City of San Diego

ORIGINAL

CONTRACTOR'S NAME: TRI-GROUP CONSTRUCTION AND DEVELOPMENT, INC.
ADDRESS: 9580 BLACK MOUNTAIN RD, STE L, SAN DIEGO, CA 92126
TELEPHONE NO.: (858) 689-0058 **FAX NO.:** (858) 689-1594
CITY CONTACT: Clementina Giordano - Contract Specialist, Email: Cgiordano@sandiego.gov
Phone No. (619) 533-3481, Fax No. (619) 533-3633
A. Del Rincon / H. McLintock / LJI

CONTRACT DOCUMENTS

e - Bidding

FOR

West Maple Canyon Mini Park

BID NO.: **L-16-1324-DBB-2**
SAP NO. (WBS/IO/CC): **S-00760**
CLIENT DEPARTMENT: **1714**
COUNCIL DISTRICT: **3**
PROJECT TYPE: **GF**

THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- COMPETITION RESTRICTED TO: SLBE-ELBE ☒ or ELBE FIRMS ONLY☐.
- PREVAILING WAGE RATES: STATE ☒ FEDERAL ☐
- APPRENTICESHIP

BID DUE DATE:

1:30 PM
DECEMBER 16, 2015
CITY OF SAN DIEGO
PUBLIC WORKS CONTRACTS
1010 SECOND AVENUE, 14th FLOOR, MS 614C
SAN DIEGO, CA 92101

ENGINEER OF WORK

The engineering Specifications and Special Provisions contained herein have been prepared by or under the direction of the following Registered Engineer:

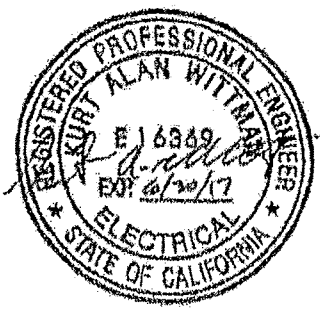
Vicki Estrada — 10/28/2015 — Seal:

1) Registered Landscape Architect — Date

Donald R. Orie, S3838 — 10/28/2015 — Seal:

2) Registered Structural Engineer — Date

Kurt Wittman — 10/28/2015 — Seal:



3) For Electrical Engineer — Date

Samir M — 10/29/15 — Seal: C73711

4) For City Engineer — Date

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CITY OF SAN DIEGO, CALIFORNIA

NOTICE INVITING BIDS

1. **LIMITED COMPETITION**: This contract may only be bid by the Contractors on the City's approved Prequalified Contractor's List (see Notice Inviting Bids, Prequalification of Contractors) and SLBE-ELBE Construction Limited Competition Contractors List in accordance with the designation stated on the cover page hereof. For information regarding the SLBE-ELBE Construction Program and registration visit the City's web site: http://www.sandiego.gov.

2. **SUMMARY OF WORK:** The Work involves furnishing all labor, materials, equipment, services, and other incidental works and appurtenances for the construction of the Project as described in ATTACHMENT A.

3. **PRE-BID MEETING:**

   3.1. There will be a Pre-Bid Meeting to discuss the scope of the Project, bidding requirements, pre-qualification process, and Equal Opportunity Contracting Program requirements and reporting procedures in the Public Works Contracts, Conference Room at 1010 Second Avenue, 14th Floor, San Diego, CA 92101 **at 10:00 AM, on November 24, 2015.**

   3.2. All potential bidders are encouraged to attend.

4. **PREQUALIFICATION OF CONTRACTORS:**

   4.1. Contractors submitting Bid must be pre-qualified for the total amount proposed, inclusive of all alternate items prior to the date of submittal. Bids from contractors who have not been pre-qualified as applicable and Bids that exceed the maximum dollar amount at which contractors are pre-qualified may be deemed **non-responsive** and ineligible for award. Complete information and links to the on-line prequalification application are available at:

   http://www.sandiego.gov/cip/bidopps/prequalification.shtml

   4.2. The completed application must be submitted online no later than 2 weeks prior to the bid opening. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.

   4.3. As a result of the City's fiduciary requirement to safeguard vendor data, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on PlanetBids™.

INSTRUCTIONS TO BIDDERS

1. **ELECTRONIC FORMAT RECEIPT AND OPENING OF BIDS:** Bids will be received in **electronic format (eBids) EXCLUSIVELY** at the City of San Diego's electronic bidding (eBidding) site, at: http://www.sandiego.gov/cip/bidopps/index.shtml and are due by the date, and time shown on the cover of this solicitation for the performance of work on **WEST MAPLE CANYON MINI PARK** (Project).

   1.1. **BIDDERS MUST BE PRE-REGISTERED** with the City's bidding system and possess a system-assigned Digital ID in order to submit and electronic bid.

   1.2. The City's bidding system will automatically track information submitted to the site including IP addresses, browsers being used and the URLs from which information was submitted. In addition, the City's bidding system will keep a history of every login instance including the time of login, and other information about the user's computer configuration such as the operating system, browser type, version, and more. Because of these security features, Contractors who disable their browsers' cookies will not be able to log in and use the City's bidding system.

   1.3. The City's electronic bidding system is responsible for bid tabulations. Upon the bidder's or proposer's entry of their bid, the system will ensure that all required fields are entered. **The system will not accept a bid for which any required information is missing.** This includes all necessary pricing, subcontractor listing(s) and any other essential documentation and supporting materials and forms requested or contained in these solicitation documents.

   1.4. **BIDS REMAIN SEALED UNTIL BID DEADLINE.** eBids are transmitted into the City's bidding system via hypertext transfer protocol secure (https) mechanism using SSL 128-256 bit security certificates issued from Verisign/Thawte which encrypts data being transferred from client to server. Bids submitted prior to the "Bid Due Date and Time" are not available for review by anyone other than the submitter which has until the "Bid Due Date and Time" to change, rescind or retrieve its proposal should it desire to do so.

   1.5. **BIDS MUST BE SUBMITTED BY BID DUE DATE AND TIME.** Once the bid deadline is reached, no further submissions are accepted into the system. Once the Bid Due Date and Time has lapsed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. City staff may then begin reviewing the submissions for responsiveness, EOCP compliance and other issues. The City may require any Bidder to furnish statement of experience, financial responsibility, technical ability, equipment, and references.

   1.6. Unit prices shall be entered for all unit price items. Unit prices shall not exceed two (2) decimal places. If the Unit prices entered exceed two (2) decimal places, the City will only use the first two digits after the decimal points without rounding up or down.

   1.7. **RECAPITULATION OF THE WORK.** Bids shall not contain any recapitulation of the Work. Conditional Bids will be rejected as being **non-responsive**. Alternative proposals will not be considered unless called for.

1.8. **BIDS MAY BE WITHDRAWN** by the Bidder prior to, but not after, the time fixed for opening of bids.

1.8.1. **Important Note:** Submission of the electronic bid into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's eBidding system. It is the bidder's sole responsibility to ensure their bids are received on time by the City's eBidding system. The City of San Diego is not responsible for bids that do not arrive by the required date and time.

1.9. **ACCESSIBILITY AND AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE.** : To request a copy of this solicitation in an alternative format, contact the Public Works Contract Specialist listed in the cover of this solicitation at least five (5) working days prior to the Bid/Proposal due date to ensure availability.

2. ELECTRONIC BID SUBMISSIONS CARRY FULL FORCE AND EFFECT

2.1. The bidder, by submitting its electronic bid, acknowledges that doing so carries the same force and full legal effect as a paper submission with a longhand (wet) signature.

2.2. By submitting an electronic bid, the bidder certifies that the bidder has thoroughly examined and understands the entire Contract Documents (which consist of the plans and specifications, drawings, forms, affidavits and the solicitation documents), and that by submitting the eBid as its bid proposal, the bidder acknowledges, agrees to and is bound by the entire Contract Documents, including any addenda issued thereto, and incorporated by reference in the Contract Documents.

2.3. The Bidder, by submitting its electronic bid, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certification, forms and affidavits submitted as part of this bid are true and correct.

2.4. The Bidder agrees to the construction of the project as described in Attachment "A– Scope of Work" for the City of San Diego, in accordance with the requirements set forth herein for the electronically submitted prices. The Bidder guarantees the Contract Price for a period of 120 days (90 days for federally funded contracts and contracts valued at $500,000 or less) from the date of Bid opening. The duration of the Contract Price guarantee shall be extended by the number of days required for the City to obtain all items necessary to fulfill all conditions precedent.

3. BIDS ARE PUBLIC RECORDS:

Upon receipt by the City, Bids shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the Bid. General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.

4. **SUBCONTRACTING PARTICIPATION PERCENTAGES:**

4.1. The City has incorporated voluntary subcontractor participation percentage to enhance competition and maximize subcontracting opportunities as follows.

4.2. The following voluntary subcontractor participation percentage for DBE, DVBE, WBE, MBE, SLBE, and ELBE certified Subcontractors shall apply to this contract:

Total voluntary subcontractor participation percentage for this project is 13.6%.

4.3. For additional Equal Opportunity Contracting Program requirements, see Attachment C.

4.4. To request a copy of the agenda on an alternative format, or to request a sign language or oral interpreter for this meeting, call the Public Works Contracts at (619) 533-3450 at least 5 Working Days prior to the Pre-Bid Meeting to ensure availability.

5. **CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:**

5.1. **Prior** to the Award of the Contract or each Task Order, you and your Subcontractors and Suppliers must register with the City's web-based vendor registration and bid management system. For additional information go to:

http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml.

5.2. The City may not award the contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified in the Notice of Intent to Award letter, the City reserves the right to rescind the Notice of Award / Intent to Award and to make the award to the next responsive and responsible bidder / proposer.

6. **JOINT VENTURE CONTRACTORS:** Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 10 Working Days after receiving the Contract forms. See 2-1.1.2, "Joint Venture Contractors" in The WHITEBOOK for details.

7. **PREVAILING WAGE RATES:** Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding $25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding $15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.

7.1. **Compliance with Prevailing Wage Requirements.** Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.

7.1.1. Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.

7.1.2. The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.

7.2. **Penalties for Violations.** Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed.

7.3. **Payroll Records.** Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.

7.3.1. For contracts entered into on or after April 1, 2015, Contractor and their subcontractors shall furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.

7.4. **Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor is held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.

7.5. **Working Hours.** Contractor and their subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on design

professionals and subcontractors of $25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections1810 through 1815.

7.6. Required Provisions for Subcontracts. Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.

7.7. Labor Code Section 1861 Certification. Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California 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."

7.8. Labor Compliance Program. The City has its own Labor Compliance Program authorized in August 2011 by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred. For questions or assistance, please contact the City of San Diego's Equal Opportunity Contracting Department at 619-236-6000.

7.9. Contractor and Subcontractor Registration Requirements. This project is subject to compliance monitoring and enforcement by the DIR. As of March 1, 2015, no contractor or subcontractor may be listed on a bid or proposal for a public works project unless registered with the DIR pursuant to Labor Code section 1725.5. As of April 1, 2015, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, or enter into any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5 By submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the DIR in compliance with Labor Code sections 1771.1 and 1725.5, and Contractor shall provide proof of registration to the City upon request.

A Contractor's inadvertent error in listing a subcontractor who is not registered pursuant to Labor Code section 1725.5 in response to a solicitation shall not be grounds for filing a bid protest or grounds for considering the bid non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to bid opening; (2) within twenty-four hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in Labor Code section 1725.5; or (3) the subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.

8. INSURANCE REQUIREMENTS:

8.1. All certificates of insurance and endorsements required by the contract are to be provided upon issuance of the City's Notice of Intent to Award letter.

8.2. Refer to sections 7-3, "LIABILITY INSURANCE", and 7-4, "WORKERS' COMPENSATION INSURANCE" of the Supplementary Special Provisions (SSP) for the insurance requirements which must be met.

9. **REFERENCE STANDARDS:** Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

Title	Edition	Document Number
Standard Specifications for Public Works Construction ("The GREENBOOK")	2012	PITS070112-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")*	2012	PITS070112-02
City of San Diego Standard Drawings*	2012	PITS070112-03
Caltrans Standard Specifications	2010	PITS070112-04
Caltrans Standard Plans	2010	PITS070112-05
California MUTCD	2012	PITS070112-06
City Standard Drawings - Updates Approved For Use (when specified)*	Varies	Varies
Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause Dated 09-11-84	1984	769023
NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml		

10. **CITY'S RESPONSES AND ADDENDA:** The City, at its option, may respond to any or all questions submitted in writing via the City's eBidding web site in the **form of an addendum**. No other responses to questions, oral or written shall be of any force or effect with respect to this solicitation. The changes to the Contract Documents through addendum are made effective as though originally issued with the Bid. The Bidders shall acknowledge the receipt of Addenda at the time of bid submission.

11. **CITY'S RIGHTS RESERVED:** The City reserves the right to cancel the Notice Inviting Bids at any time, and further reserves the right to reject submitted Bids, without giving any reason for such action, at its sole discretion and without liability. Costs incurred by the Bidder(s) as a result of preparing Bids under the Notice Inviting Bids shall be the sole responsibility of each bidder. The Notice Inviting Bids creates or imposes no obligation upon the City to enter a contract.

12. **CONTRACT PRICING FORMAT:** This solicitation is for a Lump Sum contract with Unit Price provisions as set forth herein.

12.1. Bids shall not contain any recapitulation of the Work. Conditional Bids will be rejected as being non-responsive. Alternative proposals will not be considered unless called for.

12.2. The Bidder agrees to the construction of **WEST MAPLE CANYON MINI PARK,** for the City of San Diego, in accordance with these contract documents for the prices listed below. The Bidder guarantees the Contract Price for a period of 120 days (90 days for federally funded contracts and contracts valued at $500,000 or less) from the date of Bid opening to Award of the Contract. The duration of the Contract Price guarantee shall be extended by the number of days required for the City to obtain all items necessary to fulfill all conditions precedent e.g., bond and insurance.

12.3. Unit prices shall be entered for all unit-price items. Unit prices shall not exceed two (2) decimal places. If the Unit prices entered exceeds two (2) decimal places, the City will only use the first two digits after the decimal points without rounding up or down.

13. SUBCONTRACTOR INFORMATION:

13.1. LISTING OF SUBCONTRACTORS. In accordance with the requirements provided in the "Subletting and Subcontracting Fair Practices Act" of the California Public Contract Code, the Bidder shall provide the **NAME** and **ADDRESS** of each Subcontractor who will perform work, labor, render services or who specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Contractor's total Bid. The Bidder shall also state within the description, whether the subcontractor is a **CONSTRUCTOR, CONSULTANT** or **SUPPLIER.** The Bidder shall further state within the description, the **PORTION** of the work which will be performed by each subcontractor under this Contract. The Contractor shall list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed shall be stated for all subcontractors listed. Failure to comply with this requirement may result in the Bid being rejected as **non-responsive** and ineligible for award. The Bidder's attention is directed to the Special Provisions - General; Paragraph 2-3 Subcontracts, which stipulates the percent of the Work to be performed with the Bidders' own forces. The Bidder shall list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which Bidders are seeking recognition towards achieving any mandatory, voluntary (or both) subcontracting participation goals.

13.2. LISTING OF SUPPLIERS. Any Bidder seeking the recognition of Suppliers of equipment, materials, or supplies obtained from third party Suppliers towards achieving any mandatory or voluntary (or both) subcontracting participation goals shall provide, at a minimum, the **NAME, LOCATION (CITY)** and the **DOLLAR VALUE** of each supplier. The Bidder will be credited up to 60% of the amount to be paid to the Suppliers for materials and supplies unless vendor manufactures or substantially alters materials and supplies, in which case, 100% will be credited. The Bidder is to indicate within the description whether the listed firm is a supplier or manufacturer. If no indication is provided, the listed firm will be credited at 60% of the listed dollar value for purposes of calculating the Subcontractor Participation Percentage.

13.3. LISTING OF SUBCONTRACTORS OR SUPPLIERS FOR ALTERNATES. For subcontractors or suppliers to be used on additive or deductive alternate items, in addition to the above requirements, bidder shall further note "ALTERNATE" and alternate item number within the description.

14. SUBMITTAL OF "OR EQUAL" ITEMS: See Section 4-1.6, "Trade Names or Equals" in The WHITEBOOK and as amended in the SSP.

15. AWARD PROCESS:

15.1. The Award of this contract is contingent upon the Contractor's compliance with all conditions precedent to Award.

15.2. Upon acceptance of a Bid, the City will prepare contract documents for execution within approximately 21 days of the date of the Bid opening and award the Contract approximately within 7 days of receipt of properly executed Contract, bonds, and insurance documents.

15.3. This contract will be deemed executed, and effective, only upon the signing of the Contract by the Mayor or designee of the City and approval as to form the City Attorney's Office.

15.4. The low Bid will be determined by Base Bid alone.

Once the low bid has been determined, the City may, at its sole discretion, award the contract for the Base bid alone.

16. SUBCONTRACT LIMITATIONS: The Bidder's attention is directed to Standard Specifications for Public Works Construction, Section 2-3, "SUBCONTRACTS" in The GREENBOOK and as amended in the SSP which requires the Contractor to self-perform not less than the specified amount. Failure to comply with this requirement shall render the bid **non-responsive** and ineligible for award.

17. AVAILABILITY OF PLANS AND SPECIFICATIONS: Contract Documents may be obtained by visiting the City's website: http://www.sandiego.gov/cip/. Plans and Specifications for this contract are also available for review in the office of the City Clerk or Public Works Contracts.

18. SUBMISSION OF QUESTIONS:

18.1. The Director (or designee), of the Public Works Department is the officer responsible for opening, examining, and evaluating the competitive Bids submitted to the City for the acquisition, construction and completion of any public improvement except when otherwise set forth in these documents. All questions related to this solicitation shall be submitted to:

Public Works Contracts
1010 Second Avenue, 14th Floor
San Diego, California, 92101
Attention: [Contract Specialist listed on the front cover hereof]

OR:

Email address of the Contract Specialist listed on the front cover hereof.

18.2. Questions received less than 14 days prior to the date for opening of Bids may not be considered.

18.3. Clarifications deemed by the City to be material shall be issued by Addenda and uploaded to the City's online bidding service.

18.4. Only questions answered by formal written addenda shall be binding. Oral and other interpretations or clarifications shall be without legal effect. It is the Bidder's responsibility to become informed of any Addenda that have been issued and to include all such information in its Bid.

19. ONLY ONE BID PER CONTRACTOR SHALL BE ACCCEPTED: No person, firm, or corporation shall be allowed to make, file, or be interested in more than one (1) Bid for the same work unless alternate Bids are called for. A person, firm or corporation who has submitted a sub-proposal to a Bidder, or who has quoted prices on materials to a Bidder, is not hereby disqualified from submitting a sub-proposal or quoting prices to other Bidders or from submitting a Bid in its own behalf. Any Bidder who submits more than one bid will result in the rejection of all bids submitted.

20. SAN DIEGO BUSINESS TAX CERTIFICATE: The Contractor and Subcontractors, not already having a City of San Diego Business Tax Certificate for the work contemplated shall secure the appropriate certificate from the City Treasurer, Civic Center Plaza, first floor and submit to the Contract Specialist upon request or as specified in the Contract Documents. Tax Identification numbers for both the Bidder and the listed Subcontractors must be submitted on the City provided forms within these documents.

21. BIDDER'S GUARANTEE OF GOOD FAITH (BID SECURITY):

21.1. For bids $250,000 and above, bidders shall submit Bid Security at bid time. Bid Security shall be in one of the following forms: a cashier's check, or a properly certified check upon some responsible bank; or an approved corporate surety bond payable to the City of San Diego for an amount of not less than 10% of the total bid amount.

21.2. This check or bond, and the monies represented thereby, will be held by the City as a guarantee that the Bidder, if awarded the contract, will in good faith enter into the contract and furnish the required final performance and payment bonds.

21.3. The Bidder agrees that in the event of the Bidder's failure to execute this contract and provide the required final bonds, the money represented by the cashier's or certified check will remain the property of the City; and the Surety agrees that it will pay to the City the damages, not exceeding the sum of 10% of the amount of the Bid, that the City may suffer as a result of such failure.

21.4. At the time of bid submission, bidders must upload and submit an electronic PDF copy of the aforementioned bid security. Whether in the form of a cashier's check, a properly certified check or an approved corporate surety bond payable to the City of San Diego, the bid security must be uploaded to the City's eBidding system. Within twenty-four (24) hours after the bid due date and time, the first five (5) apparent low bidders must provide the City with the original bid security.

21.5. Failure to submit the electronic version of the bid security at the time of bid submission AND failure to provide the original within twenty-four (24) hours may cause the bid to be rejected and deemed **non-responsive.**

22. AWARD OF CONTRACT OR REJECTION OF BIDS:

22.1. This contract may be awarded to the lowest responsible and reliable Bidder.

22.2. Bidders shall complete the entire Bid schedule (also referred to as "schedule of prices" or Proposal form). Incomplete price schedules may be rejected as being non-responsive.

22.3. The City reserves the right to reject any or all Bids, and to waive any informality or technicality in Bids received and any requirements of these specifications as to bidding procedure.

22.4. Bidders will not be released on account of their errors of judgment. Bidders may be released only upon receipt by the City from the Bidder within 3 Working Days, excluding Saturdays, Sundays, and state holidays, after the opening of Bids, of written notice which includes proof of honest, credible, clerical error of material nature, free from fraud or fraudulent intent, and of evidence that reasonable care was observed in the preparation of the Bid.

22.5. A bidder who is not selected for contract award may protest the award of a contract to another bidder by submitting a written protest in accordance with section 22.3017 of the San Diego Municipal Code.

22.6. The City of San Diego will not discriminate with regard to race, religious creed, color, national origin, ancestry, physical handicap, marital status, sex or age, in the award of contracts.

22.7. Each Bid package properly executed as required by these specifications shall constitute a firm offer, which may be accepted by the City within the time specified in the Proposal.

22.8. The City reserves the right to evaluate all Bids and determine the lowest Bidder on the basis of any proposed alternates, additive items or options as detailed herein.

23. BID RESULTS:

23.1. The availability of the bids on the City's eBidding system shall constitute the public announcement of the apparent low bidder. In the event that the apparent low bidder is subsequently deemed non-responsive or non-responsible, a notation of such will be made on the eBidding system. The new ranking and apparent low bidder will be adjusted accordingly.

23.2. To obtain Bid results, visit the City's eBidding site, request results via e-mail to the "City Contact" person listed in the title page of these documents, or via courier, personal delivery or U.S. Postal service delivery of a request for results accompanied by provide a self-addressed, stamped envelope, referencing bid number and bid tabulations will be mailed. Bid results cannot be given over the telephone.

24. THE CONTRACT:

24.1. The Bidder to whom award is made shall execute a written contract with the City of San Diego and furnish good and approved bonds and insurance certificates specified by the City within 14 days after receipt by Bidder of a form of contract for execution unless an extension of time is granted to the Bidder in writing.

24.2. If the Bidder takes longer than 14 days to fulfill these requirements, then the additional time taken shall be added to the Bid guarantee. The Contract shall be made in the form adopted by the City, which includes the provision that no claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.

24.3. If the Bidder to whom the award is made fails to enter into the contract as herein provided, the award may be annulled and the Bidder's Guarantee of Good Faith will be subject to forfeiture. An award may be made to the next lowest responsible and reliable Bidder who shall fulfill every stipulation embraced herein as if it were the party to whom the first award was made.

24.4. Pursuant to the San Diego City Charter section 94, the City may only award a public works contract to the lowest responsible and reliable Bidder. The City will require the Apparent Low Bidder to (i) submit information to determine the Bidder's responsibility and reliability, (ii) execute the Contract in form provided by the City, and (iii) furnish good and approved bonds and insurance certificates specified by the City within 14 Days, unless otherwise approved by the City, in writing after the Bidder receives notification from the City, designating the Bidder as the Apparent Low Bidder and formally requesting the above mentioned items.

24.5. The award of the Contract is contingent upon the satisfactory completion of the above mentioned items and becomes effective upon the signing of the Contract by the Mayor or designee and approval as to form the City Attorney's Office. If the Apparent Low Bidder does not execute the Contract or submit required documents and information, the City may award the Contract to the next lowest responsible and reliable Bidder who shall fulfill every condition precedent to award. A corporation designated as the Apparent Low Bidder shall furnish evidence of its corporate existence and evidence that the officer signing the Contract and bond for the corporation is duly authorized to do so.

25. EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK: The Bidder shall examine carefully the Project Site, the Plans and Specifications, other materials as described in the Special Provisions, Section 2-7, and the proposal forms (e.g., Bidding Documents). The submission of a Bid shall be conclusive evidence that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of Work, the quantities of materials to be furnished, and as to the requirements of the Bidding Documents Proposal, Plans, and Specifications.

26. CITY STANDARD PROVISIONS: This contract is subject to the following standard provisions. See The WHITEBOOK for details.

26.1. The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.

26.2. The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.

26.3. The City of San Diego Municipal Code §22.3004 for Pledge of Compliance.

26.4. The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.

26.5. Sections 1777.5, 1777.6, and 1777.7 of the State of California Labor Code concerning the employment of apprentices by contractors and subcontractors performing public works contracts.

26.6. The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).

26.7. The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.

27. PRE-AWARD ACTIVITIES:

27.1. The contractor selected by the City to execute a contract for this Work shall submit the required documentation as specified in the herein and in the Notice of Award. Failure to provide the information as specified may result in the Bid being rejected as **non-responsive.**

27.2. The decision that bid is non-responsive for failure to provide the information required within the time specified shall be at the sole discretion of the City.

CONTRACT AGREEMENT AND

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND

CONTRACT AGREEMENT

CONSTRUCTION CONTRACT

This contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and TRI-GROUP CONSTRUCTION & DEVELOPMENT, INC., herein called "Contractor" for construction of **West Maple Canyon Mini Park;** Bid No. **L-16-1324-DBB-2**; in the amount of FOUR HUNDRED AND ELEVEN THOUSAND DOLLARS AND ZERO CENTS ($411,000.00), which is comprised of the Base Bid alone.

IN CONSIDERATION of the payments to be made hereunder and the mutual undertakings of the parties hereto, City and Contractor agree as follows:

1. The following are incorporated into this contract as though fully set forth herein:

   (a) The attached Faithful Performance and Payment Bonds.

   (b) The attached Proposal included in the Bid documents by the Contractor.

   (c) Reference Standards listed in the Notice Inviting Bids and the Supplementary Special Provisions (SSP).

   (d) That certain documents entitled **West Maple Canyon Mini Park,** on file in the office of the Public Works Department as Document No. **S-00760,** as well as all matters referenced therein.

2. The Contractor shall perform and be bound by all the terms and conditions of this contract and in strict conformity therewith shall perform and complete in a good and workmanlike manner **West Maple Canyon Mini Park**, Bid Number **L-16-1324-DBB-2**, San Diego, California.

3. For such performances, the City shall pay to Contractor the amounts set forth at the times and in the manner and with such additions or deductions as are provided for in this contract, and the Contractor shall accept such payment in full satisfaction of all claims incident to such performances.

4. No claim or suit whatsoever shall be made or brought by Contractor against any officer, agent, or employee of the City for or on account of anything done or omitted to be done in connection with this contract, nor shall any such officer, agent, or employee be liable hereunder.

5. This contract is effective as of the date that the Mayor or designee signs the agreement.

CONTRACT AGREEMENT (continued)

IN WITNESS WHEREOF, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Municipal Code §22.3102 authorizing such execution.

THE CITY OF SAN DIEGO

By _____

Print Name: Clementina Giordano
Contract Specialist

Date: 3/24/16

APPROVED AS TO FORM

Jan I. Goldsmith, City Attorney

By Christina L. Rae

Print Name: Christina L. Rae
Deputy City Attorney

Date: 3/24/16

CONTRACTOR

By _____

Print Name: HANI ASSI

Title: SECRETARY OF CORPORATION

Date: 01-19-2016

City of San Diego License No.: BZ0030046 79

State Contractor's License No.: 792159

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: 1000004777

EXECUTED IN TRIPLICATE
BOND NO. 2207234
PREMIUM: $4,735.00
PREMIUM IS FOR CONTRACT TERM AND IS SUBJECT TO ADJUSTMENT BASED ON FINAL CONTRACT PRICE

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND:

TRI-GROUP CONSTRUCTION AND DEVELOPMENT, INC., a corporation, as principal, and NORTH AMERICAN SPECIALTY INSURANCE COMPANY, a corporation authorized to do business in the State of California, as Surety, hereby obligate themselves, their successors and assigns, jointly and severally, to The City of San Diego a municipal corporation in the sum of FOUR HUNDRED AND ELEVEN THOUSAND DOLLARS AND ZERO CENTS ($411,000.00) for the faithful performance of the annexed contract, and in the sum of dollar amount FOUR HUNDRED AND ELEVEN THOUSAND DOLLARS AND ZERO CENTS ($411,000.00) for the benefit of laborers and materialmen designated below.

Conditions:

If the Principal shall faithfully perform the annexed contract **West Maple Canyon Mini Park,** Bid Number **L-16-1324-DBB-2**, San Diego, California then the obligation herein with respect to a faithful performance shall be void; otherwise it shall remain in full force.

If the Principal shall promptly pay all persons, firms and corporations furnishing materials for or performing labor in the execution of this contract, and shall pay all amounts due under the California Unemployment Insurance Act then the obligation herein with respect to laborers and materialmen shall be void; otherwise it shall remain in full force.

The obligation herein with respect to laborers and materialmen shall inure to the benefit of all persons, firms and corporations entitled to file claims under the provisions of Article 2. Claimants, (iii) public works of improvement commencing with Civil Code Section 9100 of the Civil Code of the State of California.

Changes in the terms of the annexed contract or specifications accompanying same or referred to therein shall not affect the Surety's obligation on this bond, and the Surety hereby waives notice of same.

PERFORMANCE BOND, LABOR AND MATERIALMEN'S BOND
(continued)

The Surety shall pay reasonable attorney's fees should suit be brought to enforce the provisions of this bond.

Dated JANUARY 11, 2016

Approved as to Form

Jan I. Goldsmith, City Attorney

By Christina J. Lee 3/24/16
Deputy City Attorney

Approved:

By
Clementina Giordano, Contract Specialist

TRI-GROUP
CONSTRUCTION AND DEVELOPMENT, INC.
Principal

By

HANI ASSI, SECRETARY
Printed Name of Person Signing for Principal

NORTH AMERICAN
SPECIALTY INSURANCE COMPANY
Surety

By Mark D. Iatarola
MARK D. IATAROLA, Attorney-in-fact

6 HUTTON CENTRE DRIVE, SUITE 850
Local Address of Surety

SANTA ANA, CA 92707
Local Address (City, State) of Surety

714/550-7799
Local Telephone No. of Surety

Premium $ 8,187.00
PREMIUM IS FOR CONTRACT TERM AND IS SUBJECT TO ADJUSTMENT BASED ON FINAL CONTRACT PRICE

Bond No. 2207234

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

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 SAN DIEGO)

On 01/11/2016 before me, JISSELLE MARIE SANCHEZ, NOTARY PUBLIC,
Date *Here Insert Name and Title of the Officer*

personally appeared MARK D. IATAROLA
Name(s) of Signer(s)

,

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.

JISSELLE MARIE SANCHEZ
COMM # 2129586
SAN DIEGO COUNTY
NOTARY PUBLIC-CALIFORNIA
MY COMMISSION EXPIRES
OCT. 09, 2019

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 _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: MARK D. IATAROLA	Signer's Name: _____
☐ Corporate Officer — Title(s): _____	☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☒ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other: _____	☐ Other: _____
Signer Is Representing: _____	Signer Is Representing: _____

NAS SURETY GROUP

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Manchester, New Hampshire, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Schaumburg, Illinois, each does hereby make, constitute and appoint:

JOHN G. MALONEY, HELEN MALONEY, MICHELLE M. BASUIL,

and MARK D. IATAROLA

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

FIFTY MILLION ($50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

"RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."

NORTH AMERICAN SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1973 NEW HAMPSHIRE

By _____
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company

By _____
Michael A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company

WASHINGTON INTERNATIONAL INSURANCE COMPANY CORPORATE SEAL NEW HAMPSHIRE

IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 17th day of September, 2015.

North American Specialty Insurance Company
Washington International Insurance Company

State of Illinois
County of Cook ss:

On this 17th day of September, 2015, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.

OFFICIAL SEAL
M KENNY
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 12/04/2017

M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Assistant Secretary of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 11th day of JANUARY, 2016.

Jeffrey Goldberg, Vice President & Assistant Secretary of
Washington International Insurance Company & North American Specialty Insurance Company

ATTACHMENTS

ATTACHMENT A

SCOPE OF WORK

SCOPE OF WORK

1. **SCOPE OF WORK:** The scope of work includes demolition, grading, seat walls, retaining walls, fencing, paving, planting, irrigation, lighting, electrical, drainage, signage, ADA improvements, and other park amenities as shown on plan.

   1.1. The Work shall be performed in accordance with:

      1.1.1. The Notice Inviting Bids and Plans numbered **37863-01-D** through **37863-17-D**, inclusive.

2. **CONSTRUCTION COST:** The City's estimated construction cost for this contract is **$426,000.**

3. **LOCATION OF WORK: The location of the Work is as follows:**

   Corner of West Maple Street and Albatross Street, San Diego, CA 92101.

4. **CONTRACT TIME:** The Contract Time for completion of the Work, including the Plant Establishment Period, shall be **220 Working Days.**

5. **CONTRACTOR'S LICENSE CLASSIFICATION:** In accordance with the provisions of California Law, the Contractor shall possess valid appropriate license(s) at the time that the Bid is submitted. Failure to possess the specified license(s) shall render the Bid as **non-responsive** and shall act as a bar to award of the Contract to any Bidder not possessing required license(s) at the time of Bid.

   5.1. The City has determined the following licensing classification for this contract:

   - CLASS A

ATTACHMENT B

INTENTIONALLY LEFT BLANK

ATTACHMENT C

EQUAL OPPORTUNITY CONTRACTING PROGRAM

EQUAL OPPORTUNITY CONTRACTING PROGRAM REQUIREMENTS

1. To The WHITEBOOK, Chapter 10, Sections D and E, DELETE each in its entirety, and SUBSTITUTE with the following:

D. CITY'S EQUAL OPPORTUNITY COMMITMENT.

1. Nondiscrimination in Contracting Ordinance.

1. The Contractor, Subcontractors and Suppliers shall comply with requirements of the City's Nondiscrimination in Contracting Ordinance, San Diego Municipal Code §§22.3501 through 22.3517.

   The Contractor shall not discriminate on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers. The Contractor shall provide equal opportunity for subcontractors to participate in subcontracting opportunities. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the contract and may result in contract termination, debarment, or other sanctions.

   The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. Disclosure of Discrimination Complaints. As part of its Bid or Proposal, the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors, or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

3. Upon the City's request, the Contractor agrees to provide to the City, within 60 days, a truthful and complete list of the names of all Subcontractors and Suppliers that the Contractor has used in the past 5 years on all of its contracts that were undertaken within San Diego County, including the total dollar amount paid by the Contractor for each subcontract or supply contract.

4. The Contractor further agrees to fully cooperate in any investigation conducted by the City pursuant to the City's Nondiscrimination in Contracting Ordinance, Municipal Code §§22.3501 through 22.3517. The Contractor understands and agrees that violation of this clause shall be considered a material breach of the Contract and may result in remedies being ordered against the Contractor up to and including contract termination, debarment and other sanctions for violation of the provisions of the Nondiscrimination in Contracting Ordinance. The Contractor further understands and agrees that the procedures, remedies and sanctions provided for in the Nondiscrimination in Contracting Ordinance apply only to violations of the Ordinance.

E. EQUAL EMPLOYMENT OPPORTUNITY OUTREACH PROGRAM.

1. The Contractor, Subcontractors and Suppliers shall comply with the City's Equal Employment Opportunity Outreach Program, San Diego Municipal Code §§22.2701 through 22.2707.

   The Contractor shall not discriminate against any employee or applicant for employment on any basis prohibited by law. Contractor shall provide equal opportunity in all employment practices. Prime Contractor shall ensure their subcontractors comply with this program. Nothing in this section shall be interpreted to hold a prime contractor liable for any discriminatory practice of its subcontractors.

   The Contractor shall include the foregoing clause in all contracts between the Contractor and Subcontractors and Suppliers.

2. If the Contract is competitively solicited, the selected Bidder shall submit a Work Force Report (Form BB05), within 10 Working Days after receipt by the Bidder of Contract forms to the City for approval as specified in the Notice of Intent to Award letter from the City.

3. If a Work Force Report is submitted, and the City determines there are under-representations when compared to County Labor Force Availability data, the selected Bidder shall submit an Equal Employment Opportunity Plan.

4. If the selected Bidder submits an Equal Employment Opportunity Plan, it shall include the following assurances:

   1. The Contractor shall maintain a working environment free of discrimination, harassment, intimidation and coercion at all sites and in all facilities at which the Contractor's employees are assigned to work.

   2. The Contractor reviews its EEO Policy, at least annually, with all on-site supervisors involved in employment decisions.

   3. The Contractor disseminates and reviews its EEO Policy with all employees at least once a year, posts the policy statement and EEO posters on all company bulletin boards and job sites, and documents every dissemination, review and posting with a written record to identify the time, place, employees present, subject matter, and disposition of meetings.

   4. The Contractor reviews, at least annually, all supervisors' adherence to and performance under the EEO Policy and maintains written documentation of these reviews.

   5. The Contractor discusses its EEO Policy Statement with subcontractors with whom it anticipates doing business, includes the EEO Policy Statement in its subcontracts, and provides such documentation to the City upon request.

6. The Contractor documents and maintains a record of all bid solicitations and outreach efforts to and from subcontractors, contractor associations and other business associations.

7. The Contractor disseminates its EEO Policy externally through various media, including the media of people of color and women, in advertisements to recruit, maintains files documenting these efforts, and provides copies of these advertisements to the City upon request.

8. The Contractor disseminates its EEO Policy to union and community organizations.

9. The Contractor provides immediate written notification to the City when any union referral process has impeded the Contractor's efforts to maintain its EEO Policy.

10. The Contractor maintains a current list of recruitment sources, including those outreaching to people of color and women, and provides written notification of employment opportunities to these recruitment sources with a record of the organizations' responses.

11. The Contractor maintains a current file of names, addresses and phone numbers of each walk-in applicant, including people of color and women, and referrals from unions, recruitment sources, or community organizations with a description of the employment action taken.

12. The Contractor encourages all present employees, including people of color and women employees, to recruit others.

13. The Contractor maintains all employment selection process information with records of all tests and other selection criteria.

14. The Contractor develops and maintains documentation for on-the-job training opportunities, participates in training programs, or both for all of its employees, including people of color and women, and establishes apprenticeship, trainee, and upgrade programs relevant to the Contractor's employment needs.

15. The Contractor conducts, at least annually, an inventory and evaluation of all employees for promotional opportunities and encourages all employees to seek and prepare appropriately for such opportunities.

16. The Contractor ensures the company's working environment and activities are non-segregated except for providing separate or single-user toilets and necessary changing facilities to assure privacy between the sexes.

ATTACHMENT D

INTENTIONALLY LEFT BLANK

ATTACHMENT E

SUPPLEMENTARY SPECIAL PROVISIONS

SUPPLEMENTARY SPECIAL PROVISIONS

The following Supplementary Special Provisions (SSP) modifies the following documents:

1) Standard Specifications for Public Works Construction (The GREENBOOK) currently in effect.

2) The City of San Diego Standard Specifications for Public Works Construction (The WHITEBOOK).

SECTION 1 – TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS

1-3.2 **Common Usage.** ADD the following:

GV Globe valve

QCV Quick coupler valve

POC Point of connection (irrigation plans)

GPM Gallons per minute

SECTION 2 - SCOPE AND CONTROL OF WORK

2-3.2 **Self Performance.** DELETE in its entirety and SUBSTITUTE with the following:

1. You must perform, with your own organization, Contract work amounting to at least 50% of the base bid alone or base bid and any additive or deductive alternate(s) that together when added or deducted form the basis of award.

2. The self-performance percentage requirement will be waived for contracts when a "B" License is required or allowed.

2-5.3.1 **General.** To the City Supplement, ADD the following

7. For products for which an AML is available, products listed in the AML shall be used. A submittal review will be conducted for products not identified on an AML on a case-by-case basis when:

   a) The product type or category is not in the AML.

   b) The AML does not list at least two available manufacturers of the product.

c) The material or manufacturer listed in the AML is no longer available. Documentation to substantiate the product is no longer available or in production is required as part of the submittal.

In the case of conducting a submittal review when required by the Plans or Special Provisions, or when requested by the Engineer, all submittals shall be accompanied by the City's submittal form.

The Product Submittal Form is available for download at:

http://www.sandiego.gov/publicworks/edocref/index.shtml

*Note: The distance dimensions shown between the bypass pipes and between bypass pipes and the mainlines are subject to change to field conditions.

2-7 **SUBSURFACE DATA.** ADD the following:

4. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests of subsurface conditions at the Work Site:

   1. Geotechnical Investigation for West Maple Canyon Mini Park dated October 25, 2011 by GEOCON Incorporated.

The report listed above is attached in the Contract Appendices.

2-9.1 **Permanent Survey Markers.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

Pursuant to Division 3, Chapter 15 of the Business and Professions Code, the Contractor shall not disturb survey monuments that "control the location of subdivisions, tracts, boundaries, roads, streets, or highways, or provide horizontal or vertical survey control" until they have been tied out by a Registered Land Surveyor or Registered Civil Engineer authorized to practice land surveying within the State of California.

Monument Preservation will be performed by City Public Works Field Engineering Division (PW-FED) Field Survey Section on all Projects, unless permission is obtained for these services in writing by PW-FED.

The Contractor shall submit to the Engineer a minimum of 7 Days prior to the start of the Work a list of controlling survey monuments which may be disturbed. The Agency (or the owner on a Private Contract) will:

a) set survey points outside the affected work area that reference and locate each controlling survey monument that may be disturbed,

b) file a Corner Record or Record of Survey with the County Surveyor after setting the survey points to be used for re-establishment of the disturbed controlling survey monuments, and

c) file a Corner Record of Record of Survey with the County Surveyor after re-establishment of the disturbed controlling survey monuments.

2-9.2 **Survey Service.** DELETE in its entirety and SUBSTITUTE with the following:

Prior to start of construction, you shall submit a letter to the Engineer identifying the Licensed Land Surveyor or the Registered Civil Engineer authorized to practice land surveying within the State of California performing the survey services for the Project.

You are responsible for performing and meeting the accuracy of surveying standards adequate for construction through a Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the State of California.

Survey stakes shall be set and stationed by you for curbs, headers, water mains, sewers, storm drains, structures, rough grade, and any other structure and appurtenances that is needed for the Project. A corresponding cut or fill to finished grade (or flow line) must be indicated on a grade sheet.

Surveys performed must list the basis of bearings as tied to Record of Survey 14492 or equivalent, based on the California Coordinate System of 1983, Zone 6, U.S. Survey foot, epoch 1991.35, along with a completed calibration sheet (blank form will be supplied by City Surveys). The vertical datum used must be NGVD 29 in accordance with the City of San Diego Vertical Bench Book.

You shall preserve construction survey stakes, control points and other survey related marks for the duration of the Project. If any construction survey stakes are lost or disturbed, and need to be replaced, such replacement will be performed by the Engineer at your expense.

2-9.2.1 **Survey Files.** All Computer Aided Drafting (CAD) work must be done in accordance with The City of San Diego's Citywide Computer Aided Design and Drafting (CADD) Standards and must be in City seed files (.job, .txt, .dgn, .alg, .raw, .fwd, .dtm, .pdf, .docx, .xlsx, .tif, and .jpg).

All survey files must be completed in accordance with the City of San Diego's Citywide CADD Standards and must adhere to City's Microstation level and attribute structure.

The survey file deliverable will be either one Master .dgn file containing all xref's in geospatially referenced (and attached) models or one Master dgn with all xref's geospatially referenced (and attached) as dgn files. Resource files will be sent to Contractor if requested.

Survey files must include, but not limited to, the following items:

a. Street center line and (record width) right-of-way lines

b. Project geometry (.alg) files (this will be generated for use in InRoads)

c. 3D surface model (.dtm, break line and spot elevation) file

d. Spot elevations of the new utility main at each intersection, midblock and for any change in grade

e. Monuments

f. Curb lines (top curb and gutter)

g. All other appurtenances including but not limited to water valves, meters, vaults, manholes, fire hydrants, utility boxes, cleanouts and poles

You shall use the survey information to produce red-lines drawings as described in Section 2-5.4 "Red-Lines and Record Documents."

2-9.2.2 **Submittal.** Survey files shall be submitted in accordance with Section 2-5.3 "Submittals" and 2-5.4 "Red-Lines and Record Documents." You shall provide the Survey Files, proposed Drawings and or Red-Line Drawings on a CD/DVD to the Engineer and post the Survey Files, proposed Drawings and or Red-Line Drawings at the following website:

ftp://ftp.sannet.gov/IN/SURVEYS/

After the documents have been posted the website, you shall send a confirmation email, which includes the hyperlink to the website, to the Engineer and SurveyReview@sandiego.gov

All survey work and submittals which reveal non-compliance with the requirements of the Construction Documents shall be corrected as deemed necessary by the Engineer and the cost of the corrections to your survey submittals will be at your expense.

2-9.2.3 **Payment.** Payment for survey services shall be included in the lump sum Bid for "Field Surveys".

2-15 **TECHNICAL STUDIES AND DATA.** To the City Supplement, ADD the following:

5. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests at the Work Site:

    1. Hydrology Study for West Maple Canyon Mini Park, dated February 15, 2013 by Nasland Engineering.

    The report listed above is attached in the Contract Appendices.

SECTION 4 - CONTROL OF MATERIALS

4-1.3.6 **Preapproved Materials.** To the City Supplement, ADD the following:

3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-3 LIABILITY INSURANCE. DELETE in its entirety and SUBSTITUTE with the following:

The insurance provisions herein must not be construed to limit your indemnity obligations contained in the Contract.

7-3.1 Policies and Procedures.

1. You must procure the insurance described below, at its sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.

2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.

3. You must maintain this insurance for the duration of this contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this contract. Your liabilities under the Contract, e.g., your indemnity obligations, is not deemed limited to the insurance coverage required by this contract.

4. Payment for insurance is included in the various items of Work as bid by you, and except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any work under this contract until you have provided and the City has approved all required insurance.

5. Policies of insurance must provide that the City is entitled to 30 days (10 days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

7-3.2 Types of Insurance.

7-3.2.1 Commercial General Liability Insurance.

1. Commercial General Liability Insurance must be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.

2. The policy must cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).

3. There must be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You must maintain the same or equivalent insurance for at least 10 years following completion of the Work.

4. All costs of defense must be outside the policy limits. Policy coverage must be in liability limits of not less than the following:

General Annual Aggregate Limit	Limits of Liability
Other than Products/Completed Operations	$2,000,000
Products/Completed Operations Aggregate Limit	$2,000,000
Personal Injury Limit	$1,000,000
Each Occurrence	$1,000,000

7-3.2.2 Commercial Automobile Liability Insurance.

1. You must provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of $1,000,000 combined single limit per accident, covering bodily injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").

2. All costs of defense must be outside the limits of the policy.

7-3.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this contract as described herein must be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

7-3.3.1 Non-Admitted Carriers. The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

All policies of insurance carried by non-admitted carriers must be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

7-3.4 Evidence of Insurance. Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document must be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

7-3.5 Policy Endorsements.

7-3.5.1 Commercial General Liability Insurance

7-3.5.1.1 Additional Insured.

a) You must provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.

b) To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured.

c) The additional insured coverage for projects for which the Engineer's Estimate is $1,000,000 or more must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, (c) your work, e.g., your completed operations performed by you or on your behalf, or (d) premises owned, leased, controlled, or used by you.

d) The additional insured coverage for projects for which the Engineer's Estimate is less than $1,000,000 must include liability arising out of: (a) Ongoing operations performed by you or on your behalf, (b) your products, or (c) premises owned, leased, controlled, or used by you.

7-3.5.1.2 **Primary and Non-Contributory Coverage.** The policy must be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it must provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives must be in excess of your insurance and must not contribute to it.

7-3.5.1.3 **Project General Aggregate Limit.** The policy or policies must be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work must reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit must be in addition to the aggregate limit provided for the products-completed operations hazard.

7-3.5.2 Commercial Automobile Liability Insurance.

7-3.5.2.1 **Additional Insured.** Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy must be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

7-3.6 **Deductibles and Self-Insured Retentions.** You must pay for all deductibles and self-insured retentions. You must disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.

7-3.7 **Reservation of Rights.** The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this contract.

7-3.8 **Notice of Changes to Insurance.** You must notify the City 30 days prior to any material change to the policies of insurance provided under this contract.

7-3.9 **Excess Insurance.** Policies providing excess coverage must follow the form of the primary policy or policies e.g., all endorsements.

7-4 **WORKERS' COMPENSATION INSURANCE.** DELETE in its entirety and SUBSTITUTE with the following:

7-4.1 **Workers' Compensation Insurance and Employers Liability Insurance.**

1. In accordance with the provisions of §3700 of the California Labor Code, you must provide at your expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.

2. Limits for this insurance must be not less than the following:

Workers' Compensation	Statutory Employers Liability
Bodily Injury by Accident	$1,000,000 each accident
Bodily Injury by Disease	$1,000,000 each employee
Bodily Injury by Disease	$1,000,000 policy limit

3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you must comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

7-4.1.1 **Waiver of Subrogation.** The policy or policies must be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from work performed by the Named Insured for the City.

7-5 **PERMITS, FEES, AND NOTICES.** To the City Supplement, ADD the following:

The City will obtain, at no cost to the Contractor; the following permit:

1. Building Permit

7-15 **INDEMNIFICATION AND HOLD HARMLESS AGREEMENT.** To the City Supplement, fourth paragraph, last sentence, DELETE in its entirety and SUBSTITUTE with the following:

Your duty to indemnify and hold harmless does not include any claims or liability arising from the established active or sole negligence, or willful misconduct of the City, its officers, or employees.

7-16 **COMMUNITY LIAISON.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

ADD:

7-16 **COMMUNITY OUTREACH.**

7-16.1 **General.**

1. To ensure consistency with the City's community outreach plan for the project, the City will work with you to inform the public (which includes, but is not limited to, property owners, renters, homeowners, business owners, recreational users, and other community members and stakeholders) of construction impacts. Efforts by you to mitigate construction impacts by communicating with the public require close coordination and cooperation with the City.

2. You shall perform the community outreach activities required throughout the Contract Time. You shall assign a staff member who will perform the required community outreach services.

3. You shall closely coordinate the Work with the businesses, institutions, residents and property owners impacted by the Project.

   Your example duties include notifying businesses, institutions, and residents of the commencement of construction activities not less than 5 days in advance, coordinating access for vehicular and pedestrian traffic to businesses, institutions, and residences impacted by the Project, reporting activities at all Project progress meetings scheduled by the Engineer, attending the Project Pre-construction Meeting, attending 2 community meetings, responding to community questions and complaints related to your activities, and documenting, in writing, as well as logging in all inquiries and complaints received into the City's Public Contact Log located on the City's SDShare site:

http://sdshare/forums/ecp/PITS/picr/Lists/Public%20Contact%20Log/AllItems.aspx.

4. You shall execute the Information Security Policy Acknowledgement Form - For Non-City Employees within 15 days of the award of the Contract if:

   a) Your contact information is made available on any outreach materials or;

   b) You will be the primary point of contact to resolve project related inquiries and complaints.

5. Electronic Communication.

   All inquiries and complaints will be logged in to the City's SDShare site within 24 hours of receipt of inquiries and complaints.

   Any updates or a resolution of inquiries, and complaints shall be documented in the City's SDShare site within 24 hours.

   Copies of email communications shall be saved, individually, on to the City's SDShare site as an Outlook Message Format (*.msg).

   All graphics, photos, and other electronic files associated with the inquiries and or complaints shall be saved into the individual record.

7-16.1.1 Quality Assurance.

1. During the course of community outreach, you shall ensure that the character of all persons that conduct community outreach (distributing door hangers, attending community meetings, interacting with the public, etc.) on your behalf shall:

   a. Have the ability to speak and comprehend English and/or Spanish, as appropriate for the community or public they are informing,

   b. Possess and display easily verifiable and readable personal identification that identifies the person as your employee,

   c. Have the interpersonal skills to effectively, professionally, and tactfully represent you, the project, and the City to the public.

7-16.1.2 Submittals.

1. You shall submit to the Resident Engineer, for review and approval, all drafts of letters, notices, postcards, door hangers, signs, mailing lists, proposed addresses for hand-delivery, and any other notices and letters that are to be mailed and or distributed to the public.

   a. Prior to distributing or mailing, you shall submit final drafts of letters, notices, postcards, door hangers, signs, and any other notices and letters to the Resident Engineer for final review and approval. Submit a PDF copy of the approved door hangers to the Engineer.

b. After distributing or mailing, you shall submit verification of delivery and any copies of returned notices to the Resident Engineer. Submit a PDF copy of the approved letters and notices to the Engineer.

You shall use the City's SDShare site to identify and summarize communications (via phone, in person, and email) with the public within 24 hours of receipt, even if your response to the individual is still incomplete. You shall upload to the City's SDShare site copies of all written, electronic, and verbal communications and conversations with the public.

7-16.2 Community Outreach Services.

7-16.2.1 Public Notice by Contractor.

1. Post Project Identification Signs in accordance with section 7-10.6.2

2. Notify businesses, institutions, property owners, residents or any other impacted stakeholders, within a minimum 300 feet radius of the Project, of construction activities and utility service interruptions not less than 5 days in advance.

3. Furnish and distribute public notices in the form of door hangers using the City's format to all occupants and/or property owners along streets:

   a. Where Work is to be performed at least 5 days before starting construction or survey activities or impacting the community as approved by the Resident Engineer.

   b. Within 5 days of the completion of your construction activities where work was performed, the Contractor shall distribute public notices in the form of door hangers, which outlines the anticipated dates of Asphalt Resurfacing or Slurry Seal.

   c. No less than 48 hours in advance and no more than 72 hours in advance of the scheduled resurfacing.

4. Leave the door hanger notices on or at the front door of each dwelling and apartment unit and at each tenant of commercial buildings abutting each of the street block segments. Where the front doors of apartment units are inaccessible, distribute the door hanger notices to the apartment manager or security officer.

5. Door Hanger Material: The Contractor shall use Blanks/USA brand, Item Number DHJ5B6WH, 1 ¼" Holes (removed), 2-up Jumbo Door Hanger in Bristol White, or approved equal.

6. Mailed Notice Material: The Contractor shall use Cougar by Domtar, Item Number 2834 or approved equal.

7. For all Work on private property, contact each owner and occupant individually a minimum of 15 days prior to the Work. If the Work has been delayed, re-notify owners and occupants of the new Work schedule, as directed by the Resident Engineer.

8. A sample of public notices is included in the Contract Appendix.

7-16.2.2 Communications with the Public.

1. Coordinate access for vehicular and pedestrian traffic to businesses, institutions and residences impacted by the Project.

2. The Contractor shall provide updates on construction impacts to the Resident Engineer. The Contractor shall notify the Resident Engineer in advance about time-sensitive construction impacts and may be required to distribute construction impact notices to the public on short notice.

3. The Contractor shall incorporate community outreach activities related to construction impacts in the baseline schedule and update the Resident Engineer with each week's submittal of the Three-Week Look Ahead Schedule.

4. At the request of the Resident Engineer, the Contractor shall attend and participate in project briefings at community meetings.

5. The Contractor shall coordinate with the Resident Engineer on all responses and actions taken to address public inquiries and complaints within 24-hours that they are received.

7-16.2.3 Communications with Media.

1. The City may allow members of the media access to its construction site(s) on a case-by-case basis only.

2. Occasionally, members of the media may show up at construction sites, uninvited. Members of the media (including, but not limited to newspaper, magazine, radio, television, bloggers, and videographers) do not have the legal right to be in the construction site without the City's permission.

3. In the event media representatives arrive near or on the construction site(s), the Contractor shall keep them off the site(s), in a courteous and professional manner, until a Public Information Officer is available to meet them at an approved location.

4. You shall report all members of the media visits to the Resident Engineer as quickly as possible, so that the City's Public Information Officer can meet with the members of the media at the construction site(s).

5. If the City allows members of the media to access a construction site, you shall allow the City to escort the media representatives while they are on the construction site and shall ensure their safety.

6. You shall require media representatives to sign in and out of the Site Visitor Log and to use Personal Protective Equipment.

7. You have a right to speak to members of the media about your company and its role on the project. All other questions shall be referred to the City.

7-16.4 **Payment.** The Payment for the Community Outreach Service is included in the various Bid items.

ADD:

7-21 PROTECTION OF EXISTING PLANT MATERIAL.

7-21.1 Construction Operations.

1. All plants outside the limit of work shall be protected in place. All trees to remain shall be protected in place.

2. Identify and protect from damage all individual plants and areas of planting to remain by appropriate means. Contractor shall provide equivalent size replacement plants in the event that the death or decline of existing plants to remain is attributable to the Contractor's negligence.

3. Provide adequate barriers (4' vinyl safety fencing) and undertake work in a manner that protects trees from damage by operations and equipment.

4. Do not store material and chemicals under the drip line of trees.

5. Do not operate equipment, which generates fumes or excessive heat, within 20' of the trees to remain. Fumes and heat can damage trees.

6. The grade around existing trees to remain shall remain as existing to avoid disturbance of roots and avoid burying the roots under additional soil.

7. No excavations shall take place within the tree preservation limits except under the supervision of the Resident Engineer.

8. When excavation near a tree to be preserved must be carried out, damage shall be limited by root pruning. Roots shall be cleanly severed at the limit of the excavation. Root pruning shall be completed before the installation of improvements, structures and grading. All work shall be done based on the Arborists recommendations.

9. Buried utilities and irrigation piping and equipment shall be located out of root zones wherever possible. In cases where utilities must cross root zones, tunnels shall be utilized in lieu of trenches. Tunneling within the rooting area of a tree to remain shall be done under the supervision of the Resident Engineer.

10. Trenching, excavation and soil disturbance within the drip line of vegetation to remain shall not be permitted except as specifically allowed by the Resident Engineer. It is the intent of the plans that the Contractor provide an alternate routing of irrigation, electrical and all trenching to avoid cutting through roots of existing trees.

11. Where it is necessary to excavate in close proximity to existing trees and shrubs, all possible caution shall be exercised to avoid injury to roots and trunks. In the event it is necessary to cut the roots of an existing tree to remain, the tree shall be pruned prior to excavation to reduce the foliage volume by the same percentage as the approximate percentage of roots removed. All work shall be performed under the direction of the Resident Engineer.

12. Excavation within the drip line of the trees shall be done by hand, tunneling under roots 1" in diameter and larger, and shall be done only on the approval of the Resident Engineer. The exposed roots of trees shall be covered and shaded by moist burlap or canvas until the trench is backfilled (See Section 308-4).

13. All plants to remain on-site shall be watered if necessary during the entire construction contract to provide for plant health and survival. Watering shall be done under the direction of the Resident Engineer.

7-21.2 Clean-up Repair and Maintenance.

1. Upon completion of all work, remove tools equipment and tree preservation materials and measures from the site.

2. Repair all areas, structures and surfaces damaged and requiring repair resulting from tree preservation measures. Repair adjacent construction or surfaces soiled or damaged by tree preservation measures.

SECTION 9 - MEASUREMENT AND PAYMENT

9-3.2.5 **Withholding of Payment.** To the City Supplement, item i), DELETE in its entirety and SUBSTITUTE with the following:

i) Your failure to comply with 7-2.3, "PAYROLL RECORDS" and 2-16, "CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM."

SECTION 200 - ROCK MATERIALS

ADD:

200-1.8 **Boulders.** All boulders shall be sized and located as shown on the plans. The bouldertype shall be "Surface Select Boulder' as supplied by Decorative Stone Solutions, or approved equal.

The Contractor shall submit photos of boulders to be provided illustrating the range of color and variety of sizes for each type specified, for approval by the Resident Engineer prior to purchase or installation. Photos shall be a representative record of the quality of materials to be provided. All boulders shall be free of significant fractures and disfiguration and shall be approved by the Resident Engineer prior to placement. Boulders will be subject to rejection by the Resident Engineer if not similar in quality, style, or size as indicated in the photos or as required per plans. Rejected boulders shall be removed from the project site and all costs related to rejected boulders shall be paid by the Contractor. No payments shall be paid to the Contractor by the City for rejected boulders

ADD:

200-1.9 **Cobble Mulch.** Cobble shall be of a mix of browns, grays, tans, and maroon colored rock in 6"-9" sizes and is to be provided and installed by the Contractor. Cobble shall be "Curran Cobble" as supplied by Decorative Stone Solutions, or approved equal. Cobble shall be free of chips, earth, and discolorations or other material. All cobble shall be washed to remove dirt, dust and loose material prior to placement on site. Cobble shall be clean prior to setting.

The Contractor shall submit samples of cobble (6 pieces) illustrating the range of color and variety of sizes for each type specified, for approval of the City Engineer prior to installation. Contractor shall also submit photos of each type of cobble material specified as a representative record of general color variation.

ADD:

200-1.10 **Topseeded Aggregate Paving Rock.**

TYPE 1

For exposed aggregate concrete, the aggregate shall be 3/8"-5/8" size, 'Salmon Bay' pebble, by KRC Rock (760-744-1036), www.krcrock.com), or approved equal. Provide a one cup-size sample to Resident Engineer for approval. Aggregate shall be provided from a single source.

TYPE 2

For exposed aggregate concrete, the aggregate shall be 50% 1/2"-1" size and 50% 1"-2" 'Beach Pebble Buff' round rock, by Decorative Stone Solutions, or approved equal. (www.decorativestonesolutions.com). Provide a one cup-size sample to Resident Engineer for approval. Aggregate shall be provided from a single source.

Quantities: When purchasing materials for exposed aggregate concrete work, Contractor shall secure a minimum of ten percent (10%) surplus of all materials required to do the work. This excess material shall be delivered to the Resident Engineer.

SECTION 201 - CONCRETE, MORTAR AND RELATED MATERIALS

ADD:

201-1.1.2 **Concrete Specified By Class and Alternate Class.** The concrete class and maximum slump for the various items of concrete work shall be as specified in the table under Subsection 201-1.1.2 of the Standard Specifications with the following additions or modifications:

Item	Concrete Class	Max. Slump (in.)
Concrete (sidewalk, driveways)	560-B-3250	4-inch (Must be certified by truck ticket.)
Concrete Curb	560-C-3250	4-inch
Concrete Base	520-C-2500	4-inch
Fence and Post Foundations	520-C-2500	Dimensions per plans

ADD:

201-1.2.4 **Chemical Admixtures.**

(f) Integral Colored Concrete.

Integral color shall consist of colored admixtures developed for use in ready mixed concrete. Integral color pigments shall meet ASTM-C-979. The coloring method shall be designed for concrete flatwork applications (broom finishes, sandblast finishes, smooth finishes), as well as vertical surfaces, and other types of architectural concrete. Pigment shall be a permanent coloration, uniform throughout the concrete surface and interior, and shall be highly UV and fade resistant.

Admixture for all integral colored concrete: Colored Concrete Paving shall be the following:

Manufacturer: Color admixtures for color-conditioned concrete, or approved equivalent

Supplier: Solomon Colors, Inc.
4050 Color Plant Road
Springfield, IL 62791
1-800-624-0261

Color: #242 - 'Sahara'

Admixture products and procedures for installation shall be in strict accordance with the manufacturer's specifications and recommendations, and those published by the American Concrete Institute (ACI) and the Portland Cement Association (PCA).

201-2 **REINFORCEMENT FOR CONCRETE.**

201-2.5 **Tie Wire.** Tie wire shall be 16 gauge, black annealed.

201-2.6 **Reinforcing Supports.** All horizontal reinforcing shall be supported on approved chairs or supports to the specified height and locations. Review and approval by Resident Engineer.

201-2.7 **Dowels.** Dowels shall be sections of deformed steel reinforcing rod in sizes and lengths as indicated on the plans. Dowels shall be provided in locations as shown on plans. Provide dowels at the on-center spacing as indicated on the plan, centered on concrete slab, with a minimum of two dowels abutting into any adjacent slab sections.

201-3 **EXPANSION JOINT FILLER AND JOINT SEALANTS.**

201-3.4 **Type "A" Sealant (Two-Part Polyurethane Sealant).** ADD the following:

When not otherwise indicated all expansion joints located adjacent to colored or stained concrete shall be sealant Type "A" colored to match the color of the concrete surface.

Contractor shall provide joint sealants that have been produced and installed to establish and to maintain watertight and airtight continuous seals without causing staining or deterioration of joint substrates.

Contractor shall submit product data from the manufacturer of each joint sealant product required, including instructions for joint preparation and joint sealer application. Contractor shall also submit samples for initial selection purposes in form of manufacturer's standard bead samples, consisting of strips of actual products showing full range of colors available, for each product exposed to view. Samples shall be submitted to Residential Engineer. Submit complete schedule of type (and location where type is to be used) of each sealant.

Contractor shall engage an experienced installer who has completed joint sealant applications similar in material, design, and extent to that indicated for Project that have resulted in construction with a record of successful in-service performance.

Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.

Provide color selections made by Engineer from manufacturer's full range of standard colors for products of type indicated. Sealant color parallel to curb line shall match color of adjacent paving as specified in Section 201-1.2.4(a) of these Special Provisions.

ADD:

201-9 **WATER BASE PENETRATING SEALER FOR INTEGRAL COLORED CONCRETE. (Scofield COLORCURE Concrete Sealer or Approved Equal).** Water base penetrating sealer shall be designed for the protection of integrally colored concrete and other masonry surfaces to preserve the natural appearance of the concrete without darkening or adding gloss to the surface. It shall preserve the natural slip resistance of the concrete. Sealer shall repel spills and soils, minimizing staining and maintenance.

Seal shall leave no visible material on the surface and shall be absorbed and locked into the pores of the concrete, repelling liquids and soils but leaving the top surface natural in appearance. Install per manufacturer's directions. Seal shall be compatible with the surfaces and materials which it is applied. Concrete sealer shall conform to the following specifications:

Color:	Clear
Odor:	Mild
Flash Point:	None (C.O.C. method)
Specific Grav:	1.03
Denisity:	8.6 pounds per gallon
Drying time:	30 minutes to 60 minutes
Cure time:	24 to 48 hours
VOC Content:	None (0 g/l) excluding water
Polymer type:	Proprietarty Reactive Resin System

Coverages (approximate):

Smooth concrete:	300 to 400 square feet per gallon
Rough concrete:	200 to 300 square feet per gallon

Note: Coverages vary depending on porosity and condition of surface and method of application

Curing: L.M. Scofield Company
6533 Bandini Boulevard
Los Angeles, CA 90040
(800)-800-9900

SECTION 202 – MASONRY MATERIALS

ADD:

202-4 ACCENT WALL MASONRY MATERIALS.

202-4.1 **Concrete Masonry Units.** Concrete masonry units shall be 8x8x16 standard block units per Section 202-2 'Concrete Block'.

202-4.2 **Precast Concrete Cap.**

Model:	Quickcrete Wall Cap, or approved equal.
Unit type:	Radial End (mirrored) and Mid units: 7' inside radius w/ 1" radius bullnose on all outer edges; Anti-skate deterrent recess at joints: 1/2" depth x 1" width on top surface and vertical sides - at joints only;
Dimensions:	2' nominal (L) x 1'-2" (W) x 2-1/2" thick, w/ 1/4" under reveal offset at 1" from edge. (Actual (L) sizes should account for 1/2" grout widths.
Colors:	Solomon Colors: #338 Buckskin
Finish:	Smooth Finish

Manufacturer: Quickcrete, Inc.
731 Parkridge Ave.
Norco, CA
(951) 737-6240

202-4.3 **Manufactured Stone Veneer.** Manufactured Stone Veneer shall be Coronado River Rock 'Reno Blend', in roughly 2" to 6" sized units, or approved equal.

Supplier: Coronado Stone Products, Inc.
11191 Calabash Avenue
Fontana, CA 92337
1-800-847-8663
www.coronado.com

202-4.4 **Grout.** Grout shall be 'Accu-Color – Premium Sanded Grout #982 Summer Wheat, by TEC or approved equal. Contractor shall submit a range of Brown grout color samples for review and approval.

Precast concrete cap grout color shall match precast concrete cap color. Contractor shall submit a grout color samples for review and approval.

202-4.5 **Mortar.** Mortar shall be 'Ultimate Large Tile Mortar 383– Gray', by TEC or approved equal.

Supplier: H.B. Fuller Construction Products, Inc.
1105 S Frontenac Road
Aurora, IL 60504
1-800-552-6225
Color: Gray

202-4.6 **Concrete and Footing Reinforcing.** Footings for seat wall shall be comprised of reinforced cast in place concrete placed at locations required to support seat walls as indicated on the drawings. Concrete and reinforcing shall comply with Section 201 'Concrete, Mortar and related Materials' and Structural drawings.

ADD:
202-5 **RETAINING WALL NO. 1 MASONRY MATERIALS (Nearest Street).**

202-5.1 **Concrete Masonry Units.** Concrete masonry units shall be 6x8x16 standard block units per Section 202-2 'Concrete Block'.

202-5.2 **Precast Concrete Cap.**

Model: Quickcrete Wall Cap, or approved equal.

Unit type: All units are radial with 1" radius bullnose on all outer edges;

Left End units: 62.5' inside radius, bullnose on (3) sides;

Left Middle units: 62.5' inside radius; Anti-skate deterrent recess at (2) abutting joints: 1/2" depth x 1" width on top and vertical sides; Bullnose on sides only.

Left Inside units: 62.5' inside radius; Anti-skate deterrent recess at (1) abutting joint only: 1/2" depth x 1" width on top and vertical sides; Bullnose at sides and overlap end.

Right End units: 16.5' outside radius; Anti-skate deterrent recess at abutting joint only: 1/2" depth x 1" width on top and vertical sides; Bullnose on (3) sides;

Right Middle units: 16.5' outside radius; Anti-skate deterrent recess at (2) abutting joints: 1/2" depth x 1" width on top and vertical sides; Bullnose on (2) sides;

Right Inside units: 16.5' outside radius; Anti-skate deterrent recess at (1) abutting joint only: 1/2" depth x 1" width on top and vertical sides; Bullnose on (3) sides;

Dimensions: 2' lengths x 1'-2" wide x 2-1/2" thick.
Colors: Solomon Colors: #338 Buckskin
Finish: Smooth Finish
Manufacturer: QuickCrete, Inc.
731 Parkridge Ave.
Norco, CA
(951) 737-6240

202-5.3 **Manufactured Stone Veneer.** Manufactured Stone Veneer shall be Coronado River Rock 'Reno Blend', in roughly 2" to 6" sized units, or an approved equal.

Supplier: Coronado Stone Products, Inc.
11191 Calabash Avenue
Fontana, CA 92337
1-800-847-8663
www.coronado.com

202-5.4 **Grout.** Grout shall be 'Accu-Color – Premium Sanded Grout #982 Summer Wheat, by TEC or approved equal. Contractor shall submit a range of Brown grout color samples for review and approval.

Precast concrete cap grout color shall match precast concrete cap color. Contractor shall submit a grout color samples for review and approval.

202-5.5 **Mortar.** Mortar shall be 'Ultimate Large Tile Mortar 383– Gray', by TEC or approved equal.

Supplier: H.B. Fuller Construction Products, Inc.
1105 S Frontenac Road
Aurora, IL 60504
1-800-552-6225
Color: Gray

202-5.6 **Concrete and Footing Reinforcing.** Footings for seat wall shall be comprised of reinforced cast in place concrete placed at locations required to support seat walls as indicated on the drawings. Concrete and reinforcing shall comply with Section 201 'Concrete, Mortar and related Materials' and Structural drawings.

ADD:

202-6 RETAINING WALL NO. 2 MASONRY MATERIALS.

202-6.1 **Concrete Masonry Block.** Concrete block shall be split faced CMU on all exposed surfaces.

Color to be: Buff
Manufacturer: RCP Block & Brick
(619) 460-9101
8240 Broadway
Lemon Grove, CA

202-6.3 **Concrete and Footing Reinforcing.** Footings for seat wall shall be comprised of reinforced cast in place concrete placed at locations required to support seat walls as indicated on the drawings. Concrete and reinforcing shall comply with Section 201 'Concrete, Mortar and related Materials' and Structural drawings.

202-6.4 **Grout.** Grout shall be 'Accu-Color – Premium Sanded Grout #982 Summer Wheat, by TEC or approved equal. Contractor shall submit a range of Brown grout color samples for review and approval.

Precast concrete cap grout color shall match precast concrete cap color. Contractor shall submit a grout color samples for review and approval.

202-6.5 **Mortar.** Mortar shall be 'Ultimate Large Tile Mortar 383– Gray', by TEC or approved equal.

Supplier: H.B. Fuller Construction Products, Inc.
1105 S Frontenac Road
Aurora, IL 60504
1-800-552-6225
Color: Gray

ADD:

202-7 WATERPROOFING FOR MASONRY WALLS. Waterproofing membrane: a self-adhering sheet applied membrane consisting of 56 mils of rubberized asphalt laminated to 4 mils of cross laminated, high density polyethylene to form a minimum 60 mil membrane. The membrane shall be delivered on a silicone release paper that serves as a carrier to be removed prior to application of the membrane. Acceptable material: Bituthene 3000 waterproofing membrane, or approved equal. Provide a compatible water based primer by the same manufacturer designed to bind dust and efflorescence providing a suitable surface for adhering waterproofing.

Protection Board: Protection board to separate waterproofing from backfill shall be 3/4" thick styrofoam drainage protection board shall be Dow Protection Board, or approved equal.

SECTION 203 – BITUMINOUS MATERIALS

203-15 **RUBBER POLYMER MODIFIED SLURRY (RPMS).** To the City Supplement, CORRECT section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
203-15	RUBBER POLYMER MODIFIED SLURRY (RPMS)	203-16
203-15.1	General	203-16.1
203-15.2	Materials	203-16.2
203-15.3	Composition and Grading	203-16.3
203-15.4	Mix Design	203-16.4

ADD the following:

RPMS shall be used on this contract.

SECTION 206 - MISCELLANEOUS METAL ITEMS

ADD:

206-5.1.1 **Metal Fencing.** Cable barrier fencing shall be steel fabricated posts and cable, with hot-dipped galvanized finish. Steel posts shall comply with the dimensions as indicated on the drawings and with Section 206-5 'Metal Railings'. Fencing shall be comprised of vertical plate steel with pre-drilled holes. Any welds shall be continuous and ground smooth and remove all burrs, sharp edges, and imperfections for a smooth surface prior to galvanizing. Provide over-sized pre-drilled holes as indicated on the drawings or as required to accommodate for galvanized cabling diameter. Cable barrier fencing shall have a cable manufacturer applied galvanized coating with a minimum thickness of 8mils. Galvanized cable shall have a minimum galvanized thickness of 6mils. All clamps and other hardware shall be galvanized to match main components with a min thickness of 6 mils. Provide shop drawings and samples for review and approval. Installations shall be vandal-proof, including clamp hardware. All posts shall be embedment mounted into a cast in place concrete footing, size per plans.

206-8 **NO LITTERING OR DUMPING SIGN.** Signs shall be cleaned and reinstalled in conformance with the SDRSD M-45 standards for signs, with footings per SDM-102.

SECTION 209 – STREET LIGHTING AND TRAFFIC SIGNAL MATERIALS

209-6.4 **Induction Cobra Head Luminaire.** To the City Supplement, CORRECT certain section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
209-6.4.7	Luminaire Identification	209-6.4.8
209-6.4.8	Photometric Documentation	209-6.4.9
209-6.4.9	Quality Assurance	209-6.4.10

ADD:

209-1 GENERAL.

209-1.1 Description. All electrical work shall be in conformance with the plans, and State, Federal and Local Electric Codes and City of San Diego Park and Recreation Department Consultant's Guide to Park Design and Development Design Manual, 2011. Work includes, but is not necessarily limited to, providing site power systems as follows:

1. Complete electrical secondary conduit systems, including all pull and all meter pedestals, handholes, splice boxes, pads, and other associated components.
2. All conduit and feeder conductors for site work components.
3. All site area lighting, including service and conduit together with related photocells.
4. All required trenching, soil removal/replacement, compaction and turf repairs, to current City standards.
5. Payment of all permit fees, utility company installation charges, SDG&E service orders, engineering fees, relocation costs, and related charges, as applicable.

209-1.2 Schedule. The Contractor shall obtain information and instructions from other Contractors on the site and other trades and suppliers in ample time to schedule and coordinate the installation of items furnished by them under this section so that provisions for their work can be made without delaying the project.

209-1.3 Accuracy of Data. The electrical drawings are diagrammatic, but shall be followed as closely as actual construction and work in other sections will permit. All deviations from drawings required to conform to site conditions and to the work of others, shall be made as directed.

209-1.4 Submittals.

1. Materials List - Provide complete materials list of all proposed products, including catalog cuts of manufactured items.

209-1.5 Quality Assurance.

1. Manufacturer shall have produced the specified products for a period of 2 years prior to beginning work of this section, and shall have the capability to produce the specified products to the delivery and quantity criteria of the project.

2. STAFF - For fabrication and installation of work, use only personnel who are thoroughly trained and experienced in the skills required, have installed similar applications of the specified products within one year prior to beginning work of this section, and who are completely familiar with the manufacturers' recommended methods of installation as well as the requirements of this work.

209-1.6 **Guarantee.** The contractor shall furnish a written guarantee against defective work, materials, and operation for a period of one full year after final acceptance.

1. All materials and equipment shall be new, free from defects and or the quality or rating shown or specified.

2. Any defect due to missing or improper material or faulty workmanship existing or developed during the specified period shall be corrected and the resulting damage repaired without additional cost to the City. Such work shall be done at a time as directed by the Engineer.

209-1.7 **Product Handling.**

1. **Protection** - Use all means necessary to protect the materials of this section before, during, and after installation and to protect the work and materials, of all other trades.

2. **Replacements** - In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer and at no additional cost to the City.

209-1.8 **Covering of Unreviewed Work.** No work shall be covered, or enclosed, without review, testing, and/or approval by Engineer. Work enclosed or covered prior to review and test shall be uncovered at Contractor's expense. After review, retest for approval and repair with material necessary to restore to original and proper condition.

209-6.4 **Induction Cobra Head Luminaire.** To the City Supplement, CORRECT certain section numbering as follows:

OLD SECTION NUMBER	TITLE	NEW SECTION NUMBER
209-6.4.7	Luminaire Identification	209-6.4.8
209-6.4.8	Photometric Documentation	209-6.4.9
209-6.4.9	Quality Assurance	209-6.4.10

209-11 ELECTRICAL COMPONENTS.

209-11.1 Conduit.

1. **Rigid Non-metallic Conduit** - Heavy-wall rigid non-metallic conduit, where permitted, shall be Carlon or equal, PVC Schedule 40 manufactured in accordance with NEMA TC-2, UL-651 and WC 1094A specifications.

2. Conduit shall be delivered to site in standard lengths with each length bearing the manufacturer's trademark or stamp and U.L. Labeled.

3. Conduit shall be minimum 3/4 inch or larger in diameter.

4. All conduits shall contain equipment grounding conductors.

209-11.2 Wire/Conductors.

1. All wire and cable shall be rated for 600 volt, be color-coded, shall bear the Underwriters' Label, and shall be brought to the job in unbroken packages.

2. Wire coding shall be in accordance with the provisions of Section 210-5 of the latest edition of the National Electric Code.

3. All conductors unless noted otherwise shall be copper, No. 12 AWG minimum size. All conductors shall be stranded. Insulation type, unless otherwise noted, shall be as follows:

4. Feeder conductors: Type THW, 75 Degrees C.

5. Fixture and branch circuit conductors: Type THHN/THWN: XHHW or RHH - minimum 90 degrees C, unless otherwise noted.

6. Acceptable Manufacturers: General Wire and Cable Corp., Okonite Wire and Cable Corporation or approved substitute.

7. All branch circuit conductors shall be labeled with circuit numbers.

8. One neutral conductor for each phase conductor pulled.

9. For wire #10 AWG and smaller provide Buchanan connectors or approved substitute. For wire #8 AWG and larger provide T&B "Lock-Tite" connectors or equal.

10. All connections shall be taped with rubber tape 1-1/2 times the thickness of the conductor insulation, then covered with Scotch #33 tape, or equal.

11. Splices in underground distribution systems shall be made only in accessible locations such as handholes, with a compression connector on the conductor and by insulating and waterproofing by the following methods suitable for continuous submersion in water. Provide cast-type splice insulation by means of molded casting process employing a thermosetting epoxy resin insulating material applied by a gravity-poured method or by a pressure-injected method. Provide component materials of the resin insulation in a packaged form ready

for convenient mixing without removing from the package. Do not allow the cables to be moved until after the splicing material has completely set.

209-11.3 **Pull/Splice Boxes (Below Grade).** All pull boxes shall be sized and constructed per serving utility requirements, using precast ring design for box. Provide cover lid as required for pedestrian or vehicular traffic condition, with bolted connections, and labeled with name of serving utility. All boxes shall be located 1" above grade in landscape areas and flush with pavement in paved or traffic areas.

209-11.4 **Site Lighting.** Lighting fixtures and poles shall be per the schedule on the drawings or approved equal as accepted by the Engineer and shall include all accessories for a complete system. Provide #6 AWG connection from pole ground lug to reinforcing of concrete footing base. All pole mounted fixtures shall be 'full cut-off' per the ordinances as set forth by the City of San Diego.

209-11.5 **Other Materials.** All other required materials shall be new, of highest quality for applicable use, and per approval of local agency, servicing utility, and City of San Diego.

SECTION 210 – PAINT AND PROTECTIVE COATINGS

210-6 **ANTI-GRAFFITI COATINGS.** ADD the following:

3. Anti-graffiti coating shall be applied to all masonry site furnishings, including benches, retaining wall faces and caps, trash receptacles, etc. Anti-graffiti shall be manufacturer applied prior to delivery of site furnishings to project site.

SECTION 212 - LANDSCAPE AND IRRIGATION MATERIALS

212-1 **LANDSCAPE MATERIALS.**

212-1.2.3 **Commercial Fertilizer.** ADD the following:

Pre-plant fertilizer shall be granular commercial fertilizer 12-12-12 or approved equivalent.

Post-plant fertilizer shall be 14-7-3 or approved equivalent with CA, FE, ZN, and MN and with the majority of nitrogen in non-ammoniac form to prevent acidification of soil.

212-1.2.4 **Organic Soil Amendment.** ADD the following:

Type 4 organic soil amendment (compost) shall be derived from Green Material (yard waste and/or food waste) that is composted in accordance with California Code of Regulations, Title 14, Chapter 3 Article 7, 17868.3 (15-day Process to Further Reduce Pathogens and kill weed and other seeds). Incorporated into the soil, compost improves soil texture; increases both nutrient and water holding capacity; and reduces the need for commercial fertilizer. Where applicable, Organic Soil Amendment can qualify as a component of LEED certification.

Type 4 organic soil amendment must come from a compost facility that tests its compost on a quarterly basis and meets the requirements listed in Table 212-1.2.4(B). Contractor shall provide a copy of the most recent quarterly test results, and a current representative sample of the compost to be used on the project, to the City, prior to approval and the compost being used.

The City of San Diego's Miramar Greenery produces Type 4 organic soil amendment (compost) and complies with the U.S. Composting Council's Seal of Testing Assurance Program. The Miramar Greenery is located within the City's Miramar Landfill at State Hwy. 52 and Convoy St. in San Diego.

http://www.sandiego.gov/environmental-services/miramar/greenery/

Table 212-1.2.4 (B)

Test Criteria	Acceptable Range	Unit of Measure	TMCC Test Method
pH	6.0 - 8.0		04.11-A 1:5 Slurry pH
Soluble salts	0 - 10	dS/m (mmhos/cm)	04.10-A 1:5 Slurry Method
Organic Matter	30 - 75%	% dry weight basis	05.07-A Loss-on-ignition Organic Matter Method (LOI)
Stability	≤ 8	mg CO_2/g OM/day	05.08-B carbon Dioxide Evolution Rate
Maturity	> 80% emergence	average % of control	05.05-A Germination and vigor
Pathogens			
Fecal coliform	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.32(a)	07.01-B Fecal coliforms
Salmonella	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.32(a)	07.02 Salmonella

Test Criteria	Acceptable Range	Unit of Measure	TMCC Test Method
Heavy Metal	Pass	Pass/Fail per U.S. EPA Class A standard, 40CFR 503.13(a) Tables 1 and 3.	04.06-Heavy Metals standards, and Hazardous Elements.
Particle Size	≥ 90%	% dry weight passing through 11mm	02.02-B Sample Sieving for Aggregate Size Classification

212-1.2.5 **Mulch.** To the City Supplement, Item g), ADD the following:

Average dimensions shall be 1" to 2" in length and 1/2" in thickness. Submit two (2) samples for approval by the Resident Engineer prior to installation.

Mulch. To the City Supplement, Item (h) Type 8 Mulch (rock or gravel). ADD the following:

Cobble shall be of a mix of browns, grays, tans, and maroon colored rock in 6"-9" sizes and is to be provided and installed by the Contractor. Cobble shall be "Curran Cobble" as supplied by Decorative Stone Solutions, or approved equal. Cobble shall be free of chips, earth, and discolorations or other material. All cobble shall be washed to remove dirt, dust and loose material prior to placement on site. Cobble shall be clean prior to setting.

The Contractor shall submit samples of cobble (6 pieces) illustrating the range of color and variety of sizes for each type specified, for approval of the City Engineer prior to installation. Contractor shall also submit photos of each type of cobble material specified as a representative record of general color variation.

212-1.2.6 **Inorganic Soil Amendments.** To the City Supplement, ADD the following:

Soil sulfur. Soil sulfur shall be 99.5% elemental. Sizing on stacked screen shall be approximately: 8 mesh 4.3%; 20 mesh 7.8%; 50 mesh 46.9%; 100 mesh 39.3%; 200 mesh 1.7%.

ADD:

212-1.2.7 **Herbicides and Pesticides.** Herbicides and pesticides shall be used in their appropriate applications with strict adherence to manufacturers' specifications and instructions.

Pre-emergent herbicide for shrub and groundcover areas (planted from flats) shall be Treflan, Surflan, Eptan, or approved equivalent.

The Contractor shall obtain approval for any and all pesticide and herbicide use in writing from the Resident Engineer. All pesticides and herbicides shall be used in strict adherence to manufacturers' specifications and instructions, and shall be applied only by a licensed applicators.

Post-emergent herbicide for all areas shall be Round Up, Diquat, Montar, or approved equivalent, except for areas where it may contact standing or running water.

Post-emergent herbicide for all areas where herbicide may come in contact with standing or moving water shall be Aquamaster, Rodeo, or approved equal specifically approved for use near water bodies. These herbicides are approved for use within the riparian areas by the City and County of San Diego because it has been determined to be non-toxic to aquatic organisms. Other herbicides shall be approved by the City and County of San Diego prior to use on only the most noxious weeds, and only under the direct supervision of the Resident Engineer.

All herbicides shall be selected for suitability for the specific uses required, and shall be applied by a licensed pesticide applicator.

212-1.3 **Seed.** Second paragraph, ADD the following:

Seed specified as "Scarified" shall be certified in vendor's statement. Legume seeds shall be scarified. For seed mix see section 212-1.3.1

ADD:

212-1.3.1 **Hydroseed.** Hydroseed must comply with Section 212-1.3 "Seed" of the Standard Specifications and shall consist of:

Bonded fiber matrix (BFM)

Bonded fiber matrix shall be 'Hydro-Blanket' by Profile Products LLC, or approved equal. Bonded fiber matrix must comply with Section 700-2.8 of the Standard Specifications.

The Bonded Fiber Matrix (BFM) shall be a material pre-packaged by the manufacturer to assure material performance and in compliance with the following values.

Thermally Processed Wood Fibers – 79.5% ± 2.5%

Proprietary Crosslinked Hydro-Colloid Tackifier – 10% ± 1%

Moisture Content – 10.5% ± 1.5%

The Bonded Fiber Matrix (BFM) shall be a hydraulically applied flexible erosion control blanket composed of long strand, thermally processed wood fibers and a proprietary cross-linked, hydro-colloid tackifier. The BFM may require a 24-48 hour curing period to achieve maximum performance. The BFM shall be Hydro-Blanket® BFM, and conform to the following property values when uniformly applied at a rate of 3,000 pounds per acre (3,900 kilograms/hectare) under laboratory conditions.

Physical Property	Test Method	Req. Value (English)	Req. Value (SI)
Mass Per Unit Area	ASTM D6566	11.5 oz/yd^2	390 g/m^2
Thickness	ASTM D6525	0.21 inch	3 mm. minimum
% Ground Cover	ASTM D6567	99% minimum	99% minimum
Water Holding Capacity	Profile Products	1350% minimum	1350% minimum
Color (fugitive dye)	Observed	Green	Green
% Effectiveness	ECTC Test Method #2	10% minimum	10% minimum
Cure time	Observed	24-48 hours	24-48 hours
Vegetation Establishment	ASTM D7322[1]	800 % minimum	800 % minimum
Functional Longevity	Observed	Up to 8 months	Up to 8 months
Cover Factor	ECTC Test Method #2	10% minimum	10% minimum
Vegetation Establishment	ECTC Test Method #4	600% minimum	600% minimum

Commercial Fertilizer

Commercial fertilizer must be a controlled release type and have a guaranteed chemical analysis within 10 percent of 12 percent nitrogen, 12 percent phosphorate and 12 percent soluble potash. Acceptable commercial fertilizer: 'Biosol Forte' by Biosol, or approved equal.

Organic Soil Conditioner

Provide an organic soil conditioner that is a concentrated mineral rich soil conditioner containing 40% Humic Acids with an overall composition that is non-toxic and non-burning. Acceptable Soil Conditioner Product: "Tri-C Humate" by Tri-C, or approved equal.

Mycorrhizal Inoculum

Provide an organic Arbuscular Mycorrhizal Inoculum containing one or more species of mycorrhizae fungi at a minimum rate of 120 propagules per cubic centimeter. Acceptable Mycorrhizal Inoculum Product: "AM120" by Reforestation Technologies International, or approved equal.

Seed Mix:

Botanical Name	Common Name	LBs/Acre	%Pure Live Seed
Artemisia californica	California Sagebrush	4.7	22
Atriplex canescens	Four-wing Saltbrush	1.0	30
Encelia actonii	Acton Bush Encelia	3.0	25
Eriogonum fasciculatum	California Buckwheat	4.3	20
Isomeris arborea	Bladderpod	4.0	55
Lasthenia glabrata	Goldfields	2.0	85
Lotus scoparius	Deerweed	6.0	85
Lupinus succulentus	Arroyo Lupine	6.0	90
Salvia apinana	White Sage	2.7	13
Salvia mellifera	Black Sage	3.8	18
Vulpia microstachys	Small Fescue	8.0	70

212-1.4.1 **General.** To the City Supplement, ADD the following:

Contractor shall notify the Resident Engineer a minimum of 48 hours before each plant delivery so the Resident Engineer can schedule an inspection.

Availability: Within 2 weeks of the start of work, the Contractor shall place orders for all plant material in sufficient time to reserve or grow the plants for the project. No substitutions will be allowed. If plants are not available, the Contractor shall have the specified species contract grown by a reputable native plant nursery such as Las Pilitas, Tree of Life, or Recon, or approved equal. Provide nursery name and resume for review and approval prior to contract growing.

Quality and Size: Plants shall be in accordance with the California State Department of Agriculture Regulations for Nursery Inspections of Rules and Grading. Nursery tags must be submitted to the Resident Engineer. Sizes shall conform to the dimensions indicated on the planting plan. All plants shall be reviewed and approved for acceptable size and quality by Engineer prior to planting.

All plants shall have a growth habit normal to the species and shall be symmetrical, typical for variety and species, sound, healthy, vigorous and free from insect pests, insect eggs, plant diseases, sun scalds, fresh bark abrasions, excessive abrasions, or other objectionable disfigurements.

All plants shall have normal well-developed branch systems, and vigorous and fibrous root systems which are neither root- nor pot-bound and are free of kinked or girdling roots.

Immediately upon award of contract for work in this section, locate and purchase or hold for purchase all trees required. Color photos of all trees shall be submitted to Engineer for approval a minimum of 15 days prior to delivery of the plants to the site. The Engineer reserves the right to reject any plant species upon conducting a physical inspection after delivery to the site.

Quantities: Quantities of all plant materials shall be furnished as needed to complete work as shown on the Drawings.

Inspection of plant materials required by City, County or State authorities shall be the responsibility of the Contractor, and where necessary, permits or certificates shall have been secured prior to delivery of plans to site.

The Resident Engineer is the sole judge as to acceptability of each plant. Vigorous, healthy, well-proportioned plants are the intent of this specification. Plants which are even moderately "overgrown," or are showing signs of decline or lack of vigor are subject to rejection. The size of the plants will correspond with that normally expected for species and variety of commercially available nursery stock, or as specified in the special conditions or drawings. Plants larger in size than specified may be used with the approval of the Architect, but the use of larger plants will make no change in contract price. If the use of larger plants is approved, the ball of earth and spread of roots for each plant shall be increased proportionately.

Rejection or Substitution: The Resident Engineer reserves the right to reject any plant material found to be defective or not in conformance with plans and specifications. Plants shall be subject to inspection and approval or rejection at the project site at any time before or during progress of work, for size, variety, condition, latent defects, and injuries. All plants not conforming to the requirements herein specified shall be considered defective, and such plants, whether in place or not, shall be marked as rejected and immediately removed from the site and replaced with new plants by the Contractor at his expense. Rejected plant material shall be replaced within one week of written notice, unless otherwise approved by the Resident Engineer.

Substitutions will not be permitted except if proof is submitted that any plant specified is not obtainable, then a proposal will be considered for use of the nearest equivalent size or variety and cost. All substitutions are subject to Resident Engineer's written approval.

Right to Changes: The Landscape Architect reserves the right to change the species, variety, and/or sizes of plant material to be furnished, provided that the cost of such plant changes do not exceed the cost of plants in the original bid, and with the provision that the Contractor shall be notified, in writing, at least thirty (30) days before the planting operation has commenced.

212-1.4.2 **Trees.** ADD the following:

All trees (24" box, 36" box) shall:

a) Be of the specified type and size as indicated on the Drawings, selected from high quality, well-shaped and proportioned Southern California-grown nursery container stock. Field grown stock grown in climatic regions which are different (as determined by the Resident Engineer) to those conditions found at the project site, shall have been acclimated to a climate similar to their intended locations prior to delivery and shall be accompanied by letter and/or certificate from the nursery that the plant materials are suitable for said locations or they will not be accepted.

b) Have grown in containers for sufficient time to permit full rooting within the container to bind the soil but not so long as to create a rootbound condition. No container plants that have cracked or broken balls of earth, when taken from the container, shall be planted. No plants with damaged roots, broken root balls, or root bound, when taken from the container shall be planted.

c) Have a main leader branch and not have a co-dominant branching structure, unless the tree is intended to be multi-trunk.

d) Be free of weeds, native grasses, Bermuda grass, and Kikuyu grass.

212-1.4.3 **Shrubs.** ADD the following:

Field grown stock grown in climatic regions which are different (as determined by the Resident Engineer) to those conditions found at the project site, shall have been acclimated to a climate similar to their intended locations prior to delivery and shall be accompanied by letter and/or certificate from the nursery that the plant materials are suitable for said locations or they will not be accepted.

Contractor shall assure that shrubs grown in containers for sufficient time to permit full rooting within the container to bind the soil but not so long as to create a root bound condition. No container plants that have cracked or broken balls of earth, when taken from the container, shall be planted. No plants with damaged roots, broken root balls, or root bound, when taken from the container shall be planted.

Shrubs shall be free of weeds, native grasses, Bermuda grass, and Kikuyu grass.

Shrubs shall be full and bushy to ground.

Groundcover plants shall be healthy, vigorous, rooted cuttings grown in flats or 1 gallon cans until transplanting. The soil and spacing of the plants in the container shall ensure the minimum disturbance of the root system at time of transplanting.

212-1.5.3 **Tree Stakes.** First paragraph, second sentence, REPLACE with the following:

Tree stakes shall be two (2) inch diameter lodge pole pine of lengths required, pointed on end, and minimum 10' in length.

ADD:

212-1.5.4 **Tree Ties.** Tree ties shall be commercially manufactured of virgin flexible vinyl meeting ASTM-D-412 standards for tensile and elongation strength. Material shall be manufactured with a double back locking configuration and secured with one galvanized nail to prevent slippage. Material shall be ultraviolet resistant. Minimum length shall be twenty (20) inches. Tree ties shall be "Cinch-Tie" by V.I.T., or approved equivalent.

ADD:

212-1.10 **Perforated Pipe.** Perforated pipe for tree drain: Poly vinyl chloride SDR35 perforated pipe. Perforated pipe shall meet ASTM F-758 and AASHTO M-219. Pipe be supplied with a spun bonded filter sleeve to protect pipe from soil intrusion.

212-2.1.5 **Copper Pipe.** DELETE in its entirety and SUBSTITUTE with the following:

Copper pipe shall be Type "L" in accordance with ASTM B 88; brass pipe; brass piping shall be I.P.S. red brass; solder: 50/50 lead and tin.

212-2.2.7 **Valve Boxes.** To the City Supplement, ADD the following:

3. Valve boxes shall be sized accordingly to allow wires in pull boxes to be loose and maintain a three inch (3") clearance from the lid.

212-2.4 **Sprinkler Equipment.** To the City Supplement, Add the following:

Prior to installation of any irrigation work, the Contractor shall submit, for approval by the City, five copies, minimum, of a list of all materials and equipment the Contractor proposes to use. Should the Contractor propose to use materials or equipment other than those listed as approved, the Contractor shall submit in writing to the City a request to deviate from the approved list. Samples of the materials or equipment shall accompany the request to assist the evaluation of the proposal.

Anti-drain valves shall be installed as indicated on plans. The anti-drain valve shall be the same diameter size as the riser and shall be integrated into the riser assembly (under each head). Valve shall be "Valcon ADV-XS", Hunter, or an approved equivalent.

ADD:

212-3.2.2.3 **Trench Marker Tape.** To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

See City of San Diego Standard Drawing SDM-105.

ADD:

212-4 **BIORETENTION SOIL MEDIA (BSM).**

212-4.1 **General.** Bioretention Soil Media (BSM) is a formulated planting soil which consists of 70% to 80% washed sand and 20% to 30% compost on a volume basis, and shall be mixed at the plant site prior to delivery.

212-4.1.1 **Sand for Bioretention Soil Media.** The sand shall conform to ASTM C33 and a sieve analysis shall be performed in accordance with ASTM C 136 to demonstrate compliance with the gradation limits shown in Table 212-4.1.1 (A). The sand shall be thoroughly washed to remove fines, dust, and deleterious materials prior to delivery.

Table 212-4.1.1 (A) Sand Gradation Limits

Sieve Size	Percent Passing
3/8 inch	100
No. 4	60 - 100
No.10	40 - 100

Sieve Size	Percent Passing
No. 40	15 - 50
No. 200	0 - 5

Note: Coefficient of Uniformity (Cu = D60/D10) equal to or greater than 4

212-4.1.2 **Compost.** Compost shall be certified by the U.S. Composting Council's Seal of Testing Assurance Program or an approved equal. Compost shall comply with the following requirements:

1. Organic Material Content shall be 35% to 75% by dry weight.
2. Physical contaminants (manmade inert materials) shall not exceed 1% by dry weight
3. pH shall be between 6.0 and 8.0
4. Soluble Salt Concentration less than 10 dS/m (Method TMECC 4.10-A, USDA and U.S. Composting Council)
5. Maturity (seed emergence and seedling vigor): greater than 80% relative to positive control (Method TMECC 5.05-A, USDA and U.S. Composting Council)
6. Stability (Carbon Dioxide evolution rate): less than 8 mg CO_2-C per g OM per day (Method TMECC 5.08-B, USDA and U.S. Composting Council)
7. Moisture: 40%-50% wet weight basis.
8. Select Pathogens: Pass US EPA Class A standard, 40 CFR Section 503.32(a).
9. Trace Metals: Pass US EPA Class A standard, 40 CFR Section 503.13, Tables 1 and 3.
10. Within gradation limits in Table 212-4.1.2 (ASTM D 422 sieve analysis or approved equivalent)

Table 212-4.1.2 (A) Compost Gradation Limits

Sieve Size	Percent Passing (by weight)
1 inch	99 to 100
½ inch	90 to 100
¼ inch	40 to 90
No. 200	2 to 10

212-4.2 **Agricultural Suitability.** The Contractor shall submit the source and location of BSM, a physical sample, and accompanying and current test results by a third party independent agronomic laboratory reflecting compliance with Contract Documents to the Engineer at least 30 Days prior to ordering materials.

No planting shall begin until test results confirm the agricultural suitability of the BSM. The Contractor shall submit a written request for approval which shall be accompanied by written analysis results from a written report of a testing agency registered by the State for agricultural soil evaluation which indicates compliance which states that the tested material proposed source complies with these specifications. Third party independent laboratory tests shall be paid for by the Contractor.

The BSM shall be suitable to sustain the growth of the plants specified and shall conform to the following requirements:

a) pH range: 6.0-7.8

b) Salinity less than 3.0 millimho/cm (electrical conductivity)

c) Sodium adsorption ration (SAR) less than 3.0

d) Chloride less than 150 ppm

The test results shall show the following information:

a) Date of Testing

b) Project Name

c) The Contractor's Name

d) Source of Materials and Supplier's Name

e) Estimate of Quantity Needed

f) pH

g) EC

h) Elements: phosphorus, potassium, iron, manganese, zinc, copper, boron, calcium, magnesium, sodium, sulfur, molybdenum, nickel, aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, mercury, selenium, silver, strontium, tin, and vanadium

i) Soil adsorption ratio

j) Carbon/nitrogen ratio

k) Moisture content

l) Organic Content

m) An assessment of agricultural suitability based on test results

n) Recommendations for adding amendments, chemical corrections, or both.

BSM which requires amending to comply with these specifications shall be uniformly blended prior to importation. Third party independent laboratory test results reflecting compliance with above requirements shall be provided to the Engineer prior to the delivery of the BSM.

212-4.3 **Delivery, Storage and Handling.** The Contractor shall not deliver or place soils in frozen, wet, or muddy conditions.

The Contractor shall protect soils and mixes from absorbing excess water and from erosion at all times. The Contractor shall not store materials unprotected from large rainfall events. The Contractor shall not allow excess water to enter site prior to compaction. If water is introduced into the material after grading, the Contractor shall allow material to drain or aerate to optimum compaction moisture content.

212-4.4 **Quality Control and Acceptance.** Close adherence to the material quality controls herein are necessary in order to assure sufficient permeability to infiltrate runoff at a minimum rate of 5 inches per hour during the life of the facility, and to support healthy vegetation. Amendments may be included to adjust agronomic properties. Acceptance of the material will be based on test results conducted no more than 120 days prior to delivery of the blended BSM to the project site and certified to be representative. For projects installing more than 100 cubic yards of BSM, batch-specific tests of components and blended mix are required and locations of material batches shall be provided to the Engineer.

SECTION 213 - ENGINEERING FABRICS

ADD:

213-3 **FILTER FABRIC (Soil Separation).** Contractor shall provide filter fabric for soil separation purposes where drain rock is used, to separate drain rock from all other materials, such as concrete or soils. Filter fabric shall also be used with drain rock behind retaining walls, as well as under cobble mulch. Filter fabric shall be a needle -punched, heat-bonded, non-woven polypropylene, UV resistant, permeable geotextile fabric with a flow rate of 110 gpm. Puncture strength shall be ASTM D 4833: 95lbs. Grab Tensile strength shall be ASTM D 4632 160 lbs. Fabric shall be Mirafi160N, or approved equal, as approved by the Resident Engineer. Apply fabric under play area sand and surfacing, decomposed granite and wrap all perforated drain lines and drainage sumps, as indicated on plans and details. See Section 300-10 for installation.

ADD:

SECTION 218 - SITE FURNISHINGS

218-1 **TRASH RECEPTACLES.** Trash receptacles shall be precast concrete units with metal top, TGIC powder-coat 'Brown' standard finish, and high-density 36-gallon plastic inner liner, or approved equivalent. Trash receptacles shall be made of 100% recycled materials and manufactured in the USA. Provide shop drawings and paint color for approval. Attachment shall comply with Manufacturer's recommendations. Installations shall be surface mounted and vandal-proof.

Model No.: QS-CAL2550SDW, Precast concrete square trash receptacle with concrete top and locking steel side door, or approved equal.

Color:	'Adobe Taupe' integral colored concrete
Finish:	T2 - Light Sand Blasted
Sealer:	No manufacturer sealer applied
Concrete mix:	GEN2 80% recycled concrete
Ant-Graffiti:	Field applied per Section 210 'Paint and Protective Coatings'
Attachment:	Surface-mounted – epoxy in place
Manufacturer:	Quick Crete Products Corp., Inc. (951) 737-6240 731 Parkridge Avenue Norco, CA 92860 www.quickcrete.com

218-2 **PET WASTE STATION.** The pet waste station shall be a post mounted, commercially available assembly consisting of the following components:

a) 15.5" x 9.4" x 3.25" Bag dispenser fabricated from .08 Aluminum, powder coated Forest Green with locking hinged front access panel with stainless steel keyed lock,

b) Instructions and sign stating: 'Please clean up after your dog'.

c) Pet waste sign (on leash), 18"x 12" Aluminum forest green and white

d) 10 gallon steel mesh trash receptacle with lid: Forest green powdercoat.

e) 8' Steel channel post, forest green.

f) Bolts and fasteners for attachments

g) 100 rolls of 200 Biodegradable Opaque Brown pick up litter bags

h) 100 Heavy Duty Receptacle liner bags

Pet waste station shall be Pet Station by Dogipot, e-mail: www.dogipot.com, or approved equal.

218-3 **COMMEMORATIVE EXHIBIT INTERPRETIVE SIGN.** The interpretive sign shall be a double post-mounted, commercially available sign assembly consisting of base post unit and sign. Sign product shall be Envirosigns, model no 'West Maple Canyon-San Diego', or equal, with sign size per dimensions on the plans. Sign shall be vandal proof and installed at location shown on plans. Sign graphic shall be attained from the Landscape Architect for production by Envirosigns.

SECTION 300 – EARTHWORK

300-1 CLEARING AND GRUBBING.

300-1.1 General. ADD the following:

Clearing and grubbing shall include the removal, relocation, adjusting, or salvaging of all facilities so indicated on the plans.

In addition, clearing and grubbing shall include, but not limited to the following items as shown on the plans or specified in the Specifications:

a) Deleterious materials resulting from clearing and grubbing operations shall be hauled away and disposed of legally at a site obtained by the Contractor.

b) Minor grading for low point drainage swales in turf areas for drainage control.

c) Removal and disposal of pipe, ditches, protection posts, guardrail, inlets, trees, stairways, and any additional items not specifically mentioned which may be found within the work limits. Providing silt fencing at project limits at bottom of slope to minimize erosion and loss of soil down slope and beyond project limits and as directed by the Resident Engineer.

d) Furnishing and applying water.

e) Adjustment to grade of miscellaneous items such as drainage inlets, utility boxes, valves, manholes, pullboxes, interfering portions of storm drain pipes, posts.

f) The Contractor shall remove and transport debris and rubbish in a manner that will prevent spillage on streets or adjacent areas. Clean-up of spillage will be at the Contractor's expense.

g) Clearing and grubbing shall also include mobilization. Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, materials and incidentals to the project site necessary for work on the project and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

Any asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility. Concrete fragments which are free of reinforcing steel may be placed in fills, provided they are placed in accordance with these specifications.

300-1.3 Removal and Disposal of Materials.

300-1.3.2 Requirements. DELETE (a) in its entirety and SUBSTITUTE with the following:

(a) **Bituminous pavement.** Bituminous pavement shall be cut and removed in such a manner so as not to tear, bulge or displace adjacent paving by use of sawcutting, rockwheel, jackhammer or milling machine. Wheel type pressure cutters and drop hammer cutters will not be permitted for final edge cut. Sawcutting of edges to be joined is required. Where only the surface of existing bituminous pavement is to be removed, the method of removal shall be approved by the Engineer, and a minimum laying depth of 1 inch (25 mm) of new pavement material shall be provided at the join line. Where bituminous pavement adjoins a trench, the edges adjacent to the trench shall be trimmed to neat straight lines before resurfacing to ensure that all areas to be resurfaced are accessible to the rollers used to compact the sub-grade or paving materials.

ADD the following:

(f) **Miscellaneous materials.** Buried pavements and other materials, old subsurface pavements and other materials such as concrete planters, and other materials encountered under existing pavements, which are within designated excavation areas on the demolition plans shall be removed.

(g) **Demolition.** The work includes demolition of removal (unclassified demolition) of all materials and facilities indicated or specified. Do not begin demolition until authorization is received from the Resident Engineer. Remove rubbish and debris daily, unless otherwise directed. Store materials that cannot be removed daily in areas specified by the Resident Engineer.

(h) **Dust control.** The Contractor shall take appropriate action to check the spread of dust to avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions, such as flooding, or pollution. Comply with all dust regulations imposed by local air pollution agencies.

(i) **Protection.** The Contractor shall protect existing work which is to remain in place, that is to be re-used, or which is to remain the property of Owner by temporary covers, shoring, bracing, and supports. Items which are to remain or are to be salvaged and which are damaged during performance of work shall be repaired to their original condition or replaced with new by the Contractor at no additional cost to Owner. The Contractor shall protect all services and utilities which are to remain. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical utilities.

(j) **Personnel.** Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Notify the Resident Engineer prior to beginning any such work.

(k) **Explosives.** Use of explosives will not be permitted.

ADD:

300-1.3.3 Execution.

(a) **Paving:** Remove concrete and asphaltic concrete paving to depths as indicated on the plans or as required to allow for new improvements.

(b) **Concrete:** Where concrete work is to be removed, saw cut concrete along straight lines to a depth of not less than two inches. Make each cut in walls perpendicular to the face and in alignment with the cut in the opposite face. The remainder of the concrete shall be broken out, provided that the broken area is concealed in the finished work, and the remaining concrete is sound. At locations where the broken face cannot be concealed, it shall be ground smooth or the sawcut shall be made entirely through the concrete.

(c) **Filling:** Fill holes and other hazardous openings in accordance with Section 300 Earthwork.

(d) **Title to Materials**: Title to all materials resulting from demolition, and all materials and equipment to be removed, is vested in the Contractor upon approval by the Resident Engineer of the Contractor's demolition and removal procedures, and authorization by the Resident Engineer to begin demolition. The City will not be responsible for the condition or loss of, or damage to, such property after notice to proceed. Materials and equipment shall not be viewed by prospective purchasers or sold on or near the site.

(e) **Re-use of materials and equipment:** Carefully remove and store materials and equipment indicated to be re-used or relocated to prevent damage, and reinstall as the work progresses.

(f) **Salvaged Materials and Equipment:** Contractor to carefully remove materials and equipment that are designated to be removed on the plans.

(g) **Debris and Rubbish:** Remove and transport debris and rubbish in a manner that will prevent spillage on streets or adjacent areas. Clean up spillage from streets and adjacent roads.

(h) **Regulations:** Comply with federal, state and local hauling and disposal regulations.

(i) **Hazardous Materials**: Refer to Section 703 of the Whitebook for procedures when hazardous materials are encountered during excavation.

300-1.4 **Payment.** To the City Supplement, paragraph (2), DELETE in its entirety and SUBSTITUTE with the following:

2. Payment for existing pavement removal and disposal of up to 12" thick, within the excavation e.g., trench limits, shall be included in the Bid item for installation of the mains or the Work item that requires pavement removal.

300-2 UNCLASSIFIED EXCAVATION.

300-2.1 General. ADD the following:

In general, the on-site soils are suitable for reuse as fill if free from vegetation, debris, and other deleterious matter.

300-2.9 Payment. DELETE in its entirety and SUBSTITUTE with the following:

Unclassified Excavation shall include full compensation for furnishing all labor, materials, tools, equipment, and incidents, and for doing all the work involved in the excavation and embankments to achieve the sub-grades and final grades as shown on the plans and as specified and as directed by the Resident Engineer.

The Contractor shall be required to prepare their own earthwork for bidding and construction purposes. Any reference to earthwork quantities on the plans is strictly for bonding purposes and shall not be used by the contractor for a price basis. No additional compensation for excavation, embankment, import, or export of material shall be allowed.

Payment for Unclassified Excavation shall be included in the lump sum price and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in the excavation and embankments to achieve the sub-grades and final grades as shown on the plans and as specified and as directed by the Resident Engineer.

SECTION 302 – ROADWAY SURFACING

302-3 PREPARATORY REPAIR WORK. To the City Supplement, DELETE in its entirety and SUBSTITUTE with the following:

302-3 PREPARATORY REPAIR WORK.

1. Prior to roadway resurfacing or the application of slurry, the Contractor shall complete all necessary preparation and repair work to the road segment e.g., tree trimming, weed spray, weed abatement, crack sealing, asphalt repair, hump removal, miscellaneous asphalt patching, removal of raised pavement markers, removal of pavement markings, etc. and as specified in the Special Provisions.

2. Preparatory work shall include, but not be limited to, tree trimming, weed spray, weed abatement, crack sealing, asphalt repair i.e., mill and pave, hump removal, miscellaneous asphalt patching, removal of raised pavement markers, removal of pavement markings, etc.

3. The Contractor shall repair areas of distressed asphalt concrete pavement by milling or removing damaged areas of pavement to a minimum depth of 2" for Residential streets, and a minimum depth of 3" for all others to expose firm and unyielding pavement. The Contractor shall prepare subgrade as needed and install a minimum of 2" for residential streets, and a minimum of 3" for all others, of compacted asphalt concrete pavement over compacted native material as directed by the Engineer.

4. If, in order to achieve the minimum specified depth, the base material is exposed, the material shall be compacted to 95% relative compaction to a depth 10" below the finished grade (dig out). Compaction tests shall be made to ensure compliance with the specifications. The Engineer will determine when and where the test will occur. The City will pay for the soils testing required by the Engineer, which meets the required compaction. The Contractor shall reimburse the City for the cost of retesting failing compaction tests. If additional base material is required, the Contractor shall use Class 2 Aggregate Base in accordance with 200-2.2, "Crushed Aggregate Base."

5. Recycled base material shall conform to Crushed Miscellaneous Base Material in accordance with 200-2.4, "Crushed Miscellaneous Aggregate Base."

6. Prior to replacing asphalt, the area shall be cleaned by removing all loose and damaged material, moisture, dirt, and other foreign matter and shall be tack coated in accordance with 302-5.4 "Tack Coat."

7. The Contractor shall install new asphalt within the repair area or for patches in accordance with 302-5, "ASPHALT CONCRETE PAVEMENT." Asphalt concrete shall be C2-PG 64-10 in compliance with 400-4, "ASPHALT CONCRETE."

8. No preparatory asphalt work shall be done when the atmospheric temperature is below 50 °F or during unsuitable weather.

9. Following the asphalt placement, the Contractor shall roll the entire area of new asphalt in both directions at least twice. The finished patch shall be level and smooth in compliance with 302-5.6.2 "Density and Smoothness." After placement and compaction of the asphalt patch, the Contractor shall seal all finished edges with a 4" wide continuous band of SS-1H.

10. The minimum dimension for each individual repair shall be 4' x 4' and shall be subject to the following conditions:

    a) If the base material is exposed to achieve the required minimum removal thickness, the base material shall be prepared conforming to 301-1, "SUBGRADE PREPARATION."

    b) When additional base material is required, then the contractor shall use Class 2 Aggregate Base in accordance with 200-2.2, "Crushed Aggregate Base." Recycled base material shall conform to Crushed Miscellaneous Base Material in accordance with 200-2.4, "Crushed Miscellaneous Base."

    c) The Contractor may use grinding as a method for removal of deteriorated pavement when the areas indicated for removal are large enough (a minimum of the machine drum width) and when approved by the Engineer.

d) For both scheduled and unscheduled base repairs, failed areas may be removed by milling or by excavation provided that the edges are cut cleanly with a saw. The areas shall be cleaned and tack coated in accordance with 302-5.4, "Tack Coat" before replacing the asphalt. The areas for scheduled repairs have been marked on the street.

302-3 ASPHALT PATCHING. ADD the following

1. Asphalt overlay shall not be applied over deteriorated pavement. Preparatory asphalt work shall be completed and approved by the Engineer before proceeding with asphalt overlay.

2. The Contractor shall remove distressed asphalt pavement either by saw cutting or milling, to expose firm and unyielding pavement; prepare subgrade (as needed); and install compacted asphalt concrete pavement over compacted native material as directed by the Engineer.

3. Prior to replacing asphalt, the area shall be cleaned and tack coated per 302-5.4, "Tack Coat".

4. Following the asphalt placement, the Contractor shall roll the entire patch in both directions covering the patch at least twice.

5. After placement and compaction of the asphalt patch, the Contractor shall seal all finished edges with a 4" wide continuous band of SS-1H.

6. Base repairs shall not exceed 20% RAP in content.

302-3.2 Payment.

1. Payment for replacement of existing pavement when required shall be included in the lump sum price for Asphalt Pavement repair for the total area replaced and no additional payment shall be made regardless of the number of replacements completed. No payment shall be made for areas of over excavation or outside trench areas in utility works unless previously approved by the Engineer. No payment for pavement replacement will be made when the damage is due to the Contractor's failure to protect existing improvements. The Contractor shall reimburse the City for the cost of retesting all failing compaction tests.

2. The areas and quantities shown on the road segments and in appendices are given only for the Contractor's aid in planning the Work and preparing Bids. The Engineer will designate the limits to be removed and these designated areas shall be considered to take precedent over the area shown in an Appendix to the Contract Documents. The quantities shown in the appendices are based on a street assessment survey and may vary.

3. At the end of each day, the Contractor shall submit to the Engineer an itemized list of the asphalt pavement repair work completed. The list shall include the location of the work and the exact square footage of the repair.

4. Preparatory repair work and tack coating will be paid at the Contract unit price per ton for Asphalt Pavement Repair. No payment shall be made for areas of over excavation unless previously approved by the Engineer.

5. Milling shall be included in the Bid item for Asphalt Pavement Repair unless separate Bid item has been provided.

6. Payment for miscellaneous asphalt patching shall be included in the Contract unit price for slurry and no additional payment shall be made therefore.

302-5.1.1 **Damaged AC Pavement Replacement.** To the City Supplement, DELETE in its entirety.

302-5.1.2 **Measurement and Payment.** To the City Supplement, DELETE in its entirety.

SECTION 303 - CONCRETE AND MASONRY CONSTRUCTION

ADD:

303-4.3 **Manufactured Stone Veneer.** Manufactured Stone Veneer shall be constructed as indicated on the plans and in compliance with Section 303-1 of the Greenbook and Whitebook.

Payment for Manufactured Stone Veneer shall be included in the price for retaining walls and shall include full compensation for furnishing all items of work necessary to construct new retaining walls, including but not limited to: substrate preparation, base materials, jointing, finishing, forming, labor, materials, and all other incidentals, etc. No additional compensation for this work will be allowed.

303-5 **CONCRETE CURBS, WALKS, GUTTERS, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS, AND DRIVEWAYS**

303-5.1.1 **General.** ADD the following:

This work shall consist of preparing the area on which the concrete work is to be placed, which may include preparation of sub-grade, removal of tree roots, and placement of base materials in accordance with these Specifications and as shown on the plans. The following types of miscellaneous concrete items are included:

TYPE B ADA RAMP
Payment for Type B ADA ramps shall be included in the total lump sum project price and shall include all items of work necessary to construct the ramp, including but not limited to grading, forming, installing, finishing, repairing asphalt and concrete paving, etc. complete and in place. No additional compensation for this work will be allowed.

CAST IN PLACE WALL FOOTINGS
Cast-in-place wall footings shall be constructed as indicated on the plans and in compliance with Section 303-1 of the Greenbook and Whitebook. Concrete shall be 560-C-3250 on native compacted material.

Payment for Cast in Place Wall footings shall be included in the total lump sum price for the project and shall include full compensation for furnishing all items of work necessary to construct new retaining wall, seat wall, or site wall, including but not limited to grading, base material, finishing, forming, etc. No additional compensation for this work will be allowed.

COLORED CONCRETE SIDEWALK PAVING

Colored Concrete Paving: Place, float, apply light broom finish, and edge concrete within the area of pour. Install hand-tooled joints at locations indicated on the plans. Install expansion joints as indicated on the drawings. Grid tooling finish shall match approved paving sample finish submitted for approval by Residential Engineer a minimum of 48 hours prior to pour. Colored Concrete Paving shall be constructed as indicated on the Contract Drawings and Section 303-5 of the Greenbook and Whitebook. Concrete shall be 560-B-3250.

Payment for Colored Concrete Paving shall be included the total lump sum price for the project and shall include full compensation for furnishing all items of work necessary to construct new sidewalk, including but not limited to grading, sub-grade compaction, all jointing, finishing, forming, etc. No additional compensation for this work will be allowed.

TOPSEEDED AGGREGATE:

Work of this section includes the furnishing and installation, complete in all respects, of the Topseeded aggregate as specified on the plans.

Examine areas and surface conditions under which work will be performed. Correct conditions detrimental to timely and proper completion. Do not proceed until unsatisfactory conditions are corrected.

Coordinate with other trades as needed to assure that planned infrastructure and base are provided.

Make sure surface is free of any form of release or residue. Apply a minimum 3/8" thick layer of mortar on the wall. Apply handfuls of aggregate and cover mortared areas while the mortar bed is still pliable and press into place to imbed the aggregate. Finish surface shall be even and 75% filled with aggregate for Mix 1, and 35% filled with aggregate for Mix 2.

Topseed Aggregate Concrete Paving shall be constructed as indicated on the Contract Drawings and Section 303-5 of the Greenbook and Section 201-1.1.2 of the Whitebook. Concrete shall be 560-B-3250 per City Supplement.

The topseeded aggregate shall be measured and paid for by the square foot.

The contract unit price paid for the hand-seeded aggregate shall be included in the overall project lump sum total for paving and shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and for doing all the work involved in installing the hand-seeded aggregate, complete-in-place, as shown on the plans, as specified in these Special Provisions and as directed by the Resident Engineer.

6" PCC CURB AND GUTTER

Curb and Gutter shall match existing gutter flow line and constructed as indicated and Section 303-5 of the Greenbook and Whitebook. Concrete shall be 520-C-2500 on native compacted material.

Payment for 6" PCC Curb and Gutter shall be included in the total lump sum price for the project and shall include full compensation for furnishing all items of work necessary to construct new 6" PCC Curb and Gutter, including but not limited to: grading, base material, finishing, forming, etc. No additional compensation for this work will be allowed.

303-5.5 Finishing.

303-5.5.3 Walk. First paragraph, DELETE in its entirety and SUBSTITUTE with the following:

The forms shall be set to place the finish surface in a plane sloping from one edge of paving to the other edge a maximum of 1.5 percent perpendicular to the edge of paving.

ADD the following:

If after final troweling all walk surfaces shall receive a uniform light broom finish with a stiff fiber broom perpendicular to the edge of the walk, verify direction with Resident Engineer. Upon final curing walk surface shall meet or exceed a static coefficient of friction of .6 wet and approximately .8 dry. Finished surface shall meet ADAAG 4.5 requirements for paving."

303-5.9 Measurement and Payment. ADD the following:

Payment for sidewalk concrete paving, curb & gutters, curbs, flush curbing, concrete stairs, pedestrian ramps and ADA access ramps shall be included in the total lump sum project price and shall include the reinforcing, sub-grade preparation, compaction, formwork, and all specified finishes, admixtures, sealants, etc. and no other payment allowed therefore. The payment shall be segregated to conform with the bid items indicated on the bid schedule and may include the following:

a. Colored Concrete Paving
b. Access ADA Ramps & landings
c. Concrete stairs
d Wall footings – standard concrete
e. Miscellaneous site furnishing footings
f. Topseeded Aggregate Concrete Paving

303-7 COLORED CONCRETE.

303-7.1 General. First sentence, DELETE Method B. ADD the following:

Provide a minimum 4'x4' sample panel, on-site, of each of the colors and finishes to be used in the installation on identical surfaces for approval by Resident Engineer with coordination by the Landscape Architect a minimum of one week prior to

construction of the colored concrete work. The approved samples shall remain on-site and shall serve as a basis of comparison for all colored concrete work.

303-7.3 **Method B (Integral Color).** DELETE in its entirety.

ADD:

303-9 WATERPROOFING FOR MASONRY WALLS.

303-9.1 **Installation.** The work in this section includes requirements for membrane waterproofing of concrete and masonry walls. The extent of the waterproofing is indicated on the plans and details. (See Section 202-7 for materials.)

Delivery - materials should be delivered in manufacturer's original, unopened packaging with labels attached. Store materials indoors, or otherwise protected from the weather. Materials stored outside should be covered with a tarpaulin. Any material damaged must be removed from the project area and replaced with new materials.

Material shall be applied as shown on the drawings and in compliance with the manufacturer's recommendations. The materials shall be applied at temperatures above 40° f, unless specifically listed for application below 40° f.

Concrete should be cured a minimum of seven days before waterproofing application. Lightweight structural concrete must have dried a minimum of 14 days.

Clean all surfaces that will receive membrane with a broom, vacuum cleaner, or air hose to remove dust, dirt, loose aggregate, or other foreign materials. Surfaces to receive the waterproofing system materials must be smooth, dry, and free of dust, dirt, loose aggregate or other foreign materials. Surfaces must be free of voids, spalled areas, loose aggregate, and sharp protrusions. Repair any surfaces that are not structurally sound, that have voids, protrusions, rough spalled areas, loose aggregate, or exposed coarse aggregate. Remove all grease, oil, and other contaminants.

Smooth brick or block must have joints struck off flush before applying membrane. When walls are rough, use a well-adhered plaster coat to create a smooth surface.

A compatible primer of the same manufacturer as the membrane shall be applied as direct by manufacturer. Prime only the area which can be covered with membrane in the same working day. Areas primed and not covered with membrane within 24 hours should be reprimed. Smoothness and porosity of the concrete will effect coverage rate.

Waterproofing membrane should be applied vertically in sections of 8 feet in length or less. On walls higher than 8 feet, apply two or more sections with the upper section overlapping the lower. Side laps should be a minimum of 2-1/2 inches and end laps should be a minimum of 5 inches. Use a hand roller and firmly press in the material as it is placed on the vertical surface.

Waterproofing membrane and protection board shall be applied to the face of footing, top of footing and face of wall on all sides which will be below grade.

All terminations of the membrane should receive a bead of mastic. The bead should be troweled to a flat surface approximately 1/8 inch thick by 3/4 inches wide. The mastic should be worked into cut edge terminations.

Inadequately lapped seams and damaged areas should be patched with small sections of membrane. The patch area should extend at least 6 inches beyond the defect. Fishmouths and severe wrinkles should be slit, flaps overlapped, and repaired as above.

All inside and outside corners shall be treated either with 12 inch strips of or a 12 inch wide by 90 mil thick application of liquid membrane. The field membrane should be placed over the corner treatment. All inside horizontal corners shall have a minimum 3/4 inch fillet or latex modified cement mortar. Laps occurring within 12 inches of a 90° change in direction must be sealed with a troweled bead of mastic.

A protection board of expanded polystyrene or drainage panel shall be placed on foundation walls and other vertical surfaces to protect the surface from damage.

Contractor shall be responsible for repairing any damage, leaks or related damage attributable to his installation of operations. Installation shall be guaranteed leak free for a period of one year.

Payment for Waterproofing for Masonry Walls shall be included in the price for retaining walls and shall include full compensation for furnishing all items of work necessary to construct new Waterproofing for Masonry Walls, including but not limited to: substrate preparation, membrane installation, protection board installation, labor, materials, and all other incidentals, etc. No additional compensation for this work will be allowed.

SECTION 304 – METAL FABRICATION AND CONSTRUCTION

304-2.1.3 Installation. ADD the following:

Cable Barrier fence posts shall be spaced according to plans. For installations that must be raked to follow sloping grades, the post spacing dimension must be measured along the grade. Posts shall be set in concrete footings per plans. Use stringlines as needed to maintain uniform slope to achieve a consistent height and clearance from finish grade. Fence installations that exhibit an "up and down" alignment will not be accepted.

Cable shall be installed at heights as shown on the plans. Cable shall pass through pre-drilled holes in fence posts. The diameter of the pre-drilled holes shall be a minimum of 1/8" larger than the diameter of the cable.

SECTION 306 – UNDERGROUND CONDUIT CONSTRUCTION

ADD:

306-10 WATER METERS AND SERVICES.

306-10.1 General. Water Meters shall conform to the City Standard Drawings and to the provisions of the City Standard Specifications. Piping, meter, and material shall be listed on the City of San Diego Water Utilities Department Approved Materials List.

The contractor shall be required to coordinate, submit, and process the plans at the City of San Diego to procure the services of the City of San Diego forces to perform the City Work as indicated in the drawings. All cost associated with coordination, processing, and obtaining services shall be included in the lump sum price.

The contractor shall coordinate with the City of San Diego and verify the size and type of backflow devices to be installed.

City Water, Sewer, Capacity and Wet Tap Installation Fees for this project are stipulated at $10,000.00 and shall be included in the lump sum price. The contractor shall be required to pay all City water, sewer, capacity, and wet tap installation fees.

SECTION 308 – LANDSCAPE AND IRRIGATION INSTALLATION

308-2.3.1 General.

ADD:

308-2.3.1.1 Weed Eradication. Soil preparation and planting shall not be allowed until all weeds are removed from within the limits of planting areas as indicated on the plans.

The Contractor's labor shall possess demonstrated ability to identify the difference between desirable native species and invasive weeds.

Weed eradication for entire project site. After irrigation installation, but before planting installation, the Contractor shall irrigate the entire project site three (3) to four (4) times over seven (7) to ten (10) days to germinate existing weed seeds. Allow weed seeds to grow until they reach a maximum height of two to three inches (2" - 3"). A post-emergent herbicide shall then be applied per manufacturer's specifications and instructions. Avoid contact of herbicide with the existing plants to remain.

All herbicides used shall be compatible with use in the vicinity of water and shall be applied in accordance with the label specifications by personnel holding a valid pesticide and herbicide applicator's license. Herbicide use shall be approved by the Resident Engineer prior to application. Rodeo herbicide, or approved equal shall be used in or near areas of standing water or streams since it is non-toxic to aquatic organisms and should be applied only by a licensed pest control applicator in accordance with the manufacturer's instructions.

Pulled weeds and debris shall be transported and disposed of properly offsite immediately using approved methods to prevent any seed dispersal on the site.

The eradication of exotic plant species is required prior to any planting. All exotic vegetation within the planting areas shall be removed. Herbicide shall be applied to weedy vegetation (e.g., giant reed (*Arundo donax*), tamarisk *(Tamarix* sp.), pampas grass (*Cortaderia jubata),* tree tobacco (*Nicotina glauca*), yellow star-thistle (*Centaurea melitnesis*), cocklebur (*Xanthium* sp.), castor bean (*Ricinus communis*), annual beardgrass, and Bermuda grass (*Cynodon dactylon*), etc.) within the project area. All weedy species should be cleared approximately two weeks following herbicide application.

The Resident Engineer shall inspect the site prior to planting and during revegetation. The planting of hydroseed shall be conducted on a weed free site.

Manual weed eradication shall continue during planting and during the plant establishment period and maintenance period; no herbicides shall be used following the initial weed eradication unless authorized by the Resident Engineer. Weed seedlings and sprouts shall be removed before attaining 12-inches in height and/or before producing seed.

All areas where weed removal creates bare areas in excess of 25 square feet shall be reseeded.

Weed eradication for shrub areas and groundcover areas (planted from flats). Three (3) to four (4) days after these plants have been installed; the Contractor shall apply the pre-emergent herbicide per manufacturer's specifications and instructions.

Weed and pest eradication with the use of herbicides and pesticides shall be considered in the lump sum project cost for planting and shall include all materials, labor, and incidentals required to provide weed eradication complete and in place and no additional payment allowed therefore.

308-2.3.2 **Fertilizing and Conditioning Procedures.** Paragraph 1, REVISE to read as follows:

The planting areas shall be ripped to a depth of 15" and brought to finish grade before spreading the fertilizer and soil conditioning materials specified.

Paragraph 2, REVISE to read as follows:

Soil amendment materials shall be uniformly spread at the prescribed rate. All hardscape shall be dry at time of application. The quantities of materials necessary for the planting area shall be at the site and shall be verified by delivery tickets furnished to the Engineer before spreading.

ADD the following:

Once rough grading has been accomplished, a minimum of (4) four soil samples from different representative areas of site shall be taken from areas approved by the Resident Engineer and a soil analysis performed to determine nutrient and mineral content, compositional characteristics, permeability, and existence of possible toxic elements. Soil test shall be conducted by a reputable agricultural soils laboratory approved by Resident Engineer. Analysis shall include recommendations for amending or correcting soil conditions. Results of soil analysis shall be received by

Resident Engineer thirty (30) days prior to amending or soil and ordering amendments.

Based on the soils test results, the quantity or type of amendments may be modified by the Resident Engineer within 14 days of receipt of analysis.

Grub and clean all planting areas, removing all weeds, debris, and rocks from the site. All planting areas, 3:1 or less in steepness, shall be thoroughly tilled and loosened to a depth of fifteen (15) inches by approved method. Do not till near existing trees if roots are encountered.

All areas where existing soils are replaced with imported topsoil shall be backfilled and settled using applications of water to moisten soil and establish a stable finish grade. Areas which subside, and all depressions or irregularities shall be repaired, settled and grade re-established.

After all planting areas meet the finish grades per grading plan, the following rates of soil conditioning and amendment materials (or as modified by the soils report), shall be evenly spread over all planting areas and worked into the soil:

1) Soil amendments for all planting areas 3:1 or less in steepness (except hydroseeded areas):

Soil conditioner	4 cu. Yds/1,000 sq. Ft.
Gypsum	120 lbs/1,000 sq. Ft.
Iron sulfate	10 lbs/1,000 sq. Ft.
Soil sulphur	10 lbs/1,000 sq. Ft.
After leaching, apply:	
10-10-10 fertilizer	125 lbs/1,000 sq. Ft.

Amendments shall be thoroughly tilled and blended into the existing soil to a depth of six (6) inches by approved methods.

Soil amendments, as specified, are for bidding purposes only. Actual types and quantities may be altered based on soil analysis (provided by Contractor) after rough grading.

2) In addition, after amending soil as described above, all shrub planting areas shall be sprayed with "Sarvon" at the rate of 6 gallons/acre (or 1 qt./2,000 sq. ft.) immediately prior to leaching.

3) Hydroseeded Area: Apply michorrizal inoculum to all hydroseeded areas per manufacturer's directions. Amendments are not required for Hydroseeded Area except as specified in the hydroseed components.

Deep Water Leaching:

1) After complete installation and testing of the irrigation system and tilling soil amendments, all on-grade areas shall be deep water leached, compacted and settled

by repeated application of irrigation water until the soil has received a minimum of 12" of water, and has been thoroughly moistened to a depth of 24".

2) After leaching operation, 4 soil samples shall be taken by Contractor per Resident Engineer's direction and given to the soil laboratory for testing. Soil test shall meet the following requirements:

EC - Maximum 3.00
pH - Maximum 7.50
Minimum 6.0

Post Planting Fertilizer:

The Contractor shall apply post-plant 14-7-3 fertilizer at the rate of twenty pounds (20 lbs.) per 1,000 sq. ft., sixty (60) days after planting and once again at the end of the post-construction maintenance period.

308-2.4 **Finish Grading.** First Sentence, REVISE to read as follows:

The finish grade shall be smooth, uniform and free of abrupt grade changes and depressions to ensure surface drainage as indicated on plans. Contours and finish grade shall provide for drainage to sheet flow and shall not channel drainage in a manner where volume and velocity of water will create surface erosion.

ADD the following:

Finish grade shall insure positive drainage from the site. Surface drainage shall be away from all building foundations. The Resident Engineer shall approve the final grades and elevations before planting operations may begin.

ADD:

308-2.5 **Bioretention Soil Media.** Bioretention Soil Media shall be thorough mixed prior to delivery using mechanical mixing. BSM shall be lightly tamped by hand and placed in loose lifts no greater than 6" to ensure proper compaction. Compaction within the BSM area will not exceed 75% standard proctor within the designed depth of the BSM.

Machinery shall not be used in the bioretention facility to place the BSM. A conveyor or spray system shall be used for media placement in large facilities.

308-4 **PLANTING.**

308-4.1 **General.** ADD the following:

The Contractor shall be responsible for managing the site and performing planting, maintenance and corrective measures to the best advantage of the plant material to promote healthy growth, establishment and success of the plantings. This shall include providing for drainage, irrigation, repair of damaged features, correction of deleterious conditions, maintaining a proper soil moisture level, weeding,

fertilization, protection, temporary measures to promote establishment and other reasonable maintenance and construction efforts needed to provide for the successful establishment of the plant materials during the entire contract period.

The Contractor shall not install planting as shown in the plans when it is obvious in the field that conditions exist which are detrimental to plant survival and growth. Such conditions shall be brought to the attention of the Resident Engineer. The successful establishment of the plantings during the entire contract period is the Contractor's responsibility.

Actual planting shall be performed during those periods when weather and soil conditions are suitable and in accordance with locally accepted horticultural practice, as approved by the Resident Engineer. No planting shall be done in any areas until it has been satisfactorily prepared in accordance with these specifications. Soil moisture level prior to planting shall be no less than 75% of field capacity. The determination of adequate soil moisture for planting shall be the sole judgment of the Resident Engineer and his decision shall be final. The Contractor shall obtain approval from the Resident Engineer of planting pits before planting operations shall begin. If the soil moisture level is found to be insufficient for planting, all planting pits shall be filled with water and allowed to drain before starting planting operations. No more plants shall be distributed in the planting area on any day than can be planted and watered on that day. All plants shall be planted and watered as herein specified immediately after the removal of the containers. Containers shall not be cut prior to placing the plants in the planting area.

Percolation Test: Prior to installing plants, Contractor shall perform a minimum of three percolation tests in representative areas of the site to verify acceptable natural drainage for planting pits. Tests shall be performed as follows:

1) Dig a pit 2'x 2' x 2' deep.

2) Fill with water to top and cover with plywood and barricade to protect pedestrians.

3) Make daily observations noting the depth of water each day.

4) Report to the Resident Engineer the length of time that the water takes to drain completely from each hole. If water drains from the hole within one day, refill with water. Based on this test, the Resident Engineer will confer with the Landscape Architect and will make a determination of whether additional drainage measures will be required for boxed size tree plantings.

No plants shall be installed until percolation tests have been observed by the Resident Engineer and a determination made that no further drainage measures are required.

Planting shall not be performed if plant pits contain standing water, or if pits are over saturated to a condition which may result in an unhealthful condition for the plant. It is the Contractor's responsibility to provide a suitable growing condition for the plant material and to maintain that condition throughout the entire contract period.

If requested by the Contractor, the Resident Engineer, and/or designated representative, will visit the nursery from which trees are procured to inspect the trees prior to delivery to the site. The Contractor shall reimburse the City for all time spent driving to and from the nursery and inspecting the trees at an hourly rate of $105/hour or fraction of hour.

It is in the Contractor's interest to have the Resident Engineer (or designated representative) visit the nursery and inspect the Contractor's selected trees prior to delivery to the site. This may prevent extra shipping expenses to the Contractor for trees delivered to the site, but subsequently rejected by the Resident Engineer. This does not preclude the Resident Engineer from rejecting any trees delivered to the site which, upon inspection at the site, do not meet the criteria for acceptance as previously outlined.

After approval and transportation, and upon arrival at the construction site, the City's Landscape Inspector will inspect the plants for any damage that may have occurred in transit. Plants that have been damaged in transit may be rejected at no cost to the City in accordance with the Project Special Technical Provisions, Section 212-1.4.1.

308-4.2 **Protection and Storage.** ADD the following:

The Contractor's on-site plant storage area shall be approved by the Resident Engineer prior to the delivery of any plant materials. Any plants determined by the Resident Engineer to be wilted, broken, or otherwise damaged shall be rejected at any time during the project, whether in the ground or not. All plants shall be handled by their containers. Any plant that has been handled by its trunk or stem shall be rejected. All rejected plants shall be removed from the site immediately.

ADD:

308-4.2.1 **Existing Tree, Shrub and Ground Cover Protection.** The work is to be performed in areas of existing planting and irrigation. The Contractor shall take precautions to minimize the disturbance to adjacent planted areas and is required to replace in kind any irrigation or planting disturbed by the work.

Identify and protect from damage all individual plants and areas of planting to remain by appropriate means. The Contractor shall provide equivalent size replacement plants in the event that the death or decline of existing plants to remain is attributable to the Contractor's negligence or lack of protection as determined by the Resident Engineer.

No storage of construction equipment or construction materials, nor stockpiling of soil or debris shall be placed within 1'-0" from the trunk for every 1" caliper of any existing tree.

All plants to remain on-site shall be watered and irrigated as necessary during the entire construction contract to provide for the health of the plant. Any plants required to be removed, boxed and set aside for future installation shall be watered, and maintained by the Contractor in a healthy condition until replanted or until the end of the maintenance period.

The pruning and trimming of the limbs and roots of plant materials to remain within the project scope shall be done by tradesmen experienced in this type of work. The removal of any limbs, branches, and roots shall be done only after conferring with the Resident Engineer.

ADD:

308-4.2.2 **Excavation Adjacent To Existing Trees, Shrubs, and Ground Cover to Remain.** Trenching within the drip line of trees and shrubs shall be avoided. It is the intent of the plans that the Contractor provide an alternate routing of trenching to avoid cutting through roots of existing trees.

Where it is necessary to excavate in close proximity to existing trees and shrubs, all possible caution shall be exercised to avoid injury to roots and trunks. In the event it is necessary to cut the roots of an existing tree, the tree shall be pruned prior to excavation to reduce the foliage volume by the same percentage as the approximate percentage of roots removed. Pruning of trees on private property shall not be done without written permission of the property owner.

Excavation within the drip line of the tree shall be done by hand, tunneling under roots 1" in diameter and larger, and shall be done only on the approval of the Resident Engineer. The exposed roots of trees shall be covered and shaded by moist burlap or canvas until the trench is backfilled.

308-4.6 **Plant Staking and Guying.**

308-4.6.1 **Method A Tree Staking (Single Stake).** DELETE in its entirety and SUBSTITUTE with the following:

The tree shall be staked with the type and length of stake specified on the plans or in these Special Provisions. The stake shall be placed at the windward side of the tree and positioned adjacent to the root ball. The stake shall be vertical and driven 300 mm (12 inches) into undisturbed soil. The trunk shall be secured to the stake with one tie just below the head of the tree. The tie shall be the approved tree tie. The loop shall be 25 mm (1 inch) greater in diameter than the trunk. The tie shall be attached to the pipe through a hole drilled at the tie location described above.

Payment for tree staking shall be included in the unit price paid for trees and included in the overall lump sum cost for planting and no separate payment will be allowed therefore.

308-4.6.2 **Method B Tree Staking (Double Stake).** DELETE in its entirety and SUBSTITUTE with the following:

All 15 gallon, 24" box and 36" box size trees shall be double staked. Refer to section 212-1.5.3 of these Special Provisions for approved staking materials and guying materials.

The tree shall be staked with the type and length of stake specified on the plans or in the special provisions. One stake shall be placed 450 mm (18 inches) from each side of the tree trunk, unless directed otherwise by the Resident Engineer. Four ties shall be used; two at 50 mm (2 in) from the top of each stake and two at 0.6 m (2 ft.) above the ground. Ties shall be loops secured to the stake on one end and shall be long enough to provide for 75 mm (3 in.) of slack to permit the tree trunk limited movement in any direction.

Payment for tree staking shall be included in the unit price paid for trees and included in the overall lump sum cost for planting and no separate payment will be allowed therefore.

308-4.6.3 **Guying.** DELETE in its entirety and SUBSTITUTE with the following:

All boxed trees over 36" box shall be guyed. Guying shall be done immediately after planting. Three guys per plant shall be installed in accordance with the following:

1) Each guy shall be secured to the appropriate main branch by a twisted loop of guy wire housed in garden hose.

2) Each guy shall be anchored to a driven stake located at a horizontal distance from the tree equal to the vertical distance from ground to the connection of guy wire on the tree branch.

3) Each guy shall be covered with highly visible garden hose or plastic tubing to a height of 1.8 m (6 feet) above grade.

Slack in each guy shall be removed by hand so as not to bend or twist the plant.

308-4.7 **Ground Cover and Vine Planting.** Paragraph 2, REVISE to read as follows:

Soil shall be moist within the total root zone of the material being planted.

308-4.9.3 **Seeding and Mulching.** DELETE in its entirety and SUBSTITUTE with the following:

Seed, fertilizer, mulch, and other specified materials shall be applied on slopes by Method B described in 308-4.8.2. Method B Hydroseed shall be composed of materials as follows:

Hydroseed shall consist of a mixture of bonded fiber matrix, seed, commercial fertilizer, binder, and water. Mixture will be as specified as follows:

The hydro-mulch slurry mixes shall be applied in a two (2) step process which allows seed to be in close contact with soil. The hydro-mulch shall be applied at the following rates:

Step 1: Seed Application Hydro-mulch:

Bonded Fiber Matrix (BFM):	500 lbs. per acre.
Fertilizer (Pre-Plant12-12-12):	100 lbs per acre
Water:	As required per manufacturer's instructions
Mycorrhizal Inoculum:	60 lbs. per acre.
Seed Mix:	Pure live seed in weights as indicated on plans

Step 2: Erosion Control Hydromulch

Bonded Fiber Matrix (BFM):	2,500 lbs. per acre.
Water:	As required

Contractor must provide the Resident Engineer with seed "bag tags" and receipt forms prior to installation of hydroseed mixture.

All bare spots shall be re-seeded and mulched by the Contractor within thirty days of the initial application.

The preferred time for performing seeding is between the dates of October 15 and November 30 or before the first substantial winter rains if this is not possible, seeding shall occur between October 15 and February 28. Since an irrigation system is specified for the slope areas, seeding of those areas can be performed between September 15 and March 15, if the site is ready for seeding.

Seeding shall be started only after weed eradication, soil preparation and finish grading has been completed and soil has been permitted to settle.

Floating: After finish grading, deep watering, the areas to be seeded shall be loosened to a depth of two inches, raked, and floated to the final finish grade by a standard method acceptable to the Resident Engineer

All seed shall be separated and containerized by species. Each species of seed shall be labeled with the species, purity, germination, percent live seed and quantity of the seed in pounds. Save all seed tags and provide to the Resident Engineer with a small sample of seed from the seed containers prior to mixing to verify the seed quality.

Seeding application is to be performed prior to application of the hydromulch so that seed is in direct contact with the soil.

The seed shall be evenly applied over the entire area at the rates indicated for each area. During the sowing, care shall be exercised to keep uniform seed spacing. Seeding shall not be performed during times when wind may cause uneven distribution of the seed.

ADD:

308-4.10 **Mulch.** Install mulch in a minimum 3" depth layer in areas indicated on plans. Depth shall be uniform. Taper the mulch to the crown of plant trunks, and keep mulch free of the area within 2" of trunk of plant.

Bark Mulch shall be measured by the square foot. The contract unit price paid for mulch shall be included in the lump sum project cost and shall include full compensation for furnishing all labor, materials, tools, equipment, all incidentals necessary to provide a complete installation, and for doing all the work involved in supplying and installing bark mulch, complete-in-place, as shown on the plans, as specified in these Special Provisions and as directed by the Resident Engineer.

308-5.1 **General.** ADD the following:

Contractor shall provide a temporary water supply from an approved source to irrigate existing plants until the permanent water source is operable. Contractor shall submit shop drawings and description of the temporary water supply to the water authority and City for approval. The temporary water supply shall be of adequate pressure and gallonage to operate the existing irrigation system and other required irrigation equipment at its designed capacity.

Contractor shall furnish any and all temporary electric power required to operate irrigation controllers during construction period or until permanent electrical power has been furnished.

Contractor shall check and verify the water pressure at P.O.C. prior to beginning of work. Notify Resident Engineer of any discrepancy between pressure indicated on plans and actual water pressure.

Contractor shall check and verify all site conditions, utilities, and services prior to trenching. Verify point of connection location prior to beginning of work.

Plans are diagrammatic and approximate. All piping, valve boxes, backflow preventers, etc., shall be located in planting areas. No irrigation equipment except pipe crossings and electrical crossings shall be located in or under sidewalks or in the street. Except where street crossings or trench rerouting is required to protect existing trees.

All irrigation equipment shall be installed, flushed, pressure tested, and the coverage test approved prior to plant installation.

308-5.2 Irrigation Pipeline Installation.

308-5.2.1 General. DELETE first and second paragraphs and ADD the following:

Trenches through paved areas shall be resurfaced in accordance with 306-1.5.

Concrete thrust blocks, minimum 1 cu. ft. with sufficient bearing area to resist the thrust of water, shall be constructed against undisturbed earth at all changes of direction exceeding 45 degrees for pressure mainline pipe larger than 2", thrust blocks shall be installed at gate valves, tees, elbows, crosses, and ends of pipe runs; or wherever the Resident Engineer deems one to be necessary. Thrust blocks are to be installed as per Standard Drawings SDW-151, sized as for 4" pipe.

ll install sleeves and chases where any waterline or controller wire passes under paving. Sleeves and chases shall extend 12" beyond each side of the improvement. The letter "E" for electrical or the letter "W" for water shall be stamped or chiseled on the improvement directly above the chase or sleeve. The chases shall be a minimum 15" deep for electrical and the sleeves 21" below grade for water. Sleeves and chases shall be Schedule 40 PVC, typical. The diameter of the sleeve shall be two (2) pipe sizes larger than the diameter of waterline, to be installed in sleeve.

All pressure pipe shall have a continuous blue colored trench marker metallic tape placed nine inches (9") below finished grade directly above the buried pipe. Marker tape shall be "Alarmatape" as manufactured by Paul Potter Warning Tape, Inc., or approved equivalent.

Avoid installing pipe through proposed tree locations to avoid conflict with root ball.

308-5.2.4 **Copper Pipeline.** First Paragraph, ADD the following:

Copper pipe shall be cut square and all burrs and fins removed.

Second paragraph, change 50 – 50 to 40 – 60.

308-5.3 **Installation of Valves, Valve Boxes, and Special Equipment.** Sixth paragraph, ADD the following:

The Contractor shall rework the locking toggles of the concrete valve boxes by replacing the existing clevis pin and sheet metal clip with a cadmium-plated machine bolt and self-locking nut. Apply oil to lubricate and to prevent rust. The Contractor shall paint the identification number of the valve and the controller clock on the cover of the valve box. Valve boxes shall be sized accordingly to allow wires in pull boxes to be loose and maintain a three inch (3") clearance from the lid. All wires in pull boxes shall be loose and shall not come within three inches (75 mm) from lid. Boxes shall be sized accordingly to accommodate this requirement.

Last paragraph, ADD the following:

Backflow preventers shall be installed as specified on the contract documents.

308-5.4 **Sprinkler Head Installation and Adjustment.**

308-5.4.1 **General.** ADD the following:

Plans are diagrammatic and approximate. Precise location of heads / bubblers shall be field adjusted to meet minor variations in the plan.

308-5.5 **Automatic Control System Installation.** Third paragraph, REVISE second sentence to read as follows:

When the valve is to be housed in a valve box, it shall be installed with at least a 4 inch (100 mm) minimum to a 6 inch (150 mm) maximum clearance below the cover.

Third paragraph, ADD the following:

Valve boxes shall be set to finish grade on an unmortared brick foundation.

Seventh paragraph, ADD the following:

Controllers, 12 volt conductors and valve actuators shall be installed in conformance with the controller manufacturer's instructions.

Eighth paragraph, ADD the following:

Control wiring or hydraulic control tubing shall be housed in conduit between the controller and a point at least one foot outside the limits of the controller foundation, or the structure foundation and where the controller is housed. All other wiring and hydraulic control tubing issuing from the conduit shall be direct burial installed in main or lateral water line trenches wherever practicable. The wiring or tubing shall be installed in the lower corner of the irrigation pipeline trench. Sufficient slack shall be left in the wiring or tubing to provide for expansion and contraction. When the control wiring or tubing cannot be installed in a pipe trench, it shall be installed a minimum of 18 inches below finish grade.

308-5.6.1 **General.** First paragraph, after second sentence, ADD the following:

Flush all pipes clean prior to installing sprinkler heads. Do not allow water from irrigation flushing to enter plant pits where water would result in over-saturation of soil creating an unhealthful condition for plant materials.

308-5.6.2 **Pipeline Pressure Test.** ADD the following:

Mains larger than 2 inches, asbestos cement mains and mains employing socket and spigot gasket joints shall be tested in accordance with section 306-1.4. If leaks develop, repair leaking portions and repeat test until entire system is proven watertight. Test shall be observed and approved by Resident Engineer prior to backfilling trenches.

ADD:

308-5.12 **Operation and Maintenance Manuals.** Prepare and deliver to the Resident Engineer within ten calendar days prior to completion of construction, an electronic copy and two (2) three ring hard cover binders containing the following information:

Index sheet stating Contractor's address and telephone number, list of equipment with name and addresses of local manufacturers' representatives.

Catalog and parts sheets on all material and equipment.

Contractor Guarantee statement.

Complete operating and maintenance instructions for all equipment.

In addition to the above mentioned maintenance manuals, provide the maintenance personnel with instructions for maintaining equipment and show evidence of such instruction in writing to the Resident Engineer at the conclusion of the project.

Payment for operation and maintenance manuals shall be included in the lump sum price for irrigation, and no additional compensation shall be allowed.

ADD:

308-5.13 **Extra Equipment.** Contractor shall provide to the Resident Engineer:

Three (3) keys for opening and locking each automatic controller enclosure.

Five (5) sprinkler heads with nozzles, screens and flexible swing joints of each type used on the project.

Five (5) quick coupler keys with swivel hose ells to match quick coupler valves used on the project.

Payment for extra equipment shall be included in the lump sum price for irrigation system, and no additional payment will be allowed.

ADD:

308-5.14 **Payment for Irrigation System.**

The contract price paid for Irrigation System shall be included in the lump sum project cost and shall include full compensation for furnishing all labor, materials, tools, equipment, all incidentals necessary to provide a complete installation, and for doing all the work involved, including sprinklers, pipe, valves, backflow preventer inspections, valve boxes, controllers, trenching, backfilling, wiring, quick coupler valves, gate valves, mainline, inspections and coordination, and all other components to provide a complete and operable irrigation system, complete-in-place, as shown on the plans, as specified in these Special Provisions and as directed by the Resident Engineer.

308-7 **GUARANTEE.** To the City Supplement, DELETE in its entirety.

308-8 **PAYMENT.** To the City Supplement, DELETE in its entirety.

ADD:

SECTION 313 - SITE ELECTRICAL

313-1 **SURFACE CONDITIONS.**

313-1.1 **Inspection.** Prior to all work of this section, 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 all work may be applied in strict accordance with all pertinent codes and regulations and the requirements of these specifications.

313-1.2 **Discrepancies.** In the event of any discrepancy, immediately notify the Engineer.

Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

313-2 **CODE COMPLIANCE.** All work shall comply with all applicable electric codes and regulations.

313-3 **FIELD QUALITY CONTROL.** Upon completion of this portion of the work, test all parts of the electrical system in the presence of the Engineer. Demonstrate that all equipment furnished, installed, and/or connected under this section of these specifications functions electrically in the required manner.

313-3.2 **Test Requirements.** All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects, and shall show an insulation resistance between phase conductors and ground of not less than that required by the National Electrical Code.

Test all conduits for proper neutral connections.

313-3.3 **Record Drawing Documentation.** Designate all circuiting control of outlets and other electrical components. Dimension all trench locations on plans to fixed points to clearly delineate locations. Indicate all equipment locations and installations. Mark as-built conditions on a clean set of electrical plans and note any changes and locations in red ink.

313-4 **ELECTICAL CIRCUIT INSTALLATION.** Contractor to verify all service points with SDG&E prior to installation.

313-5 **Measurement and Payment.** The contract unit price per 'Site Electrical and Lighting Systems" shall be paid for by the lump sum and shall include full compensation for furnishing all footings, junction boxes, lamps, luminaries, poles, conduit, wiring, labor, material, equipment, tools and incidentals required to complete the work specified and no additional compensation will be made therefore.

ADD: **SECTION 315 - SITE FURNISHINGS INSTALLATION**

315-1 **General Installation Requirements**. Install all factory-fabricated landscape furnishings per manufacturer's specifications and recommendations. All components shall be firmly and permanently affixed to concrete base or footings to the satisfaction of the Resident Engineer and in conformance with the manufacturer's instructions. Anchor bolts cast into the concrete or epoxy shall reinforce all installations to prevent theft or damage.

See construction plans and details for location and layout and model numbers of furnishings.

Apply anti-graffiti coating as required prior to installation, and after the appropriate curing time for all materials to avoid discoloration.

Clean-up: The site shall be kept clean and free of tools, trash, debris and installation materials on a daily basis. Material may be stored on-site during installation with appropriate protective measures and approval by the Resident Engineer.

Close out: contractor shall provide the owner with one copy of complete manufacturers installation instructions and maintenance kit.

315-1 TRASH RECEPTACLE INSTALLATION.

315-1.1 Installation. Trash receptacles shall be located where shown on the plans. Install trash receptacles in accordance with manufacturer's instructions and recommendations. Install trash receptacles accurately and in the correct orientation and relationship with the concrete paving as shown on the drawings. Trash receptacles shall be affixed to the concrete pavings with epoxy.

Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from installation work.

Protect the trash receptacles from damage throughout construction work.

315-1.2 Measurement and Payment. Payment for 'trash receptacles' shall be included in the lump sum project cost shall include full compensation for furnishing all stainless steel fasteners, expansion shields, adhesive, labor, material, equipment, tools and incidentals required to complete the work specified and no additional compensation will be made therefore.

315-2 PET WASTE STATION INSTALLATION. Pet waste stations shall be furnished and installed at locations shown on the Contract Drawings. Install pet waste stations in accordance with manufacturer's instructions and recommendations. Install pet waste stations accurately and in the correct orientation and relationship with other improvements shown on the drawings. Pet waste stations shall be installed in concrete footings for a secure post and station.

Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from installation work.

315-2.1 Measurement and Payment. The contract unit price per 'pet waste stations' shall be included in the overall project lump sum cost and shall include full compensation for furnishing all labor, material, equipment, tools and incidentals required to complete the work for each and no additional compensation will be made therefore.

315-3 COMMEMORATIVE EXHIBIT INTERPRETIVE SIGN INSTALLATION. Commemorative exhibit interpretive sign shall be furnished and installed at locations shown on the Contract Drawings. Install commemorative exhibit interpretive sign in accordance with manufacturer's instructions and recommendations. Install commemorative exhibit interpretive sign accurately and in the correct orientation and relationship with other improvements shown on the drawings. Commemorative exhibit interpretive sign shall be installed in concrete footings for secure posts and sign.

Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from installation work.

315-3.1 **Measurement and Payment.** The contract unit price per 'commemorative exhibit interpretive sign' shall be included in the overall project lump sum cost and shall include full compensation for furnishing all labor, material, equipment, tools and incidentals required to complete the work for each and no additional compensation will be made therefore.

ADD: **SECTION 316 - BOULDERS AND COBBLE MULCH INSTALLATION**

316-1 **BOULDERS INSTALLATION.** Install boulders with a minimum burial of 1/3 of boulder prior to installing surrounding paving, cobblestone and planting. Subgrade shall be compacted prior to placement. Boulders shall be placed as laid out on plan in natural appearing groups as directed by the Residential Engineer. After setting on compacted subgrade, the boulders shall be pressed into place using the bucket of a heavy skiploader to compress the soil under the boulder and eliminate air pockets. Contractor may hand tamp soil in place and around boulders to assure compaction. Compact soil backfill around boulders prior to installing planting and cobblestone.

Clean boulders prior to paving installation. Cover all boulders during paving installation operations with plastic to deter damage by other work. Exposed surfaces of boulders shall be clean and free of dirt, discoloration and concrete or other construction materials.

316-2 **COBBLES MULCH INSTALLATION.** Install cobble in accordance with the detail on the plan prior to installing surrounding planting. Subgrade shall be compacted prior to placement. Cobble shall be placed as laid out on plan in natural appearing layers as directed by the Resident Engineer. Place cobblestone after installing boulder sand irrigation systems. Place weed fabric over fined graded soil area, then place cobblestone in layers to achieve a natural appearance and to minimize the gaps between individual stones.

Clean cobbles prior to paving installation. Cover all cobbles during paving installation operations with plastic to deter damage by other site work. Exposed surfaces of cobblestone shall be clean and free of dirt, discoloration and concrete.

316-3 **MEASUREMENT AND PAYMENT.** The price for 'Boulders' and 'Cobble Mulch' shall be included in the lump sum bid item for the construction of the park and shall include full compensation for furnishing all labor, materials, tools, equipment, transportation, incidentals and for performing all work in installing the boulders and cobble, complete and in place as shown on the plans. No additional compensation for this item shall be allowed.

ADD: **SECTION 317 - STREET SIGNAGE**

317-1 **Remove and Replace Signage.** All existing street signage shall be documented, carefully removed, and relocated to new locations as indicated on the plans to the satisfaction of the Engineer. Install with min. 2 cubic foot concrete footings. Signs shall be upright, stable, and shall be thoroughly cleaned after installation. If signs or sign posts are damaged or rusted, provide full replacement. Sign shall be provided to Contractor by City Sign Shop for installation.

317-2 **Sign Installation.** Install signs in conformance with the City of San Diego standards for signs. California Park Bond Act Sign shall be provided by the City for installation by Contractor on two 2" diameter galvanized steel posts with min. 2 cubic foot concrete footings. Signs shall be upright, stable, and shall be thoroughly cleaned after installation.

ADD: **SECTION 318 – SUB-SURFACE DRAINAGE PIPE INSTALLATION.**

318-1 **Sub-surface Drainage Systems.** Sub-surface drainage systems shall consist of drainage lines, drain inlets, headwalls and under sidewalk drains as required to provide adequate drainage of landscape areas, through existing curbs to gutter flow lines for positive drainage. Sub-surface drainage systems piping shall be installed as indicated on the drawings, and in coordination with the site improvements , and in conformance with state and local plumbing and building codes and Section 306 of these Greenbook standards.

318-1.1 **Measurement and Payment.** Sub-surface drainage systems shall be measured for payment by the lump sum. Payment for sub-surface drainage systems piping shall be included in the lump sum project cost and shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, for doing all the work involved in providing the sub-surface drainage systems, complete in place, as shown on the Plans and as specified in these Special Provisions.

SECTION 701 – WATER POLLUTION CONTROL

701-2 **GENERAL** ADD the following:

4. This contract is subject to the following version of the Water Pollution Control additional requirements (as checked) as specified in the City Supplement:

☐ Storm Water Pollution Prevention Plan (SWPPP)

☐ Tier II Storm Water Pollution Prevention Plan (Tier II SWPPP)

☐ Tier I Storm Water Pollution Prevention Plan (Tier I SWPPP)

☒ Water Pollution Control Plan (WPCP)

SECTION 707 – RESOURCE DISCOVERIES

ADD:

707-1.1 **Environmental Document.** The City of San Diego Environmental Analysis Section (EAS) of the Development Services Department has prepared a **Notice of Exemption** for **West Maple Canyon Mini Park,** as referenced in the Contract Appendix. You must comply with all requirements of the **Notice of Exemption** as set forth in the Contract **Appendix A.**

Compliance with the City's environmental document is included in the various Bid items, unless a bid item has been provided.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

ATTACHMENT E

SUPPLEMENTARY SPECIAL PROVISIONS APPENDICES

APPENDIX A

NOTICE OF EXEMPTION

NOTICE OF EXEMPTION

(Check one or both)

TO: X RECORDER/COUNTY CLERK
P.O. BOX 1750, MS A-33
1600 PACIFIC HWY, ROOM 260
SAN DIEGO, CA 92101-2422

_____ OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET, ROOM 121
SACRAMENTO, CA 95814

FROM: CITY OF SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT
1222 FIRST AVENUE, MS 501
SAN DIEGO, CA 92101

PROJECT NO.: WBS # S-00760.02.06

PROJECT TITLE: W. Maple Canyon Mini-Park

PROJECT LOCATION-SPECIFIC: The northeast corner of the intersection of Maple and Albatross Streets. The project is within the Uptown Community Planning Area and Counell District 3.

PROJECT LOCATION-CITY/COUNTY: San Diego/San Diego

DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The project proposes design and construction of an approximately 9,000-square foot mini-park located in an existing, built-out neighborhood adjacent to existing City open space. Proposed improvements include two decorative concrete meandering walkways; native and limited ornamental landscaping; irrigation; guardrail fence; stone paving and "outcroppings"; conservation of the existing designated historic resource, Historic Resources Board Site #106—the Waldo Waterman Glider Launch Site and Monument; security lighting; and retaining walls used to maintain grade.

NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego

NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: City of San Diego, E&CP Department, 525 B Street, Suite 750 (MS 908A), San Diego, CA 92101 Contact: Ana Del-Rincon, 619-533-7412

EXEMPT STATUS: (CHECK ONE)

( ) MINISTERIAL (SEC. 21080(b)(1); 15268);
( ) DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a));
( ) EMERGENCY PROJECT (SEC. 21080(b)(4); 15269 (b)(c)
(X) CATEGORICAL EXEMPTION: 15304 (MINOR ALTERATIONS TO LAND), 15331 (HISTORICAL RESOURCE RESTORATION/REHABILITATION)

REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review, in 2009, which determined that the proposed project qualifies for State CEQA Guideline §15304, "Minor Alterations to Land," which allows for new landscaping and minor public alteration in the condition of land; and State CEQA Guideline §15331, "Historical Resource Restoration/Rehabilitation." Subsequent to the 2009 review, additional modifications were made to the project to assure compliance with the Historical Resources Regulation. City Historical Resources Staff re-evaluated the revised project in 2011 and determined the project to be consistent with the U.S. Secretary of the Interior's Standards; therefore, the project, as revised, meets the criteria set forth in CEQA Sections 15304 and 15331. The exceptions listed in CEQA Guidelines Section 15300.2 would not apply.

LEAD AGENCY CONTACT PERSON: Rebecca Malone

TELEPHONE: (619) 446-5371

IF FILED BY APPLICANT:

1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.
2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?
   ( ) YES ( ) NO

IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM CEQA

SIGNATURE/TITLE

November 18, 2011
DATE

CHECK ONE:
(X) SIGNED BY LEAD AGENCY
( ) SIGNED BY APPLICANT

DATE RECEIVED FOR FILING WITH COUNTY CLERK OR OPR

APPENDIX B

FIRE HYDRANT METER PROGRAM

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 1OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

1. **PURPOSE**

1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

2. **AUTHORITY**

2.1 All authorities and references shall be current versions and revisions.

2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15

2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986

2.4 California Code of Regulations, Titles 17 and 22

2.5 California State Penal Code, Section 498B.0

2.6 State of California Water Code, Section 110, 500-6, and 520-23

2.7 Water Department Director

Reference

2.8 State of California Guidance Manual for Cross Connection Programs

2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention

2.10 American Water Works Association Standards for Water Meters

2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

3. **DEFINITIONS**

3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.

3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. POLICY

4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.

4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.

4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:

a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.

b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:

1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.

3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).

4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).

5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).

6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.

7. All private fire hydrant meters shall have backflow devices attached when installed.

8. The customer must maintain and repair their own private meters and private backflows.

9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.

10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.

12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.

13. The outlet shall have a 2 ½ "National Standards Tested (NST) fire hydrant male coupling.

14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).

4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.

4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.

4.6 **Conditions and Processes for Issuance of a Fire Hydrant Meter**

Process for Issuance

a. Fire hydrant meters shall only be used for the following purposes:

1. Temporary irrigation purposes not to exceed one year.

2. Construction and maintenance related activities (see Tab 2).

b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.

c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.

d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.

e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.

f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.

g. After the fees have been paid and an account has been created, the

meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

4.7 **Relocation of Existing Fire Hydrant Meters**

a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as "Hotline"), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter's relocation.

b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.

c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

4.8 **Disconnection of Fire Hydrant Meter**

a. After ten (10) months a "Notice of Discontinuation of Service" (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.

b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

for removal of the meter.

c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.

d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.

e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. EXCEPTIONS

5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. MOBILE METER

6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:

a) **Vehicle Mounted Meters**: Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

b) **Floating Meters:** Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

    1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.

    2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

7. FEE AND DEPOSIT SCHEDULES

7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. Theses deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. UNAUTHORIZED USE OF WATER FROM A HYDRANT

8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.

8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.

8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.

8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

Larry Gardner
Water Department Director

Tabs:
1. Fire Hydrant Meter Application
2. Construction & Maintenance Related Activities With No Return To Sewer
3. Notice of Discontinuation of Service

APPENDIX

Administering Division: Customer Support Division

Subject Index:
Construction Meters
Fire Hydrant
Fire Hydrant Meter Program
Meters, Floating or Vehicle Mounted
Mobile Meter
Program, Fire Hydrant Meter

Distribution: DI Manual Holders

City of San Diego
PUBLIC UTILITIES
Water & Wastewater

Application for Fire Hydrant Meter (EXHIBIT A)

(For Office Use Only)

NS REQ	FAC#
DATE	BY

METER SHOP (619) 527-7449

Application Date	Requested Install Date:

Meter Information

Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) Zip:	T.B.	G.B. (CITY USE)
Specific Use of Water:		
Any Return to Sewer or Storm Drain, If so , explain:		
Estimated Duration of Meter Use: ☐ Check Box if Reclaimed Water		

Company Information

Company Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ( )
*Business license#	*Contractor license#		
A Copy of the Contractor's license OR Business License is required at the time of meter issuance.			
Name and Title of Billing Agent: (PERSON IN ACCOUNTS PAYABLE)			Phone: ( )
Site Contact Name and Title:			Phone: ( )
Responsible Party Name:			Title:
Cal ID#			Phone: ( )
Signature:		Date:	

Guarantees Payment of all Charges Resulting from the use of this Meter. Insures that employees of this Organization understand the proper use of Fire Hydrant Meter

☐ Fire Hydrant Meter Removal Request	Requested Removal Date:	
Provide Current Meter Location if Different from Above:		
Signature:	Title:	Date:
Phone: ( )	Pager: ( )	

☐ City Meter	☐ Private Meter	
Contract Acct #:	Deposit Amount: $ 936.00	Fees Amount: $ 62.00
Meter Serial #	Meter Size: 05	Meter Make and Style: 6-7
Backflow #	Backflow Size:	Backflow Make and Style:
Name:	Signature:	Date:

WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER

Auto Detailing
Backfilling
Combination Cleaners (Vactors)
Compaction
Concrete Cutters
Construction Trailers
Cross Connection Testing
Dust Control
Flushing Water Mains
Hydro Blasting
Hydro Seeing
Irrigation (for establishing irrigation only; not continuing irrigation)
Mixing Concrete
Mobile Car Washing
Special Events
Street Sweeping
Water Tanks
Water Trucks
Window Washing

Note:

1. If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charges.

Date

Name of Responsible Party
Company Name and Address
Account Number:_____

Subject: Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

The authorization for use of Fire Hydrant Meter #_____, located at *(Meter Location Address)* ends in 60 days and will be removed on or after *(Date Authorization Expires)*. Extension requests for an additional 90 days must be submitted in writing for consideration 30 days prior to the discontinuation date. If you require an extension, please contact the Water Department, or mail your request for an extension to:

City of San Diego
Water Department
Attention: Meter Services
2797 Caminito Chollas
San Diego, CA 92105-5097

Should you have any questions regarding this matter, please call the Fire Hydrant Hotline at (619)_____-_____.

Sincerely,

Water Department

APPENDIX C

MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

Materials Typically Accepted by Certificate of Compliance

1. Soil amendment
2. Fiber mulch
3. PVC or PE pipe up to 16 inch diameter
4. Stabilizing emulsion
5. Lime
6. Preformed elastomeric joint seal
7. Plain and fabric reinforced elastomeric bearing pads
8. Steel reinforced elastomeric bearing pads
9. Waterstops (Special Condition)
10. Epoxy coated bar reinforcement
11. Plain and reinforcing steel
12. Structural steel
13. Structural timber and lumber
14. Treated timber and lumber
15. Lumber and timber
16. Aluminum pipe and aluminum pipe arch
17. Corrugated steel pipe and corrugated steel pipe arch
18. Structural metal plate pipe arches and pipe arches
19. Perforated steel pipe
20. Aluminum underdrain pipe
21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
22. Metal target plates
23. Paint (traffic striping)
24. Conductors
25. Painting of electrical equipment
26. Electrical components
27. Engineering fabric
28. Portland Cement
29. PCC admixtures
30. Minor concrete, asphalt
31. Asphalt (oil)
32. Liquid asphalt emulsion
33. Epoxy

APPENDIX D

SAMPLE CITY INVOICE

City of San Diego, Field Engineering Div., 9485 Aero Drive, SD CA 92123		**Contractor's Name:**	
Project Name:		Contractor's Address:	
Work Order No or Job Order No.			
City Purchase Order No.		Contractor's Phone #:	**Invoice No.**
Resident Engineer (RE):		Contractor's fax #:	**Invoice Date:**
RE Phone#:	Fax#:	Contact Name:	Billing Period: (to

Item #	Item Description	Contract Authorization				Previous Totals To Date		This Estimate		Totals to Date	
		Unit	Price	Qty	Extension	%/QTY	Amount	% / QTY	Amount	% / QTY	Amount
1					$ -		$ -		$ -	0.00%	$ -
2					$ -		$ -		$ -	0.00%	$ -
3					$ -		$ -		$ -	0.00%	$ -
4					$ -		$ -		$ -	0.00%	$ -
5					$ -		$ -		$ -	0.00%	$ -
6					$ -		$ -		$ -	0.00%	$ -
7					$ -		$ -		$ -	0.00%	$ -
8					$ -		$ -		$ -	0.00%	$ -
9					$ -		$ -		$ -	0.00%	$ -
10					$ -		$ -		$ -	0.00%	$ -
11					$ -		$ -		$ -	0.00%	$ -
12					$ -		$ -		$ -	0.00%	$ -
13					$ -		$ -		$ -	0.00%	$ -
14					$ -		$ -		$ -	0.00%	$ -
15					$ -		$ -		$ -	0.00%	$ -
16					$ -		$ -		$ -	0.00%	$ -
17	**Field Orders**				$ -		$ -		$ -	0.00%	$ -
18					$ -		$ -		$ -	0.00%	$ -
	CHANGE ORDER No.				$ -		$ -		$ -	0.00%	$ -
					$ -		$ -		$ -	0.00%	$ -
	Total Authorized Amount (including approved Change Order)				**$ -**		$ -		$ -	**Total Billed**	$ -

SUMMARY

A. Original Contract Amount	$ -
B. Approved Change Order #00 Thru #00	$ -
C. Total Authorized Amount (A+B)	$ -
D. Total Billed to Date	$ -
E. Less Total Retention (5% of D)	$ -
F. Less Total Previous Payments	$ -
G. Payment Due Less Retention	**$0.00**
H. Remaining Authorized Amount	$0.00

I certify that the materials have been received by me in the quality and quantity specified

Resident Engineer

Construction Engineer

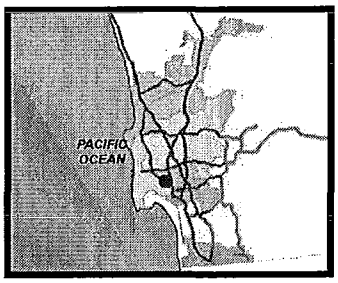
Retention and/or Escrow Payment Schedule

Total Retention Required as of this billing (Item E)	$0.00
Previous Retention Withheld in PO or in Escrow	$0.00
Add'l Amt to Withhold in PO/Transfer in Escrow:	***$0.00***
Amt to Release to Contractor from PO/Escrow:	

Contractor Signature and Date: _____

APPENDIX E

LOCATION MAP



WEST MAPLE CANYON MINI PARK

SENIOR ENGINEER
KEVIN OLIVER
619-533-5139

PROJECT MANAGER
ANA DEL RINCON
619-533-7412

LOCATION MAP

No Scale

COMMUNITY NAME:
UPTOWN COMMUNITY AREA

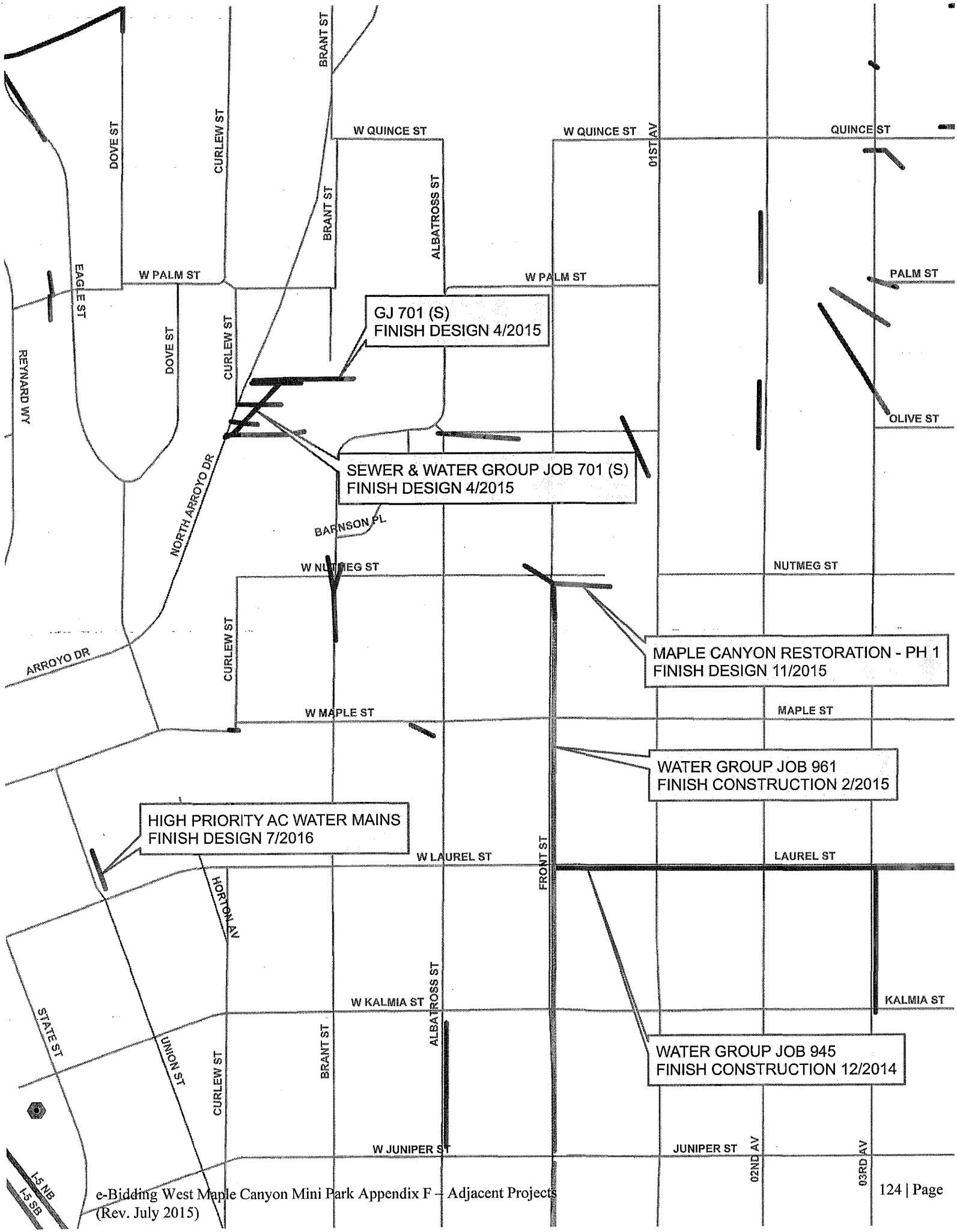
COUNCIL DISTRICT: 2

SAP ID: WBS S00760

Date: September 18, 2012

APPENDIX F

ADJACENT PROJECTS


GJ 701 (S)
FINISH DESIGN 4/2015
SEWER & WATER GROUP JOB 701 (S)
FINISH DESIGN 4/2015
MAPLE CANYON RESTORATION - PH 1
FINISH DESIGN 11/2015
WATER GROUP JOB 961
FINISH CONSTRUCTION 2/2015
HIGH PRIORITY AC WATER MAINS
FINISH DESIGN 7/2016
WATER GROUP JOB 945
FINISH CONSTRUCTION 12/2014
BRANT ST
DOVE ST
CURLEW ST
W QUINCE ST
ALBATROSS ST
01ST AV
QUINCE ST
EAGLE ST
W PALM ST
PALM ST
REYNARD WY
NORTH ARROYO DR
OLIVE ST
BARNSON PL
W NUTMEG ST
NUTMEG ST
ARROYO DR
W MAPLE ST
MAPLE ST
FRONT ST
W LAUREL ST
LAUREL ST
HORTON AV
STATE ST
UNION ST
W KALMIA ST
KALMIA ST
W JUNIPER ST
JUNIPER ST
02ND AV
03RD AV
I-5 NB
I-5 SB

APPENDIX G

HYDROLOGY STUDY FOR WEST MAPLE CANYON MINI PARK

Hydrology Study

For

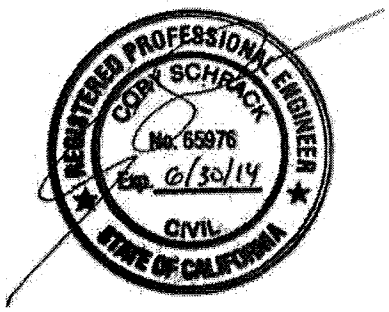
West Maple Canyon Mini Park

Albatross St & W Maple St
San Diego, CA 92101

Prepared For
Estrada Land Planning
225 Broadway, Suite 1160
San Diego, CA 92101

Prepared by
Nasland Engineering
4740 Ruffner Street
San Diego, CA 92111
(858) 292-7770
N.E. Job No. 111-047.1-5

February 15, 2013



2-15-13

Cory Schrack **R.C.E. 65976** **Date**

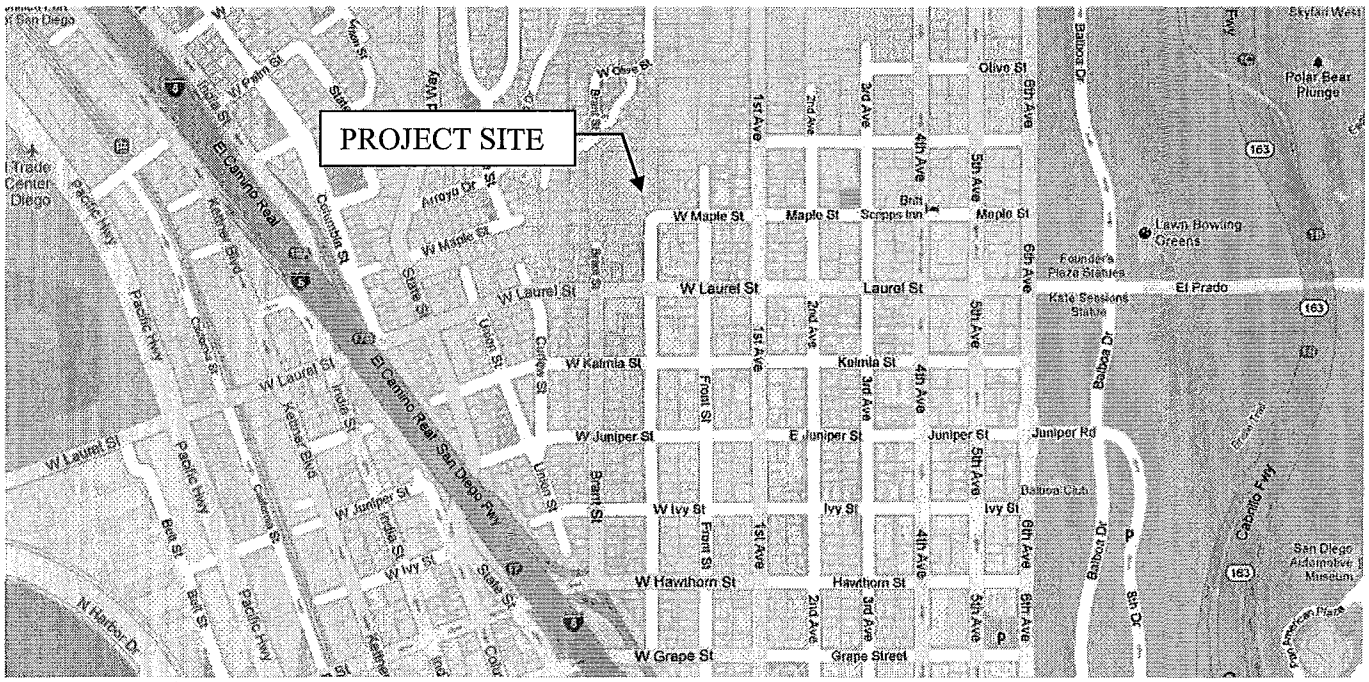
Table of Contents

PURPOSE

The purpose of this hydrology study is to show that the proposed West Maple Canyon Mini Park will not negatively impact existing hydrologic conditions. This report will calculate, analyze and compare storm water runoff for both the existing and proposed site conditions in order to ensure that the existing hydrologic regime is not negatively impacted by the project.

PROJECT DESCRIPTION

The West Maple Canyon Mini Park project will be confined to an area encompassing approximately 0.31 acres. The project proposes to construct a new mini park at the intersection of Albatross Street and West Maple Street in San Diego. In order to provide adequate site drainage, improvements such as sidewalk drains and inlets are incorporated into the design.



Source: Google Maps

EXISTING DRAINAGE

The existing site encompasses approximately 0.31 acres and primarily consists of open space and landscaped area. This existing 0.31 acre hydrologic area consists of approximately 9% impervious surfaces and 91% pervious surfaces. This area drains to two basin outfalls; one leading into the curb and gutter to drain to a nearby storm drain southwest of the site and the other down the slope into the adjacent canyon.

See **Appendix A - Existing Hydrologic Conditions Exhibit**, for further information.

PROPOSED DRAINAGE

The project proposes the construction of a mini park with sidewalk, drains, and landscaping area. This proposed 0.31 acre hydrologic area consists of approximately 20% impervious surfaces and 80% pervious surfaces including vegetated areas. This area drains to two basin outfalls; one leading into the curb and gutter to drain to a nearby storm drain southwest of the site and the other down the slope into the adjacent canyon.

See **Appendix B - Proposed Hydrologic Conditions Exhibit**, for further information.

HYDROLOGY METHODOLOGY/DESIGN CRITERIA:

Storm water runoff for both the existing and proposed site conditions is calculated, analyzed and compared in order to ensure that the proposed conditions do not negatively affect the existing hydrologic regime. Runoff is calculated by utilizing methods outlined in the City of San Diego Drainage Design Manual. Topographical information has been obtained from City of San Diego. Hydrologic basin boundaries, landscape areas, and flow path characteristics such as change in elevation and length of flow are obtained from the Existing and Proposed Hydrologic Conditions Maps which are drafted in AutoCAD Civil 3D 2013 software. This information is utilized to determine the basin area, runoff coefficient and inlet time for each basin.

CALCULATIONS:

Calculations have been performed per Rational Method guidelines set forth in Appendix I of the City of San Diego Drainage Design Manual.

- Runoff Coefficients have been calculated per Table 3-2 of the Drainage Design Manual. Where actual imperviousness conditions differed significantly from the tabulated imperviousness values provided in Table 3-2, the C value was modified per the weighting formula provided at the bottom of the table.
- Times of Concentration values are assumed to be five minutes for all calculations due to the small basin sizes for this site.
- Intensity values have been calculated per the "Intensity-Duration-Frequency Curves" graph located Appendix I-B of the Drainage Design Manual.
- For hydrology calculations refer to the pages following. For attachments and references to the calculations see **Appendix C – Hydrology References.**

West Maple Canyon Mini Park - Existing & Proposed Surface Runoff

Existing Site Conditions														
Basin	Basin Area	Basin Acreage (A)	Pervious Area	Impervious Area	% Pervious	% Impervious	[1]Runoff Coefficient	[2]Tc	[3]Intensity 2-year	Q_2	[3]Intensity 10-year	Q_{10}	[3]Intensity 100-year	Q_{100}
	(sf)	(ac)	(sf)	(sf)	%	%	(C)	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
1A	1,161	0.03	0	1,161	0%	100%	0.85	5.0	2.40	0.06	3.40	0.09	4.50	0.11
1B	1,370	0.03	1,370	0	100%	0%	0.50	5.0	2.40	0.04	3.40	0.05	4.50	0.07
2	11,011	0.25	11,011	0	100%	0%	0.50	5.0	2.40	0.30	3.40	0.43	4.50	0.56
Total	13,542	0.31	12,381	1,161	91%	9%				0.40		0.56		0.74

Proposed Site Conditions														
Basin	Basin Area	Basin Acreage (A)	Pervious Area	Impervious Area	% Pervious	% Impervious	[1]Runoff Coefficient	[2]Tc	[3]Intensity 2-year	Q_2	[3]Intensity 10-year	Q_{10}	[3]Intensity 100-year	Q_{100}
	(sf)	(ac)	(sf)	(sf)	%	%	(C)	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
1A	1,354	0.03	1,354	0	100%	0%	0.50	5.0	2.40	0.04	3.40	0.05	4.50	0.07
1B	2,118	0.05	2,118	0	100%	0%	0.50	5.0	2.40	0.06	3.40	0.09	4.50	0.11
1C	560	0.01	560	0	100%	0%	0.50	5.0	2.40	0.01	3.40	0.02	4.50	0.02
1D	2,760	0.06	0	2,760	0%	100%	0.85	5.0	2.40	0.12	3.40	0.17	4.50	0.23
1E	1,721	0.04	1,721	0	100%	0%	0.50	5.0	2.40	0.05	3.40	0.07	4.50	0.09
1F	174	0.01	174	0	100%	0%	0.50	5.0	2.40	0.01	3.40	0.02	4.50	0.02
2	4,855	0.11	4,855	0	100%	0%	0.50	5.0	2.40	0.13	3.40	0.19	4.50	0.25
Total	13,542	0.31	10,782	2,760	80%	20%				0.42		0.60		0.79
									Change in Site Surface Runoff (CFS)	**0.02**		**0.04**		**0.05**

1. Runoff coefficients have been calculated by using the values and weighting formula on Table 3-2 of the City of San Diego Drainage Design Manual.

2. Actual time of concentration is less than 5 minutes, so a minimum of 5 minutes was used.

3. Intensity values have been calculated per the "Intensity-Duration Frequency Curves" graph located in Appendix I-B of the City of San Diego Drainage Design Manual.

WEST MAPLE CANYON MINI PARK TIME OF CONCENTRATIONS

Due to the small size of basins for the West Maple Canyon Mini Park, a minimum time of concentration of 5 minutes is assumed for all calculations.

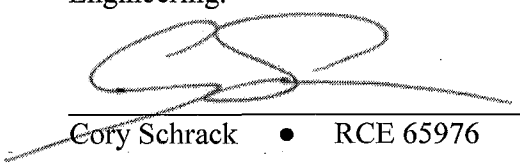
West Maple Canyon Mini Park - Existing & Proposed Outfall Summary								
Basin Outfall ID	Existing Contributory Basin Area (Acres)	Existing Q_2 (CFS)	Existing Q_{10} (CFS)	Existing Q_{100} (CFS)	Proposed Contributory Basin Area (Acres)	Proposed Q_2 (CFS)	Proposed Q_{10} (CFS)	Proposed Q_{100} (CFS)
Outfall 1	0.06	0.10	0.14	0.18	0.20	0.29	0.41	0.54
Outfall 2	0.25	0.30	0.43	0.56	0.11	0.13	0.19	0.25
Total	0.31	0.40	0.56	0.74	0.31	0.42	0.60	0.79

CONCLUSION

The Outfall Summary shows that while the proposed West Maple Canyon Mini Park Project will be increasing the impervious area, the resulting change in flow will not significantly impact the area's existing hydrologic regime. The proposed project will result in negligible increase to runoff volume, velocity or frequency at any of the basin outfalls, and will not significantly reduce existing infiltration rates. Because the proposed project will not significantly impact the existing flow regime, no alterations to existing downstream conditions such as erosion and habitat characteristics are anticipated.

ENGINEER OF WORK

This report was prepared under the supervision of Cory Schrack, PE, Project Manager for Nasland Engineering.

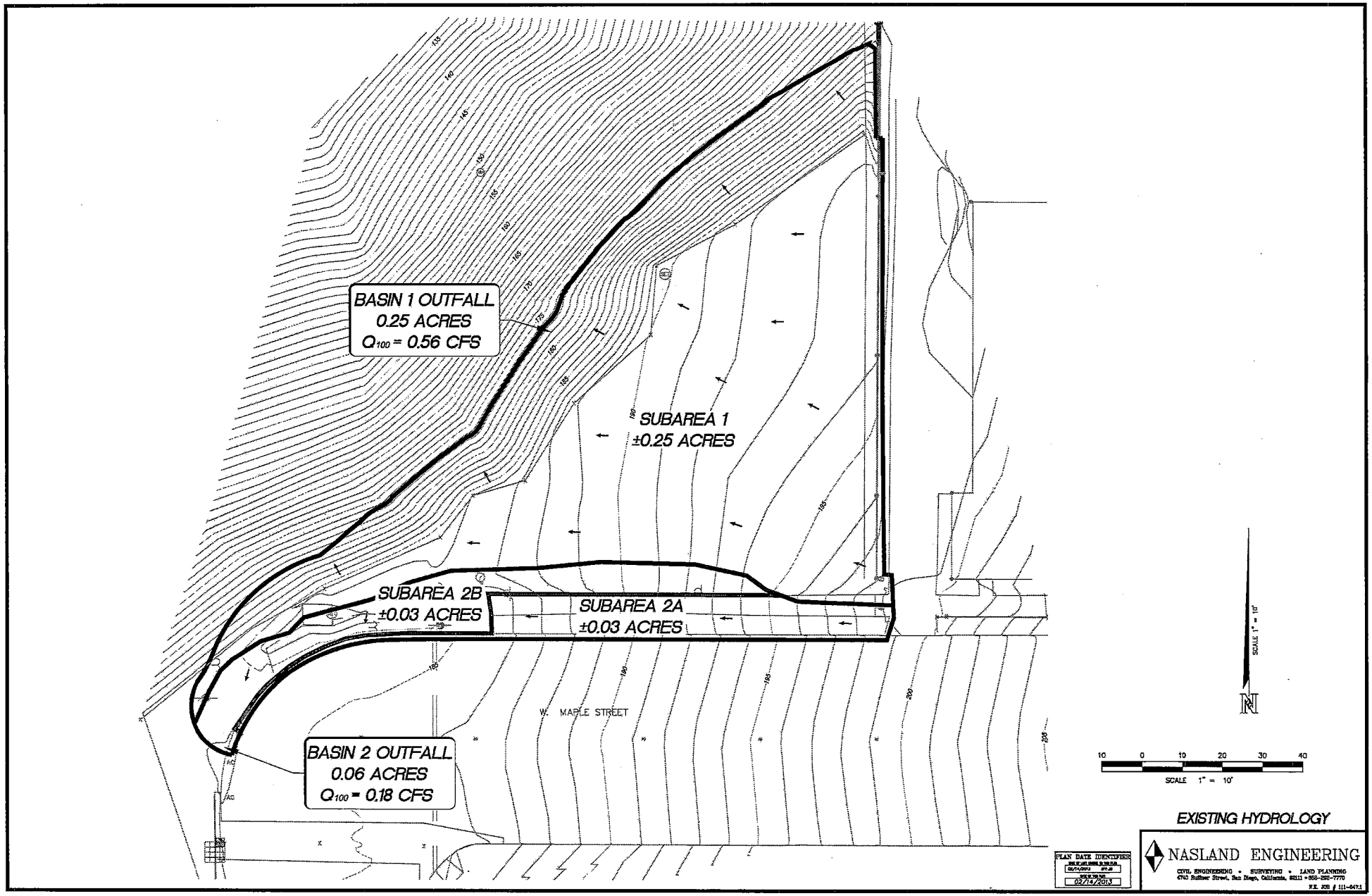


Cory Schrack • RCE 65976 • Expires 06-30-14

APPENDICES

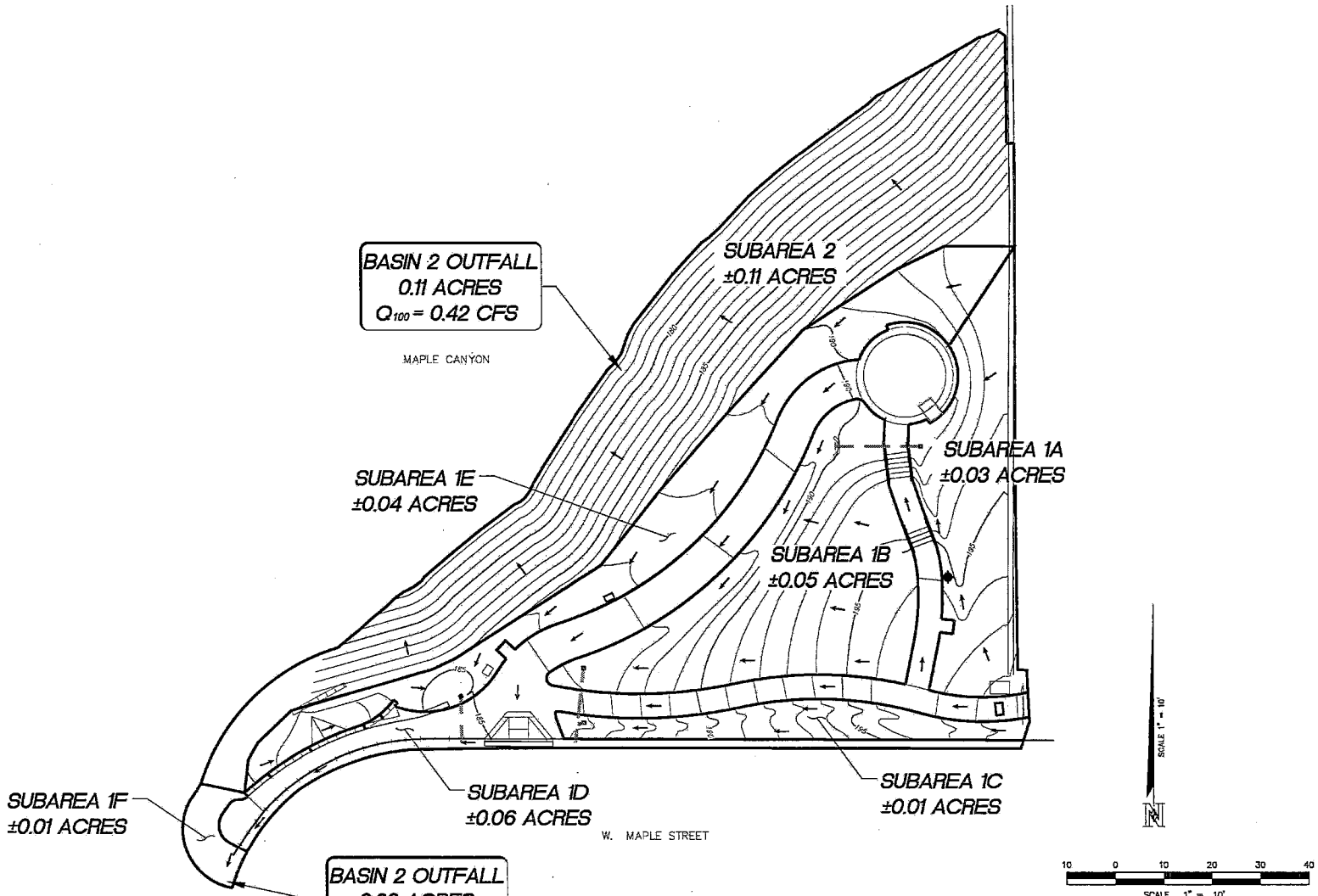
APPENDIX A

Existing Hydrologic Conditions


BASIN 1 OUTFALL
0.25 ACRES
Q_{100} = 0.56 CFS
SUBAREA 1
±0.25 ACRES
SUBAREA 2B
±0.03 ACRES
SUBAREA 2A
±0.03 ACRES
W. MAPLE STREET
BASIN 2 OUTFALL
0.06 ACRES
Q_{100} = 0.18 CFS
SCALE 1" = 10'
10 0 10 20 30 40
SCALE 1" = 10'
EXISTING HYDROLOGY
PLAN DATE IDENTIFIER
02/14/2013
NASLAND ENGINEERING
CIVIL ENGINEERING • SURVEYING • LAND PLANNING
4740 Ruffner Street, San Diego, California, 92111 • 858-292-7770
P.E. 208 # 111-8471

APPENDIX B

Proposed Hydrologic Conditions



PROPOSED HYDROLOGY

PLAN DATE IDENTIFIER
02/14/2013

NASLAND ENGINEERING
CIVIL ENGINEERING • SURVEYING • LAND PLANNING
4765 Ruffner Street, San Diego, California, 92111 • 858-292-7770
N.E. JOB # 111-047.1

APPENDIX C

Hydrology References

TABLE 2

RUNOFF COEFFICIENTS (RATIONAL METHOD)

DEVELOPED AREAS (URBAN)

Land Use	Coefficient, C Soil Type (1)
Residential:	D
Single Family	.55
Multi-Units	.70
Mobile Homes	.65
Rural (lots greater than 1/2 acre)	.45
Commercial (2) 80% Impervious	.85
Industrial (2) 90% Impervious	.95

NOTES:

(1) Type D soil to be used for all areas.

(2) Where actual conditions deviate significantly from the tabulated imperviousness values of 80% or 90%, the values given for coefficient C, may be revised by multiplying 80% or 90% by the ratio of actual imperviousness to the tabulated imperviousness. However, in no case shall the final coefficient be less than 0.50. For example: Consider commercial property on D soil.

Actual imperviousness = 50%

Tabulated imperviousness = 80%

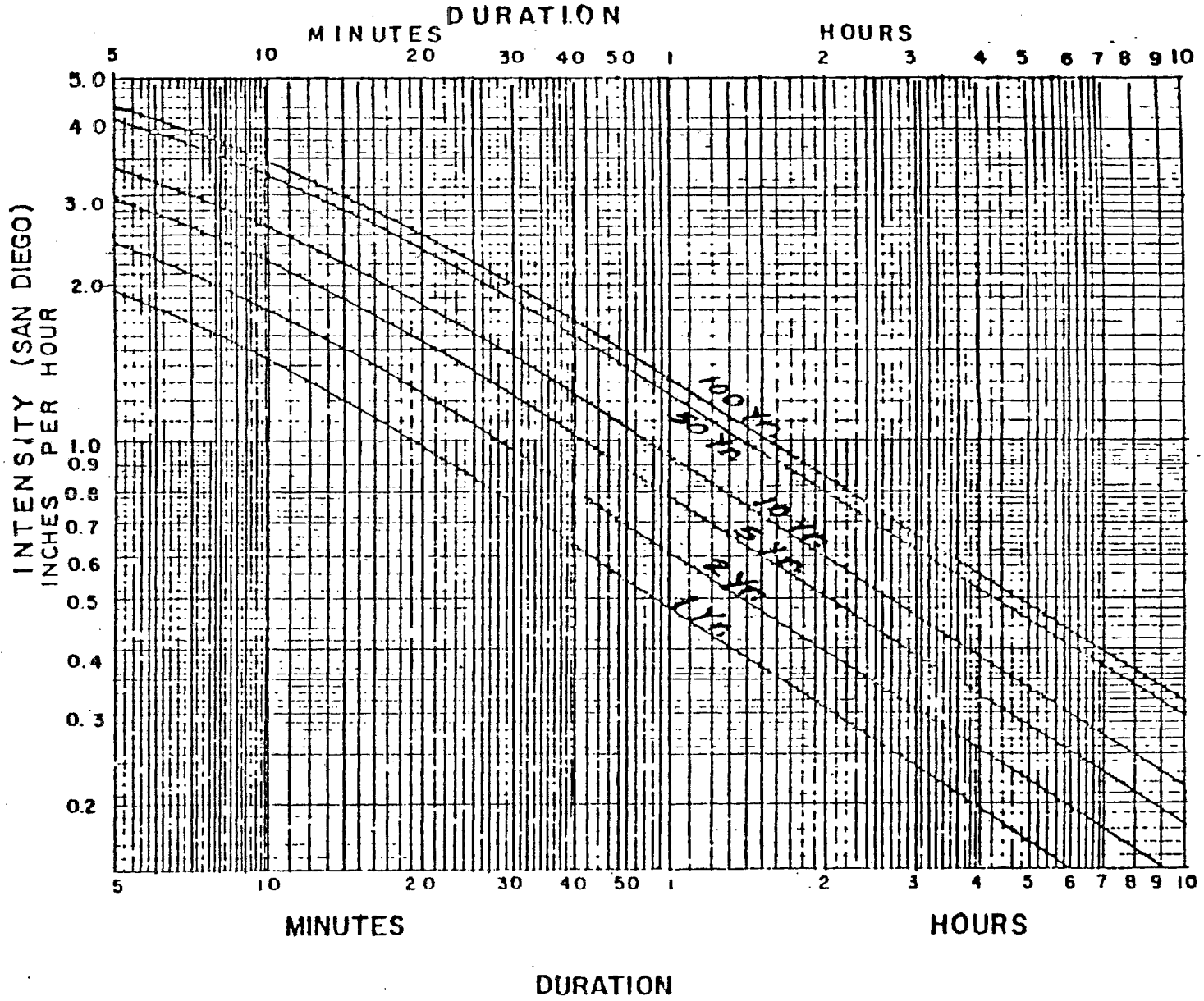
Revised C = $\frac{50}{80}$ x 0.85 = 0.53

APPENDIX I

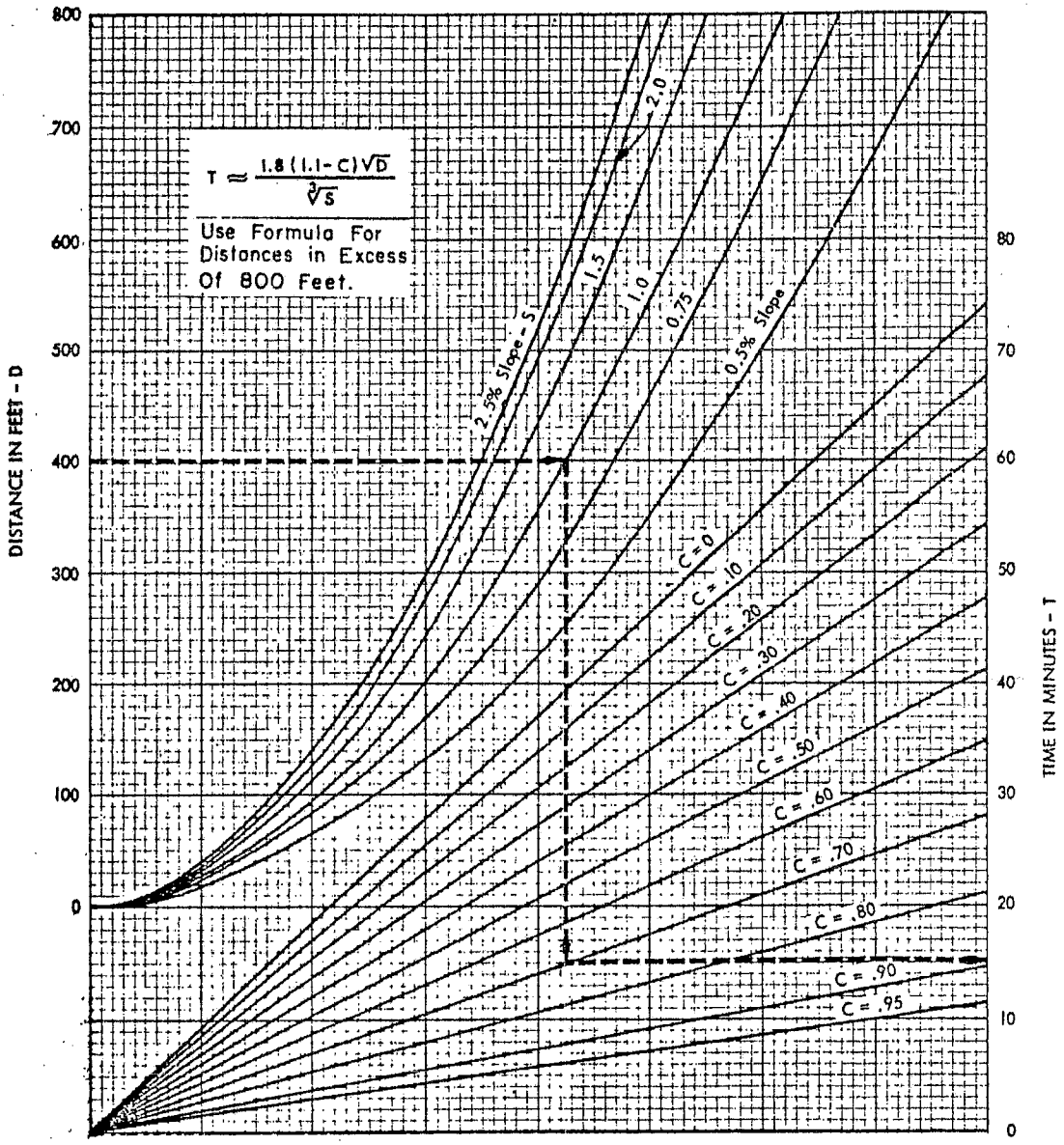
RAINFALL INTENSITY - DURATION - FREQUENCY CURVES for COUNTY OF SAN DIEGO

ELEV.	FACTOR
0–1500	1.00
1500–3000	1.25
3000–4000	1.42
4000–5000	1.60
5000–6000	1.70
DESERT	1.25

To obtain correct intensity, multiply intensity on chart by factor for design elevation.



URBAN AREAS OVERLAND TIME OF FLOW CURVES



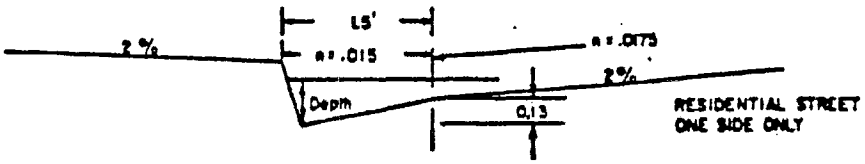
Surface Flow Time Curves

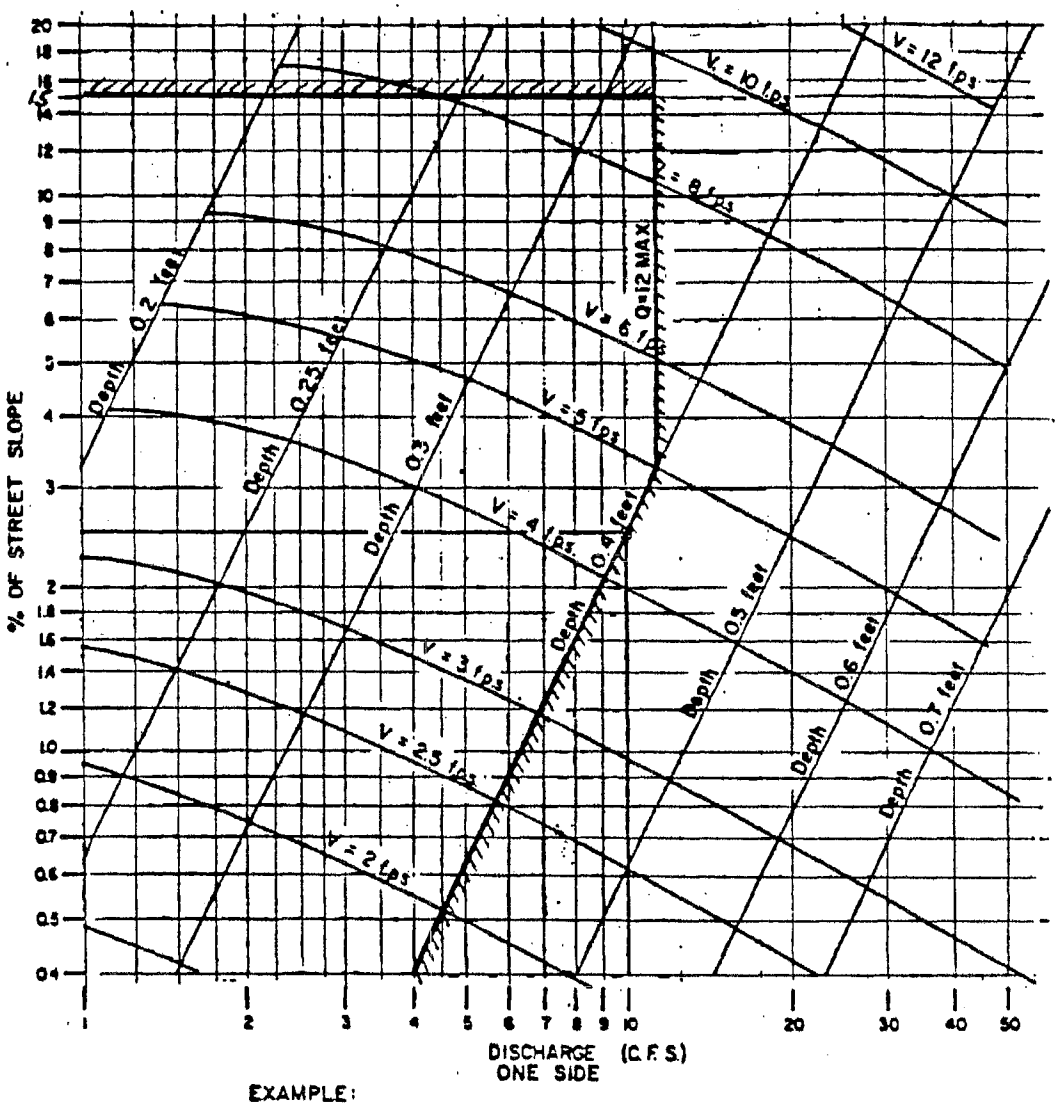
EXAMPLE:

GIVEN: LENGTH OF FLOW = 400 FT.
SLOPE = 1.0 %
COEFFICIENT OF RUNOFF C = .70

READ: OVERLAND FLOWTIME = 15 MINUTES

CHART I-104.12





EXAMPLE:

Given: Q = 10 S = 2.5 %
Chart gives: Depth = 0.4, Velocity = 4.4 f.p.s.

REV.		CITY OF SAN DIEGO - DESIGN GUIDE	SHT. NO.
		GUTTER AND ROADWAY DISCHARGE - VELOCITY CHART	

APPENDIX H

GEOTECHNICAL INVESTIGATION AND REMEDIAL GRADING FOR WEST MAPLE CANYON MINI PARK, DATED OCTOBER 25, 2011

October 25, 2011

Estrada Land Planning
755 Broadway Circle, Suite 300
San Diego, California 92101

Attention: Mr. David Preciado

Subject: GEOTECHNICAL INVESTIGATION
WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

Dear Mr. Preciado:

In accordance with your request and authorization of our proposal (LG-11207 dated July 19, 2011), we herein submit the results of our geotechnical investigation for the subject site. The accompanying report presents the results of our study and conclusions and recommendations pertaining to geotechnical aspects of the project. The site is considered suitable for construction of the proposed park development provided the recommendations of this report are followed.

Should you have questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

Noel G. Borja	Rodney C. Mikesell	John Hoobs
Senior Staff Engineer	GE 2533	CEG 1524

NGB:RCM:JH:dmc

(6/del) Addressee

TABLE OF CONTENTS

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for a proposed park at the subject site. The purpose of this geotechnical investigation is to evaluate surface and subsurface soil conditions, general site geology, and to identify geotechnical constraints that may impact development of the property.

The scope of this investigation included a review of readily available published and unpublished geologic literature (see List of References), excavating 6-exploratory trenches, soil sampling, laboratory testing, engineering analyses, and preparation of this geotechnical investigation report.

The exploratory trench logs and details of the field investigation are presented in Appendix A. We performed laboratory tests on selected soil samples obtained during the field investigation to evaluate pertinent physical and chemical properties for engineering analyses and to assist in providing geotechnical engineering recommendations for project design. Details of the laboratory tests and a summary of the test results are presented in Appendix B and on the trench logs in Appendix A.

2. SITE AND PROJECT DESCRIPTION

The West Maple Canyon Mini Park site is located northeast of the intersection of West Maple Street and Albatross Street in the Hillcrest neighborhood of San Diego, California (see Vicinity Map, Figure 1). The site consists of an approximate 9,000 square foot, triangular shaped vacant lot. The site is bound on the north and west by an open space canyon, on the east by residential homes, and on the south by West Maple Street. A monument (Waldo-Waterman) exists at the southwest corner of the property. On the east side of the site, a retaining wall supporting improvements for the adjacent property exists. Cracking and distress was evident on the face of the retaining wall. An approximately 60-foot high natural slope with inclinations ranging from 1.3:1 (horizontal:vertical) to 2:1 exists on the northwest side of the property. The upper 5 to 15 feet of this slope is comprised of fill. The site is gently sloping from southeast to southwest with elevations ranging from approximately 199 feet above Mean Sea Level (MSL) to approximately 184 feet MSL.

Based on our review of the site plan and discussions with Estrada Land Planning personnel, we understand proposed park development will consist of the construction of concrete walkways, stone paving, impervious paving, stairways, retaining walls, and landscaping. A raised circular seatwall will be constructed in the northeast portion of the site. The planned retaining walls will be constructed near the Waldo Waterman Monument to mitigate soil erosion below the concrete base and in front of the monument to accommodate a proposed walkway. Based on the proposed development, exploratory trenches, and laboratory testing, we expect grading will consist of maximum cuts and fills of less than 5 feet.

The locations and descriptions above are based on our observations and understanding of proposed development. If development plans differ significantly from those described herein, Geocon Incorporated should be contacted for review and possible revisions to this report.

3. SOIL AND GEOLOGY

The site is underlain by undocumented fill, topsoil, and the San Diego Formation. A description of each of these units is provided below. A geologic map is provided on Figure 2 and geologic cross-sections on Figures 3 through 5 depicting the subsurface geologic conditions.

3.1 Undocumented Fill

We encountered undocumented fill throughout the property. The fill was observed to be a maximum thickness of approximately 10 feet to 13 feet, however it may be thicker (see trench T-3). In the area of the proposed retaining wall at the base of the Waldo Waterman monument, the undocumented fill was approximately 4 feet thick. The undocumented fill consists of loose and soft, dry to moist, silty to clayey sand and sandy clay with gravel and cobbles. Varying amounts of debris consisting of concrete, asphalt concrete, metal, and brick was also observed in the exploratory trenches. We suspect the fill was generated during construction of the adjacent residential structures and was placed to level the site. The fill is considered unsuitable for support of structural improvements and will require remedial grading.

3.2 Topsoil

We observed topsoil underlying the undocumented fill between depths of 8 feet to 10.5 feet in trench T-1. The topsoil consists of loose, dry, dark brown, silty sand with gravel. Topsoil is also considered unsuitable for direct support of structural improvements.

3.3 San Diego Formation (TSD)

We encountered Pliocene-age San Diego Formation underlying the compacted fill and topsoil. We encountered excavation refusal in trench T-6 at a depth of approximately 4.5 feet below existing grade. This unit consists of a dense to very dense, silty sandstone with interbeds of conglomerate. The San Diego Formation is considered suitable for support of structural fill and settlement-sensitive structures.

4. GROUNDWATER

We did not observe groundwater within the trenches performed during our field investigation. We do not expect groundwater to adversely impact proposed project development; however, it is not uncommon for groundwater or seepage conditions to develop where none previously existed. Groundwater elevations are dependent on seasonal precipitation, irrigation; land use, among other factors, and vary as a result. Proper surface drainage will be important to future performance of the project.

5. GEOLOGIC HAZARDS

5.1 Geologic Hazard Category

Review of the City of San Diego *Seismic Safety Study, Geologic Hazards and Faults, April 3, 2008 Edition, Sheet No. 17,* indicates the site is situated in Hazard Category 52: *Other level area, gently sloping to steep terrain, favorable geologic structure, Low risk.*

5.2 Faulting and Seismicity

The California Geological Survey (CGS) defines an active fault as a fault showing evidence for activity within the last 11,000 years. The site is not traversed by any active, potentially active, or inactive faults. The site is not located within a State of California Earthquake Fault Zone.

According to the computer program *EZ-FRISK* (Version 7.62), six known active faults are located within a search radius of 50 miles from the property. The nearest known active fault is the Newport-Inglewood/Rose Canyon Fault, located less than ½ mile from of the site. The Newport-

Inglewood/Rose Canyon Fault is the dominant source of potential ground motion. Earthquakes that might occur on the Newport-Inglewood/Rose Canyon Fault Zone or other faults within the southern California and northern Baja California area are potential generators of significant ground motion at the site. The estimated deterministic maximum earthquake magnitude and peak ground acceleration for the Newport-Inglewood are 7.5 and 0.64 g, respectively. Table 5.2.1 lists the estimated maximum earthquake magnitude and peak ground acceleration for the most dominant faults in relationship to the site location. We calculated peak ground acceleration (PGA) using Boore-Atkinson (2008) NGA USGS 2008, Campbell-Bozorgnia (2008) NGA USGS 2008, and Chiou-Youngs (2008) NGA acceleration-attenuation relationships.

TABLE 5.2.1
DETERMINISTIC SPECTRA SITE PARAMETERS

Fault Name	Distance from Site (miles)	Maximum Earthquake Magnitude (Mw)	Peak Ground Acceleration		
			Boore-Atkinson 2008 (g)	Campbell-Bozorgnia 2008 (g)	Chiou-Youngs 2008 (g)
Newport-Inglewood	0.4	7.5	0.56	0.48	0.64
Rose Canyon	0.4	6.9	0.54	0.48	0.61
Coronado Bank	13	7.4	0.20	0.17	0.20
Palos Verdes Connected	13	7.7	0.22	0.18	0.23
Elsinore	41	7.85	0.11	0.08	0.09
Earthquake Valley	46	6.8	0.06	0.05	0.04

We used the computer program *EZ-FRISK* to perform a probabilistic seismic hazard analysis. The computer program *EZ-FRISK* operates under the assumption that the occurrence rate of earthquakes on each mapped Quaternary fault is proportional to the fault's slip rate. The program accounts for fault rupture length as a function of earthquake magnitude, and site acceleration estimates are made using the earthquake magnitude and distance from the site to the rupture zone. The program also accounts for uncertainty in each of following: (1) earthquake magnitude, (2) rupture length for a given magnitude, (3) location of the rupture zone, (4) maximum possible magnitude of a given earthquake, and (5) acceleration at the site from a given earthquake along each fault. By calculating the expected accelerations from considered earthquake sources, the program calculates the total average annual expected number of occurrences of site acceleration greater than a specified value. We utilized acceleration-attenuation relationships suggested by Boore-Atkinson (2008) NGA USGS 2008, Campbell-Bozorgnia (2008) NGA USGS 2008, and Chiou-Youngs (2008) in the analysis. Table 5.2.2 presents the site-specific probabilistic seismic hazard parameters including acceleration-attenuation relationships and the probability of exceedence.

TABLE 5.2.2
PROBABILISTIC SEISMIC HAZARD PARAMETERS

Probability of Exceedence	Peak Ground Acceleration		
	Boore-Atkinson, 2007 (g)	Campbell-Bozorgnia, 2008 (g)	Chiou-Youngs, 2008 (g)

Probability of Exceedence	Peak Ground Acceleration		
	Boore-Atkinson, 2007 (g)	Campbell-Bozorgnia, 2008 (g)	Chiou-Youngs, 2008 (g)
2% in a 50 Year Period	0.63	0.57	0.72
5% in a 50 Year Period	0.36	0.36	0.41
10% in a 50 Year Period	0.22	0.22	0.24

The California Geologic Survey (CGS) has a program that calculates the ground motion for a 10 percent of probability of exceedence in 50 years based on an average of several attenuation relationships. Table 5.2.3 presents the calculated results from the Probabilistic Seismic Hazards Mapping Ground Motion Page from the CGS website.

TABLE 5.2.3
PROBABILISTIC SITE PARAMETERS FOR SELECTED FAULTS
CALIFORNIA GEOLOGIC SURVEY

Calculated Acceleration (g) Firm Rock	Calculated Acceleration (g) Soft Rock	Calculated Acceleration (g) Alluvium
0.28	0.30	0.33

While listing peak accelerations is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including the frequency and duration of motion and the soil conditions underlying the site. Seismic design of the structures should be evaluated in accordance with the California Building Code (CBC) guidelines currently adopted by the City of San Diego.

5.3 Soil Liquefaction

Due to the lack of near surface groundwater, it is our opinion the occurrence for soil liquefaction is considered to be very low.

5.4 Landslides

It is our opinion, based on review of aerial photos and published geologic literature, that landslides are not present at the property or at a location that could impact the subject site.

5.5 Tsunamis and Seiches

The site is approximately 5 miles from the Pacific Ocean and ¾-mile from the San Diego Bay at an elevation near 185 feet MSL. The site is also not located in the vicinity of or downstream of any large body of water. Therefore, the potential for tsunamis or seiches affecting the site is very low.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 General

6.1.1 From a geotechnical engineering standpoint, it is our opinion that the site is suitable for construction of the proposed park provided the recommendations presented herein are implemented in design and construction of the project.

6.1.2 The site is underlain by undocumented fill, topsoil, and San Diego Formation. The undocumented fill and topsoil is not suitable for direct support of proposed surface flatwork improvements without removal and recompaction. The San Diego Formation is considered suitable for support of planned improvements.

6.1.3 The site is located less than ½ mile of the nearest active fault, the Newport-Inglewood/Rose Canyon Fault Zone. Based on our background research, it is our opinion that active, potentially active, and inactive faults are not present at the site.

6.1.4 With the exception of possible strong seismic shaking, no significant geologic hazards were observed or are known to exist on the site that would adversely affect the site. No special seismic design considerations, other than those recommended herein, are required.

6.1.5 The potential for geologic hazards due to landslides, fault-related ground rupture, liquefaction, and lateral spread are considered to be very low.

6.1.6 We did not encounter groundwater in the exploratory trenches during this investigation. We expect any new excavations made for the project will be relatively shallow; therefore, groundwater is not expected to affect construction as currently proposed.

6.1.7 New foundations can be supported on conventional shallow foundations bearing on properly compacted fill soil or San Diego Formation.

6.1.8 Surface settlement monuments will not be required prior to or during site development.

6.2 Excavation and Soil Characteristics

6.2.1 The soil encountered in the field investigation is considered to be "expansive/non-expansive" (Expansion Index [EI] of greater than or less than 50) as defined by 2010 California Building Code (CBC) Section 1803.5.3. Table 6.2 presents soil classifications based on the expansion index. A majority of the soil encountered is planned to possess a "very low" to "low" expansion potential (expansion index of 50 or less).

TABLE 6.2
SOIL CLASSIFICATION BASED ON EXPANSION INDEX

Expansion Index (EI)	Soil Classification
0 – 20	Very Low
21 – 50	Low
51 – 90	Medium
91 – 130	High
Greater Than 130	Very High

6.2.2 Excavation of undocumented fill should be possible with light to moderate effort with conventional heavy-duty equipment. Excavation of the San Diego Formation is expected to require a very heavy effort to excavate. Refusal was encountered in trench T-6.

6.2.3 We performed laboratory tests on samples of the site soil to evaluate the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate content tests are presented in Appendix B and indicate that the on-site materials at the locations tested possess "negligible" sulfate exposure to concrete structures as defined by 2007 CBC Section 1904.3 and ACI 318. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Additionally, over time landscaping activities (i.e., addition of fertilizers and other soil nutrients) may affect the concentration.

6.2.4 Geocon Incorporated does not practice in the field of corrosion engineering. Therefore, further evaluation by a corrosion engineer may be required if improvements that could be susceptible to corrosion are planned.

6.3 Subdrains

6.3.1 With the exception of drains behind proposed retaining walls, subdrains are not required for this project.

6.4 Grading

6.4.1 All grading should be performed in accordance with the *Recommended Grading Specifications* contained in Appendix C. Where the recommendations of Appendix C conflict with this section of the report, the recommendations of this section take precedence.

6.4.2 Site preparation should begin with removal of deleterious material and vegetation. The depth of removal should be such that material exposed in cut areas or soil to be used for fill is relatively free of organic matter. Deleterious material generated during stripping and/or site demolition should be exported from the site.

6.4.3 In areas that will receive surface improvements (retaining walls and concrete hardscape), we recommended the undocumented fill be completely removed and recompacted. This will require excavations up to 13 feet or greater. We expect debris that will require exporting will be encountered in the fill. Removal and recompaction of undocumented fill to support planned park improvements will also require a portion of the slope along the northwest sides of the site to be reconstructed. The fill slope should be reconstructed to an inclination of 2:1 or flatter to comply with City of San Diego codes.

6.4.4 Grading adjacent to the retaining wall on the adjacent eastern property should be performed so as to not impact the wall and existing improvements behind the wall. We recommend remedial removals adjacent to the retaining wall extend no closer than 3 feet horizontally from the wall and down at a 1:1 inclination away from the wall. During replacement of fill, the 1:1 slope should be benched into as new fill is placed.

6.4.5 Provided the owner is willing to accept risk for possible future distress to surface improvements, partial removal and recompaction of undocumented fill can be performed to support planned improvements considering no buildings are planned and the park will support surface improvements and landscaping. The partial removal and recompaction should provide a minimum 5-foot compacted fill mat below planned improvements. However, to provide stable slope conditions, the outer 15 feet of the undocumented fill in the slope zone (15 feet measured horizontally from the face of the finish slope) should be removed and recompacted and the slope rebuilt to a 2:1 (horizontal:vertical) inclination.

Future distress, possibly requiring repair of surface improvements, should be expected where only a partial removal of undocumented fill occurs. Additionally, storm water infiltration is not recommended as this could cause settlement in the undocumented fill. Proper surface drainage is important to reduce potential settlement of undocumented fill.

6.4.6 Prior to placing fill, the upper 12 inches of soil should be scarified, moisture conditioned as necessary and recompacted. Soils derived from onsite excavations are suitable for reuse as fill if free from vegetation, debris and other deleterious material. Fill lifts should be no thicker than will allow for adequate bonding and compaction. Fill, backfill, and scarified ground surfaces, should be compacted to a dry density of at least 90 percent of maximum dry density near to slightly above optimum moisture content, as determined in accordance with ASTM Test Procedure D 1557. Fill or backfill with in-place density test results indicating moisture contents less than optimum will require additional moisture conditioning prior to placing fill.

6.4.7 Imported fill (if necessary) should consist of granular soil with a "very low" to "low" expansion potential (EI of 50 or less) that is free of deleterious material or stones larger than 3 inches and should be compacted as recommended above. Geocon Incorporated should be notified of the import soil source and should perform laboratory testing prior to its arrival at the site to evaluate its suitability as fill material.

6.5 Slopes

6.5.1 The existing slopes along the northwest side of the site have an inclination of approximately 1.5:1 to 2:1 (horizontal:vertical). The upper 5 to 15 feet of the slope is comprised of undocumented fill. To provide stable slope conditions, removal and recompaction of the undocumented fill should be performed and the fill portion of the slope constructed to a 2:1 (horizontal:vertical) slope condition. Based on Trench T-2, T-5 and T-6, we expect removals near the top of the slope to depths of approximately 4 to 15 feet. If the owner elects to do only a partial removal of undocumented fill across the park site, we recommend, as a minimum, undocumented fill within the outer 15 feet of the finish slope face (measured horizontally from the face of the finished slope back into the pad) be removed and recompacted and the slope rebuilt to a 2:1 (horizontal:vertical) or flatter inclination to provide stability. It is our opinion that a reconstructed 2:1 fill slope as recommended herein, will have a calculated factor of safety in excess of 1.5 (see Figures 6 and 7). With respect to the natural slope, it is our opinion that it has a factor of safety in excess of 1.5 in its current configuration (see Figure 8).

6.5.2 The outer 15 feet (or a distance equal to the height of the slope, whichever is less) of proposed fill slopes should be composed of properly compacted "granular" soil fill to reduce the potential for surficial sloughing. In general, soil with an Expansion Index of 50 or less at least 35 percent sand size particles should be acceptable as "granular" fill. Soil of questionable strength to satisfy surficial stability should be tested in the laboratory for acceptable drained shear strength. The use of cohesionless soil in the outer portion of fill slopes should be avoided. Proposed fill slopes should be overbuilt a horizontal distance of two feet and cut back to finished grade or compacted by backrolling with a loaded sheepsfoot roller at vertical intervals not to exceed 4 feet and should be track-walked at the completion of each slope such that the fill soil is uniformly compacted to a dry density of at least 90 percent of the laboratory maximum dry density near to slightly above optimum moisture content to the face of the finished sloped.

6.5.3 All slopes should be landscaped with drought-tolerant vegetation, having variable root depths and requiring minimal landscape irrigation. In addition, all slopes should be drained and properly maintained to reduce erosion.

6.5.4 Where improvements are planned near the top of a slope steeper than 3:1 (horizontal:vertical), special foundations and/or design considerations are recommended due to the tendency for lateral soil movement to occur.

- For fill slopes less than 20 feet high or cut slopes regardless of height, footings should be deepened such that the bottom outside edge of the footing is at least 7 feet horizontally from the face of the slope.
- When located next to a descending 3:1 (horizontal:vertical) fill slope or steeper, the foundations should be extended to a depth where the minimum horizontal distance is equal to H/3 (where H equals the vertical distance from the top of the fill slope to the base of the fill soil) with a minimum of 7 feet but need not exceed 40 feet. The horizontal distance is measured from the outer, deepest edge of the footing to the face of the slope.
- Although other improvements, which are relatively rigid or brittle, such as concrete flatwork or masonry walls, may experience some distress if located near the top of a slope, it is generally not economical to mitigate this potential. It may be possible, however, to incorporate design measures that would permit some lateral soil movement without causing extensive distress. Geocon Incorporated should be consulted for specific recommendations.

6.6 Seismic Design Criteria

6.6.1 We used the computer program *Seismic Hazard Curves and Uniform Hazard Response Spectra*, provided by the USGS. Table 6.6 summarizes site-specific design criteria obtained from the 2010 California Building Code (CBC; Based on the 2009 International Building Code [IBC]), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The short spectral response uses a period of 0.2 second. The improvements should be designed using a Site Class D using the criteria set forth in Section 1613 of the 2010 California Building Code.

TABLE 6.6
2010 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	IBC-06 Reference
Site Class	D	Table 1613.5.2
Spectral Response – Class B (short), S_S	1.572 g	Figure 1613.5(3)
Spectral Response – Class B (1 sec), S_1	0.612 g	Figure 1613.5(4)
Site Coefficient, F_A	1.000	Table 1613.5.3(1)
Site Coefficient, F_V	1.500	Table 1613.5.3(2)
Maximum Considered Earthquake Spectral Response Acceleration (short), S_{MS}	1.572 g	Section 1613.5.3 (Eqn 16-36)

Parameter	Value	IBC-06 Reference
Maximum Considered Earthquake Spectral Response Acceleration – (1 sec), S_{M1}	0.918 g	Section 1613.5.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.048 g	Section 1613.5.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.612 g	Section 1613.5.4 (Eqn 16-39)

6.6.2 Conformance to the criteria in Table 6.6 for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a maximum level earthquake occurs. The primary goal of seismic design is to protect life and not to avoid all damage, since such design may be economically prohibitive.

6.7 Concrete Flatwork

6.7.1 Exterior concrete flatwork not subject to vehicular traffic should be constructed in accordance with the recommendations herein. Slab panels should be a minimum of 4 inches thick and, when in excess of 8 feet square, should be reinforced with 6 x 6 - W2.9/W2.9 (6 x 6 - 6/6) welded wire mesh to reduce the potential for cracking. Where only a partial removal and recompaction of undocumented fill occurs, concrete flatwork should be reinforced with No. 4, steel, bars spaced 24 inches on center and positioned in the middle of the slab.

6.7.2 Concrete flatwork should be provided with crack control joints to reduce and/or control shrinkage cracking. Crack control spacing should be determined by the project structural engineer based on the slab thickness and intended usage. Criteria of the American Concrete Institute (ACI) should be taken into consideration when establishing crack control spacing. Subgrade soil for exterior slabs not subjected to vehicle loads should be compacted in accordance with criteria presented in the grading section prior to concrete placement. Subgrade soil should be properly compacted and the moisture content of subgrade soil should be checked prior to placing concrete.

6.7.3 Even with the incorporation of the recommendations within this report, exterior concrete flatwork has a potential of experiencing some movement due to swelling or settlement; therefore, welded wire mesh should overlap continuously in flatwork. Additionally, flatwork should be structurally connected to curbs, where possible.

6.7.4 Special subgrade presaturation is not deemed necessary prior to placing concrete; however, the exposed slab subgrade soil should be moisture conditioned, as necessary, to maintain a moist condition as would be expected in any such concrete placement.

6.7.5 The recommendations presented herein are intended to reduce the potential for cracking of slabs and foundations as a result of differential movement. However, even with the incorporation of the recommendations presented herein, foundations and slabs-on-grade will still crack. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by: limiting the slump of the concrete, the use of crack-control joints, proper concrete placement

and curing. Crack control joints should be spaced at intervals no greater than 12 feet. Literature provided by the Portland Concrete Association (PCA) and American Concrete Institute (ACI) present recommendations for proper concrete mix, construction, and curing practices, and should be incorporated into project construction.

6.8 Retaining Walls

6.8.1 We recommend retaining walls be founded on compacted fill or on native San Diego Formation. Retaining wall footings should not bear on undocumented fill. Where complete removal of undocumented fill is not performed beneath retaining walls, footings for the walls will need to be deepened through the fill to a minimum of 6 inches into the underlying San Diego Formation. As an alternative to deepening footings through the fill, the footing excavation to reach native soils can be backfill with 2-sack cement-slurry back to the footing elevation with the retaining wall footing bearing on the cement-slurry.

6.8.2 Retaining walls that are allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall) at the top of the wall at the top and having a level backfill surface should be designed for an active soil pressure equivalent to the pressure exerted by a fluid density of 35 pounds per cubic foot (pcf). Where the backfill will be inclined at 2:1 (horizontal:vertical), an active soil pressure of 50 pcf is recommended. These earth pressures assume backfill soil will have an expansion index of 50 or less.

6.8.3 Where walls are restrained from movement at the top, an additional uniform pressure of 7H psf should be added to the active soil pressure. For retaining walls subject to vehicular loads within a horizontal distance equal to two-thirds the wall height, a surcharge equivalent to 2 feet of fill soil should be added.

6.8.4 The structural engineer should determine the seismic design category for the project and if retaining walls need to incorporate seismic lateral loads. A seismic load of 15H should be used for design. The seismic load is dependent on the retained height where H is the height of the wall, in feet, and the calculated loads result in pounds per square foot (psf) exerted at the base of the wall and zero at top of the wall. We used a horizontal peak ground acceleration of 0.42g calculated using 2010 CBC (S_{DS}/2.5) and applying a pseudo-static coefficient of 0.33.

6.8.5 Retaining and site walls founded on properly compacted fill should have a minimum depth and width of 12 inches below finish pad subgrade and may be designed for an allowable soil bearing pressure of 2,000 psf.

6.8.6 Retaining walls should be provided with a drainage system adequate to prevent the buildup of hydrostatic forces and should be waterproofed as required by the project architect. A typical retaining wall drainage detail is provided on Figure 9. The use of drainage openings through the base of the wall (weep holes, etc.) is not recommended where the seepage could be a nuisance or otherwise adversely impact the property adjacent to the base of the wall. The above recommendations assume a properly compacted granular (Expansion Index less than 50) backfill material with no hydrostatic forces or imposed surcharge load. If conditions different than those described are expected, or if specific drainage details are desired, Geocon Incorporated should be contacted for additional recommendations.

6.9 Lateral Loading

6.9.1 To resist lateral loads, a passive pressure exerted by an equivalent fluid density of 300 pounds per cubic foot (pcf) should be used for the design of footings or shear keys placed against properly compacted fill or native paralic deposits. The allowable passive pressure assumes a horizontal surface extending at least 5 feet, or three times the surface generating the passive pressure, whichever is greater. The upper 12 inches of material in areas not protected by floor slabs or pavement should not be included in design for passive resistance. Where footings are placed against undocumented fill, we recommend the undocumented fill not be relied upon for passive resistance.

6.9.2 If friction is to be used to resist lateral loads, an allowable coefficient of friction between soil and concrete of 0.35 should be used for design.

6.10 Site Drainage and Moisture Protection

6.10.1 Adequate site drainage is critical to reduce the potential for differential soil movement, erosion, and subsurface seepage. Under no circumstances should water be allowed to pond adjacent to footings. The site should be graded and maintained such that surface drainage is directed away from structures and the top of slopes into swales or other controlled drainage devices.

6.10.2 Because of the presence of undocumented fill and potential settlement and related distress, we do not recommend infiltration of storm water runoff at the site. Proper drainage should be maintained across the site and water directed to outlet structures.

6.10.3 Underground utilities should be leak free. Utility and irrigation lines should be checked periodically for leaks, and detected leaks should be repaired promptly. Detrimental soil movement could occur if water is allowed to infiltrate the soil for prolonged periods of time.

6.10.4 Landscaping planters adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Area drains to collect excess irrigation water and transmit it to drainage structures or impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, we recommend construction of a cutoff wall along the edge of the pavement that extends at least 6 inches below the bottom of the base material.

6.11 Grading and Foundation Plan Review

6.11.1 Geocon Incorporated should review the grading and foundation plans prior to final design submittal to evaluate whether additional analyses and/or recommendations are required.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical

engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

2. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Incorporated should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Incorporated.

3. This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

4. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

APPENDIX A

FIELD INVESTIGATION

Fieldwork for our investigation included a site visit and subsurface exploration. The locations of the exploratory trenches are shown on the Geologic Map, Figure 2 (map pocket). The trenches were located in the field based on visual reference points. Therefore, actual trench locations may deviate slightly.

We performed the field investigation on August 30, 2011, which consisted of excavating 6 exploratory trenches using a John Deere 310 rubber-tire backhoe. The exploratory trenches were excavated to a maximum depth of approximately 18.5 feet below existing grade to check the depth of undocumented fill and excavation characteristics of the underlying formational soil. Trench logs are presented on Figures A-1 through A-6.

The soil encountered in the borings were visually examined, classified, and logged in general accordance with American Society for Testing and Materials (ASTM) practice for Description and Identification of Soils (Visual-Manual Procedure D 2488). The logs depict the soil and geologic conditions observed and the depth at which samples were obtained.

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. Selected samples were tested to evaluate maximum dry density and moisture content, expansion potential, direct shear, water-soluble sulfate content, and gradation characteristics. Results of the laboratory tests are summarized in Tables B-I through B-IV and in Figure B-1.

TABLE B-I
SUMMARY OF LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557

Sample No.	Description	Maximum Dry Density (pcf)	Optimum Moisture Content (% dry wt.)
T6-1	Dark brown, Silty, fine to medium SAND; some gravel	133.5	8.1

TABLE B-II
SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	Expansion Classification
	Before Test	After Test			
T1-1	9.3	16.1	112.7	9	Very Low

TABLE B-III
SUMMARY OF LABORATORY DIRECT SHEAR TEST RESULTS
ASTM D 3080

Sample No.	Dry Density (pcf)	Moisture Content (%)		Unit Cohesion (psf)	Angle of Shear Resistance (degrees)
		Initial	Final		
*T5-1	120.2	7.6	12.8	620	33

*Sample was remolded to a dry density of about 90 percent of the laboratory maximum dry density near optimum moisture content prior to performing laboratory testing.

TABLE B-IV
SUMMARY OF LABORATORY WATER-SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST 417

Sample No.	Water-Soluble Sulfate (% SO_4)	Sulfate Exposure
T1-1	0.001	Negligible

APPENDIX C

RECOMMENDED GRADING SPECIFICATIONS

FOR

WEST MAPLE CANYON MINI PARK

RECOMMENDED GRADING SPECIFICATIONS

LIST OF REFERENCES

1. Boore, D. M. and G. M Atkinson (2006), *Boore-Atkinson NGA Ground Motion Relations for the Geometric Mean Horizontal Component of Peak and Spectral Ground Motion Parameters*, Report Number PEER 2007/01, May 2007.

2. California Geological Survey, *Seismic Shaking Hazards in California,* Based on the USGS/CGS *Probabilistic* Seismic Hazards Assessment (PSHA) Model, 2002 (revised April 2003). 10% probability of being exceeded in 50 years.

   http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html

3. Campbell, K. W. and Y. Bozorgnia, *NGA Ground Motion Model for the Geometric Mean Horizontal Component of PGA, PGV, PGD and 5% Damped Linear Elastic Response Spectra for Periods Ranging from 0.01 to 10 s*, Preprint of version submitted for publication in the NGA Special Volume of Earthquake Spectra, Volume 24, Issue 1, pages 139-171, February 2008.

4. Chiou, Brian S-J and Young's, Robert R., *A NGA Model for the Average Horizontal Component of Peak Ground Motion and Response Spectra*, preprint for article to be published in NGA Special Edition of Earthquake Spectra, Spring 2008.

5. *City of San Diego Seismic Safety Study, Geologic Hazards and Faults*, dated April 3, 2008.

6. Kennedy, M. P. and S. S. Tan, 2005, *Geologic Map of the San Diego 30'x60' Quadrangle, California*, USGS Regional Map Series Map No. 3, Scale 1:100,000.

7. Legg, M. R., J. C. Borrero, and C. E. Synolakis (2002), *Evaluation of Tsunami Risk to Southern California Coastal Cities*, 2002 NEHRP Professional Fellowship Report, dated January.

8. Risk Engineering, *EZ-FRISK (Version 7.62)*, 2011.

9. Unpublished reports, aerial photographs, and maps on file with Geocon Incorporated.

10. USGS computer program, *Seismic Hazard Curves and Uniform Hazard Response Spectra (version 5.1.0,), February 10, 2011*

11. 1953 Aerial Photographs, AXN-3M-195 and 196.

RECOMMENDED GRADING SPECIFICATIONS

5.1 GENERAL

5.2 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon Incorporated. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

5.3 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

5.4 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, adverse weather, result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2.0 DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the

development of the project for which these Recommended Grading Specifications are intended to apply.

3.0 MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1. **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2. **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3. **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9 and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

4.0 CLEARING AND PREPARING AREAS TO BE FILLED

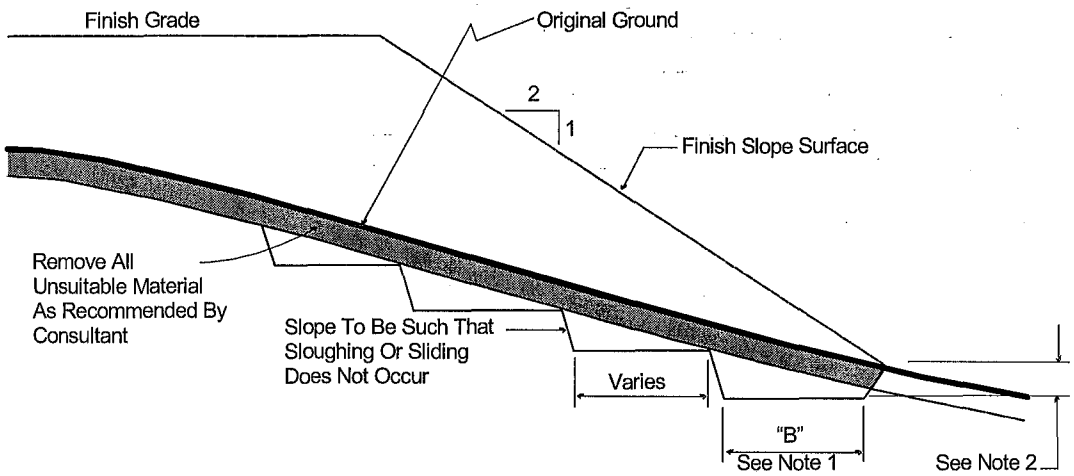
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Any asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES:

(1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5.0 COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6.0 PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557-09.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the

compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557-09. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196-09, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be

determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

8.0 OBSERVATION AND TESTING

8.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

8.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

8.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

8.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

8.5 The Consultant should observe the placement of subdrains, to verify that the drainage devices have been placed and constructed in substantial conformance with project specifications.

8.6 Testing procedures shall conform to the following Standards as appropriate:

7.6.1 Soil and Soil-Rock Fills:

7.6.1.1 Field Density Test, ASTM D 1556-07, Density of Soil In-Place By the Sand-Cone Method.

7.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938-08A, Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).

7.6.1.3 Laboratory Compaction Test, ASTM D 1557-09, Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop.

7.6.1.4. Expansion Index Test, ASTM D 4829-08A, Expansion Index Test.

7.6.2 Rock Fills

7.6.2.1 Field Plate Bearing Test, ASTM D 1196-09 (Reapproved 1997) Standard Method for Nonreparative Static Plate Load Tests of Soils and Flexible Pavement Components, For Use in Evaluation and Design of Airport and Highway Pavements.

8.0 PROTECTION OF WORK

8.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

8.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

9.0 CERTIFICATIONS AND FINAL REPORTS

9.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

9.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

Project No. G1395-42-01
March 12, 2013

Estrada Land Planning
755 Broadway Circle, Suite 300
San Diego, California 92101

Attention: Mr. David Preciado

Subject: EAST RETAINING WALL FOOTING
WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

Dear Mr. Preciado:

In accordance with your request, we have performed hand dug test pits adjacent to the retaining wall along the east side of the property to assess the depth of the footing. Figure 1 shows the approximate locations of the test pits. At each location, the base of the wall footing was exposed and the depth to the bottom of the footing from existing grade was measured (3.5 and 5 feet). Attached are photos taken at each test pit location. Based on our observations, the wall footing does not extend in front of the wall at the two test pit locations.

Should you have questions regarding this letter, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

Rodney C. Mikesell
GE 2533

REGISTERED PROFESSIONAL ENGINEER
RODNEY C. MIKESELL
No.2533
GEOTECHNICAL
STATE OF CALIFORNIA

RCM:dmc

(2) Addressee

PHOTO 1: Bottom of Footing at Test Pit P-1.

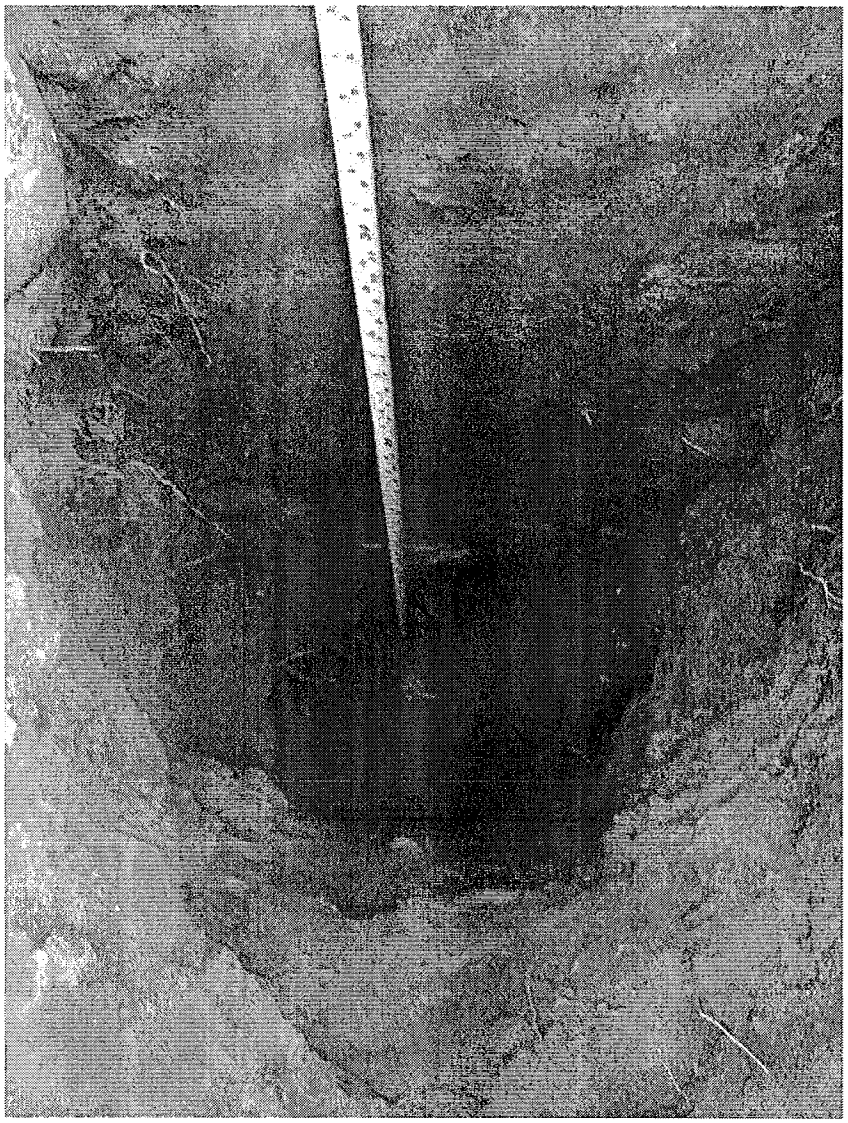
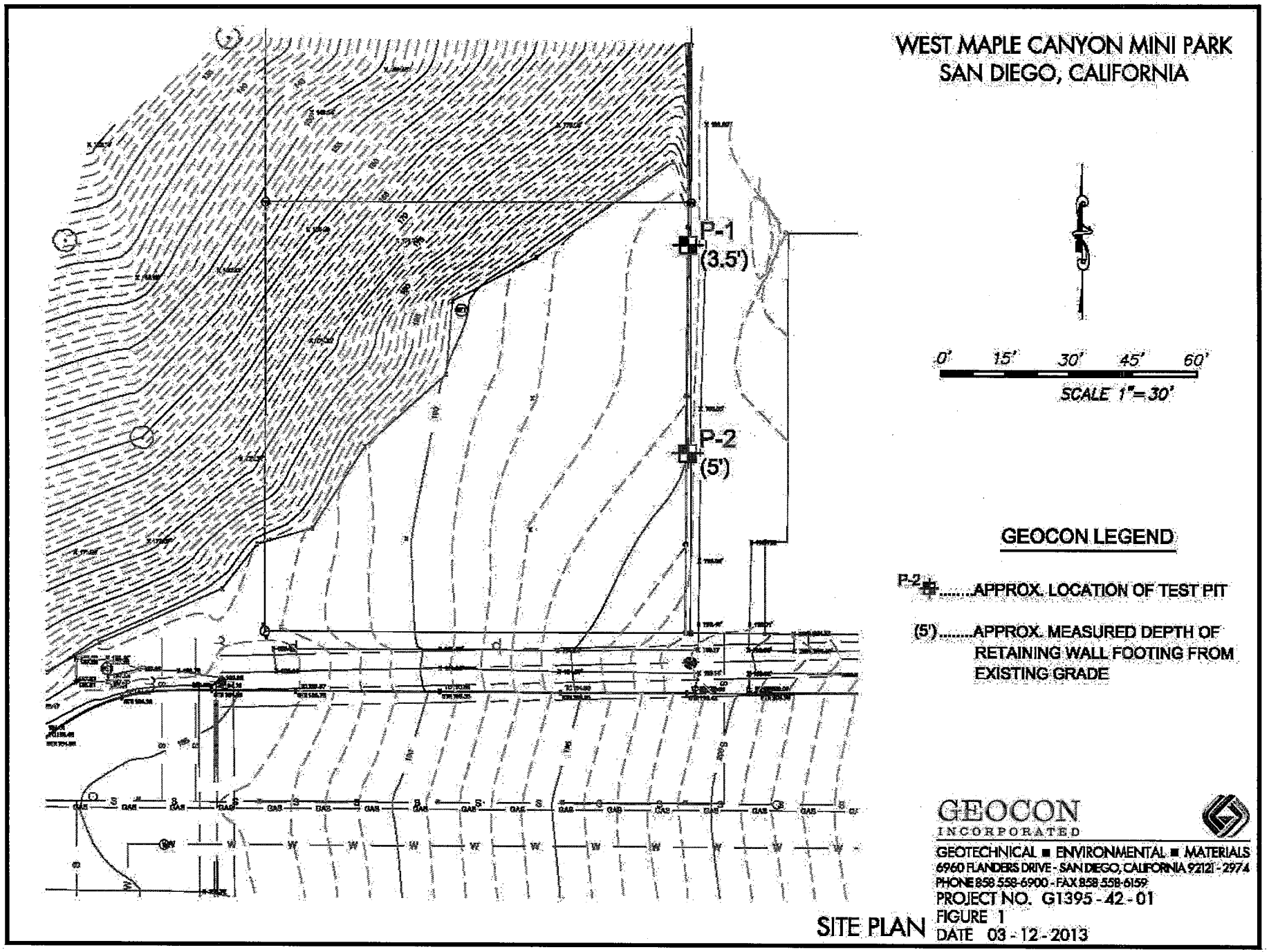


PHOTO 2: Bottom of Footing at Test Pit P-2.



GEOTECHNICAL INVESTIGATION

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

GEOCON
INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

ESTRADA LAND PLANNING, INC
SAN DIEGO, CALIFORNIA

OCTOBER 25, 2011
PROJECT NO. G1395-42-01

Project No. G1395-42-01
October 25, 2011

Estrada Land Planning
755 Broadway Circle, Suite 300
San Diego, California 92101

Attention: Mr. David Preciado

Subject: GEOTECHNICAL INVESTIGATION
WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

Dear Mr. Preciado:

In accordance with your request and authorization of our proposal (LG-11207 dated July 19, 2011), we herein submit the results of our geotechnical investigation for the subject site. The accompanying report presents the results of our study and conclusions and recommendations pertaining to geotechnical aspects of the project. The site is considered suitable for construction of the proposed park development provided the recommendations of this report are followed.

Should you have questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

Noel G. Borja
Senior Staff Engineer

Rodney C. Mikesell
GE 2533

REGISTERED PROFESSIONAL ENGINEER
RODNEY C. MIKESELL
No. 2533
Exp. 6/30/12
GEOTECHNICAL
STATE OF CALIFORNIA

John Hoobs
CEG 1524

PROFESSIONAL GEOLOGIST
JOHN HOOBS
No. 1524
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

NGB:RCM:JH:dmc

(6/del) Addressee

TABLE OF CONTENTS

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for a proposed park at the subject site. The purpose of this geotechnical investigation is to evaluate surface and subsurface soil conditions, general site geology, and to identify geotechnical constraints that may impact development of the property.

The scope of this investigation included a review of readily available published and unpublished geologic literature (see List of References), excavating 6-exploratory trenches, soil sampling, laboratory testing, engineering analyses, and preparation of this geotechnical investigation report.

The exploratory trench logs and details of the field investigation are presented in Appendix A. We performed laboratory tests on selected soil samples obtained during the field investigation to evaluate pertinent physical and chemical properties for engineering analyses and to assist in providing geotechnical engineering recommendations for project design. Details of the laboratory tests and a summary of the test results are presented in Appendix B and on the trench logs in Appendix A.

2. SITE AND PROJECT DESCRIPTION

The West Maple Canyon Mini Park site is located northeast of the intersection of West Maple Street and Albatross Street in the Hillcrest neighborhood of San Diego, California (see Vicinity Map, Figure 1). The site consists of an approximate 9,000 square foot, triangular shaped vacant lot. The site is bound on the north and west by an open space canyon, on the east by residential homes, and on the south by West Maple Street. A monument (Waldo-Waterman) exists at the southwest corner of the property. On the east side of the site, a retaining wall supporting improvements for the adjacent property exists. Cracking and distress was evident on the face of the retaining wall. An approximately 60-foot high natural slope with inclinations ranging from 1.3:1 (horizontal:vertical) to 2:1 exists on the northwest side of the property. The upper 5 to 15 feet of this slope is comprised of fill. The site is gently sloping from southeast to southwest with elevations ranging from approximately 199 feet above Mean Sea Level (MSL) to approximately 184 feet MSL.

Based on our review of the site plan and discussions with Estrada Land Planning personnel, we understand proposed park development will consist of the construction of concrete walkways, stone paving, impervious paving, stairways, retaining walls, and landscaping. A raised circular seatwall will be constructed in the northeast portion of the site. The planned retaining walls will be constructed near the Waldo Waterman Monument to mitigate soil erosion below the concrete base and in front of the monument to accommodate a proposed walkway. Based on the proposed development, exploratory

trenches, and laboratory testing, we expect grading will consist of maximum cuts and fills of less than 5 feet.

The locations and descriptions above are based on our observations and understanding of proposed development. If development plans differ significantly from those described herein, Geocon Incorporated should be contacted for review and possible revisions to this report.

3. SOIL AND GEOLOGY

The site is underlain by undocumented fill, topsoil, and the San Diego Formation. A description of each of these units is provided below. A geologic map is provided on Figure 2 and geologic cross-sections on Figures 3 through 5 depicting the subsurface geologic conditions.

3.1 Undocumented Fill

We encountered undocumented fill throughout the property. The fill was observed to be a maximum thickness of approximately 10 feet to 13 feet, however it may be thicker (see trench T-3). In the area of the proposed retaining wall at the base of the Waldo Waterman monument, the undocumented fill was approximately 4 feet thick. The undocumented fill consists of loose and soft, dry to moist, silty to clayey sand and sandy clay with gravel and cobbles. Varying amounts of debris consisting of concrete, asphalt concrete, metal, and brick was also observed in the exploratory trenches. We suspect the fill was generated during construction of the adjacent residential structures and was placed to level the site. The fill is considered unsuitable for support of structural improvements and will require remedial grading.

3.2 Topsoil

We observed topsoil underlying the undocumented fill between depths of 8 feet to 10.5 feet in trench T-1. The topsoil consists of loose, dry, dark brown, silty sand with gravel. Topsoil is also considered unsuitable for direct support of structural improvements.

3.3 San Diego Formation (Tsd)

We encountered Pliocene-age San Diego Formation underlying the compacted fill and topsoil. We encountered excavation refusal in trench T-6 at a depth of approximately 4.5 feet below existing grade. This unit consists of a dense to very dense, silty sandstone with interbeds of conglomerate. The San Diego Formation is considered suitable for support of structural fill and settlement-sensitive structures.

4. GROUNDWATER

We did not observe groundwater within the trenches performed during our field investigation. We do not expect groundwater to adversely impact proposed project development; however, it is not uncommon for groundwater or seepage conditions to develop where none previously existed. Groundwater elevations are dependent on seasonal precipitation, irrigation; land use, among other factors, and vary as a result. Proper surface drainage will be important to future performance of the project.

5. GEOLOGIC HAZARDS

5.1 Geologic Hazard Category

Review of the City of San Diego *Seismic Safety Study, Geologic Hazards and Faults, April 3, 2008 Edition, Sheet No. 17,* indicates the site is situated in Hazard Category 52: *Other level area, gently sloping to steep terrain, favorable geologic structure, Low risk.*

5.2 Faulting and Seismicity

The California Geological Survey (CGS) defines an active fault as a fault showing evidence for activity within the last 11,000 years. The site is not traversed by any active, potentially active, or inactive faults. The site is not located within a State of California Earthquake Fault Zone.

According to the computer program *EZ-FRISK* (Version 7.62), six known active faults are located within a search radius of 50 miles from the property. The nearest known active fault is the Newport-Inglewood/Rose Canyon Fault, located less than ½ mile from of the site. The Newport-Inglewood/Rose Canyon Fault is the dominant source of potential ground motion. Earthquakes that might occur on the Newport-Inglewood/Rose Canyon Fault Zone or other faults within the southern California and northern Baja California area are potential generators of significant ground motion at the site. The estimated deterministic maximum earthquake magnitude and peak ground acceleration for the Newport-Inglewood are 7.5 and 0.64 g, respectively. Table 5.2.1 lists the estimated maximum earthquake magnitude and peak ground acceleration for the most dominant faults in relationship to the site location. We calculated peak ground acceleration (PGA) using Boore-Atkinson (2008) NGA USGS 2008, Campbell-Bozorgnia (2008) NGA USGS 2008, and Chiou-Youngs (2008) NGA acceleration-attenuation relationships.

TABLE 5.2.1
DETERMINISTIC SPECTRA SITE PARAMETERS

Fault Name	Distance from Site (miles)	Maximum Earthquake Magnitude (Mw)	Peak Ground Acceleration		
			Boore-Atkinson 2008 (g)	Campbell-Bozorgnia 2008 (g)	Chiou-Youngs 2008 (g)
Newport-Inglewood	0.4	7.5	0.56	0.48	0.64
Rose Canyon	0.4	6.9	0.54	0.48	0.61
Coronado Bank	13	7.4	0.20	0.17	0.20
Palos Verdes Connected	13	7.7	0.22	0.18	0.23
Elsinore	41	7.85	0.11	0.08	0.09
Earthquake Valley	46	6.8	0.06	0.05	0.04

We used the computer program *EZ-FRISK* to perform a probabilistic seismic hazard analysis. The computer program *EZ-FRISK* operates under the assumption that the occurrence rate of earthquakes on each mapped Quaternary fault is proportional to the fault's slip rate. The program accounts for fault rupture length as a function of earthquake magnitude, and site acceleration estimates are made using the earthquake magnitude and distance from the site to the rupture zone. The program also accounts for uncertainty in each of following: (1) earthquake magnitude, (2) rupture length for a given magnitude, (3) location of the rupture zone, (4) maximum possible magnitude of a given earthquake, and (5) acceleration at the site from a given earthquake along each fault. By calculating the expected accelerations from considered earthquake sources, the program calculates the total average annual expected number of occurrences of site acceleration greater than a specified value. We utilized acceleration-attenuation relationships suggested by Boore-Atkinson (2008) NGA USGS 2008, Campbell-Bozorgnia (2008) NGA USGS 2008, and Chiou-Youngs (2008) in the analysis. Table 5.2.2 presents the site-specific probabilistic seismic hazard parameters including acceleration-attenuation relationships and the probability of exceedence.

TABLE 5.2.2
PROBABILISTIC SEISMIC HAZARD PARAMETERS

Probability of Exceedence	Peak Ground Acceleration		
	Boore-Atkinson, 2007 (g)	Campbell-Bozorgnia, 2008 (g)	Chiou-Youngs, 2008 (g)
2% in a 50 Year Period	0.63	0.57	0.72
5% in a 50 Year Period	0.36	0.36	0.41
10% in a 50 Year Period	0.22	0.22	0.24

The California Geologic Survey (CGS) has a program that calculates the ground motion for a 10 percent of probability of exceedence in 50 years based on an average of several attenuation relationships. Table 5.2.3 presents the calculated results from the Probabilistic Seismic Hazards Mapping Ground Motion Page from the CGS website.

TABLE 5.2.3
PROBABILISTIC SITE PARAMETERS FOR SELECTED FAULTS
CALIFORNIA GEOLOGIC SURVEY

Calculated Acceleration (g) Firm Rock	Calculated Acceleration (g) Soft Rock	Calculated Acceleration (g) Alluvium
0.28	0.30	0.33

While listing peak accelerations is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including the frequency and duration of motion and the soil conditions underlying the site. Seismic design of the structures should be evaluated in accordance with the California Building Code (CBC) guidelines currently adopted by the City of San Diego.

5.3 Soil Liquefaction

Due to the lack of near surface groundwater, it is our opinion the occurrence for soil liquefaction is considered to be very low.

5.4 Landslides

It is our opinion, based on review of aerial photos and published geologic literature, that landslides are not present at the property or at a location that could impact the subject site.

5.5 Tsunamis and Seiches

The site is approximately 5 miles from the Pacific Ocean and ¾-mile from the San Diego Bay at an elevation near 185 feet MSL. The site is also not located in the vicinity of or downstream of any large body of water. Therefore, the potential for tsunamis or seiches affecting the site is very low.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 General

6.1.1 From a geotechnical engineering standpoint, it is our opinion that the site is suitable for construction of the proposed park provided the recommendations presented herein are implemented in design and construction of the project.

6.1.2 The site is underlain by undocumented fill, topsoil, and San Diego Formation. The undocumented fill and topsoil is not suitable for direct support of proposed surface flatwork improvements without removal and recompaction. The San Diego Formation is considered suitable for support of planned improvements.

6.1.3 The site is located less than ½ mile of the nearest active fault, the Newport-Inglewood/Rose Canyon Fault Zone. Based on our background research, it is our opinion that active, potentially active, and inactive faults are not present at the site.

6.1.4 With the exception of possible strong seismic shaking, no significant geologic hazards were observed or are known to exist on the site that would adversely affect the site. No special seismic design considerations, other than those recommended herein, are required.

6.1.5 The potential for geologic hazards due to landslides, fault-related ground rupture, liquefaction, and lateral spread are considered to be very low.

6.1.6 We did not encounter groundwater in the exploratory trenches during this investigation. We expect any new excavations made for the project will be relatively shallow; therefore, groundwater is not expected to affect construction as currently proposed.

6.1.7 New foundations can be supported on conventional shallow foundations bearing on properly compacted fill soil or San Diego Formation.

6.1.8 Surface settlement monuments will not be required prior to or during site development.

6.2 Excavation and Soil Characteristics

6.2.1 The soil encountered in the field investigation is considered to be "expansive/non-expansive" (Expansion Index [EI] of greater than or less than 50) as defined by 2010 California Building Code (CBC) Section 1803.5.3. Table 6.2 presents soil classifications based on the expansion index. A majority of the soil encountered is planned to possess a "very low" to "low" expansion potential (expansion index of 50 or less).

TABLE 6.2
SOIL CLASSIFICATION BASED ON EXPANSION INDEX

Expansion Index (EI)	Soil Classification
0 – 20	Very Low
21 – 50	Low
51 – 90	Medium
91 – 130	High
Greater Than 130	Very High

6.2.2 Excavation of undocumented fill should be possible with light to moderate effort with conventional heavy-duty equipment. Excavation of the San Diego Formation is expected to require a very heavy effort to excavate. Refusal was encountered in trench T-6.

6.2.3 We performed laboratory tests on samples of the site soil to evaluate the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate content tests are presented in Appendix B and indicate that the on-site materials at the locations tested possess "negligible" sulfate exposure to concrete structures as defined by 2007 CBC Section 1904.3 and ACI 318. The presence of water-soluble sulfates is not a visually discernible characteristic; therefore, other soil samples from the site could yield different concentrations. Additionally, over time landscaping activities (i.e., addition of fertilizers and other soil nutrients) may affect the concentration.

6.2.4 Geocon Incorporated does not practice in the field of corrosion engineering. Therefore, further evaluation by a corrosion engineer may be required if improvements that could be susceptible to corrosion are planned.

6.3 Subdrains

6.3.1 With the exception of drains behind proposed retaining walls, subdrains are not required for this project.

6.4 Grading

6.4.1 All grading should be performed in accordance with the *Recommended Grading Specifications* contained in Appendix C. **Where the recommendations of Appendix C conflict with this section of the report, the recommendations of this section take precedence.**

6.4.2 Site preparation should begin with removal of deleterious material and vegetation. The depth of removal should be such that material exposed in cut areas or soil to be used for fill is relatively free of organic matter. Deleterious material generated during stripping and/or site demolition should be exported from the site.

6.4.3 In areas that will receive surface improvements (retaining walls and concrete hardscape), we recommended the undocumented fill be completely removed and recompacted. This will require excavations up to 13 feet or greater. We expect debris that will require exporting will be encountered in the fill. Removal and recompaction of undocumented fill to support planned park improvements will also require a portion of the slope along the northwest sides of the site to be reconstructed. The fill slope should be reconstructed to an inclination of 2:1 or flatter to comply with City of San Diego codes.

6.4.4 Grading adjacent to the retaining wall on the adjacent eastern property should be performed so as to not impact the wall and existing improvements behind the wall. We recommend remedial removals adjacent to the retaining wall extend no closer than 3 feet horizontally from the wall and down at a 1:1 inclination away from the wall. During replacement of fill, the 1:1 slope should be benched into as new fill is placed.

6.4.5 Provided the owner is willing to accept risk for possible future distress to surface improvements, partial removal and recompaction of undocumented fill can be performed to support planned improvements considering no buildings are planned and the park will support surface improvements and landscaping. The partial removal and recompaction should provide a minimum 5-foot compacted fill mat below planned improvements. However, to provide stable slope conditions, the outer 15 feet of the undocumented fill in the slope zone (15 feet measured horizontally from the face of the finish slope) should be removed and recompacted and the slope rebuilt to a 2:1 (horizontal:vertical) inclination. Future distress, possibly requiring repair of surface improvements, should be expected where only a partial removal of undocumented fill occurs. Additionally, storm water infiltration is not recommended as this could cause settlement in the undocumented fill. Proper surface drainage is important to reduce potential settlement of undocumented fill.

6.4.6 Prior to placing fill, the upper 12 inches of soil should be scarified, moisture conditioned as necessary and recompacted. Soils derived from onsite excavations are suitable for reuse as fill if free from vegetation, debris and other deleterious material. Fill lifts should be no thicker than will allow for adequate bonding and compaction. Fill, backfill, and scarified ground surfaces, should be compacted to a dry density of at least 90 percent of maximum dry density near to slightly above optimum moisture content, as determined in accordance with ASTM Test Procedure D 1557. Fill or backfill with in-place density test results

indicating moisture contents less than optimum will require additional moisture conditioning prior to placing fill.

6.4.7 Imported fill (if necessary) should consist of granular soil with a "very low" to "low" expansion potential (EI of 50 or less) that is free of deleterious material or stones larger than 3 inches and should be compacted as recommended above. Geocon Incorporated should be notified of the import soil source and should perform laboratory testing prior to its arrival at the site to evaluate its suitability as fill material.

6.5 Slopes

6.5.1 The existing slopes along the northwest side of the site have an inclination of approximately 1.5:1 to 2:1 (horizontal:vertical). The upper 5 to 15 feet of the slope is comprised of undocumented fill. To provide stable slope conditions, removal and recompaction of the undocumented fill should be performed and the fill portion of the slope constructed to a 2:1 (horizontal:vertical) slope condition. Based on Trench T-2, T-5 and T-6, we expect removals near the top of the slope to depths of approximately 4 to 15 feet. If the owner elects to do only a partial removal of undocumented fill across the park site, we recommend, as a minimum, undocumented fill within the outer 15 feet of the finish slope face (measured horizontally from the face of the finished slope back into the pad) be removed and recompacted and the slope rebuilt to a 2:1 (horizontal:vertical) or flatter inclination to provide stability. It is our opinion that a reconstructed 2:1 fill slope as recommended herein, will have a calculated factor of safety in excess of 1.5 (see Figures 6 and 7). With respect to the natural slope, it is our opinion that it has a factor of safety in excess of 1.5 in its current configuration (see Figure 8).

6.5.2 The outer 15 feet (or a distance equal to the height of the slope, whichever is less) of proposed fill slopes should be composed of properly compacted "granular" soil fill to reduce the potential for surficial sloughing. In general, soil with an Expansion Index of 50 or less at least 35 percent sand size particles should be acceptable as "granular" fill. Soil of questionable strength to satisfy surficial stability should be tested in the laboratory for acceptable drained shear strength. The use of cohesionless soil in the outer portion of fill slopes should be avoided. Proposed fill slopes should be overbuilt a horizontal distance of two feet and cut back to finished grade or compacted by backrolling with a loaded sheepsfoot roller at vertical intervals not to exceed 4 feet and should be track-walked at the completion of each slope such that the fill soil is uniformly compacted to a dry density of at least 90 percent of the laboratory maximum dry density near to slightly above optimum moisture content to the face of the finished sloped.

6.5.3 All slopes should be landscaped with drought-tolerant vegetation, having variable root depths and requiring minimal landscape irrigation. In addition, all slopes should be drained and properly maintained to reduce erosion.

6.5.4 Where improvements are planned near the top of a slope steeper than 3:1 (horizontal:vertical), special foundations and/or design considerations are recommended due to the tendency for lateral soil movement to occur.

- For fill slopes less than 20 feet high or cut slopes regardless of height, footings should be deepened such that the bottom outside edge of the footing is at least 7 feet horizontally from the face of the slope.
- When located next to a descending 3:1 (horizontal:vertical) fill slope or steeper, the foundations should be extended to a depth where the minimum horizontal distance is equal to H/3 (where H equals the vertical distance from the top of the fill slope to the base of the fill soil) with a minimum of 7 feet but need not exceed 40 feet. The horizontal distance is measured from the outer, deepest edge of the footing to the face of the slope.
- Although other improvements, which are relatively rigid or brittle, such as concrete flatwork or masonry walls, may experience some distress if located near the top of a slope, it is generally not economical to mitigate this potential. It may be possible, however, to incorporate design measures that would permit some lateral soil movement without causing extensive distress. Geocon Incorporated should be consulted for specific recommendations.

6.6 Seismic Design Criteria

6.6.1 We used the computer program *Seismic Hazard Curves and Uniform Hazard Response Spectra*, provided by the USGS. Table 6.6 summarizes site-specific design criteria obtained from the 2010 California Building Code (CBC; Based on the 2009 International Building Code [IBC]), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The short spectral response uses a period of 0.2 second. The improvements should be designed using a Site Class D using the criteria set forth in Section 1613 of the 2010 California Building Code.

TABLE 6.6
2010 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	IBC-06 Reference
Site Class	D	Table 1613.5.2
Spectral Response – Class B (short), S_S	1.572 g	Figure 1613.5(3)
Spectral Response – Class B (1 sec), S_1	0.612 g	Figure 1613.5(4)
Site Coefficient, F_A	1.000	Table 1613.5.3(1)
Site Coefficient, F_V	1.500	Table 1613.5.3(2)
Maximum Considered Earthquake Spectral Response Acceleration (short), S_{MS}	1.572 g	Section 1613.5.3 (Eqn 16-36)
Maximum Considered Earthquake Spectral Response Acceleration – (1 sec), S_{M1}	0.918 g	Section 1613.5.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.048 g	Section 1613.5.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.612 g	Section 1613.5.4 (Eqn 16-39)

6.6.2 Conformance to the criteria in Table 6.6 for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a maximum level earthquake occurs. The primary goal of seismic design is to protect life and not to avoid all damage, since such design may be economically prohibitive.

6.7 Concrete Flatwork

6.7.1 Exterior concrete flatwork not subject to vehicular traffic should be constructed in accordance with the recommendations herein. Slab panels should be a minimum of 4 inches thick and, when in excess of 8 feet square, should be reinforced with 6 x 6 - W2.9/W2.9 (6 x 6 - 6/6) welded wire mesh to reduce the potential for cracking. Where only a partial removal and recompaction of undocumented fill occurs, concrete flatwork should be reinforced with No. 4, steel, bars spaced 24 inches on center and positioned in the middle of the slab.

6.7.2 Concrete flatwork should be provided with crack control joints to reduce and/or control shrinkage cracking. Crack control spacing should be determined by the project structural engineer based on the slab thickness and intended usage. Criteria of the American Concrete Institute (ACI) should be taken into consideration when establishing crack control spacing. Subgrade soil for exterior slabs not subjected to vehicle loads should be compacted in accordance with criteria presented in the grading section prior to concrete placement. Subgrade soil should be properly compacted and the moisture content of subgrade soil should be checked prior to placing concrete.

6.7.3 Even with the incorporation of the recommendations within this report, exterior concrete flatwork has a potential of experiencing some movement due to swelling or settlement; therefore, welded wire mesh should overlap continuously in flatwork. Additionally, flatwork should be structurally connected to curbs, where possible.

6.7.4 Special subgrade presaturation is not deemed necessary prior to placing concrete; however, the exposed slab subgrade soil should be moisture conditioned, as necessary, to maintain a moist condition as would be expected in any such concrete placement.

6.7.5 The recommendations presented herein are intended to reduce the potential for cracking of slabs and foundations as a result of differential movement. However, even with the incorporation of the recommendations presented herein, foundations and slabs-on-grade will still crack. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics. Their occurrence may be reduced and/or controlled by: limiting the slump of the concrete, the use of crack-control joints, proper concrete placement and curing. Crack control joints should be spaced at intervals no greater than 12 feet. Literature provided by the Portland Concrete Association (PCA) and American Concrete Institute (ACI) present recommendations for proper concrete mix, construction, and curing practices, and should be incorporated into project construction.

6.8 Retaining Walls

6.8.1 We recommend retaining walls be founded on compacted fill or on native San Diego Formation. Retaining wall footings should not bear on undocumented fill. Where complete removal of undocumented fill is not performed beneath retaining walls, footings for the walls will need to be deepened through the fill to a minimum of 6 inches into the underlying San Diego Formation. As an alternative to deepening footings through the fill, the footing excavation to reach native soils can be backfill with 2-sack cement-slurry back to the footing elevation with the retaining wall footing bearing on the cement-slurry.

6.8.2 Retaining walls that are allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall) at the top of the wall at the top and having a level backfill surface should be designed for an active soil pressure equivalent to the pressure exerted by a fluid density of 35 pounds per cubic foot (pcf). Where the backfill will be inclined at 2:1 (horizontal:vertical), an active soil pressure of 50 pcf is recommended. These earth pressures assume backfill soil will have an expansion index of 50 or less.

6.8.3 Where walls are restrained from movement at the top, an additional uniform pressure of 7H psf should be added to the active soil pressure. For retaining walls subject to vehicular

loads within a horizontal distance equal to two-thirds the wall height, a surcharge equivalent to 2 feet of fill soil should be added.

6.8.4 The structural engineer should determine the seismic design category for the project and if retaining walls need to incorporate seismic lateral loads. A seismic load of 15H should be used for design. The seismic load is dependent on the retained height where H is the height of the wall, in feet, and the calculated loads result in pounds per square foot (psf) exerted at the base of the wall and zero at top of the wall. We used a horizontal peak ground acceleration of 0.42g calculated using 2010 CBC (S_{DS}/2.5) and applying a pseudo-static coefficient of 0.33.

6.8.5 Retaining and site walls founded on properly compacted fill should have a minimum depth and width of 12 inches below finish pad subgrade and may be designed for an allowable soil bearing pressure of 2,000 psf.

6.8.6 Retaining walls should be provided with a drainage system adequate to prevent the buildup of hydrostatic forces and should be waterproofed as required by the project architect. A typical retaining wall drainage detail is provided on Figure 9. The use of drainage openings through the base of the wall (weep holes, etc.) is not recommended where the seepage could be a nuisance or otherwise adversely impact the property adjacent to the base of the wall. The above recommendations assume a properly compacted granular (Expansion Index less than 50) backfill material with no hydrostatic forces or imposed surcharge load. If conditions different than those described are expected, or if specific drainage details are desired, Geocon Incorporated should be contacted for additional recommendations.

6.9 Lateral Loading

6.9.1 To resist lateral loads, a passive pressure exerted by an equivalent fluid density of 300 pounds per cubic foot (pcf) should be used for the design of footings or shear keys placed against properly compacted fill or native paralic deposits. The allowable passive pressure assumes a horizontal surface extending at least 5 feet, or three times the surface generating the passive pressure, whichever is greater. The upper 12 inches of material in areas not protected by floor slabs or pavement should not be included in design for passive resistance. Where footings are placed against undocumented fill, we recommend the undocumented fill not be relied upon for passive resistance.

6.9.2 If friction is to be used to resist lateral loads, an allowable coefficient of friction between soil and concrete of 0.35 should be used for design.

6.10 Site Drainage and Moisture Protection

6.10.1 Adequate site drainage is critical to reduce the potential for differential soil movement, erosion, and subsurface seepage. Under no circumstances should water be allowed to pond adjacent to footings. The site should be graded and maintained such that surface drainage is directed away from structures and the top of slopes into swales or other controlled drainage devices.

6.10.2 Because of the presence of undocumented fill and potential settlement and related distress, we do not recommend infiltration of storm water runoff at the site. Proper drainage should be maintained across the site and water directed to outlet structures.

6.10.3 Underground utilities should be leak free. Utility and irrigation lines should be checked periodically for leaks, and detected leaks should be repaired promptly. Detrimental soil movement could occur if water is allowed to infiltrate the soil for prolonged periods of time.

6.10.4 Landscaping planters adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Area drains to collect excess irrigation water and transmit it to drainage structures or impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, we recommend construction of a cutoff wall along the edge of the pavement that extends at least 6 inches below the bottom of the base material.

6.11 Grading and Foundation Plan Review

6.11.1 Geocon Incorporated should review the grading and foundation plans prior to final design submittal to evaluate whether additional analyses and/or recommendations are required.

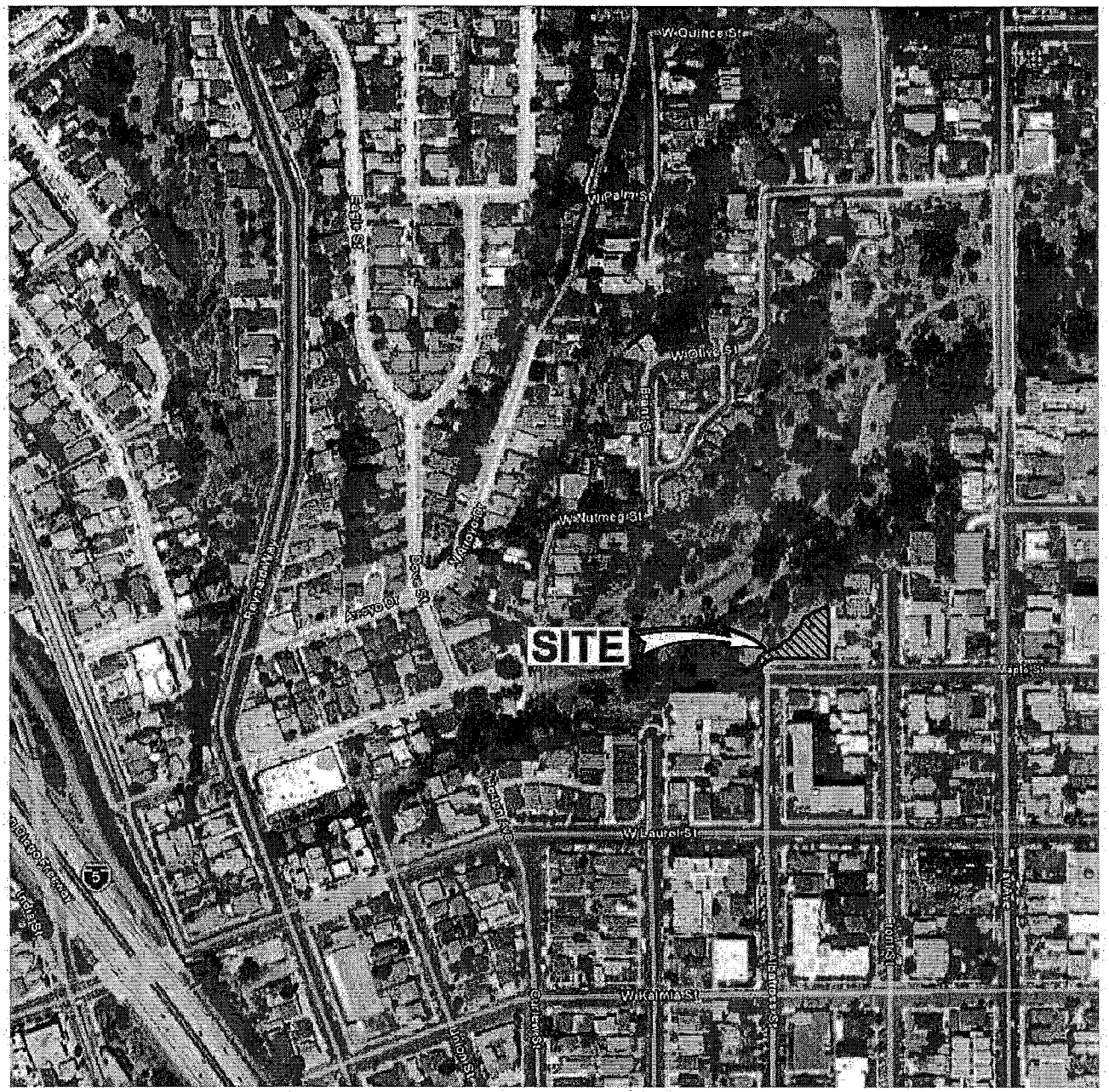
LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

2. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Incorporated should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Incorporated.

3. This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

4. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.



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NO SCALE

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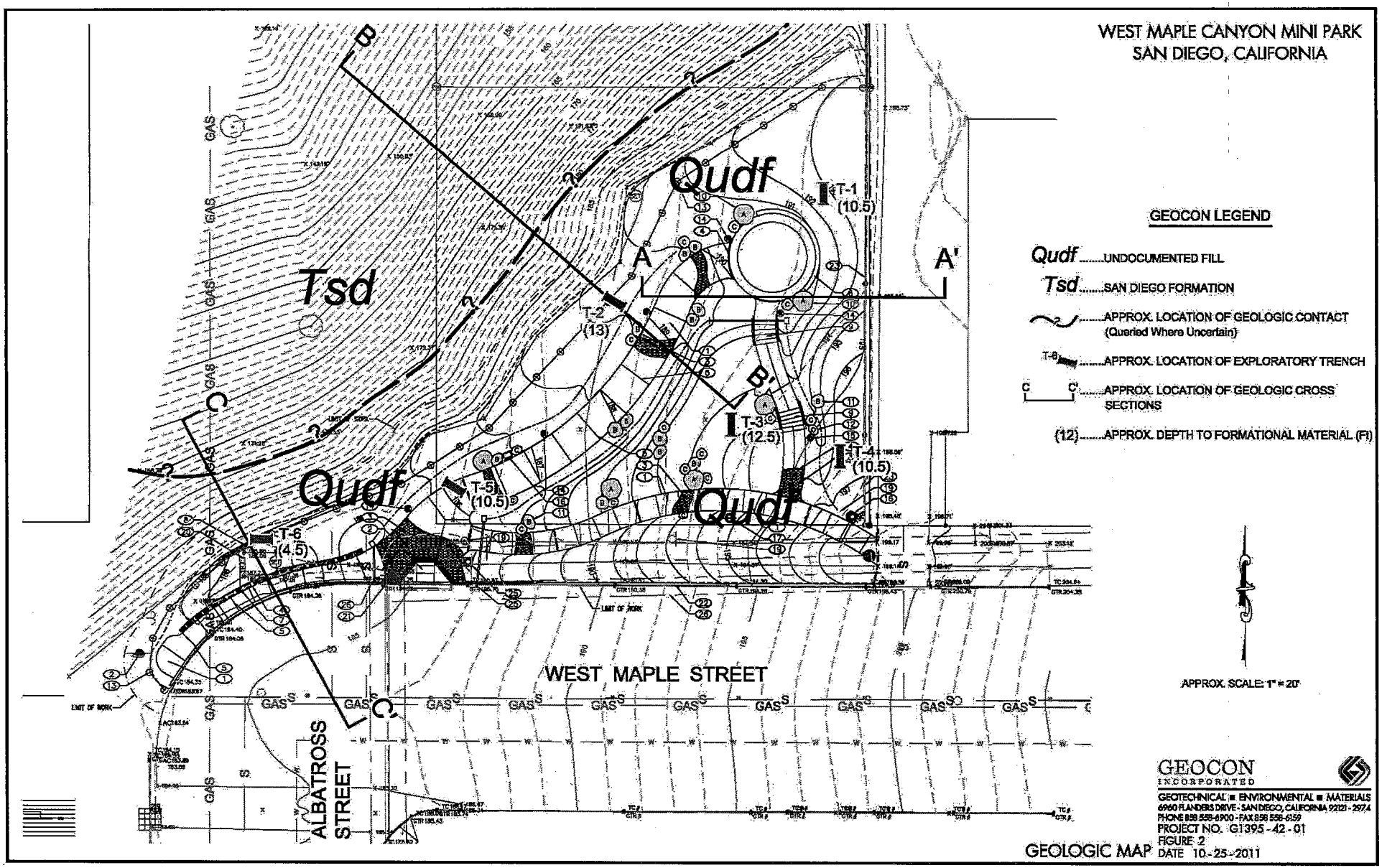
VICINITY MAP

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

DATE 10 - 25 - 2011	PROJECT NO. G1395 - 42 - 01	FIG. 1

Vicinity Map

Y:\PROJECTS\G1395-42-01 (Mini Park) \DETAILS\Vicinity Map.dwg, 10/28/2011 10:31:13 AM, Ladrillono A


WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA
GEOCON LEGEND
Qudf.....UNDOCUMENTED FILL
Tsd.....SAN DIEGO FORMATION
.....APPROX. LOCATION OF GEOLOGIC CONTACT (Queried Where Uncertain)
T-8.....APPROX. LOCATION OF EXPLORATORY TRENCH
C C'.....APPROX. LOCATION OF GEOLOGIC CROSS SECTIONS
(12).....APPROX. DEPTH TO FORMATIONAL MATERIAL (Ft)
Qudf
Tsd
T-1 (10.5)
T-2 (13)
T-3 (12.5)
T-4 (10.5)
T-5 (10.5)
T-6 (4.5)
A
A'
B
B'
C
C'
WEST MAPLE STREET
ALBATROSS STREET
GAS
LIMIT OF WORK
APPROX. SCALE: 1" = 20'
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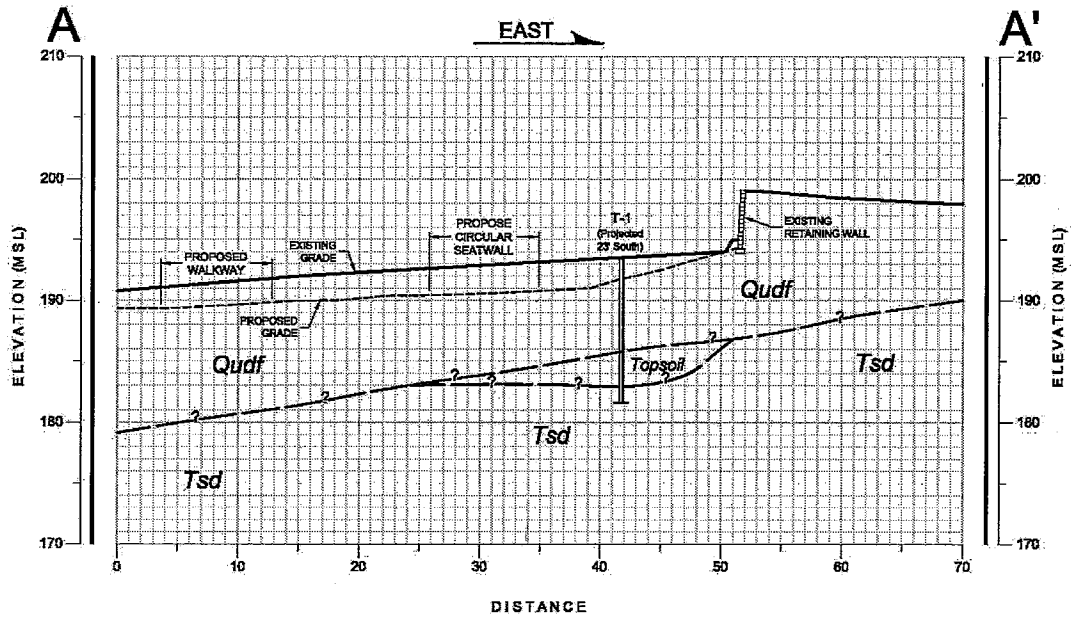
PROJECT NO. G1395 - 42 - 01
FIGURE 2
DATE 10 - 25 - 2011
GEOLOGIC MAP

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA



GEOLOGIC CROSS-SECTION A-A'

SCALE: 1" = 10' (Vert. = Horiz.)

GEOCON LEGEND

Qudf .....UNDOCUMENTED FILL

Tsd .....SAN DIEGO FORMATION

.....APPROX. LOCATION OF GEOLOGIC CONTACT (Queried Where Uncertain)

T-1 .....APPROX. LOCATION OF EXPLORATORY TRENCH

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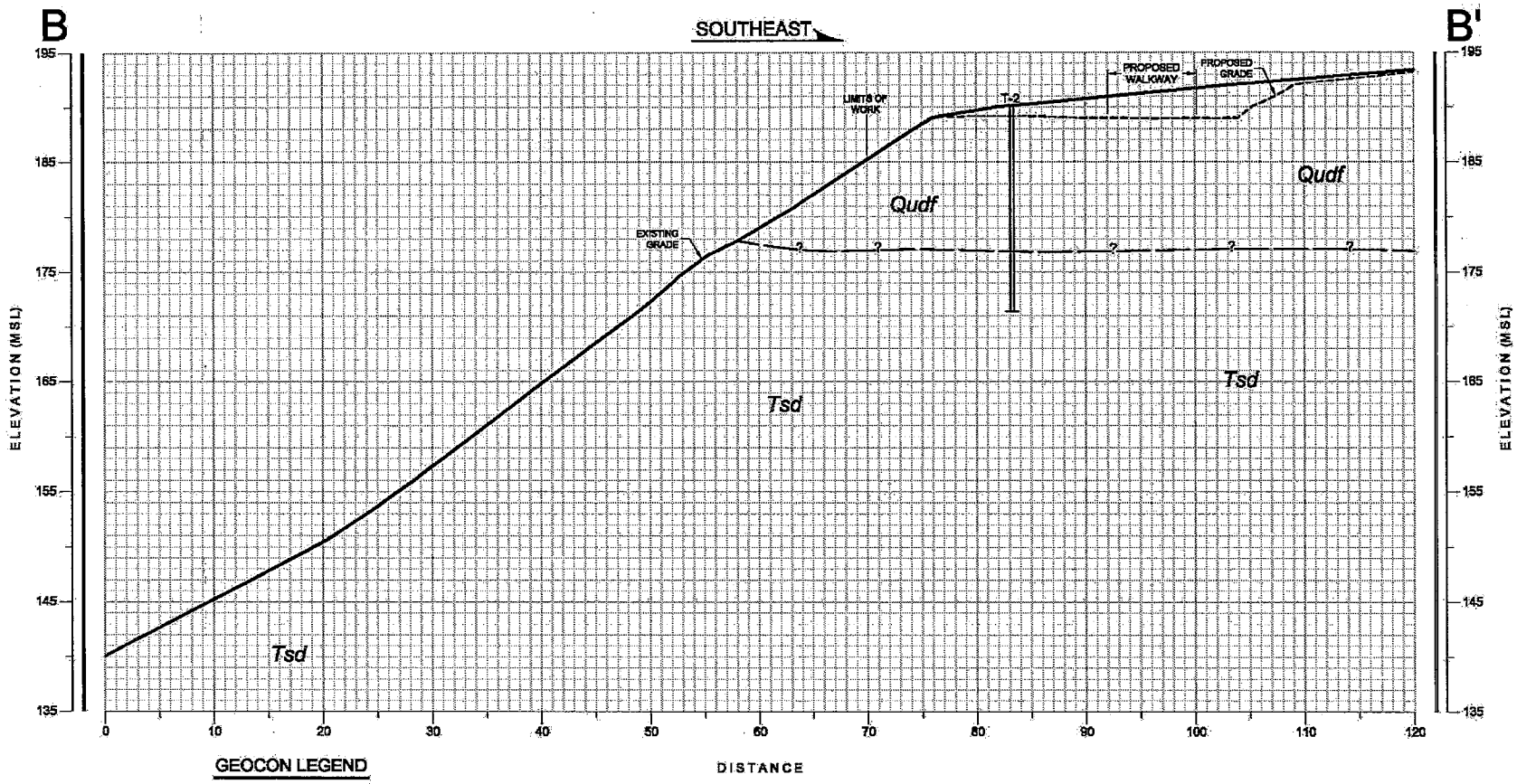
PROJECT NO. G1395-42-01
FIGURE 3
DATE 10-25-2011

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA



GEOCON LEGEND

Qudf.....UNDOCUMENTED FILL

Tsd.....SAN DIEGO FORMATION

~2~.....APPROX. LOCATION OF GEOLOGIC CONTACT (Queried Where Uncertain)

T-1 .....APPROX. LOCATION OF EXPLORATORY TRENCH

GEOLOGIC CROSS-SECTION B-B-'

SCALE: 1" = 10' (Vert. = Horiz.)

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PROJECT NO. G1395-42-01
FIGURE 4
DATE 10-25-2011

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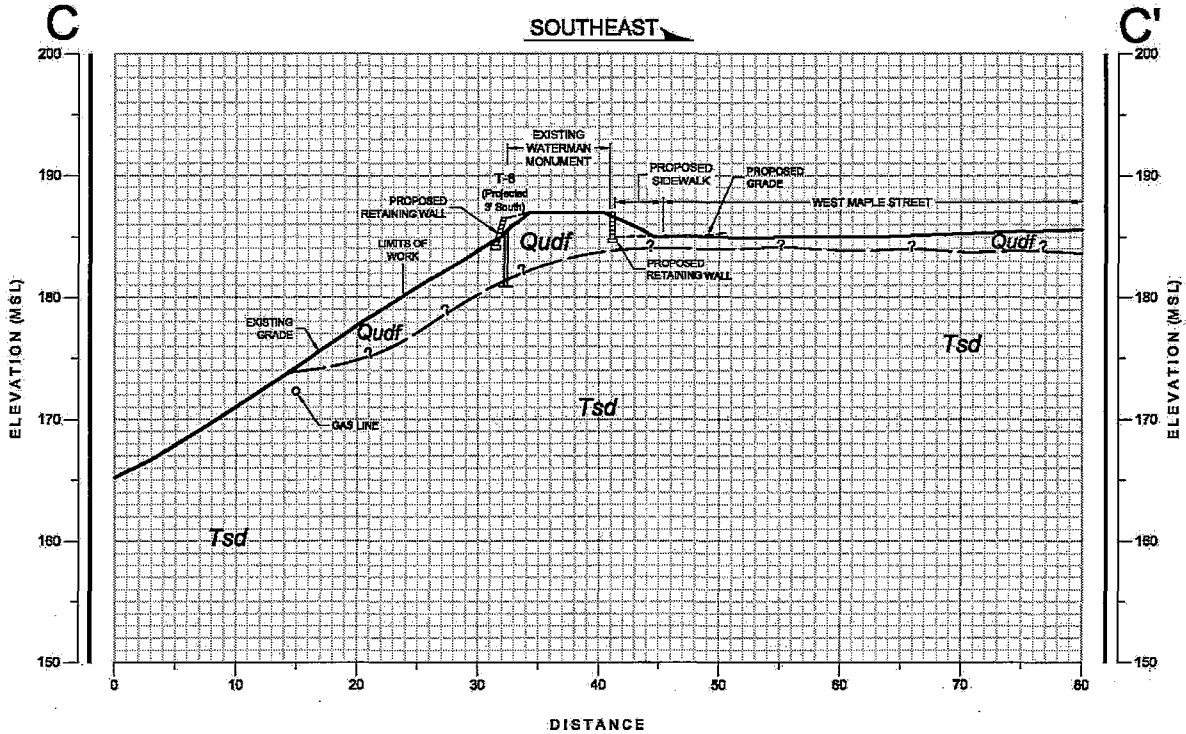
WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA



GEOCON LEGEND

Qudf.....UNDOCUMENTED FILL

Tsd.....SAN DIEGO FORMATION

~?~.....APPROX. LOCATION OF GEOLOGIC CONTACT (Queried Where Uncertain)

T-1 I.....APPROX. LOCATION OF EXPLORATORY TRENCH

GEOLOGIC CROSS-SECTION C-C'

SCALE: 1" = 10' (Vert. = Horiz.)

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PROJECT NO. G1395-42-01
FIGURE 5
DATE 10-25-2011

LADRILLONO

ASSUMED CONDITIONS :

SLOPE HEIGHT	H	= 15 feet
SLOPE INCLINATION		2 : 1 (Horizontal : Vertical)
TOTAL UNIT WEIGHT OF SOIL	γ_t	= 130 pounds per cubic foot
ANGLE OF INTERNAL FRICTION	ϕ	= 33 degrees
APPARENT COHESION	C	= 600 pounds per square foot
NO SEEPAGE FORCES		

ANALYSIS :

$\gamma_{c\phi}$	=	$\frac{\gamma_t H \tan\phi}{C}$	EQUATION (3-3), REFERENCE 1
FS	=	$\frac{N_{cf} C}{\gamma_t H}$	EQUATION (3-2), REFERENCE 1
$\gamma_{c\phi}$	=	2.1	CALCULATED USING EQ. (3-3)
N_{cf}	=	13	DETERMINED USING FIGURE 10, REFERENCE 2
FS	=	4.0	FACTOR OF SAFETY CALCULATED USING EQ. (3-2)

REFERENCES :

1.....Janbu, N., Stability Analysis of Slopes with Dimensionless Parameters, Harvard Soil Mechanics, Series No. 46, 1954

2.....Janbu, N., Discussion of J.M. Bell, Dimensionless Parameters for Homogeneous Earth Slopes, Journal of Soil Mechanics and Foundation Design, No. SM6, November 1967.

FILL SLOPE STABILITY ANALYSIS

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WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

DATE 10 - 25 - 2011	PROJECT NO. G1395 - 42 - 01	FIG. 6

ASSUMED CONDITIONS :

SLOPE HEIGHT	H	=	Infinite
DEPTH OF SATURATION	Z	=	3 feet
SLOPE INCLINATION	2 : 1 (Horizontal : Vertical)		
SLOPE ANGLE	i	=	26.6 degrees
UNIT WEIGHT OF WATER	γ_w	=	62.4 pounds per cubic foot
TOTAL UNIT WEIGHT OF SOIL	γ_t	=	130 pounds per cubic foot
ANGLE OF INTERNAL FRICTION	ϕ	=	33 degrees
APPARENT COHESION	C	=	600 pounds per square foot

SLOPE SATURATED TO VERTICAL DEPTH Z BELOW SLOPE FACE

SEEPAGE FORCES PARALLEL TO SLOPE FACE

ANALYSIS :

$$FS = \frac{C + (\gamma_t - \gamma_w)\ Z\ \cos^2 i\ \tan \phi}{\gamma_t\ Z\ \sin i\ \cos i} = 4.5$$

REFERENCES :

1.....Haefeli, R. *The Stability of Slopes Acted Upon by Parallel Seepage*, Proc. Second International Conference, SMFE, Rotterdam, 1948, 1, 57-62

2.....Skempton, A. W., and F.A. Delory, *Stability of Natural Slopes in London Clay*, Proc. Fourth International Conference, SMFE, London, 1957, 2, 378-81

SURFICIAL FILL SLOPE STABILITY ANALYSIS

GEOCON INCORPORATED

GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

6960 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121 - 2974

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NGB / AML		DSK/E0000

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

DATE 10 - 25 - 2011	PROJECT NO. G1395 - 42 - 01	FIG. 7

ASSUMED CONDITIONS :

SLOPE HEIGHT	H	= 60 feet
SLOPE INCLINATION	1.5:1 (Horizontal : Vertical)	
TOTAL UNIT WEIGHT OF SOIL	γ_t	= 130 pounds per cubic foot
ANGLE OF INTERNAL FRICTION	ϕ	= 35 degrees
APPARENT COHESION	C	= 500 pounds per square foot
NO SEEPAGE FORCES		

ANALYSIS :

$\gamma_{c\phi}$	=	$\frac{\gamma H \tan\phi}{C}$	EQUATION (3-3), REFERENCE 1
FS	=	$\frac{N_{cf} C}{\gamma H}$	EQUATION (3-2), REFERENCE 1
$\gamma_{c\phi}$	=	10.9	CALCULATED USING EQ. (3-3)
Ncf	=	35	DETERMINED USING FIGURE 10, REFERENCE 2
FS	=	2.2	FACTOR OF SAFETY CALCULATED USING EQ. (3-2)

REFERENCES :

1.....Janbu, N., Stability Analysis of Slopes with Dimensionless Parameters, Harvard Soil Mechanics, Series No. 46, 1954

2.....Janbu, N., Discussion of J.M. Bell, Dimensionless Parameters for Homogeneous Earth Slopes, Journal of Soil Mechanics and Foundation Design, No. SM6, November 1967.

CUT SLOPE STABILITY ANALYSIS

GEOCON INCORPORATED
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NGB / AML		DSK/E0000

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

DATE 10 - 25 - 20011	PROJECT NO. G1395 - 42 - 01	FIG. 8

CO\FOOT2.DWG/aml

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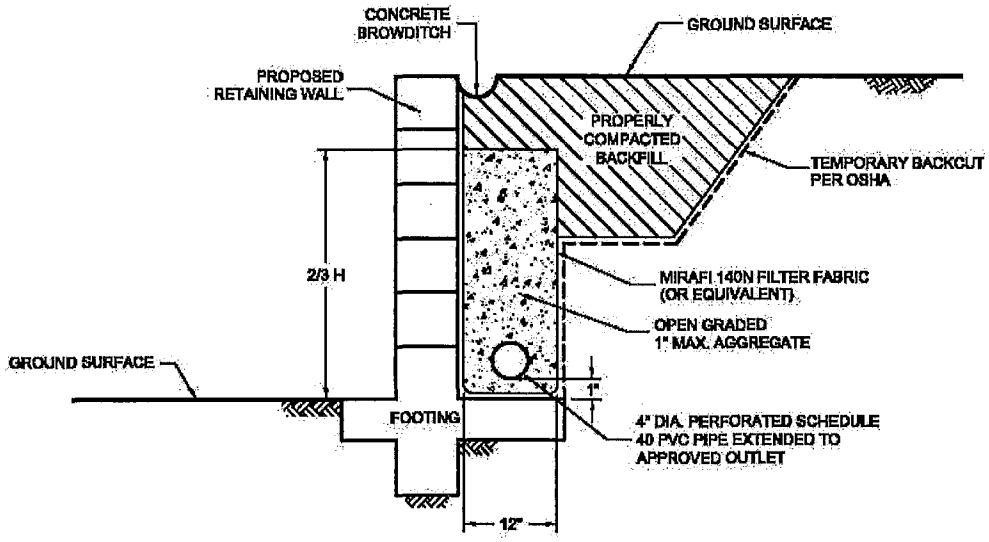

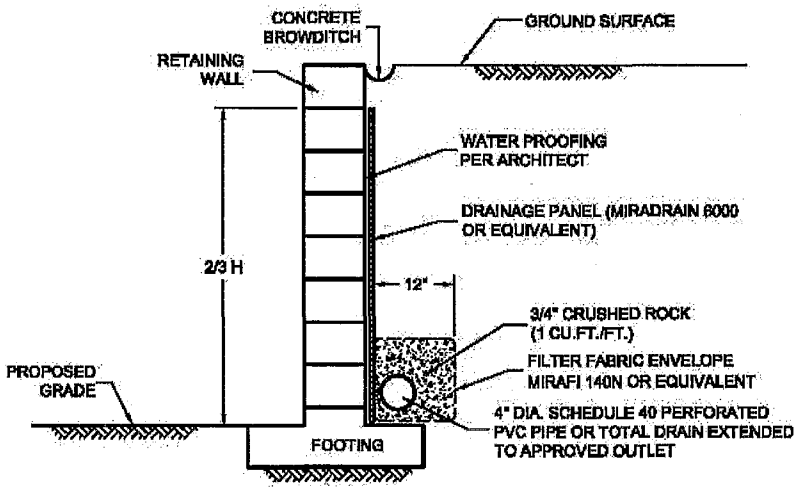

NOTE :

DRAIN SHOULD BE UNIFORMLY SLOPED TO GRAVITY OUTLET OR TO A SUMP WHERE WATER CAN BE REMOVED BY PUMPING

NO SCALE

TYPICAL RETAINING WALL DRAIN DETAIL

GEOCON INCORPORATED
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NGB / AML		DSK/GTYPD

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

DATE 10 - 25 - 211	PROJECT NO. G1395 - 42 - 01	FIG. 9

RWD07

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APPENDIX A

APPENDIX A

FIELD INVESTIGATION

Fieldwork for our investigation included a site visit and subsurface exploration. The locations of the exploratory trenches are shown on the Geologic Map, Figure 2 (map pocket). The trenches were located in the field based on visual reference points. Therefore, actual trench locations may deviate slightly.

We performed the field investigation on August 30, 2011, which consisted of excavating 6 exploratory trenches using a John Deere 310 rubber-tire backhoe. The exploratory trenches were excavated to a maximum depth of approximately 18.5 feet below existing grade to check the depth of undocumented fill and excavation characteristics of the underlying formational soil. Trench logs are presented on Figures A-1 through A-6.

The soil encountered in the borings were visually examined, classified, and logged in general accordance with American Society for Testing and Materials (ASTM) practice for Description and Identification of Soils (Visual-Manual Procedure D 2488). The logs depict the soil and geologic conditions observed and the depth at which samples were obtained.

PROJECT NO. G1395-42-01

TRENCH T 1

ELEV. (MSL.) 193' DATE COMPLETED 08-30-2011

EQUIPMENT JD 410 RUBBER TIRE BY: N. BORJA

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	T1-1			SM	**UNDOCUMENTED FILL** Loose, dry to damp, yellowish brown, Silty, fine to medium SAND; some concrete debris; few asphalt concrete debris			
2					-Becomes reddish brown to brown; trace asphalt concrete debris			
4								
6	T1-2				-Becomes brown to dark brown and reddish brown; few gravel and cobbles up to 12-inch diameter			
8				SM	**TOPSOIL** Loose, dry, dark brown, Silty, fine to medium SAND; trace gravel			
10								
12	T1-3			SM	**SAN DIEGO FORMATION** Very dense, damp, yellowish brown to reddish brown, Silty, fine- to medium-grained SANDSTONE; few gravel; strongly cemented at 11.5 feet; very difficult digging			
					REFUSAL AT 12 FEET Groundwater not encountered			

G1395-42-01.GPJ

Figure A-1,
Log of Trench T 1, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◥ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. G1395-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 2 ELEV. (MSL.) 190' DATE COMPLETED 08-30-2011 EQUIPMENT JD 410 RUBBER TIRE BY: N. BORJA	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**UNDOCUMENTED FILL** Loose, dry, yellowish brown to reddish brown, Silty, fine to medium SAND; little concrete debris; few asphalt concrete debris			
2					-Becomes reddish brown			
4				SM	Loose to medium dense, yellowish brown to grayish brown, Silty, fine to medium SAND; few chunks of gray, Silty CLAY			
6					-Trace wood debris			
8								
10				SM	Loose, dry, brown to reddish brown, Silty, fine to medium SAND; little concrete and asphalt concrete debris; few gravel and cobble up to 12-inches in diameter			
12					-Sidewall caving below 11 feet			
14				SM	**SAN DIEGO FORMATION** Medium dense, dry, brown to olive brown, Silty, fine to coarse SAND; few gravel and cobble up to 12-inches in diameter			
16								
18								
					TRENCH TERMINATED AT 18.5 FEET Groundwater not encountered			

Figure A-2,
Log of Trench T 2, Page 1 of 1

G1395-42-01.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. G1395-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 3 ELEV. (MSL.) 193' DATE COMPLETED 08-30-2011 EQUIPMENT JD 410 RUBBER TIRE BY: N. BORJA	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**UNDOCUMENTED FILL** Loose, dry, yellowish brown and brown, Silty, fine to medium SAND; little gravel; little concrete debris			
2								
4					-Becomes brown, few asphalt debris; trace metal debris			
6					-Trace brick debris; sidewall caving below 6 feet			
8					-Excavates with some asphalt concrete debris			
10					-Becomes brown to dark brown; some concrete and asphalt concrete debris up to 3-feet wide			
12					TRENCH TERMINATED AT 12.5 FEET Groundwater not encountered			

Figure A-3,
Log of Trench T 3, Page 1 of 1

G1395-42-01.GPJ

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
◧ ... STANDARD PENETRATION TEST
■ ... DRIVE SAMPLE (UNDISTURBED)
⊠ ... DISTURBED OR BAG SAMPLE
◥ ... CHUNK SAMPLE
▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. G1395-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 4 ELEV. (MSL.) 196' DATE COMPLETED 08-30-2011 EQUIPMENT JD 410 RUBBER TIRE BY: N. BORJA MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**UNDOCUMENTED FILL** Loose, dry, grayish brown to dark brown, Silty, fine to medium SAND; little gravel and cobble; some concrete debris; trace metal debris			
2								
					-Becomes yellowish brown and reddish brown			
4								
6	T4-1			SM/SC	Loose, moist, brown to dark reddish brown, Silty to Clayey, fine to medium SAND; few gravel			
8								
				CL	Soft, moist, gray to light greenish gray, Sandy CLAY			
10								
	T4-2			SM	**SAN DIEGO FORMATION** Very dense, damp, reddish brown and yellowish brown, CONGLOMERATE with Silty SAND matrix; strongly cemented; highly weathered			
					REFUSAL AT 11.5 FEET Groundwater not encountered			

Figure A-4,
Log of Trench T 4, Page 1 of 1

G1395-42-01.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. G1395-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 5 ELEV. (MSL.) 187' DATE COMPLETED 08-30-2011 EQUIPMENT JD 410 RUBBER TIRE BY: N. BORJA MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**UNDOCUMENTED FILL** Loose, dry, yellowish brown and brown, Silty, fine to medium SAND; few gravel and cobble; little concrete debris; trace brick debris; trace wood debris			
2								
4					-Becomes brown; concrete debris up to 3-feet wide			
6								
8					-Cobble observed up to 12-inches in diameter -Becomes moist, brown to dark brown			
10								
	T5-1			SM	**SAN DIEGO FORMATION** Very dense, damp to moist, reddish brown, CONGLOMERATE with Silty SAND matrix; strongly cemented; highly weathered			
					TRENCH TERMINATED AT 11 FEET Groundwater not encountered			

Figure A-5,
Log of Trench T 5, Page 1 of 1

G1395-42-01.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◣ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. G1395-42-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 6 ELEV. (MSL.) 185' DATE COMPLETED 08-30-2011 EQUIPMENT JD 410 RUBBER TIRE BY: N. BORJA	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0	T6-1			SM	**UNDOCUMENTED FILL** Loose, dry, brown to dark brown, Silty, fine to medium SAND; few gravel and cobble up to 10-inches in diameter; trace concrete debris; trace brick debris			
2					-Bottom probed firm			
4				SM	**SAN DIEGO FORMATION** Very dense, damp, yellowish brown to reddish brown, Silty, fine- to coarse-grained SANDSTONE; strongly cemented; slightly weathered			
					REFUSAL AT 4.5 FEET Groundwater not encountered			

Figure A-6,
Log of Trench T 6, Page 1 of 1

G1395-42-01.GPJ

SAMPLE SYMBOLS

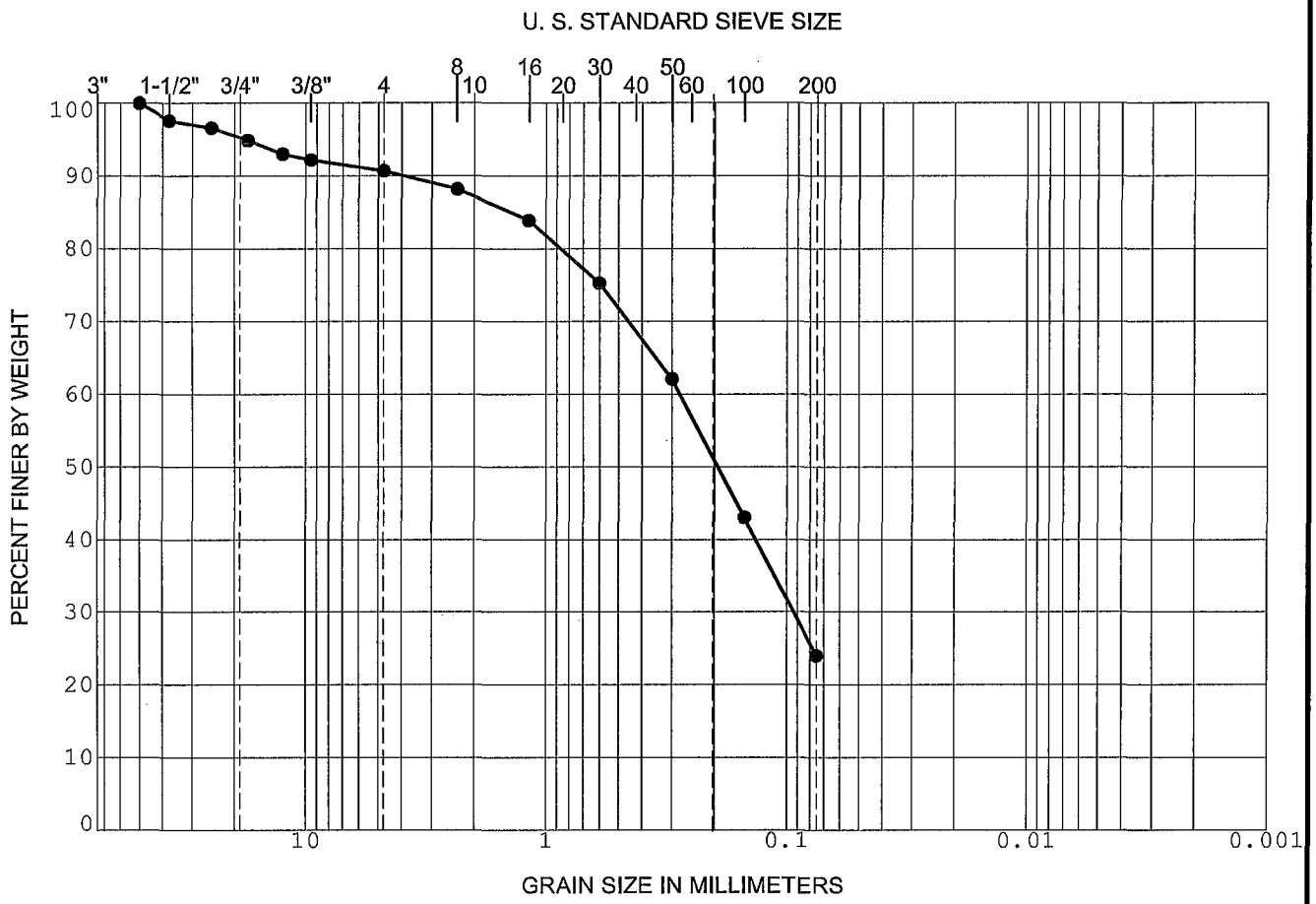
☐ ... SAMPLING UNSUCCESSFUL ◧ ... STANDARD PENETRATION TEST ■ ... DRIVE SAMPLE (UNDISTURBED)

⊠ ... DISTURBED OR BAG SAMPLE ◪ ... CHUNK SAMPLE ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. G1395-42-01

GRAVEL		SAND			SILT OR CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



	SAMPLE	DEPTH (ft)	CLASSIFICATION	NAT WC	LL	PL	PI
●	T1-1	0.0	SM - Silty SAND				
⊠							
▲							

GRADATION CURVE

WEST MAPLE CANYON MINI PARK

SAN DIEGO, CALIFORNIA

G1395-42-01.GPJ

Figure B-1

APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM) or other suggested procedures. Selected samples were tested to evaluate maximum dry density and moisture content, expansion potential, direct shear, water-soluble sulfate content, and gradation characteristics. Results of the laboratory tests are summarized in Tables B-I through B-IV and in Figure B-1.

TABLE B-I
SUMMARY OF LABORATORY MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557

Sample No.	Description	Maximum Dry Density (pcf)	Optimum Moisture Content (% dry wt.)
T6-1	Dark brown, Silty, fine to medium SAND; some gravel	133.5	8.1

TABLE B-II
SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	Expansion Classification
	Before Test	After Test			
T1-1	9.3	16.1	112.7	9	Very Low

TABLE B-III
SUMMARY OF LABORATORY DIRECT SHEAR TEST RESULTS
ASTM D 3080

Sample No.	Dry Density (pcf)	Moisture Content (%)		Unit Cohesion (psf)	Angle of Shear Resistance (degrees)
		Initial	Final		
*T5-1	120.2	7.6	12.8	620	33

*Sample was remolded to a dry density of about 90 percent of the laboratory maximum dry density near optimum moisture content prior to performing laboratory testing.

TABLE B-IV
SUMMARY OF LABORATORY WATER-SOLUBLE SULFATE TEST RESULTS
CALIFORNIA TEST 417

Sample No.	Water-Soluble Sulfate (% SO_4)	Sulfate Exposure
T1-1	0.001	Negligible

APPENDIX C

APPENDIX C

RECOMMENDED GRADING SPECIFICATIONS

FOR

WEST MAPLE CANYON MINI PARK
SAN DIEGO, CALIFORNIA

PROJECT NO. G1395-42-01

RECOMMENDED GRADING SPECIFICATIONS

1. GENERAL

1.1 These Recommended Grading Specifications shall be used in conjunction with the Geotechnical Report for the project prepared by Geocon Incorporated. The recommendations contained in the text of the Geotechnical Report are a part of the earthwork and grading specifications and shall supersede the provisions contained hereinafter in the case of conflict.

1.2 Prior to the commencement of grading, a geotechnical consultant (Consultant) shall be employed for the purpose of observing earthwork procedures and testing the fills for substantial conformance with the recommendations of the Geotechnical Report and these specifications. The Consultant should provide adequate testing and observation services so that they may assess whether, in their opinion, the work was performed in substantial conformance with these specifications. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that personnel may be scheduled accordingly.

1.3 It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications and the approved grading plans. If, in the opinion of the Consultant, unsatisfactory conditions such as questionable soil materials, poor moisture condition, inadequate compaction, adverse weather, result in a quality of work not in conformance with these specifications, the Consultant will be empowered to reject the work and recommend to the Owner that grading be stopped until the unacceptable conditions are corrected.

2. DEFINITIONS

2.1 **Owner** shall refer to the owner of the property or the entity on whose behalf the grading work is being performed and who has contracted with the Contractor to have grading performed.

2.2 **Contractor** shall refer to the Contractor performing the site grading work.

2.3 **Civil Engineer** or **Engineer of Work** shall refer to the California licensed Civil Engineer or consulting firm responsible for preparation of the grading plans, surveying and verifying as-graded topography.

2.4 **Consultant** shall refer to the soil engineering and engineering geology consulting firm retained to provide geotechnical services for the project.

2.5 **Soil Engineer** shall refer to a California licensed Civil Engineer retained by the Owner, who is experienced in the practice of geotechnical engineering. The Soil Engineer shall be responsible for having qualified representatives on-site to observe and test the Contractor's work for conformance with these specifications.

2.6 **Engineering Geologist** shall refer to a California licensed Engineering Geologist retained by the Owner to provide geologic observations and recommendations during the site grading.

2.7 **Geotechnical Report** shall refer to a soil report (including all addenda) which may include a geologic reconnaissance or geologic investigation that was prepared specifically for the development of the project for which these Recommended Grading Specifications are intended to apply.

3. MATERIALS

3.1 Materials for compacted fill shall consist of any soil excavated from the cut areas or imported to the site that, in the opinion of the Consultant, is suitable for use in construction of fills. In general, fill materials can be classified as *soil* fills, *soil-rock* fills or *rock* fills, as defined below.

3.1.1 **Soil fills** are defined as fills containing no rocks or hard lumps greater than 12 inches in maximum dimension and containing at least 40 percent by weight of material smaller than ¾ inch in size.

3.1.2 **Soil-rock fills** are defined as fills containing no rocks or hard lumps larger than 4 feet in maximum dimension and containing a sufficient matrix of soil fill to allow for proper compaction of soil fill around the rock fragments or hard lumps as specified in Paragraph 6.2. **Oversize rock** is defined as material greater than 12 inches.

3.1.3 **Rock fills** are defined as fills containing no rocks or hard lumps larger than 3 feet in maximum dimension and containing little or no fines. Fines are defined as material smaller than ¾ inch in maximum dimension. The quantity of fines shall be less than approximately 20 percent of the rock fill quantity.

3.2 Material of a perishable, spongy, or otherwise unsuitable nature as determined by the Consultant shall not be used in fills.

3.3 Materials used for fill, either imported or on-site, shall not contain hazardous materials as defined by the California Code of Regulations, Title 22, Division 4, Chapter 30, Articles 9 and 10; 40CFR; and any other applicable local, state or federal laws. The Consultant shall not be responsible for the identification or analysis of the potential presence of hazardous materials. However, if observations, odors or soil discoloration cause Consultant to suspect the presence of hazardous materials, the Consultant may request from the Owner the termination of grading operations within the affected area. Prior to resuming grading operations, the Owner shall provide a written report to the Consultant indicating that the suspected materials are not hazardous as defined by applicable laws and regulations.

3.4 The outer 15 feet of *soil-rock* fill slopes, measured horizontally, should be composed of properly compacted *soil* fill materials approved by the Consultant. *Rock* fill may extend to the slope face, provided that the slope is not steeper than 2:1 (horizontal:vertical) and a soil layer no thicker than 12 inches is track-walked onto the face for landscaping purposes. This procedure may be utilized provided it is acceptable to the governing agency, Owner and Consultant.

3.5 Samples of soil materials to be used for fill should be tested in the laboratory by the Consultant to determine the maximum density, optimum moisture content, and, where appropriate, shear strength, expansion, and gradation characteristics of the soil.

3.6 During grading, soil or groundwater conditions other than those identified in the Geotechnical Report may be encountered by the Contractor. The Consultant shall be notified immediately to evaluate the significance of the unanticipated condition

4. CLEARING AND PREPARING AREAS TO BE FILLED

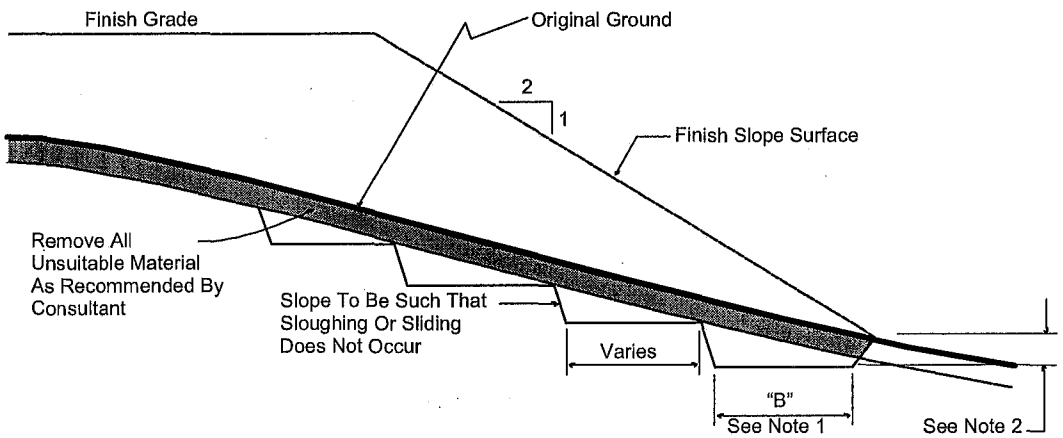
4.1 Areas to be excavated and filled shall be cleared and grubbed. Clearing shall consist of complete removal above the ground surface of trees, stumps, brush, vegetation, man-made structures, and similar debris. Grubbing shall consist of removal of stumps, roots, buried logs and other unsuitable material and shall be performed in areas to be graded. Roots and other projections exceeding 1½ inches in diameter shall be removed to a depth of 3 feet below the surface of the ground. Borrow areas shall be grubbed to the extent necessary to provide suitable fill materials.

4.2 Any asphalt pavement material removed during clearing operations should be properly disposed at an approved off-site facility. Concrete fragments that are free of reinforcing steel may be placed in fills, provided they are placed in accordance with Section 6.2 or 6.3 of this document.

4.3 After clearing and grubbing of organic matter and other unsuitable material, loose or porous soils shall be removed to the depth recommended in the Geotechnical Report. The depth of removal and compaction should be observed and approved by a representative of the Consultant. The exposed surface shall then be plowed or scarified to a minimum depth of 6 inches and until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment to be used.

4.4 Where the slope ratio of the original ground is steeper than 5:1 (horizontal:vertical), or where recommended by the Consultant, the original ground should be benched in accordance with the following illustration.

TYPICAL BENCHING DETAIL



No Scale

DETAIL NOTES: (1) Key width "B" should be a minimum of 10 feet, or sufficiently wide to permit complete coverage with the compaction equipment used. The base of the key should be graded horizontal, or inclined slightly into the natural slope.

(2) The outside of the key should be below the topsoil or unsuitable surficial material and at least 2 feet into dense formational material. Where hard rock is exposed in the bottom of the key, the depth and configuration of the key may be modified as approved by the Consultant.

4.5 After areas to receive fill have been cleared and scarified, the surface should be moisture conditioned to achieve the proper moisture content, and compacted as recommended in Section 6 of these specifications.

5. COMPACTION EQUIPMENT

5.1 Compaction of *soil* or *soil-rock* fill shall be accomplished by sheepsfoot or segmented-steel wheeled rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compaction equipment. Equipment shall be of such a design that it will be capable of compacting the *soil* or *soil-rock* fill to the specified relative compaction at the specified moisture content.

5.2 Compaction of *rock* fills shall be performed in accordance with Section 6.3.

6. PLACING, SPREADING AND COMPACTION OF FILL MATERIAL

6.1 *Soil* fill, as defined in Paragraph 3.1.1, shall be placed by the Contractor in accordance with the following recommendations:

6.1.1 *Soil* fill shall be placed by the Contractor in layers that, when compacted, should generally not exceed 8 inches. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to obtain uniformity of material and moisture in each layer. The entire fill shall be constructed as a unit in nearly level lifts. Rock materials greater than 12 inches in maximum dimension shall be placed in accordance with Section 6.2 or 6.3 of these specifications.

6.1.2 In general, the *soil* fill shall be compacted at a moisture content at or above the optimum moisture content as determined by ASTM D 1557-02.

6.1.3 When the moisture content of *soil* fill is below that specified by the Consultant, water shall be added by the Contractor until the moisture content is in the range specified.

6.1.4 When the moisture content of the *soil* fill is above the range specified by the Consultant or too wet to achieve proper compaction, the *soil* fill shall be aerated by the Contractor by blading/mixing, or other satisfactory methods until the moisture content is within the range specified.

6.1.5 After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted by the Contractor to a relative compaction of at least 90 percent. Relative compaction is defined as the ratio (expressed in percent) of the in-place dry density of the compacted fill to the maximum laboratory dry density as determined in accordance with ASTM D 1557-02. Compaction shall be continuous over the entire area, and compaction equipment shall make sufficient passes so that the specified minimum relative compaction has been achieved throughout the entire fill.

6.1.6 Where practical, soils having an Expansion Index greater than 50 should be placed at least 3 feet below finish pad grade and should be compacted at a moisture content generally 2 to 4 percent greater than the optimum moisture content for the material.

6.1.7 Properly compacted *soil* fill shall extend to the design surface of fill slopes. To achieve proper compaction, it is recommended that fill slopes be over-built by at least 3 feet and then cut to the design grade. This procedure is considered preferable to track-walking of slopes, as described in the following paragraph.

6.1.8 As an alternative to over-building of slopes, slope faces may be back-rolled with a heavy-duty loaded sheepsfoot or vibratory roller at maximum 4-foot fill height intervals. Upon completion, slopes should then be track-walked with a D-8 dozer or similar equipment, such that a dozer track covers all slope surfaces at least twice.

6.2 *Soil-rock* fill, as defined in Paragraph 3.1.2, shall be placed by the Contractor in accordance with the following recommendations:

6.2.1 Rocks larger than 12 inches but less than 4 feet in maximum dimension may be incorporated into the compacted *soil* fill, but shall be limited to the area measured 15 feet minimum horizontally from the slope face and 5 feet below finish grade or 3 feet below the deepest utility, whichever is deeper.

6.2.2 Rocks or rock fragments up to 4 feet in maximum dimension may either be individually placed or placed in windrows. Under certain conditions, rocks or rock fragments up to 10 feet in maximum dimension may be placed using similar methods. The acceptability of placing rock materials greater than 4 feet in maximum dimension shall be evaluated during grading as specific cases arise and shall be approved by the Consultant prior to placement.

6.2.3 For individual placement, sufficient space shall be provided between rocks to allow for passage of compaction equipment.

6.2.4 For windrow placement, the rocks should be placed in trenches excavated in properly compacted *soil* fill. Trenches should be approximately 5 feet wide and 4 feet deep in maximum dimension. The voids around and beneath rocks should be filled with approved granular soil having a Sand Equivalent of 30 or greater and should be compacted by flooding. Windrows may also be placed utilizing an "open-face" method in lieu of the trench procedure, however, this method should first be approved by the Consultant.

6.2.5 Windrows should generally be parallel to each other and may be placed either parallel to or perpendicular to the face of the slope depending on the site geometry. The minimum horizontal spacing for windrows shall be 12 feet center-to-center with a 5-foot stagger or offset from lower courses to next overlying course. The minimum vertical spacing between windrow courses shall be 2 feet from the top of a lower windrow to the bottom of the next higher windrow.

6.2.6 Rock placement, fill placement and flooding of approved granular soil in the windrows should be continuously observed by the Consultant.

6.3 *Rock* fills, as defined in Section 3.1.3, shall be placed by the Contractor in accordance with the following recommendations:

6.3.1 The base of the *rock* fill shall be placed on a sloping surface (minimum slope of 2 percent). The surface shall slope toward suitable subdrainage outlet facilities. The *rock* fills shall be provided with subdrains during construction so that a hydrostatic pressure buildup does not develop. The subdrains shall be permanently connected to controlled drainage facilities to control post-construction infiltration of water.

6.3.2 *Rock* fills shall be placed in lifts not exceeding 3 feet. Placement shall be by rock trucks traversing previously placed lifts and dumping at the edge of the currently placed lift. Spreading of the *rock* fill shall be by dozer to facilitate *seating* of the rock. The *rock* fill shall be watered heavily during placement. Watering shall consist of water trucks traversing in front of the current rock lift face and spraying water continuously during rock placement. Compaction equipment with compactive energy comparable to or greater than that of a 20-ton steel vibratory roller or other compaction equipment providing suitable energy to achieve the

required compaction or deflection as recommended in Paragraph 6.3.3 shall be utilized. The number of passes to be made should be determined as described in Paragraph 6.3.3. Once a *rock* fill lift has been covered with *soil* fill, no additional *rock* fill lifts will be permitted over the *soil* fill.

6.3.3 Plate bearing tests, in accordance with ASTM D 1196-93, may be performed in both the compacted *soil* fill and in the *rock* fill to aid in determining the required minimum number of passes of the compaction equipment. If performed, a minimum of three plate bearing tests should be performed in the properly compacted *soil* fill (minimum relative compaction of 90 percent). Plate bearing tests shall then be performed on areas of *rock* fill having two passes, four passes and six passes of the compaction equipment, respectively. The number of passes required for the *rock* fill shall be determined by comparing the results of the plate bearing tests for the *soil* fill and the *rock* fill and by evaluating the deflection variation with number of passes. The required number of passes of the compaction equipment will be performed as necessary until the plate bearing deflections are equal to or less than that determined for the properly compacted *soil* fill. In no case will the required number of passes be less than two.

6.3.4 A representative of the Consultant should be present during *rock* fill operations to observe that the minimum number of "passes" have been obtained, that water is being properly applied and that specified procedures are being followed. The actual number of plate bearing tests will be determined by the Consultant during grading.

6.3.5 Test pits shall be excavated by the Contractor so that the Consultant can state that, in their opinion, sufficient water is present and that voids between large rocks are properly filled with smaller rock material. In-place density testing will not be required in the *rock* fills.

6.3.6 To reduce the potential for "piping" of fines into the *rock* fill from overlying *soil* fill material, a 2-foot layer of graded filter material shall be placed above the uppermost lift of *rock* fill. The need to place graded filter material below the *rock* should be determined by the Consultant prior to commencing grading. The gradation of the graded filter material will be determined at the time the *rock* fill is being excavated. Materials typical of the *rock* fill should be submitted to the Consultant in a timely manner, to allow design of the graded filter prior to the commencement of *rock* fill placement.

6.3.7 *Rock* fill placement should be continuously observed during placement by the Consultant.

7. OBSERVATION AND TESTING

7.1 The Consultant shall be the Owner's representative to observe and perform tests during clearing, grubbing, filling, and compaction operations. In general, no more than 2 feet in vertical elevation of *soil* or *soil-rock* fill should be placed without at least one field density test being performed within that interval. In addition, a minimum of one field density test should be performed for every 2,000 cubic yards of *soil* or *soil-rock* fill placed and compacted.

7.2 The Consultant should perform a sufficient distribution of field density tests of the compacted *soil* or *soil-rock* fill to provide a basis for expressing an opinion whether the fill material is compacted as specified. Density tests shall be performed in the compacted materials below any disturbed surface. When these tests indicate that the density of any layer of fill or portion thereof is below that specified, the particular layer or areas represented by the test shall be reworked until the specified density has been achieved.

7.3 During placement of *rock* fill, the Consultant should observe that the minimum number of passes have been obtained per the criteria discussed in Section 6.3.3. The Consultant should request the excavation of observation pits and may perform plate bearing tests on the placed *rock* fills. The observation pits will be excavated to provide a basis for expressing an opinion as to whether the *rock* fill is properly seated and sufficient moisture has been applied to the material. When observations indicate that a layer of *rock* fill or any portion thereof is below that specified, the affected layer or area shall be reworked until the *rock* fill has been adequately seated and sufficient moisture applied.

7.4 A settlement monitoring program designed by the Consultant may be conducted in areas of *rock* fill placement. The specific design of the monitoring program shall be as recommended in the Conclusions and Recommendations section of the project Geotechnical Report or in the final report of testing and observation services performed during grading.

7.5 The Consultant should observe the placement of subdrains, to verify that the drainage devices have been placed and constructed in substantial conformance with project specifications.

7.6 Testing procedures shall conform to the following Standards as appropriate:

7.6.1 Soil and Soil-Rock Fills:

7.6.1.1 Field Density Test, ASTM D 1556-02, *Density of Soil In-Place By the Sand-Cone Method.*

7.6.1.2 Field Density Test, Nuclear Method, ASTM D 6938-08A, *Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).*

7.6.1.3 Laboratory Compaction Test, ASTM D 1557-02, *Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10-Pound Hammer and 18-Inch Drop.*

7.6.1.4. Expansion Index Test, ASTM D 4829-03, *Expansion Index Test.*

7.6.2 Rock Fills

7.6.2.1 Field Plate Bearing Test, ASTM D 1196-93 (Reapproved 1997) *Standard Method for Nonreparative Static Plate Load Tests of Soils and Flexible Pavement Components, For Use in Evaluation and Design of Airport and Highway Pavements.*

8. PROTECTION OF WORK

8.1 During construction, the Contractor shall properly grade all excavated surfaces to provide positive drainage and prevent ponding of water. Drainage of surface water shall be controlled to avoid damage to adjoining properties or to finished work on the site. The Contractor shall take remedial measures to prevent erosion of freshly graded areas until such time as permanent drainage and erosion control features have been installed. Areas subjected to erosion or sedimentation shall be properly prepared in accordance with the Specifications prior to placing additional fill or structures.

8.2 After completion of grading as observed and tested by the Consultant, no further excavation or filling shall be conducted except in conjunction with the services of the Consultant.

9. CERTIFICATIONS AND FINAL REPORTS

9.1 Upon completion of the work, Contractor shall furnish Owner a certification by the Civil Engineer stating that the lots and/or building pads are graded to within 0.1 foot vertically of elevations shown on the grading plan and that all tops and toes of slopes are within 0.5 foot horizontally of the positions shown on the grading plans. After installation of a section of subdrain, the project Civil Engineer should survey its location and prepare an *as-built* plan of the subdrain location. The project Civil Engineer should verify the proper outlet for the subdrains and the Contractor should ensure that the drain system is free of obstructions.

9.2 The Owner is responsible for furnishing a final as-graded soil and geologic report satisfactory to the appropriate governing or accepting agencies. The as-graded report should be prepared and signed by a California licensed Civil Engineer experienced in geotechnical engineering and by a California Certified Engineering Geologist, indicating that the geotechnical aspects of the grading were performed in substantial conformance with the Specifications or approved changes to the Specifications.

LIST OF REFERENCES

1. Boore, D. M. and G. M Atkinson (2006), *Boore-Atkinson NGA Ground Motion Relations for the Geometric Mean Horizontal Component of Peak and Spectral Ground Motion Parameters*, Report Number PEER 2007/01, May 2007.

2. California Geological Survey, *Seismic Shaking Hazards in California,* Based on the USGS/CGS *Probabilistic* Seismic Hazards Assessment (PSHA) Model, 2002 (revised April 2003). 10% probability of being exceeded in 50 years. http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html

3. Campbell, K. W. and Y. Bozorgnia, *NGA Ground Motion Model for the Geometric Mean Horizontal Component of PGA, PGV, PGD and 5% Damped Linear Elastic Response Spectra for Periods Ranging from 0.01 to 10 s*, Preprint of version submitted for publication in the NGA Special Volume of Earthquake Spectra, Volume 24, Issue 1, pages 139-171, February 2008.

4. Chiou, Brian S-J and Young's, Robert R., *A NGA Model for the Average Horizontal Component of Peak Ground Motion and Response Spectra*, preprint for article to be published in NGA Special Edition of Earthquake Spectra, Spring 2008.

5. *City of San Diego Seismic Safety Study, Geologic Hazards and Faults*, dated April 3, 2008.

6. Kennedy, M. P. and S. S. Tan, 2005, *Geologic Map of the San Diego 30'x60' Quadrangle, California*, USGS Regional Map Series Map No. 3, Scale 1:100,000.

7. Legg, M. R., J. C. Borrero, and C. E. Synolakis (2002), *Evaluation of Tsunami Risk to Southern California Coastal Cities*, 2002 NEHRP Professional Fellowship Report, dated January.

8. Risk Engineering, *EZ-FRISK (Version 7.62)*, 2011.

9. Unpublished reports, aerial photographs, and maps on file with Geocon Incorporated.

10. USGS computer program, *Seismic Hazard Curves and Uniform Hazard Response Spectra (version 5.1.0,), February 10, 2011*

11. 1953 Aerial Photographs, AXN-3M-195 and 196.

APPENDIX I

SAMPLE OF PUBLIC NOTICES

CONSTRUCTION NOTICE

PROJECT NAME

Trenching on your street is complete.

What you need to know:

- Pipe installation on your street is complete and construction crews are now installing new pipeline for this project at another location.
- You may see temporary trench plates or trench caps for some time –even after construction activities have concluded on your street.

Street resurfacing:

- Your Streets will be resurfaced once the entire pipeline project is complete.
- Concrete streets will not be resurfaced curb to curb; only the trench will be backfilled.
- Street resurfacing may be delayed due to the City's slurry seal moratorium.

Estimated resurfacing completion on your street:

(Insert Date-Month and Year)

For questions related to this work
Call: (619) 533-4207
Email: engineering@sandiego.gov
Visit: sandiego.gov/CIP

CITY OF SAN DIEGO
PUBLIC WORKS
DEPARTMENT

This information is available in alternative formats upon request.

ATTACHMENT F

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CERTIFICATIONS AND FORMS

Instruction to Bidders, Section 1 - The Bidder, by submitting its electronic bid, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certifications, forms and affidavits submitted as part of this bid are true and correct.

Bidder's General Information

To the City of San Diego:

Pursuant to "Notice Inviting Bids", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that 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, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that 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, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

The undersigned bidder(s) further warrants that bidder(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Bidding Documents therefore, and that by submitting said Bidding Documents as its bid proposal, bidder(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Bidding Documents.

NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID UNDER 23 UNITED STATES CODE 112 AND PUBLIC CONTRACT CODE 7106

State of California

County of San Diego

The bidder, being first duly sworn, deposes and says that he or she is authorized by the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that 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, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that 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, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

CONTRACTOR CERTIFICATION

DRUG-FREE WORKPLACE

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-17 regarding Drug-Free Workplace as outlined in the WHITEBOOK, Section 7-13.3, "Drug-Free Workplace", of the project specifications, and that;

This company has in place a drug-free workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of subdivisions a) through c) of the policy as outlined.

CONTRACTOR CERTIFICATION

AMERICAN WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the American With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 7-13.2, "American With Disabilities Act", of the project specifications, and that;

This company has in place workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of the policy as outlined.

CONTRACTOR CERTIFICATION

CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE

I declare under penalty of perjury that I am authorized to make this certification on behalf of the company submitting this bid/proposal, that as Contractor, I am familiar with the requirements of City of San Diego Municipal Code § 22.3004 regarding Contractor Standards as outlined in the WHITEBOOK, Section 7-13.4, ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors whose subcontracts are greater than $50,000 in value has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.

AFFIDAVIT OF DISPOSAL

(To be submitted upon completion of Construction pursuant to the contracts Certificate of completion)

WHEREAS, on the _____ DAY OF _____, 2_____ the undersigned entered into and executed a contract with the City of San Diego, a municipal corporation, for:

WEST MAPLE CANYON MINI PARK
(Name of Project)

as particularly described in said contract and identified as Bid No. **L-16-1324-DBB-2**; SAP No. (WBS/IO/CC) **S-00760**; and **WHEREAS**, the specification of said contract requires the Contractor to affirm that "all brush, trash, debris, and surplus materials resulting from this project have been disposed of in a legal manner"; and **WHEREAS**, said contract has been completed and all surplus materials disposed of:

_____

_____

NOW, THEREFORE, in consideration of the final payment by the City of San Diego to said Contractor under the terms of said contract, the undersigned Contractor, does hereby affirm that all surplus materials as described in said contract have been disposed of at the following location(s)

_____

_____

and that they have been disposed of according to all applicable laws and regulations.

Dated this _____ DAY OF _____, _____.

_____ Contractor
by

ATTEST:

State of _____ County of _____

On this_____ DAY OF _____, 2____, before the undersigned, a Notary Public in and for said County and State, duly commissioned and sworn, personally appeared _____ known to me to be the _____ Contractor named in the foregoing Release, and whose name is subscribed thereto, and acknowledged to me that said Contractor executed the said Release.

Notary Public in and for said County and State

COMPANY LETTERHEAD

CERTIFICATE OF COMPLIANCE

Materials and Workmanship Compliance

For Contract or Task_____

I certify that the material listed below complies with the materials and workmanship requirements of the Caltrans Contract Plans, Special Provisions, Standard Specifications, and Standard Plans for the contract listed above.

I also certify that I am an official representative for_____, the manufacturer of the material listed above. Furthermore, I certify that where California test methods, physical or chemical test requirements are part of the specifications, that the manufacturer has performed the necessary quality control to substantiate this certification.

Material Description:

Manufacturer: _____

Model:_____

Serial Number (if applicable)_____

Quantity to be supplied:_____

Remarks:_____

Signed by: _____

Printed Name:_____

Title: _____

Company: _____

Date: _____

City of San Diego
Public Works Department, Field Division

NOTICE OF MATERIALS TO BE USED

To:_____ Date: _____, 20___
Resident Engineer

You are hereby notified that the materials required for use under Contract No. _____ for construction of _____
_____,
in the City of San Diego, will be obtained from sources herein designated.

CONTRACT ITEM NO. (Bid Item)	KIND OF MATERIAL (Category)	NAME AND ADDRESS WHERE MATERIAL CAN BE INSPECTED (At Source)

It is requested that you arrange for a sampling, testing, and inspection of the materials prior to delivery, in accordance with Section 4-1.11 of the WHITEBOOK, where it is practicable, and in accordance with your policy. It is understood that source inspection does not relieve the Contractor of full responsibility for incorporating in the work, materials that comply in all respects with the contract plans and specifications, nor does it preclude subsequent rejection of materials found to be undesirable or unsuitable.

Distribution:

Supplier

Yours truly,

_____
Signature of Supplier

_____
Address

BID ITEMS

***** PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY *****
TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY
SEE INSTRUCTIONS TO BIDDERS, FOR FURTHER INFORMATION

Item	Quantity	Unit	NAICS	Payment Reference	Description	Unit Price	Extension
BASE BID							
1	1	LS	524126	2-4.1	Bonds (Payment and Performance)		$
2	1	LS	238990	9-3.4.1	Mobilization		$
3	1	LS	238390	700-2.15	Demolition/Clearing and Grubbing		$
4	1	LS	541370	2-9.2	Survey Services		$
5	1	LS	237310	300-2.9	Grading and Export		$
6	1	LS	238990	9.3.1	Construction of approximately 9,000 square feet park. Proposed improvements include Decorative Concrete Meandering Walkways, Native Landscaping, Irrigation System, Guardrail Fence, Stone Paving and "Outcroppings", Upgrading of Existing Waldo Waterman Monument, Retaining Walls, Seat Walls, Site Furnishings, Drainage Systems, Boulders and Cobble Mulch, and Accessible Walkways.		$
7	1	LS	238210	313-5	Site Electrical and Lighting Systems		$
8	1	LS	238990	7-10.2.6	Traffic Control Design and Installation		$
9	1	LS	541330	701-13.9.5	Water Pollution Control Program Development		$
10	1	LS	238990	701-13.9.5	Water Pollution Control Program Implementation		$

Item	Quantity	Unit	NAICS	Payment Reference	Description	Unit Price	Extension
11	1	AL	238990	7-5.3	Building Permits - Type I		$5,000.00
12	1	AL		9-3.5	Field Orders - Type II		$10,000.00
13	1	AL	237110	306-14.1	Water Meter Capacity and Permitting Fees – Type I		$16,000.00
14	1	LS	237110	306-14.1	Water Meter, Service Line and Wet Tap Installation		$
15	1	LS	561730	700-2.15	Revegetation and permanent erosion control		$
16	1	LS	561730	700-2.15	Revegetation Maintenance and Monitoring Program (25 months)		$
					TOTAL BASE BID:		**$**

LIST OF SUBCONTRACTORS

*** PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY ***
TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY
SEE INSTRUCTIONS TO BIDDERS, FOR FURTHER INFORMATION

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the California Public Contract Code (PCC), the Bidder is to list below the name, address and license number of each Subcontractor who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement, in an amount of or in excess of 0.5% of the Contractor's total Bid. Failure to comply with this requirement may result in the Bid being rejected as non-responsive. The Contractor is to list only one Subcontractor for each portion of the Work. The Bidder's attention is directed to the Special Provisions - General; Paragraph 2-3 Subcontracts, which stipulates the percentage of the Work to be performed with the Bidder's own forces. The Bidder is to also list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which the Bidders are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB①	WHERE CERTIFIED ②	CHECK IF JOINT VENTURE PARTNERSHIP
Name:_____ Address:_____ City:_____ State:_____ Zip:_____ Phone:_____ Email:_____							
Name:_____ Address:_____ City:_____ State:_____ Zip:_____ Phone:_____ Email:_____							

① As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Bidder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC		
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.

NAMED EQUIPMENT/MATERIAL SUPPLIER LIST

*** PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY ***
TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY
SEE INSTRUCTIONS TO BIDDERS, FOR FURTHER INFORMATION

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES (MUST BE FILLED OUT)	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB①	WHERE CERTIFIED②
Name:_____ Address:_____ City:_____ State:_____ Zip:_____ Phone:_____ Email:_____						
Name:_____ Address:_____ City:_____ State:_____ Zip:_____ Phone:_____ Email:_____						

① As appropriate, Bidder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE,SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Bidder shall indicate if Vendor/Supplier is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC		
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Bidder will not receive any subcontracting participation percentages if the Bidder fails to submit the required proof of certification.

ELECTRONICALLY SUBMITTED FORMS

THE FOLLOWING FORMS MUST BE SUBMITTED IN PDF FORMAT WITH BID SUBMISSION

The following forms are to be completed by the bidder and submitted (uploaded) electronically with the bid in PlanetBids.

A. **BID BOND – See Instructions to Bidders, Bidders Guarantee of Good Faith (Bid Security) for further instructions**
B. **CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS**
C. **EQUAL BENEFITS ORDINANCE - CERTIFICATION OF COMPLIANCE**

Bids will not be accepted until ALL forms are submitted as part of the bid submittal

BID BOND

See Instructions to Bidders, Bidder Guarantee of Good Faith (Bid Security)

KNOW ALL MEN BY THESE PRESENTS,

That TRI-GROUP CONSTRUCTION AND DEVELOPMENT, INC. as Principal, and NORTH AMERICAN SPECIALTY INSURANCE COMPANY as Surety, are held and firmly bound unto The City of San Diego hereinafter called "OWNER," in the sum of **10% OF THE TOTAL BID AMOUNT** 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.

WHEREAS, said Principal has submitted a Bid to said OWNER to perform the WORK required under the bidding schedule(s) of the OWNER's Contract Documents entitled

WEST MAPLE CANYON MINI PARK, BID NO. L-16-1324-DBB-2

NOW THEREFORE, if said Principal is awarded a contract by said OWNER and, within the time and in the manner required in the "Notice Inviting Bids" enters into a written Agreement on the form of agreement bound with said Contract Documents, furnishes the required certificates of insurance, and furnishes the required Performance Bond and Payment Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect. In the event suit is brought upon this bond by said OWNER and OWNER prevails, said Surety shall pay all costs incurred by said OWNER in such suit, including a reasonable attorney's fee to be fixed by the court.

SIGNED AND SEALED, this 16TH day of DECEMBER, 2015

TRI-GROUP CONSTRUCTION AND DEVELOPMENT, INC. (SEAL)	NORTH AMERICAN SPECIALTY INSURANCE COMPANY (SEAL)
(Principal)	(Surety)
By: _____	By: _____
(Signature)	(Signature)
HANI ASSI, SECRETARY	MARK D. IATAROLA, ATTORNEY-IN-FACT

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

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 SAN DIEGO)

On 12/16/2015 *Date* before me, MICHELLE M. BASUIL, NOTARY PUBLIC *Here Insert Name and Title of the Officer*,

personally appeared MARK D. IATAROLA *Name(s) of Signer(~~s~~)*,

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.

MICHELLE M. BASUIL
COMM # 2034911
SAN DIEGO COUNTY
NOTARY PUBLIC-CALIFORNIA
MY COMMISSION EXPIRES
AUG. 24, 2017

Signature Michelle M. Basuil
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: MARK D. IATAROLA	Signer's Name:
☐ Corporate Officer — Title(s):	☐ Corporate Officer — Title(s):
☐ Partner — ☐ Limited ☐ General	☐ Partner — ☐ Limited ☐ General
☐ Individual ☒ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other:	☐ Other:
Signer Is Representing:	Signer Is Representing:

NAS SURETY GROUP

NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Manchester, New Hampshire, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Schaumburg, Illinois, each does hereby make, constitute and appoint:

JOHN G. MALONEY, HELEN MALONEY, MICHELLE M. BASUIL,
and MARK D. IATAROLA
JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

FIFTY MILLION ($50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

"RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."

NORTH AMERICAN SPECIALTY INSURANCE COMPANY CORPORATE SEAL 1973 NEW HAMPSHIRE

By _____
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company

By _____
Michael A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company

WASHINGTON INTERNATIONAL INSURANCE COMPANY CORPORATE SEAL NEW HAMPSHIRE

IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 17th day of September, 2015.

North American Specialty Insurance Company
Washington International Insurance Company

State of Illinois
County of Cook ss:

On this 17th day of September, 2015, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.

OFFICIAL SEAL
M KENNY
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 12/04/2017

M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Assistant Secretary of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 16th day of DECEMBER, 20 15.

Jeffrey Goldberg, Vice President & Assistant Secretary of
Washington International Insurance Company & North American Specialty Insurance Company

CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

CHECK ONE BOX ONLY.

☑ The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.

☐ The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN
		TRI-GROUP CONSTRUCTION AND DEVELOPMENT, INC.			~~HANI ASSI~~

Contractor Name: TRI-GROUP CONSTRUCTION AND DEVELOPMENT, INC.

Certified By HANI ASSI Title SECRETARY OF CORPORATION

Name

Signature Date 12-16-15

USE ADDITIONAL FORMS AS NECESSARY

EQUAL BENEFITS ORDINANCE CERTIFICATION OF COMPLIANCE

For additional information, contact:
CITY OF SAN DIEGO
EQUAL BENEFITS PROGRAM
202 C Street, MS 9A, San Diego, CA 92101
Phone (619) 533-3948 Fax (619) 533-3220

COMPANY INFORMATION

Company Name:	TRI-GROUP CONSTRUCTION	Contact Name:	HANI ASSI
Company Address:	AND DEVELOPMENT, INC. 9580 BLACK MOUNTAIN RD, STE L SAN DIEGO, CA 92126	Contact Phone:	858-583-1846
		Contact Email:	haniassi@aol.com

CONTRACT INFORMATION

Contract Title:	WEST MAPLE CANYON MINI PARK	Start Date:	04-01-16
Contract Number (if no number, state location):	L-16-1324-DBB-2	End Date:	12-31-16

SUMMARY OF EQUAL BENEFITS ORDINANCE REQUIREMENTS

The Equal Benefits Ordinance [EBO] requires the City to enter into contracts only with contractors who certify they will provide and maintain equal benefits as defined in SDMC §22.4302 for the duration of the contract. To comply:

- Contractor shall offer equal benefits to employees with spouses and employees with domestic partners.
  - Benefits include health, dental, vision insurance; pension/401(k) plans; bereavement, family, parental leave; discounts, child care; travel/relocation expenses; employee assistance programs; credit union membership; or any other benefit.
  - Any benefit not offer an employee with a spouse, is not required to be offered to an employee with a domestic partner.
- Contractor shall post notice of firm's equal benefits policy in the workplace and notify employees at time of hire and during open enrollment periods.
- Contractor shall allow City access to records, when requested, to confirm compliance with EBO requirements.
- Contractor shall submit *EBO Certification of Compliance*, signed under penalty of perjury, prior to award of contract.

NOTE: This summary is provided for convenience. Full text of the EBO and Rules Implementing the EBO are available at *www.sandiego.gov/administration.*

CONTRACTOR EQUAL BENEFITS ORDINANCE CERTIFICATION

Please indicate your firm's compliance status with the EBO. The City may request supporting documentation.

☑ I affirm **compliance** with the EBO because my firm *(contractor must select one reason):*

- ☐ Provides equal benefits to spouses and domestic partners.
- ☑ Provides no benefits to spouses or domestic partners.
- ☐ Has no employees.
- ☐ Has collective bargaining agreement(s) in place prior to January 1, 2011, that has not been renewed or expired.

☐ I request the City's approval to pay affected employees a cash equivalent in lieu of equal benefits and verify my firm made a reasonable effort but is not able to provide equal benefits upon contract award. I agree to notify employees of the availability of a cash equivalent for benefits available to spouses but not domestic partners and to continue to make every reasonable effort to extend all available benefits to domestic partners.

It is unlawful for any contractor to knowingly submit any false information to the City regarding equal benefits or cash equivalent associated with the execution, award, amendment, or administration of any contract. [San Diego Municipal Code §22.4307(a)]

Under penalty of perjury under laws of the State of California, I certify the above information is true and correct. I further certify that my firm understands the requirements of the Equal Benefits Ordinance and will provide and maintain equal benefits for the duration of the contract or pay a cash equivalent if authorized by the City.

HANI ASSI, SECRETARY OF CORP		12-16-15
Name/Title of Signatory	Signature	Date

FOR OFFICIAL CITY USE ONLY

Receipt Date: EBO Analyst: ☐ Approved ☐ Not Approved – Reason:

(Rev 02/15/2011

City of San Diego

CITY CONTACT: **CLEMENTINA GIORDANO** - Contract Specialist, Email: Cgiordano@sandiego.gov
Phone No. (619) **533-3481**, Fax No. (619) 533-3633

ADDENDUM "A"

e - Bidding **FOR**

West Maple Canyon Mini Park

BID NO.:	**L-16-1324-DBB-2**
SAP NO. (WBS/IO/CC):	**S-00760**
CLIENT DEPARTMENT:	**1714**
COUNCIL DISTRICT:	**3**
PROJECT TYPE:	**GF**

BID DUE DATE:

1:30 PM
DECEMBER 16, 2015
CITY OF SAN DIEGO
PUBLIC WORKS CONTRACTS
1010 SECOND AVENUE, 14th FLOOR, MS 614C
SAN DIEGO, CA 92101

ENGINEER OF WORK

The engineering Specifications and Special Provisions contained herein have been prepared by or under the direction of the following Registered Engineer and Architect:

Vicki Estrada — 12/15/2015 — Seal:

1) Registered Architect — Date

Samir M — 12/15/15 — Seal: C 73711

2) For City Engineer — Date

A. CHANGES TO CONTRACT DOCUMENTS

The following changes to the Contract Documents are hereby made effective as though originally issued with the bid package. Bidders are reminded that all previous requirements to this solicitation remain in full force and effect.

B. BIDDER's QUESTIONS

Q1. I cannot determine how long the plant establishment period is for the referenced project. Bid Item #6 indicates 25 months maintenance and the Specifications say the time for completion is 220 working days (11 months), including the plant establishment period. Please clarify the time for plant establishment.

A1. The plant establishment period of 120 days is included as part the contract time frame of 220 working days.

Upon completion of the contract period of 220 working days the 25 monitoring period will begin.

Q2. What does this mean? Line Item 16 "*Revegetation Maintenance and Monitoring Program (25 month)*" so I have heard of a separate agreement for Revegetation and Maintenance but where does it say how often monitoring will occur how can we bid without this information. What page of the "main body " might I have missed for this definition.

A2. Per White Book, Section 700 – Revegetation, Maintenance, and Monitoring.

Q3. The existing SDG&E tie-downs to be adjusted to grade is to be completed by others (SDG&E). How will the SDG&E work be paid – by the Contractor and reimbursed by the City, or paid by the City directly to SDG&E?

A3. The coordination of all work with SDG&E shall be done by the Contractor. Tie downs adjustment to grade shall be paid by the Contractor as part of the Lump Sum Bid Item #7.

James Nagelvoort, Director
Public Works Department

Dated: *December 15, 2015*
San Diego, California

JN/HM/lji/

Bid Results for Project West Maple Canyon Mini Park (L-16-1324-DBB-2)
Issued on 11/17/2015
Bid Due on December 16, 2015 1:30 PM (Pacific)
Exported on 12/16/2015

VendorID	Company Name	Address	City	ZipCode	Country	Contact	Phone	Fax	Email	Vendor Type
305965	Tri-Group Construction & Development, Inc.	9580 Black Mountain Rd, Ste L	San Diego	92126	United States	Casey Whitlock	858-689-0058	858-689-1594	casey.trigroup@gmail.com	SLBE,CADIR,Local

Respondee	Respondee Title	Respondee Phone	Respondee Email
Hani Assi	Vice President	858-689-0058	casey.trigroup@gmail.com

Bid Format	Submitted Date	Status	Confirmation #	Ranking
Electronic	December 16, 2015 1:02:23 PM (Pacific)	Submitted	69470	0

Attachments		
File Title	File Name	File Type
Bid Bond	W Maple Canyon Bid Bond.pdf	General Attachments
Cert of Pending Actions	W Maple Canyon Cert of Pending Actions.pdf	General Attachments
Equal Benefits	W Maple Canyon Equal Benefits.pdf	General Attachments

Line Items

Item Num	Section	Item Code	Description	Unit of Measure	Quantity	Unit Price	Line Total
1	Main Bid		Bonds (Payment and Performance)	LS	1	$5,000.00	$5,000.00
2	Main Bid		Mobilization	LS	1	$12,000.00	$12,000.00
3	Main Bid		Demolition/Clearing and Grubbing	LS	1	$10,000.00	$10,000.00
4	Main Bid		Survey Services	LS	1	$8,000.00	$8,000.00
5	Main Bid		Grading and Export	LS	1	$45,000.00	$45,000.00
6	Main Bid		Construction of approximately 9,000 square feet park. Proposed improvements include Decorative Concrete Meandering Walkways, Native Landscaping, Irrigation System, Guardrail Fence, Stone Paving and "Outcroppings", Upgrading of Existing Waldo Waterman Monument, Retaining Walls, Seat Walls, Site Furnishings, Drainage Systems, Boulders and Cobble Mulch, and Accessible Walkways.	LS	1	$234,000.00	$234,000.00
7	Main Bid		Site Electrical and Lighting Systems	LS	1	$30,000.00	$30,000.00
8	Main Bid		Traffic Control Design and Installation	LS	1	$5,000.00	$5,000.00
9	Main Bid		Water Pollution Control Program Development	LS	1	$5,000.00	$5,000.00
10	Main Bid		Water Pollution Control Program Implementation	LS	1	$5,000.00	$5,000.00
11	Main Bid		Building Permits - Type I	AL	1	$5,000.00	$5,000.00
12	Main Bid		Field Orders - Type II	AL	1	$10,000.00	$10,000.00
13	Main Bid		Water Meter Capacity and Permitting Fees	AL	1	$16,000.00	$16,000.00
14	Main Bid		Water Meter, Service Line and Wet Tap Installation	LS	1	$6,000.00	$6,000.00
15	Main Bid		Revegetation and permanent erosion control	LS	1	$5,000.00	$5,000.00
16	Main Bid		Revegetation Maintenance and Monitoring Program (25 month)	LS	1	$10,000.00	$10,000.00
						Subtotal	$411,000.00
						Total	$411,000.00

Subcontractors

Name	Description	License Num	Amount	Type	Address	City	ZipCode
Cutting Edge Landcare	landscaping and 25 mo. maintenance	981127	$106,365.79		26808 Banbury Ln	V C	92101
Hanson Electric, Inc.	Electrical	1006273	$26,847.00	CAU,MALE,DVBE,CADIR	1277 Buckwheat Tri	Campo	91906

Self-Performance
0.3241