engineering Division immediately. The Contractor shall also arrange for the immediate repair of the water facility by a properly California licensed contractor, at no cost to the City. The Contractor will not be compensated for any damages or delays as a result of water facility repairs.

Payment for location and protection of utilities shall be considered to be included in the prices paid for the various contract items of work, and no additional compensation will be allowed or paid for and shall include repair of damaged utilities caused by the Contractor's operations.

C. Removal

The provisions of Section 5-3 "Removal" of the SSPWC shall apply, except as modified and supplemented below:

Unless otherwise specified, the Contractor shall remove or abandon all interfering portions of utilities shown on the Plans, or indicated in the Bid documents as "abandoned" or "to be abandoned in place". Before starting removal operations, the Contractor shall ascertain from the Agency that the abandonment is complete. The costs involved in the removal and disposal, or abandonment shall be included in the various bid items or work, and no additional compensation will be allowed or paid for.

D. Compensation for Damage or Relocation

In accordance with Section 4215 of the California Government Code, the Contractor shall be compensated for the cost of locating and repairing damage to main or trunk line utility facilities located on the job site, not due to the failure of the Contractor to exercise reasonable care; for costs of removing or relocating such utility facilities not indicated in the Contract Documents with reasonable accuracy; and for the operating costs for equipment on the project necessarily idled during such work. If the Contractor wishes to have any utility located, he should contact the owner at least 48 hours prior to construction in the immediate vicinity of the utility. Potholing to locate existing underground utilities shall be the responsibility of the utility owner or the contractor, and no further compensation shall be allowed therefor.

1.5 COMPLETION AND ACCEPTANCE

A. Guarantee of Work and Materials

The Contractor shall guarantee 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 (1) year from the date of acceptance of the work by the City Council, the Contractor shall, at his own expense, make any repair or replacement necessary to restore the work to full compliance with these Special Provisions, including repair of settled backfill and resurfacing.

Such repair and replacement shall be made promptly upon receipt of written notice from the City. If the contractor fails to make such repair and replacement promptly, the City may cause the work to be done and the cost incurred thereby shall become the liability of the Contractor and his surety.

If, in the opinion of the Engineer, defective work creates a dangerous condition or requires immediate 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 and the costs of such correction shall be charged against the Contractor. Such action by the City will not relieve the Contractor of the guarantees provided in this article or elsewhere in this

contract.

This article does not, in any way, limit the guarantee on any items for which a longer guarantee 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, or implied warranties. Contractor's bonds shall remain in force during the warranty period.

B. Liquidated Damages

Liquidated Damages shall be in the amount of ***Two Hundred and Fifty Dollars, (\$250)*** per calendar day in excess of the time allowed under this Contract. This amount shall be deducted from any compensation due the Contractor should he fail to complete the work required by the terms of his contract within the time specified herein, plus any authorized time extension.

1.6 Construction Start Date and Time of Completion

The City is anticipating award of the Construction Contract in **November 2025**. Contractor shall execute all required documents in an expeditious manner (i.e. Agreement, Insurance, Bonds, etc.) so that construction can begin no later than three weeks after the award of bid. The Contract Time shall commence on the date of issuance of the City's written Notice to Proceed (NTP). The Contractor undertaking the work hereinafter specified will be required to complete all work within ***Two-hundred forty (240) calendar days*** following date of issuance of the City's written NTP. The ***Two-hundred forty (240) calendar days*** shall include lead time for the manufacture / order of material required on this project.

The Contractor shall submit to the City for approval, a construction schedule at least 10 days prior to starting work.

1.7 Work Hours

Permitted work hours shall be 7:00 a.m. to 3:30 p.m., Monday through Friday. The Contractor shall take all necessary steps to minimize inconvenience to residents, businesses, and the public.

Work in excess of eight (8) hours per day, on Saturdays, Sundays, or legal holidays, requires prior consent of the City Engineer and is subject to Cost of Overtime Construction Inspection. Should the Contractor desire to perform work during these periods, he must submit his written request to the City Engineer at least forty-eight (48) hours prior to the anticipated start of such work. No work outside the permitted work hours stated above shall proceed without the approval of the City Engineer.

1.8 Notification of Residents and Businesses

All adjacent homeowners, business owners, and occupants shall be duly notified by the Contractor, in writing, of his proposed operation. Notice shall be delivered at least ten (10) working days prior to the start of construction. The City will provide the notification letter, and any necessary attachments, and the Contractor shall be responsible for reproduction and distribution of such notification letter and attachments.

Renotification will be required if the Contractor's schedule is altered or other delays occur,

which significantly affects the scheduled work. Renotification shall be at the Contractor's expense.

Prior to the actual start of the operation the Contractor shall inform the residents, tenants, business owners or occupants regarding the construction to preclude entrapment of cars and vehicles in driveways, garages, or parking areas. All costs involved in notification of residents and businesses shall be included in the various contract items of work and no additional compensation will be allowed therefore.

1.9 Temporary Traffic Control

Temporary Traffic controls (TTC), 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 the latest edition of Manual of Traffic Controls for Construction and Maintenance Work Zones, as published by the Department of Transportation of the State of California; California Manual on Uniform Traffic Control Devices (*CA MUTCD*); Part 6, "Temporary Traffic Control," of the SSPWC, and the following Special Provisions. In the event of conflict, the Special Provisions shall take precedence over the Manual of Traffic Controls, and the Manual of Traffic Controls shall take precedence over the Standard Specifications.

The contractor is also advised of City of Upland Ordinance 1495 for other specific street closure requirements. **Contractor shall prepare and submit for approval a traffic control plan prepared by a registered engineer for all project work. Construction will not be allowed to begin until traffic control plan is accepted by the City.**

A. General Requirements

1. Contractor shall have exclusive control and responsibility for traffic control and safety devices, all signage and roadway markings, all equipment and materials, and the ongoing construction at all times.
2. The Contractor shall conduct his operations so as to offer the least possible obstruction and inconvenience to the public, and shall have under construction, no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public. The Contractor's operations will cause no unnecessary inconvenience. The access rights of the public will be considered at all times.
3. The Contractor shall furnish and maintain all construction signs, channelizing devices, barricades, k-rail, temporary traffic striping and pavement markings, lighting devices, etc., to safely guide the traffic through the project limits, as described herein, and as directed by the Engineer.
4. The Contractor will be responsible for obtaining all partial street closure permits from the City of Upland prior to the start of any work. The street closure permits will identify additional signing requirements, work hours and other conditions as may be necessary to minimize inconvenience to motorists and businesses.

Ingress and egress to local residents, commercial and industrial properties must be accessible at all times.

5. All traffic control and safety devices, equipment and materials, including but not limited to cones, delineators, flashing warning lights, barricades, high level warning devices (flag trees), flags, signs, markers, portable barriers, flashing arrow signs, markings and flagging equipment, shall be provided and maintained in "like new" condition.
6. The Contractor shall furnish and properly install, construct, erect, use and continuously inspect and maintain, twenty-four (24) hours per day, seven (7) days per week, all said devices, equipment and materials, and all temporary and permanent pedestrian and driving surfaces as necessary to provide for the safety and convenience of and to properly warn, guide, control, regulate and channelize project workers and the public beyond said limits as necessary to include areas affecting or affected by the work, from the start of work to the completion of the work.
7. High level warning devices (flag trees) are required at all times for any work being performed within the roadway, unless otherwise specifically authorized by the City Engineer. Flashing arrow boards will be required on all streets with four or more lanes, or as deemed necessary by the Engineer or Inspector.
8. All barricades shall be equipped with flashing warning lights and all traffic cones shall be no less than 28 inches in height except that shorter cones, 12 inches high or higher, may be used during striping maintenance operations where the only function of the cones is to protect the wet paint from traffic.
9. Contractor shall have exclusive control and responsibility for all flaggers at all times. Properly trained and experienced flaggers shall be provided at all times when Contractor's operations encroach into the public right of way. Flaggers shall also be provided to direct traffic when said traffic is to be interrupted, when two-way traffic is to be reduced to one-way traffic at such time as is necessary to safely pass the traffic through or around the work area, and when so directed by the City.
10. Any traffic control and safety devices and equipment being used which becomes damaged, destroyed, faded, soiled, misplaced, worn out, inoperative, lost or stolen shall be promptly repaired or refurbished and/or replaced, and any traffic control and safety devices and equipment being used which are displaced or not in an upright position from any cause, shall be promptly returned or restored to their proper position.
11. Contractor shall have exclusive control and responsibility for all signs and warning devices, and all trucks, equipment and materials at all times. An unobstructed view of all signs and warning devices including, but not limited to, stop signs, stop ahead signs, street name signs and other regulatory, warning and construction signs, markers and warning devices shall be maintained at all times. No trucks or other equipment or materials shall be stopped, parked or otherwise placed in such a manner as to block signs from the view of vehicular and/or pedestrian traffic to which it applies.
12. When entering or leaving roadways carrying public traffic, the Contractor's equipment, whether empty or loaded, shall yield to said public traffic at all times, except where the traffic is being controlled by Police officers, Fire officers, or at traffic signalized intersections or the aforementioned construction traffic signal.

13. Contractor shall have exclusive control and responsibility for stockpile and/or storage areas at all times. Stockpiling and/or storage of materials on any public right of way or parking areas, or immediately adjacent to all such areas, will not be allowed without specific permission of the City. Materials spilled along or on said right of way or parking area shall be removed completely and promptly. All stockpile and/or 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.
14. On projects involving work on, closure of or partial closure of existing streets and where vehicular access to the abutting property must be restricted, the work shall be so selected, arranged and scheduled that the persons requiring access to said abutting property and/or residents along said streets affected will be able to park within a reasonable distance of not more than 500 feet from their homes and/or destination; and in addition, no two (2) adjoining streets shall be closed at the same time, except as otherwise authorized by the City.
15. When work has been completed on a particular street or has been suspended or rescheduled and said street is to be opened to vehicular traffic, all equipment, "NO PARKING" signs, other obstructions and unnecessary traffic control devices and equipment shall be promptly removed from the street, except as otherwise authorized or directed by the City Engineer. Temporary traffic striping shall be applied prior to opening any newly paved area to traffic. This includes lane and centerlines.
16. Should the Contractor be neglectful, negligent or refuse, fail or otherwise be unavailable to promptly, satisfactorily and fully comply with the provisions specified and referred to hereinabove, the City reserves the right to correct and/or mitigate any situation, which in the sole opinion of the Engineer constitutes a serious deficiency and/or serious case of noncompliance, by any means at its disposal at the Contractor and/or permittee's expense, and in the case of a contract City project, to deduct the cost therefore from the Contractor's progress and/or final payments. Such corrective actions taken by the City shall not reduce or abrogate the Contractor's legal obligations and liability for proper traffic control and safety measures and shall not serve to transfer said obligations and liability from the Contractor to the City or the City's agent.
17. Violations of any of the above provisions and/or provisions of the referenced publications, unless promptly and completely corrected to the satisfaction of the Engineer, shall, at the sole discretion of the City, be grounds for termination of the Contract or shut down or partial shutdown of the work without compensation to the Contractor and/or permittee, or liability to the City, all as prescribed by contractual obligations or State law, whichever is applicable.

B. Pedestrians

1. A minimum walkway of 48 inches in width must be maintained at all times for safe pedestrian passage through all public parkway work areas. Crosswalks shall remain unobstructed at all times. Obstructions within the walkway areas shall be illuminated during the hours of darkness and marked with Type II barricades with flashing warning lights.
2. Where construction prohibits pedestrian access, alternate crossing areas shall

be established with appropriate signing and other devices as required by the Engineer. Pedestrian access facilities shall be provided through construction area within the right-of-way. Pedestrian walkways shall be provided with surfacing as required to maintain safe and accessible pathways. Surface shall be skid resistant and free of irregularities.

3. The Contractor shall keep the areas adjacent to the project site clear of any objects that may be hazardous to pedestrians and motorists. Provisions to reroute pedestrians, including the disabled, around the work area must be clearly delineated and maintained. If the Contractor's operations require the closure of a walkway, then another walkway shall be provided nearby, off the traveled roadway, along the general path of travel.

C. Parking

On-street parking may be restricted within the project limits. Temporary "NO PARKING – TOW AWAY" signs shall be provided and posted by the Contractor not less than forty-eight (48) hours in advance of the start of construction.

D. Street Lighting

1. The Contractor shall maintain illumination of the traveled roadway after hours of darkness throughout the duration of the project, as follows:
2. The street lighting system shall be installed and removed in phases such that not less than one-half of the street lights are operable each evening.
3. A minimum illumination level of 0.4 foot-candles with a 6:1 uniformity ratio shall be provided, unless otherwise approved by the Engineer.

E. Lane Closures

Lane closures shall be prohibited unless explicitly approved by the Engineer.

F. Road Closures

Road closures shall be prohibited unless explicitly approved by the Engineer.

G. Emergency Response

The Contractor shall provide the Engineer with names and telephone numbers of at least three people responsible for emergency service response. Upon notification, Contractor shall respond to City emergency requests. In the event these people do not promptly respond when notified, or it becomes necessary to call other forces to accomplish emergency service, the Contractor will be held liable for any costs incurred. A fee of \$400/hour, at 4 hours minimum, will be charged to the Contractor.

1. During Working Hours:

In case of an emergency that threatens loss or injury of property, and or safety of life during working hours, the Contractor shall act, without previous instructions from the City, as the situation may warrant. He/She shall notify the Engineer of the emergency and the action taken immediately thereafter. Any compensation claimed by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the Engineer within 15

calendar days after the emergency. Compensation, if allowed, will be paid for as extra work.

2. Outside of Working Hours:

Whenever, in the opinion of the City, an emergency arises outside of the regular working hours which threatens loss or injury of property, or danger to public safety, the Contractor shall act, without previous instructions from the City as the situation may warrant. He/She shall notify the Engineer of the emergency and the action taken immediately thereafter. Any compensation claimed by the Contractor, together with substantiating documents in regard to expense, shall be submitted to the Engineer within 15 calendar days after the emergency. Compensation, if allowed, will be paid for as extra work.

In the event the Contractor is unable to respond to an emergency outside of regular working hours, the City's forces will handle such emergency work. If such emergency arises out of, or is the result of, operations by the Contractor, the cost of the corrective measures will be billed to the Contractor and deducted from his/her payment as provided in the Contract documents. The performance of emergency work by City forces will not relieve the Contractor of any of his/her responsibilities, obligations, or liabilities under the Contract.

1.10 Storage of Materials and Equipment

The storage of materials and equipment will not be allowed on public streets or in the public right of way unless prior arrangements have been made with the Engineer. The Contractor shall be responsible for obtaining a storage site at the Contractor's sole expense. The Contractor shall provide the City with a copy of the written permission from the property owner for the use of the site if the property is not owned by the Contractor or the City.

1.11 Safeguarding of Equipment, Materials, and Work

The Contractor shall properly safeguard all equipment, materials, and work against loss, damage, malicious mischief, or tampering by unauthorized persons until acceptance of the work by the City. Locked and covered storage or continuous surveillance by a watchman shall be provided by the Contractor if required to accomplish this task.

1.12 New Materials and Equipment

Unless otherwise specified, shown, or permitted by the Engineer, all materials and equipment incorporated in the work shall be new and of current manufacture. The Engineer may request the Contractor to furnish the manufacturer's certificates to this effect.

1.13 Material Testing

All tests of materials furnished by the Contractor shall be made in accordance with commonly recognized standards of national organizations and such special methods and tests as are prescribed in these specifications.

No materials shall be used until they have been approved by the Engineer.

The Contractor shall at his expense furnish the City, in triplicate, certified copies of all required factory and mill test reports. Any materials shipped by the Contractor from a factory or mill prior to having satisfactorily passed such testing and inspection by a representative of the City shall not be incorporated in the work, unless the Engineer shall have notified the Contractor, in writing, that such testing and inspection will not be required.

At the option of the Engineer, the source of supply of each of the materials shall be approved by the Engineer before delivery is started and before such material is used in the work.

All soil and material testing lab/firm shall be approved by the Engineer prior to start of construction. Any subsequent soil and material tests deemed necessary due to the failure of initial tests will also be at the Contractor's sole expense.

All materials furnished and all work performed under the Contract shall be subject to inspection by the Engineer. The Contractor shall be held strictly to the true intent of the Specifications and Drawings in regard to quality of materials, workmanship, and diligent execution of the Contract. Such inspection may include mill, plant, shop, or field inspection as required. The Engineer shall be permitted access to all parts of the work, including plants where materials or equipment are manufactured or fabricated. The Engineer shall be furnished with such materials, information, and assistance by the Contractor, subcontractors, and suppliers as is required to make a complete and detailed inspection.

The Engineer will make, or have made, such tests as he deems necessary to assure that the work is being accomplished in accordance with the requirements of the Contract. In circumstances where it is suspected that proper procedures and/or materials are not being followed or used, any testing required by the Engineer shall be at the Contractor's expense. It is understood and agreed that the making of tests shall not constitute an acceptance of any portion of the work nor relieve the Contractor from compliance with the terms of the Contract.

1.14 Order of Work

The Contractor shall prosecute work in an order to minimize public inconvenience and to minimize disruptions to nearby businesses, unless he/she can present to the City, without additional cost, a better alternative, i.e., less public inconvenience, shorter project duration. The contractor can use stage construction for cross gutters, sidewalks or paving by constructing half at a time. The Contractor can also use high-early strength concrete if needed, with prior approval per the substitution procedure. Contractor shall provide flaggers to direct traffic to safely pass through or around the work area whenever traffic is interrupted by the construction work or when one-way traffic is blocked or a reduced width at such time as is necessary and when so directed by the City.

Concrete shall cure for three days prior to reopening to traffic. Contractor shall submit to the Engineer, for approval, a traffic control plan showing traffic flow during the curing period and at times when flaggers are not on the site.

A. Construction Schedule

1. As required by these specifications, **the Contractor shall submit a detailed construction schedule in accordance with Section 6-1.1, "Construction Schedule," of the SSPWC, and SWPPP to the Engineer for approval at least 10 working days prior to start of work.**

2. Prior to beginning of construction, the Contractor shall acquire all necessary permits for construction from the Public Works Department, Building and Safety Division and all other applicable agencies.

3. The city anticipates construction to begin December 2025.

B. Protection of Utilities

The Contractor's attention is directed to Section 5 of the Standard Specifications for Public Works Construction (SSPWC).

The Contractor will take due precautionary measures to protect the utilities shown and other utilities or structures not shown on these plans that might be discovered during the process of the job.

The City of Upland Water Operations Division has water services and meters in the vicinity of where construction operations will be conducted by the Contractor. The Contractor shall protect the existing services and meters in place.

Where water valve boxes or other utility facilities are encountered in areas designated for removals and reconstruction, the Contractor shall protect those boxes and facilities in place. Meter boxes shall be raised to grade where parkway improvements are reconstructed as shown on the plans. Payment for protection of utilities shall be considered to be included in other items of work and no additional compensation will be allowed therefore.

In the event that a water service is damaged, the Contractor shall notify the Water Operations Division and the Engineering Division immediately. The Contractor shall also arrange for the immediate repair of the water service by a properly California licensed contractor, at no cost to the City. In certain circumstances, the Contractor may encounter water services which are entangled in roots. In these circumstances, it may be necessary to replace the water service. All such replacements shall be made by qualified personnel. In order to receive compensation for this repair, the City Tree Inspector shall be contacted prior to any further root removals.

When a water pipe crosses a sanitary sewer pipe, where minimum vertical separation is not met, concrete pipe encasement shall be provided by the Contractor.

Full compensation for compliance with the provisions specified and referred to hereinabove shall be considered as included under the water work items, and no additional compensation will be allowed therefor.

C. Protection of Work

The provisions of Section 4-1 "Materials and Workmanship" of the SSPWC shall apply except as modified and supplemented below:

The Contractor shall provide sufficient personnel, barricades, delineators and ribbon at each location to adequately protect the new and fresh concrete surfaces from vandalism and unauthorized markings. Newly poured and finished concrete areas shall be delineated or cordoned off with tape to inhibit and discourage pedestrians, bikers and skateboards from tracking across the fresh sidewalk surfaces.

Unauthorized markings (i.e. graffiti, footprints, bike tire marks, and scuff marks) in the new sidewalk surfaces are not acceptable, and may be cause for rejection. All such areas rejected due to such cause shall be removed and replaced at the Contractor's expense.

All costs for protecting the new concrete surfaces and any graffiti removal shall be included in contract unit price bid for the various items of work involved, and no additional compensation will be allowed therefore.

D. Obstructions and Cooperation with Other Work

A minimum of two (2) working days prior to construction, the Contractor will expose all known utility crossings in order to provide for grade and alignment adjustments, if necessary. All costs involved in exposing existing utilities shall be included in the various contract items of work and no additional compensation will be allowed therefore.

The Contractor will schedule his work and cooperation with all other forces working in the area so that all improvements in the project area may be installed in a logical, workmanlike manner. The Contractor will take due precautions to protect all improvements placed by others in the vicinity of their operations.

Prior to construction, the Contractor shall inspect the entire project area and document in writing and by photograph, any pre-existing condition. Existing damage to improvements within the project area shall be reported to the City's Inspector for verification.

1.15 Changes in Work

The City reserves the right to make such alterations, deviations, additions to or omissions from, the Plans and Specifications, including the right to increase or decrease the quantity of any item or portion of the work to match the funding available for the project, or to omit any item or portion of the work, as may be deemed by the Engineer to be necessary or advisable, and to require such extra work as may be determined by the Engineer to be required for the proper completion or construction of the whole work contemplated.

1.16 Suspension of Work

The Engineer acting on behalf of the City may, by written notice to the Contractor, suspend the work in whole or in part for such period or periods as the Engineer may deem necessary, due to unsuitable weather, delay in delivery of City-furnished equipment or materials, or such other conditions as are considered unfavorable for prosecution of the

work, or failure on the part of the Contractor to carry out the provisions of the Contract or to provide materials or workmanship meeting the requirements of the Specifications. Suspended work shall be resumed by the Contractor within 10 calendar days of receipt from the Engineer of written Notice to Proceed. The Contractor shall have no claim for damages alleged to have been suffered by reasons of any suspension of the work without termination of the Contract, and Contractor shall receive no additional compensation because of any such suspension.

1.17 Use of Completed Portions

The City shall have the right to take possession of and use any completed or partially completed portions of the work, notwithstanding the time for completing the entire work or such portions as may not have expired; but such taking possession and use shall not be deemed an acceptance of the work not completed in accordance with the Contract Documents.

1.18 Failure to Comply

If the Contractor should refuse or neglect to comply with the provisions of the Contract or the orders of the Engineer, the City may have such provision or orders carried out by others at the expense of the Contractor.

1.19 Noncompliance with Plans and Specifications

Failure of the Contractor to comply with any requirement of the Specifications and Drawings, or failure to immediately remedy any noncompliance upon notice from the Engineer, may result in suspension of contract progress payments. Any progress payments so suspended shall remain in suspension until the Contractor's operations are brought into compliance to the satisfaction of the Engineer in accordance with the Contract Documents and Specifications. No additional compensation will be allowed as a result of suspension of progress payments due to Contractor's noncompliance with the Plans and Specifications.

1.20 Site Access

The City Engineer or his representative, testing agencies, and government agencies with jurisdictional interests shall be allowed access to the Work at all times for their observation, inspection, and testing. The Contractor will provide proper and safe conditions for such access.

1.21 Construction Water

The Contractor shall be responsible for furnishing all necessary water for compaction, cleaning, flushing, dust control, etc. The Contractor shall obtain a hydrant meter from the City of Upland if the Contractor intends to use city water. The Contractor will not be allowed to use water from individual residences or businesses. The cost of obtaining a hydrant meter from the City and the usage of the water is considered incidental to the job and shall be included in contract unit prices bid for the various items of work involved. No additional compensation will be allowed therefor.

1.22 Safety

All Construction will be performed in compliance with the standards as established by

OSHA and in accordance with the appropriate State of California regulations, including SCRRRA requirements in the vicinity of railroad crossings. It will be the Contractor's responsibility to acquaint himself and abide by these regulations during all phases of construction. The Contractor will hold harmless and indemnify the City and its agents for any damages caused by failure to abide by said regulations.

1.23 Engineer's Estimate

The quantities of work to be done and materials to be furnished are approximate as shown and listed in these Specifications and are given as a basis of comparison of bids only. The City does not expressly or by implication agree that the actual amount of work will correspond therewith.

1.24 Shop Drawings

The Contractor shall furnish and receive a reviewed copy of a submittal prior to bringing materials onsite. Submittals shall be 3 copies of detail drawings, catalog sheets, cuts or descriptive lists of all material to be used on the job. The submittals shall include the name and location of the supplier and manufacturer, trade name, catalog reference, size, finish, and all pertinent data, and shall be reviewed by the City within 10 working days and returned marked with one of the following:

- 1) NO EXCEPTIONS TAKEN
- 2) MAKE CORRECTIONS NOTED
- 3) REVISE AND RESUBMIT
- 4) REJECTED

1.25 Record Drawings (As-Built Drawings)

The Contractor shall maintain, on the job site, a set of full-size reproducible contract drawings, or a set of full-size blueline or blackline prints. On these he shall mark all as-built conditions, locations, configurations, and other details, which may vary from the details represented on the original drawings. This master record of as-built conditions, including all revisions made necessary by addenda, change orders, and the like, shall be maintained up-to-date during the progress of the work.

On a monthly basis, the Contractor shall submit progress record drawing(s) clearly delineating the improvements completed, for the purpose of review and processing progress payments. The City's ability to process the progress payments is contingent upon the timely submittals of the progress record drawing(s).

Upon completion of the work and prior to final acceptance, the complete set of contract drawings (size D, 24x36 in.), marked-up to show all as-built conditions, shall be delivered to the Engineer. These drawings shall be known as "Record Drawings".

1.26 Final Cleanup

Prior to final acceptance, the Contractor shall restore the entire project site to a condition equal or better than the pre-construction condition as evidenced by film, notes, sketches and other construction records.

A. Cleaning and Dust Control

Clean-up and dust control shall conform to Section 7-8, "Work Site Maintenance," of the SSPWC. During execution of work, the Contractor will daily clean the site, adjacent properties, and public roads, and dispose of waste materials, debris, and rubbish to assure that all affected properties and roadways are maintained free from accumulations of water, materials and rubbish. Watering for dust control shall consist of developing a water supply and furnishing and placing all water required for dust control.

Contractor will provide containers for collection and disposal of waste materials, debris, and rubbish.

Contractor will cover all loads of excavated material leaving the site or of material being imported, to prevent excessive dust from being created.

B. Cleanup

At the end of each day, Contractor shall be responsible for the clean-up of all job sites. All job sites must be left in a safe and orderly condition. The Contractor will perform additional clean-up as directed by the Engineer. The cost for all clean-up shall be considered incidental to the cost of the work and no additional compensation will be allowed therefore.

1.27 Permits and Licenses

A. Encroachment Permit

The Contractor will be required to obtain a no-fee Encroachment Permit from the City prior to issuance of NTP. No compensation for expenses of the Contractor incidental to obtaining the Permits will be allowed or paid for. The Contractor shall comply with the requirements of all City and other public agency permits.

B. Excavation Permit

In accordance with Section 6500 of the Labor Code, the Contractor is required to obtain a permit from the Division of Occupational Safety and Health of the State of California, Department of Industrial Relations for any excavations five feet (5') or more in depth and into which a person is required to descend. Contractor shall submit a copy of said permit to the Engineer prior to any excavations.

The Contractor shall provide trench shoring systems for the construction of underground improvements, in accordance with Subsections 7-10.4.2, "Safety Orders," and 306-4, "Shoring and Bracing," of the SSPWC and State of California Division of Occupational Safety and Health (Cal/OSHA) Construction Safety Orders.

Excavations five feet or more in depth shall be shored to provide support for existing improvements and protection of workers during trench excavation and pipe placement.

Prior to commencement of work, the Contractor shall obtain a PERMIT from Cal/OSHA and shall submit to the City for approval a detailed plan, showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during trench excavation. Trench

shoring systems shall be designed by a Civil or Structural Engineer, registered in the State of California. The shoring plan shall consist of complete engineering calculations together with diagrams and specifications for the components of the shoring system proposed for use. No such plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders of the Division of Occupational Safety and Health. Copies of all permits shall be submitted to the City prior to start of work.

The shoring system plan to be submitted to the City for approval, either prepared by an Engineer or drawn from manufacturers or supplier's data or catalogue, must be wet-signed and sealed by a Civil or Structural Engineer, registered in the State of California. All specific items or applicable conditions must be outlined on the submittal.

The State of California Department of Transportation "Trenching and Shoring Manual" dated January 1990 will be used as a guide for plan review and approval.

The Contractor shall not assume that only one type of trench safety system, such as a shield or "trench box", will be adequate for this project. The Contractor shall have an alternate plan for the use of other types of safety systems, such as solid sheeting, should field conditions dictate. The design and calculations of such alternate plan shall be readily available from the Contractor upon request by the City.

Contractor shall be solely responsible for implementation and maintenance of worker's safety and protection systems. It shall also be the Contractor's responsibility to provide adequate shoring for the protection of existing improvements in the vicinity of any excavation, in ADDITION to using the method of shoring which has been approved by the City for the protection of workers (such as shields, sloping the sides of excavations, or other similar methods).

Protection of all existing improvements must be considered in the design of the shoring system, including subsurface utilities. The shoring system must sustain loads imposed by traffic, construction equipment, adjacent structures, or any other surcharge loads.

Excavations less than five feet in depth need not be shored unless they are made at the locations, or in types of soil where hazardous ground movement may be expected.

The Contractor shall be solely responsible for any damages which may result from his failure to provide for adequate shoring to support the excavations under any or all of the conditions of loading which may exist, or which may arise during the construction of the project.

C. City of Upland Business License

The Contractor and all sub-contractors are required to obtain City of Upland Business Licenses. The cost for all business licenses shall be the Contractor and/or sub-contractor's responsibility, and no additional compensation will be allowed or paid for.

Effective June 2, 2014, the City's Finance Department will no longer be accepting payments for business license renewals or processing new business license

applications. To apply for a City business license, Contractor and subcontractors shall go on-line per appendix E.

D. Contractor's License

Contractor must possess a valid Class "A" (unless a different class is specified on the Notice Inviting Bids) Contractor's License from the California Contractors State License Board at the time of bid. Contractor must maintain the Class "A" license in good standing with the California Contractors State License Board throughout the duration of the project.

1.28 Preconstruction Meeting and Weekly Progress Meeting(s)

The Contractor to whom the contract is awarded shall attend a preconstruction meeting at a location and time set by the Engineer. The Contractor shall meet with the Project Engineer weekly to discuss issues and progress of work.

1.29 Protection of Improvements

A. Protection of Existing Improvements

The Contractor shall be responsible for protecting all existing equipment, piping, associated appurtenances, trees, etc. during construction to prevent damage to these items. Any damage caused by the Contractor's actions will be corrected by the Contractor at its expense.

B. Protection of New Improvements

The Contractor shall be responsible for the protection of the new improvements and shall exercise care to adequately protect the new improvements until the work has been accepted by the City.

Any damage caused to the new improvements as a result of the Contractor's actions shall be repaired at the Contractor's expense.

The Engineer may ask the traffic lane or roadway to remain closed if, in his opinion, the street is not yet cured enough to allow traffic on it. The Contractor shall pay all costs associated with any extension of a street closure.

1.30 Patents and Copyrights

The Contractor shall indemnify and save harmless the City and Engineer and their officers, agents, and employees against all claims or liability arising from the use of any patented or copyrighted design, device, material, or process by the Contractor or any of his subcontractors in the performance of the work.

1.31 NPDES Requirements

The Contractor shall conform to the requirements of General Construction Activity Storm Water NPDES Permit No. CAS000002 and Order No. 2009-0009-DWQ issued by the State Water Resources Control Board. This General Permit, hereafter referred to as the "Permit", regulates storm water discharges associated with construction activities.

The Contractor shall also conform to the requirements of NPDES Permit No. CAS6180036 and Order No. R8-2010-0036 issued by the Santa Ana Regional Water Quality Control Board. This permit, hereafter referred to as the 'Permit', regulates storm water discharges that enter the City's municipal storm drain systems (MS4). Contractor is not responsible for filing a Notice of Intent (NOI) for Permit coverage or a Notice of Termination (NOT) at project end. City staff will file a NOI for permit coverage and file a (NOT) at the end of the project.

Water pollution control work shall conform to the requirements in the Construction Contractor's Guide and Specifications of the Stormwater Best Management Practice Handbook, dated December 2019, and addenda thereto issued up to and including the date of advertisement of the project, hereafter referred to as the "Handbook". Copies of the Handbook may be obtained from CASQA website at: <https://www.casqa.org/resources/bmp-handbooks>; Telephone: (424) 241-2249; or email at: CASQA@casqa.org. Copies of the Handbook and the Permit are also available for review only, at the City of Upland Public Works Facility.

The Contractor shall become fully informed of, and comply with, the applicable provisions of the Handbook, Permit, and Federal, State, and local regulations that govern the Contractor's operations and storm water discharges from both the project site and areas of disturbance outside the project limits during construction. The Contractor shall maintain a copy of the Permit at the project site and shall make the Permit available during construction activities.

A. Storm Water Pollution Prevention

Storm Water Pollution Prevention shall include control of all waters entering the project site, erosion control, and any dewatering in accordance with California Regional Water Quality Control Board, Santa Ana Region requirements.

Storm, surface, and/or nuisance water may be encountered at various times and locations during performance of the Work. Such waters may interfere with Contractor's operation and may cause damage to adjacent or downstream private and/or public property by flooding, lateral erosion, sedimentation, or pollution if not properly controlled by Contractor. Contractor, by entering into the Contract, assumes all risk and responsibility for water control. Contractor's responsibility includes, at a minimum, handling any nuisance and/or storm waters that may result during the term of the Contract in a manner which will protect construction throughout the various stages of work up to the point of final acceptance by Owner (City). The Contractor shall install and maintain all required or necessary erosion control measures to cover the entire duration of the term of the Contract.

The Contractor is responsible to protect the Project site from erosion damage at all times by utilizing interim erosion control measures which, due to the site's ever changing condition during construction, is achieved by implementing Best Management Practices (BMPs). The Contractor shall ensure that Best Management Practices (BMPs) are implemented.

B. Storm Water Pollution Prevention Plan

The proposed disturbed area for this project is greater than 1 acre; therefore, a site specific Storm Water Pollution Prevention Plan (SWPPP) is required. The Contractor shall ensure that BMPs within the SWPPP are implemented by a

Qualified SWPPP Practitioner (QSP). A Rain Event Action Plan (REAP) shall be submitted to the City 24 hours prior to any likely precipitation event. Failure to provide a REAP document to the city will result in a halt to activity until a REAP document has been submitted and implementation has started. All costs for preparation of REAPs and associated implementation shall be considered included in the various items of work and shall be considered as full compensation for furnishing all labor, materials, tools, equipment, time, and incidentals for all costs related to REAPs and associated implementation, and no additional compensation will be allowed or paid for.

Payment for fulfilling the requirements of this Section and all Subsections shall be considered included in the price under the Bid Item "Storm Water Pollution Prevention Plan and Implementation" and no additional compensation will be allowed therefore

END OF SPECIAL PROVISIONS

SECTION 2 SPECIFICATIONS

The unit prices and lump sum amounts to be paid for the Items listed in the Proposal shall include full compensation for furnishing all labor, materials, tools, equipment, time, and incidentals necessary to complete the work, and for performing all work contemplated and embraced under the Contract, in accordance with the Plans and Specifications. This shall include the Contractor's costs involved with bonding, insurance, worker's compensation, overhead, financing, obtaining required permits and permit fees, mobilization, traffic control, public convenience and safety, protective barricading, sanitary facilities, storage of equipment and materials, security against theft and vandalism, project site maintenance, dust and runoff control, clean-up and all other items incidental to the work.

Payment for Unit Price work shall be made for the actual quantities of Contract Items removed, constructed, or disposed of in accordance with the Plans and these Specifications. Measurement of Unit Price work shall be as specified in Section 7-1, "Measurement of Quantities for Unit Price Work," of the SSPWC. Payment for Lump Sum work shall be paid for at the price indicated in the Bid, in accordance with Section 7-2, "Lump Sum Work," of the Standard Specifications for Public Works Construction (SSPWC).

BASE BID:

Each respective bid item and bid schedule as shown on the proposal form shall comply with all respective Sections of the 2018 Edition of the Standard Specifications for Public Works Construction (Green Book), its supplements, the following technical specification sections, and any other publications as specified, except as modified herein. If there is a conflict between these inclusions and the Standard Specifications, these inclusions shall have precedence.

**SECTION 01000
MOBILIZATION**

PART 1 - GENERAL

1.01 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all Mobilization and De-Mobilization Work as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Preparatory operations including, but not limited to those efforts necessary for the movement of personnel, equipment, supplies, and incidentals to the Work site;
- All other operations which must be performed or costs incurred prior to beginning Work on the site;
- Provision of Temporary Toilets;
- All operations necessary for De-Mobilization Work;
- Provision and installation of Construction Fence per General Conditions;
- Provision of Construction Office;
- Provision of office equipment including copy machine and plan files;
- Provision of temporary utilities;
- Secure all required permits;
- Obtain temporary construction water & electrical service;
- Submittals per General Conditions, Article 5.22

1.02 RELATED WORK:

| | |
|---------------------------------|---------------------------------|
| Bonds | Section 00 61 13 |
| Proposed Substitutions | General Conditions, Article 6.4 |
| Liability Insurance | General Conditions, Article 4.2 |
| Workers' Compensation Insurance | General Conditions, Article 4.2 |

1.03 SUBMITTALS: As a part of mobilization, all submittals as specified in various individual Sections of the Specifications shall be forwarded to the City Representative in the format specified in Technical Specifications. See General Conditions, Article 5.22. Submittals shall include all Materials Lists, Catalog Cuts, Shop Drawings, material and color samples, and Construction Schedule, all as specified.

PART 2 - MATERIALS

2.01 TEMPORARY UTILITIES: The permanent potable domestic water meter is already in place and available for use on the Project. Contractor shall furnish temporary water (if need exceeds safe rate of flow through existing water meter), and power complete with connecting piping, wiring, lamps, meters and similar equipment as required for the Work. Install, maintain, and remove temporary lines upon completion of the Work. All expenses in connection with temporary services and facilities shall be paid for by Contractor.

2.02 TEMPORARY TOILETS: Contractor shall install and maintain in a sanitary condition suitable toilets for the use of workers. Toilets shall be portable and shall be removed from the job site at the end of the contract period just prior to Final Acceptance. There shall be a minimum of one (1) toilet for each multiple of twenty (20) Contractor's employees or fractional part thereof working at the job site. Portable toilets shall be maintained in a neat, clean and sanitary condition throughout the contract period.

2.03 CONSTRUCTION OFFICE: Contractor shall provide and maintain a watertight construction office on the premises, where directed, for Contractor's own and subcontractors' use. The Construction Office building/trailer shall be heated, provided with operating windows, doors with locks, tables, chairs, racks for drawings, and file drawers and restroom. This office shall have a minimum floor space of 120 square feet.

2.04 TEMPORARY TELEPHONE: Contractor shall provide at Contractor's own expense a non-pay telephone for the use of Contractor and subcontractors, as well as for the use of A/E and the City Representative. The A/E's and City's use will be for local calls only, or for toll calls with all charges reversed.

2.05 OFFICE EQUIPMENT: Contractor shall furnish and maintain necessary office equipment, including a plan "stick file", copy machine and a fax phone. The cost for use of office equipment for the duration of the Project shall be borne by Contractor.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Payment: Payment for mobilization will be at the lump sum price bid for mobilization. Payment shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the Mobilization and De-Mobilization Work as herein specified. The 5% retention shall apply to all Mobilization and De-Mobilization Work.
- B. Work Yard Site Plan: Contractor shall submit a site plan sketch of Contractor's planned Construction Office and work yard showing their proposed on-site location(s) for the review and approval of the City Representative.

3.02 CLEAN-UP: Contractor shall provide trash receptacles for collecting debris, shall remove debris from the job site at regular intervals, not less than weekly, and shall dispose of same off-site in a legal manner.

END OF SECTION

**SECTION 01240
CONTRACTOR'S REQUEST FOR INFORMATION (RFI's)**

1 PART 1 - GENERAL

1.01 DEFINITIONS:

- A. Request for Information:
 - 1. Definition: A document submitted by Contractor to request clarification of a portion of the Contract Documents, hereinafter referred to as RFI.
 - 2. Requirements: A properly prepared RFI shall include a detailed written statement that indicates the specific Drawings or Specification in need of clarification and the nature of the clarification requested.
 - a. Drawings shall be identified by drawing number and location on the sheet.
 - b. Specifications shall be identified by Section number, page and paragraph.
- B. Improper RFI:
 - 1. Definition: An RFI that is not properly prepared.
 - 2. Handling: Improper RFI's will be returned marked "Not Reviewed" with a notation of why they are deemed improper.
- C. Frivolous RFI:
 - 1. Definition: An RFI that requests information that is clearly shown on the Contract Documents.
 - 2. Handling: Frivolous RFI's will be returned marked "Not Reviewed" with a notation of why they are deemed frivolous.

1.02 CONTRACTOR'S RFI:

- A. When Contractor is unable to determine from the Contract Documents the material, process or system to be installed, an informal clarification shall be requested of the Architect at the next appropriate project meeting, so that when possible a response can be provided and entered into the meeting minutes. When such informal clarification is not possible due to its complexity, or when due to the urgency of the issue clarification cannot wait until the next project meeting, Contractor shall prepare and submit an RFI.
- B. Contractor shall endeavor to keep the number of RFI's to a minimum. In the event that the Architect determines the process has become unwieldy due either to the number and/or the frequency of RFI's, the City Representative may require Contractor to abandon the process and submit future requests either as submittals, substitutions or requests for change.
- C. RFI's shall be submitted on a form acceptable to the Architect. Forms shall be completely filled in and shall be fully legible when photocopied and/or transmitted. Each page of attachments to RFI's shall bear the RFI number.
- D. RFI's shall be originated by Contractor:
 - 1. RFI's from subcontractors or material suppliers shall be submitted through, reviewed and signed by Contractor prior to submittal to City.
 - 2. RFI's sent by subcontractor directly to the Architect or to Architect's consultants will not be accepted and will be returned unanswered.
- E. Contractor shall carefully study the Contract Documents to assure that the requested information is not available therein. RFI's which request information available in the Contract Documents will either be deemed "improper" or "frivolous" as noted above.

SECTION 01240

- F. In cases where RFI's are submitted to request clarification of coordination issues, for example pipe and duct routing, clearances, specific locations of work shown diagrammatically, and similar issues, Contractor shall fully lay out a suggested solution using drawings or sketches drawn to scale, and submit same with the RFI. RFI's which fail to include a suggested solution will be returned unanswered with the notation that Contractor is to submit a complete RFI.
 - G. RFI's shall not be used for any of the following purposes:
 - 1. To request approval of submittals;
 - 2. To request approval of substitutions;
 - 3. To request changes which entail additional cost or credit;
 - 4. To request changes which entail change in time of completion; or,
 - 5. To request different methods of performing work than those drawn and specified.
 - H. In the event Contractor believes that a clarification by the Architect results in additional cost or time, Contractor shall not proceed with the Work indicated by the RFI until a change order is prepared and approved. RFI's alone shall not justify a cost increase in the Work or a change in the project schedule. All such changes must be via official change orders.
 - I. Contractor shall prepare and maintain a log of RFI's, and, at any time requested by the Architect, shall furnish copies of the log showing outstanding RFI's. Contractor shall note unanswered RFI's in the log.
 - J. Contractor shall allow up to 14 calendar days for review and response time for RFI's from the date of receipt by the City. However, the Architect will endeavor to respond in a timely fashion to all RFI's.
- 1.03 ARCHITECT'S RESPONSE TO RFI'S: Architect will respond to each RFI in one of the following ways:
- A. Properly prepared RFI's:
 - 1. Architect's Supplemental Instruction;
 - 2. Request for Cost Proposal;
 - 3. Instruction Bulletin; or,
 - 4. Architect may opt to retain RFI's for discussion during regularly scheduled project meetings for inclusion of responses in meeting minutes in lieu of separate written response in another form.
 - B. Improper or Frivolous RFI's:
 - 1. Notification of Processing Fees(s).
 - 2. Unanswered RFI's will be returned with a stamp or notation: Not Reviewed.
 - C. Answers to properly prepared RFI's will be made separately in writing, not upon the RFI form.

PART 2 - MATERIALS (Not Applicable).

PART 3 - EXECUTION (Not Applicable).

END OF SECTION

**SECTION 02110
CLEAR, GRUB, DEMOLITION AND SALVAGE**

2 PART 1 - GENERAL

1.01 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Clear, Grub, Demolition and Salvage Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Protection of all trees not designated for removal;
- Clearing and grubbing of vegetation from work area as necessary to accomplish scope of work;
- Saw-cutting, removal and disposal of all pavement designated on the Plans for removal;
- Salvage of various site furnishings and equipment and deliver to City yard;
- Demolition of existing structures, such as concrete paving, asphalt paving, rock paving, base materials, below grade concrete footings, utilities, catch basins, existing walls, irrigation equipment, site furnishings, and other items as noted on the Plans. Includes termination/capping of existing service utilities as noted;
- Furnishing, developing, applying and providing dust control watering equipment as required for the project;
- Removal and disposal of all deleterious materials not specifically mentioned herein which may be found within the Work Limits;
- Coordination with Work of other Sections;
- Clean-up.

1.02 DEFINITIONS

- A. Demolish: Completely remove and legally dispose of off-site.
- B. Recycle: Recovery of demolition waste for subsequent processing in preparation for reuse.
- C. Salvage: Carefully detach from existing construction, in a manner to prevent damage, and store in a secured location until ready for installation on site. Include fasteners or brackets needed for re-attachment elsewhere. Memorial items that may require some disassembly shall be carefully coordinated with City representative.

1.03 RELATED WORK:

| | |
|-------------|---------------|
| Grading: | Section 02210 |
| Planting: | Section 02480 |
| Irrigation: | Section 02441 |

1.04 RESPONSIBILITY AND COORDINATION: Contractor shall secure and maintain all required permits and licenses, and pay all fees necessary to legally complete the Work of this Section.

Contractor shall notify utility companies for all utilities to be cut off, modified or relocated, and shall maintain and protect all active utilities.

Contractor shall coordinate all ASSA lock cylinder salvage work with Adair Safe & Lock company and shall provide signed receipts to the Park and Recreation Department to document the number and types of ASSA high security lock cylinders salvaged for future use in the City's park system.

Contractor shall coordinate all Work with the Park and Recreation Department in an effort to avoid any conflicts with the recreation programming and parks maintenance schedules.

1.05 PROTECTION AND SAFETY: Contractor shall provide signs in necessary places to exclude persons, except those connected with the Work, from entering the working area. Contractor is responsible for preventing unauthorized persons from entering the work area.

Contractor shall protect the Project site and adjacent properties from dirty water, mud and water accumulated due to Contractor's operations and from rainfall runoff or water that enters the Project site from any other source.

SECTION 02110

It is not expected that hazardous materials will be encountered in the Work. However, if materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and City. Any hazardous materials will be removed by City under a separate contract.

PART 2 - MATERIALS - Not applicable.

3 PART 3 - EXECUTION

3.01 GENERAL REMOVAL WORK: Removal Work shall be carefully done to avoid damage to all existing facilities not designated for removal. When removing concrete pavement adjacent to concrete pavement designated to remain, contractor shall double saw-cut and carefully hand trim to the second saw-cut line to avoid damage to portions designated to remain.

3.02 SITE CLEARANCE AND DISPOSAL:

- A. Site Clearing: Clear the sites to be improved of grass, trees (including root balls), shrubs, weed growth, rubbish and debris, and existing asphaltic concrete pavement, concrete slabs, etc., that are to be removed for construction of the improvements shown on the Plans. Roots three inches in diameter and larger, rocks and broken masonry larger than four inches in the greatest dimension, and irrigation lines shall be removed to a minimum depth of 12" below finished grade.
- B. Disposal: All deleterious materials shall be disposed of off the site in a legal manner by Contractor, who shall make all necessary arrangements and pay all related costs.

3.03 UTILITIES: All known underground utilities are noted on the Plans.

- A. Utilities to be Inactivated or Abandoned: Utilities that are to be inactivated or abandoned shall be disconnected, removed, and plugged or capped subject to local governing ordinances. All electrical conductors are to be removed from conduit runs to be abandoned.
- B. Existing Inactive/Abandoned Utilities: All miscellaneous inactive underground facilities (e.g., drainage devices, secondary water lines, cables, abandoned oil and water lines, leaching fields, irrigation pipes, wiring, etc.), located 12 inches or more below finish grade may be abandoned in place or removed as necessary for proper completion of the Work.
- C. Utilities to be Protected: All miscellaneous active underground facilities that are encountered during the Work, whether shown on the Plans or not, shall be protected.
- D. Utilities Not Shown: If Contractor encounters any existing underground utilities not shown on the Plans, Contractor shall at once notify the City Inspector who will determine further procedure.

3.04 SALVAGE: The following items shall be salvaged from the project site for re-use on site.

- A. Existing site boulders: Existing rock boulders, noted on plans, shall be salvaged by the Contractor and stockpiled for reinstallation at new locations as indicated on plans.

3.05 DEBRIS BURNING: Burning of debris is NOT permitted.

3.06 DUST CONTROL: Dust shall be kept to a minimum for the duration of the Contract period, especially during the site clearing operations, by means of wetting the site or other approved method. After all site clear and grub operations are complete, wash down all existing sidewalks and roadways on and off the site that have become soiled due to Contractor's operations.

4 END OF SECTION

**SECTION 02210
GRADING, TRENCHING, BACKFILL & COMPACTION**

5 PART 1 - GENERAL

1.01 STANDARD SPECIFICATIONS: The provisions of the "Standard Specifications for Public Works Construction" shall apply except as modified herein.

1.02 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Grading, Trenching, Backfill & Compaction Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Rough grading as shown on the plans, including cut, fill, backfill and backfill compaction;
- Preparation of subgrade for all walkways, slabs and other facilities including any over-excavation and re-compaction as may be required per the Structural Soils Report;
- Trenching, backfill & compaction;
- Excavation Safety;
- CU-Structural Soil import;
- Soil compaction as required;
- Soil testing as required;
- Coordination with Work of other Sections;
- Clean-up; and,
- Erosion Repairs, Guarantees and Warranty Work.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

| | |
|--|--|
| Site Clear and Grub | Section 02110 Clear, Grub, Demo, & Salvage |
| Placement of all mechanical, plumbing, irrigation, drainage, electrical, or other underground, work within trenches dug under this section | Technical Sections as Appropriate |
| Finish Grading in Landscaped Areas | Section 02480 Planting |

1.04 QUALITY ASSURANCE:

A. Other Requirements: All Work of this Section shall comply with the requirements of the following:

1. The Grading Code of the City of Upland.
2. The Soils Engineering Investigation Reports for the site prepared by Soils Engineer

B. Tests and Inspections:

1. All Work in this Section shall be subject to the observation and testing as required by the Soils Engineer selected by City. The Soils Engineer will submit a compaction report to the City Representative certifying Contractor's compliance with the Plans, Specifications, Soils Reports and City Grading Ordinance in placing all fills and backfills. The Soils Engineer will conduct all specified tests to insure compliance. The Soils Engineer will also test, identify and make recommendations on borrow site fill materials as specified in this Section.
2. The number and location of soils tests shall be at the discretion of the Soils Engineer to assure uniformity and shall be at least one test per two vertical feet of fill, but not less than one test per 500 cubic yards, all as approved by the City Representative.
3. The costs of services of the Soils Engineer for specified field density and maximum density tests, compaction reports and certificates of compliance, will be borne by City except that additional tests and re-compactions made necessary by inadequate compaction, inadequate materials provided by Contractor, or inaccurate excavations shall be paid for by Contractor.

1.05 WATER: See Special Provisions, **Article 1.20 Construction Water** regarding temporary construction water.

1.06 JOB CONDITIONS:

A. Protection of Existing Items:

1. Contractor shall furnish, place and maintain all shoring and bracing as may be required for protection of existing structures and utility services during execution of the Work.
2. All bench marks, monuments and other reference points shall remain undisturbed unless specifically directed otherwise by the City Inspector.

B. Coordination with Others:

1. Contractor shall give written notice to the City Representative, utility agencies, and other legal authorities prior to starting Work.
2. Contractor shall coordinate Contractor's operations with other trades, utility agencies, and other affected public departments to assure continuity for both access and service of all utility service distribution lines, in conformance with applicable requirements of these organizations. No services to any property shall be impeded.

C. Abandoned and Unknown Utilities:

1. Abandoned lines, meters and boxes, obstructions or piping, shall be removed, plugged, or capped in accordance with the requirements and approval of the agencies affected, or as directed by the Park Projects Inspector. Coordinate all such Work with applicable mechanical or electrical trade having responsibility. Remove all abandoned utility lines, pipes, or conduits, to a point outside new construction lines.
2. Where unmarked utility lines or other underground obstructions or piping are uncovered within the Work area, notify the agencies or service utility companies having jurisdiction and take necessary measures to prevent interruption of service. If such lines or services become damaged, broken, or interrupted due to Contractor's negligence, such damaged services shall be repaired immediately by the party designated by the utility owner, at Contractor's expense. If an unmarked utility is damaged other than through the negligence of Contractor, Contractor's responsibility is limited to providing immediate and proper notification of the damage to the utility owner so that repairs can be made. Contractor shall cooperate with the utility owner and provide access for repair work.

6 **PART 2 - MATERIALS**

2.01 FILL MATERIAL:

- A. Required Approval: All fill material must be approved by the Soils Engineer and the City Representative.
- B. On-site Material: On-site excavated materials may be used for fill as approved by the Soils Engineer and the City Representative.

2.02 GRANULAR BEDDING MATERIAL: Where called for on the Plans, granular bedding material shall be crushed stone or pea gravel conforming to the following grading:

| <u>Sieve Size</u> | <u>% Passing</u> |
|-------------------|------------------|
| 3/4" | 100 |
| 1/2" | 95 |
| #4 | 5 |

2.03 IMPORT:

- A. Landscape Fills: All import soil used for fill in landscape areas shall be Class 'A' topsoil per Standard Specifications, Section **212-1.1 Top Soil, General**.
- B. Structural Fills: All import soil used solely for structural fill shall be non-expansive, predominantly granular material free from organic contaminants, and capable of attaining the required compacted densities.

- C. CU-Structural Soil: CU-Soil™ is a proprietary material patented by Cornell University (US Patent #5,849,069) and marketed under the registered trademark, CU-Structural Soil®. Only licensed companies are authorized to produce this material, meeting the specifications described in this text. For a list of licensed CU-Soil™ producers, call AMEREQ, INC. at 800-832-8788.
- D. Approved Samples: Samples of all import soil, as obtained, must be approved by the City Representative prior to start of import of soil to the Project site. Submit from licensed producer, 1/2 cubic foot representative sample of clay loam, one cubic foot representative sample of crushed stone, and one cubic foot representative sample of CU- Structural Soil® mix for approval. The soil mix shall be compliant with the gradation specifications for CU-Structural Soil as indicated by the manufacturer.

7 PART 3 - EXECUTION

3.01 GENERAL:

- A. Work Sequence: All demolition, clearing and grubbing of objectionable materials must be completed to the satisfaction of the City Representative before starting any earthwork grading and excavation. All existing site improvements and plant material not designated for removal, or salvage, shall be protected in place.
- B. Survey: General Conditions, **Article 5.25 Layout and Field Engineering** regarding responsibility for provision of all survey services as necessary for horizontal and vertical control points, layouts, lines and levels, and staking of the Work. Protect all bench marks and survey control points.
- C. Unknown Utilities and Structures: In the event unknown utility lines, vaults, ducts or other underground structures of any sort are discovered during excavation that are not shown on the Plans, immediately notify the City Representative, and take measures as necessary to protect such utilities and structures from damage.

3.02 ROUGH GRADING:

- A. Conformance with Plans: Rough grading of the site shall be completed in accordance with indicated contours, elevations, and limit lines shown on the Plans and shall allow for the depths of slabs, paving, sub-base, topsoil, and controlled fills.
- B. Grading Tolerances:
 1. Sub-grades to receive slabs and pavements shall be graded to a tolerance of plus or minus one-half 1/2 inch and shall be compacted as specified below in Sub-section **3.04 CONTROLLED FILL**, paragraph **G. Relative Compaction Requirements**, sub-paragraph **1. Slabs & Pavement Subgrades**.
 2. Tolerance for rough grading in all other areas is 1/10th of a foot.
 3. In all areas, appearance and positive drainage will be factors in the acceptability of grades.
- C. Compacted Lifts: Graded material shall not be left loose, but shall be stockpiled for use in controlled fill or compacted in thin layers as grading progresses in accordance with controlled fill requirements.
- D. Scarification: Shall be performed on all areas indicated to receive paving to depths as indicated in the soils report. In the absence of a soils report, scarification shall be to a minimum depth of six (6) inches or to a depth permitting twelve (12) inches of controlled fill whichever is greater.
- E. Engineer's Approval: Contractor shall obtain the Soil Engineer's approval of all scarified surfaces prior to placement of fill.

3.03 CONTROLLED FILL:

- A. Landscape Fills: The topmost 12" of fill in all landscape areas shall be topsoil.

- B. Rocks: Rocks larger than two (2) inches in diameter shall be removed from all fills to be compacted.
 - C. Lifts: Fill material shall be spread in uniform lifts of six (6) to eight (8) inches of un-compacted thickness.
 - D. Moisture Content: Prior to starting compaction, the fill material shall be brought to optimum moisture content by spraying with water if too dry, and aeration if too wet.
 - E. Mixing: Thoroughly mix each lift to assure uniform distribution of water content.
 - F. Allow for Shrinkage & Subsidence: Bring fills to suitable elevations above required grades to provide for effects of shrinkage and settlement.
 - G. Relative Compaction Requirements:
 - 1. Slabs & Pavement Subgrades: For all areas designated to receive slabs and pavement and within a perimeter five (5) feet outside these areas, each lift shall be compacted to a minimum of 90% of maximum density as determined by ASTM D1557-78.
 - 2. Planting Areas: Where fill is required in planting areas each lift shall be compacted to a minimum of 85% maximum density.
 - 3. Mechanical Equipment: Perform all compaction by suitable mechanical equipment and methods approved by the Soils Engineer.
 - H. Contractor's Responsibility: During the grading operations, inspection and field tests will be carried on by the Soils Engineer. However, Contractor is responsible to ensure obtaining the required degree of compaction and the proper moisture content. Where compaction of less than the specified percentage is found, additional compaction effort shall be made with adjustment of the moisture content as necessary until the minimum specified compaction is obtained.
 - 1. Over-excavation Due to Unsuitable Materials: Excessively wet material, material in any soft or spongy spots, and material in standing water shall be over-excavated to such depth as directed by the Soils Engineer and replaced with suitable material, properly compacted, all at no additional cost to the City.
- 3.04 EXCAVATION: Contractor shall perform all necessary excavation work for footings and slabs and shall perform all additional excavation work necessary to provide ample room for the installation of concrete forms where required. The bottom of all excavations shall be level and free from loose material, and shall be brought to the indicated or required grades in undisturbed earth. All excavations shall be kept free of standing water. Contractor shall perform all pumping, draining, and dewatering as may be necessary to keep excavations free of standing water while carrying on the Work. Should excavations for footings, through error, be excavated to a greater depth or size than indicated or required, such additional depth or size shall be filled with concrete at Contractor's expense.
- 3.05 OPEN TRENCH OPERATIONS: Shall conform to Standard Specifications Section **306-1 Open Trench Operations**, as modified by the following:
- A. General: Add the following to Standard Specifications Section **306-1.1.1 General**:
 - 1. All excavation shall be made to the lines and grades shown on the Plans. Trenches shall come no closer than 1 foot to the toe of a gutter unless otherwise approved by the Project Inspector.
 - 2. When the trench is close to an existing pole mounted light, catch basin, or other structure that is to remain, Contractor shall brace the adjacent structure as necessary to prevent dislocation of such structures. In the area of any such structures, the trench backfill shall be compacted to 95% to the full depth of the structure.
 - 3. Ponding or jetting of backfill is not allowed unless specifically shown on the Plans.
 - B. Replacement of Surface Improvements: Add the following to Standard Specifications Section **306-1.1.5 Trench Resurfacing**:
 "Replacement of bituminous pavement and base material over trenches shall conform to Public Works Department Standard Drawing No. 453."

- C. Unsuitable Material: Add new subsection 306-1.1.7 as follows:
3.06-1.1.7 Unsuitable Material. The conditions and requirements for the determination and disposition of unsuitable material encountered during open trench operations shall be in accordance with Standard Specifications Section **300-2.2 Unsuitable Material**.
- D. Pipe Bedding: Unless otherwise shown on the Plans, pipe bedding shall conform to Public Works Department Standard Drawing No. 452, Case I.
- E. Trench Backfill: Shall conform to Public Works Department Standard Drawing No. 453. and Standard Specifications Section **306-1.3 Backfill & Densification**. Trench backfill shall be completed as soon as possible after the pipe has been installed, and in existing streets there shall be no more than 200 feet of open and/or uncompacted trench at the end of any calendar day. Contractor's operations shall be adequate to ensure 2-way traffic at all street intersections during all phases of construction.
- F. Compaction of Backfill Over Utilities: Mechanical compaction of backfill using impact type pavement breakers (stompers) will not be permitted within the first 4 feet of backfill over Vitriified Clay Pipe (VCP). Such backfill shall be compacted by other means. All trench backfill over underground utilities shall conform to the applicable Technical Specifications section for that utility.
- G. Temporary Resurfacing: Shall be required only at times and locations during construction as determined by the City Representative. If required, payment for such temporary resurfacing shall be the stipulated price of \$40 per ton of temporary resurfacing in place and shall include full compensation for furnishing, placing, maintaining, removing, and disposing of such temporary materials.

3.06 FOOTINGS: Footings may be poured against undisturbed soil if the Soils Engineer approves.

3.07 BACKFILLING:

- A. Material: Select site material, free from large stones and clods, shall be used for backfill of trenches and excavations. All backfill material shall be as approved by the Soils Engineer.
- B. Pre-Conditioning and Placement:
 1. Layers of backfill shall be pre-conditioned by moistening with water, the amount of water is to be controlled to insure optimum moisture conditions for the type of fill material used. Excess water causing saturated earth beneath footings, walks, and curbs is unacceptable.
 2. Backfill shall be deposited in layers of maximum six inch thickness.
 3. Backfill shall be compacted by suitable means to a minimum relative compaction of 90%.
 4. All trenches shall be backfilled per this Section, and may be tested at the discretion of the Engineer.

3.08 FINE GRADING: Fine grading, as specified under this Section, is a separate operation from finish grading as specified under Section **02480 Planting**. Fine Grading Work is to commence upon completion of all trenching and backfill operations, and prior to soil preparation.

Upon completion of Fine Grading Work all areas shall slope to drain without water pockets or irregularities and shall conform to the intent of all Plans and Specifications after thorough settlement and compaction of the soil. Fine grading shall allow for Soil Preparation Work as specified under Section **02480 Planting**, such that finish grades shall meet the elevations indicated on the Plans. Tolerance for fine grading is ¼ inch, plus or minus. All corrections to the Grading Work required to obtain proper drainage and to bring it into conformance with the intent of the Plans and Specifications and City codes shall be performed by Contractor at no additional cost to City.

3.09 DUST AND NOISE ABATEMENT: During the entire construction period, site areas shall be kept sprinkled as necessary to reduce dust in the air and annoyance to surrounding properties. Adhere to the requirements of City ordinances for dust and noise control.

8 END OF SECTION

SECTION 02231
SITE PROTECTION OF VEGETATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the protection of existing vegetation that interferes with, or is affected by, execution of the Work, whether temporary or permanent construction.
- B. Related sections include the following:
 - 1. Section 02110 "Clear, Grub, Demolition and Salvage"
 - 2. Section 02210 "Grading"
 - 3. Section 02480 "Planting"

9 PART 2 - PRODUCTS

2.1 MATERIALS

- A. Temporary Fence: 4'-0" high orange plastic high visibility safety fence material. Temporary posts shall be U-channel, or tee steel posts, 6'-0" long.

10 PART 3 - EXECUTION

3.1 PREPARATION

- A. Temporary Fencing: Install temporary fencing around protection zones to protect remaining trees and vegetation from construction damage. Install posts 8'-0" apart maximum. Maintain temporary fence and remove when construction is complete. Install posts two feet (2') into grade.
- B. Protect tree root systems, of trees to remain, from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- C. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.

3.2 EXCAVATION

- A. Do not excavate within tree protection zones, unless otherwise indicated.

3.3 REGRADING

- A. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond tree protection zones. Maintain existing grades within tree protection zones, unless otherwise directed.
- B. Minor Fill: Where existing grade is 6 inches or less below elevation of finish grade, fill with topsoil from site. Place topsoil in a single un-compacted layer and hand grade to required finish elevations. Compact where below new paving.

3.4 TREE REPAIR AND REPLACEMENT

- A. Promptly repair trees and vegetation damaged by construction operations within 24 hours in a manner approved by the City-authorized representative. Treat damaged trunks, limbs, and roots according to arborist's written instructions.

3.5 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted.
- B. Disposal: Remove excess excavated material and displaced vegetation from Owner's property.

11 END OF SECTION

**SECTION 02410
DRAINAGE SYSTEM**

12 PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Standard Specifications: The provisions of the Standard Specifications shall apply except as modified herein.
- B. Reference Standards: The following standards also apply to the Work of this section:
 - 1. American Society for Materials & Testing (ASTM) Standards:
ASTM D 2321 Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications; and,
ASTM D 2729 Standard Specifications for Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings.
 - 2. Department of the Army, Corps of Engineers Standard:
COE CW-02215 Civil Works Construction Guide Specification for Geotextiles Used as Filters.

1.02 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Drainage System Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Obtain all required permits, and pay for those obtained from other than the City of Signal Hill.
- Coordination with Work of other Sections;
- Installation of all infiltration drain systems;
- Installation of drain line pipes, with outlet locations per Plans or as directed by the City Inspector;
- Clean-up;
- Replacements, Repairs, Guarantees and Warranty Work.

1.03 RELATED WORK:

Grading

Section 02210

1.04 SUBMITTALS: Submit copies of each of the following per General Conditions, Section 00700, Article 9, at the pre-construction conference for the review and approval of the City prior to commencement of any Work:

- A. Materials List: Contractor shall submit a written Materials List for all materials that are proposed for use in the Work. The list shall show manufacturer's model numbers, type, size, and such other information as may be required to properly identify all items.
- B. Product Data: Submit manufacturer's technical literatures and installation instructions for the following:
 - 1. Solid wall drain piping, fitting and inlets;
 - 2. Perforated french drain piping and fittings; and,
 - 3. Filter Fabric.
- C. Samples: Submit samples as follows:
 - 1. Filter Fabric: Submit 6-inch square.
 - 2. Drain Pipe (each type): Submit 12 inch long section.
 - 3. Drain Inlet: Submit one sample.

1.05 PRODUCT HANDLING: Contractor shall provide proper storage facilities for all materials delivered to the job site during the progress of the Work. Use all means necessary to protect materials of this Section as well as materials and installed Work of other trades before, during, and after installation.

13 PART 2 - MATERIALS

- 2.01 GENERAL: All materials of this Section shall conform to the requirements of the Standard Specifications.
- 2.03 DRAIN PIPE: Shall be poly-vinyl chloride (PVC 1120) pipe (size per plan) in compliance with ASTM D 2729. The class of fittings shall be at least equal to the class of the PVC pipe to be installed. Use perforated type for infiltration drains.
- 2.04 FILTER AGGREGATE: Shall be "Pervious Backfill" conforming with Standard Specifications Section **300-3.5.2 Pervious Backfill**.
- 2.05 INLETS: Prefabricated plastic boxes as manufactured by NDS or approved equal and precast concrete boxes as manufactured by Jensen or approved equal

14 PART 3 - EXECUTION

- 3.01 PREPARATION: Contractor shall verify all existing field conditions and compare them with the Plan dimensions. Prior to beginning the Work of this Section, Contractor shall inspect all related Work and adjacent features and report to the Parks Department Representative all conditions which prevent proper execution of the Work. Commencement of Work will be considered as Contractor's acceptance of the existing conditions. Contractor shall establish all lines, grades and locations of piping and accessories for the approval of the Engineer and the City Representative prior to installation of same.
- 3.02 PLANS ESSENTIALLY DIAGRAMMATIC: The Plans are to be considered as essentially diagrammatic in nature, to the extent that all offsets, and fittings as necessary to conform to actual site conditions are not shown. Contractor shall install the drain lines in the general locations as shown on the Plans as approved by the Engineer and the City Representative.
- 3.03 INFILTRATION DRAIN SYSTEM:
 - A. Coordination: The schedule for installation of the Work of this Section shall be coordinated with the overall construction schedule so as to insure the orderly progress of the Work. No Work of this Section shall commence until acceptance of the rough grading operations per Section **02210 Grading**. Prior to the commencement of each stage of this Work, carefully inspect the installed Work of other trades. For all Work, other than the rough grading cited above, Contractor shall be responsible for determining whether such other Work has been installed in such a manner as to permit the Work of this Section to proceed.
 - B. System Layout: Carefully layout the french drain system following the retaining wall layout shown on the Plans, in a manner to avoid interference with and from other Work, determining proper elevations for all components of the system, and using a minimum of bends and fittings.
 - C. Earthwork and Trenching: Contractor shall perform all required excavation, backfilling, and compaction in accordance with the requirements of other related Division 2 sections as applicable. Costs for performing such work are to be included in the bid breakdown price given for the sub-drainage system.
 - D. Infiltration Drain Pipe Installation:
 - 1. Inspect all piping before installation to detect apparent defects. Mark all defective materials and promptly remove same from the work site. Do not incorporate defective materials into the Work.
 - 2. Prior to assembly of French drain piping, install the filter fabric membrane from the grade line, down the earthen side of the excavation, across the bottom of the excavation, and up the backside of the retaining wall leaving enough excess fabric to envelope aggregate and French drain pipe after installation.
 - 3. Place, shape and compact a layer of filter aggregate in the excavation over the filter fabric but below the perforated drain pipe to provide a minimum 4" thick bed.
 - 4. Assemble and install all PVC piping in accordance with ASTM D 2321.
 - 5. Beginning at the low point of the system, lay piping true to line and grade indicated and with unbroken continuity of invert (i.e. no abrupt changes in invert gradient). Lay pipe to drain as indicated on the Plans.
 - 6. Make all joints between pipe sections with standard manufactured fittings and adapters intended for

SECTION 02410

that purpose.

7. Backfill around the pipe with filter aggregate and compact to envelope pipe with minimum 4" thick layer of filter aggregate all around.
8. Envelope aggregate with filter fabric and commence placement and compaction of remainder of backfill with clean soils to finish grade.

F. Backfilling:

1. Place and compact backfill in uniform layers, to minimum 90% relative compaction.
2. Take care when placing backfill to avoid damaging or dislodging the drainage system components. Do not operate wheeled or tracked vehicles on (in contact with) the filter fabric.

3.04 CONCRETE 24" wide channel: Shall be constructed per Plans or Cast-in-Place Concrete per Technical Specification Section **03300**.

3.05 CLEAN UP: After completion of the Work, Contractor shall thoroughly clean out all drain lines flushing them with a full head of water, and shall remove all debris, surplus materials and trash that may result from the Work of this Section and dispose of same off site in a legal manner.

15 END OF SECTION

SECTION 02441 IRRIGATION SYSTEM

16 PART 1 - GENERAL

1.01 **SCOPE:** The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Irrigation Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Provide complete operating irrigation systems including drip irrigation system;
- Installation of new irrigation systems as necessary to provide complete operating irrigation systems for all planting areas within the Park;
- 120 volt electrical connection to the controller;
- New Rain Bird Irrigation Controller as noted on the Plans; with a flow meter and master valve as specified;
- Coordination with Work of other Sections;
- Testing;
- Clean-up; and,
- Replacements, Repairs, Guarantees and Warranty Work.

1.02 **RELATED WORK:**

| | |
|-----------------------------------|-------|
| Clear, Grub, Demolition & Salvage | 02110 |
| Grading | 02210 |
| Planting | 02480 |
| Concrete, Paving and Curbs | 02515 |
| Electrical | 16530 |

1.03 **SUBMITTALS:** Submit copies of each of the following per General Conditions, **Article 5.22, Submittals** at the pre-construction conference for the review and approval of the City prior to commencement of any Work:

A. **Materials List:** Contractor shall submit a complete materials list for approval by the Parks Department Representative prior to performing any Work. Catalog data and full descriptive literature must be submitted whenever the use of items different than those specified is requested. Notarized certificate must be submitted by plastic pipe and fitting manufacturer indicating that material complies with the Project Specifications, unless material has been previously approved, and used on other projects by City. Material list shall be submitted using the following format:

| <u>Item</u> | <u>Description</u> | <u>Manufacturer</u> | <u>Model No.</u> |
|-------------|----------------------|---------------------|------------------|
| 1 | Pressure Supply Line | Lasco | Sch. 40 |
| 2 | Head | Rain Bird | 1800 |
| etc. | etc. | etc. | etc. |

B. **"Record" Prints:**

1. Record accurately on one set of blue-line prints all changes in the Work constituting departures from the Plans, including changes in pressure and non-pressure line locations.
2. The changes and dimensions shall be recorded in a legible and workmanlike manner to the satisfaction of the City Representative. Prior to final inspection of the Work, submit "record" prints to City for approval.
3. Dimension from two permanent points of reference (buildings, monuments, sidewalks, curbs, pavement, etc.). Data to be shown on "record" prints shall be recorded day-to-day as the project is being installed.
4. Show locations and depths of the following items:
 - a) Point of connection;
 - b) Routing of irrigation pressure lines (dimension maximum 100 feet along routing);
 - c) Ball valves;
 - d) Irrigation remote control valves;

- e) Quick coupling valves;
 - f) Routing of control wires; and,
 - g) Related equipment (as may be directed).
5. Maintain record prints on site at all times.

1.04 INSPECTIONS:

- A. Inspections will be required for:
- 1. Pressure test of irrigation main line.
 - 2. Coverage test.
 - 3. Final inspection/start of maintenance.
 - 4. Final acceptance.
- B. Inspection Requests: Contractor shall notify the Park Projects Inspector in advance for requesting all inspections as follows:
- 1. Pressure supply line installation and testing - 36 hours (1-1/2 working days)
 - 2. System layout - 36 hours (1-1/2 working days)
 - 3. Coverage tests - 36 hours (1-1/2 working days)
 - 4. Final Inspection - 48 hours (two working days)
- C. Evidence of Inspection by Others: When inspections have been conducted by other than the City Inspector, Contractor shall show evidence of when and by whom these inspections were made.
- D. Requirements for Inspection: No inspection is to commence without "record" prints available on the site. In the event Contractor calls for an inspection without up to date "record" prints, without completing previously noted corrections, or without preparing the system for inspection, the inspection may be cancelled and Contractor back charged for the direct costs of all City personnel time and consultant time lost, at the discretion of the City Representative.
- E. Closing in Uninspected Work: Do not allow or cause any of the Work of this Section to be covered up or enclosed until it has been inspected, tested and approved by the City Representative.
- F. Coverage test: When the irrigation system is completed, Contractor shall perform a coverage test in the presence of the Park Projects Inspector to determine if the water coverage for planting areas is complete and adequate. This test must be accepted by the City Inspector before planting can commence.
- G. Hydrostatic test:
- 1. Prior to the installation of any valves, all pressure lines shall be tested under a hydrostatic pressure of 150 psi for a period of not less than two hours, with all ends of lines capped and the line fully charged with water after all air has been expelled from the line.
 - 2. All hydrostatic tests shall be made in the presence of the City Inspector or Inspector's designated representative. No pressure line shall be backfilled until it has been inspected, tested, approved in writing, and the mainline and valve locations have been noted on the "record" prints.
 - 3. Contractor shall furnish the necessary force pump and all other test equipment, and shall perform the test.

1.05 TURNOVER ITEMS:

A. As-built Record Drawings:

The Contractor shall maintain a complete and accurate set of as-built drawings. These drawings shall be kept up to date with the progress of the work. The Contractor will have blueprints for the purpose of recording the as-built conditions of the Work, with information as follows:

- 1. The location of the main line; quick coupling valves; electric control valves; controllers; sleeves; point of connection; any special capped lines for future work; locations of controller wire splice junctions, lateral lines, and miscellaneous equipment.

2. The Contractor shall indicate clearly and correctly work installed differently from that shown on the design contract drawings by dimensioning from two permanent points of reference.
- B. Controller Charts:
1. "Record" prints must be approved by the City Representative before charts are prepared.
 2. Provide one controller chart for each automatic controller. The chart shall show the entire area covered by the controller, preferably in a single sheet. The chart shall be a reduced copy of the approved "record" print. Reduce the print to a size that is the maximum dimensions that will fit within the controller door without folding. If the controller sequence is illegible at this reduction scale, the chart may be provided as a "multi-sheet" chart to provide adequate legibility. Provide a digital version of the controller chart formatted as a PDF file for City's permanent records.
 3. Each control station on the Chart shall be marked with a different color to show its area of coverage.
 4. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being minimum 20 mils in thickness. The chart shall be installed in the controller enclosure using Velcro fasteners, and three different color grease pencils (red, black and blue) shall be provided in the enclosure for maintenance notations on the chart.
 5. Controller charts shall be completed prior to the final acceptance inspection.
- C. Operation and Maintenance Manuals: Within a minimum of 14 calendar days prior to acceptance of construction, prepare and deliver to the Parks Department Representative all required descriptive materials, properly prepared in two individually bound copies of the operation and maintenance manual. The manual shall describe the material installed and shall be in sufficient detail to permit operating personnel to identify, operate, and maintain all equipment. Spare parts lists and related manufacturer's information shall be included for each equipment item installed. Each complete, bound manual shall include the following information:
1. Index sheet stating Contractor's address and telephone number, including names and addresses and telephone numbers of local manufacturer's representatives.
 2. Complete operating and maintenance instructions on all major equipment.
- D. Materials to be furnished: The following items shall be supplied as part of this Contract and shall be turned over to the City Inspector at the conclusion of the Project at the Final Acceptance Inspection:
1. 4% additional irrigation heads of each type and spray pattern shown;
 2. Two (2) special tools/wrenches for disassembly and adjustment of each type irrigation equipment/heads installed that require such special tools/wrenches;
 3. Two keys for each type of automatic controller.;
 4. Two quick coupler "quills" with a 3/4" bronze hose bib, bent nose type with hand wheel and two quick coupler locking lid keys;
 5. One valve box cover key;
 6. "Record" prints and Mylar "As-Built Plans" at Final Acceptance; record prints to be provided in digital form, formatted both as a PDF and as a DWG file;
 7. Remove and turn over backflow device valve handles; and,
 8. Documentation of Water Department's inspection and acceptance of backflow device.

1.06 GUARANTEE:

- A. General: The entire irrigation system, including all Work done under this Contract, shall be guaranteed against all defects and fault of material and workmanship for a period of one (1) year following Final Acceptance of the Work as documented by the Notice of Completion filed with the Riverside County Recorder's Office. All materials used shall carry a manufacturer's guarantee of one (1) year. If any problem with the irrigation system is discovered by the City within the guarantee period, it shall be corrected by Contractor at no additional expense to City within fourteen (14) calendar days of receipt of written notice from City. When the nature of the repairs as determined by the Director constitute an emergency (e.g. broken pressure line) City may proceed to make repairs at Contractor's expense. Any and all damages to existing improvement resulting either from faulty materials or workmanship, or from the necessary repairs to correct same, shall be repaired to the satisfaction of the Parks Department Representative by Contractor, all at no additional cost to City.

B. Form of Guarantee: Guarantee shall be submitted on Contractors own letterhead as follows:

17 GUARANTEE FOR IRRIGATION SYSTEM

PROJECT: **Tom Thomas Magnolia Plaza**
LOCATION: Upland, CA

We hereby guarantee the irrigation system we have furnished and installed against defects in materials and workmanship, ordinary wear and tear and unusual abuse, or neglect excepted, and that the Work has been completed in accordance with the Plans and Specifications. We agree to repair or replace any or all of the Work, together with any other adjacent Work which may be displaced by so doing, that may prove to be defective in its workmanship or materials within a period of one (1) year after the date the Notice of Completion for the above named Project is filed with the County Recorder by the City of Riverside, California, at no additional cost to City. We shall make such repairs or replacements within 14 calendar days following written notification by City. When the immediate repair or replacement of the Work is necessary to ensure the public safety and welfare, which would be endangered by continued usage of the facility, such circumstance will be deemed an operational emergency. In the event of such an emergency, after City contacts our firm and after authorizing 24 hours to initiate repairs, if we fail to initiate and diligently complete such repairs in a timely manner, the Director may direct City forces to perform such functions as the Director may deem necessary to correct the Work and immediately place the facility back in operational condition. If such procedure is implemented, we shall bear all expenses incurred by City. In all cases, the judgment of the Director shall be final in determining whether an operational emergency exists. In the event of our failure to make such repairs or replacements within the time specified after receipt of written notice from City (other than an operational emergency), we authorize City to proceed to have said repairs or replacements made at our expense and we will pay the costs and charges therefor upon demand.

SIGNED: _____

ADDRESS: _____

PHONE: _____

- C. Operational Instruction: After the system has been completed, Contractor shall instruct the Parks Department Representative in the operation and maintenance of the system and shall furnish a complete set of operating instructions.
- D. Trench Settlement: Any settling of trenches which may occur during the one-year period following acceptance shall be repaired to City's satisfaction by Contractor without any additional expense to City. Repairs shall include the complete restoration of all planting, paving or other improvements of any kind which are damaged as a result of the Work.

18 PART 2 - MATERIALS

2.01 PIPE AND FITTINGS:

A. Steel Pipe:

All steel pipe shall be hot-dipped galvanized. All fittings for steel pipe shall be 250 pound rated galvanized malleable iron, banded pattern. Pipe sizes indicated on the Plans are nominal inside diameter, unless otherwise noted."

B. Plastic Pipe: Except where specified otherwise, all PVC pipe used for irrigation purposes shall be white in color, class and sizes as specified in Part 3 herein. Plastic pipe used for domestic water purposes shall be white in color.

1. All plastic pipes shall bear the following markings: manufacturer's name, nominal pipe size, schedule or class, type of material, pressure rating in PSI, NSF seal of approval, and date of extrusion.
2. All plastic pipe fittings shall be standard weight schedule 40 and shall be injection molded of an improved PVC fitting compound. All threaded plastic fittings shall have injection molded threads. No cut threads will be accepted on PVC pipe and fittings. All tees and ells shall be manufactured in injection molds that are side-gated. All threaded nipples shall be standard weight schedule 80 with molded threads. All threaded nipples exposed above grade shall be gray in color.

D. Drip Irrigation System: All drip irrigation emitter devices shall be as shown on the Plans.

E. PVC Cement and Primer:

1. All PVC cement and primer shall comply with ASTM D2564-91a and be NSF and IAPMO standards.
2. Lateral lines and fittings shall be cemented using a 100% active solvent, blue in color, medium bodied, fast setting.
3. Main line pipe and fittings shall be coated with a primer and then cemented with a 100% active solvent, gray in color, medium set, heavy bodied.
4. Both primer and solvent shall be similar in all respects to that manufactured by IPS Weld-On brand.
5. Obtain and follow the manufacturer's application directions.

F. SLEEVE MATERIAL:

1. Sleeves for irrigation piping and wires shall be provided crossing of all walks, asphalt drives, and any other paving locations.
2. All sleeve material shall extend 18 inches beyond edges of paving, hardscape, or construction. Sleeve shall extend five (5) feet beyond potable water crossing. Provide pavement markings or witness stakes and wires for sleeve crossing locations.
3. Sleeving material for PVC main line piping shall be SCH 40 and sized to allow for piping with couplings to easily slide through the sleeving material. Minimum size sleeving material as follows:

| Pipe Size | Sleeve Size (Nominal Size) |
|-----------|----------------------------|
| 3/4" | 1 1/2" |
| 1" | 2" |
| 1 1/4" | 2 1/2" |
| 1 1/2" | 3" |
| 2" | 4" |

4. Sleeving material for low voltage wiring shall be PVC SCH 40 pipe, where below grade. Where above grade use PVC SCH 40 gray conduit. The maximum number of direct burial 14 gauge wires per diameter of sleeve pipe shall be as follows:

| Sleeve Size | No. of wires |
|-------------|--------------|
| 3/4" | 6 |
| 1" | 12 |
| 1 1/4" | 18 |
| 1 1/2" | 21 |
| 2" | 25 |

G. UNDERGROUND UTILITY MARKING TAPE:

1. Marking tape shall be Magnetic brand as manufactured by Griffolyn Company Inc, Terra Tape or Thor Enterprises, or approved equal.
2. Marking tape shall be a minimum of 3 inch wide, and length as needed to mark the entire length of main line within the project boundaries, where below grade.
3. Marking tape color codes are as follows:

| | |
|------|---------------|
| Red | Electrical |
| Blue | Potable water |

2.02 VALVES AND VALVE BOXES:

A. Valves:

1. Ball Valves: All ball valves shall be bronze bodied, full port, with stainless steel trim, capable of withstanding a non-shock cold water working pressure of not less than 400 psi., Nibco Model No. T-585-70, or City approved equal
4. Quick-Coupling Valves: Quick coupling valves shall have locking vinyl cover, yellow in color, and shall be 1" in size.
5. Remote Control Valves:
 - a) Valves shall be spring-loaded, self-cleaning, packless diaphragm activated, of a normally closed type.
 - b) Valve solenoid shall be corrosion-proof and constructed of stainless steel molded in epoxy to form one integral unit, and shall be 24 volt A.C., 2.0 watt maximum (2" and smaller valves).
 - c) Valve shall close against flow without chatter and with minimum closing surge pressure (minimum 5 seconds closing time per valve).
 - d) Valve shall be completely serviceable in the field without removing valve body from line.

B. Boxes:

1. Plastic Valve Boxes:
 - a) General: Valve boxes and covers shall be fabricated from a durable plastic material resistant to weather, sunlight and chemical reactions, with 10 year warranty and snap lock lids. Brand lids with valve number. The covers shall be secured with a hidden latch mechanism or bolts. The cover and box shall be capable of sustaining a load of 1,500 pounds. Valve box extensions shall be by the same manufacturer as the valve box. The box covers shall be factory embossed for the designated use and stenciled by the installer with 2" high letters in a contrasting color as noted below. Boxes and covers shall be as manufactured by Carson, Rain Bird or City approved equal. Use two valve boxes; one inverted over one for the flow meter and master valve only. The box shall be black with green lid or purple lid if reclaimed water is available.
 - b) Rectangular Plastic Boxes and Covers: Shall be a minimum of 12" wide x 18 long", with depths as necessary to protect the valve and provide the clear dimensions as detailed and/or specified. The covers shall be embossed with words or initials to identify the use for the box (e.g. "Flush Valve" or the letters "F.V.", and Air Relief Valve or the letters "A.R.V.") as noted on the Plan.
 - c) Round Plastic Boxes and Covers: Shall be minimum 12" diameter, round boxes with covers embossed with words to identify the use for the box (e.g. "Quick Coupler Valve" or the letters "Q.C.V.") and shall be marked as noted on the Plans.

2.03 BACKFLOW PREVENTION DEVICE: Where shown on plans, an existing device will be used.

- A. New Device: The backflow prevention device shall be a reduced pressure type vacuum breaker of the size, manufacture, and model number as indicated on the Plans. If not indicated, the device shall be the same size as the water service meter, but in no case less than one line size smaller than the line into which it is

being installed. The manufacturer and model number shall be among those shown on the approved list as published by the Public Works Department, Water Division.

2.04 IRRIGATION HEADS: All irrigation heads shall be as shown on the Plans.

2.05 ELECTRICAL MATERIALS:

- A. Conduit: All conduit below grade shall be schedule 40 PVC of sufficient size to carry all proposed wiring. Low Voltage (24 volt) wiring shall be provided with a separate conduit/sleeve from both high voltage wiring (110/120 volt and higher) and the irrigation mainline sleeve.
- B. Electrical Service: Materials for electrical service shall comply with the standard specifications, governing utility agency standards, and requirements of all applicable codes.
- C. Wire:
 - 1. Control Wire: All low voltage conductors used as control wires shall be 14 gage and shall be of one color other than white or green. A different color control wire shall be used for each controller installed.
 - 2. Common Wire: All low voltage conductors used as common wires shall be 12 gage and shall be white with a colored stripe. Stripe color shall match the color of the "control" wire insulation used for valves on the same controller, and shall be different for each controller installed.

2.06 CONTROLLER:

- A. Controller: Shall be Rain Bird, model ESP LXMEF, with expansion modules as needed and Flow Smart Module, mounted within a steel wall mount enclosure with locking hinged cover.

19 PART 3 – EXECUTION

3.01 GENERAL: No Work of this Section other than sleeving under pavement shall commence prior to the completion and acceptance of all Grading Work as specified in Section **02210 Grading**.

- A. Irrigation System Design & Water Supply:
 - 1. The irrigation system design is based upon an available static water pressure of 30-42 PSI, boosted to 100 PSI, and a maximum flow rate of 110 GPM. The system is designed to withstand a maximum pressure of 200 PSI. Contractor shall verify the size of the existing water supply, water meter and the existing operating water pressure at the water supply location shown on the Plans prior to starting construction. Contractor shall notify the Park Projects Inspector in writing of any discrepancies noted. Failure to provide such written notification may cause Contractor to provide for modifications to the irrigation system as necessary to provide for a fully operational system providing 100% coverage at the operating pressure available, all at no additional cost to City.
 - 2. Connection to, or the installation of, the water supply shall be at the location shown on the Plans. Minor changes caused by actual site conditions shall be made at no additional cost to City.
- B. Electrical Service: Contractor shall make 120 V connection to the irrigation controller from existing power within restroom building. Connect to an independent electrical circuit.
- C. Code Requirements: Prior to all Work of this Section, Contractor shall carefully inspect the installed Work of all other trades and verify that all such Work is complete to the point where this installation may properly commence. Verify that the irrigation system may be installed in strict accordance with all pertinent codes and regulations, the original design, the referenced standards, and the manufacturer's recommendations. In the event any equipment or methods indicated on the Plans or in the Specifications is in conflict with local codes, immediately notify the Inspector prior to installing the Work. If this notification is not provided, Contractor shall assume full responsibility for the cost of all revisions necessary to comply with all codes.

- D. Grades: Before starting Work of this Section, Contractor shall obtain the written acceptance of the Park Projects Inspector of the *fine* grades, and written authorization for the Work of this Section to proceed. Contractor is to keep within the specified material depths with respect to finish grade. Failure to obtain such written acceptance may subject Contractor to adjusting the grades or depth of lines in order to achieve acceptable depths of cover, all as directed by the City Inspector and at no additional cost to City.
- E. Coordination with Work of Other Trades: Make all necessary measurements in the field to ensure precise fit of items in accordance with the original design. Contractor shall coordinate the installation of all irrigation materials with all other Work. Special attention shall be given to coordination of piping locations versus tree and shrub locations and sleeve locations versus pavement installation to avoid conflicts.
- F. Maintain Record Prints: Contractor shall maintain "record" prints on site at all times. Upon completion of the Work, transfer all "record" information from the record prints to either sepia Mylar or photo Mylar prints for turn-over to the City as the irrigation "As-Built" Plans. The changes and dimensions shall be recorded in a legible and workmanlike manner, to the satisfaction of the City Inspector.

3.02 TRENCHING AND BACKFILLING:

- G. Trenching:
 - 1. Dig trenches and support pipe continuously on bottom of ditch. Where lines occur under paved areas, depth dimensions shall be considered below sub-grade.
 - 2. Water lines continuously pressurized - minimum 18 inches, maximum 24 inches. (These measurements are to be from sub-grade elevation for piping under pavement.)
 - 3. Lateral irrigation lines - minimum 12 inches and maximum 16 inches.
 - 4. Where it is necessary to excavate adjacent to existing trees, Contractor shall avoid injury to trees and tree roots. Excavation in areas where 2-inch and larger roots occur shall be done by hand. All roots 2 inches and larger in diameter shall be tunneled under and shall be heavily wrapped with wet burlap to prevent scarring or drying. Where trenching machine is run close to trees having roots smaller than 2 inches in diameter, the wall of the trench adjacent to the tree shall be hand trimmed, making a clean cut through the roots. Roots 1 inch and larger in diameter shall be painted with two coats of tree seal or approved equal. Trenches adjacent to trees shall be closed within 24 hours.
 - 5. Permanent Resurfacing: All surface improvements damaged or removed as a result of Contractor's operations shall be reconstructed by Contractor to the same dimensions, except for pavement thickness, and with the same type materials used in the original Work. Trench resurfacing shall be 1 inch greater in thickness than existing pavement. Concrete pavement shall be removed and replaced in "full panels" with no horizontal dimension less than five (5) feet. Contractor shall review the planned limits and lines of concrete removal and replacement with the City Inspector prior to saw-cutting for Removal Work.
- H. Backfill:
 - 1. Backfill shall be uniformly tamped in 4-inch layers under and around the pipe for the full width of the trench and the full length of the pipe. Materials shall be sufficiently damp to permit thorough compaction, free of voids. Backfill shall be compacted to dry density equal to adjacent undisturbed soil and shall conform to adjacent grades.
 - 2. Compaction
 - a) Flooding in lieu of tamping is not allowed without specific prior written approval of the Soils Engineer and the City Inspector.
 - b) Under no circumstances shall the wheels of any vehicle not designed for the purpose of soils compaction be used to compact backfill.

3.03 PIPE INSTALLATION:

A. General:

1. Piping under existing pavement may be installed by jacking, boring, or hydraulic driving. However, no hydraulic driving is permitted under asphaltic concrete pavement.
2. Cutting or breaking of existing pavement is not permitted except as approved by Park Projects Inspector or where called for on the plans. Whenever pavement is cut or broken all necessary repairs and replacements will be made at no additional cost to City.
3. Carefully inspect all pipe and fittings before installation, removing all dirt, scale and burrs and reaming; install pipe with all markings up for visual inspection and verification.
4. Contractor shall install concrete thrust blocking per the pipe manufacturer's recommendations at all changes of direction and terminal points of pressure pipe.
5. Parallel lines shall not be installed directly over one another. Provide a minimum of 12" horizontal separation for all parallel lines.
6. For plastic-to-metal connections, work the metal connections first. Use a non-hardening pipe dope on all threaded plastic-to-metal connections, except where noted otherwise.
7. All piping under pavement shall be sleeved using schedule 40 PVC sleeves. Each line shall be separately sleeved.
8. Do not install multiple assemblies (i.e. "manifolds") on plastic lines. Provide each equipment assembly (e.g. RCV, quick coupler, ball valve, head, backflow device) with its own connection to its service line.

B. Plastic Pipe:

1. Exercise care in handling, loading, unloading and storing plastic pipe and fittings, store plastic pipe and fittings under cover until ready to install; transport plastic pipe on a vehicle with a bed long enough to allow pipe to lay flat, avoid undue bending and any concentrated external load.
2. 360 Degree applicators shall be used to apply primer and solvent on pipe sizes 2-1/2 inches and larger.
3. Pressure supply lines 2 inches in diameter and up to 8 inches in diameter shall be either Class 315 solvent weld PVC or Class 200 rubber gasket type PVC. Solvent weld and ring type pipe shall not be used together on the same pressure supply line.
4. Pressure supply lines 1-1/2 inches in diameter and smaller shall be schedule 40 PVC.
5. Non-pressure lines shall be schedule 40 PVC..

3.04 BACKFLOW INSTALLATION: Install backflow assemblies at locations approved in the field by the City Inspector and at heights required by local codes. Provide lockable enclosure or anti-theft devices as necessary to prevent theft of device.

3.05 VALVE AND VALVE BOX INSTALLATION:

C. Valves:

1. Valves shall be the same size as the pipeline in which valves are installed unless otherwise specified on the Plans. Valves shall be installed a minimum of three feet in horizontal distance apart, each with its own connection to the pressure main line. All isolation and shut off valves less than 2-1/2" in size shall be ball valves as specified. All isolation and shut off valves 2-1/2" and larger shall be gate valves as specified with square operating nuts.
2. Install quick couplers and valve boxes per the Park and Recreation Department's standard details.
3. Valves shall be installed in shrub areas whenever possible. No valves or valve boxes other than quick coupler valves shall be installed within a designated athletic playing field.

D. Valve Boxes:

1. General: Valve boxes shall be installed with a minimum of 12" clearance between boxes and a minimum clearance of 2" between the box and all pipelines and valve components and/or special equipment within the box. Valve boxes found to be resting on valves, special equipment or pipelines shall be cause for rejection of the installation.
2. Box Types by Use:
 - a) Rectangular: Unless noted otherwise on the Plans, each master control valve, remote control

valve, isolation valve, drip irrigation valve, and each air relief valve shall be installed within a rectangular plastic valve box.

- b) Round: Unless noted otherwise on the Plans, each quick coupler valve shall be installed within a round plastic valve box.

3.06 IRRIGATION HEAD INSTALLATION: Irrigation heads shall be installed as designated on the Plans and per the Park and Recreation Department's standard details. Upon coverage testing of the system if 100% coverage is not afforded by the system as designed, additional heads shall be added as necessary to achieve 100% coverage. Up to 5% of the total number of heads in the system are to be added at no additional cost to City. If a greater number of heads is needed, cost shall be as negotiated by change order.

3.07 CONTROLLER INSTALLATION:

- A. Controller Installation: The controller location, as shown on the Plans, is diagrammatic. The final location of the controller(s) shall be as approved by the City Inspector before installation. Contractor shall install all conduit runs, 120V wire and cable, and 24V control wire, and controller communication cables as necessary for a complete and operational system.
- B. Controller Enclosure:
- (1) Conventional Type: The controller shall be wall mounted within a steel vandal resistant enclosure, unless noted otherwise on the Plans. Controller enclosure shall be located within the existing restroom building Utility room.
- B. Coordination of Controller Location with Various Service Connections: Contractor shall coordinate *and* the electrical service with the approved controller location. Contractor shall verify the locations of 120V power, *and sensor cable lead-ins* prior to installing controller(s) and shall coordinate final assembly mounting locations with the needed utilities. Contractor shall furnish and install grounding rods and ground wires for each controller. Ground rods shall be installed a minimum of eight feet from their respective controller housing and the ground wire run back to the controller.
- C. Controller Connections: Contractor shall inspect, test, and certify all low voltage control wire, *communication cables*, splices and ground rod installations as applicable. Repairs necessary to provide properly operating wiring are to be made by Contractor at no additional cost to City. After repairs are completed, Contractor shall connect the ground wires to the ground rods and the controller(s)..
- D. Controller Programming: Following establishment of the turf, the irrigation system shall be programmed to operate during the periods of minimal use of the Project area (i.e., 11:00 p.m. through 6:00 a.m.).

3.08 WIRING:

- A. All splice connections shall occur in a valve box. All wire runs between the valve and the controller shall be a continuous run with no splices unless noted otherwise on the Plans.
- B. All low voltage wiring splices shall be made-up as soldered connections, wrapped with a minimum of two (2) layers of electrical tape and sealed with Scotch-coat. Scotch-lok, Uni-pack, Penn-tite, or other similar type connectors are not acceptable.

3.09 FINISHING AND TESTING Pressure test the mains - minimum 2 hours at 150 PSI. Center-load all plastic pipe prior to pressure testing. The entire system shall be operating properly prior starting any planting operations.

3.10 COMPLETION CLEANING: Upon completion of the Work, Contractor shall smooth all ground surfaces, remove excess materials, rubbish, debris, etc., sweep adjacent streets, gutters, walkways and trails, and remove construction equipment from the premises.

END OF SECTION

BJ/02441.MAS 12/07/07

SECTION 02452 SIGNAGE

20 PART 1 - GENERAL

1.01 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all site **Signage Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Construction Signs (Temporary);
Construction Worksite Access; and,
Project Signs;
- Site Signs, including but not necessarily limited to the following:
Precast concrete wall signs and plaques

Bronze Dedication Plaque

- Coordination with Related Work of other Sections;
- Clean-up; and,
- Replacements, Repairs, Guarantees and Warranty Work.

1.02 RELATED WORK:

Submittals General Conditions, Article 5.22

1.03 GUARANTEE: All signage shall be guaranteed for a minimum period of one (1) year against all peeling, fading, chipping and deterioration of any kind.

1.04 SUBMITTALS: Shall be prepared and submitted in accordance with General Conditions, **Article 5.22, Submittals**, and shall consist of the following:

- A. Materials Lists/Manufacturer's Product Information: Contractor shall submit a complete list of materials along with the manufacturer's catalog cuts for all materials proposed for use in the Work at the preconstruction conference. Contractor shall also provide the Manufacturer's complete installation drawings including specifications and a replacement parts lists for all equipment proposed for the Project. Submit all Manufacturer's product information for each item specified for use in the Work.
- B. Proposed Substitutions: Submittals for Proposed Substitutions shall conform to General Conditions, Article 6.4, **Substitutions**. Products proposed for substitution as "equals" to the products specified are subject to the approval of the Parks Department Representative. If at the time proposed equals are delivered to the site and/or incorporated into the Work it is determined by the City Representative that the substitute products are not equal to the products specified, the unacceptable substitute products shall be removed and products as specified shall be provided and installed by Contractor at no additional cost to City.
- C. Shop Drawings: Contractor shall prepare and submit Shop Drawings for all signage of this section which shows complete details for all signs being fabricated. Shop Drawings shall show all methods of attachment, materials, letter styles, and height, finishes, colors, dimensions and locations for signs, and shall be prepared in accordance with Standard Specifications and General Conditions, Article 8, Shop Drawings.

1.05 DELIVERY, STORAGE AND HANDLING: Contractor shall assume all responsibility for storage of all signage materials for the Project. City assumes no liability for losses or damages from any cause as a result of Contractor's storage of materials on site.

21 PART 2 - MATERIALS

2.01 GENERAL: Products used in the Work of this Section shall be produced by manufacturers regularly engaged in the manufacture of similar items with a history of successful production acceptable to the City Department.

2.02 CONSTRUCTION SIGNS (TEMPORARY):

- A. Construction Worksite Access: Contractor shall provide signage indicating “Construction Area - No Unauthorized Entry” and “No Trespassing” for mounting on the construction fence gate and fence lines respectively.
- B. Project Sign: Shall be provided to identify the project, the City and Representatives, the Landscape Architect, and Contractor. It shall be constructed of 4’ x 8’ exterior plywood with white background and mounted on 4” x 4” posts in location approved by City, Submit sign layout to City for approval.

2.03 SITE SIGNAGE:

- A. Precast Concrete Signs: Shall be fabricated by a company experienced in fabricating and preparing precast concrete elements. Submit manufacturer’s qualifications and shop drawings for review and approval prior to proceeding. Fabricator Qualifications: A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer
 - 1. Wall Precast Concrete Signs:
 - a) Curved precast concrete stage wall sign. Sign thickness and reinforcing shall be determined by the manufacturer. Sign may be produced in two pieces if necessary. Provide sign text per drawings.
 - b) Column precast concrete plaque. 18” x 24” Sign. Thickness and reinforcing shall be determined by the manufacturer. Sign text and logo will be provided to the contractor.
 - c) Attachment bolts shall be stainless steel, size as determined by the manufacturer.
- B. Bronze Dedication Plaque: 18” x 24” Sign. Shall be fabricated as detailed on plans. Finish as selected.

22 PART 3 - EXECUTION

3.01 GENERAL:

- A. Qualifications of Installers: Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
- B. Coordination: Signs to be installed shall be coordinated with the various bid schedules awarded. All dimensions and conditions shall be field verified prior to any signs being fabricated. Contractor shall size foundations for support walls as detailed or as determined by the structural engineer.
- C. Do not install precast concrete units until supporting cast-in-place concrete or masonry has attained minimum allowable design compressive strength and supporting steel or other structure is structurally ready to receive loads from precast concrete units

3.02 CONSTRUCTION SIGNS (TEMPORARY):

- A. Construction Worksite Access:
 - 1. Construction Area - No Unauthorized Entry: Signs shall be affixed to the construction fence at all entry gates into the construction work area.

2. No Trespassing: Signs shall be affixed to the temporary construction fence.
 - B. Project Identification Sign: Shall be installed at a location approved by the City and with an adequate concrete footing to support sign in windy conditions.
- 3.03 SITE SIGNAGE: All site signage to be permanently set into supporting concrete or masonry structures as detailed on plans.
- A. Wall Precast Concrete Signs:
 1. Erect architectural precast concrete signs level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment of units until permanent attachment methods have fully cured.
 - A. Wall Bronze Signs:
 1. Erect bronze signs level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment of units until permanent attachment methods have fully cured
- 3.04 COMPLETION CLEANING: Upon completion of the Work of this Section, Contractor shall clean all Signs installed removing all soil, concrete latence, stains, grease, dirt, etc., and shall polish all signs faces and other such surfaces that require such maintenance. Contractor shall remove all excess materials, rubbish, debris, etc., and remove construction equipment from the premises.
- 3.05 CLEAN-UP: Throughout the duration of the Project, Contractor shall provide trash receptacles for collecting debris, shall remove debris, trash and unused materials, and excess soil from the job site at regular intervals of not less than weekly and shall dispose of same off site in a legal manner.

23 END OF SECTION

SECTION 02461 SITE FURNISHINGS

24 PART 1 - GENERAL

1.01 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Site Furnishing Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Providing and Installing all site furnishings;
- Coordination with Work of other Sections;
- Clean-up; and,
- Replacements, Repairs, Guarantees and Warranty Work.

1.02 RELATED WORK:

| | |
|------------|----------------------------------|
| Submittals | General Conditions, Article 5.22 |
| Grading | Section 02210 |
| Concrete | Section 02515, 02768 |

1.03 SHOP DRAWINGS: Contractor shall prepare and submit copies of Shop Drawings which show complete details for all items requiring shop fabrication. Shop Drawings shall be prepared in accordance General Conditions, Article 5.23, Shop Drawings.

1.04 GUARANTEE & PRODUCT LIABILITY INSURANCE:

- A. Manufacturer: Shall guarantee all materials (and workmanship if installed by manufacturer) for a period of one (1) year exclusive of vandalism. Manufacturer(s) will be required to provide product liability insurance coverage in the minimum amounts of \$3,000,000 per incident. Manufacturer(s) shall inspect all installation Work and provide written certification that equipment has been installed in accordance with manufacturer's specifications.
- B. Contractor: Shall provide a one-year written guarantee on Contractor's letter head for all materials, labor and workmanship, exclusive of vandalism. Contractor's written guarantee shall be submitted to the City Inspector at the final inspection prior to Final Acceptance of the Work.

1.05 SUBMITTALS:

- A. Materials Lists/Manufacturer's Product Information: Contractor shall submit a complete list of materials along with the manufacturer's catalog cuts for all materials proposed for use in the Work at the preconstruction conference. Contractor shall also provide the Manufacturer's complete installation drawings including specifications and a replacement parts lists for all products proposed for the Project. Submit copies of all Manufacturers' product information for each item specified for use in the Work per General Conditions, Article 5.22
- B. Proposed Substitutions: Submittals for Proposed Substitutions shall conform to General Conditions, Article 6.4, **Substitutions**. Products proposed for substitution as "equals" to those specified are subject to the approval of the City Representative. If at the time proposed equals are delivered to the site it is determined by the City Inspector that the products are not equal to those specified, the unacceptable products shall be removed and products as specified provided by Contractor at no additional cost to City.

1.06 INSPECTIONS:

- A. Equipment Locations: No equipment, apparatus, or foundations for same shall be placed, dug or poured until location stakes have been inspected and approved by the City Inspector.

- B. Foundations & Assembly: All equipment shall be fully assembled prior to foundations being poured. The assembled and positioned site furnishings shall be inspected and approved by the City Inspector prior to pour of the foundations or permanently anchored.

1.07 DELIVERY, STORAGE AND HANDLING: Contractor shall assume all responsibility for storage of all materials for the Project. City assumes no liability for losses or damages from any cause as a result of Contractors storage of materials on site.

25 PART 2 - MATERIALS

- 2.01 BENCH: Omitted.
- 2.02 TRASH RECEPTACLE: Trash Receptacle shall be provided by the City.
- 2.03 PICNIC TABLE: Shall be precast concrete, models (2) as specified on plans and manufactured by QCP Corp. or approved equal.
- 2.04 BOULDERS: Shall be provided by the City and as salvaged from the site.
- 2.05 ROCK COBBLE: Shall be provided from a local source or as available from Southwest Boulder & Stone.
- 2.06 CORN HOLE GAME BOARDS: Shall be precast concrete, model as specified on plans and manufactured by QCP Corp. or approved equal.
- 2.07 TREE GRATE: Shall be cast iron, black color, model and size as specified on plans and manufactured by Ironsmith. or approved equal.
- 2.08 BICYCLE RACKS: Shall be Powder coated steel, model and capacity as specified on plans and manufactured by Keystone Ridge Designs or approved equal. Color per plans.
- 2.09 BICYCLE REPAIR STATION: Shall be provided by the City.
- 2.10 REMOVABLE BOLLARD: Shall be galvanized steel with galvanized steel sleeve, crash rated as manufactured by Reliance Foundry or approved equal. Model and size as specified on plans.
- 2.11 PERMANENT BOLLARD: Shall be galvanized steel, crash rated as manufactured by Reliance Foundry or approved equal. Model and size as specified on plans.
- 2.12 DECORATIVE PERMANENT BOLLARD: Shall be galvanized steel pipe with decorative powder coated cast iron cover, crash rated as manufactured by Reliance Foundry or approved equal. Model and size as specified on plans.
- 2.13 UTILITY BOX COVER: Shall be galvanized steel, model and size as specified on plans and manufactured by Wunder Covers or approved equal. Color per plans

26 PART 3 - EXECUTION

- 3.01 SEQUENCE OF WORK: No Work of this Section shall commence prior to the completion and acceptance of all grading work specified in Section **02210 Grading**.
- 3.02 LAYOUT:
 - A. Site Furnishings: Contractor shall stake or otherwise mark the proposed locations for picnic tables, benches, and other site furnishings, and shall obtain the approval of the locations from the City Inspector

prior to commencing any excavation for foundations or attachment methods. The proposed locations shall be reviewed by Contractor in the presence of the City Inspector to verify minimum clear distances required from all edges of slabs, trees, irrigation heads, and other obstructions are provided.

3.03 PROTECTION OF EXISTING IMPROVEMENTS: Contractor shall protect all existing improvements from damage due to Contractor's operations. All damage to existing improvements that result from Contractor's operations shall be repaired by Contractor at Contractor's expense. All turf areas that are damaged shall be fine graded, filling all depressions, wheel ruts and irregularities, and shall be resodded with the grass specified in Section **02480 Planting**. Contractor shall make all repairs and shall restore all damaged turf areas at Contractor's sole expense. All trees and shrubs in and around the project site shall be protected by Contractor, and if damaged shall be replaced at Contractor's expense.

3.04 SITE FURNISHINGS INSTALLATION:

- A. Boulders and Rock Cobble: Boulders shall be placed under the direction of the City Inspector or his field representative. Rock Cobble for masonry structures shall be installed by the masonry contractor. Rock Cobble for dry stream beds shall be installed as detailed. Obtain approval of sample 10' long section before proceeding.
- B. Picnic Tables: Shall be fully assembled and located as approved by City inspector.
- C. Trash Containers: Shall be fully assembled and located as approved by City inspector. Attach to paving with stainless steel anchors.
- D. Bicycle Rack: Shall be fully assembled and located per plan as approved by City inspector. Attach to paving with stainless steel anchors.
- E. Bicycle Repair Station: Shall be fully assembled and located as approved by City inspector. Attach to paving with stainless steel anchors.
- F. Corn Hole Boards: Shall be fully assembled and located per plan as approved by City inspector.
- G. Permanent Bollard: Shall be installed as detailed on plans and manufacturer's instructions.
- H. Removeable Bollard: Shall be installed as detailed on plans and manufacturer's instructions.
- I. Utility Box Cover: Shall replace existing utility box cover with adjacent paving material installed into pan lid. Match color and finish of adjacent paving material.

3.05 CLEAN-UP: Throughout the duration of the project, Contractor shall provide trash receptacles for collecting debris, shall remove debris, trash and unused materials, and excess soil from the job site at regular intervals of not less than weekly and shall dispose of same off site in a legal manner.

27 END OF SECTION

SECTION 02480 PLANTING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

A. Reference Standards: American Association of Nurserymen Standards.

1.02 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Planting Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Soil preparation;
- Finish grading (as distinguished from fine grading per Section **02210 Grading**);
- Planting trees;
- Guying and staking trees;
- Planting shrubs and groundcovers;
- Maintenance;
- Plant establishment – 90 calendar days;
- Coordination with Work of other Sections;
- Clean-up;
- Replacements, Repairs, Guarantees and Warranty Work.

1.03 RELATED WORK:

| | |
|---|--|
| Submittals | Section 00700, General Conditions, Article 9 |
| Clear and Grub and Selective Demolition | 02110 |
| Site Grading | 02210 |
| Irrigation | 02441 |
| Electrical | 16530 |

1.04 SOILS TEST: Contractor shall notify the City Inspector upon completion of fine grading and prior to commencement of soil preparation work. The Park Projects Inspector will obtain agronomic soils tests for all planting areas after completion of fine grading and prior to start of soil preparation work. Tests will be performed by an approved agronomic soils testing laboratory and will include a fertility and suitability analysis with written recommendations for soil preparation, planting backfill mix, auger hole requirements, and post plant fertilization program. The soils report recommendations will take precedence over the minimum amendment and fertilizer application rates specified herein if and when the soils report recommendations exceed the specified minimums. Contractor shall allow a minimum two week period for the soils testing work commencing upon the Park Projects Inspector's acceptance of grade/the fine grading work per Section **02210 Grading**.

1.05 GUARANTEE: The guarantee requirements of the Special Provisions are supplemented as follows as they pertain to the tree planting, broadleaf tree relocation and palm tree relocation portions of the Work. All trees installed and/or relocated under the Contract shall be guaranteed against any and all poor, inadequate or inferior materials and/or workmanship for a period of one (1) year following the date the Project Notice of Completion is filed with the County Recorder. During the guarantee period, any trees found to be dead, missing, or in poor condition shall be replaced by Contractor within ten (10) days of written notification. Park Projects Inspector shall be the sole judge as to the condition of the trees. Replacement shall be made in accordance with City standards. Material and labor involved in replacing trees shall be provided by Contractor at no additional cost to City.

1.06 INSPECTIONS: Inspections will be required. Contractor shall contact the City Inspector at least 48 hours (2 working days) in advance of an anticipated inspection. An inspection will be required at each of the steps listed below:

A. General Planting Work:

- 1) Fine Grade Prior to Commencement of Soil Preparation: Upon completion of fine grading and prior to commencement of soil preparation, for acceptance of fine grading work/grade and taking of soils samples.
- 2) Finish Grade: Inspection of completed finish grading work following soil preparation work.
- 3) Plant Material: Inspection of plant materials upon delivery to the job site, but prior to planting.
- 4) Plant Locations: When container plants and/or bare root stock are spotted for planting, but before planting holes are excavated.
- 5) Completed Planting: When planting and all other indicated or specified work has been completed.
- 6) Chemical Applications: During application of pre-emergent chemical.
- 7) Start of Plant Establishment: At the start of the Plant Establishment Period.
- 8) End of the Plant Establishment: Prior to Final Acceptance of the Project for maintenance by City, the project will be inspected for end of the Plant Establishment Period. Acceptance for maintenance will be confirmed in writing by the Parks Department Representative. Contractor shall remain responsible for maintenance until receipt of this written confirmation of City's acceptance of the Project for maintenance.

1.07 SUBMITTALS: The following written certifications are required to be submitted to the City Inspector upon delivery of the respective materials to the job site:
 Total Quantity of commercial fertilizers, by type;
 Total Quantity of soil amendments and conditioners, by type;
 Total Quantity of iron sulphate if specified.

1.08 PLANT ESTABLISHMENT PERIOD:

- A. General Landscape Work: The length of the Plant Establishment Period for all general landscape work shall be **90 calendar days** following approval of substantial completion. See also Subsections **3.12 Maintenance and Plant Establishment** and **3.13 Start of Plant Establishment Period** for the criteria to start plant establishment and the maintenance tasks required.

PART 2 - MATERIALS

2.01 FERTILIZER, SOIL AMENDMENTS AND CONDITIONERS:

- A. Plant Tablets: Tightly compressed long-lasting, slow-release fertilizer tablets weighing 21 grams, with a potential acidity of not more than 5 percent by weight and having an analysis of 20-10-5 derived from the sources listed in the following guaranteed analysis:
GUARANTEED ANALYSIS

| | |
|--|-------|
| Total Nitrogen (N) | 20% |
| Derived from urea formaldehyde | |
| 7.0% water soluble nitrogen | 13.0% |
| water insoluble nitrogen | |
| Available Phosphoric Acid (P ₂ O ₅) | 10% |
| Derived from calcium phosphate | |
| Soluble Potash (K ₂ O) | 5% |
| Combined Calcium (Ca) | 2.6% |
| Derived from calcium phosphates | |
| Combined Sulfur (S) | 1.6% |
| Derived from ferrous and potassium sulfates | |
| Iron (expressed as elemental Fe) | 35% |
| Derived from ferrous sulfate | |

- B. Commercial fertilizer: Shall bear the manufacturer's guaranteed statement of analysis and shall meet the following minimum requirements: 16% nitrogen, 6% phosphoric acid, and 8% potash (**16 - 6 - 8**).
- C. Organic Soil Amendment: Shall be a wood based product, nitrogen stabilized, and free of foreign matter.
- D. Soil Conditioners:

Inorganic Conditioners. Inorganic conditioners shall be agricultural grade gypsum, soil sulfur and iron sulfate. Iron sulphate shall be ferric sulphate or ferrous sulphate in pelleted or granular form containing not less than 18.5% iron, expressed as metallic iron, and shall be registered as an agricultural mineral with the State Department of Food and Agriculture in compliance with Chapter 5 "Fertilizing Materials", of Division 7 of the Food and Agriculture Code of California, commencing at Section 14501.

2.03 HEADERS, STAKES AND TIES:

- A. Headers:
"Headers shall be Concrete- Concrete shall be 5-1/2 sack mix with a maximum slump test of four inches (4"). Provide sufficient concrete forming and stakes (maximum 3' o.c.) to provide continuous line without waving."
- B. Tree Stakes: Shall be straight-grained lodgepole pine, or City approved equal. Stakes shall be free from knots, checks, split, or disfigurements.
- C. Tree Ties: Shall be made from tire casing, 22" long by 3/4" wide, fastened to tree stake with two galvanized 5d roofing nails each.

2.04 MULCH:

- A. Nitrolized Shavings: Shall conform to Standard Specifications Section **212-1.2.5 (a) Type I Mulch**.
- B. Tree Mulch: Shall be a ground wood product as produced through a wood chipper, and shall consist of twigs and branches with pieces of a maximum size of 1/2" diameter by 4" long, free of seeds, trash and debris and other inert non-organic materials.

2.05 PLANTS:

- A. General: All plants shall be true to name, with at least one of each bundle or lot tagged with the name and size in accordance with the American Association of Nurserymen Standards. In all cases, botanical names shall take precedence over common names. All plants and planting materials shall meet or exceed the specifications of Federal, State, and County Laws requiring inspection for plant disease and insect control.
- B. Quality and Size.
 1. Quality: All plant material shall comply with the definition for number one nursery stock per the current edition of "Horticultural Standards" as adopted by the American Association of Nurserymen.
 2. Size:
 - a) All container plants supplied by Contractor shall be of the specified standard height and diameter set by the American Standard for Nursery Stock. The height of the trees shall be measured from the root crown to the last division of the terminal leader and the diameter shall be measured six (6) inches above the crown roots.
 - b) All palm trees shall be of a minimum overall height of 8 to 12 feet as measured from the crown of the rootball to the tips of the fronds, or four feet of brown trunk whichever is greater.
 - c) All container grown plants shall be the size(s) as noted on the approved plans, but in no case less than a minimum 15 gallon container size, with minimum caliper and height in accordance

with the American Association of Nurseryman standards for container plants. Where substitution of bare root stock is approved by the Street Tree Inspector, bare root stock shall conform to the American Nurseryman's Association standards. Minimum caliper shall be two (2) inch diameter and minimum height shall be twelve (12) feet.

PART 3 - EXECUTION

3.01 **GENERAL:** All Broadleaf Work shall be performed in a workmanlike manner by personnel with a minimum of 5 years experience in this type of Work, and to the satisfaction of the Park Projects Inspector.

3.02 **WEED CONTROL MEASURES:** Upon completion of all *fine* grading work *per Section 02210 Grading*, and prior to soil preparation, perform weed control measures as follows:

1. Irrigate all areas designated to be planted for a minimum of 10 minutes per setting, two settings per day for seven days to germinate all weed seed possible.
2. Apply a contact weed killer and allow sufficient time to obtain complete kill of all weeds germinated.
3. Repeat step one above.
4. Repeat step two above.

3.03 **SOIL PREPARATION:**

- A. **Work Sequence:** All fine grading and mounding *per Section 02210 Grading* and weed control measures shall be completed prior to soil preparation. Soil Preparation Work shall not commence until the agronomic soils test has been completed. Should 30 calendar days elapse between completion of soil preparation and commencement of planting, all areas shall be prepared again.
- B. **Soil Preparation:** In all planting areas with gradients less than 3:1, areas to be soil prepared shall first be cross ripped to a minimum depth of 6" with tractor tines spaced at maximum 18" on center. Following cross-rip operations, a layer of soil amendments shall be spread and rototilled into the soil to a minimum depth of 4 inches, or as recommended by the soils report, so that the soil shall be loose, friable, and free from rocks, sticks, and other objects undesirable to planting.
- C. **Amendment Application Rates:** The following soil amendments shall be added per 1,000 square feet to all planting areas (agronomic soil test recommendations shall take precedence where these minimum amounts are exceeded):
 1. 4 cubic yards Type I organic soil amendment;
 2. 15 pounds commercial fertilizer;
 3. 100 pounds gypsum; and,
 4. Soil sulfur per soils report.

3.04 **FINISH GRADING:** Contractor shall finish grade all planting areas, filling as needed or removing surplus dirt, raking to remove all rocks and debris over 1 inch in diameter, and floating to a smooth uniform grade. All areas shall slope to drain. Flow lines shall be established to roads, curbs, drainage swales and inlets, and/or sidewalks as shown on the Plans and as directed. All fill material placed within the top 12" from finish grade elevations in all planting areas shall be topsoil.

All landscape areas shall be finish graded (as distinguished from fine grading specified in Section **02210 Grading**) to "dress out", maintain, and/or re-establish finish grades and flow lines as approved prior to amending the soil. Contractor shall call for inspection upon completion of finish grading work. Contractor shall not proceed with planting work until finish grades have been inspected and accepted by the City Inspector.

3.05 **INSPECTION OF CONTAINER PLANTS:** The root condition of plants furnished in containers will be checked by the Park Projects Inspector by removal of earth from the roots of not less than two plants nor more than 2% of the total number of plants of each species or variety from a single source and proposed for use in the Work. The roots of not less than two plants of each species or variety from each source may be checked by the City Inspector. The selection of plants to be checked will be made by the City Inspector.

Care shall be exercised to avoid rendering plants unsuitable for planting by virtue of this inspection. However, all plants rendered unsuitable for planting shall be considered as samples, and replacements shall be provided at no additional cost to City. In case the sample plants are found to be defective, the entire lot or lots of plants represented by the defective samples will be rejected.

3.06 PLANTING BACKFILL:

- A. Mixing: All backfill materials for all container plantings (excludes trees being relocated) shall be bulk mixed, not individually mixed at each plant pit.
- B. Proportions: Backfill for planting pits shall be enriched using the following blend per cubic yard (agronomic soil test recommendations shall be reviewed prior to soil mixing):
 - 1. Container Plants:
 - 60% site soil;
 - 3 lbs. gypsum;
 - 2 lbs. iron sulphate;
 - 40% Type I Organic Amendment; and,
 - 2 lbs. commercial fertilizer.

3.07 PLANTING:

- A. Tree and Shrub Planting:
 - 1. Soil surrounding planting pit shall be in a friable condition and moist to a depth of 8".
 - 2. Backfill new plantings using specified soil mix to within 8" of finish grade. At this depth, place the plant fertilizer tablets Agriform 20-10-5, 21 grams each, or City approved equal. A minimum of 1 tablet for 1 gallon, 3 tablets for 5 gallons, 5 tablets for 15 gallons, and 8 tablets for a 24" box. Complete backfilling to finish grade.
 - 3. Trees shall be planted at such a depth that the crown roots bear the same relative position to finish grade as the crown roots did in the soils where the trees were grown. Backfill after planting shall be compacted carefully into place without injuring the roots of the tree or breaking up the ball of earth surrounding the roots.
- B. Groundcover and Vine Planting:
 - 1. Prepare the soil in all planting areas (except where slopes exceed 3:1) by applying 1.5 cubic yards of Nitroized Shavings and 5 lbs. of the specified commercial fertilizer per 1,000 square feet. Repeat fertilization at 30 day intervals throughout the duration of the Contract up to 4 applications, after which decrease frequency to once every 90 days.
 - 2. All planting areas, areas to receive Tree-Mulch and bare dirt areas shall be treated with a pre-emergent chemical (subject to approval by the Park Projects Inspector prior to application). Chemicals shall be applied by a licensed Pest Control Agent. This treatment shall be applied at the following times during the Contract: a) before planting, b) at beginning of Plant Establishment Period, and c) at end of Plant Establishment Period. The Park Projects Inspector, (951) 712-4642, shall be given a minimum of 48 hours (2 working days) notice prior to each application. No chemicals shall be applied other than in the presence of the Inspector.
 - 3. All areas designated to receive Tree-Mulch shall have mulch applied and spread to provide a uniform thickness of not less than 3" of mulch, and shall be neat and clean, free of trash.

3.08 TREE STAKING: Stake trees in accordance with the Parks, Recreation & Community Services Department's standard detail or as detailed on plans.

3.09 WATERING:

- A. Responsibility: It shall be Contractor's responsibility to maintain a balanced watering program to ensure proper growth until Final Acceptance of the Work.
- B. Initial Watering: Immediately after planting, apply water to each plant. Apply water in a moderate stream in the planting hole until the material about the roots is completely saturated from the bottom of the hole to the top of the ground.
- C. Ongoing Watering: Apply water in sufficient quantities and as often as seasonal conditions require to keep the planted areas moist at all times, well below the root system of plants.

D. Irrigation:

1. Contractor shall properly and completely maintain the irrigation system. A balanced water program shall be maintained to ensure proper germination and growth until Final Acceptance of the Work. Plants which cannot be watered sufficiently with the irrigation system shall be watered by means of a hose.
2. All controllers are to have each station individually adjusted on a weekly basis. System shall be set considering the application rate each area is capable of receiving. The system shall operate on short intervals, with the cycle repeating at a later time to reduce runoff.

3.10 MAINTENANCE AND PLANT ESTABLISHMENT:

"Contractor shall maintain all areas within the Work Limits of this Contract on a continuous basis...until Final Acceptance".

3.11 CRITERIA FOR START OF PLANT ESTABLISHMENT:

The Plant Establishment Period will not commence until all of the following criteria have been met:

All Elements Complete: All elements of the Project that impact the landscape are completed in accordance with the Contract Documents. Projects will not be segmented into phases.

Permanent Power Established: Permanent electrical power to remote controllers has been established.

"First Mowing" Approved and Completed: The first mowing of the newly planted turf areas has been approved and completed. For Plant Establishment purposes "First Mowing" is defined as the first mowing after the point in time that a minimum of 85% of the turf area has attained a minimum height of 2". Until the above specified percentage of turf area is established and mown, Contractor shall mow as necessary to maintain those portions of turf exceeding 2" at the mowing height of 1 ½ inches. At no time shall any turf exceed 3" in height.

Written Acceptance: The written acceptance of the Parks Department Representative is received to authorize start the Plant Establishment Period.

If the City Representative determines that the project maintenance is failing to continuously meet the standards required, the Plant Establishment Period "day count" may be suspended and will not recommence until Contractor has corrected all deficiencies to the satisfaction of the Parks Department Representative. If such suspension of the Plant Establishment Period occurs and extends beyond a maximum of 15 calendar days, then liquidated damages may be assessed for each calendar day where suspension of the establishment continues."

3.12 MAINTENANCE TASKS:

- A. General: During the contract period provide all watering, weeding, mowing, fertilizing, and cultivation as necessary to keep the plants and turf in a healthy growing condition, neat, edged, and attractive. All shrubs planted by Contractor shall be pinched and pruned as necessary to encourage new growth and to eliminate rank sucker growth. Old wilted flowers and dead foliage shall be immediately pinched or cut off. Do not prune trees without written approval of the Parks Department Representative.
- B. Iron Chlorosis: After planting and during the Plant Establishment Period, in the event that any plantings exhibit iron chlorosis symptoms, apply FE 138 Geigy or equivalent at manufacturer's recommended rates.
- C. Replacement Plantings: During the Plant Establishment Period, should the appearance of any planting installed by Contractor indicate weakness, that plant shall be replaced immediately with a new, healthy plant. At the end of the Plant Establishment Period, all plant materials shall be in a healthy, growing condition and spaced as indicated on the plans.

- D. Fertilization: Contractor shall apply commercial fertilizer to all groundcover areas at a rate of 5 pounds per 1,000 square feet, at 30-day intervals, for 3 applications as a minimum, above and beyond the original soil preparation application.
- E. Planting Establishment: All planting areas that do not show a prompt establishment of plant material, and areas where plant material is missing, shall be replanted at 10-day intervals until the plant material is established. For turf sod plantings, sod shall exhibit sufficient root growth knitting into the subgrade such that the sod can no longer be removed by hand. If a good rate of growth has not been demonstrated within 30 days of first planting/hydroseeding, Contractor shall be responsible to determine the appropriate horticultural practices necessary to obtain good growth. Contractor shall obtain agronomic soils testing of all areas not showing good growth and shall provide copies of the test results to the Parks Department Representative to verify the appropriateness of all maintenance work performed. If additional soil amendments are needed, up to a maximum 25% beyond the application rate specified, such amendments shall be provided by Contractor at no additional cost to City.
- F. Grading and Drainage: During the Plant Establishment Period all flow lines shall be maintained to allow for free flow of surface water. Displaced material which interferes with drainage shall be removed and placed as directed. Low spots and pockets shall be graded to drain properly. Jute netting shall be installed at flow lines and other locations where erosion is evident, when directed by the City Inspector.
 1. Damage to planting areas shall be repaired immediately and throughout the Plant Establishment Period. Depressions caused by vehicles, bicycles, or foot traffic shall be filled and leveled. Replant damaged areas.
 2. All paved areas shall be washed and maintained in a neat and clean condition at all times.
 3. All subsurface drains and inlets shall be periodically cleared of debris, leaves and trash and flushed with clear water to avoid build up of silt and debris.
 4. Debris and trash shall be removed from the site daily.
- G. Disease and Pest Control: Throughout the Plant Establishment Period, all plants shall be maintained in a disease and pest free condition. During the plant establishment period provide all herbicide and pesticide applications as necessary to keep the plants and turf areas free of weeds, diseases and pests. A licensed pest control operator shall be retained by Contractor to recommend and apply all pesticides, herbicides, and fungicides. Exterminate gophers, moles, and all other rodents, and repair damage.

3.13 END OF PLANT ESTABLISHMENT PERIOD: :

- A. Request for Inspection: When Contractor believes the Plant Establishment Period is complete and the Project is ready for Final Acceptance, Contractor shall request inspection of the Project. The Park Projects Inspector will inspect the Project for Final Acceptance. Deficiencies noted during inspection shall extend the Plant Establishment Period until all are corrected.
- B. Established Plantings: All planting areas shall show a good rate of growth and shall be well established "filled in" plantings free of voids. Bare areas will be unacceptable. Contractor shall provide sod or plantings from flats as necessary to fill in all bare areas. Such sod or plantings shall be planted a minimum of 10 days prior to the end of the Plant Establishment Period and shall have roots "knit-in" to the native soil.
- C. Written Acceptance: Final Acceptance and assumption of maintenance responsibilities by City shall occur only upon the Parks Department Representative's written acceptance of the Project for maintenance by City."

3.14 CLEAN UP: Upon completion of the Work, Contractor shall smooth all ground surfaces; remove excess materials, rubbish, debris, etc.; sweep adjacent streets, curbs, gutters; wash down all walkways, and trails; and remove construction equipment from the premises.

END OF SECTION

SECTION 02751 CONCRETE PAVING AND CURBS

28 PART 1 - GENERAL

1.01 **SCOPE:** The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Concrete Paving and Curbs Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Exterior flatwork, walks and slabs as shown on the Plans (excludes Decorative Finish Concrete per Technical Specifications Section 02768);
- Curbs, headers, channel gutters;
- Miscellaneous concrete work and foundations (excludes Cast-in-Place structural concrete and foundations per Technical Specifications Section 03300);
- Cement, finish, joints, saw-cutting, and patching;
- Setting of items to be inserted into concrete;
- Curing;
- Testing;
- Placing of sleeves and conduit stubs under slabs;
- Coordination with Work of other Sections;
- Clean-up; and,
- Replacements, Repairs, Guarantees and Warranty Work.

1.02 **RELATED WORK:**

| | |
|---|----------------------------------|
| Submittals | General Conditions, Article 5.22 |
| Drainage System | Section 02410 |
| Irrigation sleeves | Section 02441 |
| Site Furnishings | Section 02461 |
| Specialty Finish Concrete | Section 02768 |
| Form Work | Section 03100 |
| Concrete Reinforcement | Section 03200 |
| Cast-in-Place Concrete | Section 03300 |
| Electrical Conduit sleeves | Section 16530 |
| Furnishing and determining location of items to be inserted into concrete | |

1.03 **CONCRETE MATERIAL:** All transit mixed concrete delivered to the site for this project shall be obtained from Holiday Rock, 2193 W. Foothill Blvd., Upland, CA. The City of Upland will be responsible for payment to Holiday Rock for all transit mixed concrete ordered and delivered to the project site based on approved delivery tickets. The contractor will be responsible for the scheduling and ordering of concrete from Holiday Rock, including mix design, color additives, etc. All orders for concrete from Holiday Rock shall be approved by the City inspector prior to delivery. All installation and finishing of concrete, including pumping if required, shall be the contractor's responsibility.

1.04 **GUARANTEE:** All Work of this Section shall be guaranteed against cracking, lifting, separation, and other such defect for a minimum period of one (1) year following Final Acceptance of the Project.

1.05 **STANDARDS:** Testing, materials, and workmanship shall conform to the requirements of all applicable codes, except that requirements specified herein shall govern where such requirements exceed the requirements in the Building Code.

1.06 **SLOPE AND SMOOTHNESS TOLERANCES AND ADA COMPLIANCE:** All exterior cement finish surfaces shall be sloped sufficiently to drain without puddling or birdbaths. Finish surfaces shall be of such smoothness and evenness that the surface shall contact the entire length of a 10-foot straight edge laid in any direction, with an allowable tolerance of 1/8 inch. All flatwork, pedestrian ramps, walkways and slabs shall comply with the requirements of the Americans with Disabilities Act as well as both Federal Guidelines and State Title 24 requirements for disability access. Irrespective of plan grade information shown, Contractor shall have primary

responsibility to ensure compliance with ADA requirements and shall immediately bring to the attention of the Architect /Engineer any deviations or discrepancies in the plans that would preclude such compliance. Any operations necessary to achieve this result shall be performed by Contractor at no additional cost to City.

- 1.07 PATCHING: No patching will be permitted to correct defective work without the prior knowledge of the City Inspector. Patching of slabs to eliminate bird baths will not be permitted, defective panels shall be removed and replaced. No extension of time will be allowed for correcting defective work. Granting of consent to attempt patching as a remedy to defects will not constitute a waiver of City's right to reject and require removal and replacement if the patching is deemed unacceptable by the City Inspector.
- 1.08 INSPECTIONS: Inspections will be required. Contractor shall call for inspection a minimum of 48 hours (two working days) prior to need. Contractor shall call for inspection upon completion of each of the following specific phases of construction, each prior to pour:
- All form work placement or construction;
 - All footing excavation;
 - Subgrade preparation;
 - Steel reinforcing placement.

Contractor shall notify the City Inspector a minimum of 48 hours prior to each concrete pour. Any Work covered prior to inspection shall be opened to view by Contractor at Contractor's expense.

- 1.09 TESTING: All testing shall be as required by the Standard Specifications.

29 PART 2 - MATERIALS

- 2.01 CONCRETE: Concrete shall be a minimum 5-sack mix, with a maximum 4-inch slump, with ultimate compressive strength at 28 days as specified in the Concrete Mix Section. No admixtures will be allowed. Minimum 2500 PSI.
- 2.02 REINFORCING STEEL: Shall be in accordance with Section **03200 Concrete Reinforcement**.
- 2.03 EXPANSION JOINTS:
- A. Expansion Joints: Shall be as shown on Plans. Submit samples of preformed material and sealant for approval of the City Representative.
 - B. Control Joints: Shall be as shown on the Plans.
- 2.04 CONCRETE CURING COMPOUND: Shall be Type 1, all of one manufacturer, either "Clear Seal" as manufactured by A. C. Horn, or "Burke Cure Seal" as manufactured by Burke Concrete Accessories, Inc. or City approval equal.
- 2.06 FORM LUMBER: Shall be Douglas Fir, construction grade or better, conforming to the Technical Specifications Section **03100 Formwork**.

PART 3 - EXECUTION

- 3.01 GENERAL. Contractor shall provide copies of all load tickets to the City Inspector for all transit-mixed concrete delivered to the site.
- 3.02 FORM WORK: Forms shall be substantial, unyielding, true to line and grade, and shall be placed to conform with the dimensions for the Work as noted on the Plans and shall conform to Technical Specifications Section **03100 Form Work**.
- 3.03 PLACING CONCRETE: Transport, place and spread concrete in a manner to prevent segregation of aggregate. Reinforcing shall be supported by metal or plastic chairs and shall be placed as needed. Concrete supports shall not be used.

3.04 CONCRETE FINISHING:

- A. Finish: Exterior slabs and walks shall be finished with a non-slip, uniform medium broom surface, transverse to direction of slab, unless otherwise shown on the Plans. No advertising impression, stamp, or mark of any description will be permitted on surface of concrete or cement finish.
- B. Installation, Slope and Drainage: Install all concrete and cement finish work true to lines, dimensions and grades. All concrete slabs shall slope to drain. Depressions in the slab surface that hold water ("bird baths") will not be acceptable.
- C. Protection: Protect all finished concrete from graffiti. Contractor shall be responsible for providing concrete watchperson. A graffitied finish will not be acceptable.

3.05 CURING: Initial curing shall be moist curing or moisture cover curing, and shall continue for at least 168 cumulative hours (not necessarily consecutive), during which time the concrete has been exposed to air temperatures above 50°F. Avoid rapid drying at the end of the curing period. Use water that is free of impurities which could etch or discolor concrete surfaces. Do not use liquid membrane curing compounds on surfaces which are to be covered with a coating material applied directly to the concrete or with a covering material bonded to the concrete, such as other concrete, liquid floor hardener, waterproofing, damp-proofing, flooring, painting, and other coatings and finish materials, unless otherwise acceptable to the inspector.

3.06 COORDINATION: All items that require a foundation and are shown to be located within a slab (e.g. drinking fountains) shall be set in properly cured footings as specified prior to placing the slab. The required cure time for all such footings shall be a minimum of 14 days.

3.07 DEFECTIVE CONCRETE: Remove and replace all defective concrete and defective cement finish work. Removal and replacement shall be for full panels to the nearest crack control or expansion joint unless approved otherwise in advance by the City Inspector. Permission to patch any defective area shall not be a waiver of City's right to require complete removal of defective work if patching does not restore quality, durability and appearance of the Work to the equivalent of a properly constructed concrete item/slab.

3.08 CLEAN-UP: Remove all concrete spoil and clean all laitance, spills, stains and splatters from all equipment, poles, standards and surfaces. Remove all forming from the site and clean up and legally dispose of all debris and trash that may result from the Work of this Section.

30 END OF SECTION

SECTION 02764 PAVEMENT JOINT SEALANTS

31 PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Expansion and contraction joints within cement concrete pavement.
 - 2. Joints between cement concrete and walls.
- B. Related Sections:
 - 1. Section 02751 Concrete Paving and Curbs.
 - 2. Section 02768 Decorative Concrete Pavement

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For each type and color of joint sealant required.
- C. Product certificates and test reports.
- D. Compatibility and Adhesion Test Reports: From sealant manufacturer.

32 PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in other Part 2 articles.

2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer based on testing and field experience.
 - 1. Primers: Product recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.3 COLD-APPLIED JOINT SEALANTS

- A. Multi-Component Urethane Sealant for Concrete: High performance multi-component polyurethane sealant for horizontal expansion joints.

1. Available Products:
 - a. Tremco: THC-900.
 - b. Sika Sikaflexflex Self Leveling.
 - c. Dow Corning

2.4 JOINT-SEALANT BACKER MATERIALS

- A. General: Provide joint-sealant backer materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by joint-sealant manufacturer based on field experience and laboratory testing.
- B. Round Backer Rods for Cold-Applied Sealants: ASTM D 5249, Type 3, of diameter and density required to control sealant depth and prevent bottom-side adhesion of sealant.

33 PART 3 - EXECUTION

3.1 INSTALLATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
- B. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests prior to experience.
- C. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- D. Install backer materials to support sealants during application and at position required to produce optimum sealant movement capability. Do not leave gaps between ends of backer materials. Do not stretch, twist, puncture, or tear backer materials. Remove absorbent backer materials that have become wet before sealant application and replace them with dry materials.
- E. Install sealants at the same time backings are installed to completely fill recesses provided for each joint configuration and to produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Immediately after sealant application and before skinning or curing begins, apply fine grade (60) silica sand to joint surface, to prevent tracking.
- G. Clean off excess sealants or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved by manufacturers of joint sealants and of products in which joints occur.
- H. After curing, remove excess silica sand.

34 END OF SECTION

SECTION 02768 DECORATIVE CONCRETE PAVEMENT

35 PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes exterior cast-in-place cement concrete for the following:

1. Walkways, integral colored.
2. Wall caps
3. Pavement, integral colored and sandblasted
4. Concrete stairs

B. Related Sections:

1. Section 02764 JOINT SEALANTS
2. Section 02715 CONCRETE PAVING AND CURBS
3. Section 03100 FORMWORK
4. Section 03200 CONCRETE REBAR
5. Section 03300 CAST IN PLACE CONCRETE

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete pavement mixture.
- C. Samples: Provide 3'x3' sample of each type of color and finish

1.3 CONCRETE MATERIAL: All transit mixed concrete delivered to the site for this project shall be obtained from Holiday Rock, 2193 W. Foothill Blvd., Upland, CA. The City of Upland will be responsible for payment to Holiday Rock for all transit mixed concrete ordered and delivered to the project site based on approved delivery tickets. The contractor will be responsible for the scheduling and ordering of concrete from Holiday Rock, including mix design, color additives, etc. All orders for concrete from Holiday Rock shall be approved by the City inspector prior to delivery. All installation and finishing of concrete, including pumping if required, shall be the contractor's responsibility.

1.4 QUALITY ASSURANCE

- D. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.

36 PART 2 - PRODUCTS

2.1 FORM MATERIALS

- A. Rough-Formed Finished Concrete: Plywood, Douglas fir lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for a tight fit.
- B. Provide sufficient staking, shoring and/or bracing of forms as required to adequately secure forms during placement of concrete.
- C. See Section 03100 FORMWORK for other requirements.

2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60; deformed.
- B. Plain Steel Wire: ASTM A 82, as drawn.
- C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice."
- D. See Section 03200 CONCRETE REINFORCEMENT for other requirements.

2.3 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
- B. Normal-Weight Aggregates: ASTM C 33, Class 4S coarse aggregate, uniformly graded, not greater than 1" size. Provide aggregates from a single source.
- C. Water: ASTM C 94/C 94M.
- D. Air-Entraining Admixture: ASTM C 260.
- E. Chemical Admixtures: ASTM C 494/C 494M, of type suitable for application, certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

2.4 CURING MATERIALS

- A. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- B. Water: Potable.

2.5 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber or approved equal.
- B. Color Pigment: ASTM C 979, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, free of carbon black, nonfading, and resistant to lime and other alkalis. As manufactured by L.M. Scofield, or equal.

2.6 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to ACI 301, with the following properties:
 - 1. Compressive Strength (28 Days): Not less than 2500 psi for natural color pavements, Not less than 3000 psi for colored pavements.
 - 2. Maximum Water-Cementitious Materials Ratio at Point of Placement: 0.45.
 - 3. Slump Limit: Not more than 4 inches.
 - 4. Air Entrainment by total volume of concrete should be 4 percent to 6 percent for 1 ½ max. size aggregate.
- B. Color Pigment: Add integral color pigment to concrete mixture according to manufacturer's written instructions.

2.7 CONCRETE MIXING

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

37 PART 3 - EXECUTION

3.1 EXAMINATION

- A. Proof-roll prepared base surface below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Add base material as required to low areas and re-compact.

3.2 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.
- C. Comply with requirements of section 03100 Concrete Formwork.

3.3 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Comply with requirements of section 03200 Concrete Reinforcement.

3.4 JOINTS

- A. General: Form construction, expansion, and contraction 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. Expansion Joints: Form expansion joints of preformed joint-filler strips abutting walls, concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated on plans.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness.
- E. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 3/8-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

3.5 CONCRETE PLACEMENT

- A. Moisten sub-base 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.

3.6 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 trowel-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.

3.7 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. 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 manufacturer's written instructions after placing, screening, and bull floating or darbying concrete, but before float finishing.
- C. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.

3.8 PAVEMENT TOLERANCES

- A. Comply with tolerances of ACI 117 and as follows:
 - 1. Elevation: 1/4 inch.
 - 2. Thickness: Plus 3/8 inch, minus 1/4 inch.
 - 3. Surface: Gap below 10-foot long, unlevelled straightedge not to exceed 1/8 inch.
 - 4. Joint Spacing: 3 inches.
 - 5. Contraction Joint Depth: Plus 1/4 inch, no minus.
 - 6. Joint Width: Plus 1/8 inch, no minus.

3.9 PAVEMENT MARKING

- A. Allow concrete pavement to cure for 28 days and be dry before starting pavement sand blasting and staining.
- B. Sweep and power clean surface to eliminate loose material and dust.
- C. Overlay concrete with approved artwork stencil. Secure stencil in place to prevent movement. Stencil shall be weighted as need to provide a tight connection with the concrete surface.
- D. Sand blast area within the stencil. Obtain approval of sandblast depth from City representative.
- E. Remove all dust and sand blast material by vacuuming. Do not blow dust material into the air.
- F. Apply stain to sand blasted areas with approved stain material and color, being careful not to apply any stain to surrounding concrete.

3.10 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.

38 END OF SECTION

SECTION 02780 TACTILE WARNING SURFACING

39 PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Surface-applied detectable warning tiles.
- B. Related Requirements:
 - 1. Section 02751 Concrete Paving & Curbs

1.2 SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples for Initial Selection: For each type of exposed finish requiring color selection.
- C. Samples for Verification: For each type of tactile warning surface, in manufacturer's standard sizes unless otherwise indicated, showing edge condition, truncated-dome pattern, texture, color, and cross section; with fasteners and anchors.

1.3 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.4 PROJECT CONDITIONS

- A. Cold-Weather Protection: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit paver work damaged by frost or freezing.

1.5 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of tactile warning surfaces that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:

- a. Deterioration of finishes beyond normal weathering and wear.
 - b. Separation or delamination of materials and components.
2. Warranty Period: Five years from date of Substantial Completion.

40 PART 2 - PRODUCTS

2.1 TACTILE WARNING SURFACING, GENERAL

- A. Accessibility Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for tactile warning surfaces.
 1. For tactile warning surfaces composed of multiple units, provide units that when installed provide consistent side-to-side and end-to-end dome spacing that complies with requirements.

2.2 DETECTABLE WARNING PAVERS

- A. Surface Installed Detectable Warning Pavers: Accessible truncated dome detectable warning pavers, manufactured for installation on concrete surfaces, with slip resistant surface treatment on domes.
 1. Manufacturer: Endicott
Available through: Thompson Building Materials or equal.
 2. Material: 2-1/4" x 4" x 8" Handicap Detectable Warning Paver
 - a. Brick paver with truncated domes on one surface, 1.0 inches in diameter by 0.2 inches high, spaced 2" on center, with 8 domes per paver.
 3. Color: Medium Ironspot #46
 4. Mounting: Mortar set on concrete base as detailed on plans.

2.3 ACCESSORIES

- A. Mortar: Premium Crack Prevention Thin-set Mortar for adhering paver units to concrete as follows:
 1. Manufacturer: Custom Building Products.
 2. Product: FlexBond Premium Crack Prevention Thin-set Mortar, gray color, available in 50 lb. bags.
- B. Grout: General Purpose joint grout.
 1. Manufacturer: Quikrete
 2. Product: Non-Shrink General Purpose Grout, gray color, available in 50 lb. bags.

41 PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that concrete base pavement is cured and in suitable condition to begin installation according to manufacturer's written instructions. Verify that installation of tactile warning pavers will comply with accessibility requirements upon completion.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF DETECTABLE WARNING PAVERS

- A. General: Prepare mortar adhesion material according to manufacturer's written instructions unless otherwise indicated.
- B. Install brick pavers on concrete base with screeded thin-set mortar with notched trowel. Set brick in running bond pattern with ¼" wide joints.
- C. After brick paver installation has fully cured, grout joints flush with surface of pavers. Grouting shall extend the full depth of the pavers. Clean off all excess grout from paver surfaces.

3.3 CLEANING AND PROTECTION

- A. Remove and replace tactile warning pavers that are broken or damaged or do not comply with requirements in this Section. Remove in complete sections from joint to joint unless otherwise approved by Landscape Architect. Replace using the same material as acceptable to the City representative.
- B. Protect tactile warning pavers from damage and maintain free of stains, discoloration, dirt, and other foreign material.

END OF SECTION

SECTION 02782

STABILIZED DECOMPOSED GRANITE SURFACING

PART 1: GENERAL

1.1 SUMMARY

- A. This section includes materials and execution information for construction with aggregate with Natracil binder for pathway and picnic area seating.
- B. Related Sections:
 - Section 02210: Grading
 - Section 02751 Concrete Paving & Curbs

1.2 REFERENCES

- A. ASTM C136 / C136M – 14, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
- B. ASTM D2419 – 14, Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregates.

1.3 SUBMITTALS

- A. Submit in accordance with General Conditions, Article 5.22 - Submittal Procedures:
- B. Product Data
 - 1. Manufacturer's product data sheet.
 - 2. Stabilized crush aggregate gradation specification indicating that the product meets specifications.
 - 3. Manufacturer's safety data sheet.
- C. Samples
 - 1. (1) Quart sample of stabilized crushed aggregate paving.
- D. Mockup
 - 1. Install 10' x 10' minimum of stabilized crushed aggregate paving at a location approved by Landscape Architect.
 - 2. Allow Landscape Architect to review test plot before proceeding with rest of stabilized crushed aggregate paving. Once it is approved work can begin.
 - 3. Approved mockup may remain as part of completed work.

1.4 QUALITY ASSURANCE

- A. It is highly recommended to use a licensed C-12 Earthwork and paving contractor. This classification includes the mixing fabricating and placing of paving and any other surfacing materials like decomposed granite. If a landscape contractor is used, they must have five years demonstrated experience.
- B. Storage: Protect stabilized crushed aggregate mix from contamination. Store undercover. If the blended and hydrated aggregate is sitting for long periods of time (longer than 48 hours), or when subject to rainfall, it needs to be turned with a skid steerer or loader to ensure consistent moisture content throughout prior to installation. Verify hydration level with snowball test before installation. For any questions regarding storage, contact the manufacturer or local dealer.

1.5 SITE CONDITIONS

- A. Ensure that the subgrade and base are properly graded and compacted to required specifications.
- B. Do not install the pathway aggregate during rain. Rain within 3-5 days after the installation will increase curing time.
- C. Protect all nearby surfaces, plants, and structures from possible contamination from materials or damage from equipment.
- D. It is not recommended to install when temperatures are below 40 degrees Fahrenheit as it will slow down curing/drying process.

1.6 HANDLING AND STORAGE

- A. Handling: When dealing with un-blended material, wear appropriate respirator when ventilation is inadequate. Avoid contact with skin and eyes.
- B. Storage: Protect stabilized crushed aggregate mix from contamination. Store undercover. If the blended and hydrated aggregate is sitting for long periods of time (longer than 48 hours), or when subject to rainfall, it needs to be turned with a skid steerer or loader to ensure consistent moisture content throughout prior to installation. Verify hydration level with snowball test before installation. For any questions regarding storage, contact the manufacturer or local dealer.

42 PART 2: PRODUCTS

2.1 MANUFACTURERS

- A. Dealers:
 Southwest Boulder & Stone
 2418 Cypress Way, Fullerton, CA 92831
 (714) 882-1010

2.2 MATERIALS

- A. Crushed Aggregate Materials:
 - 1. Crushed Aggregate Material shall consist of sound, angular, durable particles. Color as indicated on plans.

2. Gradation, in accordance with ASTM C136:

Optimal Gradation

| <u>Sieve</u> | <u>Percent Passing</u> |
|--------------|------------------------|
| 1/2" | 100% |
| 3/8" | 90-100% |
| No. 4 | 50-100% |
| 30 | 25-55% |
| 100 | 10-20% |
| 200 | 5-18% |
| S.E. | 30-50% |

B. Organic Soil Binder

1. Soil-Secure powdered organic binder designed to be blended with crushed aggregate.
2. Made from 100% Psyllium Husk Industrial Powder
3. The soil binder shall be premixed with the specified crushed aggregate by the manufacturer at a rate of 10 lbs. per ton of aggregate.

43 PART 3: EXECUTION

3.1 PREPARATION

A. Prepare the Subgrade

1. Excavate the area to the depth required so that the finish grade can be established as noted on plans. See decomposed granite detail for base and decomposed granite with Soil-Secure thickness.
2. Compact the subgrade to 95% Modified Proctor Density.

3.2 SPREADING OF DECOMPOSED GRANITE WITH BINDER

- A. The use of a paving machine is highly recommended for large projects to evenly spread Pathway Aggregate at the specified depth. It's recommended to screed the material to ensure the depth is consistent for smaller projects or projects with tight areas.
- B. Spread the loose and uncompacted Pathway Aggregate over the compacted base.
- C. Typically, a lift of 4 inches of loose, pre-wet Organic-Lock Pathway Aggregate will compact to the required 3-inch depth for Pathways. Contractor is to calibrate at beginning of project to achieve indicated grades.

3.3 COMPACTION OF DECOMPOSED GRANITE WITH BINDER

- A. Following grading of material, apply water until moisture penetrates the full depth of the material. Moisture activates the Soil-Secure binder, so make sure the moisture

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penetration is total and complete. Test saturation using a core sample.

- B. After thorough moisture penetration, compact the aggregate using a 5-ton double or single static drum roller, or equivalent. Do not use a vibratory compactor. See drawings for final paving thickness.
- C. Compaction will vary with different aggregates due to particle shape and size. It will compact 20-25%, less if using paving machinery. This level of compaction needs to be monitored as early as possible (starting during the test plot) to determine the actual degree of compaction. It is better to put down too much material and to remove it from the top than to put down too little and add a layer later.
- D. Compact to 95% Modified Proctor Density.
- E. Divert all traffic from compacted material until the surface dries completely and is fully cured, a minimum of 24-72 hours. Allow additional drying time in cooler weather. Keep water off the surface while drying.

3.4 COMPLETING INSTALLATION

- A. Apply a light spray to the surface of the material to give a clean appearance. Apply water until the water begins to run-off.
- B. Do not allow any traffic on the newly installed pathway until fully cured, a minimum of 24-72 hours.

3.5 REPAIRS

- A. Repair of Damaged Area
 - 1. Excavate the damaged area and scarify exposed Pathway Aggregate.
 - 2. Install pre-blended replacement crushed stone aggregate material with Soil-Secure binder. Apply the material to the excavated area. Thoroughly water the material to achieve an 8-10% moisture content. Compact as previously prepared.
 - 3. Allow the newly installed Pathway Aggregate to cure, but not completely dry out.
 - 4. Re-compact the material, ensuring that the final grade and crown are maintained.

3.6 MAINTENANCE

- A. All outdoor products require a level of maintenance analysis. It is recommended to do a thorough analysis of your installed blended aggregate 7 days after installation followed by monthly analysis to ensure no alterations are required.
- B. Erosion damage
 - 1. If you do experience erosion damage, first look at ways to get the water

away or slow the water down, that's causing the damage.

2. Replace the lost material with new material following the guidelines below.

C. Excess loose material

1. Directly after the installation, the aggregate surface will be smooth because of the weight of the fresh compaction. As the surface weathers with traffic and time, the larger particles of the aggregate will loosen on the surface to create a natural look and feel which is often sought after. The loose aggregate particles on your surface should not exceed 1/4" in depth.
2. Sweeping off the excess particles can be accomplished in areas where excess 1/4" chip is not detrimental. These loose particles can also be shoveled and removed from site. The remaining surface will eventually chip loose again, so new material is recommended as a top up (see instructions below) after doing this more than once.
3. If material exceeds a 1/4", redistribute the particles over a greater surface, scarify the surface to a depth of 1" and water to a 1" depth and compact with a roller of no less than 1000-lbs. Keep traffic off for 24-72 hours.

44 END OF SECTION

SECTION 03100 FORMWORK

45 PART 1 - GENERAL

1.01 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Form Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- All form work for construction of the Project, including but not limited to the following project elements:
 - concrete walkways and exterior pavement;
 - concrete headers;
 - concrete pedestrian ramps;
 - concrete retaining walls;
 - concrete stairs;
 - miscellaneous concrete structures
- Coordination with Work of other Sections; and,
- Clean-up.

1.02 RELATED WORK:

| | |
|------------------------------|---------------|
| Concrete Paving and Curbs | Section 02515 |
| Decorative Concrete Pavement | Section 02768 |
| Concrete Reinforcement | Section 03200 |
| Cast-in-Place Concrete | Section 03300 |

1.03 INSPECTIONS: Contractor is responsible to call for inspection of all forming prior to pouring concrete.

PART 2 - MATERIALS

2.01 QUALITY ASSURANCE: Products used in the Work of this Section shall be produced by manufacturers regularly engaged in the manufacture of similar items with a history of successful production acceptable to the Parks Department Representative.

2.02 WOOD: Form lumber shall be Douglas Fir Construction Grade or better. Plywood shall be B-B Plyform Class I Exterior DFPA.

2.03 ACCESSORIES: Form hardware, ties, clamps, spreaders, stakes, etc., shall be of adequate strength to maintain form in place before, during, and after placement of concrete.

PART 3 - EXECUTION

3.01 GENERAL:

- A. Qualifications of Installers: Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
- B. Form Design: It is Contractor's responsibility to design forms, shoring and bracing adequate to support the men and materials, and to support all vertical and lateral loads imposed upon them, and in compliance with the requirements of the American's with Disabilities Act, related Federal Access Guidelines and State Title 24 code requirements. Forms shall be substantial, unyielding, true to line and level, sufficiently tight to prevent leakage of mortar and shall conform exactly to the dimension indicated on the Plans. No wood of any kind, with the exception of wood bucks and nailing blocks, shall be installed inside the forms.

All points in the Form Work shall be accessible for cleaning and inspection prior to pour. Temporary openings shall be left where necessary.

- C. Coordination: Contractor shall afford every tradesperson required to fasten Work to the structure every facility for fastening sleeves, inserts, boxes, bolts, anchors, or other rough hardware accurately and securely in the forms. When form ties are removed, there shall be no metal closer than 1" from the surface of the concrete.

3.02 FORMING:

- A. Exposed concrete surfaces: Forming for exposed concrete surfaces shall be constructed to show a minimum number of joints. Use full size sheets of plywood forming wherever possible. Unless otherwise shown on the Plans, joints shall be as inconspicuous as possible, symmetrical and evenly spaced on the finished surface. Align vertical joints to form one (1) continuous line. Align horizontal joints to form one (1) continuous line.
- B. Inside Forms: Drive nails on the inside of forms flush without hammer marks. Place beveled chamfer strips in forms at external corners and edges of columns, girders, beams, and walls.
- C. Stairs: Care shall be taken to form all angles and corners of stairs neatly and smoothly. Every nosing and riser shall be run straight to a template and screed, and every riser shall be cut and leveled back below the nosing. Treads shall be level lengthwise and sloped 1/8" from back to the nosing.
- D. Temperature: Concrete shall not be deposited on forms which are at a temperature in excess of 90 degrees Fahrenheit.
- E. Removal of Forms: Remove forms in a manner that will insure the complete safety of the workmen and will not damage the concrete.
Do not remove forms for foundations, walls, columns and beam sides in less than 24 hours.
Do not remove forms for roof slabs, opening and arch centers, and centering under beams, girders and joists in less than **14 days**.
In no case shall forms and shores be removed until the member has acquired sufficient strength to support its own weight and all superimposed loads. Where forms are removed in less than the required curing time, the curing shall be continued by wetting, covering or spraying as directed by the Structural Engineer.

3.03 CONDUIT AND PIPING: Pipes, other than conduits for electrical circuits, shall not be embedded within structural concrete. Conduits shall be located within the middle half of the slab's thickness. No conduit shall be placed between reinforcing and the bottom of the slab. When located in columns, walls, beams, or foundations, conduit shall not impair the strength of the structure.

3.04 CLEAN UP: Upon completion of the Work of this Section, remove all trash, debris, excess materials and equipment from the Work Site. Dispose of all such trash, debris and excess materials off site in a legal manner.

END OF SECTION

SECTION 03200 CONCRETE REINFORCEMENT

46 PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Standard Specifications: The provisions of the Standard Specifications shall apply except as modified herein.
- B. Reference Standards: Work of this Section shall comply with the provisions of the following codes, specifications and standards, except as otherwise shown or specified:
- | | |
|---------------------------------------|---|
| American Concrete Institute: | ACI 315, <u>Manual of Standard Practice for Detailing Reinforced Concrete Structures.</u> |
| | ACI 318, <u>Building Code Requirements for Reinforced Concrete.</u> |
| American Welding Society: | AWS D12.1, <u>Recommended practices for Welding Reinforcing Steel, Metal inserts and Connections in Reinforced Concrete Construction.</u> |
| Concrete Reinforcing Steel Institute: | CRSI <u>Manual of Standard Practice.</u> |

1.02 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Concrete Reinforcement Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:

- Reinforcement;
- Coordination with Work of other Sections;
- Testing;
- Clean-up; and,
- Replacements, Repairs, Guarantees and Warranty Work.

1.04 TESTS AND INSPECTION:

- A. Definitions:
1. Identified Reinforcing Steel: Is defined as any reinforcing steel which can be positively identified by the Testing Laboratory as to source, heat number and mill analysis.
 2. Unidentified Reinforcing Steel: Is defined as any reinforcing steel which cannot be identified as noted above.
- B. Tests: Test samples shall be taken at the job site unless the Structural Engineer determines it is more advantageous to take test specimens from the Suppliers Yard. No tests will be required for identified reinforcing steel. Unidentified reinforcing steel shall have one (1) series of tests made from each 2-1/2 tons or fraction thereof of each size of reinforcing steel. When conglomerate loads of differing heats, sources, analyses and including unidentified steel are to be tested, random testing at the discretion of the Testing Laboratory shall be made after receiving authority from the Structural Engineer. The Structural Engineer may refuse to accept unidentified reinforcing steel at the Engineer's discretion. Tests on unidentified reinforcing steel shall be paid for by Contractor.
- C. Payment for Tests: City will pay for all tests and inspections of completed installation. Costs of all tests and inspections at materials sources and costs of retests of rejected Work shall be borne by Contractor.
- D. Contractors Responsibility: Arranging for and scheduling of tests and inspections are responsibilities of Contractor. Allow free access to materials stockpiles and facilities at all times.
- E. Written Reports of Test Results: Contractor shall submit written reports, six (6) copies each, to the Park Projects Inspector for each material sampled and tested, prior to the start of Work. Provide the project identification name and number, date of report, name of Contractor, name of testing service, source of materials, material manufacturer and brand name for manufactured materials, values specified in the referenced specification for each material, and test results. Indicate whether or not material is acceptable for intended use. Materials and installed Work may require testing, retesting and inspection as directed by the Park Projects Inspector.

- F. Inspection: Contractor shall allow adequate time (48 hours minimum) for the Architect to inspect reinforcing in place and have necessary corrections made before scheduling concrete pours. All welding of reinforcing shall have continuous inspection by an Inspector approved by the Structural Engineer.

47 PART 2 - MATERIALS

- 2.01 BILLET STEEL BARS: All reinforcing shall comply with UBC Standard 26-4 and ASTM A615, grade as required by the Plans; typical reinforcing bars shall be minimum Grade 60. Ties and Stirrups shall be minimum grade 40. No. 3 and larger bars shall be deformed.
- 2.03 TIE WIRE: Shall be annealed steel, 16 gauge minimum, in conformance with Std. Spec. Section **201.2.3 Wire Reinforcement**.
- 2.04 WELDING ELECTRODES: Shall conform to AWS A5.1, low hydrogen, E7016 or #7018.
- 2.05 SUPPORTS FOR REINFORCING BARS: All supports for Work exposed to view or weather shall be made of materials that will not rust or corrode (such as galvanized steel, precast concrete or plastic-coated units) so that finished surfaces will not be marred nor stained; supports shall be suitably sized and spaced for proper load distribution on earth or membrane so that membrane is not perforated and rebar does not sag before, during, or after placement of concrete. Use no supports of wood or other cellulose material.
- 2.06 NO. 2 REINFORCING: Shall conform to ASTM A30, Grade 80, round carbon steel bars.
- 2.07 No. 3, 4, 5, and 6 REINFORCING: Shall conform to ASTM A615, Grade 40 or Grade 60 billet steel.
- 2.08 TESTS AND INSPECTIONS:
- A. Tests: The approved Testing Laboratory, whose services will be paid for by City unless noted otherwise, shall perform one tensile and one bending test for each 10 tons or fraction thereof of each size of reinforcement used, provided steel is properly identified by mill test reports of each size and lot. Otherwise, the lab shall perform one tensile and one bending test for each 2.5 tons or fraction thereof of each size of reinforcement in each log. Contractor shall bear costs of tests for unmarked reinforcement.
- B. Inspections:
1. 3000 psi Concrete Reinforcing Installation: Contractor shall provide a registered Deputy Building Inspector at the job to inspect reinforcing steel installation prior to placement of concrete for all concrete having a design strength at 28 days of 3,000 psi and above. Inspector shall be approved by the City Inspector and the governing Building Department. Inspector shall be paid for by Contractor.
 2. Welding Inspections: Contractor shall provide a registered Deputy Building Inspector, as required, at the job for continuous inspection of all welding and placing of reinforcing bars. Inspector shall be approved by the City Inspector and the governing Building Department. Inspector shall be paid for by Contractor.
 3. Certified Reports: All Deputy Inspectors shall furnish written certified reports on all Work inspected to certify that the Reinforcing Work each has personally inspected was performed in accordance with the Plans.

48 PART 3 - EXECUTION

- 3.01 GENERAL:
- A. Field Conditions: Verify Plan dimensions with actual field conditions. Inspect related Work and adjacent surfaces.
- B. Codes: Materials and Work shall conform to the governing Building Code. In case of conflict between these specifications and the Building Code, the more stringent shall govern.
- C. Standards: Except as called for on the Plans, all concrete reinforcing steel shall be bent and placed in

accordance with the Code of Standard Practice and Specifications for Placing Reinforcement, of the Western Concrete Reinforcing Steel Institute, latest edition. Where the reinforcing is not placed in accordance with the Plans and Specifications, it shall be removed and replaced at no additional cost to City.

3.02 FABRICATION AND DELIVERY:

- A. Bending and Forming: Fabricate bars of indicated size and accurately form to shapes and lengths indicated and required, by methods not injurious to materials. All bars shall be bent cold, do not heat reinforcement for bending. Bars with kinks, bends or offsets not conforming to the Plans will be rejected and shall not be used.
- B. Marking and Shipping: Bundle reinforcement and tag with suitable identification to facilitate sorting and placing; transport and store at site so as not to damage material.

3.03 PLACING:

- A. Coordination: Coordinate with other trades and expedite materials and labor to avoid omissions and delay.
- B. Clean Reinforcement: Before placing concrete, all reinforcement shall be free from rust, mill scale, grease, mortar, oil, dirt or other coating of any character which would likely reduce its proper bond with the concrete.
- C. Placement: Place all reinforcement in accordance with CRSI Recommended Practice for Placing Reinforcing Bars, latest edition, and the contract Plans. Use sufficient bar supports, ties, anchors, and other accessories to hold bars securely in place. Securely wire all stirrups and ties. All steel shall be accurately secured in place with annealed wire so that it will not be displaced during pour. Wall and slab steel shall be wired together at all points where reinforcing crosses. Steel reinforcing bars shall be lapped at all splices a minimum of 15 bar diameters. Where dowels and bars extend through construction joints, secure them firmly in position to avoid displacement during placement of concrete.

3.04 SPACING AND CLEARANCES:

- A. Minimums:
 - 1. Spacing: between parallel bars shall meet the following minimums:
 - a) 1" minimum clear distance
 - b) 1-1/3 times the dimension of the maximum size aggregate
 - c) 1 times the bar diameter
 - 2. Clear Distances: Maintain minimum clear distance between reinforcing steel and face of concrete as indicated or as follows:
 - a) Concrete footings formed against earth: 3"
 - b) Concrete in forms with exposed face in contact with earth: 2"
 - c) Walls: As detailed on plans
 - d) Slabs: Center

3.04 WELDING: Bars larger than No. 11 shall be spliced by welding. Perform welding of reinforcing bars in accordance with Recommended Practices for Welding Reinforcing Steel, Metal Inserts and Connections for Reinforced Concrete Construction (AWS Standard D12.1). Provide mill reports showing chemical analysis assuring satisfactory weldability. Welders shall be certified and qualified by tests as prescribed in the Standard Qualification Procedures (AWS B3.0), and qualified by the governing Building Department.

3.05 CLEAN-UP: Following completion of Reinforcement Work, remove all unused materials and miscellaneous debris from the construction site. Do not leave wire and bar remnants on the site.

49 END OF SECTION

SECTION 03300
CAST-IN-PLACE CONCRETE

50 PART 1 - GENERAL

- 1.01 RELATED DOCUMENTS: The provisions of the "Standard Specifications for Public Works Construction" shall apply except as modified herein.
- 1.02 SCOPE: The Work of this Section shall consist of furnishing all labor, materials, equipment, appliances and services necessary for the execution and completion of all **Cast-in-Place Concrete Work** as shown on the Plans and as described in the Specifications including, but not necessarily limited to, the following:
- Provide all cast-in-place concrete as shown on the plans, including but not limited to the following:
 - exterior concrete pavement and walkways;
 - concrete pedestrian ramps;
 - concrete retaining walls;
 - structural concrete slabs and walls;
 - concrete headers;
 - concrete stairs;
 - Coordination with Work of other Sections;
 - Testing;
 - Clean-up; and,
 - Replacements, Repairs, Guarantees and Warranty Work.
- 1.03 CONCRETE MATERIAL: All transit mixed concrete delivered to the site for this project shall be obtained from Holiday Rock, 2193 W. Foothill Blvd., Upland, CA. The City of Upland will be responsible for payment to Holiday Rock for all transit mixed concrete ordered and delivered to the project site based on approved delivery tickets. The contractor will be responsible for the scheduling and ordering of concrete from Holiday Rock, including mix design, color additives, etc. All orders for concrete from Holiday Rock shall be approved by the City inspector prior to delivery. All installation and finishing of concrete, including pumping if required, shall be the contractor's responsibility.
- 1.04 RELATED WORK SPECIFIED ELSEWHERE:
- | | |
|------------------------------|---------------|
| Grading: | Section 02210 |
| Concrete Paving and Curbs | Section 02515 |
| Decorative Concrete Pavement | Section 02768 |
| Form Work: | Section 03100 |
| Concrete Reinforcement | Section 03200 |
- 1.05 QUALIFICATIONS OF INSTALLERS: Throughout the progress of installation of the Work of this Section, provide at least one English speaking person who shall be thoroughly familiar with the specified requirements, completely trained and experienced in the necessary skills, and who shall be present at the site and shall direct all Work performed under this Section. Use adequate number of skilled workers to ensure installation in strict accordance with the approved design.

51 PART 2 - MATERIALS

- 2.01 GENERAL: All materials shall conform to Section **201 CONCRETE MORTAR AND RELATED MATERIALS** of Standard Specifications.
- A. Portland Cement: Shall comply with Standard Specifications Section **201-1.2.1 Portland Cement**, and with UBC Standard 26-1, Type I or II, low alkali. Only one brand of cement shall be used.
- B. Aggregates: Shall conform to Standard Specifications Section **201-1.2.2 Aggregates**, and UBC Standard 26-2.

- C. Water: Shall be clean and free from deleterious amounts of acids, alkalis, salts, or organic materials and shall conform to Standard Specifications Section **201-1.2.3 Water**.
- D. Curing Compound: Shall be "Clear Seal" as manufactured by A.C. Horn, "Burke Cure Seal" as manufactured by Burke Concrete Accessories, Inc., or City approved equal.
- E. Form Lumber: Shall comply with Section **03100 Form Work**.
- F. Expansion Joint Materials: Shall comply with ASTM Standard D-1751-65 and shall be "Flexcell" as manufactured by Celotex Corporation, or "Kaiser" as manufactured by Kaiser Corporation, or City approved equal.

2.02 CONCRETE DESIGN MIX:

- A. General: Contractor shall provide designs for each strength of concrete and each size of aggregate, and whenever the source of materials changes. The quality and quantities of materials used in Concrete portions shall be controlled at the batch plant by a Weighmaster. In no case shall concrete contain less than 5 and ½ sacks of cement per yard, and a maximum of 7 gallons of water per sack of cement. Concrete mixes shall not use aggregate exceeding 1-inch maximum size.
- B. Compressive Strength: Concrete shall develop an ultimate compressive strength at 28 days as specified in the concrete Class Use Table in Section **201-1.1.2 Concrete Specified by Class** of the Standard Specifications as designated for its intended use, but in no case shall be less than the following:
 - * 2500 PSI for natural color flatwork, curbs, gutters, headers.
 - * 3000 PSI for integral colored flatwork.
 - * 3000 PSI for natural color footings, walls
- C. Consistency and Slump:
 1. Consistency: The consistency of the concrete shall be such that it can be readily worked around reinforcement and into corners and angles of the forms without excessive puddling, spading, or vibrating, and without permitting the materials to segregate or free water to collect on the surface.
 2. Slump: Slumps shall be checked twice for each day's run of concrete mixture in accordance with ASTM C-143. A complete record of slumps shall be kept. The maximum slumps allowable shall be as follows: 4 inches.

2.03 TRANSIT MIXED CONCRETE: Shall comply with UBC Standard 26-13. See section 1.03 CONCRETE MATERIAL regarding responsibilities for transit mixed concrete for this project.

2.04 GROUT AND DRY PACK:

- A. Grout: Cement grout shall be composed of 1 part cement and 1-1/2 parts sand. The material shall be mixed dry and enough water added to make the mixture flow under its own weight.
- B. Dry Pack: Shall be of the same mixture as grout, except that just enough water shall be added to hold the mixture together in the hand.

2.05 RETAINING WALL SEALER: The back side of all retaining walls shall be sealed using Super Thoroseal as manufactured by Thoro Consumer Products, BASF Construction Chemicals, LLC, 23700 Chagrin Blvd., Cleveland, OH 44122, www.ThoroProducts.com; (216) 839-7171, or City approved equal. Asphaltic emulsions are not an acceptable substitute.

52 PART 3 - EXECUTION

3.01 GENERAL: All Work shall conform to Section **303 CONCRETE AND MASONRY CONSTRUCTION** of Standard Specifications except as modified herein.

3.02 CONCRETE MIX: Contractor shall supply and pay all costs for concrete mix designs. The Contractor shall deliver two copies of each load ticket to the City Inspector.

3.03 FORMWORK: Forms shall be substantial, unyielding, true to line and grade, and shall be placed to conform to the dimensions for the Work as indicated on the Plans.

3.04 PLACING CONCRETE:

- A. General: Concrete shall not be placed until forms and reinforcement, bolts, etc., have been inspected and approved by the Architect, and the Building Inspector. All foreign material shall be removed from forms and excavations. Wooden forms shall be thoroughly wetted. Mechanical vibrators shall be used in placing concrete except for concrete slabs on grade. Responsibility for proper placement, compaction and finishing rests with Contractor. Concrete shall not be placed while wind is blowing across exposed surfaces unless protected with wind breaks or other means.
- B. Pours: Concrete for any one unit shall be placed in one continuous operation with construction joints located as shown on the Plans, or as approved by the Structural Engineer prior to pour. Make pours of vertical concrete elements in approximately 2-foot lifts per hour. Allow 2 hours minimum after completing the pour of any vertical element before pouring beams, girders, or slabs supported thereon. Provide openings in forms, tremies, or other mechanical devices, so that the concrete does not have a free fall in excess of 4'-0" in height.
- C. Joints:
 - 1. General: Joints shall be straight, exactly horizontal or vertical, and the surface of the concrete shall be level wherever a run is stopped. Reinforcement shall be extended through the joints, or steel dowels shall be provided, sufficient to develop the full strength of the reinforcement.
 - 2. Joints to Receive Masonry: Construction joints and concrete surfaces that are to receive masonry shall be cleaned to remove all laitance and expose clean aggregates, firmly embedded in mortar.
 - 3. Horizontal Joints: At horizontal joints, modify the regular mix by omitting 1/4 of the coarse aggregate and pour to a depth of 2" on the prior concrete pour. Follow immediately with the placing of regular concrete.
 - 4. Vertical Joints: At vertical joints, thoroughly wet and slush the face of the joints with neat cement grout prior to placing new concrete. Concrete adjacent to the vertical joint shall be well soaked with water on the day preceding the pour.

3.05 SLABS AND WALKS: Floor slabs shall be limited to an area of 1200 square feet with a maximum of 40 feet without an expansion joint or cold joint. Limit slab pours to a maximum length-to-width ration of 2:1. Where possible, locate cold joints at expansion joint locations.

3.06 SLAB FINISH:

- A. Exterior Slabs:
 - 1. Shall have a medium broom finish with 6" smooth-troweled "shiners" as directed by the City Inspector. The finish must be true to line and grade.
 - 2. Concrete walks shall have 1/2" thick expansion joints at maximum intervals of 30 feet and control joints at maximum intervals of 10 feet on center each way. Slabs to receive other separate topping shall be depressed as detailed. See plans for joint locations and types.
 - 3. All exterior flatwork shall drain positively, away from buildings, and shall comply with the requirements of the American's with Disabilities Act, related Federal Access Guidelines and State Title 24 code requirements, whether or not so indicated on the Plans. If indicated otherwise on the Plans, obtain clarification from the Parks Department Representative in writing. All exterior slabs shall drain away from the buildings at a minimum slope of 1/4" per foot for the first 6 feet perpendicular to the building wall.
 - 4. Any condition which may result in water standing or flowing adjacent to buildings shall be brought to the attention of the City Inspector before placing concrete.
 - 5. Maximum allowable tolerance for flatwork shall be a variation of 1/8" from a 10'0" straight edge. All concrete walkways shall have a cross slope not to exceed 2%. All concrete walkways shall not exceed a longitudinal slope of 5%; if 5% is exceeded handrails shall be provided. All concrete walkways shall

not have a drop off of more than 4" without either a 6" curb or guardrail along the edge of the slab wherever such drop off occurs. All "plaza" and "landing" areas within the walkway system shall not exceed 2% slope in any direction. All exterior slabs shall be sloped sufficiently to ensure positive drainage without birdbaths. The existence of birdbaths will be deemed sufficient cause for rejection of the concrete as defective work which shall be removed and replaced with proper work, all at no additional cost to the City.

- B. Stair, Ramps and Landings: All stair treads, ramps and landings shall be rendered non-slip by applying non-slip grooves, before the final trowel operations. On stair treads, apply non-slip material to the groove area after the concrete has cured.

3.07 CURING CONCRETE:

- A. General: All concrete surfaces shall be kept continuously wet for a period of not less than 36 hours by ponding, soaking or spraying. Following this 36 hour period, the concrete shall be protected from loss of moisture for a minimum period of 10 days by the following means:
 - 1. Water curing consisting of ponding, soaking, or spraying;
 - 2. Covering with Kraft paper or plastic sheets;
 - 3. Leaving Forms in place; and/or
 - 4. Application of an approved liquid curing compound.
- B. Compatibility: In the event the curing compound used is not compatible with the finish materials to be applied to the concrete surfaces, Contractor shall neutralize the curing compound before applying the finish materials.
- C. Weather Protection:
 - 1. Low Temperatures: Concrete shall be protected from low temperatures at all times in accordance with the "Recommended Practice for Winter Concrete", as published by the American Concrete Institute (ACI-604).
 - 2. High Temperatures: Concrete shall be protected from high temperatures at all times in accordance with the "Recommended Practice for Summer Concrete", as published by the American Concrete Institute (ACI-605).

3.09 PATCHING AND FINISHING: Concrete surfaces that are exposed to view shall be smooth and free from form marks. Wet and rub with a carborundum brick, or other abrasive block, until a uniform, fine-textured surface appearance is obtained. Use cement mortar paste in rubbing and remove excess material by brushing and washing. Smooth trowel and burnish weathering surfaces and leave external angles neatly rounded with an edging tool. Finished Work showing voids and separation of aggregates will not be accepted. After forms are removed and form ties withdrawn, all projections and fins shall be cut away from exposed surfaces and all honeycombs and porous surfaces shall be cut back to solid concrete. The defective surfaces shall then be repaired by the use of grout and finished to match the adjacent surfaces.

3.10 GROUT AND DRY PACK: Areas to receive dry pack shall be wetted down just before tamping dry pack. Dry pack shall be sprinkled with water the same day it is applied and shall be kept moist for a period of 3 days for proper curing.

3.11 FAULTY AND DEFECTIVE WORK:

- A. Removal of Defective Concrete: Concrete not conforming to the design, or which has voids, honeycombs, or other defects, or which has been repaired other than under the direction of the Architect or the Architects representative, shall be deemed to be defective and shall be removed and replaced with acceptable Work. All concrete rubble resulting from such removal work shall be disposed of legally off the site.
- B. Graffiti: Graffitied concrete surfaces will not be accepted. Contractor shall provide watchmen as required to insure a graffiti-free surface. Patching of concrete surfaces will not be permitted. Whole sections must be removed and replaced

3.12 CLEAN UP: During construction, keep the area clean and clear. Concrete spoils shall not be buried in backfills or left on the site. On a daily basis and upon completion of the Work of this Section, remove all trash, debris, excess materials and equipment from the Work Site. Dispose of all such trash, debris and excess materials off site in a legal manner.

53 END OF SECTION

SECTION 04810

UNIT MASONRY ASSEMBLIES

PART 1 - GENERAL

- 1.1 STANDARD SPECIFICATIONS: The provisions of the "Standard Specifications for Public Works Construction" shall apply except as modified herein.
- 1.2 SUBMITTALS
 - A. Product Data: For each type of product indicated.
- 1.3 PROJECT CONDITIONS
 - A. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
 - B. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

54 PART 2 - PRODUCTS

- 2.1 MANUFACTURERS
 - A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.
 - 2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to Orco Block, Angelus Block, or equal.
- 2.2 CONCRETE MASONRY UNITS (CMUs)
 - A. Shapes: Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
 - B. Concrete Masonry Units: ASTM C 90.

1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 1900 psi.
2. Weight Classification: Normal weight.

2.3 BRICK PAVING

A. General: Brick

1. Sizes: 2-1/4" x 3-5/8" x 7-5/8" Face Brick
2. Manufacturer: Endicott.
3. As available through Thompson Building Materials or approved equal.
4. Colors: Manganese Ironspot & Medium Ironspot #46.

B. General: Pavers

1. Sizes: 2-1/4" x 4" x 8" & 2-1/4" x 8" x 8" – Invisi-lug Paver
2. Manufacturer: Endicott.
3. As available through Thompson Building Materials or approved equal.
4. Color: Coppertone.

2.4 NATURAL COBBLE VENEER AND PAVING

A. General: Natural granite stones, smooth and unbroken.

1. Sizes from 4" diameter to 8" diameter.
2. As available through Southwest Boulder & Stone or approved equal.
3. City provided cobble for use on the project.

2.5 MORTAR AND GROUT MATERIALS

A. Portland Cement: ASTM C 150, Type II, except Type III may be used for cold-weather construction.

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

C. Masonry Cement: ASTM C 91.

D. Aggregate for Mortar: ASTM C 144.

1. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
2. Aggregate for base below pavers: 3/4" crushed aggregate & plaster sand leveling course.

E. Aggregate for Grout: ASTM C 404.

- F. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.
- G. Water: Potable.
- H. Filter Fabric: Mirafi 140n.

2.6 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
 - 2. Limit cementitious materials in mortar for exterior and reinforced masonry to portland cement.
 - 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification.
- C. Grout for Unit Masonry: Comply with ASTM C 476.

55 PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Use full-size units without cutting if possible. If cutting is required, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- B. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602.

3.2 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.

- D. Fill space between steel frames and masonry solidly with mortar, unless otherwise indicated.
- E. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

3.3 MORTAR BEDDING AND JOINTING

- A. Lay hollow concrete masonry units as follows:
 - 1. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
- B. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

3.4 ROCK COBBLE PAVING

- A. Lay rock cobble paving as detailed on plans and as follows:
 - 1. After pouring 3" minimum thick concrete base, set cobbles into wet concrete, placing flattest side up, flush with adjacent paving or headers, keeping joints between stones 1" maximum.
 - 2. Grout spaces between cobble stones holding top of grout 2" below top of stones.

3.5 ROCK COBBLE VENEER

- A. Lay rock cobble veneer over CMU columns as detailed on plans and as follows:
 - 1. After completing the masonry CMU column, lay rock cobble veneer starting at the bottom with larger pieces and gradually decreasing size as you build to the top. Use string lines at corners to achieve the correct batter. Install masonry clips into CMU units to help secure stone veneer.
 - 2. Grout spaces between cobble stones, 1" maximum, and strike back to reveal more of the stone.

3.6 AGGREGATE SETTING-BED APPLICATIONS

- A. Compact soil subgrade uniformly to at least 95 percent of ASTM D698 laboratory density.
- B. Place aggregate base, compact to 95 percent of ASTM D1557 maximum laboratory density, and screed to depth indicated.
- C. Place drainage geotextile over compacted base course, overlapping ends and edges at least 12 inches.

- D. Place sand leveling course and screed to a thickness of 1 inch taking care that moisture content remains constant, and density is loose and uniform until pavers are set and compacted.
- E. Treat leveling course with herbicide to inhibit growth of grass and weeds.
- F. Set pavers with a minimum joint width of 1/16 inch and a maximum of 1/8 inch being careful not to disturb leveling base. If pavers have spacer bars, place pavers hand tight against spacer bars. Use string lines to keep straight lines. Fill gaps between units that exceed 3/8 inch with pieces cut to fit from full-size unit pavers.
- G. Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 3500- to 5000-lbf compaction force at 80 to 90 Hz. Use vibrator with neoprene mat on face of plate or other means as needed to prevent cracking and chipping of pavers. Perform at least three passes across paving with vibrator.
- H. Spread dry sand and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add sand until joints are completely filled, then remove excess sand. Leave a slight surplus of sand on the surface for joint filling.
- I. Do not allow traffic on installed pavers until sand has been vibrated into joints.
- J. Repeat joint-filling process 30 days later.

3.7 MORTAR SETTING-BED APPLICATIONS

- A. Saturate concrete subbase with clean water several hours before placing setting bed. Remove surface water about one hour before placing setting bed.
- B. Apply mortar bed; spread and screed mortar bed to uniform thickness at subgrade elevations required for accurate setting of pavers to finished grades indicated.
- C. Mix and place only that amount of mortar bed that can be covered with pavers before initial set. Before placing pavers, cut back, bevel edge, and remove and discard setting-bed material that has reached initial set.
- D. Wet brick pavers before laying if the initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C67. Allow units to absorb water so they are damp but not wet at time of laying.
- E. Place pavers before the initial set of cement occurs.
- F. Tamp or beat pavers with a wooden block or rubber mallet to obtain full contact with setting bed and to bring finished surfaces within indicated tolerances. Set each paver in a single operation before initial set of mortar; do not return to areas already set or disturb pavers for purposes of realigning finished surfaces or adjusting joints.
- G. Spaced Joint Widths: Provide 3/8-inch joint width with variations not exceeding plus or minus 1/8 inch.

- H. Grouted Joints: Grout paver joints complying with ANSI A108.10.
- I. Grout joints as soon as possible after initial set of setting bed.
 - 1. Force grout into joints, taking care not to smear grout on adjoining surfaces.
 - 2. Clean pavers as grouting progresses by dry brushing or rubbing with dry burlap to remove smears before tooling joints.
 - 3. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
 - 4. If tooling squeezes grout from joints, remove excess grout and smears by dry brushing or rubbing with dry burlap and tool joints again to produce a uniform appearance.
- J. Cure grout by maintaining in a damp condition for seven days unless otherwise recommended by grout or liquid-latex manufacturer.

3.8 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace unit pavers that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment and with no evidence of replacement.
- B. Pointing: During tooling of joints, enlarge voids or holes and completely fill with grout. Point joints at sealant joints to provide a neat, uniform appearance, properly prepared for sealant application.
- C. Cleaning: Remove excess grout from exposed paver surfaces; wash and scrub clean.
 - 1. Remove temporary protective coating as recommended by coating manufacturer and as acceptable to paver and grout manufacturers.
 - 2. Do not allow protective coating to enter floor drains. Trap, collect, and remove coating material.

3.9 MASONRY WASTE DISPOSAL

- A. Remove excess clean masonry waste and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 04810

SECTION 05500 METAL FABRICATIONS

PART 1 - GENERAL

1.01 STANDARD SPECIFICATIONS: The provisions of the "Standard Specifications for Public Works Construction" shall apply except as modified herein.

1.02 SUMMARY

- A. Section Includes: Metal fabrications:
1. Tubular steel Handrails and Guardrails
 2. Tubular steel Shade Structure Beams
 3. Decorative Aluminum Shade Structure Panels
 4. Miscellaneous steel brackets and angels.
 5. Steel plate for Primary Entry Arch Sign
- B. Related Requirements:
1. Section 03300 – Cast-in-Place Concrete.
 2. Section 04810: Concrete Unit Masonry.

1.03 REFERENCES

- A. ASTM International (ASTM):
1. ASTM A27 – Standard Specification for Steel Castings, Carbon, for General Application.
 2. ASTM A36 – Standard Specification for Carbon Structural Steel.
 3. ASTM A47 - Standard Specification for Ferritic Malleable Iron Castings.
 4. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 5. ASTM A123 - Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products.
 6. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 7. ASTM A283 - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.

8. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength.
 9. ASTM A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
 10. ASTM A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
 11. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts.
 12. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 13. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
 14. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
 15. ASTM F2329 - Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners.
- B. American Welding Society (AWS):
1. AWS D1.1 Structural Welding Code - Steel.
 2. AWS D1.3 Structural Welding Code - Sheet Steel.
 3. AWS D-19.0 Welding Zinc Coated Steel.

1.04 COORDINATION

- A. Coordination between Steel Fabricator and City Representative
1. Prior to fabrication, submit approved fabrication shop drawings to the City Representative for review and approval
- B. Coordinate installation of metal fabrications that are anchored to concrete or masonry, or that receive work specified by other Sections. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry.
- C. Field Measurements: Field verify dimensions prior to fabrication.

1.05 SUBMITTALS

- A. Shop Drawings: Submit Shop Drawings indicating provided materials, dimensions, anchoring detail, and details of termination or connection to adjacent construction. Indicate items that are purchased from a manufacturer and items that are shop fabricated. Indicate component parts requiring Project site fabrication or assembly.
- B. Product Data: Submit Product Data for manufactured items. Submit Product Data for paint primers and finishes.
- C. Material Samples: Submit Samples of primers and finishes on fabricated items.
- D. Fabricator qualifications per Article "Quality Assurance".
- E. Welding:
 - 1. Welder's Certificates: Field welders shall be Project certified in accordance with AWS D1.1.
 - 2. Welding Material Certification: Provide certificate that welding material complies with specifications.
- F. Research/Evaluation Reports: ICC-ES for post-installed anchors.

1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: Firm with a minimum of five years' experience in successfully producing metal fabrications similar to that shown on the drawings.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D-1.1– Structural Welding Code – Steel.
 - 2. AWS D1.3 - Structural Welding Code - Sheet Steel.
- C. Inspection of Welding: Refer to Section 01 4523: Testing and Inspection.
- D. Field applied primers, paintings, sealers and adhesives shall be approved by the OWNER's Office of Environmental Health and Safety (OEHS).
- E. Preassemble items in shop to greatest extent possible to minimize field welding. Mark units for reassembly and coordination of installation. Use marking method compatible with powder coater.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Store miscellaneous metal items above grade on platforms, skids, or other required supports.
- B. Protect from damage and from corrosion, dirt, grease, and other foreign matter.

2.01 MATERIALS

- A. Structural Steel Shapes: ASTM A36.
- B. Rolled Steel Plates: ASTM A36. Plates to be bent or cold-formed shall conform to ASTM A283, Grade C.
- C. Round HSS: ASTM A500 Grade B or C.
- D. Square and Rectangular HSS: ASTM A500 Grade B or C.
- E. Steel Pipe: ASTM A53 Type E or S, Grade B, standard weight (Schedule 40), unless otherwise noted. Black finish.
- F. Steel Sheet: ASTM A1008 or ASTM A1011.
- G. Steel Bolts: ASTM A307, Grade A, or F3125 with hex steel nuts per ASTM A563 and washers. Galvanized in accordance with ASTM A153 for exterior locations.
- H. Steel Bars: Conforming to ASTM A108 or ASTM A575.
- I. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either malleable iron, ASTM A47, or cast steel, ASTM A27. Provide bolts, washers, and shims, hot-dip galvanized per ASTM A153.
- J. Nonshrink, Nonmetallic Grout: Factory-packaged, non-staining, noncorrosive, nongaseous grout complying with ASTM C1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- K. Concrete Materials:
 - 1. Concrete per Section 03300, Cast-in-Place Concrete.

2.02 FABRICATION

- A. General:
 - 1. Preassemble items in the shop to the greatest extent possible. Use connections that maintain structural value of joined pieces. Mark units for reassembly and installation.
 - 2. Cut, drill, and punch metals cleanly and accurately. Ease exposed edges to a radius of approximately 1/32 inch, unless otherwise indicated or specified. Remove sharp and rough areas on exposed surfaces. Form exposed work with accurate angles and surfaces and straight edges. Form exposed connections with hairline joints, flush and smooth. Locate joints where they are the least conspicuous.
- B. Welding:
 - 1. Weld connections unless otherwise indicated.

2. Weld corners and seams continuously and in accordance with requirements of AWS D1.1 Structural Welding Code. Welds shall be inspected as required in Section 05 1200: Structural Steel Framing.
3. Grind exposed welds smoothly and flush to match and blend with adjoining surfaces.

2.03 PREPARATION FOR PAINTING

- A. Fabricate to the largest size possible and whenever possible use slip joints to minimize field welding.
- B. Fabricate structural steel in accordance with Class I, II, III guidelines.
- C. Remove welding slag, splatter, anti-splatter compounds and burrs prior to delivery for painting.
- D. Marking for Identification: Avoid unsuitable marking paints for identification, such as oil-based paints and markers and crayon markers. Use water soluble paints or markers acceptable to powder coater or steel tags wired to the work.

2.04 PAINTED FINISH

- A. Metal fabrications shall be provided with a metal primer and a two coat finish, color as indicated of selected.

57 PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine the areas where metal fabrications are to be installed. Notify the OAR in writing of unsatisfactory conditions. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Provide anchorage devices and fasteners as indicated in the drawings and where necessary for securing miscellaneous metal fabrications to in-place construction.
- B. Cut, drill, and fit as required for installation of miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- C. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop-welded because of shipping size limitations.

- D. Alignment: Verify alignment of items with adjacent construction. Coordinate related work.
- E. Grout: Follow manufacturer's recommendations for substrate preparation and application.

3.03 FIELD WELDING

- A. Preparation of Weld Area of Shop primed fabrications: Remove masking from fabrications. Remove coating between one inch and four inches from both sides of members to be welded, by grinding back the coating.
- B. Welding: Comply with AWS Code for procedures of manual shielded metal-arch welding, appearance and quality of welds made methods used in correcting welding work.
 - 1. Weld in accordance with AWS D-1.1.
- C. Remove welding flux immediately. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surfaces matches those adjacent.
- D. Upon completion of welding plug vent, drainage and lifting holes of fabrications with appropriate diameter plugs. Push in about halfway by hand, and hammer to a tight fit. With a hand file or an abrasive tool, file off excess material. Repair scratches with a field matching coating.
 - 1. Plug railing holes.
 - 2. Plug visible holes of HSS members.

3.04 ADJUSTING AND CLEANING

- A. Touch Up Damaged Surfaces:
 - 1. Painted Surfaces: Clean field welds, connections and damaged areas. Apply two coats of approved paint, matching the paint color.

3.05 CLEAN UP

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.06 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

58 END OF SECTION

SECTION 16530 ELECTRICAL

PART 1 - GENERAL REQUIREMENTS

1.1 SCOPE OF WORK

- A. The work covered by this section consists of furnishing and installing all I, materials, equipment, fixtures and performing all labor and operations for complete and operable systems.
- B. Provide all new materials, unless noted otherwise, of the best quality, and in perfect condition, and materials of the same make and quality throughout the work and as hereinafter specified. Comply with the requirements of ASTM, NEMA, U.L., and NBFM for materials and equipment.
- C. The intent of these specifications is to establish a standard of quality of materials installed. Include materials as specified without exception in the Base Bid. Submit for approval any proposed substitution, complete descriptive, technical, and cost comparison data and test reports. Do not furnish or install any substitute items without written approval at the time of contract signing. Reimburse the Owner for any additional engineering charges and for any changes in the work of other trades resulting from substitutions. List proposed substitutions on the Bid Form, stating the reasons for substitution. When requested by the Architect or Electrical Engineer, samples, electrically wired at 120V. with plug, or system demonstrations of both specified and proposed items will be submitted for inspection at the Electrical Engineer's office and at a time convenient to all concerned parties.
- D. Where a substitution alters the design or space requirements indicated on the plans, Contractor is responsible for all additional cost for Engineering to revise plans.
- E. Verifying Drawings and Job Conditions:
 - 1. Examine all drawings and specifications in a manner to be fully familiar of all work required.
 - 2. Visit the site and verify existing conditions. Where existing conditions differ from drawings, make adjustments and allowances for all necessary equipment to complete all parts of the drawings and specifications.
- F. Shop Drawings:
 - 1. Submit drawings in six sets accompanied by letter of transmittal listing the number and dates of the drawings submitted.
 - 2. Mark the drawings submitted with the name of the project, numbered consecutively, and bearing approval as evidence that the drawings have been checked. Any drawings submitted without this approval will be returned for resubmission.
 - 3. Submit Shop drawings on, but not limited to, the following:
 - a. Time Switch
 - b. Lighting Fixtures
 - c. Circuit Breakers
 - d. Product List

G. Drawings of Record:

Provide and keep up-to-date, a complete record set of blue line prints. Show every change from the original drawings. Keep this set of prints on the job site, and use only as a record set. Do not make changes in the layout without definite instruction in each case. Obtain a set of Contract Drawings from Architect and incorporate all changes as noted on the record set of prints. Deliver this set to the Architect upon completion and acceptance of work.

H. Accuracy of Plans and Specifications:

Plans and/or specifications showing deviation from standard practice methods or from compliance with codes, and/or any omissions, does not relieve the responsibility of furnishing, making or installing all items required by code and/or intended for the function of the system.

I. Permits, Fees and Insurance:

Obtain and pay for all insurance, permits, etc. necessary for this Contract.

J. Codes and Regulations:

All work performed under this Section of the Specifications complies with the rules and regulations of the Division of Industrial Safety, State of California, as set forth in the latest edition of the Electrical Safety Orders, the National Electrical Code, NFPA, and all rules and regulations of local codes having jurisdiction, including the presently adopted edition Title 21 and 24 California Administrative Code.

K. Testing and Adjustment:

Test all circuits, outlets, switches, lights, motors, circuit breakers and any other electrical equipment, upon completion of all electrical work.

L. Guarantees of Materials and Workmanship:

Furnish and install all materials under this Contract, new and free from all defects, and guaranteed for a period of two years from the date of acceptance of the work. Should any trouble develop during this period due to defective material or faulty workmanship, furnish all necessary labor and materials to correct the trouble without additional cost to the Contract. Correct any defective material or inferior workmanship noticed at the time of installation immediately, to the satisfaction of the Architect.

M. Removal of Rubbish:

Remove rubbish, excess materials, tools or equipment related to this portion of the work, frequently during construction and upon completion of the work.

N. Drawings and Specifications:

1. The electrical drawings are considered as part of these specifications, and any work or materials shown on the drawings and not mentioned in the specifications, or vice versa, shall be as if specifically mentioned in both.

2. The data herein specified and shown on the drawings is as exact as could be prepared, but their extreme accuracy is not guaranteed. The drawings and specifications are for assistance and guidance. The installation is essentially as shown and specified. The exact location of the equipment, material, apparatus and devices as well as the distances and levels, are more or less governed by the physical conditions and arrangements of the building. Accept this Contract with this understanding.
3. Make minor changes, when ordered by the Architect, accommodating the installation of the work with other sections of the Contract without additional cost to the Contract.

O. Safety Conditions:

It is the Contractor's responsibility to prevent any damages to personnel and/or property resulting from contact with new or existing energized circuits, switches, circuit breakers, or other electrical apparatus. All electrical work to be constructed with electrical systems de-energized in the area of work.

P. Final Inspection and Acceptance:

After all requirements of the specifications and drawings have been fully completed, a representative of the Owner will inspect the work. Provide competent personnel to demonstrate the operation of any item or system involved to the complete satisfaction of each representative.

2. PART 2. PRODUCTS

2.1 PANELBOARDS:

- A. Provide the automatic circuit breaker type, quick-make and quick-break panelboards. Provide wiring gutter sides, top and bottom.
- B. Provide panelboards from the same manufacturers as the main switchboard; type, mounting, and size as noted on the drawings with silver-plated copper bussing.
- C. Where space is called for on the panelboard schedules, provide space and mounting for future circuit breaker installation as indicated.
- D. Use trims having doors equipped with flush type combination lock and catch, two milled type keys supplied with each panel, all locks are keyed alike. Provide a clear covered directory frame with a typed identification card, indicating type of circuit and location, in accordance with final circuitry and panel designation on each door. Completely fill in all panel directories, using actual connections, Owners designations or other factual information. Key all doors to Yale LL803, or as directed by Owner.
- E. Where called for on the drawings, provide a separate compartment within the panelboards for contactors and/or time switches.

2.2 CIRCUIT BREAKERS:

Provide circuit breakers with inverse time characteristic thermal and magnetic tripping elements, with an interrupting capacity of not less than 10,000 amperes, UL labeled, NEMA rated, molded case

type. Use common trip single handle multi-pole breakers. Handle extensions are not permitted. All circuit breakers will have covers sealed on non-interchangeable trip breakers and trip unit covers sealed in interchangeable trip breakers to prevent tampering. Be sure the circuit breaker current rating markings clearly visible after breaker is installed. One manufacturer for all circuit breakers for a given panel. Provide bolt-on circuit breakers unless specifically noted on electrical drawings.

2.3 CONDUIT AND FITTINGS:

- A. Rigid Conduit (RGS): Hot dipped galvanized or sherardized steel. Republic Steel Co. or approved equal. Intermediate metal conduit may be used, where CEC allows, in lieu of RGS.
- B. Electrical metallic tubing (EMT): Welded, electro-galvanized thin wall steel tubing. All couplings are gland compression type.
- C. Non-metallic conduit (PVC): Polyvinyl chloride Schedule 40 or 80. Install a copper ground wire, sized per National Electrical Code, in all non-metallic conduit power raceways. Use PVC in underground installations only.
- D. Liquidtight Flexible Metal Electrical Conduit: Hot-dipped galvanized steel with exterior, molded polyvinyl jacket. Use for all final connections to all vibrating equipment, transformers and the like. 18" maximum. Provide a code sized ground wire.
- E. Flexible metallic steel tubing: Liquid tight without a nonmetallic jacket. Use as allowed by code and where permitted by this Specification, section 3.06.C. Provide a code sized ground conductor.

- F. Condulet Type Fittings: As manufactured by Crouse Hinds Company, Appleton Electric Company or Pyle National or approved equal, smooth inside and out, taper threaded with integral bushings.

2.4 CONDUCTORS:

- A. Provide copper conductors, 600 volt A.C. unless noted otherwise. Aluminum conductors are not permitted.
- B. Use THWN conductors for underground and damp locations, THHN for dry areas.
- C. Deliver conductors to the site in unbroken packages, marked with the manufacturer's name, date of manufacture, voltage and classification letters. Use only wire recently manufactured (10 months or less).
- D. Provide signal service and low voltage control conductors as specified or noted on the drawings.
- E. No conductor supplying 120 volts or more will be smaller than No. 12 AWG unless otherwise noted on the drawings.
- F. Fixture wire to comply with latest requirements of the National Board of Fire Underwriters. The carrying capacity of the wire as per the latest requirements of the National Electrical Code. No fixture wire may be smaller than #18 gauge. Protect wiring with tape or tubing at all points where abrasion is likely to occur.
- G. Install all conductors of each electrical system in an approved raceway. Factory assemblies, non-metallic/pliable/corrugated raceways, type UF cable or multi-conductor assemblies are not approved.
- H. Use solid conductor, size #10 AWG and smaller, stranded for #8 AWG and larger.

2.5 JUNCTION AND PULL BOXES:

Above grade level, provide galvanized junction and pull boxes with removable covers, secured with machine screws. The sizes of all boxes determined by the number and size of conductors entering the box, and by the sizes of conduit terminating in the box. All boxes conform to the applicable Electrical Safety Orders, State of California. Pullboxes flush with grade shall be concrete, with bolt down concrete or steel covers, per plans, with engraved or beadweld identification.

2.6 OUTLET BOXES:

- A. Provide galvanized outlet boxes and covers, one piece pressed steel, knockout fixture outlets equipped with 3/8" fixture studs and plaster rings.
- B. Where standard boxes are not suitable, provide boxes of special design to fit space.
- C. Cast aluminum or cast iron for outlet boxes exposed to weather, in damp locations, or surface mounted with threaded hubs for conduit connections; cover made watertight with gasket and non-ferrous screws.
- D. Provide outlet boxes in plaster covered walls with raised covers or plaster rings to finish flush with plaster.

2.7 RELAYS:

Install control relays for automatic controls or for interlocking as indicated in the drawings. Provide relays with the number and type of poles and with operating coils as indicated. Equip relays with contacts rated not less than 15 amperes for continuous inductive load, unless otherwise shown or specified. Rate operating coils for continuous duty at the operating voltage shown on the drawings.

2.8 FUSES:

- A. Provide (in a location designated by the Owner) a spare fuse cabinet with the following:
 - 1. Nameplate "spare fuses".
 - 2. Necessary fuse holders.
 - 3. Spare set of each size and type of fuses.
- B. Provide dual element fuses for all 600 volt or lower voltage requirements unless otherwise indicated or specified. Where fuses are not made for this application, furnish Buss "Limitron" or approved equal fuses.
- C. Provide Bussman Fuses as indicated on plans.
- D. Replace fuses "blown" or damaged during construction with new fuses of proper rating and type for the particular use, replace spare sets.

2.9 LIGHTING FIXTURES:

Furnish, install and connect lighting fixtures of type designed on the plans.

- A. Verify all fixture locations with Landscape Architectural drawings prior to rough in.
- B. Where there is conflict in fixture quantities on any of the plans the greatest amount will prevail. The description of the lighting fixture supersedes the catalog number and is to be furnished and installed with type to fit description.

2.10 NAMEPLATES:

Shall be micarta or lamacoid plate, 1/8" thick and have approved size, with beveled edges and engraved white letters on black background. Provide nameplates for all items of electrical equipment as well as circuits in the service distribution and power distribution panelboards; lighting distribution panelboards; separately mounted motor starting switches; disconnect switches; motor control pushbutton stations and other similar devices. Each nameplate as approved by the Architect. Use two machine screws for attachment. Cement/adhesive is not approved.

PART 3 - EXECUTION

- 3.1 If construction of building reveals that any part of the Electrical Work would not be readily accessible if installed according to drawings, notify the Architect before proceeding with such installation.
- 3.2 All concrete work such as pull boxes, raised pads, conduit envelopes and other areas where affecting Electrical Work are the responsibility of the Electrical Contractor.

3.3 Coordinate layout and installation of electrical work with the overall construction schedule and work schedules of various trades to prevent delay in completion of the project.

A. Verify dimensions and information regarding accurate location of equipment, structural limitations, and finish with other affected sections.

B. Job Conditions:

The drawings do not always show offsets, bends, special fittings or junctions or pull boxes necessary to meet job conditions. Provide the items as required at no cost to the Owner.

C. Weatherproof Equipment:

Use weather resistant electrical devices or equipment located in damp, semi-exposed areas. Comply with NEMA Type 3R requirements for enclosures.

D. Where devices are shown diagrammatically in the same location, neatly group them together in a reasonable manner. Provide one-piece plate where such is manufactured.

3.4 Equipment requiring electrical under other sections is part of the Contract. Work includes all necessary connections.

3.5 EXCAVATION AND BACKFILLING:

Excavate and backfill in accordance with section in other documents covering that work.

3.6 CONDUIT:

A. Install all conduit concealed, except where specifically indicated as exposed. Use rigid galvanized steel or I.M.C. for all exposed conduit. Paint with two coats to match adjacent surroundings, if viewed by the public.

B. Use galvanized rigid steel on all conduit installed in concrete and masonry walls, 3/4 inch trade size minimum, unless otherwise specified and/or noted on the plans. Verify conduit runs in concrete slab, prior to placement. Otherwise, do not run conduits in slabs.

C. All conduit installed in the dry walls or dry ceilings of the building structures, shall be steel tube (EMT), except that in certain locations and for certain runs where it is impractical to install EMT, and where permission to do so has been given by the Architect, galvanized flexible steel conduit may be used, with a code sized ground conductor.

D. Run conduit so as not to interfere with or contact other piping, fixtures or equipment. Maintain 6" separation from water piping.

E. Cut the ends of all conduit square and carefully ream out to full size, and shoulder in fitting.

F. No running threads will be permitted in locations exposed to the weather, in concrete or underground. Use special watertight union fittings in these locations.

G. Use PVC Schedule 40 or 80 for all underground conduits. Install all underground conduit at a depth of not less than 24 inches below the final finish grade, unless under concrete

slabs or otherwise noted and/or specified. Provide metallic high voltage tape buried 12" above conduit, under floor slab/ under concrete walk, in which case, install 6" below bottom of slab. Use IMC for all horizontal and vertical sweeps or risers with factory applied PVC coating or half lapped 10 mil. tape. Schedule 80 PVC sweeps are permitted for conduits 1 1/2" diameter and greater.

- H. Cut and patch all pavements, curbs, sidewalks and gutters, whenever necessary for laying conduit, or whenever damaged by the operations of this trade. Replace materials with quality and finish equal to that removed or damaged.
- I. Where conduit extends through roof to equipment on roof areas, provide weatherproofing as specified in the appropriate section of these Specifications.
- J. Support all conduit in intervals not less than 10'-0" and within 36 inches from any outlet and at each side of bends and elbows. Use galvanized, concealed conduit supports, heavy stamped, one hole malleable conduit clamps secured with nails. On exposed conduit supports, use two hole clamps with screws, or galvanized steel framed channels secured by screws may be used for conduit supports. Perforated iron for supporting conduit is not permitted.
- K. Use rigid galvanized steel or I.M.C., threaded, for exposed conduit runs. Install parallel or perpendicular to walls, structural members or intersection of vertical plane and ceilings. Avoid field made bends and offsets where possible. Do not install crushed or deformed raceways.
- L. Provide metal sleeves and install where conduit passes through masonry or concrete walls. Use No. 20 gauge galvanized steel sleeves, no more than 1/2 inch greater in diameter than the outside diameter of the conduit. Caulk conduit into sleeves with stone wool, Duseal or Oakum and weatherproof below grade. Where conduit passes through fire resistive walls, partitions, and floors, pack void spaces between conduits with U.S.G. Thermafiber or equal, as approved by the State Fire Marshal.
- M. Provide a heavy nylon cord pull rope in all empty conduits for future use. Leave in place for future use in all runs and tagged with plastic tag at terminating end indicating the location of the opposite end of the conduit.
- N. Use factory-manufactured ells, except where noted otherwise. Field bends are permitted for EMT conduit less than 1" diameter. Conduit radius for signal system is ten times the internal diameter of the conduit.
- O. Cap or seal all conduit ends until wires are pulled.
- P. Use watertight gland compression type connectors and couplings on fittings for thin wall metallic conduit. Screw type or crimp type are not permitted.
- Q. Wire all rotating electrical equipment with flexible, liquid-tight conduit with appropriate slack from disconnect switch to equipment.
- R. Install expansion coupling at all expansion joint locations, refer to Architectural Drawings for locations.
- S. Use approved type-bending machines for PVC conduits. Use of blow torch is prohibited.
- T. For grouping, use conduit trapezes made up of suitable Unistrut or Kindorf hangers.
- U. Seal or cap all conduit for a watertight installation.

- V. Use approved conductor pulling machines for all underground conduits. Use of truck is prohibited.

3.7 OUTLET BOXES:

- A. Attach outlet boxes on metal studs with TEC screws. Use wood screws for attachment on wood studs. Nails are not acceptable.
- B. Cover all boxes with outlet box protector, Appleton SB-CK or approved equal. Keep plaster and dirt from entering box or panels. If plaster does get in, removed it prior to pulling in wires.
- C. Close all unused openings with plugs.

3.8 INSTALLATION OF CONDUCTORS:

- A. Unless otherwise indicated or specified, do not install conductors of less than No. 12 AWG size. For control conductors protected by 15 ampere or lower overcurrent protection, No. 14 AWG conductors will be installed. Where approved by Code, remote control and signal circuits utilize No. 18 or No. 16 AWG sizes. Increase No. 12 to No. 10 AWG for 120 volt home runs exceeding 75 feet.
- B. Color code power wire and cable for feeders and branch circuits.
- C. Install all electrical conductors, including signal and communications circuits in an approved raceway.
- D. Neatly group conductors in panels, switchgear and terminal cabinets, etc., and form in a manner to fan into terminals with regular spacing. Lace formed groups of conductors with No. 12 waxed twine, or Panduit Co. Nylon Straps Numbers "SST-4-H" or "SST-2". Lace larger conductors with marlin and secure with cleats, or Panduit Co. Nylon Sta-Straps Numbers "SSC-4-H" and tie anchors ETA-1, TA-2 or TM-1-2-3.
- E. Install U.L. approved covered wire from all lighting fixture lamp sockets into outlet or junction box.

W. 3.10 WIRING COLOR CODE

- A. 120/240 Volt System
 - Phase A - Black.
 - Phase A Switch Leg - Black with "S" tag.
 - Phase B - Red.
 - Phase B Switch Leg - Red with "S" tag.
 - Travelers - Yellow.
 - Neutral - White.
 - Equipment Ground - Green.
- B. Provide identification tags on each conductor entering panel, switch, junction box and pull box to identify conductor.

3.11 UNDERGROUND PULL BOXES:

- A. Set underground pull boxes at +3" above highest adjacent grade level.

- B. Size per NEC.
- C. Provide nameplate on all covers. "ELEC"

3.12 CONDUCTOR JOINTS AND TAPING:

Make joints in conductors smaller than No. 6 AWG with solderless, tapeless, wing nut type pressure cable connector. Join conductors No. 6 AWG and larger together with approved type or pressure connector and tape to provide insulation not less than that of the conductor. Make connections to switch or bus bar with one-piece copper lugs for conductors No. 8 AWG or larger.

3.13 GROUNDING:

Provide grounding for entire electrical installation as required by the serving utility and codes mentioned in these specifications. Including:

- A. Conduit.
- B. Neutral or identified conductor of interior wiring system.
- C. Power and lighting panelboards.
- D. Non-current carrying metal parts or fixed equipment.
- E. Electrical panels in separate buildings.

END OF SECTION

END OF SPECIFICATIONS



APPENDIX "A"
PROJECT IMPROVEMENT PLANS
FOR

PROJECT NO. 82338

BID NO. 2024-12

CITY OF UPLAND TOM THOMAS MAGNOLIA PLAZA

"The Following Project Improvement Plans are Incorporated Herein By Reference As If Set Forth In Their Entirety:

Project 82338 City of Upland TOM THOMAS MAGNOLIA PLAZA
Construction Plans
Sheets 1-40 as signed October 10, 2025.



APPENDIX "B"

REQUIRED PERMITS AND CITY BUSINESS LICENSE

PROJECT NO. 82338

BID NO. 2024-12

CITY OF UPLAND TOM THOMAS MAGNOLIA PLAZA



Finance Stamp Here

Construction Permit No. _____

Inspector: _____

Final Inspection By: _____

Street/Lane Closure Permit No. _____

NOTE TO PERMITTEES: ANY WORK NOT LISTED ON THE CITY'S ACTIVE CONSTRUCTION MONITORING LIST, WILL BE SHUT DOWN IMMEDIATELY. PERMIT HOURS 7:00 AM TO 3:30 PM (M-F)

This Permit is not valid without the following items completed.

- Pre-Construction Meeting is MANDATORY before work begins; please contact Inspection at (909) 291-2963 to schedule your meeting. WORK SHALL NOT COMMENCE UNTIL THE PRE-CON MEETING HAS TAKEN PLACE, OR PERMIT WILL BE REVOKED AND PROJECT WILL BE SHUT DOWN IMMEDIATELY. PRE-CONSTRUCTION MEETINGS MAY BE SCHEDULED AFTER A MINIMUM OF THREE WORKING DAYS FROM THE PERMIT ISSUANCE DATE.
A 'Temporary Street Closure Permit' is required. No Street shall be closed, vehicular traffic, or pedestrian access impeded in any way without said permit, please allow 4 to 8 City business days for permit processing. Please contact the Permit Engineer at PWPERMITS@CI.UPLAND.CA.US for permit information.
A 'Truck Access Plan' is required before the work begins; please contact the Permit Engineer at PWPERMITS@CI.UPLAND.CA.US for necessary information to complete the Access Plan.
'At Risk Improvements' applies to Contractors requesting to work in the Public Right-Of-Way without approved plans. The Developer/Contractor is proceeding at their own risk in commencing this work without City Approved Plans. The Developer/Contractor has supplied the appropriate bonding and Indemnity Letter.
Underground Service Alert at 1-800-227-2600 shall be notified by applicant at least 2 working days in advance of any excavation and an Underground Service Alert Inquiry Identification Number shall be obtained from Underground Service Alert. CONTACTING U.S.A. DOES NOT RELIEVE CONTRACTOR OF RESPONSIBILITY FOR LOCATING OR PROTECTING EXISTING UTILITIES.

Reference (Tract, P.M., S.P., C.U.P., or Address): _____

General Location/City Plan#/Project #: _____

Contact Name: _____ E-mail Address: _____

Contractor: _____ Telephone: _____

License Number: _____ Expiration Date: _____

Address: _____

Developer (Owner): _____ Telephone: _____

Address: _____

Applicant's Statement

The undersigned hereby applies for permission to undertake, or to have undertaken, construction work within public right-of-way in the City of Upland. Said undersigned has read the conditions provided as Supplemental Permit Information. Said undersigned hereby agrees to observe and comply with all permit provisions. All applicable Sections of the Upland Municipal Code and all applicable Sections of the City of Upland Standard Specification for Public Works Construction, and to complete said construction work all in accordance with the approved plan, and/or standard drawing and/or engineering directives and/or special conditions.

Applicant's Printed Name Signature Date Signed

This Permit Expires on: _____ Extension _____ Approved By _____

Permit Approval: _____ City Engineer or Authorized Representative Date

Items to be constructed or activities with this Permit

Street

- AC Paving
- Curb & Gutter
- Drive Approach
- Sidewalk
- Miscellaneous Items
- Per Attached Plans

Sewer

- Sewer Main
- Manhole
- Sewer Lateral

Paid with Receipt Number

Water

- Water Main
 - Water Lateral
 - Fire Hydrant
- Storm drain**
- Storm drain Main

Miscellaneous

- Pavement Repairs
- Parkway Landscaping
- Utility Trench
- Splice Pit
- Aerial Work
- Traffic Control Inspection
- Grading
- Stockpile/Material Placement
- Square Feet Soil Disturbed

Fees

Permit Fee: _____

Inspection Deposit: _____

Total Due this Permit: _____

Account Number

101-300-0000-3205

101-300-0000-3645

REFUND REMAINING DEPOSIT TO: _____

Permit Work Hours

Permit work hours are from **7:00 AM to 3:30 PM**, Monday through Friday (excluding holidays). Any work after 3:30 PM is subject to the overtime inspection rate. Any work outside of the permit hours must be submitted in writing a minimum of four (4) business days/permit hours in advance.

NO WORK ON WEEKENDS AND HOLIDAYS ALLOWED BY THIS PERMIT PERMIT IS VALID ONLY WITHIN CITY RIGHT OF WAY; WORKS ON PRIVATE PROPERTY NEED PRIVATE OWNER'S PERMISSION. ALL PERTINENT ORDINANCES APPLY. PRE-CONSTRUCTION MEETING IS MANDATORY. PAVING WORKS MUST BE COMPLETED WITHIN 30 DAYS FROM BACKFILL IF INCLUDED IN THE SCOPE OF WORKS AND MUST USE ORDINANCE 841.

Temporary Street Closure

Temporary Street Closures require a separate permit and a minimum of 3 to 7 permit business days for processing. Prior to the start of any temporary street and/or lane closure, the applicant is required to notify and receive City approval a minimum of 72 permit business hours in advance. Permit business hours are Monday through Thursday from 8:00 AM to 4:00 PM.

Permit Fee Structure

The minimum fee for a Construction Permit is \$325.00 and is non-refundable. This minimum fee is for minor construction usually for a utility tie-in for a single-family home. Projects that are more extensive require a review on a case-by-case basis.

Public Works Inspection Deposit (Defined)

Inspections are based on an hourly rate. Staff performs an audit when the Inspector finalizes a Construction Permit. This audit consists of deducting the Inspector's documented time (shown on their time sheet) from the deposit.

Permit Extensions

Each permit extension will be assessed a new processing fee. The minimum fee is \$130.00 for each extension. Extension fees will automatically be assessed until the Permittee provides written notification to the City that the construction and all associated activities have been completed and that the permit has been finalized/signed-off by the Public Works Inspector.



City of Upland Public Works
Land Development and Transportation Division

PERMIT APPLICATION
TEMPORARY STREET AND LANE CLOSURES

NOTE: Please allow a minimum of 8 working days to process the permit application. For Inspections Call (909) 291-2963.

Start Date: _____ Completion Date: _____

Location: _____

Description of Street / Lane Closure: _____

Contact Name: _____ Project Number: _____

Company Name: _____ E-mail Address: _____

Address: _____ Daytime Phone: _____

City, State, Zip: _____ Emergency Phone: _____

Traffic Control Plans (check all that apply):

- Latest edition of WATCH manual plan/sketch
Latest edition of CJUTCM manual plan/sketch
Engineered Traffic Control Plans (TCP)

Table with Fees: Full Closure \$450.00, Partial Closure \$450.00, Block Party \$40.00, Vzn/TW/SCE/Gas - WO#, Traffic Control Plan Check

ALL APPLICATIONS MUST CONTAIN THE FOLLOWING INFORMATION. FAILURE TO PROVIDE THE INFORMATION WILL RENDER THE APPLICATION INCOMPLETE AND WILL NOT BE PROCESSED BY CITY STAFF.

- 1. Proof of valid California contractor's license
2. Proof of valid City Business license
3. Certificate of Liability Insurance (min. \$1M, with City named as additionally insured)
4. Proof of Workers Compensation
5. Any applicable fees
6. Site plan
7. City Project Number (if applicable)

I agree to all terms, conditions and restrictions listed on the back of the application.

Print Name _____ Signature _____ Date _____

FOR CITY STAFF USE ONLY:

Form containing permit details: Permit, Effective Date(s), Work Hours, Permit Number, Closure Type, Signature, Date, Receipt Number, Amount Paid, CIP or Project #, Extended Date(s), By, Date Extended, Permittee to contact City, Contacted By, Date of Call, Distribution checkboxes.

Traffic Control Plans:

Work Area Traffic Control Handbook (WATCH) or California Joint Utility Traffic Control Manual (CJUTCM) – It is the responsibility of the applicant to present the City with a reasonable assessment of how the required work zone and existing field condition fits this category. The existing field condition/lane geometry must match the proposed drawing being referenced in the source document.

Engineered Traffic Control Plans (sign and stamped by a registered Traffic Engineer) – For major projects or projects affecting major arterials and/or intersections involving temporary traffic control beyond the scope of WATCH or CJUTCM, an engineered traffic control plan will be required. Final determination of this requirement is made by traffic engineering staff. Engineered plans shall be stamped and signed by a registered civil traffic engineer. Allow two weeks for review of the first plan check submittal and one week for review of subsequent submittals of engineered traffic control plans.

General Notes

The Contractor shall provide and install barricades, delineators, warning devices, and construction signs in accordance with the latest edition of California Manual on Uniform Traffic Control Devices (M.U.T.C.D.). During adverse weather or unusual traffic or working conditions, additional traffic devices shall be placed as directed by the Public Works Director or Authorized Representative.

The Contractor shall relocate, preserve, and maintain the visibility of all existing signs within the project limits, which affect the flow of traffic, as directed by the Public Works Director or Authorized Representative. The Contractor at his expense as directed by the Public Works Director or Authorized Representative shall replace any signs, which are damaged or found to be missing during the course of construction.

The City of Upland and its elected officials, officers, agents, and employees shall not be answerable or accountable in any manner of any loss or damage that may happen to the work or any part thereof, or for any of the materials or other things used or employed in performing the work, or for injury or damage to any person or persons, either workmen, employees or Contractor or his Sub-Contractors or the public, or for damage to adjoining or other property from any cause whatsoever arising out of or in connection with the performance of the work. The Contractor shall be responsible for any damage or injury to any person or property resulting from defects or obstructions or from any cause whatsoever, except the sole negligence or willful misconduct of City, its employees, servants, or independent Contractors who are directly responsible to City during the progress of the work or at any time before its completion and final acceptance.

The Contractor will indemnify City and its elected officials, officers, agents, and employees against and will hold and save harmless from any and all actions, claims, damages to persons or property, penalties, obligations, or liabilities that may be asserted or claimed by any person, firm, entity, corporation, political subdivision, or other organizations arising out of or in connection with the work, operation, or activities of the Contractor, his agents, employees, Sub-Contractors, or invitees provided for herein whether or not there is concurrent passive or active negligence on the part of the City, its elected officials, officers, agents, and employees, but excluding such actions, claims, damages to persons or property, penalties, obligations, or liabilities arising from the sole negligence or willful misconduct of the City, its employees, servants, or independent Contractors who are directly responsible to City, and in connection therewith: The Contractor will defend any action or actions filed in connection with any of said claims, damages, penalties, obligations or liabilities and will pay all costs and expenses, including attorney's fees incurred in connection therewith.

Conditions

- Prior to the start of the temporary street closure, the applicant is required to notify and receive City approval a minimum of 72 permit business hours in advance (909) 931-4137. Permit business hours are M-Th from 8:00 AM to 4:00 PM.
- Please contact Inspection at (909) 291-2963 for Pre-Con.
- All signs shall be graffiti free and monitored/replaced when damaged.
- Must use flashing arrow boards for lane closures on all streets except for local/residential streets.
- Must backfill or steel plate all trenches during non-working hours.
- Post-temporary "NO PARKING" signs in the vicinity of the work area a minimum of 48 hours prior to closure. Signs shall clearly state effective dates and time of parking restriction.
- Must maintain one (1) lane of traffic in each direction at all times (Min. 12' wide lane).
- Protect any traffic signal detection equipment in-place or restore any equipment damaged by the Permittee within five (5) working days.
- Must maintain access for emergency vehicles to all driveways.
- Must notify all affected residents by letter or door hanger of the street closure a minimum of 48 hours in advance.
- When work is within a school zone, all sidewalks and traffic lanes shall remain open during non-working hours.
- Discretion per City Engineer or Inspector to change Traffic Control.

Restrictions/Comments: _____



Business License Fee Schedule

Effective January 18, 1988, a \$15.00 one-time application fee is added to all new Business License fees. This includes previous City of Upland business license holders who have closed their businesses and wish to re-open. Unless otherwise stated, all license fees (exclusive of application fee) are not to exceed \$864.00 per year.

Retail, Wholesale, Contractor, Service, or any business not otherwise specified will be based on gross receipts as follows:

| | | | | | |
|---------|----|---------|---|----------|---|
| 0 | to | 20,000 | = | \$ 54.00 | <i>This category limited to Upland Based Businesses Only</i> |
| 0 | to | 40,000 | = | \$ 75.60 | |
| 40,001 | to | 60,000 | = | 97.20 | |
| 60,001 | to | 100,000 | = | 140.40 | |
| 100,001 | to | 200,000 | = | 183.60 | |
| 200,001 | to | 300,000 | = | 216.00 | |
| 300,001 | to | 400,000 | = | 279.00 | |
| 400,001 | to | 500,000 | = | 324.00 | |
| 500,001 | to | 600,000 | = | 378.00 | |
| | | | | | |
| | | | | | 600,001 |
| | | | | | to |
| | | | | | 700,000 |
| | | | | | = |
| | | | | | 432.00 |
| | | | | | 700,001 |
| | | | | | to |
| | | | | | 800,000 |
| | | | | | = |
| | | | | | 486.00 |
| | | | | | 800,001 |
| | | | | | to |
| | | | | | 900,000 |
| | | | | | = |
| | | | | | 540.00 |
| | | | | | 900,001 |
| | | | | | to |
| | | | | | 1,000,000 |
| | | | | | = |
| | | | | | 594.00 |
| | | | | | 1,000,001 |
| | | | | | to |
| | | | | | 1,100,000 |
| | | | | | = |
| | | | | | 648.00 |
| | | | | | 1,100,001 |
| | | | | | to |
| | | | | | 1,200,000 |
| | | | | | = |
| | | | | | 702.00 |
| | | | | | 1,200,001 |
| | | | | | to |
| | | | | | 1,300,000 |
| | | | | | = |
| | | | | | 756.00 |
| | | | | | 1,300,001 |
| | | | | | to |
| | | | | | 1,400,000 |
| | | | | | = |
| | | | | | 810.00 |
| | | | | | 1,400,001 |
| | | | | | to |
| | | | | | 1,500,000 |
| | | | | | = |
| | | | | | 864.00 |

ADDITIONAL CATEGORIES

Administrative Offices

| | |
|---------------------|----------------|
| Base fee | 54.00 per year |
| Each employee | 4.50 per year |

Manufacturing

| | |
|-----------------------------------|-----------------|
| One to five employees..... | 54.00 per year |
| Six to fifteen employees | 108.00 per year |
| Sixteen to thirty employees | 216.00 per year |
| Over thirty employees | 324.00 per year |

Professional / Semi-Professional

| | |
|---|---------------------|
| Each practicing member of the firm (including real estate agents) | 54.00 each per year |
| Each non professional/semi professional employee | 4.50 each per year |

Recreation & Entertainment

| | |
|---------------------------------|-----------------|
| Rides or games of skill | 54.00 per year |
| Arcade games | 54.00 per year |
| Social club, Dancing club | 108.00 per year |

Residential Property Rentals

| | |
|------------------------------------|----------------|
| Three units or rooms | 54.00 per year |
| Each additional unit or room | 4.50 per year |

Solicitations

| | |
|---------------------------------------|------------------------------|
| Solicitors, canvassers, peddlers..... | 216.00 per year / per person |
|---------------------------------------|------------------------------|

Transportation

| | |
|--------------------------|------------------------------|
| Delivery by Vehicle..... | 54.00 per year / per vehicle |
| Taxicabs | 54.00 per year / per vehicle |

Other

| | |
|-----------------------------|--|
| Circus, carnival, etc | (issued by permission of City Manager) 540.00 per year |
| Public Utilities | 216.00 per year |



CITY OF UPLAND

Business Support Center
Business Licensing Division
8839 N Cedar Ave #212
Fresno, CA 93720

(909) 348-0460 , 8:00 a.m. – 5:00 p.m., M-F
support@hdlgov.com

Business License Number

Business License Application

This application is for:

- CITY OF UPLAND BUSINESS
- CITY OF UPLAND HOME OCCUPATION BUSINESS LICENSE
- CONTRACTOR OR OUTSIDE SERVICE DOING BUSINESS IN UPLAND
- CHANGE OF BUSINESS NAME*
- CHANGE OF BUSINESS ADDRESS*

*Prior Business Name: _____ *Prior Business Address: _____

GENERAL BUSINESS INFORMATION

Business Name (DBA): _____ Start Date: _____

Business Location: _____ City: _____ State: _____ Zip: _____

Mailing Address: _____ City: _____ State: _____ Zip: _____

Business Telephone: () - _____ No. of Employees: _____ Gross Receipts (Projected Next 12 Months): _____

Business Description (detailed summary): _____

OWNERSHIP TYPE/ IDENTIFICATION NUMBERS/OTHER INFORMATION

OWNERSHIP TYPE: Corporation Corporation Name: _____

Sole Proprietorship Husband & Wife Sole Proprietorship Partnership Non-Profit Org. (Exempt) LLC

Federal Employer ID: _____ State Employer ID: _____ State Sales Tax/Resale #: _____

Contractor License #: _____ Class: _____ Social Security: _____ - - SIC Code: _____

OWNER/PARTNER/OFFICER INFORMATION

| (1) | (2) | (3) |
|------------------------------|------------------------------|------------------------------|
| Name: _____ | Name: _____ | Name: _____ |
| Title: _____ | Title: _____ | Title: _____ |
| Home Address: _____ | Home Address: _____ | Home Address: _____ |
| City/State/Zip: _____ | City/State/Zip: _____ | City/State/Zip: _____ |
| Email Address: _____ | Email Address: _____ | Email Address: _____ |
| Home Telephone: _____ | Home Telephone: _____ | Home Telephone: _____ |
| Cell Telephone: _____ | Cell Telephone: _____ | Cell Telephone: _____ |
| Drivers License #: _____ | Drivers License #: _____ | Drivers License #: _____ |
| Social Security #: _____ - - | Social Security #: _____ - - | Social Security #: _____ - - |

NOTICE: I declare under penalty of perjury that the information I have provided is true and correct. I certify I will operate my business in accordance with all applicable Federal, State, and City laws and regulations. I understand that any false statements made are in violation of the City of Upland Municipal Code and are grounds for revocation of the Certificate of Business License. I understand that the term of the Certificate issued for this application will expire if I cease to meet the issuance qualifications. I authorize the City of Upland and its agents to seek information and/or conduct an investigation on this application.

Authorized Signature

Print Signature Name

Date

Please check to sign up for our Economic Development mailing list E-mail: _____



CITY OF UPLAND

BUSINESS LICENSE & ZONING CLEARANCE
APPLICATION PACKAGE

Starting a Business in the City of Upland?

Great!

The City of Upland would like to welcome you to its business community. We know that starting a new business can be exciting and challenging. We wish you success in your new venture!

To operate any business within the City of Upland you must first obtain a business license and meet all zoning requirements. For your convenience we have included a business license application, zoning clearance form, and a list of some of the additional requirements that you may need to consider when applying for your business license.

The City of Upland has contracted with The HdL Companies to provide assistance to the business community for all of their business licensing needs. The Business Support Center offers extended telephone support hours via their toll free telephone number as well as email contact options.

You may contact the Business Support Center for your entire business license needs anytime Monday through Friday from 8am to 5pm at:

- Toll-Free by Phone: 888-602-0239
- E-mail: businesstax@hdlcompanies.com
- Apply online: <https://upland.hdlcompanies.com/>
- Apply by mail: 8839 N. Cedar Avenue #212
Fresno, CA 93720

A GUIDE FOR STARTING A NEW BUSINESS IN UPLAND

The City of Upland is excited that you have chosen to operate a business in our community and we value the many businesses that have made Upland their home. This guide is intended to assist you through our business approval process. The process includes three steps:



Outside contractors who perform work in Upland at the request of individual property owners and who do *not* have a physical location in Upland do not need zoning approval and may skip Step 2 (Zoning Clearance).

The process mentioned above is outlined in more detail below including a description of the specific steps and the agency to contact. Some businesses also have special circumstances. Please read the details below for more information:

| Step | What to Do | Who to Contact |
|---------------|--|--|
| Step 1 | Obtain Business License Tax Certificate | |
| 1.1 | Name The Business <p>This is a very important part of beginning your business since it is the item that will identify you, your service and/or your product to the consumer. Once you have decided your business name, ascertain if the name is available for use. Make inquiries to confirm availability with the Secretary of State for corporate names and San Bernardino County Recorder's office for fictitious name filings.</p> | <p>City of Upland Business Support Center 888-602-0239</p> <p>➔ You can also apply online at: https://upland.hdlcompanies.com/</p> |
| 1.2 | File And Publish A Fictitious Name Statement <p>If the business is not a legal entity registered with the State of California, or it does not contain the owners surname, such as Jones Roofing, a Fictitious Name Statement must be filed with the County Recorder's office in the county in which the business is based (San Bernardino). This is also a requirement for partnerships not recognized by the State.</p> | <p>San Bernardino County Recorder's Office 855-732-2575</p> |

| Step | What to Do | Who to Contact |
|------|------------|----------------|
|------|------------|----------------|

1.3 Determine The Legal Status Of Your Business

Most businesses are classified under one of the following categories of legal status:

- Sole-Proprietor – A business owned by a single person or husband and wife who receives profits.
- Partnership – Two or more persons who are co-owners of a business for profit.
- Corporation – An independent legal tax entity, which remains intact even if its officers and/or directors change; must provide *Articles of Incorporation or DBA (Doing Business As), if applicable.*
- Limited Liability Corporation (LLC) – A non-corporate business whose owner actively participates in the organization’s management and are protected against personal **liability**.
- Non-Profit – Must be recognized by the IRS as an exempt entity; *must provide supporting documentation – (Section 501C(3)).*
- Other

Check with your legal or financial advisor for the status best suited for your business. Questions concerning incorporation of a business should be directed to the Secretary of State, an attorney, financial advisor, or trade association.

Legal or Financial Advisor

1.4 Apply For Tax ID Numbers

If you plan to hire employees for your business, you must obtain tax identification numbers for reporting purposes. These numbers are used to identify your business on payroll and business income tax returns. To apply for a Federal number, contact the IRS, for a state number contact EDD.

State of California
Employment Development (EDD)
800-300-5616

US Department of Treasury
Internal Revenue Service
800-829-1040

1.5 Workers Comp Insurance

Workers Compensation Insurance is required by the State of California for any business with employees. Contact the State Industrial Relations Department for information and requirements. Some insurance agencies may also be able to assist.

State of California
Industrial Relations Department
800-963-9424

1.6 Obtain Required Permits

Depending upon the type of business, certain permits may be required. Below is a list of possible permits that may apply to your business.

Sellers Permit: All retail and wholesale businesses must obtain a Sellers Permit or Resale Permit from the State Board of Equalization. This may be applied for at any local office. Every business that sells goods must collect and then remit sales tax to the State of California. This process is set in motion with the application for the sellers permit.

State of California
State Board of Equalization
951-680-6400
800-400-7115

Health Permit: Eating establishments - food sales and handling. Any business dealing with consumable products must obtain a permit from the County Environmental Health Services Department.

San Bernardino County
Environmental Health Services
800-782-4264

Hazardous Materials: Any business which handles hazardous materials (i.e. automotive repair) is also required to obtain a permit from the County Environmental Health Services Department. All businesses should contact the County to verify whether or not a permit is required.

San Bernardino County
Environmental Health Services
800-782-4264

Child/Day Care: Although daycare businesses operated from a private residence are exempt from City business licensing if there are six or fewer children, a State license is required regardless of the number of children. The County and Development Services Department should also be contacted for any additional requirements.

State of California
Community Care Licensing
951-782-4200
800-300-5616

Alcohol Sales: Businesses selling alcohol products consumed on or off the premises must obtain a permit from the California Department of Alcoholic Beverage Control (ABC). The City's Development Services Department should also be contacted for any additional requirements.

State of California
Department of Alcoholic
Beverage Control (ABC)
(951) 782-4400

Secondhand Dealers and Pawn Shops: Businesses are required by the Department of Justice (DOJ) to possess and display a Secondhand Dealer or Pawn Broker license. The Upland Police Department serves as a liaison between the DOJ and the business owner. Contact the Upland Police Department Detective Bureau and request an application for license and Live Scan Service. Also, the Upland Planning Division can tell you whether the proposed business location is zoned for secondhand dealers and pawn shops.

City of Upland
Planning Division
909-931-4130

Upland Police Department
*909-946-7624

**Non-Emergency Number*

Massage Industry: Businesses are required to obtain and display certification from the California Massage Therapy Council. Contact the California Massage Therapy Council for information on certification. Please note certifications for all employees must be obtained prior to issuance of a zoning clearance from the Upland Planning Division.

City of Upland
Planning Division
909-931-4130

State of California
Massage Therapy Council
916-669-5336

1.7 Complete and Submit the Business License Application

Submit your **Business License Application** to the Business Support Center. Be sure to include a copy of your signed zoning clearance application. After filing with all required agencies, a business is ready to obtain a business license. Submit the zoning clearance, all State and County licenses and permits, your fictitious name filing, corporate or partnership documentation and your Tax ID numbers to the Business Support Center. You may also file online at: <https://upland.hdlcompanies.com/>

City of Upland
Business Support Center
1142 S. Diamond Bar Blvd #502
Diamond Bar, CA 91765
888-602-0239

No payment will be required until your application has been reviewed and accepted. You will receive an email verifying the receipt of application. After the business tax fees are paid a business license number issued. A hard copy certificate will be mailed in approximately 6-8 weeks. Upon receipt, the Upland Municipal Code requires it be posted in a conspicuous place within the business.

➔ Please continue to the zoning clearance section (STEP 2) if your business will be located or based inside the City of Upland.

| Step | What to Do | Who to Contact |
|---------------|--|---|
| Step 2 | Obtain Zoning Approval For Your Location | |
| | <p>2.1 Local Zoning And Building Codes</p> <p>Visit the Planning Division section of the City’s website and review the zoning forms in this package to find out more about the zoning, land use, and building code requirements for your proposed business location. Be sure to do this before you sign leases or sales agreements, and before making any interior or exterior alterations.</p> <p>The Business Support Center staff will assist you determine what zoning clearance, home occupation permit, or other type of prerequisite your business will required based on the activity and location of your proposed business. If your business only requires a zoning clearance or home occupation permit, you may go to Step 2.2</p> | <p>City of Upland Planning Division 909-931-4130</p> |
| | <p>2.2 Complete and Submit the Zoning Clearance Forms</p> <p>All new business must complete and submit a Zoning Clearance Application. Please submit all zoning related documentation to the Business Support Center with your Business License Application. If you plan to conduct your business from a residence (home based business) located in the City of Upland you will also need to complete a Home Occupation Application.</p> <p><i>** Please note that once a zoning clearance is approved, it is only active for 30 day period. It is very important that you complete all the required prerequisites for your business type in order to obtain a business license certificate. **</i></p> | <p>City of Upland Business Support Center 888-602-0239</p> |
| | <p><u>Building Permit:</u> Businesses wishing to make interior or exterior alterations to a tenant space must obtain any necessary permits from the Development Services Department.</p> | <p>City of Upland Planning Division Development Services 909-931-4130</p> |
| Step 3 | <p>Construction</p> <p>After obtaining building permits, perform any construction or building modifications required by the City as necessary for the successful operation of your business. Once you have passed a final inspection or received a certificate of use and occupancy, you may open for business.</p> | <p>City of Upland Building & Safety Division 909-931-4110</p> |
| Step 4 | <p>GRAND OPENING!</p> <p>Congratulations! We hope your business thrives in the City of Upland.</p> | |

ADDITIONAL INFORMATION

Additional sources for information pertaining to starting or relocating a business include: Chamber of Commerce, the Small Business Administration, counselors, attorneys, your local library, financial advisors, tax consultants, and the City of Upland website and Municipal Code.

DISCLAIMER

This handout is intended as a guideline and tool for business owners. The City of Upland does not guarantee these are the only steps your particular business may need prior to opening. Any technical questions should be directed to the responsible agency or your professional consultant. Upland cannot take responsibility for operation of your business.

HELPFUL NUMBERS

There are a number of entities involved in the process of obtaining all necessary licenses and permits when opening a business at the local, State, and federal level. The following is a list of helpful numbers of these various agencies:

UPLAND CITY OFFICES

www.ci.upland.ca.us

CITY HALL

460 N. Euclid Avenue
Upland, CA 91785
(909) 931-4100

BUILDING DIVISION

460 N. Euclid Avenue
Upland, CA 91785
(909) 931-4110

BUSINESS LICENSES

Business Support Center
8839 N. Cedar Avenue #212
Fresno, CA 93720
(888) 602-0239

CODE ENFORCEMENT

460 N. Euclid Avenue
Upland, CA 91785
(909) 931-4260

PLANNING DIVISION

460 N. Euclid Avenue
Upland, CA 91785
(909) 931-4130

FIRE DEPARTMENT

475 N. 2nd Avenue
Upland, CA 91785
Non-Emergency (909) 931-4180

PUBLIC WORKS

1370 N. Benson Avenue
Upland, CA 91785
(909) 931-4230

POLICE DEPARTMENT

1499 W. 13th Street
Upland, CA 91785
Non-Emergency (909) 946-7624

COUNTY OFFICES

<http://www.sbcounty.gov/>

AUDITOR/CONTROLLER/RECORDER

Fictitious Business Name
222 W. Hospitality Lane, First Floor
San Bernardino, CA 92415-0022
(855) REC-CLRK or (909) 387-8306

DEPARTMENT OF PUBLIC HEALTH

County Government Center
385 N. Arrowhead Avenue
San Bernardino, CA 92415
(800) 782-4264

MISCELLANEOUS

CHAMBER OF COMMERCE

215 N. 2nd Ave., #D
Upland, CA 91785
www.uplandchamber.org
(909) 204-4465

CALIFORNIA MASSAGE THERAPY COUNCIL

One Capitol Mall, Suite 320
Sacramento, CA 95814
www.camtc.org
(916) 669-5336

BETTER BUSINESS BUREAU

www.bbb.org
(909) 825-7280

INLAND EMPIRE SMALL BUSINESS DEVELOPMENT CENTER

3780 Market Street
Riverside CA 92501
www.iesmallbusiness.com
(951) 781-2345

STATE AND FEDERAL OFFICES

www.ca.gov

ALCOHOLIC BEVERAGE CONTROL (ABC)

www.abc.ca.gov

(951) 782-4400

ATTORNEY GENERAL

www.caag.state.ca.us

(800) 952-5225

BOARD OF EQUALIZATION

www.boe.ca.gov

Riverside Office

(951) 680-6400 or (800) 400-7115

CONSUMER AFFAIRS

www.dca.ca.gov

(800) 952-5210

CONTRACTOR'S STATE LICENSING BOARD

www.cslb.ca.gov

Sacramento

(800) 321-2752

DEPARTMENT OF JUSTICE (DOJ)

www.oag.ca.gov

Sacramento

(800) 952-5225

DEPARTMENT OF SOCIAL SERVICES COMMUNITY CARE LICENSING

www.cclld.ca.gov

Riverside/San Bernardino Office

(951) 782-4200

EMPLOYMENT DEVELOPMENT

www.edd.ca.gov

(800) 300-5616

FRANCHISE TAX BOARD

www.ftb.ca.gov

(800) 338-0505

INTERNAL REVENUE SERVICE (IRS)

www.irs.gov

(800) 829-1040

SECRETARY OF STATE

www.sos.ca.gov

Sacramento

(916) 653-3795

SMALL BUSINESS ADMINISTRATION

www.sbaonline.sba.gov

(800) U-ASK-SBA

ADDITIONAL INFORMATION

BUSINESS LICENSE REQUIREMENTS

Businesses operating within Upland City limits are required to have a business license. This includes home-based businesses, contractors, and outside services doing business in Upland. Chapter 5.04 of the Upland Municipal Code states in part, "It is unlawful for any person to transact and carry on any business, trade, profession, calling, or occupation in the city (Upland) without first having procured a license . . ."

FILING YOUR BUSINESS LICENSE APPLICATION

The Business License Application is a general form used for all types of businesses; complete only applicable information pertinent to your business.

Contractors: Must include their State Contractors License Number.

Residential Property Rental: If there are less than 3 total rental units NO business license is required in the City of Upland.

Fictitious Name Statement: If surname is not included in the business name, a Fictitious Name Statement and proof of publication must be provided.

BUSINESS DESCRIPTION

Provide a detailed description of the type of business you intend to operate. It may be necessary to attach a written operations summary to include a detailed analysis of what your business operations entail.

RENEWAL

The City will mail one courtesy renewal notice annually. It is your responsibility to renew your business license during the month following the expiration of your license. Penalties will be assessed if the City does not receive your renewal payment during this timeframe. Business licenses will expire either on June 30th or on December 31st of each year.

CLOSURE

You must notify the Business Support Center in writing when you close your business.

CHANGES

Notify the Business Support Center in writing if you have a change of address or a change of business name; fee is \$2.00. Licenses are non-transferable. If you sell your business, it is your responsibility to notify the City and close your license. The new business owner or entity must apply for a new license.

SB-1186 FEE

State Law SB-1186 requires the City to charge a fee of \$1 on any application for a business license or similar instrument, permit, or renewal thereof. The purpose of this fee is to increase disability access and compliance with construction-related accessibility requirements, and to develop educational resources for businesses in order to facilitate compliance with federal and state disability laws, as specified. SB-1186 was signed into law by Governor Jerry Brown on September 19, 2012 and became effective on January 1, 2013.

**** The above information provides general information on applying for a Business License in the City of Upland. Should you require additional information, please contact Customer Service at 888-602-0239 ****



APPENDIX "C"
SOUTH COAST AIR QUALITY MANAGEMENT
DISTRICT

PROJECT NO. 82338

BID NO. 2024-12

CITY OF UPLAND TOM THOMAS MAGNOLIA PLAZA

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

- (1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.
- (2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.
- (3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.
- (4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.
- (5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

- (6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.
- (7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.
- (8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.
- (9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.
- (10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.
- (11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.
- (12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.
- (13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

- (14) **DISTURBED SURFACE AREA** means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:
- (A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;
 - (B) been paved or otherwise covered by a permanent structure; or
 - (C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.
- (15) **DUST SUPPRESSANTS** are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.
- (16) **EARTH-MOVING ACTIVITIES** means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.
- (17) **DUST CONTROL SUPERVISOR** means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.
- (18) **FUGITIVE DUST** means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.
- (19) **HIGH WIND CONDITIONS** means that instantaneous wind speeds exceed 25 miles per hour.
- (20) **INACTIVE DISTURBED SURFACE AREA** means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.
- (21) **LARGE OPERATIONS** means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

- (22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.
- (23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.
- (25) PM₁₀ means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.
- (26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.
- (27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.
- (28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.
- (29) SIMULTANEOUS SAMPLING means the operation of two PM₁₀ samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.
- (30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

- (31) **STABILIZED SURFACE** means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.
 - (32) **TRACK-OUT** means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
 - (33) **TYPICAL ROADWAY MATERIALS** means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.
 - (34) **UNPAVED ROADS** means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.
 - (35) **VISIBLE ROADWAY DUST** means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
 - (36) **WIND-DRIVEN FUGITIVE DUST** means visible emissions from any disturbed surface area which is generated by wind action alone.
 - (37) **WIND GUST** is the maximum instantaneous wind speed as measured by an anemometer.
- (d) **Requirements**
- (1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

- (A) the dust remains visible in the atmosphere beyond the property line of the emission source; or
 - (B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.
- (2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.
- (3) No person shall cause or allow PM₁₀ levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM₁₀ monitoring. If sampling is conducted, samplers shall be:
- (A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM₁₀.
 - (B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.
- (4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.
- (5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.
- (A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

- (B) Pave the surface extending at least 100 feet and at least 20 feet wide.
 - (C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
 - (D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
 - (E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).
- (6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.
- (e) Additional Requirements for Large Operations
- (1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:
 - (A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;
 - (B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
 - (C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

- (D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;
 - (E) identify a dust control supervisor that:
 - (i) is employed by or contracted with the property owner or developer;
 - (ii) is on the site or available on-site within 30 minutes during working hours;
 - (iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;
 - (iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and
 - (F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).
- (2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).
- (f) **Compliance Schedule**
The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

- (A) Dairy farms.
- (B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.
- (C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.
- (D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:
 - (i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;
 - (ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and
 - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.
- (E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:
 - (i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and
 - (ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and
 - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.

- (F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.
 - (G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.
 - (H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.
 - (I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.
 - (J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:
 - (i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and
 - (ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.
 - (K) sandblasting operations.
- (2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:
- (A) When wind gusts exceed 25 miles per hour, provided that:

- (i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;
 - (ii) records are maintained in accordance with subparagraph (e)(1)(C).
 - (B) To unpaved roads, provided such roads:
 - (i) are used solely for the maintenance of wind-generating equipment; or
 - (ii) are unpaved public alleys as defined in Rule 1186; or
 - (iii) are service roads that meet all of the following criteria:
 - (a) are less than 50 feet in width at all points along the road;
 - (b) are within 25 feet of the property line; and
 - (c) have a traffic volume less than 20 vehicle-trips per day.
 - (C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.
- (3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.
 - (4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:
 - (A) Blasting operations which have been permitted by the California Division of Industrial Safety; and
 - (B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.
 - (5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

- (6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.
- (7) The provisions of subdivision (e) shall not apply to:
 - (A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.
 - (B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.
 - (C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.
- (8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM₁₀ pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

| Source Category | Control Measure | Guidance |
|-----------------------|---|---|
| Backfilling | 01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity. | <ul style="list-style-type: none"> ✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket |
| Clearing and grubbing | 02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities. | <ul style="list-style-type: none"> ✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes |
| Clearing forms | 03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms. | <ul style="list-style-type: none"> ✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements |
| Crushing | 04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing. | <ul style="list-style-type: none"> ✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes |

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

| Source Category | Control Measure | Guidance |
|--------------------------------|--|--|
| Cut and fill | 05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities. | <ul style="list-style-type: none"> ✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts |
| Demolition – mechanical/manual | 06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403. | <ul style="list-style-type: none"> ✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes |
| Disturbed soil | 07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures | <ul style="list-style-type: none"> ✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes |
| Earth-moving activities | 08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete. | <ul style="list-style-type: none"> ✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes |

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

| Source Category | Control Measure | Guidance |
|---------------------------------------|---|--|
| Importing/exporting of bulk materials | 09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114. | <ul style="list-style-type: none"> ✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes |
| Landscaping | 10-1 Stabilize soils, materials, slopes | <ul style="list-style-type: none"> ✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season |
| Road shoulder maintenance | 11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance. | <ul style="list-style-type: none"> ✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs |

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

| Source Category | Control Measure | Guidance |
|--|--|--|
| Screening | 12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening. | <ul style="list-style-type: none"> ✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point |
| Staging areas | 13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion. | <ul style="list-style-type: none"> ✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exits |
| Stockpiles/ Bulk Material Handling | 14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage. | <ul style="list-style-type: none"> ✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces |

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

| Source Category | Control Measure | Guidance |
|---|--|---|
| Traffic areas for construction activities | 15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes. | <ul style="list-style-type: none"> ✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes |
| Trenching | 16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities. | <ul style="list-style-type: none"> ✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment |
| Truck loading | 17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114) | <ul style="list-style-type: none"> ✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading |
| Turf Overseeding | 18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site. | <ul style="list-style-type: none"> ✓ Haul waste material immediately off-site |

**TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)**

| Source Category | Control Measure | Guidance |
|----------------------------|--|---|
| Unpaved roads/parking lots | 19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots. | ✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements |
| Vacant land | 20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures. | |

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

| FUGITIVE DUST SOURCE CATEGORY | CONTROL ACTIONS |
|--|---|
| Earth-moving (except construction cutting and filling areas, and mining operations) | <p>(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>(1a-1) For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p> |
| Earth-moving: Construction fill areas: | <p>(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p> |

Table 2 (Continued)

| FUGITIVE DUST SOURCE CATEGORY | CONTROL ACTIONS |
|--|--|
| Earth-moving: Construction cut areas and mining operations: | (1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors. |
| Disturbed surface areas (except completed grading areas) | (2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area. |
| Disturbed surface areas: Completed grading areas | (2c) Apply chemical stabilizers within five working days of grading completion; OR (2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas. |
| Inactive disturbed surface areas | (3a) Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR (3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (3c) Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR (3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas. |

Table 2 (Continued)

| FUGITIVE DUST SOURCE CATEGORY | CONTROL ACTIONS |
|--------------------------------------|---|
| Unpaved Roads | <p>(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR</p> <p>(4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR</p> <p>(4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p> |
| Open storage piles | <p>(5a) Apply chemical stabilizers; OR</p> <p>(5b) Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR</p> <p>(5c) Install temporary coverings; OR</p> <p>(5d) Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.</p> |
| All Categories | <p>(6a) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.</p> |

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

| FUGITIVE DUST SOURCE CATEGORY | CONTROL MEASURES |
|--------------------------------------|---|
| Earth-moving | (1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil. |
| Disturbed surface areas | (0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas. |
| Unpaved roads | (1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic. |
| Open storage piles | (1D) Apply water twice per hour; OR (2D) Install temporary coverings. |
| Paved road track-out | (1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads. |
| All Categories | (1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used. |

Table 4
(Conservation Management Practices for Confined Animal Facilities)

| SOURCE CATEGORY | CONSERVATION MANAGEMENT PRACTICES |
|--|--|
| Manure Handling (Only applicable to Commercial Poultry Ranches) | (1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material. |
| Feedstock Handling | (2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins. |
| Disturbed Surfaces | (3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface. |
| Unpaved Roads | (4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface. |
| Equipment Parking Areas | (5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches). |



**APPENDIX "D"
TRUCK ACCESS PLAN**

FOR

PROJECT NO. 82338

BID NO. 2024-12

CITY OF UPLAND TOM THOMAS MAGNOLIA PLAZA



**Development Services Department
Engineering Division**

Telephone (909) 931-4137
Facsimile (909) 931-4321
Revision Date: October 24, 2011

Construction Traffic (Truck) Access Plan

Project Name: _____ Construction Permit # _____
(Tract/Parcel Map Site Plan or CUP #)

Project Location: _____

Company Name: _____

Contact Person: _____

Company Address: _____

Company Telephone: _____ Fax: _____

Company Email: _____

Construction traffic (truck) access to and from the above project site is limited to the following streets:

Trucks are restricted to the approved City Of Upland truck routes except as specified above.

This plan is valid for truck traffic associated with delivery of common construction material or removal of earthen materials during grading operations. Trucks or loads exceeding the weight or size limitations as specified in Section 35000 of the California Vehicle Code may require a special permit.

Applicant Signature: _____ Date: _____

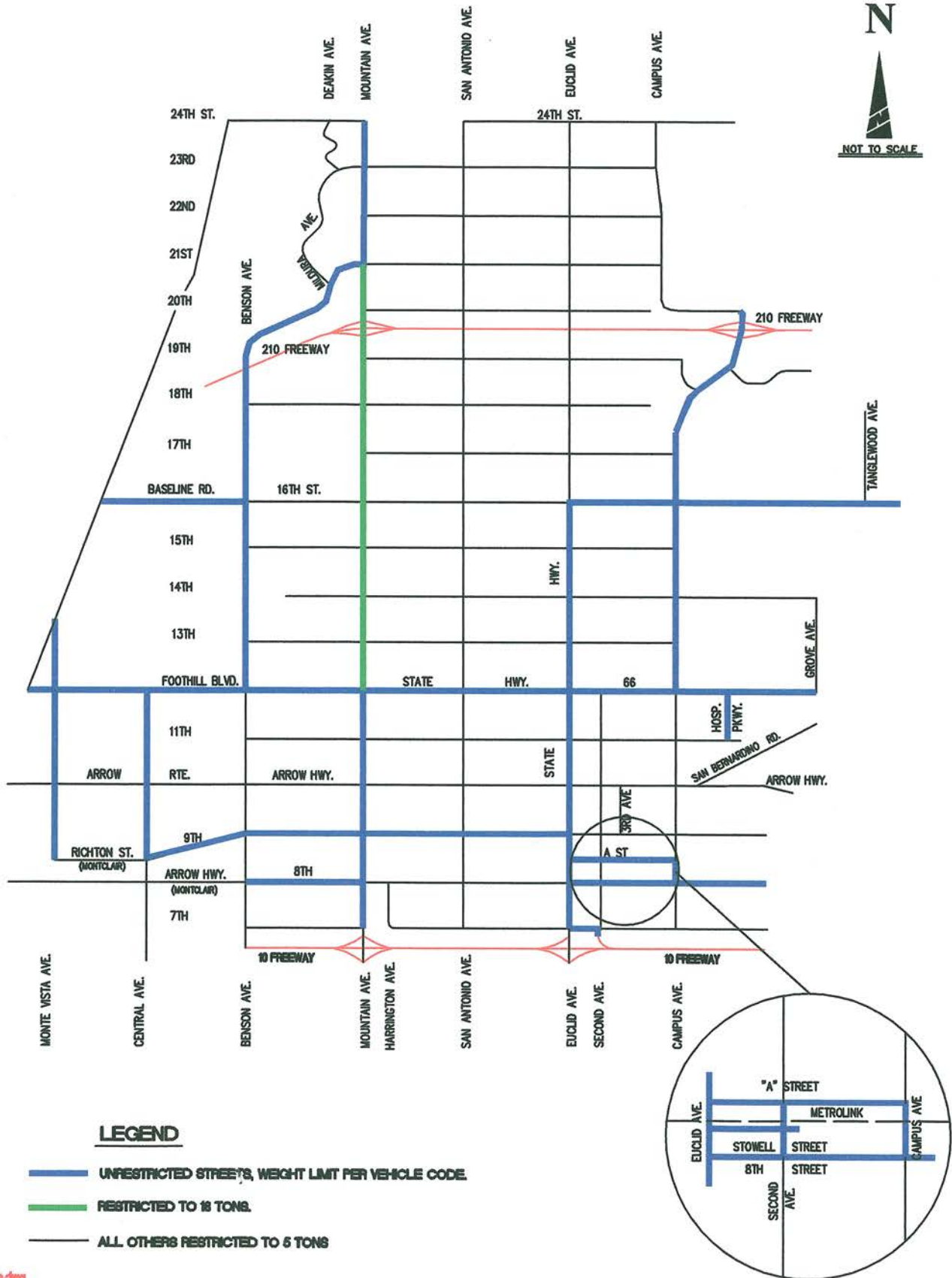
Applicant Name: (Please Print) _____

Approved By: _____ Date: _____

Routing:

- Applicant PD Traffic Division Project File PW Inspectors PW Transportation

CITY OF UPLAND TRUCK ROUTES & RESTRICTED STREETS





APPENDIX "E"
SAMPLE PROJECT IDENTIFICATION SIGN
FOR

PROJECT NO. 82338

BID NO. 2024-12

CITY OF UPLAND TOM THOMAS MAGNOLIA PLAZA



**7TH STREET & HARRINGTON AVENUE
REHABILITATION
AND
WATER IMPROVEMENTS**

Estimated Completion: NOVEMBER 2020

**FUNDING PROVIDED BY:
GAS TAX, MEASURE I, AND
CITY OF UPLAND – WATER ENTERPRISE FUND**

City Council

Debbie Stone, Mayor • Rudy Zuniga, Mayor Pro Tem
Janice Elliot • Bill Velto, Council Members

For more information, please call the Upland Public Works Department (909) 291-2930

Size: 4' Vertical by 8' horizontal. Material: ½" Plywood with graffiti laminate. Colors: White background, green and black graphics, full color logo.



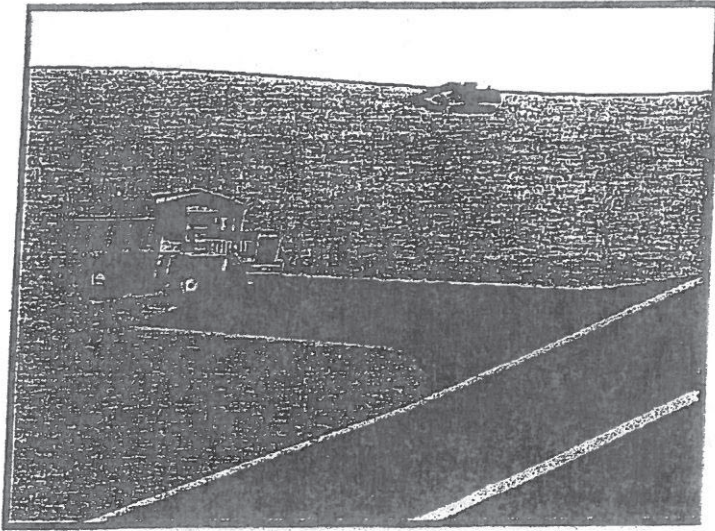
APPENDIX "F"
BEST MANAGEMENT PRACTICES
FOR

PROJECT NO. 82338

BID NO. 2024-12

CITY OF UPLAND TOM THOMAS MAGNOLIA PLAZA

Stabilized Construction Entrance/Exit TC-1



Description and Purpose

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Suitable Applications

Use at construction sites:

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Entrances and exits require periodic top dressing with additional stones.
- This BMP should be used in conjunction with street sweeping on adjacent public right of way.
- Entrances and exits should be constructed on level ground only.
- Stabilized construction entrances are rather expensive to construct and when a wash rack is included, a sediment trap of some kind must also be provided to collect wash water runoff.

Objectives

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | <input checked="" type="checkbox"/> |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TC | Tracking Control | <input checked="" type="checkbox"/> |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

None



Stabilized Construction Entrance/Exit TC-1

Implementation

General

A stabilized construction entrance is a pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right of way, street, alley, sidewalk, or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights of way or streets. Reducing tracking of sediments and other pollutants onto paved roads helps prevent deposition of sediments into local storm drains and production of airborne dust.

Where traffic will be entering or leaving the construction site, a stabilized construction entrance should be used. NPDES permits require that appropriate measures be implemented to prevent tracking of sediments onto paved roadways, where a significant source of sediments is derived from mud and dirt carried out from unpaved roads and construction sites.

Stabilized construction entrances are moderately effective in removing sediment from equipment leaving a construction site. The entrance should be built on level ground. Advantages of the Stabilized Construction Entrance/Exit is that it does remove some sediment from equipment and serves to channel construction traffic in and out of the site at specified locations. Efficiency is greatly increased when a washing rack is included as part of a stabilized construction entrance/exit.

Design and Layout

- Construct on level ground where possible.
- Select 3 to 6 in. diameter stones.
- Use minimum depth of stones of 12 in. or as recommended by soils engineer.
- Construct length of 50 ft minimum, and 30 ft minimum width.
- Rumble racks constructed of steel panels with ridges and installed in the stabilized entrance/exit will help remove additional sediment and to keep adjacent streets clean.
- Provide ample turning radii as part of the entrance.
- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment trapping device before discharge.
- Design stabilized entrance/exit to support heaviest vehicles and equipment that will use it.
- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. Do not use asphalt concrete (AC) grindings for stabilized construction access/roadway.

Stabilized Construction Entrance/Exit TC-1

- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth, or place aggregate to a depth recommended by a geotechnical engineer. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.
- Designate combination or single purpose entrances and exits to the construction site.
- Require that all employees, subcontractors, and suppliers utilize the stabilized construction access.
- Implement SE-7, Street Sweeping and Vacuuming, as needed.
- All exit locations intended to be used for more than a two-week period should have stabilized construction entrance/exit BMPs.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMPs are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect local roads adjacent to the site daily. Sweep or vacuum to remove visible accumulated sediment.
- Remove aggregate, separate and dispose of sediment if construction entrance/exit is clogged with sediment.
- Keep all temporary roadway ditches clear.
- Check for damage and repair as needed.
- Replace gravel material when surface voids are visible.
- Remove all sediment deposited on paved roadways within 24 hours.
- Remove gravel and filter fabric at completion of construction

Costs

Average annual cost for installation and maintenance may vary from \$1,200 to \$4,800 each, averaging \$2,400 per entrance. Costs will increase with addition of washing rack, and sediment trap. With wash rack, costs range from \$1,200 - \$6,000 each, averaging \$3,600 per entrance.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas, USEPA Agency, 2002.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group Working Paper, USEPA, April 1992.

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Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

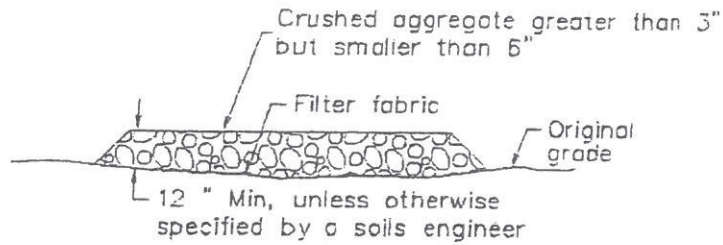
Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

Virginia Erosion and Sedimentation Control Handbook, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, 1991.

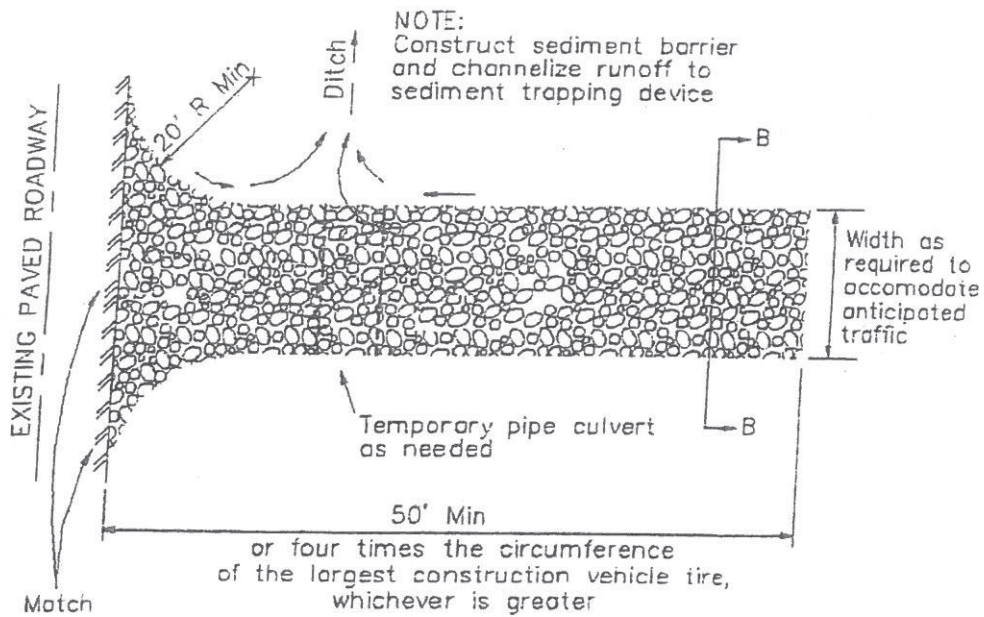
Guidance Specifying Management Measures for Nonpoint Pollution in Coastal Waters, EPA 840-B-9-002, USEPA, Office of Water, Washington, DC, 1993.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

Stabilized Construction Entrance/Exit TC-1

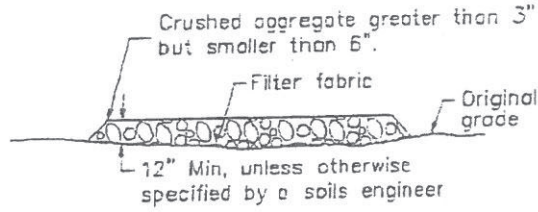


SECTION B-B
NTS

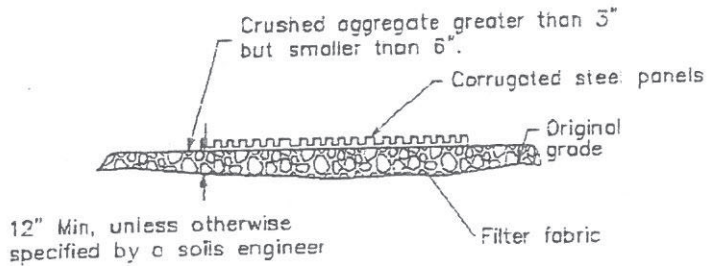


PLAN
NTS

Stabilized Construction Entrance/Exit TC-1

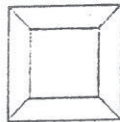


SECTION B-B
NTS

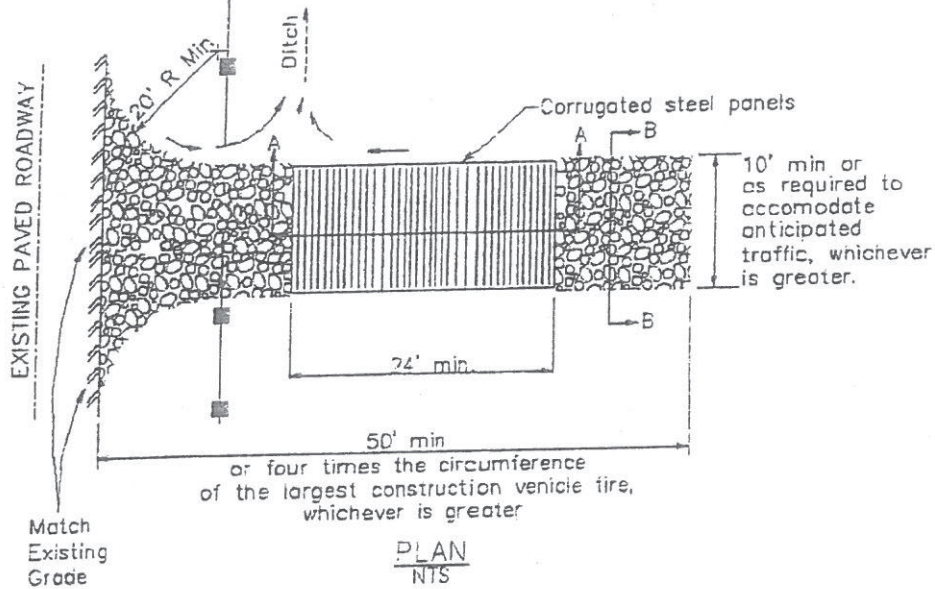


SECTION A-A
NOT TO SCALE

NOTE:
Construct sediment barrier and channelize runoff to sediment trapping device

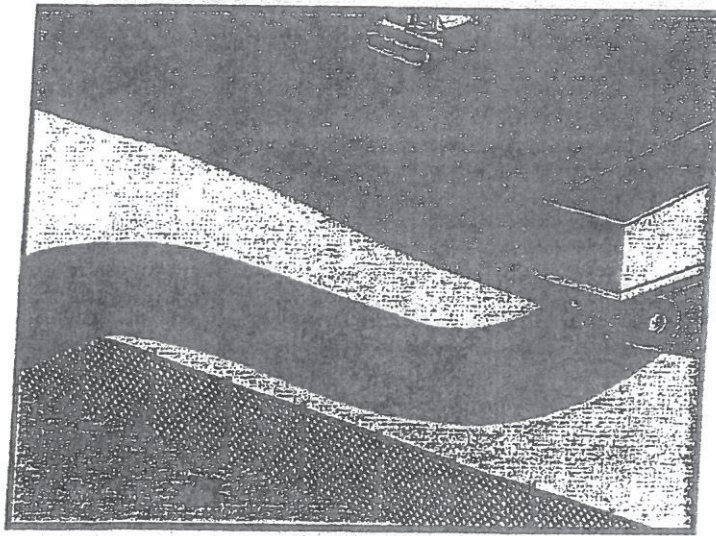


Sediment trapping device



Stabilized Construction Roadway

TC-2



Objectives

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | <input checked="" type="checkbox"/> |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TC | Tracking Control | <input checked="" type="checkbox"/> |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

None

Description and Purpose

Access roads, subdivision roads, parking areas, and other onsite vehicle transportation routes should be stabilized immediately after grading, and frequently maintained to prevent erosion and control dust.

Suitable Applications

This BMP should be applied for the following conditions:

- Temporary Construction Traffic:
 - Phased construction projects and onsite road access
 - Construction during wet weather
- Construction roadways and detour roads:
 - Where mud tracking is a problem during wet weather
 - Where dust is a problem during dry weather
 - Adjacent to water bodies
 - Where poor soils are encountered

Limitations

- The roadway must be removed or paved when construction is complete.



Stabilized Construction Roadway

TC-2

- Stabilize roadway using aggregate, asphalt concrete, or concrete based on longevity, required performance, and site conditions. The use of cold mix asphalt or asphalt concrete (AC) grindings for stabilized construction roadway is not allowed.
- Coordinate materials with those used for stabilized construction entrance/exit points.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 12 in. depth. A crushed aggregate greater than 3 in. but smaller than 6 in. should be used.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two-week intervals in the non-rainy season to verify continued BMP implementation.
- Keep all temporary roadway ditches clear.
- When no longer required, remove stabilized construction roadway and re-grade and repair slopes.
- Periodically apply additional aggregate on gravel roads.
- Active dirt construction roads are commonly watered three or more times per day during the dry season.

Costs

Gravel construction roads are moderately expensive, but cost is often balanced by reductions in construction delay. No additional costs for dust control on construction roads should be required above that needed to meet local air quality requirements.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Coastal Nonpoint Pollution Control Program; Program Development and Approval Guidance, Working Group, Working Paper; USEPA, April 1992.

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

Stormwater Quality Handbooks Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

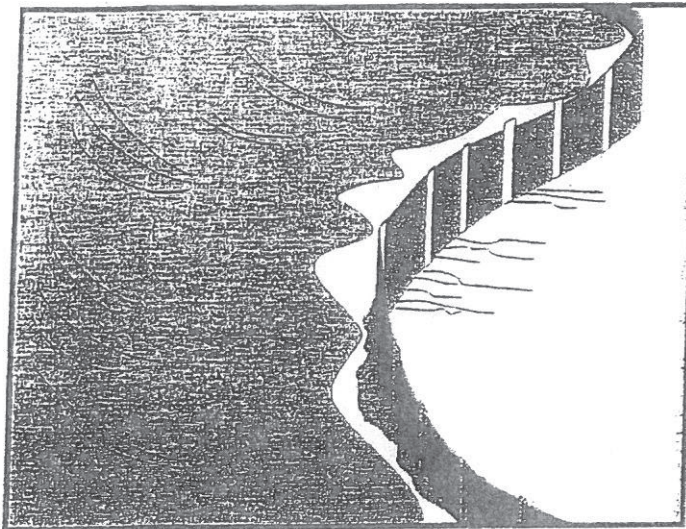
Stormwater Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.

Stormwater Management of the Puget Sound Basin, Technical Manual, Publication #91-75, Washington State Department of Ecology, February 1992.

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Virginia Erosion and Sedimentation Control Handbook, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, 1991.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.



Description and Purpose

A silt fence is made of a filter fabric that has been entrenched, attached to supporting poles, and sometimes backed by a plastic or wire mesh for support. The silt fence detains sediment-laden water, promoting sedimentation behind the fence.

Suitable Applications

Silt fences are suitable for perimeter control, placed below areas where sheet flows discharge from the site. They should also be used as interior controls below disturbed areas where runoff may occur in the form of sheet and rill erosion. Silt fences are generally ineffective in locations where the flow is concentrated and are only applicable for sheet or overland flows. Silt fences are most effective when used in combination with erosion controls. Suitable applications include:

- Along the perimeter of a project.
- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels.
- Around temporary spoil areas and stockpiles.
- Below other small cleared areas.

Limitations

- Do not use in streams, channels, drain inlets, or anywhere flow is concentrated.

Objectives

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TR | Tracking Control | |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

- SE-5 Fiber Rolls
- SE-6 Gravel Bag Berm
- SE-8 Sandbag Barrier
- SE-9 Straw Bale Barrier



- Do not use in locations where ponded water may cause flooding.
- Do not place fence on a slope, or across any contour line. If not installed at the same elevation throughout, silt fences will create erosion.
- Filter fences will create a temporary sedimentation pond on the upstream side of the fence and may cause temporary flooding. Fences not constructed on a level contour will be overtopped by concentrated flow resulting in failure of the filter fence.
- Improperly installed fences are subject to failure from undercutting, overlapping, or collapsing.
 - Not effective unless trenched and keyed in.
 - Not intended for use as mid-slope protection on slopes greater than 4:1 (H:V).
 - Do not allow water depth to exceed 1.5 ft at any point.

Implementation

General

A silt fence is a temporary sediment barrier consisting of filter fabric stretched across and attached to supporting posts, entrenched, and, depending upon the strength of fabric used, supported with plastic or wire mesh fence. Silt fences trap sediment by intercepting and detaining small amounts of sediment-laden runoff from disturbed areas in order to promote sedimentation behind the fence.

Silt fences are preferable to straw bale barriers in many cases. Laboratory work at the Virginia Highway and Transportation Research Council has shown that silt fences can trap a much higher percentage of suspended sediments than can straw bales. While the failure rate of silt fences is lower than that of straw bale barriers, there are many instances where silt fences have been improperly installed. The following layout and installation guidance can improve performance and should be followed:

- Use principally in areas where sheet flow occurs.
- Don't use in streams, channels, or anywhere flow is concentrated. Don't use silt fences to divert flow.
- Don't use below slopes subject to creep, slumping, or landslides.
- Select filter fabric that retains 85% of soil by weight, based on sieve analysis, but that is not finer than an equivalent opening size of 70.
- Install along a level contour, so water does not pond more than 1.5 ft at any point along the silt fence.
- The maximum length of slope draining to any point along the silt fence should be 200 ft or less.
- The maximum slope perpendicular to the fence line should be 1:1.

- Provide sufficient room for runoff to pond behind the fence and to allow sediment removal equipment to pass between the silt fence and toes of slopes or other obstructions. About 1200 ft² of ponding area should be provided for every acre draining to the fence.
- Turn the ends of the filter fence uphill to prevent stormwater from flowing around the fence.
- Leave an undisturbed or stabilized area immediately down slope from the fence where feasible.
- Silt fences should remain in place until the disturbed area is permanently stabilized.

Design and Layout

Selection of a filter fabric is based on soil conditions at the construction site (which affect the equivalent opening size (EOS) fabric specification) and characteristics of the support fence (which affect the choice of tensile strength). The designer should specify a filter fabric that retains the soil found on the construction site yet that it has openings large enough to permit drainage and prevent clogging. The following criteria is recommended for selection of the equivalent opening size:

1. If 50 percent or less of the soil, by weight, will pass the U.S. Standard Sieve No. 200, select the EOS to retain 85 % of the soil. The EOS should not be finer than EOS 70.
2. For all other soil types, the EOS should be no larger than the openings in the U.S. Standard Sieve No. 70 except where direct discharge to a stream, lake, or wetland will occur, then the EOS should be no larger than Standard Sieve No. 100.

To reduce the chance of clogging, it is preferable to specify a fabric with openings as large as allowed by the criteria. No fabric should be specified with an EOS smaller than U.S. Standard Sieve No. 100. If 85% or more of a soil, by weight, passes through the openings in a No. 200 sieve, filter fabric should not be used. Most of the particles in such a soil would not be retained if the EOS was too large and they would clog the fabric quickly if the EOS were small enough to capture the soil.

The fence should be supported by a plastic or wire mesh if the fabric selected does not have sufficient strength and bursting strength characteristics for the planned application (as recommended by the fabric manufacturer). Filter fabric material should contain ultraviolet inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature range of 0 °F to 120 °F.

- Layout in accordance with attached figures.
- For slopes steeper than 2:1 (H:V) and that contain a high number of rocks or large dirt clods that tend to dislodge, it may be necessary to install additional protection immediately adjacent to the bottom of the slope, prior to installing silt fence. Additional protection may be a chain link fence or a cable fence.
- For slopes adjacent to sensitive receiving waters or Environmentally Sensitive Areas (ESAs), silt fence should be used in conjunction with erosion control BMPs.

Materials

- Silt fence fabric should be woven polypropylene with a minimum width of 36 in. and a minimum tensile strength of 100 lb force. The fabric should conform to the requirements in ASTM designation D4632 and should have an integral reinforcement layer. The reinforcement layer should be a polypropylene, or equivalent, net provided by the manufacturer. The permittivity of the fabric should be between 0.1 sec^{-1} and 0.15 sec^{-1} in conformance with the requirements in ASTM designation D4491.
- Wood stakes should be commercial quality lumber of the size and shape shown on the plans. Each stake should be free from decay, splits or cracks longer than the thickness of the stake or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable.
- Staples used to fasten the fence fabric to the stakes should be not less than 1.75 in. long and should be fabricated from 15 gauge or heavier wire. The wire used to fasten the tops of the stakes together when joining two sections of fence should be 9 gauge or heavier wire. Galvanizing of the fastening wire will not be required.
- There are new products that may use prefabricated plastic holders for the silt fence and use bar reinforcement instead of wood stakes. If bar reinforcement is used in lieu of wood stakes, use number four or greater bar. Provide end protection for any exposed bar reinforcement.

Installation Guidelines

Silt fences are to be constructed on a level contour. Sufficient area should exist behind the fence for ponding to occur without flooding or overtopping the fence.

- A trench should be excavated approximately 6 in. wide and 6 in. deep along the line the proposed silt fence.
- Bottom of the silt fence should be keyed-in a minimum of 12 in.
- Posts should be spaced a maximum of 6 ft apart and driven securely into the ground a minimum of 18 in. or 12 in. below the bottom of the trench.
- When standard strength filter fabric is used, a plastic or wire mesh support fence should be fastened securely to the upslope side of posts using heavy-duty wire staples at least 1 in. long. The mesh should extend into the trench. When extra-strength filter fabric and closer post spacing are used, the mesh support fence may be eliminated. Filter fabric should be purchased in a long roll, and then cut to the length of the barrier. When joints are necessary, filter cloth should be spliced together only at a support post, with a minimum 6 in. overlap and both ends securely fastened to the post.
- The trench should be backfilled with compacted native material.
- Construct silt fences with a setback of at least 3 ft from the toe of a slope. Where a silt fence is determined to be not practicable due to specific site conditions, the silt fence may be constructed at the toe of the slope, but should be constructed as far from the toe of the slope as practicable. Silt fences close to the toe of the slope will be less effective and difficult to maintain.

- Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the barrier; in no case should the reach exceed 500 ft.

Costs

- Average annual cost for installation and maintenance (assumes 6 month useful life): \$7 per lineal foot (\$850 per drainage acre). Range of cost is \$3.50 - \$9.10 per lineal foot.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric. The lifespan of silt fence fabric is generally 5 to 8 months.
- Silt fences that are damaged and become unsuitable for the intended purpose should be removed from the site of work, disposed of, and replaced with new silt fence barriers.
- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- Silt fences should be left in place until the upstream area is permanently stabilized. Until then, the silt fence must be inspected and maintained.
- Holes, depressions, or other ground disturbance caused by the removal of the silt fences should be backfilled and repaired.

References

Manual of Standards of Erosion and Sediment Control Measures, Association of Bay Area Governments, May 1995.

National Management Measures to Control Nonpoint Source Pollution from Urban Areas, United States Environmental Protection Agency, 2002.

Proposed Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, Work Group-Working Paper, USEPA, April 1992.

Sedimentation and Erosion Control Practices, and Inventory of Current Practices (Draft), UESPA, 1990.

Southeastern Wisconsin Regional Planning Commission (SWRPC). Costs of Urban Nonpoint Source Water Pollution Control Measures. Technical Report No. 31. Southeastern Wisconsin Regional Planning Commission, Waukesha, WI. 1991

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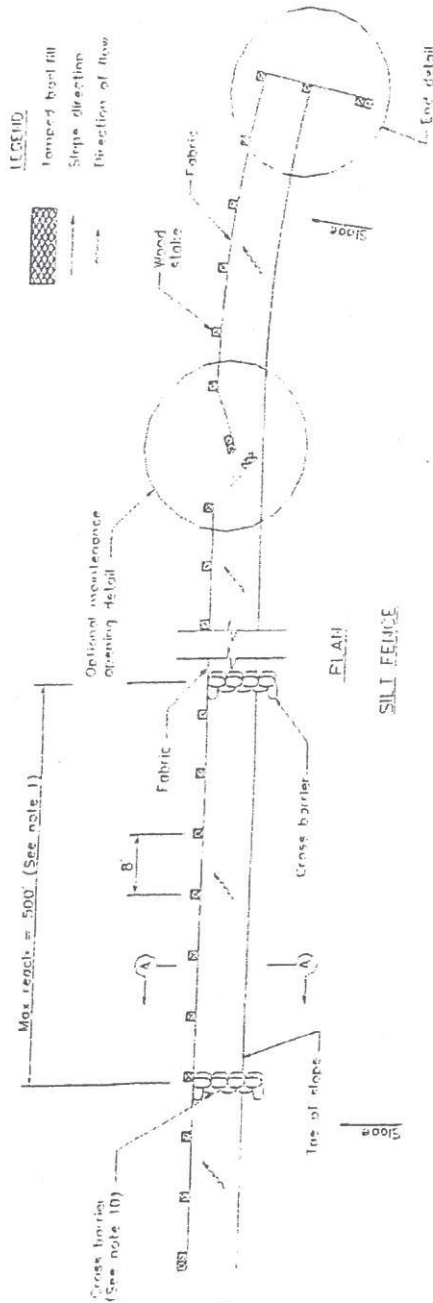
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U.S. Environmental Protection Agency (USEPA). Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. U.S. Environmental Protection Agency, Office of Water, Washington, DC, 1992.

Water Quality Management Plan for the Lake Tahoe Region, Volume II, Handbook of Management Practices, Tahoe Regional Planning Agency, November 1988.

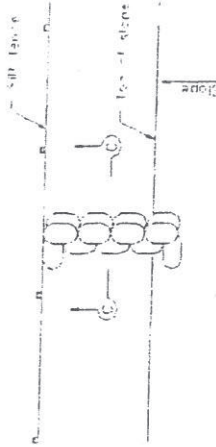
Silt Fence

SE-1



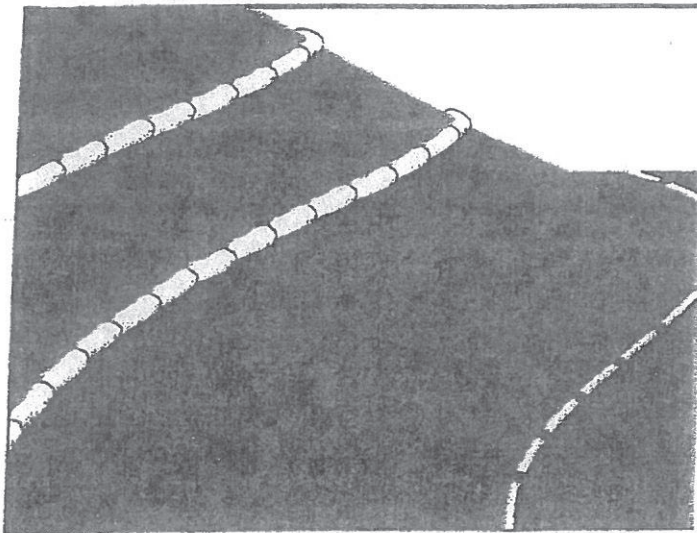
NOTES

1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/2 the height of the linear barrier. In no case shall the reach length exceed 500.
2. The last 8'-0" of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension in y-axis to fit field condition.
5. Stakes shall be raised at 8'-0" maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. Top and stake fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sanding tops and layers shall be offset to eliminate gaps.



Gravel Bag Berm

SE-6



Description and Purpose

A gravel bag berm is a series of gravel-filled bags placed on a level contour to intercept sheet flows. Gravel bags pond sheet flow runoff, allowing sediment to settle out, and release runoff slowly as sheet flows, preventing erosion.

Suitable Applications

Gravel bag berms may be suitable:

- As a linear sediment control measure:
 - Below the toe of slopes and erodible slopes
 - As sediment traps at culvert/pipe outlets
 - Below other small cleared areas
 - Along the perimeter of a site
 - Down slope of exposed soil areas
 - Around temporary stockpiles and spoil areas
 - Parallel to a roadway to keep sediment off paved areas
 - Along streams and channels
- As linear erosion control measure:

Objectives

| | | |
|----|--|-------------------------------------|
| EC | Erosion Control | <input checked="" type="checkbox"/> |
| SE | Sediment Control | <input checked="" type="checkbox"/> |
| TR | Tracking Control | |
| WE | Wind Erosion Control | |
| NS | Non-Stormwater Management Control | |
| WM | Waste Management and Materials Pollution Control | |

Legend:

- Primary Objective
- Secondary Objective

Targeted Constituents

| | |
|----------------|-------------------------------------|
| Sediment | <input checked="" type="checkbox"/> |
| Nutrients | |
| Trash | |
| Metals | |
| Bacteria | |
| Oil and Grease | |
| Organics | |

Potential Alternatives

- SE-1 Silt Fence
- SE-5 Fiber Roll
- SE-8 Sandbag Barrier
- SE-9 Straw Bale Barrier



- Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow
- At the top of slopes to divert runoff away from disturbed slopes
- As check dams across mildly sloped construction roads

Limitations

- Gravel berms may be difficult to remove.
- Removal problems limit their usefulness in landscaped areas.
- Gravel bag berm may not be appropriate for drainage areas greater than 5 acres.
- Runoff will pond upstream of the filter, possibly causing flooding if sufficient space does not exist.
- Degraded gravel bags may rupture when removed, spilling contents.
- Installation can be labor intensive.
- Berms may have limited durability for long-term projects.
- When used to detain concentrated flows, maintenance requirements increase.

Implementation

General

A gravel bag berm consists of a row of open graded gravel-filled bags placed on a level contour. When appropriately placed, a gravel bag berm intercepts and slows sheet flow runoff, causing temporary ponding. The temporary ponding provides quiescent conditions allowing sediment to settle. The open graded gravel in the bags is porous, which allows the ponded runoff to flow slowly through the bags, releasing the runoff as sheet flows. Gravel bag berms also interrupt the slope length and thereby reduce erosion by reducing the tendency of sheet flows to concentrate into rivulets, which erode rills, and ultimately gullies, into disturbed, sloped soils. Gravel bag berms are similar to sand bag barriers, but are more porous.

Design and Layout

- Locate gravel bag berms on level contours.
 - Slopes between 20:1 and 2:1 (H:V): Gravel bags should be placed at a maximum interval of 50 ft (a closer spacing is more effective), with the first row near the slope toe.
 - Slopes 2:1 (H:V) or steeper: Gravel bags should be placed at a maximum interval of 25 ft (a closer spacing is more effective), with the first row placed the slope toe.
- Turn the ends of the gravel bag barriers up slope to prevent runoff from going around the berm.
- Allow sufficient space up slope from the gravel bag berm to allow ponding, and to provide room for sediment storage.

- For installation near the toe of the slope, consider moving the gravel bag barriers away from the slope toe to facilitate cleaning. To prevent flows behind the barrier, bags can be placed perpendicular to a berm to serve as cross barriers.
- Drainage area should not exceed 5 acres.
- In Non-Traffic Areas:
 - Height = 18 in. maximum
 - Top width = 24 in. minimum for three or more layer construction
 - Top width = 12 in. minimum for one or two layer construction
 - Side slopes = 2:1 or flatter
- In Construction Traffic Areas:
 - Height = 12 in. maximum
 - Top width = 24 in. minimum for three or more layer construction.
 - Top width = 12 in. minimum for one or two layer construction.
 - Side slopes = 2:1 or flatter.
- Butt ends of bags tightly
- On multiple row, or multiple layer construction, overlap butt joints of adjacent row and row beneath.
- Use a pyramid approach when stacking bags.

Materials

- **Bag Material:** Bags should be woven polypropylene, polyethylene or polyamide fabric or burlap, minimum unit weight of 4 ounces/yd², Mullen burst strength exceeding 300 lb/in² in conformance with the requirements in ASTM designation D3786, and ultraviolet stability exceeding 70% in conformance with the requirements in ASTM designation D4355.
- **Bag Size:** Each gravel-filled bag should have a length of 18 in., width of 12 in., thickness of 3 in., and mass of approximately 33 lbs. Bag dimensions are nominal, and may vary based on locally available materials.
- **Fill Material:** Fill material should be 0.5 to 1 in. Class 2 aggregate base, clean and free from clay, organic matter, and other deleterious material, or other suitable open graded, non-cohesive, porous gravel.

Costs

Gravel filter: Expensive, since off-site materials, hand construction, and demolition/removal are usually required. Material costs for gravel bags are average of \$2.50 per empty gravel bag. Gravel costs range from \$20- \$35 per yd³.

Inspection and Maintenance

- Inspect BMPs prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.
- Gravel bags exposed to sunlight will need to be replaced every two to three months due to degrading of the bags.
- Reshape or replace gravel bags as needed.
- Repair washouts or other damage as needed.
- Sediment that accumulates in the BMP must be periodically removed in order to maintain BMP effectiveness. Sediment should be removed when the sediment accumulation reaches one-third of the barrier height. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed at an appropriate location.
- Remove gravel bag berms when no longer needed. Remove sediment accumulation and clean, re-grade, and stabilize the area. Removed sediment should be incorporated in the project or disposed of.

References

Handbook of Steel Drainage and Highway Construction, American Iron and Steel Institute, 1983.

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