

COUNTY OF SAN MATEO

STATE OF CALIFORNIA

CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR

QUARRY PARK
FIRE ROAD EXTENSION PROJECT

TOTAL PROJECT APPROXIMATELY 2,250 FEET IN LENGTH
WITH APPURTENANT WORK THERETO
IN SAN MATEO COUNTY

COUNTY PROJECT NO. P32R1
PROJECT FILE NO. E5053



APPROVED: _____ May 5 _____, 2023

A handwritten signature in blue ink, appearing to read "Ann Mader Stillman".

ANN MADER STILLMAN
(R.C.E. No. 47882)
Director of Public Works



Department of Public Works
San Mateo County
555 County Center, 5th Floor
Redwood City, California 94063-1665

Last Updated: May 2023

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NOT USED

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Pacific Watershed Associates, March 24, 2022

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Signature of Bidder

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San Mateo County Equal Employment Opportunity Program

Equal Benefits Compliance Ordinance No. 04026

(Title 2, Chapter 2.84, San Mateo County Ordinance Code)

Equal Benefits Compliance Declaration Form

Contractor Employee Jury Service Ordinance No. 04269

(Title 2, Chapter 2.85, San Mateo County Ordinance Code)

Contractor Employee Jury Service Compliance Declaration Form

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AGREEMENT

Signature Sheet

**COUNTY OF SAN MATEO
STATE OF CALIFORNIA**

NOTICE TO CONTRACTORS

NOTICE IS HEREBY GIVEN, that

Sealed bids will be received at the office of the County Executive/Clerk of the Board of Supervisors, Hall of Justice and Records, 400 County Center, Redwood City, California, 94063 until the hour of

2:30 p.m., Thursday, June 1, 2023

which bids will then be transmitted to the County Executive's Office in the Hall of Justice and Records, where the bids will be publicly opened and read aloud for the following project in accordance with the specifications therefore and to which special reference is made as follows:

**QUARRY PARK
FIRE ROAD EXTENSION PROJECT**

**TOTAL PROJECT APPROXIMATELY 2,250 FEET IN LENGTH
WITH APPURTENANT WORK THERETO
IN SAN MATEO COUNTY**

**COUNTY PROJECT NO. P32R1
PROJECT FILE NO. E5053**

Bids are required for the entire work described herein.

Bidders are further advised of the following:

- 1. Contractor should be placed on a Plan Holders List for bidding. To be placed on the Plan Holders List, the Contractor shall either:**
 - a. Purchase Plans and Specifications, including forms of proposal and contract, from the County of San Mateo Department of Public Works. When purchasing by phone (650-363-4100) or email (adeguzman@smcgov.org), please send check payable to "County of San Mateo" to 555 County Center, 5th Floor, Redwood City, CA 94063; OR**
 - b. Complete and sign the following Plan Holder's Affidavit and return to the County by PDF via email to adeguzman@smcgov.org, alum@smcgov.org, or by using the link below and you will receive a**

separate link for downloading an electronic copy of the Plans and Specifications:

<https://www.smcgov.org/publicworks/affidavit-form-quarry-park-fire-road-extension-project>

- c. If the Plans and Specifications are obtained through a source other than those outlined in 1a or 1b above, complete and sign the following Plan Holder's Affidavit and return to the County by either PDF via email to adeguzman@smcgov.org. The Contractor is advised that the table should be received by the County no later than three (3) working days prior to the bid opening date.

Plan Holder's Affidavit	
Project Title	Quarry Park Fire Road Extension Project
Project No.	P32R1
Project Engineer:	Atkins De Guzman
Project Manager:	Anthony Lum
Bid Open Date and Time:	2:30 p.m., Thursday, June 1, 2023
Company Name:	
Mailing Address:	
Phone Number:	Fax Number:
E-mail Address:	
(Name and Title of Authorized Representative of Bidder)	
(Signature of Authorized Representative of Bidder)	

- The Plan Holders List will be posted to the County of San Mateo's Public Works website two (2) working days prior to the bid open date.
- Questions regarding the Contract Documents concerning items such as discrepancies, conflicts, omissions, doubts as to meanings, or regarding scope of bid items shall be referred to the Engineer. Inquiries must be received in writing via email, to adeguzman@smcgov.org, not less than five (5) working days prior to bid opening. Inquiries will be answered in writing

via email response if written clarification is warranted, in the opinion of the Engineer, then inquiries and responses will be posted to the Project's page on the County of San Mateo's Public Works website. It will be the Contractor's sole responsibility to ensure that they receive responses, *if any*. The County will not be responsible for oral clarifications.

4. It will be the Contractor's sole responsibility to ensure that they have received addendums, *if any*, which will be posted to the County of San Mateo's Public Works website on the same day issued. Said addendums will also be sent to all current plan holders and made available during purchase of Plans and Specifications.
5. Proposals in which the prices obviously are unbalanced may be rejected.

The Department of Public Works website will be updated as needed and can be accessed under the Department's tab found on the County of San Mateo website (<http://publicworks.smcgov.org>).

ENGINEER'S ESTIMATE**QUARRY PARK
FIRE ROAD EXTENSION PROJECT**

**TOTAL PROJECT APPROXIMATELY 2,250 FEET IN LENGTH
WITH APPURTENANT WORK THERETO
IN SAN MATEO COUNTY**

Item No.	Section No.	Estimated Quantity	Unit of Measure	Item Description
1	11	1	LS	Mobilization
2	12	1	LS	Maintaining Traffic
3	13	1	LS	Water Pollution Control
4	14	1	LS	Construction Waste Management
5	17	1	LS	Clearing and Grubbing
6	17-2	3	EA	Remove Trees and Tree Stumps from 6" to 11.9" in Diameter
7	17-2	116	EA	Remove Trees and Tree Stumps from 12" to 17.9" in Diameter
8	17-2	41	EA	Remove Trees and Tree Stumps from 18" to 23.9" in Diameter
9	17-2	53	EA	Remove Trees and Tree Stumps from 24" to 35.9" in Diameter
10	17-2	33	EA	Remove Trees and Tree Stumps 36" or Greater in Diameter
11	18	1	LS	Dust Palliatives
12	19-5.1 (F)	165	CY	Reinforced Steepened Slopes
13	19-7.1 (F)	3,100	CY	Earthwork Excavation
14	19-7.2	1,000	CY	Earthwork Native Backfill

15	19-7.3	2,000	CY	Earthwork Imported Backfill
16	19-7.4	2,100	CY	Off-Haul Dirt
17	21-1	3,000	LF	Temporary Silt Fence
18	21-2	1	LS	Temporary Erosion Control
19	26-1	1,200	TON	Class 2 Aggregate Base
20	80-2	120	LF	Temporary Construction Fencing
21	80-4	1	LS	Access Gate (Coronado Ave)
22	96-1	45,200	SF	Non-Woven Geotextile
23	96-1	9,150	SF	Primary Geogrid
24	96-1	3,750	SF	Secondary Geogrid
25	100	1	LS	Construction Staking and Layout

Engineer's Estimate of Costs: \$ 1,000,000.00

(F) Final Pay Quantities - See Section 9-1.02C, "Final Pay Item Quantities," of the Standard Specifications.

(Note: Gaps in section numbering, above, indicate the Section is blank or does not apply.)

The foregoing quantities are approximate only, being given as a basis for the comparison of bids, and the County of San Mateo does not, expressly or by implication, agree that the actual amount of work will correspond herewith, but reserves the right to increase or decrease the amount of any class or portion of the work, or to omit any portion of the work, as may be deemed necessary or expedient by the Engineer.

Payment to the Contractor for materials furnished and work completed shall be made by the County in accordance with Section 9 of the "Special Provisions" portion of these Contract Documents. Pursuant to Section 22300 of the Public Contract Code, Contractor may, upon his request and at Contractor's expense, substitute equivalent securities for any moneys retained from such payment for the fulfillment of the Contract.

When applicable, both Contractor and Subcontractor hereby agrees to pay not less than prevailing rates of wages and be responsible for compliance with all the provisions of the California Labor Code, Article 2-Wages, Chapter 1, Part 7, Division 2, Section 1770 et seq and Section 1810 et seq. A copy of the prevailing wage scale established by the Department of Industrial Relations is on file in the office of the Director of Public Works, and available at www.dir.ca.gov/DLSR or by phone at 415-703-4774. California Labor Code Section 1776(a) requires each contractor and subcontractor keep accurate payroll records of trades workers on all public works projects and to submit copies of certified payroll records upon request.

Additionally, pursuant to State Senate Bill SB 854 (Stat. 2014, chapter 28), effective January 1, 2015:

- (1) No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].**
- (2) No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.**
- (3) This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.**

Wage rates for overtime shall be paid at not less than one and one-half (1-1/2) times the above rates. Wage rates for Sundays and holidays shall be paid at not less

than two (2) times the above rates.

The holidays upon which such rates shall be paid shall be all holidays recognized in the collective bargaining agreement applicable to the particular craft, classification, or type of worker employed on the Project.

It is the policy of the County that Contractors on public projects employ their workers and craftsmen from the local labor market whenever possible. "Local Labor Market" is defined as the labor market within the geographical confines of the County of San Mateo, State of California. Consistent with this policy, the Contractor is requested to employ craftsmen and other workers from the local labor market whenever possible to do so.

Each bidder shall submit with the bid, Certificates of Compliance and Intent on a form provided in the "Proposal" section of these Contract Documents; a certificate that bidder complies with the provisions of the Equal Employment Opportunity Requirement of Executive Order 11246, Title VII of the Civil Rights Act of 1964, the California Fair Employment and Housing Act and any other federal, State and local laws and regulations relating to equal employment opportunity. With the execution of said certificates, bidder also agrees that bidder will maintain or develop and implement, during the course of the work concerned, a program of hiring and employment, conducted without regard to race, religion, color, national origin, ancestry, sexual orientation, or sex of the applicants. With this certification, bidder shall submit any and all information that may be required by the County in connection with the particular project.

Each bidder is hereby notified of Section 9204 and Section 20104 et seq. of the Public Contract Code as those Sections (attached hereto as Appendix E) relate to resolution of construction claims, and to Section 3186 of the Civil Code, as amended January 1, 1999, with regard to stop notices and public entity's rights to retain monies in order to provide for that entity's reasonable cost of litigation. The bidder is further notified that all provisions of Section 9204 and Section 20104 et seq. of the Public Contract Code and Section 3186 of the Civil Code, as outlined above shall be considered as incorporated into and become an integral part of these specifications.

Questions relating to equal employment should be directed to the San Mateo County Department of Public Works, Equal Employment Opportunity Program, 555 County Center, 5th Floor, Redwood City, CA 94063-1665, telephone (650) 363-4100.

Plans and Specifications and forms of Proposal and Contract may be seen and obtained at the office of the Director of Public Works, 555 County Center, Redwood City, California, 94063-1665. Plans and specifications may be obtained for a:

NON-REFUNDABLE FEE OF \$50 PER SET

Additional technical questions should be directed to the office of the Director of Public Works, 555 County Center, Redwood City, California, 94063-1665, telephone (650) 363-4100.

The Contractor shall possess either a Class A License or a combination of Class C licenses that are applicable for the majority of the work at the time this contract is awarded. No Contract will be awarded to a Bidder who is not licensed as required by laws of the State of California.

The Contractor shall sign and date the Acknowledgement of Site Visit form provided on page 6 of the Proposal Section and submit with the bid. Failure to complete this form shall be grounds for rejection of the bid.

The County of San Mateo reserves the right to reject any or all bids and/or waive any informalities or irregularities in any bid received.

Bidders may not withdraw their bid for a period of **FORTY-FIVE (45) DAYS** after the date set from the opening thereof.

BY ORDER OF THE
BOARD OF SUPERVISORS
COUNTY OF SAN MATEO

DATE: May 5, 2023

**Michael Callagy, County Executive/
Clerk of the Board of Supervisors**



Receipt of Bids in the Office of the County Manager/Clerk of the Board of Supervisors, Hall of Justice.
Refer to project Notice to Contractors for Time, Date or alternate location.

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COUNTY OF SAN MATEO

STATE OF CALIFORNIA

**SPECIAL PROVISIONS
FOR**

**QUARRY PARK
FIRE ROAD EXTENSION PROJECT**

**TOTAL PROJECT APPROXIMATELY 2,250 FEET IN LENGTH
WITH APPURTENANT WORK THERETO
IN SAN MATEO COUNTY**

**COUNTY PROJECT NO. P32R1
PROJECT FILE NO. E5053**

DATE: May 5, 2023

SECTION 1.
DEFINITIONS OF TERMS TO BE USED IN THE SPECIAL PROVISIONS,
NOTICE TO CONTRACTORS, PROPOSAL, AGREEMENT OR
OTHER CONTRACT DOCUMENTS

Except as specifically stated herein, the definitions contained in the Standard Specifications of the State of California, Department of Transportation, as set forth per Section 2-1, "Plans and Specifications," of these Special Provisions and hereafter referred to as "Standard Specifications," shall be applicable with the understanding that where said definitions specifically refer to the State of California, a department or division of the State or an official, officer or employee of the State, said definition shall be interpreted to refer to the County of San Mateo, the Department of Public Works, or other appropriate department, division, official, officer or employee of the County of San Mateo.

Definition 7-1.02L, "Public Contract Code," of the Standard Specifications shall not be interpreted to include the provisions of Article 7.1 of Division 2, Part 2, Chapter 1 of the Public Contract Code.

END OF SECTION

SECTION 2. BIDDING

The Bidder's attention is directed to all the provisions of Section 2, "Bidding," of the Standard Specifications and these Special Provisions. The County will accept a Bidder's Bond in the form issued by an admitted surety insurer in lieu of the sample forms provided herein in Appendix C of these Special Provisions. The County will not be responsible for any oral interpretations to Bidders with respect to any of the work embraced herein.

Failure of the bidder to fulfill the requirements of the Special Provisions for submittals required to be furnished after bid opening, including but not limited to escrowed bid documents, where applicable, may subject the bidder to a determination of the bidder's responsibility in the event it is the apparent low bidder on a future public works contract.

All proposals must be made upon the blank form contained herein.

2-1. Plans and Specifications

Subject to the exceptions stated herein, the work embraced herein shall be done in accordance with the Standard Plans and Specifications as adopted by the County of San Mateo insofar as the same may apply, and in accordance with the following Special Provisions.

As set forth in **Resolution No. 077227** of the Board of Supervisors of the County of San Mateo, adopted **February 11, 2020**, which approved and adopted the **2018** Standard Plans and Standard Specifications of the State of California, Department of Transportation as the Standard Plans and Standard Specifications of the County of San Mateo, State of California.

In the event that a discrepancy arises between the project Plans, these Special Provisions, the Standard Plans and the Standard Specifications, the provisions of Section 5-1.02, "Contract Components," of the Standard Specifications shall apply.

END OF SECTION

SECTION 3. CONTRACT AWARD AND EXECUTION

The bidder's attention is directed to the provisions in Section 3, "Contract Award and Execution," of the Standard Specifications and these Special Provisions for the requirements and conditions concerning award and execution of contracts.

However, the following supersedes the second paragraph in Section 3-1.04, "Contract Award," of the Standard Specifications:

"The award of contract, if awarded, will be made to the lowest responsible bidder within **SIXTY (60) DAYS** after the opening of the proposals. If the lowest responsible bidder refuses or fails to execute the contract, the County may award the contract to the second lowest responsible bidder. If the second lowest responsible bidder refuses or fails to execute the contract, the County may award the contract to the third responsible bidder. The period of time after that specified above within which the award of the contract may be made shall be subject to extension for such further period as may be agreed upon, in writing, between the County and the bidder concerned."

Bidders who wish to lodge a protest for consideration as to the bidding process or the award of a contract to the lowest responsible bidder must do so as follows:

- (1) Protests based upon alleged improprieties in a solicitation, which are apparent prior to bid opening, shall be filed **two (2) business days** prior to bid opening.
- (2) Protests other than those covered by paragraph 1, above, shall be filed no later than **ten (10) calendar days** after the bid opening.
- (3) All protests shall be delivered to:

Director of Public Works
County of San Mateo
555 County Center, 5th Floor
Redwood City, CA 94063

Untimely protests, which do not meet the deadline requirements specified above, will not be accepted or considered.

Bid protests must be submitted in writing to the addressee and address listed above. Bid protests must at a minimum include the following:

- Project Name
- Project File Number
- A complete statement describing the basis for the bid protest, which includes a detailed statement of all legal and factual grounds for the protest

- Documentation supporting the protestor's grounds for the protest
- The type of relief requested and the legal basis for such relief

If a valid protest is filed timely, the Department will investigate the bid protest. The protested bidder shall have **three (3) business days** to respond to the Department and to provide any information requested by the Department. The Department shall respond to the protesting party, stating its findings. The Department Director shall make a recommendation to the San Mateo County Board of Supervisors regarding the bid protest.

Bid protests are to be delivered to the following address: 555 County Center, 5th Floor Redwood City, CA 94063.

The award of the contract, if it is awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed.

The contract shall be executed by the successful bidder and shall be returned, together with the contract bonds, to the County so that it is received within ten (10) days, not including Saturdays, Sundays and legal holidays, after the bidder has received the contract for execution. Failure to do so shall be just cause for forfeiture of the proposal guaranty. The executed contract documents shall be delivered to the following address: 555 County Center, 5th Floor Redwood City, CA 94063.

END OF SECTION

SECTION 4.

SCOPE OF WORK

Quarry Park is a 567-acre County Park located in the unincorporated community of El Granada, on the Pacific coast side of San Mateo County, California. It is 4 miles north of Half Moon Bay, and 25 miles south of San Francisco. Quarry Park existing conditions include hiking trails, play areas for children, picnic tables, a community garden, tree house, open grass fields, restrooms, and a parking area. Majority of the area of Quarry Park is covered by Eucalyptus Trees with small patches of Pine.

The work to be done, in general, includes construction of a new fire road within Quarry Park which must follow California Department of Forestry and Fire Protection Regulations and San Mateo County Fire Marshall's Office Regulations. The new fire road will start at Coronado Avenue and will connect to the South Ridge Vista Trail. The new fire road will require the removal of existing trees and include significant grading of the hillslope to create turnouts, rolling dips, as well as any other items and details that are required by the Project Plans, Standard Specifications, these Special Provisions, and the Project Engineer.

END OF SECTION

SECTION 5.

CONTROL OF WORK

Attention is directed to the provisions of Section 5, "Control of Work," of the Standard Specifications, except as herein provided, and to Section 2-1, "Plans and Specifications," of these Special Provisions.

5-1. Differing Site Conditions

This section shall be used in lieu of Section 4-1.06, "Differing Site Conditions," of the Standard Specifications. Section 4-1.06 of the Standard Specifications shall not apply.

The following shall apply to digging trenches or other excavations that extend deeper than four feet (4') below the surface:

The Contractor shall promptly, and before the following conditions are disturbed, notify the Engineer, in writing, of any:

Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, II, or III disposal site in accordance with provisions of existing law.

Subsurface or latent physical conditions at the site differing from those indicated. Unknown physical conditions at the site of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract.

The Engineer shall promptly investigate the conditions, and if they find that the conditions do materially differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work, shall issue a change order, excluding loss of anticipated profits, under the procedures described in the contract. No contract adjustment that results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

In the event that a dispute arises between the Engineer and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the contractor's cost of, or time required for,

performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the contract, but shall proceed with all work to be performed under the contract. The Contractor shall retain any and all rights provided either by contract or by law that pertain to the resolution of disputes and protests between the contracting parties.

In the event conditions materially differ from those indicated, the Contractor shall have no claim for construction delays, unless said conditions are determined by the Engineer to impact the controlling item of work.

5-2. Repair of Equipment

The work of installing, assembling, repairing or reconditioning, or other work of any nature on machinery, equipment or tools used in or upon the work shall be considered a part of the work to be performed under the contract and any laborers, workers or mechanics working on the machinery, equipment or tools, unless employed by bona fide commercial repair shops, garages, blacksmith shops or machine shops, which have been established and operating on a commercial basis for a period of at least 2 months prior to the award of the contract, shall be subject to all the requirements relating to labor set forth in these specifications and in the special provisions.

5-3. Cooperation

Attention is directed to Sections 5-1.20, "Coordination with Other Entities," and 5-1.36, "Property and Facility Preservation," of the Standard Specifications, and to these Special Provisions. The utility companies may be rearranging their facilities within the project area, and it is expected that they will cooperate with the Contractor to the end that the work may be handled in an efficient manner.

The Contractor shall contact USA North811 (USA) service alert a minimum of forty-eight (48) hours in advance of any excavation or trenching work. USA may be contacted either on-line at usanorth811.org or by phone by dialing (800) 642-2444 or 811.

5-4. Permits and Licenses

Attention is directed to Section 5-1.20B, "Permits, Licenses, Agreements, and Certifications," of the Standard Specifications and these Special Provisions.

The Contractor shall have at least two employees trained in confined

space entry regulations CAL/OSHA Confined Space Regulations, Title 8 CCR GISO 5156, 5157, and 5158 at the site whenever there are open trenches or underground work going on. It is understood that all fall protection, retrieval and atmospheric monitoring equipment shall be furnished and maintained by the Contractor at the Contractor's expense. This shall include but not be limited to cost associated with compliance with Confined Space Entry Regulations shall be at the expense of the Contractor.

Contractor's attention is directed to Appendix F, "Regulatory Environmental Documents" of these Project Specifications.

5-5. Project Appearance

The Contractor shall maintain a neat appearance to the work. Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in the unit prices paid for the various Contract items of work involved, and no additional compensation will be allowed, therefore.

5-6. Preservation of Property

The Contractor's attention is directed to Section 5-1.36, "Property and Facility Preservation," of the Standard Specifications.

5-7. Air Pollution Control

Air pollution control shall conform to the provisions of Section 14-9.02, "Air Pollution Control," of the Standard Specifications.

5-8. Obstructions

Attention is directed to the provisions in Sections 5-1.36C, "Nonhighway Facilities," 15, "Existing Facilities," and 51-1.03E(9), "Utility Facilities," of the Standard Specifications.

5-9. Sound Control

Sound control shall conform to the provisions in Section 14-8.02, "Noise Control," of the Standard Specifications.

5-10. Public Convenience

Public Convenience shall conform to the provisions in Section 7-1.03, "Public Convenience," of the Standard Specifications and to these Special Provisions.

5-11. Disposal of Material Outside the Highway Right of Way

Disposal of Material Outside the Highway Right Of Way shall conform to the provisions of Sections 5-1.20B(4), "Contractor-Property Owner Agreement," and 14-10, "Solid Waste Disposal and Recycling," of the Standard Specifications, and Section 14, "Construction Waste Management," of these Special Provisions. The Contractor's attention is further directed to Appendix "A", "Construction Waste Management Plan," of these Special Provisions.

5-12. Sanitary Sewer Monitoring and Reporting Requirements

NOT USED

5-13. Subcontracting

Attention is directed to the provisions in Section 5-1.13, "Subcontracting," of the Standard Specifications.

END OF SECTION

SECTION 6.

CONTROL OF MATERIALS

Attention is directed to Section 6, "Control of Materials," of the Standard Specifications and these Special Provisions.

The Contractor shall furnish all materials required to complete the work under this Contract.

6-1. Certificates of Compliance

Certificates of Compliance, conforming to the provisions in Section 6-2.03C, "Certificates of Compliance," of the Standard Specifications shall be furnished for all manufactured products, unless otherwise waived by the Engineer.

6-2. Materials Testing

Whenever the specifications require compliance with specified values for the following applicable properties, tests will be made as indicated:

Material To Be Tested	Property Being Tested	Acceptable Test Method(s)	Description
Aggregate Base	Relative Compaction	CT 216/CT 231	Determines field densities using a nuclear gage.
Subgrade	Relative Compaction	CT 216/CT 231	Determines field densities using a nuclear gage.

Any costs to the County for testing layers which fail the compaction requirements may be deducted from any progress payment due to the Contractor when, in the opinion of the Engineer, such failure results from the Contractor's lack of diligence in pursuing compaction effort. In the event that a test fails, any testing after the first shall be at the Contractor's expense.

END OF SECTION

SECTION 7. LEGAL RELATIONS AND RESPONSIBILITY

Attention is directed to the provisions of Section 7, "Legal Relations and Responsibility to the Public," of the Standard Specifications, these Special Provisions, and to the provisions of paragraph VIII, "Insurance," of the Agreement (AG) portion of the Contract Documents for insurance requirements and the provisions related to Novel Coronavirus Disease 2019 (COVID-19) in the Proposal (PR) and Sections XV, "COVID-19" and XII, "Electronic Signature," of the Agreement (AG) portions of the Contract Documents.

7-1. Equal Employment Opportunity Program for Minority Employment

It is the intent of the Board of Supervisors of the County of San Mateo to prohibit and eliminate employment discrimination and to further the opportunities for minority persons to be gainfully employed in the performance of County construction contracts. Award of a contract to a low bidder will not be made until such bidder has complied with the provisions of Section 2.50.040 of Title 2, Chapter 2.50, as amended, of the San Mateo County Ordinance Code and with these guidelines.

7-1.1. Definitions

EQUAL EMPLOYMENT OPPORTUNITY PROGRAM: An Equal Employment Opportunity Program (EEOP) is a set of specific and result oriented procedures to which a Contractor commits himself in order to achieve equal employment opportunity.

COMPLIANCE OFFICER: The Compliance Officer (CO) means the County official designated by the County Executive to represent him in the administration of these guidelines and in the enforcement of the provisions of Sections 2.50.040 and 2.50.050 of Title 2, Chapter 2.50.

7-1.2. Certifications of Compliance and Intent

Every bidder will submit with his bid, as required by Section 2.50.050 of Title 2, Chapter 2.50, a Certification of Compliance with the laws prohibiting discrimination and a Certification of Intent to implement an equal employment opportunity program on the form furnished in the Proposal section of these Specifications.

7-1.3. Equal Employment Opportunity Program

In addition to furnishing the Certifications of Compliance and Intent, each bidder will submit his equal employment opportunity program with his bid proposal. The EEOP shall contain the following information:

- A. Analysis of current work force
 - (1) Total number of employees;
 - (2) Numerical racial breakdown of employees by job classification;
 - (3) Information on apprentices.

These figures will provide the base by which the low bidder's EEOP will be evaluated. Factors to be considered both in the original statistics and in any plans for future employment will include the percentage of minority population in San Mateo County, the availability of minority construction workers and the present minority representation in the various construction trades.

- B. The affirmative actions the bidder has taken and will take to ensure equal employment opportunity. These shall include:
 - (1) Recruiting and hiring minority persons. If non-union personnel are employed, this would involve employment advertising through sources serving the minority population. These include local minority newspapers, referral agencies, high schools, vocational schools and community groups. Specific information on these sources may be obtained from the Compliance Officer. Union employees will be recruited in accordance with applicable labor agreements. The bidder will seek to have included or will reaffirm clauses in all labor agreements prohibiting discrimination based on race, religion, color, national origin, age, disability, ancestry, sexual orientation, or sex. It is also suggested that bidders assist in admitting minority workers who are over the traditional apprenticeship entry age to the various craft training programs.
 - (2) Providing adequate opportunity for the upgrading or further training of all employees to insure equal opportunity in advancement and promotion. This might include a counseling service, information and assistance with night classes, or special career-directed

program information.

- (3) Appointing an Equal Employment Opportunity Coordinator, full time or as an additional duty. This person will have the responsibility of administering an active program, informing company personnel and union representatives of company policy, and advising all subcontractors of their obligation to this program.
- (4) Establishing or maintaining an apprenticeship/training program designed to ensure hiring of additional minority employees in the journeyman and skilled classes. Each bidder is urged to support or develop and implement an Apprenticeship Program for his trade.
- (5) Selecting minority subcontractors or subcontractors who are known for their ongoing programs of apprenticeship for minorities. This includes advising minority Contractor associations of opportunities for subcontracts. Joint ventures with minority sub-contractors are encouraged.

C. The EEOP should state any previous experience the bidder has had with similar plans and the results of that effort. Current affirmative action plans should be described in detail.

7-1.4. Equal Employment Opportunity Program Evaluation

A. The Compliance Officer (**CO**) will review the EEOP submitted by the low bidder in order to determine whether the program submitted complies with the provisions of Section 2.50.040 of Title 2, Chapter 2.50, as amended, of the San Mateo County Ordinance Code, and these guidelines. If deficiencies are indicated, CO may request additional information from the bidder or suggest appropriate remedies. The CO will be available to answer questions relative to the guidelines and to advise those seeking assistance of other sources. CO will not be responsible for the service or lack of service rendered by the consultant recommended, nor will the CO develop an EEOP or serve as a recruiter for any bidder.

The low bidder may withdraw his EEOP for revision after consultation with the CO; however, the revised program must be resubmitted by a date not later than fifteen (15) calendar days after the opening of bids.

- B. All subcontractors listed in the low bidder's proposal shall be required to file completed Certificates of Compliance and Intent and their EEOP with the Bidder for submission to the County. The EEOP of each subcontractor will be evaluated by criteria established for the low bidder's EEOP.
- C. The CO, upon conclusion of the EEOP review, will report his findings and recommendation to the Director of Public Works. The CO will keep acceptable EEOP's on file for six (6) months. During this time period, if the bidder or subcontractors bid for other County contracts, they may refer to the EEOP on file and state any changes, but will not be required, unless specifically requested, to re-file their program.

7-1.5. Inclusion of EEOP and Certificates

Upon award of the Contract by the Board of Supervisors, the EEOP and certifications for the bidder and all subcontractors, which have been approved and accepted by the County, will become an integral part of the Contract and subject to the provisions thereof.

7-1.6. Compliance of Contractor

- A. The Contractor will post, in conspicuous places available to employees and applicants for employment, notices, provided by the County, stating that the Contractor is obliged to comply with the provisions of these guidelines and the provisions of Section 2.050.040 of Title 2, Chapter 2.50, as amended, of the San Mateo County Ordinance Code. These notices will also be sent to all unions, employee organizations and other recruiting sources providing employees to the Contractor.
- B. All announcements of job openings will include the statement, "An Equal Opportunity Employer."
- C. The Contractor will make written progress reports on a form provided by the County to illustrate the effectiveness of his EEOP at intervals established by the County.
- D. The **CO** will monitor the Contractor's EEOP until completion of the Contract and will report non-compliance of the Contractor in adhering to his EEOP to the Director of Public Works.
- E. The Contractor will permit, during Contractor's normal business

hours and at Contractor's place of business, access by the County to his records of employment, employment advertisements, application forms and other data and records pertaining to Contractor's employment practices, for the purpose of determining whether Contractor is complying with the non-discrimination and equal employment opportunity rules of the County.

7-1.7. Compliance of Subcontractor

All subcontractors listed by the bidder are subject to all the provisions of these guidelines and the provisions of Section 2.050.040 of Title 2, Chapter 2.50, as amended, of the San Mateo County Ordinance Code.

7-1.8. Penalties for Non-Compliance

The penalties for non-compliance are listed in Title 2, Chapter 2.50, Section 2.50.050, which states:

- a. "Every public works contract shall provide that a contractor who, within the time specified in the contract, does not submit an equal employment plan and make the certifications required in this chapter shall be in breach of the contract."
- b. "If, after an award is made, the contractor is found by the County or by a Federal or State agency empowered to make such findings to be in substantial or material violation of the Fair Employment Practices Act of the State of California, the Equal Employment Opportunity Requirement of Executive Order 11246, title VII of the Civil Rights Act of 1964, or of the provisions of this chapter or of the Board-established guidelines implementing them, he may be found to be in material breach of contract, and the County shall have the power to cancel the contract in whole or in part, or alternatively, to deduct for each working day during which the contractor is found to have been in such non-compliance, two percent (2%) of the total amount payable to the contractor."

7-1.9. Waiver of Compliance

In the event that any of the requirements of Sections 2.050.040 and 2.050.050 of Title 2, Chapter 2.50, as amended, of the San Mateo County Ordinance Code, are found to result in an undue hardship upon a low bidder, bidder may submit evidence of hardship and a petition for waiver of such requirements to the Director of Public Works for recommendation to the Board of Supervisors. Such a waiver may only be granted by the Board and, if approved, shall become an integral part of the contract.

7-1.10 Employee Benefits

All Contractors with contracts with the County of \$5,000 or more shall comply with the provisions of Title 2, Chapter 2.84, as amended, of the San Mateo County Ordinance Code with respect to the provisions on employee benefits. As set forth in the ordinance, such contractors are prohibited from discriminating in the provisions of employee benefits between an employee with a domestic partner and an employee with a spouse. A copy of the Ordinance and Compliance form is attached to the Proposal Section of these Specifications.

In the event it is determined, by the County, that any portion of the County Ordinance Code regarding employee benefits conflict with Federal or State regulations, the Federal or State regulations shall take precedence over the County Ordinance Code.

7-1.11 Non-Discrimination

No person shall be excluded from participation in, denied benefits of, or be subject to discrimination under this Agreement on the basis of their race, color, religion, national origin, age, sex, sexual orientation, pregnancy, childbirth or related conditions, medical condition, mental or physical disability or veteran's status. Contractor shall ensure full compliance with Federal, State and local laws, directives and executive orders regarding non-discrimination for all employees and Subcontractors under this Agreement.

Violation of the non-discrimination provisions of this Agreement shall be considered a breach of this Agreement and subject the Contractor to penalties, to be determined by the County Executive, including but not limited to:

- (1) termination of this Agreement;
- (2) disqualification of the Contractor from bidding on or being awarded a County contract for a period of up to 3 years;
- (3) liquidated damages of \$2,500 per violation;
- (4) imposition of other appropriate contractual and civil remedies and sanctions, as determined by the County Executive.

To effectuate the provisions of this paragraph, the County Executive shall have the authority to:

- (1) examine Contractor's employment records with respect to compliance with this paragraph;

- (2) set off all or any portion of the amount described in this paragraph against amounts due to Contractor under the Contract or any other Contract between Contractor and County.

Contractor shall report to the County Executive the filing by any person in any court of any complaint of discrimination or the filing by any person of any and all charges with the Equal Employment Opportunity Commission, the Fair Employment and Housing Commission or any other entity charged with the investigation of allegations within thirty (30) days of such filing, provided that within such thirty (30) days such entity has not notified Contractor that such charges are dismissed or otherwise unfounded. Such notification shall include the name of the complainant, a copy of such complaint and a description of the circumstance. Contractor shall provide County with a copy of its response to the Complaint when filed.

In the event it is determined, by the County, that any portion of these requirements regarding non-discrimination conflict with Federal or State regulations, the Federal or State regulations shall take precedence over County requirements.

7-2. Prevailing Wages

Attention is directed to Section 7-1.02K(2), "Wages," of the Standard Specifications.

In accordance with the provisions of Section 1770 of the California Labor Code, the Board of Supervisors of the County of San Mateo has ascertained the prevailing rate of wages applicable to the work to be done, which prevailing wage rates have been established as indicated in the Notice to Bidders and are incorporated herein by reference.

The Contractor's attention is further directed to the following requirements of State Senate Bill SB 854 (Stat. 2014, chapter 28), effective January 1, 2015:

- (1) No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].**

- (2) No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.**
- (3) This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.**

7-2.1 Payroll Records

Reference is made to Section 7-1.02K(3), "Certified Payroll Records (Labor Code § 1776)," of the Standard Specifications. In particular, the Contractor's attention is directed to the last paragraph, which is amended to read:

"If by the 7th working day after the 25th of the month, the Contractor has not submitted satisfactory payrolls for all work performed during the monthly period ending on or before the 25th of that month, the Department may withhold an amount equal to ten percent (10%) of the estimated value of the work performed (exclusive of Mobilization) from that month's estimate, except that this withholding shall not exceed \$10,000 nor be less than \$1,000. Withholdings for failure to submit satisfactory payrolls shall be additional to all other withholdings or retentions provided for in the contract. The withholding for failure to submit payrolls for any monthly period will be released for payment on the monthly estimate for partial payments following the date that all the satisfactory payrolls for which the withholding was made are submitted."

The Contractor is advised that Contractor shall submit either Contractor's Daily Dispatch Report at the start of each working day OR a Daily Personnel and Equipment Log (included as Appendix D of these Special Provisions) to the Engineer by the start of the first working day subsequent to the performance of the work, or Contractor may incur task-specific liquidated damages in the amount of \$500 per calendar day for every day hence until submittal is made.

The Contractor is further advised that, pursuant to State Senate Bill SB 854 (Stat. 2014, chapter 28), effective January 1, 2015, all contractors and subcontractors working on a contract for public work on a public works project must furnish electronic certified payroll records to the Labor Commissioner.

7-2.2. Contractor Employee Jury Service

All Contractors with contracts with the County of \$100,000 or more shall comply with the provisions of Title 2, Chapter 2.85, as amended, of the San Mateo County Ordinance Code, with respect to provision of jury duty pay to employees and have and adhere to a written policy that provides that its employees shall receive from the Contractor, on an annual basis, no less than five (5) days of regular pay for actual jury service in San Mateo County. The policy may provide that employees deposit any fees received for such jury service with the Contractor or that the Contractor deduct from the employees' regular pay the fees received for jury service. A copy of the Ordinance and a Compliance Form is attached to the Proposal Section of these Specifications.

Award of a Contract to a low bidder will not be made until such bidder has certified compliance with the provisions of Title 2, Chapter 2.85, as amended, of the San Mateo County Ordinance Code.

7-3. Highway Construction Equipment

Attention is directed to Section 7-1.02O, "Vehicle Code," of the Standard Specifications and these Special Provisions.

Pursuant to the authority contained in Section 591 of the Vehicle Code, the County has determined that, within such areas as are within the limits of the project and are open to public traffic, the Contractor shall comply with all the requirements set forth in Divisions 11, 12, 13, 14 and 15 of the Vehicle Code. Attention is directed to the statement in Section 591 that this section shall not relieve him or any person from the duty of exercising due care. The Contractor shall take all necessary precautions for safe operation of his equipment and the protection of the public from injury and damage from such equipment.

7-4. Public Safety

Public Safety shall conform to the provisions in Section 7-1.04, "Public Safety," of the Standard Specifications and to these Special Provisions.

Full compensation for conforming to the requirements of this section shall be considered as included in the unit prices paid for the various Contract items of work, and no additional compensation will be allowed therefore.

END OF SECTION

SECTION 8.

PROGRESS OF WORK AND TIME OF COMPLETION

Attention is directed to the provisions of Section 8, "Prosecution and Progress," of the Standard Specifications, except as herein provided.

8-1. Time of Completion

The Contractor shall begin work within **TEN (10) CALENDAR DAYS** after receiving Notice to Proceed from the Department of Public Works, and shall diligently prosecute the same to completion before the expiration of

SIXTY (60) WORKING DAYS

from the date of said beginning, as described above.

The Contractor is advised that punch list items are required to be completed before the expiration of the working days stated above.

The Contractor may request, in writing, for an extension of working days, which request shall state the reason for said request and the number of additional working days. The Engineer will consider said request and respond, in writing, stating either the number of additional working days approved or the reason for denying the request.

8-2. Liquidated Damages

Attention is directed to Sections 8-1.04, "Start of Job Site Activities," 8-1.05, "Time," and 8-1.10, "Liquidated Damages," of the Standard Specifications. The Contractor shall pay to the County of San Mateo the sum of Three Thousand Six Hundred Dollars (\$3,600.00) per calendar day for every calendar day delay over and above the number of working days prescribed above for finishing the work.

8-3. Progress Schedule

The Contractor is advised that an initial/baseline project schedule and subsequent schedule updates may be required for the work included under this Contract. If required, such schedules shall be in accordance with these Special Provisions.

The provisions of Section 8-1.02, "Schedule," of the Standard Specifications are superseded by the following:

“The Contractor shall submit a baseline project schedule, if required, to the Engineer within **five (5) working days** after receipt of the Notice to Proceed from the Department of Public Works. This baseline schedule and any subsequent schedule updates shall show:

- (1) Completion of all work within the specified contract time;
- (2) The proposed order of work; and
- (3) Projected starting and completion times for major phases of the work, for the total project, including dates for ordering materials and for substantial completion of the project. Reference is made to Section 8-1, “Time of Completion,” of these Special Provisions.”

The Contractor is advised that:

- (1) Contractor shall notify the Engineer a minimum of twenty-four (24) hours, prior to cancellation of any scheduled work. Should the Contractor fail to provide such notice, the cost for any travel time and mileage incurred by the Engineer will be deducted from the total amount due to the Contractor.**
- (2) When requested, Contractor shall submit subsequent schedule updates within five (5) calendar days after receipt of written request from the Engineer. Failure to provide such subsequent schedule updates may be sufficient enough cause for the Engineer to issue a “Stop Notice,” and work may not be allowed to proceed until such subsequent schedule update has been submitted and approved.**

The schedule shall be developed by a critical path method. The baseline progress schedule shall have as many activities as necessary, and as approved by the Engineer, to be sufficient to assure adequate planning of the project, and to permit monitoring and evaluation of progress and the analysis of time impacts. The Contractor shall provide sufficient material, equipment, and labor to meet the completion times in this schedule.

The baseline project schedule submitted shall meet in all respects the time and order of work requirement of the contract. If the Contractor fails to define any element of work, activity or logic, and the error is discovered by either party, it shall be corrected by the Contractor at the next scheduled monthly update or

revision.

The Engineer shall have **five (5) working days** to review and accept, reject or return a submitted schedule for revision. The Contractor shall not commence project work until after receipt of written approval of the preliminary project schedule from the Engineer.

The Contractor shall submit a revised progress schedule within **five (5) working days** when requested by the Engineer, or when there is significant change in the Contractor's operations that will affect the work schedule.

During the period of the Contract, on or before the first calendar day of each month, the Contractor shall submit to the Engineer a complete, updated progress schedule. Said updated schedules shall provide a complete analysis of work previously completed and work yet to be performed, including a status update of each salient component that is delayed or not on schedule, the impact such delays will have on each of the remaining salient features of the work (with revised completion dates), and a revised completion date for all of the project work. Updated schedules shall incorporate all current schedule information, actual progress, approved adjustments of time and proposed changes in sequence and logic.

The Engineer may require the Contractor to also submit, on a weekly basis, a schedule of work for the following workweek. The Engineer will determine the dates for submittal of weekly schedules.

If the Contractor or the Engineer considers that an approved or anticipated change will impact the contract progress, a schedule analysis and revised schedule supporting the proposed adjustment of time shall be submitted to the Engineer for review and approval.

If the Engineer deems that the baseline progress schedule, any necessary progress schedules and/or required supplemental schedules do not provide the information required in the section and/or is unacceptable in size, appearance, neatness and legibility, progress payments will be withheld by the Engineer until a schedule containing the required information and/or with improved appearance has been submitted by the Contractor and approved in writing by the Engineer.

The Engineer's written approval of any schedule shall not transfer any of the Contractor's responsibilities to the Engineer. The Contractor alone shall

remain responsible for adjusting forces, equipment, and work schedules to ensure completion of the work within the time(s) specified in the contract. Full compensation for conforming to all provisions of this Section, "Progress Schedule," shall be considered as included in the unit prices paid for the various Contract items of the work, and no additional compensation will be allowed therefore.

END OF SECTION

SECTION 9. MEASUREMENT AND PAYMENT

9-1. Force Account Work

Attention is directed to the provisions of Section 9-1.04, "Force Account," of the Standard Specifications and these Special Provisions.

The first sentence of bullet item 2 under Section 9-1.04B, "Labor," of the Standard Specifications is amended to read:

"Labor surcharge percentage in *Labor Surcharge and Equipment Rental Rates and General Prevailing Wage Rates* current during the work paid at force account for:"

With respect to extra work, the Bidder's attention is directed to the provisions of Section 4-1.05, "Changes and Extra Work," of the Standard Specifications. No extra work or change shall be made, unless pursuant to a written contract change order from the Engineer. No claim for an addition to the Contract sum shall be valid unless so ordered.

9-2. Payments to Contractor

Payments shall be made according to the provisions of Section 9, "Payment," of the Standard Specifications and these Special Provisions. Attention is directed to Section 9-1.16, "Progress Payments," regarding progress or partial payments, and to Section 9-1.17, "Payment After Contract Acceptance," regarding final estimates and payments.

Section 9-1.16E(2), "Progress Withholds," of the Standard Specifications is superseded by the following:

The County of San Mateo shall retain five percent (5%) of such estimated value of the work done, and five percent (5%) of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for the fulfillment of the Contract by the Contractor. In no event shall the County of San Mateo withhold less than five percent (5%) of the total Contract price until final completion and acceptance of the project.

The Contractor may, upon request and at the Contractor's own expense, substitute security for any money withheld to ensure performance of the Contract in accordance with Government Code Section 4590.

The filing of a Notice of Completion for the work herein provided shall not constitute an acceptance by the County of latent defects in said work.

9-3. Payments Withheld from Contractor

The County may withhold sufficient monies from any sum otherwise due the Contractor, pursuant to this Agreement, to protect the County against loss on account of:

- (1) Repair or replacement of street pavement or base, and/or culverts or other structures, on or near the work, damaged by reason of the Contractor's operations due to hauling materials or moving heavy equipment.
- (2) Defective work not corrected.
- (3) Claims filed or reasonable evidence indicating probable filing of claims.
- (4) Failure of the Contractor to make payments properly to the subcontractors for material or labor.
- (5) Reasonable doubt that the Contract can be completed for the balance then unpaid.
- (6) Damage to another Contractor.
- (7) Failure of the Contractor to provide water pollution control.
- (8) Failure of the Contractor to submit satisfactory as-built drawings.

Payment of the amounts withheld shall be made upon the determination by the County that the withholding of such amounts is no longer necessary.

9-4. Stop Notices

Section 9-1.16E(4), "Stop Notice Withholds," of the Standard Specifications is superseded by the following:

"The County of San Mateo, by and through the Department of Public Works or other appropriate County office or officers, may at its option and at any time retain any amounts due the Contractor, sums sufficient to cover claims filed pursuant to Section 9000 et seq. of the Civil Code."

9-5. Construction Claims

Each Bidder is hereby notified of Section 9204 and Section 20104 et seq. of the Public Contract Code as those Sections (attached hereto as Appendix E) relate to the resolution of construction claims and to Section 3186 of the Civil Code, as amended January 1, 1999, with regard to stop notices and public entity's rights to retain monies in order to provide for that entity's reasonable cost of litigation. The Bidder is further notified that all provisions of Sections 9204 and 21014 et seq. of the Public Contract Code and Section 3186 of the Civil Code, as

outlined above, shall be considered as incorporated into and become an integral part of these Specifications.

END OF SECTION

SECTION 11. MOBILIZATION

Mobilization shall conform to the provisions in Section 9-1.16D, "Mobilization," of the Standard Specifications and to these Special Provisions.

11-1. Property Owner Primary Notification

The Contractor shall furnish all affected property owners and/or residents written notification that describes the proposed work. The notices shall include relevant dates and describe anticipated impacts to property owners during the work, including, but not limited to, a description of landscaping and improvements that may be affected and/or removed and a statement that the owners/residents have a right to salvage all such existing landscaping, improvements and/or materials that the Contractor may remove to facilitate construction within the right of way. The content, format and method of delivery of such notices shall be approved by the Engineer prior to distribution. The Contractor is advised that these notices shall not be placed in mailboxes, as it is a violation of Federal postal regulations. Affected property owners and residents shall be considered all those who:

- (1) Front on or are contiguous to the Project limits, including property owners and residents of Coronado Avenue between 5th Avenue and the project conform at Coronado Avenue.
- (2) Have ingress/egress route only from within the Project limits.
- (3) Have executed a Right-of-Entry Agreement with the Real Property Division, County of San Mateo.

The Contractor shall provide approved notification to all affected owners/residents a minimum of **TEN (10) CALENDAR DAYS** prior to the commencement of any Project site work. Failure to distribute notices shall be sufficient cause for the Engineer to suspend the work until such notices are distributed.

For additional property owner notification requirements, the Contractor's attention is directed to Section 12, "Maintaining Traffic," of these Special Provisions.

Full compensation for all work involved for this item, "Mobilization," shall be as specified in Section 9 of the Standard Specifications and these Special Provisions.

END OF SECTION

SECTION 12.

MAINTAINING TRAFFIC

Attention is directed to Section 12-1, "Temporary Traffic Control, General," of the Standard Specifications, Sections 5-10, "Public Convenience," and 7-4, "Public Safety," of these Special Provisions, the Standard Plans, the Project Plans and the directions of the Engineer. The first paragraph of Section 12-1.04, "Payment," of the Standard Specifications shall not apply. In connection with said sections, it is understood that all lights, signs, barricades, flaggers or other necessary devices shall be furnished and maintained by the Contractor at the Contractor's expense.

Contractor is advised that general roadway excavation shall not commence until authorized by the Engineer.

12-1. Property Owner Secondary Notification

The Contractor shall furnish all affected property owners and/or residents secondary written notification that describes the proposed work, including relevant dates; the Contractor's attention is directed to Section 11, "Mobilization," of these Special Provisions for primary notification requirements. The content, format and method of delivery of such secondary notices shall be approved by the Engineer prior to distribution. Affected property owners and residents shall be considered all those who:

- (1) Front on or are contiguous to the Project limits, including property owners on Coronado Avenue between 5th Avenue and the project conform at Coronado Avenue.
- (2) Have ingress/egress route only from within the Project limits.
- (3) Have executed a Right-of-Entry Agreement with the Real Property Division, County of San Mateo.

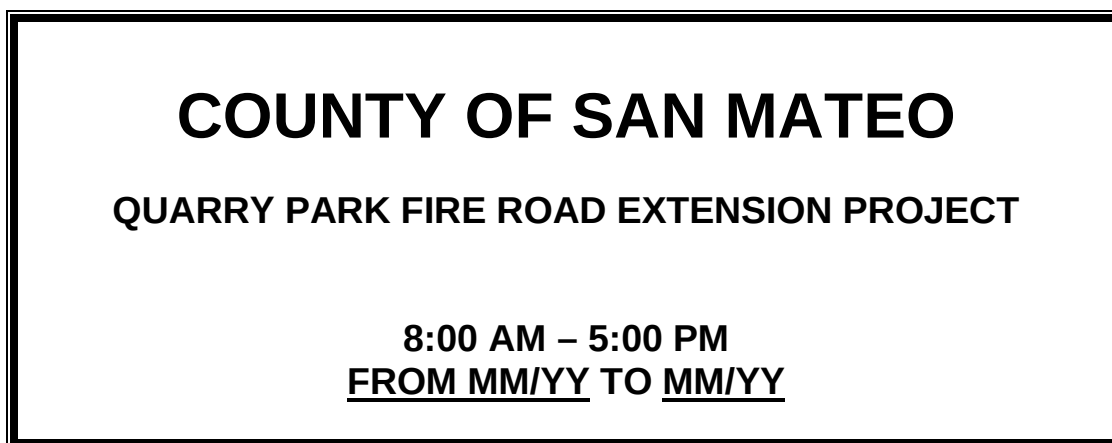
The Contractor shall provide approved notification to all affected owners/residents a minimum of **FORTY-EIGHT (48) HOURS** prior to the commencement of any Project specific site work to allow residents to move their vehicles away from the work area. Failure to distribute notices shall be sufficient cause for the Engineer to suspend the work until such notices are distributed.

12-2. Traffic Control Plan

The Contractor shall furnish an overall Traffic Control Plan for all phases of work.

The Plan shall be in accordance with 2018 Standard Plan T-13 unless these requirements are modified as directed by the Engineer. The Contractor shall submit the Traffic Control Plan within **FIVE (5) WORKING DAYS** after the pre-construction conference. The Engineer shall establish the time and place for said pre-construction conference. Delays upon the part of the Contractor in submitting a Plan, in the format as outlined in these Special Provisions and as directed by the Engineer, shall not constitute a valid reason for time extensions should the Contract time elapse before completion of said project. The Contractor is further advised that consideration for adequate review time, as determined by the Engineer, shall be included in the work schedule.

The Traffic Control Plan shall include orange advisory signs (aluminum or plywood, or as approved by the Engineer), **3' x 6' minimum**, stating expected dates and times of work. Wording of advisory signs shall be as follows.



Advisory signs shall be set in accordance to the locations as shown on the Location Map of Plan Sheet C-3. Signs shall be set in place a minimum of **SEVEN (7) CALENDAR DAYS** prior to commencement of construction site work, unless otherwise directed by the Engineer. No construction site work shall commence prior to the Engineer's written approval of the Traffic Control Plan and installation of required signs.

If any component in the traffic control system is damaged, displaced or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair or replace said component to its original condition and reinstall the component to its original location.

The provisions in this Special Provision will not relieve the Contractor from

responsibility to provide additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.04, "Public Safety," of the Standard Specifications.

At locations where traffic is being routed through construction under one-way controls, the movement of the Contractor's equipment from one portion of work to another shall be governed in accordance with such one-way controls. Whenever the Contractor's operations create a condition hazardous to traffic or to the public, the Contractor shall take the necessary precautions and provide additional traffic control measures to protect those who must pass through the work. If the Contractor shall appear to be neglectful or negligent in providing warning or protective measures, the Engineer may direct attention to the existence of a hazard, and require that additional barricades, flashers, warning and detour signs or lights be installed by the Contractor, or additional flaggers provided. Any action or lack of action by the Engineer as provided herein shall not relieve the Contractor from responsibility for public safety.

Temporary pavement delineation shall be applied by any means satisfactory to the Engineer.

Surfaces on which temporary pavement delineation is to be applied shall be cleaned of all dirt and loose material and shall be dry when the temporary pavement delineation is applied.

All work necessary to establish satisfactory lines for temporary pavement delineation shall be performed by the Contractor. Temporary pavement delineation that is damaged from any cause during the progress of the work shall be immediately repaired or replaced by the Contractor at his own expense.

Full compensation for all work involved for this item, "Maintaining Traffic," shall be as specified in Section 9 of the Standard Specifications and these Special Provisions.

END OF SECTION

SECTION 13.
WATER POLLUTION CONTROL

The provisions of Section 13, “Water Pollution Control,” of the Standard Specifications are superseded by these Special Provisions and the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP). Information regarding this program is available at www.flowstobay.org.

The Contractor is advised that failure to fully comply with the provisions of this Section, and all requirements listed in the California Regional Water Quality Control Board Half Moon Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit Order No. R2-2015-0049 (MRP), and where applicable, the State Water Resources Control Board NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2010-0014-DWQ (Construction General Permit), and any resource agency permits obtained for the project, where applicable, except where amended in writing and signed by the Director of Public Works or its duly authorized representative, shall constitute substantial non-compliance with the requirements of the Clean Water Act, the NPDES permit program, and the Contract.

The County shall provide periodic site monitoring to ensure that the work complies with the requirements specified herein and in any resource agency permits. The County will provide the Contractor with copies of the completed monitoring reports. Should any work be found to be non-compliant, a follow up site monitoring visit will be conducted to ensure the items have been corrected. If deficiencies noted during a monitoring visit are not corrected before the follow up monitoring visit, the costs associated with additional follow up visits to correct the noted deficiencies shall be deducted from the final payment for all of the Contract work.

Attention is directed to Section 21, “Erosion and Sediment Control,” of these Special Provisions and the plans for erosion control requirements.

Construction sites are common sources of water pollution. Materials and wastes that blow or wash into a storm drain, gutter, or street have a direct impact on local

creeks and wetlands, Half Moon Bay and the Pacific Ocean. The Contractor shall be responsible for any environmental damage caused by his operations and those of his subcontractors or employees.

Water pollution shall be defined as including the introduction of any material, including sediment, trash, or other debris, equipment, or vehicles into any watercourse, including creeks, ponds, ditches, storm drain facilities, and any surfaces immediately tributary to those areas, except as specifically authorized by any resource agency permits. Water pollution controls are materials and measures that prevent the introduction of any material to any watercourse. Water pollution control materials and measures may consist of temporary silt fencing; straw mulch/straw logs; spill cleanup materials; pavement sweepers; sandbags or continuous berms; etc.

Water pollution controls shall be applied, maintained, and removed by the Contractor as specified herein and as directed by the Engineer. For construction activities occurring between June 15 and September 15, enough applicable water pollution control materials shall be available at the work site prior to commencing any work. For construction activities occurring between September 15 and June 15, all applicable water pollution control measures shall be installed, and all applicable water pollution control materials shall be available at the work site, prior to commencing any work.

13-1. Water Pollution Control Program

Before starting any work on the project, the Contractor shall submit, for acceptance by the Engineer, a written program including Storm Water Pollution Prevention Plans (SWPPPs) and applicable plan drawings and details to control water pollution effectively during construction of the project. The program shall show the schedule for any erosion control work included in the contract and for all water pollution control measures that the Contractor proposes to take in connection with construction of the project to minimize the effects of the operations upon water resources. The Contractor shall not perform any clearing and grubbing or earthwork on the project, other than that specifically authorized in writing by the Engineer, until the program has been approved by the Engineer.

The Contractor is advised that this project, although only having between one (1) and five (5) acres of disturbed area, does not qualify for a waiver. ***Therefore, the SWPPP shall be prepared by a Qualified SWPPP Developer (QSD) and implemented by a Qualified SWPPP Practitioner (QSP) in accordance with the requirements of the Construction General Permit.*** The SWPPP shall list the name and telephone number of the designated QSD. All amendments to the SWPPP shall be signed by the QSD and shall include a listing of the date of initial preparation and the date of each amendment. The SWPPP shall also include a list of names of all subcontractors and individuals who will be directed by the QSP, their telephone numbers and work addresses, the specific areas of responsibility and emergency contact numbers.

If the measures being taken by the Contractor are inadequate to control water pollution effectively, the Engineer may direct the Contractor to revise the operations and the water pollution control program. The directions will be in writing and will specify the items of work for which the Contractor's water pollution control measures are inadequate. No further work shall be performed on those items until the water pollution control measures are adequate and, if also required, a revised water pollution control program has been approved. Attention is directed to "Contractor Response" of this Section for additional provisions relating to correction of the Contractor's water pollution control program, and payment.

The Engineer will notify the Contractor of the acceptance or rejection of any submitted or revised water pollution control program within 5 working days.

The County will not be liable to the Contractor for failure to accept all or any portion of an originally submitted or revised water pollution control program, nor for any delays to the work due to the Contractor's failure to submit an acceptable water pollution control program or failure to adhere to the provisions of an accepted water pollution control program.

A. Contractor Response

The Contractor is advised that they may be required to respond to the work site after hours and/or on weekends or holidays to mitigate potential water pollution, soil

erosion or sedimentation and/or to repair damaged water pollution controls. Failure to respond within four (4) hours of notification by the Department of Public Works shall constitute substantial non-compliance with these Special Provisions.

Should the County Road Maintenance Division be required to provide any after-hours, weekend, or holiday repairs to the Contractor's water pollution controls due to the Contractor's failure to respond, all costs associated with providing that response, including overtime wages, equipment, and material costs, shall be deducted from the Contractor's final payment. The Contractor shall also be fully responsible for any fines, penalties or mitigations imposed by any regulatory agency caused by his failure to respond, regardless of if the County Road Maintenance Division attempts any repairs or pollution prevention work in their absence.

B. Excavation and Grading

The Contractor shall not commence any excavation, backfilling, grading, or stockpiling operations until water pollution control materials have been delivered to the work site. The Contractor shall certify, in writing, that the quantity of water pollution control materials at the site is sufficient to protect against water pollution caused by the work and shall specify the type of material and intended use in said written certification.

Excavation and grading activities shall be scheduled for dry weather periods. Excavation and grading activities shall not be allowed to commence or continue during periods of rainfall or runoff.

The Contractor may elect to perform excavation or grading activities immediately prior to periods of forecasted rain if they certify in writing to the Engineer that the site will be completely secured against erosion and/or water pollution at the conclusion of the workday and prior to any rainfall. The work site shall be considered as completely secured against erosion and/or water pollution during or prior to forecast periods of rain if the turbidity of runoff from the site does not exceed the turbidity of runoff from adjacent, undisturbed sites by more than 50 NTUs (Nephelometric Turbidity Units). Should the turbidity of runoff from the work site exceed this limit, the Contractor shall be required to immediately place additional erosion and/or water

pollution controls at his expense, as directed by the Engineer, and shall be subject to any administrative fines or penalties associated with water quality or permit violations, and no additional compensation will be allowed, therefore.

C. General Housekeeping

The Contractor shall control the amount of runoff entering upon disturbed construction and staging areas, particularly during excavation, to reduce the amount of water pollution controls required. Temporary diversion berms and/or sandbags may be employed to divert runoff from entering upon construction and staging areas as approved by the Engineer.

Paved surfaces shall be broom-swept as necessary to prevent water pollution. Water spray system of the sweeper units shall be used as appropriate to reduce dust generation. If pavement flushing is necessary, silt ponds or other techniques to trap sediment and other pollutants shall be required.

Dumpsters shall be covered, maintained, and checked frequently for leaks. It is recommended that dumpsters be lined with plastic to prevent leakage of liquids. At no time will the Contractor be permitted to wash dumpsters at the site.

The Contractor shall place trashcans and recycling receptacles around the site for use by their forces. Trashcans and recycling receptacles shall be kept covered and shall be emptied at appropriate intervals to reduce litter at the site.

All wastes shall be disposed of properly outside the highway right of way in accordance with Section 5-11, "Disposal of Material Outside the Highway Right of Way," and Section 14, "Construction Waste Management," of these Special Provisions.

The Contractor shall maintain portable toilets in good working order and wastes shall be disposed of properly. The Contractor shall check toilets frequently for leaks, and repair or replace any toilets found to be leaking. Portable toilets shall be protected against tipping by ground anchors, bollards, or any other suitable means as approved by the Engineer.

D. Stockpiles

All soil and/or rock stockpiles shall be protected against wind, rainfall, and runoff at all times. Plastic sheeting may be used to cover soils, including aggregate base, and shall be securely anchored by sandbags or other suitable means. At no time will any stockpiled materials be allowed to erode into any watercourse or onto any roadway or other tributary surface.

E. Vehicle Maintenance

The Contractor shall designate a completely contained area of the construction site, well away from watercourses and tributary areas, for auto and equipment parking, refueling, and routine vehicle and equipment maintenance. The Contractor shall require the use of drip pans or drop cloths to catch drips and spills if any vehicle or equipment fluids (e.g., motor oil, radiator coolant, etc.) must be drained on site. Diesel oil shall not be used to lubricate or clean equipment or parts. All spent fluids shall be stored in separate containers, and recycled whenever possible, or disposed of as hazardous waste.

Spills or leaks shall be immediately contained and cleaned up by the Contractor, all at their expense, and shall be reported to the Engineer immediately after containment.

All vehicles and equipment shall be maintained in good repair. The Contractor shall inspect frequently for and immediately repair any leaks. The Contractor shall perform major maintenance, repair jobs, and vehicle and equipment washing off site.

F. Spill Prevention and Response

Fluid spills shall not be hosed down. The Contractor shall use dry cleanup methods (absorbent materials, cat litter, and/or rags) whenever possible. If water must be used, the Contractor will be required to collect the water and spilled fluids and dispose of it as hazardous waste. Spilled fluids shall not be allowed to soak into the ground or enter any watercourse.

Spilled dry materials shall be swept up immediately. The Contractor shall not wash down or bury any dry spills. Spills on dirt areas shall be removed by digging up

and properly disposing of contaminated soil. The Contractor shall report significant spills to the Engineer immediately.

G. Tire Washing

Should the Contractor's equipment be tracking soil onto a public road, the Engineer shall require a tire-washing swale at the exit from the construction site and/or staging areas. The Engineer shall also require that soil be removed from the traveled way by whatever means necessary to prevent water pollution.

H. Training

Contractor shall ensure that all persons responsible for preparing, amending, and implementing SWPPPs be appropriately trained in accordance with the requirements of the Construction General Permit and these Special Provisions. The Contractor shall provide documentation of all training for persons responsible for implementing these requirements upon request by the Engineer.

When required, the County will provide introductory training to the Contractor, their employees, and subcontractors at the job site before work commences for any project with resource agency permits. The training will provide background information on sensitive species, permit requirements and site-specific water quality issues. When not required, the County is available to provide such training at the Contractor's request.

Full compensation for all work involved for this item, "Water Pollution Control," shall be as specified in Section 9 of the Standard Specifications and these Special Provisions.

END OF SECTION

SECTION 14.

CONSTRUCTION WASTE MANAGEMENT

The County has established that this Project shall minimize the creation of construction and demolition waste on the job site. Factors that contribute to waste such as over packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination, shall be minimized. For any waste that is generated, as many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.

Full compensation for this item, "Construction Waste Management," shall be as specified in Section 9 and 14 of the Standard Specifications and these Special Provisions.

No partial payment will be made for this Contract item of work until all work required, as specified herein, is completed to the satisfaction of the County, and all necessary documentation provided.

14-1. Diversion Goals

One hundred percent (100%) of inert wastes, and at least fifty percent (50%) of the remaining construction and demolition debris shall be diverted from landfills.

Inert wastes, such as concrete, brick, rock, asphalt, and soil not intended for on-site use, shall be taken to a facility that will reuse or recycle them.

Other mixed construction & demolition (C&D) wastes shall be taken to a facility with a C&D sorting program, as listed in the Construction and Demolition Debris Recycling Guide referenced below, if additional recycling is needed in order to meet the requirements set forth in this Section. If debris box service is used, the debris boxes must be taken to a C&D sorting facility if materials are not separated on-site for recycling.

The Contractor has the option of separating on-site for recycling non-inert materials, such as cardboard, paper, wood, metals, green waste, new gypsum wallboard, tile, porcelain fixtures, and other easily recycled materials, and directing them to recycling facilities and taking the remaining mixed waste (but no more than 50% by

weight or yardage) to a facility for disposal. If waste is taken for disposal, documentation must be provided to show that 50% of C&D wastes (in addition to 100% of inert wastes) have been diverted.

14-2. References and Resources

A Construction and Demolition Guide (C&D Guide) is available online at <https://www.smcsustainability.org/waste-reduction/construction-demolition/>. For more information or resources, contact the County of San Mateo's Office of Sustainability by phone at (888) 442-2666 or by email at sustainability@smcgov.org. The Contractor's attention is directed to **Appendix A** for the County of San Mateo Waste Management Plan Form and the Waste Management Daily Transport Report.

14-3. Waste Management Plan and Daily Transport Report

The Contractor is required to complete a Waste Management Daily Transport Report, listing details of the material transported on that particular day, which is to be signed by both the Contractor's representative and the County inspector on the job site.

The Waste Management Plan shall be submitted to the Engineer, Department of Public Works, 555 County Center – 5th Floor, for approval within SEVEN (7) WORKING DAYS after the pre-construction conference. The Waste Management Plan shall include a description of how the contractor will meet the requirements of this contract and shall include a list of disposal and recycling facilities where waste materials will be taken, a description of what will be taken to each facility (inert wastes, metals, wood, glass, plastics, mixed waste, etc.), a description of the means of transportation of recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and designated center, or whether mixed materials will be collected by a waste hauler and removed from the site), and an estimated amount (weight, yardage, etc.). Approval will be granted if the plan shows:

1. One hundred percent (100%) of inert wastes being reused or recycled AND at least fifty percent (50%) of C&D wastes being reused or recycled; OR
2. All waste that is not separated on-site for recycling is sent to a mixed C&D sorting facility for recycling.

14-4. Waste Management Plan Implementation

A. Plan Distribution

The contractor shall provide copies of the approved Waste Management Plan to the project superintendent and each subcontractor.

B. Instruction

The contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.

C. Meetings

The contractor shall conduct monthly Construction Waste Management meetings or at least one meeting for projects with length of less than twenty (20) working days. Meetings shall include subcontractors affected by the Waste Management Plan. At a minimum, waste management goals and issues shall be discussed at regularly scheduled project meetings.

D. Separation Facilities

The contractor shall designate a specific area or areas to facilitate separation of materials for potential reuse, salvage, recycling, and return. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid co-mingling of materials. Bins set within the County Right of Way shall be subject to approval by the County. All bins used shall be protected during non-working hours from offsite contamination.

E. Materials Handling Procedures

Materials to be recycled shall be protected from contamination, and shall be handled, stored, and transported in a manner that meets the requirements set by the designated facilities for acceptance.

F. Hazardous Wastes

Hazardous wastes shall be separated, stored, and disposed of according to State and local regulations. Unless specified in other section, the County is not aware of any hazardous wastes within the project site. Notify the Engineer if hazardous waste is encountered.

G. Reporting

As a condition of final approval and retention release, submit documentation to the Engineer. Projects that establish monthly progress payments shall also require monthly reporting on the Waste Management Plan. Such reports shall be submitted prior to the monthly cutoff for progress payments and shall include, at a minimum, a summary of waste materials recycled, salvaged and disposed of for the Project. Submitted with this summary will be documentation (receipts/scale tickets, waybills) showing the quantities and types of materials diverted and disposed. The documentation shall coincide with the Waste Management Daily Transport Reports (in Appendix A) that were signed by both the Contractor and the County inspector. A Notice of Completion will not be filed for the project and retention released until all reports as required for the project are submitted and approved.

The above-mentioned summary and documentation shall contain the following information:

- (1) For each material recycled and salvaged from the Project, include the amount (in cubic yards or tons, or in the case of salvaged items, state quantities by number, type and size of items) and the destination (i.e., recycling facility, used building materials yard or other local users).
- (2) For each material landfilled or incinerated from the Project, include the amount (in cubic yards or tons) of material and the identity of the landfill, incinerator and/or transfer station. All projects are subject to inspection.

Documentation shall consist of photocopies of receipts and weight tags or other records of measurement or equivalent documentation from recycling companies, deconstruction contractors, and landfill and disposal companies. The contractor shall sign the completed Waste Management Plan to certify its accuracy as part of the documentation of compliance.

It is unlawful for any person to submit documentation to the County for an approved Waste Management Plan that that said person knows to contain any false statements,

including but not limited to false statements regarding weight and/or yardage of materials recycled or diverted, or to submit any false or fraudulent receipt or weight tag or other record of measurement.

END OF SECTION

SECTION 17.
CLEARING AND GRUBBING

Clearing and grubbing shall conform to the provisions of Section 17-2, "Clearing and Grubbing," of the Standard Specifications, these Special Provisions, the Plans, and the directions of the Engineer.

The Contractor attention is directed to Sub-section 14-2, "References and Resources," of Section 14, "Construction Waste Management," of these Special Provisions.

Areas within the limits of work, as shown on the Plans, or as directed by the Engineer, shall be cleared as necessary for the construction of improvements and related work. The areas to be cleared and grubbed will not necessarily extend to the work limit lines. The exact limits for clearing and grubbing shall be approved by the Engineer in advance of commencing any work.

Construction easements, as shown on the Plans, shall be cleared only as necessary for the construction of improvements and related work, or as directed by the Engineer.

Existing trees, tree stumps and shrubs within the limits of work shall be removed, unless otherwise specified in these Special Provisions or directed by the Engineer. The Contractor's attention is directed to Section 17-1, "Remove Trees and Tree Stumps" of these Special Provisions.

All existing vegetation, fencing, driveways, and walks outside the areas to be cleared and grubbed, shall be protected from damage resulting from the Contractor's operations.

Removal of any concrete improvements (sidewalks, curbs) driveway drainage pipes, roadside signs, fences, tree stumps, shrubs and hedges shall be as shown on the Plans and as directed by the Engineer.

The Contractor shall not remove fences, trees or tree stumps, shrubs, hedges, mailboxes or any other landscaping or improvements prior to receiving

written approval from Engineer in consultation with the County Parks Natural Resources Manager.

Removing, salvaging and/or relocating fences shall conform to the provisions of Section 16-2, "Miscellaneous Temporary Facilities," and Section 80, "Fences," of the Standard Specifications and these Special Provisions.

Fences and other debris to be removed and disposed of outside the highway right of way shall be in accordance with the provisions in Section 5-11, "Disposal of Material Outside the Highway Right of Way," of these Special Provisions.

If, in the Engineer's judgment, signs and other such items can be salvaged, these materials shall be delivered to 1195 Columbus St. El Granada, CA 94018. Contractor shall coordinate with the County of San Mateo Parks Department. Contractor shall notify the County a minimum of two (2) working days prior to delivery of signs.

If encountered, concrete removal shall conform to the provisions of Section 15, "Existing Facilities," of the Standard Specifications and these Special Provisions and shall be removed as directed by the Engineer and in accordance with Section 15-1.03B, "Removing Concrete," of the Standard Specifications.

The Contractor shall take care not to damage existing facilities that are to remain. Any damage to such facilities caused by the Contractor's operations during clearing and grubbing operations, as determined by the Engineer, shall be repaired to the satisfaction of the Engineer, all at the Contractor's expense, and no additional compensation will be allowed, therefore.

All materials removed shall become the property of the Contractor and shall be disposed of in accordance with Section 5-11, "Disposal of Material Outside the Highway Right of Way," of these Special Provisions.

Nothing herein shall be construed as relieving the Contractor of their responsibility for final cleanup of the site and adjacent access routes, as provided in Section 4-1.13, "Cleanup," of the Standard Specifications.

The Contractor attention is directed to Section 14, “Construction Waste Management,” of these Special Provisions. Currently certified, local recyclers include, but are not limited to, the following:

- | | | |
|-----|---|---|
| (1) | Ox Mountain Sanitary Landfill
12310 San Mateo Road
Half Moon Bay, CA 94019 | (650) 726-4718
<i>(Reinforced Concrete and Rebar Only)</i> |
| (2) | Bell Marine/Harbor Sand and Gravel
775 Seaport Blvd.
Redwood City, CA 94063 | (650) 367-7124 |
| (3) | Granite Rock
195 Seaport
Redwood City, CA 94063 | (650) 482-3840 |
| (4) | SRDC
199 Seaport
Redwood City, CA 94063 | (650) 367-7324 |

The Contractor is advised that approximately **one-hundred-one-thousand, two hundred (101,200) square feet** is estimated for possible clearing and grubbing. Trees and stumps 6” and under in diameter will be paid for under “Clearing and Grubbing”.

The contract lump sum price paid for this item, “Clearing and Grubbing,” shall include, but not be limited to, full compensation for furnishing all labor, materials, including structure backfill, as required, equipment and incidentals necessary for doing all work involved in clearing and grubbing, including, but not limited to, the removal and disposal of concrete, underdrain pipes, trees and stumps 6” and under in diameter (except as provided for under Section 17-1, “Remove Trees and Tree Stumps”), shrubs, hedges, and stumps to a depth of six inches (6”) below existing ground levels, minor trimming of hedges and shrubs as necessary, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefore.

No adjustment to the Contract bid price will be made for any increase or decrease in the quantities for this item, “Clearing and Grubbing,” required. The provisions in Section 4-1.05, “CHANGES AND EXTRA WORK,” of the Standard Specifications shall not apply to this item of work.

17-1. Remove Trees and Tree Stumps

Designated trees and tree stumps shall be removed in accordance with Section 17-2, "Clearing and Grubbing," of the Standard Specifications, the Plans, these Special Provisions, and the directions of the Engineer.

No trees or tree stumps shall be removed without the prior written approval of the Engineer. Voids left by removed tree stump and roots shall be backfilled with native material immediately upon completion of tree removal, in conformance with Section 19, "Earthwork," of the Standard Specifications, and the directions of the Engineer.

Said removed trees, tree stumps and roots shall become the property of the Contractor and shall be disposed of outside the highway right of way in conformance with Section 5-11, "Disposal of Material Outside the Highway Right of Way," of these Special Provisions.

Removal of tree branches, trunks, stumps, roots, and other organic debris associated with the removal of trees within the area of disturbance shall be completed by the contractor within a timeframe deemed reasonable by the engineer.

The Contractor's attention is directed to the fact that tree root balls within the areas to be paved or to provide structure subgrade shall be ground to a depth below finished grade greater than the thickness of the typical structural section of one and one-tenth feet (1.1'), and root systems within the limits of the paving and subgrade areas shall be completely removed.

The Contractor shall take care not to damage existing facilities that are to remain. Any damage to such facilities caused by the Contractor's operations, as determined by the Engineer, shall be repaired to the satisfaction of the Engineer, all at the Contractor's expense, and no additional compensation will be allowed therefore.

Prior to excavation and removal of trees, tree stumps and root systems, the Contractor shall verify the locations of existing utilities or other obstacles within the vicinity of the tree and tree stump.

The Contractor is advised that active water and gas lines may be located in the area. **The Contractor shall contact USA North811 (USA) a minimum of forty-eight (48) hours in advance of any excavation or trenching work. USA may be contacted either on-line at usanorth811.org or by phone by dialing (800) 227-2600 or 811.**

The Contractor is encouraged to review the project site in order to assess the trees, tree stumps and root balls that will require removal.

17-2. Measurement and Payment

A. Remove Trees and Tree Stumps from 6" to 11.9" in Diameter

The Contract unit price paid per Each for this item, "Remove Trees and Tree Stumps from 6" to 11.9" in Diameter," shall include, but not be limited to, full compensation for furnishing all labor, materials (including excavation and backfill) tools, equipment and incidentals necessary for doing all work involved in removing existing trees (including the associated tree stumps and roots) from 6" to 11.9" in diameter, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefore. No adjustment of the Contract bid price will be made for any increase or decrease in the quantities of tree stump removal required. The provisions of section 4-1.05, "CHANGES AND EXTRA WORK," of the Standard Specifications shall not apply to this item. The County reserves the right to eliminate or reduce in quantities of this item, "Remove Trees and Tree Stumps from 6" to 11.9" in Diameter," from the project completely. The Contractor shall request and receive written confirmation from the County as to the status of this item of work prior to incurring any cost. The Contractor shall not be entitled to any compensation under this item of work for any cost incurred should they proceed in advance of receiving written authorization from the County.

B. Remove Trees and Tree Stumps from 12" to 17.9" in Diameter

The Contract unit price paid per Each for this item, "Remove Trees and Tree Stumps from 12" to 17.9" in Diameter," shall include, but not be limited

to, full compensation for furnishing all labor, materials (including excavation and backfill) tools, equipment and incidentals necessary for doing all work involved in removing existing trees (including the associated tree stumps and roots) from 12" to 17.9" in diameter, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefore. No adjustment of the Contract bid price will be made for any increase or decrease in the quantities of tree removal required. The provisions of section 4-1.05, "CHANGES AND EXTRA WORK," of the Standard Specifications shall not apply to this item. The County reserves the right to eliminate or reduce in quantities of this item, "Remove Trees and Tree Stumps from 12" to 17.9" in Diameter," from the project completely. The Contractor shall request and receive written confirmation from the County as to the status of this item of work prior to incurring any cost. The Contractor shall not be entitled to any compensation under this item of work for any cost incurred should they proceed in advance of receiving written authorization from the County.

C. Remove Trees and Tree Stumps from 18" to 23.9" in Diameter

The Contract unit price paid per Each for this item, "Remove Trees and Tree Stumps from 18" to 23.9" in Diameter," shall include, but not be limited to, full compensation for furnishing all labor, materials (including excavation and backfill) tools, equipment and incidentals necessary for doing all work involved in removing existing trees (including the associated tree stumps and roots) from 18" to 23.9" in diameter, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefore. No adjustment of the Contract bid price will be made for any increase or decrease in the quantities of tree stump removal required. The provisions of section 4-1.05, "CHANGES AND EXTRA WORK," of the Standard Specifications shall not apply to this item. The County reserves the right to eliminate or reduce in quantities of this item, "Remove Trees and Tree Stumps from 18" to 23.9" in Diameter," from the project completely. The Contractor shall request and receive written confirmation from the County as

to the status of this item of work prior to incurring any cost. The Contractor shall not be entitled to any compensation under this item of work for any cost incurred should they proceed in advance of receiving written authorization from the County.

D. Remove Trees and Tree Stumps from 24" to 35.9" in Diameter

The Contract unit price paid per Each for this item, "Remove Trees and Tree Stumps from 24" to 35.9" in Diameter," shall include, but not be limited to, full compensation for furnishing all labor, materials (including excavation and backfill) tools, equipment and incidentals necessary for doing all work involved in removing existing trees (including the associated tree stumps and roots) from 24" to 35.9" in diameter, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional compensation will be allowed therefore. No adjustment of the Contract bid price will be made for any increase or decrease in the quantities of tree stump removal required. The provisions of section 4-1.05, "CHANGES AND EXTRA WORK," of the Standard Specifications shall not apply to this item. The County reserves the right to eliminate or reduce in quantities of this item, "Remove Trees and Tree Stumps from 24" to 35.9" in Diameter," from the project completely. The Contractor shall request and receive written confirmation from the County as to the status of this item of work prior to incurring any cost. The Contractor shall not be entitled to any compensation under this item of work for any cost incurred should they proceed in advance of receiving written authorization from the County.

E. Remove Trees and Tree Stumps 36" or greater in Diameter

The Contract unit price paid per Each for this item, "Remove Trees and Tree Stumps 36" or Greater in Diameter," shall include, but not be limited to, full compensation for furnishing all labor, materials (including excavation and backfill) tools, equipment and incidentals necessary for doing all work involved in removing existing trees (including the associated tree stumps and roots) 36" or greater in diameter, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the

Engineer, and no additional compensation will be allowed therefore. No adjustment of the Contract bid price will be made for any increase or decrease in the quantities of tree stump removal required. The provisions of section 4-1.05, "CHANGES AND EXTRA WORK," of the Standard Specifications shall not apply to this item. The County reserves the right to eliminate or reduce in quantities of this item, "Remove Trees and Tree Stumps 36" or greater in Diameter," from the project completely. The Contractor shall request and receive written confirmation from the County as to the status of this item of work prior to incurring any cost. The Contractor shall not be entitled to any compensation under this item of work for any cost incurred should they proceed in advance of receiving written authorization from the County.

END OF SECTION

SECTION 18.
DUST PALLIATIVES

Watering shall conform to the provisions of Section 10-4, "Water Usage", Section 10-5, "Dust Control," Section 10-6, "Watering," and Section 18, "Dust Palliatives," of the Standard Specifications, these Special Provisions and as directed by the Engineer. The provisions of Section 18-1.04 "Payment" shall not apply to this item. Payment for this item, "Dust Palliatives," shall be made on a lump sum basis.

In addition to all other water supply requirements for the construction work, the Contractor's attention is directed to the importance of dust control. The Contractor shall provide dust control at all times, including Saturdays, Sundays and holidays, as ordered by the Engineer. The Contractor shall diligently control dust resulting from the Contractor's operations and from public traffic passing through the work by the application of water and/or dust palliative. Whenever the Contractor appears to be negligent in controlling dust, as determined by the Engineer, the Engineer may direct attention to the existence of a dust hazard and instruct the Contractor to immediately alleviate said hazard. If the Contractor fails to follow the Engineer's instructions, the Engineer may have this completed by the County and deduct the costs incurred by the County from the Contractor's payment for this item.

Water may not be obtained from Quarry Park, Half Moon Bay or adjacent creeks.

The Contractor is responsible for attaining access to water including use of trucked-in or from local water utilities. If from local water utilities, the Contractor shall also be responsible to coordinate and attain all needed approvals and pay all needed fees required by the utilities owner(s), and also to receive prior approval from the Engineer.

The Contractor is advised that the County reserves the right to have County forces watering and to have the cost of said work deducted from payments to the Contractor if Contractor fails to perform.

For the purpose of progress payments, payment for this item shall be based on the pro rata share of the work completed. When, in the opinion of the Engineer, the

Contractor has been inattentive to a dust hazard, any portion of the progress payment for this item, "Dust Palliative," may be withheld until the dust hazard has been corrected.

The contract lump sum price paid for this item, "Dust Palliatives," shall include full compensation for furnishing all labor, materials (including dust palliative binder and water), tools, equipment and incidentals necessary for doing all work involved in developing and applying all water and/or dust palliative required for the work, and for controlling dust resulting from the Contractor's operations, public traffic, wind or other conditions at all times (including Saturdays, Sundays, holidays) and when ordered by the Engineer, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, and no additional or separate payment shall be made therefore.

END OF SECTION

SECTION 19. EARTHWORK

Earthwork shall conform to the provisions of Section 19, "Earthwork," of the Standard Specifications, these Special Provisions, and the directions of the Engineer. All earthwork shall conform to the provisions of Section 19-1, "General," of the Standards Specifications and these Special Provisions. This Section describes the following work:

- Structural earthwork incidental to installation of the new fire road.
- All other miscellaneous earthwork needed to perform the work.

The Contractor shall not commence earthwork until the Construction Sequencing Plan and Schedule have been approved by the Engineer.

The Contractor shall refer to the engineering geologic report prepared by Pacific Watershed Associates, dated March 24, 2022 (see Appendix G). The work will include excavation of material from the existing grade surface. Material to be excavated is believed to be sandy silt and deeply weathered colluvium granitic rock beneath organic debris consisting primarily of eucalyptus, pine, oak, and poison oak leaves and stem. Vegetation and such debris as may be present due to past filling and public use of the site. The Contractor is advised to review the project site for material to be excavated.

The topographic mapping shown on the Drawings was prepared in 2019 using data from the ground survey performed on the dates and by the entities noted in the Plans.

Elevation contours shown are approximate and provided for general reference only.

19-1. General

Comply with Section 19-1.03C, "Grade Tolerance," modified as follows:

Modify Paragraph 4. to read:

4. When the material to be placed on the grading plane is to be paid for by the cubic yard, the grading plane at any point shall not vary

more than 0.25 feet above or below the grade shown on the Plans or established by the Engineer.

Referring to Section 19-1.03D, "Buried Man-Made Objects," buried concrete rubble and other man-made objects may be encountered in excavation and the contract price paid for the excavation in which the concrete rubble is encountered includes full compensation for the removal and disposal of such concrete, and no additional compensation shall be allowed therefore.

Pursuant to State law regulations, all open excavations greater than five feet in depth shall be constructed with bracing, sheeting, shoring or other equivalent method designed for the protection of life and limb. The Contractor must at all times comply with the requirements of the construction safety orders of the Division of Industrial Safety, uniform Building Code, Cal-OSHA, and other governing codes and restrictions.

The above-stipulated requirements shall be considered the minimum to be provided. It shall be the Contractor's responsibility to provide the additional strength required to support the sides of the excavation against loads which may exceed those employed to derive the criteria set forth in the Industrial Safety orders. The Contractor shall be solely responsible for any and all liabilities which may arise from his failure to provide adequate shoring, bracing or sheeting as necessary to support the excavation under any and all of the conditions of loading which may exist or which may arise during construction of the project.

The Contractor shall assign a project safety supervisor who shall, by training and experience, be fully qualified to supervise the installation, maintenance and removal of sheeting, shoring and bracing. The project safety supervisor shall have full authority over the work in all job safety matters and shall be present at all times when work is in progress in excavations and trenches greater than five feet in depth.

Grading, as shown on the Plans and as directed by the Engineer, shall be performed so as to provide surface drainage. Said grading shall be considered as included in the Contract unit price paid for the item of roadway excavation (Section 19-2 of these Special Provisions), and no separate payment will be allowed therefore.

The Contractor's attention is directed to the Plans for the limits of the various Contract earthwork items.

The Contractor may propose alternate excavation or shoring plans to safely complete the work.

Should the Engineer determine that work be suspended for the Winter Season due to the Contractor not aggressively prosecuting the Project to completion within the stipulated time, the Contractor shall be responsible for "winterizing" the Project to the satisfaction for the Engineer, and maintaining said Project in a safe and acceptable manner, regardless of the amount of effort involved, all at the Contractor's expense, and no additional compensation will be allowed therefore.

"Winterizing" shall include the general maintenance of the Project site to a level that will not leave any detrimental effects for future construction, clean-up of material tracked from the Project limits, supplying and placing material to provide and maintain access, necessary work to maintain existing drainage patterns, and all work necessary to comply with Section 7-1.03, "Public Convenience," and Section 7-1.04, "Public Safety," of the Standard Specifications, and Section 5-5, "Project Appearance," of these Special Provisions.

Full compensation for "Winterizing," including the general maintenance of the Project site, supplying and placing material to provide and maintain access, necessary work to maintain drainage patterns, and such other work as may be required by the Engineer to complete the work, shall be considered as included in the unit prices paid for the various Contract items of work, and no additional compensation will be made therefore.

19-2. Roadway Excavation

Incidental excavation that is not Structural Excavation shall conform to the provisions of Section 19-2, "Roadway Excavation," of the Standard Specifications, these Special Provisions and the Plans, and the directions of the Engineer.

Roadway excavation shall consist of all excavation involved in this construction, including, but not limited to, the removal of asphalt concrete, and other materials in the

roadway prism.

Excavation beyond the limits of the Plans, or unauthorized by the Engineer, will not be paid for by the County. In addition, the Contractor shall be responsible for the cost of all remedial work associated with over-excavated areas, and such work will be performed in a manner directed by, and to the satisfaction of the Engineer, and no additional compensation will be allowed therefore.

The Contractor is advised to review the Project site for material to be excavated. Regardless of material encountered, full compensation for performing roadway excavation, as described herein, including furnishing all labor, tools, materials, equipment and incidentals necessary for doing all work involved in excavating, hauling, filling, spreading, grading and compacting, as specified in these Special Provisions, including, but not limited to, disposing of surplus excavated material outside of the highway right-of-way, and grading areas for positive drainage flow, as shown on the Plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer, shall be considered as included in the various Contract items of work, and no additional compensation will be allowed therefore.

Excavated material shall become the property of the Contractor and shall be disposed of outside the highway right-of-way in accordance with the provisions of Section 19-2.03B, "Surplus Material," of the Standard Specifications.

19-3. Excavation Dewatering

The Contractor shall take whatever measures necessary, as determined by the Engineer, and shall furnish, install and operate pumps or other devices as may be necessary to remove seepage, storm water or sewage that may be found or accumulate in the excavations during the progress of the work. Once seepage or ground water conditions in excavated areas are encountered, no further Excavation will be allowed until suitable dewatering procedures are in operation.

The Contractor shall keep all excavations free from water at all times during construction and until the County gives permission to cease pumping. The Contractor shall also keep all excavations free from the accumulation of water or sewage at all times, as may be required by the County for inspection or other purposes. The

Contractor shall not dewater sewage or seepage into the Pacific Ocean.

Full compensation for this item, "Excavation Dewatering," shall be considered as included in the unit prices paid for the various Contract items of work, and no additional compensation will be made therefore.

19-4. Compaction

Compaction shall conform to the provisions of Section 19-5.03B, "Relative Compaction", of the Standard Specifications, and as directed by the Engineer.

19-5. Embankment Construction

Suitable excavated material, as determined by the Engineer, may be used for structural backfill. The County makes no assurance that the Engineer will deem any excavated material to be suitable. If the Contractor elects to import structural fill, rather than reuse suitable excavated material, the cost of the imported material shall be considered as included in the unit prices paid for the various items of work, and no additional compensation shall be allowed therefore.

Compaction of structure backfill by ponding and jetting will not be permitted.

Excess earth shall be stockpiled at the County storage/staging area as specified on the plans. Earth shall be placed in lifts not exceeding 1 foot in vertical thickness, compacted to at least 85% by track walking or other suitable means. Perimeter fill slopes shall be 1.5:1 (horizontal: vertical) or flatter. Apply dust control and water pollution control measures in accordance with Section 18 of these Special Provisions.

Upon completion of construction, install silt fences around the perimeter, and place coir wattles on the slopes in accordance with Section 21 "Erosion and Sediment Control" of these Special Provisions.

Full compensation for this item, "Embankment Construction," shall be considered as included in the unit prices paid for the various Contract items of work, and no additional compensation will be made therefore.

19-5.1. Reinforced Steepened Slopes

Construction of reinforced steepened slopes and embankments shall conform to section 19-6.02B, "Geosynthetic Reinforced Embankment" of the Standard Specifications, unless otherwise specified by the Plans or by the engineer.

Primary Geosynthetic reinforcement shall be Mirafi 3XT Geogrid or equivalent. Secondary Geosynthetic reinforcement shall be Mirafi BXG-120 or equivalent. Each roll of geosynthetic reinforcement must be labeled with:

- (1) Manufacture's Name
- (2) Production identification
- (3) Roll dimensions
- (4) Lot number
- (5) Date of manufacture

Suitable excavated material, as determined by the Engineer, may be used for reinforced steepened slope construction, and shall be free from:

- (1) Organic material
- (2) Shale, soft, or poor-durability particles
- (3) Recycled materials such as glass, shredded tires, concrete rubble, or other unsuitable materials
- (4) Loose or extraneous material and sharp objects that may come in contact with the geosynthetic reinforcement

If the Contractor elects to import structural backfill, rather than reuse suitable excavated material, the cost of the imported material shall be considered as included in the unit prices paid for the various items of work, and no additional compensation shall be allowed, therefore.

The reinforced steepened slope shall be constructed from suitable backfill in lifts that do not exceed six inches in vertical thickness. Suitable backfill will be compacted to 95% relative compaction via tack walking or other suitable means. Compaction of structure backfill by ponding and jetting will not be permitted. Hand-operated equipment must be used to compact areas within three (3) feet of slope contours.

All geosynthetic reinforcement (geogrid) shall be placed within three inches of the design elevations.

Geosynthetic reinforcement must be:

- (1) Secured with staples, pins, or small piles of backfill
- (2) Placed without wrinkles
- (3) Aligned with the primary strength direction perpendicular to slope contours
- (4) Spliced under the manufacturer's instructions
- (5) Butted edge-to-edge for straight slope contours
- (6) Butted edge-to-edge at the slope face and fanned out or overlapped into the backfill for curved slope contours

All geosynthetic reinforcement shall be covered with backfill within the same work shift.

At least six inches of backfill shall be placed on the geogrid before operating or driving equipment or vehicles over it, except in the event that equipment or vehicles are used for spreading backfill directly on the reinforcement. If vehicles or equipment are used to spread backfill on the geogrid, the contractor must:

- (1) Comply with the manufacturer's instructions
- (2) Use rubber-tire vehicles
- (3) Minimize traffic repetitions
- (4) Maintain a speed less than five (5) mph
- (5) Avoid sudden braking and sharp turning

Any damaged geogrid shall be repaired by placing additional reinforcement to cover the damaged area as follows:

- (1) For reinforcement placed parallel to slope contours, overlap five (5) aperture opening or eight (8) inches, whichever is greater
- (2) For reinforcement placed perpendicular to slope contours, splice the edges following the manufacturer's instructions

Vertical height of compacted backfill shall not exceed three (3) feet between layers of the primary geogrid. The primary geogrid shall extend from the face of the reinforced steepened slope to the inner most excavated edge of the reinforced steepened slope.

Vertical height of the compacted backfill shall not exceed one (1) foot between the layers of secondary geogrid. The secondary geogrid shall extend from the face of the reinforced steepened slope four (4) feet inward toward the innermost excavated edge of the reinforced steepened slope. Only one geogrid (either primary or secondary) shall be installed at a given lift, primary geogrids take priority over secondary geogrids.

The top one (1) foot of backfill of the reinforced steepened slope shall be sloped as specified on the plans or as directed by the engineer. The top one (1) foot of backfill shall be compacted to 100% relative compaction by track walking or other suitable means.

The top of the reinforced steepened slope shall be capped with six (6) inches of class 2 aggregate base and compacted to 95% relative compaction.

The outboard face of the reinforced steepened slope shall be covered with erosion control blanket that is compliant with CASQA BMP EC-7.

The Contract unit price paid per Cubic Yard for this item, "Reinforced Steepened Slopes," shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in road and structural and incidental backfill for the project, including but not limited to placing, spreading, and compacting dirt, controlling and removing water, and other work as may be required by the Engineer to complete the work, and no additional compensation will be made therefore.

The volume of constructed reinforced steepened slopes shall be determined from the average end areas and the distanced between them. If quantities of excavated earthwork are determined via average end areas and centerline distances a correction for curvature is not applied to quantities within the roadway prism. Where the roadway centerline is used as a base, correction is made for curvature if the centerline radius is 1000 feet or less.

This is a (F) Final Pay Quantities item - See Section 9-1.02C, "Final Pay Item Quantities," of the Standard Specifications.

19-6. Construction Staking and Layout

Construction Staking and Layout, including all supporting surveying, computations and reporting shall comply with Section 100 “Construction Staking and Layout” of these Special Provisions. The Survey Party (County or Contractor) is responsible for providing all staking and surveying needed to achieve all lines, grades and dimensions shown on the Plans. Stakes and markers shall be provided by the Contractor as necessary to control the work and assure construction is in conformance with the Special Provisions and as otherwise directed by the Engineer. The Contractor shall use established survey control data shown on the Plans to lay out the work.

Prior to commencing any earthwork, the Survey Party shall stake the limits of work for review by the Engineer. At a minimum, the Survey Party shall place additional stakes and offsets needed to control the work, as well as additional stakes as requested by the Engineer.

The Contractor shall allow up to two (2) working days for the Engineer to review staking and note any adjustments as needed to conform to the design intent to the pre-construction conditions. The Contractor shall adjust the staking.

Reference is made to Section 100, “Construction Staking and Layout,” of these Special Provisions.

19-7. Measurement and Payment

19-7.1 Earthwork Excavation

The Contract unit price paid per Cubic Yard for this item, “Earthwork Excavation,” shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in road and structural and incidental excavations for the project, including but not limited to shoring and/or sheet piling, excavation, controlling and removing water from excavation, and other work as may be required by the Engineer to complete the work, and no additional compensation will be made therefore.

The volume of excavated material shall be determined from the average end areas and the distance between them. If quantities of excavated earthwork are

determined via average end areas and centerline distances a correction for curvature is not applied to quantities within the roadway prism. Where the roadway centerline is used as a base, correction is made for curvature if the centerline radius is 1000 feet or less.

This is a (F) Final Pay Quantities item - See Section 9-1.02C, “Final Pay Item Quantities,” of the Standard Specifications.

19-7.2 Earthwork Native Backfill

The Contract unit price paid per Cubic Yard for this item, “Earthwork Native Backfill,” shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in road and structural and incidental backfill for the project, including but not limited to placing, spreading, and compacting dirt, controlling and removing water, and other work as may be required by the Engineer to complete the work, and no additional compensation will be made therefore. The Earthwork Native Backfill will only be used if the excavated material is considered unusable by the Geotechnical Engineer.

The volume of backfill material shall be determined from the average end areas and the distance between them. If quantities of excavated earthwork are determined via average end areas and centerline distances a correction for curvature is not applied to quantities within the roadway prism. Where the roadway centerline is used as a base, correction is made for curvature if the centerline radius is 1000 feet or less.

19-7.3 Earthwork Imported Backfill

The Contract unit price paid per Cubic Yard for this item, “Earthwork Imported Backfill,” shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in road and structural and incidental backfill for the project, including but not limited to placing, spreading, and compacting dirt, controlling and removing water, and other work as may be required by the Engineer to complete the work, and no additional compensation will be made therefore. The Earthwork Imported Backfill will only be used if the excavated material is considered unusable by the Geotechnical Engineer.

The volume of backfill material shall be determined from the average end areas

and the distance between them. If quantities of excavated earthwork are determined via average end areas and centerline distances a correction for curvature is not applied to quantities within the roadway prism. Where the roadway centerline is used as a base, correction is made for curvature if the centerline radius is 1000 feet or less.

19-7.4 Off-haul Dirt

The Contract unit price paid per Cubic Yard for this item, "Off-haul Dirt," shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in off-hauling extra dirt, and other work as may be required by the Engineer to complete the work, and no additional compensation will be made therefore. The Off-Haul Dirt will only be used if the excavated material is considered unusable by the Geotechnical Engineer

The volume of off-haul dirt shall be determined from the average end areas and the distance between them. If quantities of excavated earthwork are determined via average end areas and centerline distances, a correction for curvature is not applied to quantities within the roadway prism. Where the roadway centerline is used as a base, correction is made for curvature if the centerline radius is 1000 feet or less.

END OF SECTION

SECTION 21.**EROSION CONTROL**

The provisions of Section 21, “Erosion Control,” of the Standard Specifications are superseded by these Special Provisions.

The Contractor is advised that failure to fully comply with the provisions of this Section and Section 13, “Water Pollution Control,” of these Special Provisions, and any resource agency permits obtained for the project, where applicable, except where amended in writing and signed by the Director of Public Works or their duly authorized representative, shall constitute substantial non-compliance with the requirements of the Clean Water Act, and the Contract.

The County shall provide periodic site monitoring to ensure that the work complies with the requirements specified herein and in any resource agency permits. The County will provide the Contractor with copies of the monitoring reports. Should the work be found to be non-compliant, a follow up site monitoring visit will be conducted to ensure the items have been corrected. The costs associated with any compliance monitoring required beyond a single follow up site monitoring visit shall be deducted from the final payment for all of the Contract work.

21-1. Temporary Silt Fence

No excavation or backfill work shall commence until temporary silt fence has been placed as shown on the plans and as directed by the Engineer.

Temporary silt fence shall be installed on contour a minimum of two (2) feet to the downslope side of any excavation or backfill. Temporary silt fence shall be installed as shown on the Plans, with the supporting posts on the downslope side of the fence structure. Silt fence lines shall be unbroken, with silt fencing pieces wound together to form a contiguous structure as shown on the Plans. Attention is directed to Section 21-2, “Temporary Erosion Controls,” of these Special Provisions for additional requirements.

The Engineer may deem it necessary and require parallel silt fencing to contain the full limits of excavation and backfill. Parallel silt fence shall be placed on contour and

shall overlap the horizontal projection of the primary silt fence by not less than eight (8) linear feet.

No silt fencing shall be placed in or across any flowing stream.

A. Inspection and Maintenance

Silt fencing shall be inspected, and any necessary repairs made by the Contractor at their expense daily prior to any excavation or backfill. The Contractor shall remove any soil, rock and/or debris contained by the silt fence once they have reached a depth of half ($\frac{1}{2}$) the above-ground height of the silt fence.

Any soil, rock and/or debris that are stockpiled shall be protected against wind, rainfall and runoff at all times. Plastic sheeting may be used to cover soils (including aggregate base) and shall be securely anchored by sandbags or other suitable means. At no time will any stockpiled materials be allowed to erode into any watercourse or onto any roadway or other tributary surface.

B. Removal and Disposal

Temporary silt fence and any soil, rock or debris shall be completely removed by the Contractor at the conclusion of the work. Temporary silt fence and any soils, rock or debris shall be disposed of outside the highway right of way in accordance with the provisions of Section 5-11, "Disposal of Material Outside the Highway Right-of-Way," of these Special Provisions, by the Contractor at their expense. Soil, rock or debris shall not be scattered or "flaked" on any slope. The Contractor shall specify in writing the method of removal and disposal for the Engineer's approval not less than two (2) working days prior to removing silt fence.

C. Payment

Full compensation for all work involved for this item, "Temporary Silt Fence," shall be as specified in Section 9 of the Standard Specifications and these Special Provisions and shall be measured per the Linear Foot.

21-2. Temporary Erosion Control

The Contractor shall be required to adhere to the provisions of Section 18, "Dust Palliatives," Section 13, "Water Pollution Control," this Section, and the directions of the Engineer throughout the work.

Temporary erosion controls may consist of straw logs, straw mulch, silt fencing, temporary berms, or any combination of these or other means acceptable to the Engineer to prevent polluted runoff and/or wind erosion. The use of any type of hay or any straw containing oat or weed seed is expressly forbidden. The Contractor is encouraged to review the Best Management Practices (BMPs) included in the County of San Mateo Maintenance Standards for installation and maintenance recommendations.

Temporary erosion controls shall be applied, maintained and removed by the Contractor as specified herein and as directed by the Engineer. The Contractor shall not commence any excavation, backfilling, grading or stockpiling operations until sufficient quantities and types of temporary erosion control materials have been delivered to the work site as determined by the Engineer.

Additional temporary erosion controls, if necessary and as directed by the Engineer, shall be installed at the conclusion of the workweek to the satisfaction of the Engineer. The Engineer may also require the installation of temporary erosion controls at the conclusion of any workday when rain and/or wind is occurring or forecast.

The Contractor is advised that they may be required to respond to the work site after hours and/or on weekends or holidays to mitigate potential erosion or sedimentation and/or to repair damaged silt fencing and other erosion controls. Provisions for the Contractor's Required Response are included in Section 13, "Water Pollution Control," of these Special Provisions.

A. Staging Areas

The Contractor shall contain runoff that may potentially leave any staging area to within the staging area by any suitable means approved by the Engineer.

Staging area BMPs shall be maintained throughout the duration of the work. Staging area BMPs shall be completely removed and disposed of outside the highway right of way in accordance with the provisions of Section 5-11,

“Disposal of Material Outside the Highway Right-of-Way” of these Special Provisions, by the Contractor at their expense at the conclusion of the work. Attention is directed to Section 13, “Water Pollution Control,” of these Special Provisions for provisions relating to tracking of mud from staging areas.

B. Staging Area Finish

The Contractor shall finish all staging areas as specified herein and as directed by the Engineer.

All stockpiles, debris and exclusion fencing shall be completely removed and disposed of outside the highway right of way by the Contractor at the conclusion of construction operations. Staging area surfaces shall be smoothed and contoured to drain in the same manner as prior to their use. The smoothed and contoured surface shall be covered with not less than six (6) inches and not more than twelve (12) inches of three-inch (3”) un-compacted drain rock unless other material is approved in advance in writing by the Engineer. Any adjacent areas disturbed by the Contractor’s operations shall be smoothed and mulched as specified below.

Loose soil and/or rock resulting from any grading work required to restore the pre-construction condition shall not be scattered or “flaked” on any slope.

C. Mulch

The Contractor shall mulch all finished soil surfaces at the conclusion of the work and as part of any winterization as shown on the Plans, as specified herein and as directed by the Engineer.

Mulch shall consist of a uniform application of rice straw to a depth of not less than two (2) inches. Straw bales and flakes shall be broken apart and loosely spread prior to crimping. Mulch shall be manually crimped into the soil surface using rakes, pitchforks or other appropriate means. Mulch shall not be track-walked using heavy equipment.

The Contractor shall comply with item 4 of San Mateo County’s Administrative Memorandum B-33, Compost, Mulch, and Renewable Natural

Gas Procurement Requirements, when procuring mulch for this project. The contractor may also propose in writing an alternate type of straw mulch. Any type of proposed straw shall be certified by the manufacturer as weed-free and seed-free. Written proposals for alternate straw or duff shall include identification of the source of the material, including written permission from the property owner to collect redwood duff, if applicable. Proposals to use alternate types of straw or duff will be submitted to the Engineer for approval not less than three (3) working days in advance of placing mulch. The Engineer reserves the right to reject alternate proposals and require the use of rice straw mulch.

The Contractor shall avoid mulching over newly-planted trees/plants. Mulch shall not be applied below the ordinary high water line of any water body.

D. Winterization

Should the Contractor fail to complete the work within the specified number of working days with any time extensions allowed by the Engineer and the permitting agencies, the Contractor shall be required to winterize the sites and any staging areas at his expense as specified herein and as directed by the Engineer.

Winterization shall include, at a minimum, removal or securing, at the Engineer's option, of any stockpiled materials; removing equipment from the vicinity; restoring staging areas for winter use by the County's Road Maintenance Division as specified under "Staging Area Finish" above; covering any vertical excavation faces with plastic sheeting secured with sandbags and not extending below the ordinary high water line; mulching all other excavations with rice straw as specified under "Mulch" above; and ensuring positive drainage through the work sites.

E. Payment

Full compensation for all work involved for this item, "Temporary Erosion Control," shall be as specified in Section 9 of the Standard Specifications and these Special Provisions and shall be paid per Lump Sum.

END OF SECTION

SECTION 26.
AGGREGATE BASES

Aggregate bases shall conform to section 26-1.02B “Class 2 Aggregate Base,” and section 26-1.03C “Placing Geosynthetic Materials,” of the Standard Specifications, the Project Plans and the directions of the Engineer.

Class 2 Aggregate Base (3/4” maximum) shall be applied as shown on the Project Plans. In connection with said sections, it is understood that all materials and equipment used to haul and place aggregate bases are to be furnished and maintained by the Contractor at the Contractor’s expense.

26-1. Payment

Full compensation for all work involved for this item, “Class 2 Aggregate Base,” shall be as specified in Section 26-1.04 “Payment” of the Standard Specifications and these Special Provisions. Payment for this item shall be per ton (TON).

END OF SECTION

SECTION 80.**FENCES****80-1. Temporary Construction Fencing**

Installation of temporary construction fencing shall be done on an as needed basis and shall primarily serve as a visual boundary for the upper and lower edges of the work site. Materials and installation of temporary fencing shall comply with these Special Provisions as well as Section 80 – “Fences” of the Standard Specifications. The complete enclosure of the project area is unwarranted and unnecessary to afford the crew and public an adequate level of safety. All temporary fencing shall be removed upon completion of work.

80-2. Payment

Full compensation for all work involved for this item, “Temporary Construction Fencing,” shall be as specified in Section 9 of the Standard Specifications and these Special Provisions. Payment for this item shall be per linear foot (LF).

80-3. Access Gates

Installation of gates shall conform to the provisions of section 80-10 “Gates,” of the Standard Specifications.

80-4. Payment

Full compensation for all work involved for this item, “Access Gate (Coronado Ave),” shall be as specified in Section 80-10.04 of the Standard Specifications and these Special Provisions. Payment for this item shall be on a lump sum (LS) basis.

END OF SECTION

SECTION 96.
GEOSYNTHETICS

Geosynthetics used beneath the road rock shall conform to Section 96-1.02J “Paving Fabric” and Section 96-1.02O “Subgrade Enhancement Geotextile” for equivalent substitution to be approved by the Engineer. Mirafi® 160N (or equivalent substitution to be approved by the Engineer) shall be applied as the non-woven geotextile as shown on the Project Plans. In connection with said sections, it is understood that all materials and equipment used to haul and place aggregate bases are to be furnished and maintained by the Contractor at the Contractor’s expense.

Geosynthetics used on the RSS fill slopes shall conform to Section 96-1.02D “Geotechnical Subsurface Reinforcement,” Section 96-1.02O “Subgrade Enhancement Geotextile,” and section 26-1.03C “Placing Geosynthetic Materials,” of the Standard Specifications, the Project Plans and the directions of the Engineer. Mirafi® 3XT (or equivalent substitution to be approved by the Engineer) shall be applied as primary geogrid layers as shown on the Project Plans.

Geosynthetics used on the RSS fill slopes shall conform to Section 96-1.02P “Biaxial Geogrid” for equivalent substitution to be approved by the Engineer. Mirafi® BXG 120 (or equivalent substitution to be approved by the Engineer) shall be applied as secondary geogrid (biaxial reinforcement) layers as shown on the Project Plans.

96-1. Payment

Full compensation for all work involved for these items, “Non-Woven Geotextile,” “Primary Geogrid,” and “Secondary Geogrid,” shall be as specified in these Special Provisions. Payment for this item shall be on a square-foot (SF) basis.

END OF SECTION

SECTION 100.
CONSTRUCTION STAKING AND LAYOUT

Section 5-1.26, "Construction Surveys," of the Standard Specifications shall not apply to this section.

Unless explicitly stated and agreed upon as the County's responsibility, the Contractor shall be responsible for all land surveying and shall provide construction stakes or marks necessary to establish the limits, lines, alignments, and grades required for proper construction staking layout and completion of the work as shown on the drawings, as specified in these Special Provisions, and as directed by the Engineer. All construction staking shall be provided under the direction of either a professional land surveyor licensed by the State of California, or an Engineer qualified to perform land surveying and subsequent references to the Survey Party will reference either the County or the Contractor depending on the scope of work agreement.

The survey datum used for the project shall be in accordance or tied-in with the County datum, as referenced on the Plans.

The Survey Party shall provide and establish the construction staking of principal structures, and set grades and benchmarks as required. It will be the Survey Party's responsibility to lay out the work from the lines and grades, and to transfer elevations from the benchmarks set. All staking, locating, and layout work required for construction purposes shall be performed by the Survey Party. Where new construction connects to existing facilities, the Survey Party shall check and establish the exact location of existing facilities prior to construction of new facilities.

When using construction stakes to establish alignment, the Survey Party shall use a minimum of three (3) stakes to check horizontal alignments, and a minimum of two (2) stakes to check vertical alignments.

Should an occasion arise where the validity of a stake is questionable, either as to its location, or the elevation marked thereon, the Survey Party shall check the stake or stakes in question. The Survey Party shall be responsible for correcting any alignment or elevation errors that resulted from incorrect staking.

The Contractor shall maintain a complete and accurate log of all control and survey work as it progresses. On completion of site improvements, the Contractor shall prepare a certified survey drawing showing all dimensions, locations, angles, and elevations of construction.

The Survey Party shall set or establish the necessary construction layout stakes and markings a minimum of **two (2) working days** in advance of the work and shall notify the Engineer when such markings have been set.

The Contractor shall protect all monumentation and survey points in their undisturbed location and condition. Damage, as a result of the Contractor's operations, to the existing monuments, survey markers, or reference points that are not part of this Contract, shall be repaired and replaced at the Contractor's expense.

The Contractor's attention is directed to Section 100-1, "As-Built Drawings," of these Special Provisions for additional requirement for submittal of As-Built Drawings upon completion of this project.

Full compensation for all work involved for this item, "Construction Staking and Layout," shall be as specified in Section 9 of the Standard Specifications and these Special Provisions.

The County reserves the right to eliminate this item, "Construction Staking and Layout," from the project completely. The Contractor shall request and receive written confirmation from the County as to the status of this item of work prior to incurring any costs. The Contractor shall not be entitled to any compensation under this item of work for any cost incurred should he proceed in advance of receiving written authorization from the County.

100-1. As-Built Drawings

In order for the County to produce As-Built Drawings for this project, the Contractor shall submit a PDF copy of the Plans with appropriate as-built information mark-ups, which Plans shall be signed by the Contractor certifying the accuracy of the as-built drawings, including that elevations and locations of improvements are in accordance with the contract Documents. Should the Engineer determine that

additional information is required to produce accurate As-Built Drawings, the Contractor shall provide such information within **ten (10) calendar days** after receiving the written request for said additional information. The cost for providing this additional information shall be at the Contractor's expense, and no additional compensation will be allowed therefore.

The Contractor is advised that Final Progress Payment may be withheld until satisfactory as-builts plans, as determined by the Engineer, are submitted to the County. Payment may be withheld upon the determination by the County that the withholding of such amount is no longer necessary.

END OF SECTION

Appendix A

County of San Mateo Waste Management Plan Form

Waste Management Daily Transport Report

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County of San Mateo

WASTE MANAGEMENT PLAN

Submit to:

County of San Mateo
Department of Public Works
555 County Center, 5th Floor
Redwood City, CA 94063

Information and support: 888-442-2666

www.smcsustainability.org/waste-reduction/construction-demolition

Case/group number(s):

BLD _____ - _____

Project address:

Street: _____

City: _____

Zip Code: _____

Green Halo number(s):

WMP required because project is a:

☐ Residential ☐ Demolition

☐ Nonresidential ☐ New Construction

☐ Addition

Section One: Permit Application

This Waste Management Plan (WMP) must be completed, submitted for review, and approved to obtain a permit. Separate WMPs are required for demolition and construction at the same site unless the Building Department requires only one permit. Need for a WMP is at the discretion of the Building Official or designee.

Applicant's Name: _____ Owner's Name: _____

Phone Number: _____ Email: _____

Applicant is (please check one): ☐ Owner ☐ Architect ☐ Builder ☐ Owner/Builder ☐ Other _____

Contractor (if applicable): _____ Contact Phone Number: _____

Project Description: _____

Project Square Footage: _____ Estimated Completion Date: _____

Waste Management Requirements:

You are required to recycle or re-use all inert solids (asphalt, brick, concrete, dirt, fines, rock, sand, and stone) and 65% of all construction and demolition debris.

I understand that I am required by San Mateo County Building Regulations Section 9210 - Adoption Of 2016 California Green Building Standards Code (Building Regulations) to salvage, reuse, or recycle **all inert solids** (asphalt, brick, concrete, dirt, fines, rock, sand, and stone) and **a minimum of 65%** of all construction and demolition debris (C&D). _____ (Initial)

I understand that failure to meet the requirements of the Building Regulations shall constitute a misdemeanor, and shall be punishable by imprisonment in the county jail for up to 6 months and/or a fine of up to \$1,000, calculated as a percentage of the required 65% diversion of C&D debris, and that the fine must be paid as a condition of final approval. _____ (Initial)

At the completion of this project, or more frequently if required, all weight tags or other equivalent documentation from salvage, recycling and waste facilities will be provided and I understand that I may not be issued my final inspection unless all original receipts and documentation are submitted to the County of San Mateo Department of Public Works. _____ (Initial)

Recycling and waste facilities ask for the correct origin of the materials generated as they come through the scale house. These tons are reported to the State of California. I understand that I need to advise my debris box company, waste haulers, and my drivers that the materials generated on this project originated in Unincorporated County of San Mateo. _____ (Initial)

1) Deconstruction/salvage/reuse:

What materials will be salvaged/reused? _____

Deconstruction or salvage company (if applicable): _____

What materials will be reused on site? _____

How will this be documented? _____

2) Material transportation:

Will you be using a hauling company, debris box company or hauling the material yourself?

☐ Hauler ☐ Debris Box ☐ Self-haul

If using a hauling or debris box company, which company? _____

Have they been notified that the diversion of 65% mixed debris and all inert solids is required? ☐ Yes ☐ No

3) Waste management plan:

Check the materials you anticipate generating and fill in the facilities that you plan to use.

Category	Material	√	Reuse, Recycling or Disposal Facility
Mixed C&D	Mixed Debris		
Inerts	Asphalt		
	Bricks		
	Concrete		
	Dirt		
	Other inert solids		
Source Separated	Cardboard		
	Metals		
	Wood		
	Roofing		
	Carpet		
	Drywall		
	Yard trimmings		
	Other		
Disposal	Waste		

The undersigned hereby agrees to comply with the Waste Management Plan as submitted and is the owner or authorized agent to sign for the owner of this project.

Applicant Signature _____ **Date** _____

County Approval: ☐ Approved ☐ Approved with comments ☐ Denied

All receipts, weight tags and documentation for salvage, recycling, and disposal must be submitted:

☐ On completion of project ☐ Other _____

Office of Sustainability Approval: _____ Date: _____



County of San Mateo

WASTE MANAGEMENT PLAN

Case/Group Number(s):

BLD _____ - _____

Project Address:

Street: _____

City: _____

Section Two: Final Report Approval

Please complete, submit, and get this section approved by the Department of Public Works, prior to obtaining final approval by the Department of Public Works no later than 30 days after completion of the demolition or construction project. Please provide weight of materials in **tons**. If needed, please use the conversion table on the next page to convert cubic yards to tons.

This section must be completed and signed, and all receipts or other supporting documentation must be attached in order to receive final project approval.

Category	Date	Material/items	Name of facility debris was hauled to	Weight (Tons)	Volume (CU. YD.)
Mixed C&D					
Salvage/Reuse					
Inerts Asphalt, bricks, concrete, dirt, rock, sand, soil, stone					
Source Separated Cardboard, wood, metal, sheetrock, wire, carpet, yard trimmings					
Disposal (Waste)					

☐ All receipts or equivalent documentation for salvage, recycling, and disposal are hereby attached.

☐ This project has recycled all of the inert solids and at least 65% of all debris generated.

Applicant Signature _____ Date _____

County Approval: ☐ Approved ☐ Approved with Comments ☐ Fine Payment Required

Comments:

Fine Calculation: $1 - (\text{C\&D Diversion \% Achieved} \div 65\%) \times \$1000 = \$$ _____

Office of Sustainability Approval: _____ Date: _____



County of San Mateo

WASTE MANAGEMENT PLAN

Cubic Yards to Tons Conversion Table

Category	Material	Cubic Yards	Pounds	Tons
Mixed C&D	Mixed load C&D	1	500	0.25
Inerts	Asphalt	1	1380	0.69
	Bricks	1	3000	1.5
	Concrete	1	1860	0.93
	Dirt	1	2000	1
	Other inert solids	1	1240	0.62
Source Separated	Cardboard	1	100	0.05
	Metals	1	900	0.45
	Wood	1	300	0.15
	Asphalt roofing	1	1188	0.59
	Carpet	1	600	0.3
	Drywall	1	400	0.2
	Green waste	1	300	0.15
	Gravel	1	2600	1.3
Disposal	Waste	1	300	0.15

WASTE MANAGEMENT DAILY TRANSPORT REPORT				
Date :		Day :	Multiple Pages : Yes___ No ___	
Project :			Contractor Representative :	
			County Inspector :	
	Transport Vehicle Type	Vehicle License/I.D.	Load Destination	
			Inert Material	Non-Inert Material
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
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19				
20				
21				
22				
23				
24				
25				

Note : Inert material shall be as defined in the Construction Waste Management Section of these specifications.

Comments :

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Appendix B

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Appendix C

Sample “Payment Bond” Form

Sample “Performance Bond” Form

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PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That WHEREAS, the County of San Mateo hereinafter designated as the "County," has awarded to _____, hereinafter designated
(Contractor's Name)
as the "Principal," a contract dated _____, hereinafter designated
(Contract Award Date)
as the "Contract," which Contract is by this reference made a part hereof, for the work described as _____.
(Project Name, Location & Number)

And WHEREAS, pursuant to law, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by whom the Contract is awarded to secure the claims to which reference is made in Sections 9550 to 9566 and 9100 to 9364 both inclusive, of the Civil Code of California.

NOW THEREFORE, THESE PRESENTS WITNESSETH:

That the said Principal and the undersigned, _____
(Surety's Name)
as corporate Surety, are held and firmly bound unto all laborers, material men and other persons referred to in said statutes in the sum of _____
Dollars (\$))
lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the above bonded Principal, contractor, person, company or corporation, or his or its sub-contractor, fails to pay any claimant name in Section 9100 of the Civil Code of the State of California, or amounts due under the Unemployment Insurance Code, with respect to work or labor performed by any such claimant, that the Surety on this bond will pay the same, in an amount not exceeding the aggregate sum specified in this bond, and also, in case suit is brought upon this bond, a reasonable attorney's fee, which shall be awarded by the court to the prevailing party in said suit, and attorney's fees to be taxed as costs in said suit.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Section 9100 to 9364 of the Civil Code, so as to give a right of action to them or

their assigns in any suit brought upon this bond.

This bond is executed and filed to comply with the provisions of the act of Legislature of the State of California as designated in the Civil Code, Sections 9550-9566 inclusive, and all amendments thereto.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

And the said Surety, for value received, hereby stipulates and agrees that no change will be made which increases the total Contract price more than twenty percent (20%) in excess of the original Contract price without notice to the Surety, then, this obligation to be void, otherwise to remain in full force and virtue.

Correspondence relating to this bond shall be sent to the Surety at the address set forth below.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety this _____ day of _____, 20____.

Principal

Surety

Signature

Signature

Printed Name

Printed Name

Address for Notices:

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That WHEREAS, the County of San Mateo hereinafter designated as the "County," has awarded to _____, hereinafter designated
(Contractor's Name)
as the "Principal," a contract dated _____, hereinafter designated
(Contract Award Date)
as the "Contract," which Contract is by this reference made a part hereof, for the work described as _____.
(Project Name, Location & Number)

And WHEREAS, Principal is required to furnish a bond in connection with the Contract, guaranteeing the faithful performance thereof.

NOW THEREFORE, THESE PRESENTS WITNESSETH:

That the said Principal and the undersigned, _____,
(Surety's Name)
as corporate Surety, are held and firmly bound unto the County in the sum of _____ Dollars (\$))
lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that if the above bonded Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term of said Contract and any extensions thereof that may be granted by the County, with or without notice to the Surety, and during the life of any guarantee required under the Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, except that no change will be made which increases the total

Contract price more than twenty percent (20%) in excess of the original Contract price without notice to the Surety, then, this obligation to be void, otherwise to remain in full force and virtue.

Correspondence relating to this bond shall be sent to the Surety at the address set forth below.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety this _____ day of _____, 20____.

Principal

Surety

Signature

Signature

Printed Name

Printed Name

Address for Notices:

NOTE: Notary acknowledgement for Surety and Surety's Power of Attorney must be attached.

Appendix D

Daily Personnel and Equipment Log

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DAILY PERSONNEL AND EQUIPMENT LOG

Using as many copies of this form necessary, the Contractor shall provide the Engineer with a list of all personnel and their title and, if applicable, equipment said employee is operating. This information is required of the Prime and their Subcontractors.

This form, if used in lieu of Contractor's Daily Dispatch Report, shall be submitted to the Engineer by the start of the first working day subsequent to the performance of the work, or Contractor may incur task-specific liquidated damages in the amount of \$500 per day for every day hence until submittal is made. Reference is made to Section 7-2.1., "Payroll Records," of the Project Special Provisions.

Date: _____ Project No.: P32R1

Project: Quarry Park Fire Road Extension Project

Contractor: _____

Is this log for Subcontractor? ☐ Yes ☐ No

If yes, Name of Subcontractor: _____

Personnel		Equipment			
Name	Title/ Trade	No.	Type	Make	Model

Notes:

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Appendix E

Public Contract Code Sections 9204 and 20104 et seq.

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Public Contract Code Section 9204 et seq.

9204.

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3) (A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2027, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2027, deletes or extends that date.

SEC. 2.

The Legislature finds and declares that it is of statewide concern to require a charter city, charter county, or charter city and county to follow a prescribed claims resolution process to ensure there are uniform and equitable procurement practices.

SEC. 3.

If the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to Part 7 (commencing with Section 17500) of Division 4 of Title 2 of the Government Code.

Public Contract Code Section 20104 et seq.

20104.

(a) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a contractor and a local agency.

(2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.

(b) (1) "Public work" means "public works contract" as defined in Section 1101 but does not include any work or improvement contracted for by the state or the Regents of the University of California.

(2) "Claim" means a separate demand by the contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.

(c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article.

(d) This article applies only to contracts entered into on or after January 1, 1991.

(Amended by Stats. 2010, Ch. 697, Sec. 47. Effective January 1, 2011. Operative July 1, 2012, by Sec. 105 of Ch. 697.)

20104.2.

For any claim subject to this article, the following requirements apply:

(a) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

(b) (1) For claims of less than fifty thousand dollars (\$50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

(c) (1) For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

(d) If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency's response or within 15 days of the local agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(e) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

(f) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

(Added by Stats. 1994, Ch. 726, Sec. 22. Effective September 22, 1994.)

20104.4.

The following procedures are established for all civil actions filed to resolve claims subject to this article:

(a) Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

(b) (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act (Title 4 (commencing with Section 2016.010) of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and

reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney's fees of the other party arising out of the trial de novo.

(c) The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.

(Amended by Stats. 2004, Ch. 182, Sec. 54. Effective January 1, 2005. Operative July 1, 2005, by Sec. 64 of Ch. 182.)

20104.6.

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.

(Added by Stats. 1994, Ch. 726, Sec. 22. Effective September 22, 1994.)

Appendix F

Regulatory Environmental Documents:

Coastal Development Permit

**Mitigation Measures and
Mitigation Monitoring and Reporting Program**

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April 28, 2023

San Mateo County Parks Department
Hannah Ormshaw
455 County Center, 4th Floor
Redwood City, CA 94063

Subject: **LETTER OF DECISION**
File Number: PLN2022-00125
Location: Quarry County Park, El Granada
APN: 047-330-010; 047-340-010, -020, -040, -290

On April 26, 2023, the Planning Commission considered your request for a Coastal Development Permit, pursuant to Section 6328.4 of the County Zoning Regulations, and certification of a Mitigated Negative Declaration pursuant to the California Environmental Quality Act, to implement a wildfire fuel reduction program, including construction of a new fire access road and bathroom facilities, at Quarry County Park in the unincorporated El Granada area of San Mateo County.

Based on information provided by staff and evidence presented at the hearing, the Planning Commission adopted the Mitigated Negative Declaration and approved the requested Coastal Development Permit, County File Number PLN2022-00125 by making the required findings and adopting the conditions of approval listed in Attachment A.

Any interested party aggrieved by the determination of the Planning Commission has the right of appeal to the Board of Supervisors within ten (10) business days from such date of determination. The appeal period for this matter will end at **5:00 p.m. on May 10, 2023.**

An approval of this project is appealable to the California Coastal Commission. Any aggrieved person may appeal this decision to the California Coastal Commission within 10 working days following the Coastal Commission's receipt of the notice of Final Local Decision. Please contact the Coastal Commission's North Central Coast District Office at (415) 904-5260 for further information concerning the Commission's appeal process.

The County and Coastal Commission appeal periods are sequential, not concurrent, and together total approximately one month. A project is considered approved when these appeal periods have expired, and no appeals have been filed.

Please direct any questions regarding this matter to Project Planner Michael Schaller mschaller@smcgov.org.

To provide feedback, please visit the Department's Customer Survey at the following link: <http://planning.smcgov.org/survey>.

Sincerely,

M. Schaller, for

Steve Monowitz
Community Development Director

cc: Department of Public Works
Building Inspection Section
Coastside Fire Protection District
City of Half Moon Bay
Midcoast Community Council
California Coastal Commission



County of San Mateo
Planning and Building Department

FINDING AND CONDITIONS OF APPROVAL

Permit Number: PLN 2022-00125

Hearing Date: April 26, 2023

Prepared By: Michael Schaller
Senior Planner

Adopted By: Planning Commission

FINDING

Regarding the Environmental Review, Find:

1. That the Mitigated Negative Declaration is complete, correct, and adequate and prepared in accordance with the California Environmental Quality Act and applicable State and County guidelines.
2. That, on the basis of the Initial Study, comments received thereto, and testimony presented and considered at the public hearing, that there is no substantial evidence that the project, if subject to the mitigation measures contained in the negative declaration, will have a significant effect on the environment.
3. That the Mitigated Negative Declaration reflects the independent judgment of San Mateo County.
4. That the mitigation measures identified in the Negative Declaration, agreed to by the applicant, placed as conditions on the project, and identified as part of this public hearing, have been incorporated into the Mitigation Monitoring and Reporting Plan in conformance with California Public Resources Code Section 21081.6.

Regarding the Coastal Development Permit, Find:

5. That the project, as described in the application and accompanying materials required by Zoning Regulations Section 6328.7 and as conditioned in accordance with Section 6328.14, conforms with the plans, policies, requirements, and standards of the San Mateo County Local Coastal Program with regards to the protection of biotic and visual resources.

6. That the project conforms to the specific findings required by policies of the San Mateo County Local Coastal Program as discussed in Section A(2) of this Staff Report. Protection measures will be implemented to prevent any impact to biological resources, including the San Francisco Garter Snake and California Red-Legged Frog.

CONDITIONS OF APPROVAL

Current Planning Section

1. The approval applies only to the proposal as described in this report and materials submitted for review and approval by the Planning Commission on April 26, 2023. The Community Development Director may approve minor revisions or modifications to the Project if they are found to be consistent with the intent of and in substantial conformance with this approval.

Compliance with existing Routine Maintenance Program Best Management Practices

2. This permit proposes to continue existing Wildfire Fuel Reduction activities, previously permitted in select areas of Quarry Park under the Parks Department's Routine Maintenance Program, into additional areas of the park. The approved Wildfire Fuel Reduction activities shall continue to utilize and comply with the previously approved RMP's Best Management Practices (BMPs) as listed in Attachment D of this report.

Project Specific Mitigation Measures

In addition to continued implantation of the RMP's Best Management Practices, the project's CEQA document identified the following measures as necessary to avoid significant impacts to the environment:

3. **Mitigation Measure BLGY-1. California Strawberry Pre-Construction Survey.** Within one year of project activities, a qualified biologist shall conduct a pre-construction survey for California Strawberry during the appropriate blooming period (February to March) to determine if this species is present within and adjacent to the vault toilet construction, South Ridge Fire Road, and fuel management work areas. If this species is absent, no further surveys or measures are required. If this species is present, comply with Policy 7.49 of the San Mateo County Local Coastal Program (LCP), which would include the following measures:

If the California strawberry is present in proposed work areas, a qualified professional doing work in strawberry breeding shall determine the value of the plant patch. If the breeder determines that the patch has significant value, project activities shall be designed to avoid direct impacts on the strawberry. Under the direction of the qualified biologist, occupied areas shall be marked with high visibility physical barriers such as orange construction fencing to delineate Environmentally Sensitive Areas (ESAs) where the strawberries are present. For activities involving the use of mechanical equipment, the fencing will be installed around plant occurrences including a 50-foot disturbance-free buffer. For activities involving the use of hand tools, high-visibility flagging may be installed in place of construction fencing, around plant occurrences including a 10-foot disturbance free buffer. In all cases, ESAs shall include signage that states that the area shall be avoided.

- a. If project activities cannot avoid areas of high value strawberry patches and would result in the destruction of plants, a Habitat Mitigation Monitoring Plan (HMMP) shall be developed to ensure that impacts are appropriately mitigated. At a minimum, the MMP shall:
 - (1) Describe proposed impacts to the species.
 - (2) Proposed mitigation including some combination of transplantation or reestablishment of impacted populations and/or preservation and management of existing populations.
 - (3) Identify success criteria, including achieving the establishment of a new viable occurrences of the strawberry or re-establishment of the strawberry, equal or greater in extent and numbers to the affected occurrence.
 - (4) Provide a detailed implementation plan, including relocation methods as well as a schedule for completing and monitoring the relocation.
 - (5) Set goals and performance criteria for transplants or plantings, including (a) survivorship, (b) density, (c) percent cover, and (d) control of invasive weeds with a California Invasive Plant Council Inventory (Cal-IPC) rating of moderate or high.
 - (6) Specify a minimum monitoring period of 3 years, with annual reports.

- (7) Identify contingency and adaptive management measures if the relocation or reestablishment plantings are not meeting success criteria.
 - b. Update the HMMP on an as-needed basis. Because some projects would be initiated over the course of several years, additional pre-activity surveys may detect new California strawberry patches. In that case, if direct impacts on this species cannot be avoided during successive fuel treatment projects, the County will amend the HMMP with applicable information on new impacts and mitigation as outlined above.
4. **Mitigation Measure BLGY-2a. Burrowing Owl Pre-activity Survey and Avoidance.** Pre-activity surveys for burrowing owls will be conducted prior to the initiation of all project activities within suitable habitat (e.g., grassland, rocky outcrop, and scrub habitats) in the Highest and Moderate fuel reduction treatment effectiveness areas. Although burrowing owls are not expected to breed on the site, surveys shall be conducted year-round to detect potential dispersing juveniles, non-breeding adults, wintering, and migrating individuals. If burrowing owls are observed during the surveys, then Mitigation Measure BLGY-2b will be implemented.
- a. Pre-construction surveys will be completed in conformance with the CDFW's 2012 guidelines (CDFG 2012), or any more current protocols if any become available, which include the following:
 - (1) At least 14 days prior to the onset of vegetation mowing/removal or ground disturbing activities, an initial habitat assessment will be conducted in suitable habitat (e.g., grassland, rocky outcrop, and scrub habitats) by a qualified biologist to determine if suitable burrowing owl habitat is present. A qualified biologist is an individual who has a degree in biological sciences or related resource management with a minimum of two seasonal years post-degree experience conducting surveys for burrowing owl. During or following academic training, the qualified biologist will have achieved a high level of professional experience and knowledge in biological sciences and special-status species identification, ecology, and habitat requirements.
 - (2) During the habitat assessment, the biologist will survey the entire activity area for burrows that could be used by burrowing owls, including burrows of the California ground squirrel, American badger,

striped skunk, or coyote for nesting and roosting, and signs of use (e.g., feathers, pellets, whitewash).

- (3) The survey shall also include all areas within 250 feet of the site, as access allows.
- (4) If no suitable burrowing owl habitat is present, no additional surveys will be required.
- (5) If suitable burrows and signs of activity are found, an additional survey shall be conducted within the 24-hour period prior to the initiation of project activities in any given area.

5. Mitigation Measure BLGY-2b: Implement Buffer Zones for Burrowing Owls.

If burrowing owls are determined to be present, a 150-foot buffer zone will be maintained around the occupied burrow(s). If maintaining such a buffer is not feasible, then the buffer must be great enough to avoid injury or mortality of individual owls, as determined by the qualified biologist. No ground-disturbing activities will occur in the buffer until it is determined that the owl has vacated the area. If avoidance of occupied habitat cannot be avoided, the owl(s) will be passively relocated by the qualified biologist using one-way doors, which should be installed in all burrows within the impact area and left in-place for at least two nights. These one-way doors will then be removed and the burrows back-filled immediately prior to vegetation mowing/removal or grading. If relocation occurs during the breeding season (February 1 – August 31) owls will not be relocated unless the biologist can determine that the owls are not actively breeding.

6. Mitigation Measure BLGY-3. Reconnaissance and Focused Surveys. Within one year of initiation of the Project, a qualified biologist shall conduct a reconnaissance survey of all proposed treatment areas in potentially suitable habitat (grassland and scrub habitats) to assess the suitability of the habitat for the crotch bumble bee and obscure bumble bee, including potential foraging, nesting, and overwintering habitat that may support these species. If suitable habitat is present, focused surveys shall be conducted within the year that each treatment project is scheduled to occur. Reconnaissance and focused surveys should be conducted during the flight season (March - September), timed to occur when detection probability is highest, including surveys in early spring (early April) and early summer (early July). Focused surveys should be conducted during two to four evenly spaced sampling periods during the flight season. Surveys shall be conducted by a qualified biologist with knowledge in the life history and ecology of special-status bumble bees and has a minimum of two field seasons of experience conducting focused surveys for these species.

If focused surveys do not identify occupied or suitable habitat, no additional surveys and mitigation are warranted. If treatment project sites are occupied by special-status bumble bees or suitable habitat, Mitigation Measure BLGY-4 shall be implemented.

7. **Mitigation Measure BLGY-4. Bumble Bee Avoidance Measures**

If focused surveys identify occupied or suitable habitat within the project footprint, the following avoidance measures shall be implemented:

- a. **Avoid Treatment Activities During Active Bumble Bee Season.** To the extent feasible, conduct all treatment activities during the time of year when bees are not active (October – February) of any given year. If avoidance of the active bumble bee season is not feasible, implement b) below.
- b. **Avoid Injury and Mortality to Bumble Bee Colonies.** If treatment activities cannot avoid the active bumble bee season, the biologist should establish no-work buffers around active nest colonies identified during surveys. The size and configuration of the no-work buffer would be based on the best professional judgment of the biologist. At a minimum, the buffer should provide at least 20 feet of clearance around nest entrances for manual treatment activities with motorized and non-motorized hand tools, and 40 feet of clearance for treatment activities with heavy equipment but may be adjusted as determined by the qualified biologist using the most current and commonly accepted science and published guidance. Construction activities should not occur within the no-work zone buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days), as determined by the qualified biologist.
- c. **Maintain Habitat Function for Special-Status Bumble Bees.** To the extent feasible, treatment activities will be designed to maintain habitat function including maintaining some amount of foraging (i.e., floral resources) and nesting habitat for special-status bumble bees during implementation of all treatment activities in occupied or suitable habitat in two ways. First, habitat function should be maintained by dividing suitable habitat into a smaller number of treatment units so that the entire treatment area is treated across two or more years. This method will maintain suitable habitat for special-status bumble bees during treatment activities and temporary retention of floral resources in the treatment area. Second, maintenance of habitat function shall also be achieved by conducting treatment activities in a patchy pattern such that entire habitat patches (e.g., entire northern coastal scrub habitat on the southern portion of the site) are

not treated/removed and untreated portions of occupied or suitable habitat are retained.

- d. **Avoidance of Impacts on Bumble Bees from Herbicide Application.** If suitable foraging, nesting, or wintering habitat is present in a proposed work area that supports occupied or suitable habitat for special-status bumble bees, no herbicides will be applied to plants that are in bloom, including any native and non-native plants. Prohibit the use of the herbicide paraquat dichloride at any time, regardless of blooming, in suitable foraging, nesting, or potential wintering habitat of special-status bees.
8. **Mitigation Measure BLGY-5. Roosting Bat Surveys and Avoidance.** To minimize impacts on maternity colonies during the maternity season (March 15 – August 31) or non-reproductive bats during winter torpor season (November 1 – March 1) the following measures will be implemented:
- a. In the year of project activities, a qualified biologist shall conduct a bat habitat assessment and map with a GIS device and mark all trees in the work area that support potentially high-quality roost trees.
 - b. If work is planned to occur during the maternity season, no more than 30 days prior to project activities, a qualified biologist shall conduct a pre-activity survey for roosting bats of all suitable roost trees that were identified during the habitat assessment. The biologist will conduct a survey to look for evidence of bat use within suitable habitat. If evidence of use is observed, or if high-quality roost sites are present in areas where evidence of bat use might not be detectable, an evening emergence survey and/or a nocturnal acoustic survey may be necessary to determine if a bat colony is present and to identify the specific location of the bat colony.
 - c. If no active maternity colony or non-breeding bat roost is located, project work can continue as planned.
 - d. If an active maternity colony or non-breeding roost is located, the project work will be modified to avoid disturbance of the roosts, to the extent feasible.
 - e. If an active maternity colony is located and Project work cannot be modified to avoid removal or disturbance of the occupied tree, disturbance will be scheduled to take place outside the maternity roost season (April 15– August 31), and a disturbance-free buffer zone (determined by a qualified bat biologist) will be implemented during the maternity roost season.

- f. If an active non-breeding bat roost is located and project work cannot be modified to avoid removal of the occupied tree, the tree will be removed using methods using a two-day phased method as follows:
 - (1) Day 1, under supervision of a qualified biologist, tree limbs or tree top (tree topping) not containing suitable bat roosting habitat will be removed using chainsaws only; then
 - (2) Day 2, the rest of the tree can be removed.
 - g. Because bats are rarely detected during the deep torpor period, no surveys are recommended during this time. Instead, if high quality roost trees are proposed to be removed during the deep torpor season, the County will avoid the removal only of the suitable roost trees to the extent feasible to avoid mortality to hibernating bats.
 - h. The County will also follow any applicable measures in CDFW Streambed Alteration Agreement permits.
9. **Mitigation Measure BLGY-6. Fuel Management Plan.** The County shall prepare a management plan to ensure that sensitive resources are not impacted by fuel reduction activities. The plan shall be prepared by a wildland resources expert in coordination with a biologist/ecologist knowledgeable about the habitats. The plan shall include the following:
- a. Describe the purpose of the management plan and focus on protection of biological resources while reducing fuels and providing buffer zones.
 - b. Identify the different vegetation treatments associated with fuel reduction areas or zones, if applicable.
 - c. Describe the sensitive resources and how they will be protected. In particular, the plan shall include protection measures for special-status wildlife that occur or are known to occur in non-timber woodland and other habitats that would be impacted by the Project site including the San Francisco dusky-footed woodrat, California red-legged frog, San Francisco garter snake, burrowing owl, crotch bumble bee, monarch butterfly, special-status birds, common nesting birds and roosting bats; and special-status plants including Hickman's cinquefoil, Marin checker lily, bent-flowered fiddleneck, western leatherwood, perennial goldfields, Oregon polemonium, and San Mateo tree lupine.

d. Provide BMPs for fuel management, which may include the following:

- (1) seasonal restrictions on removal of vegetation
- (2) restrictions on removal of native vegetation
- (3) pre-activity surveys for sensitive species (e.g., special-status plants and wildlife)
- (4) protection measures for sensitive species and habitats (e.g., fencing)
- (5) worker environmental awareness training
- (6) vegetation disposal guidelines
- (7) describe protection measures for sensitive resources such as temporary fencing and worker training
- (8) map sensitive resources (e.g., dusky-footed woodrat nests, rare plants [if found]) with GPS or other method that allows them to be searched for in subsequent years
- (9) biological monitoring requirements
- (10) guidelines for herbicide treatments and herbicides that should be avoided
- (11) avoidance of removal of native species to the extent practicable
- (12) description of sensitive habitats to avoid

e. Prior to the beginning of vegetation removal within the work area covered by the Fuel Management Plan, the Parks Department will submit the Plan to the Planning Department for a determination of compliance with the conditions of this CDP and the conditions of the Routine Maintenance Program CDP approval.

10. **Mitigation Measure HAZ-1: Use of Best Management Practices.** The County shall require the construction contractor use the following best management practices (BMPs) to minimize potential release of hazardous materials used during construction activities:

- a. Follow manufacturer's directions on use, storage and disposal of chemical products used in construction.
- b. Avoid overtopping construction equipment fuel gas tanks.
- c. Provide secondary containment for any hazardous materials temporarily stored on site.
- d. During routine maintenance of construction equipment, properly contain and remove grease and oils.
- e. Perform regular inspections of construction equipment and materials storage areas for leaks and maintain records documenting compliance with the storage, handling and disposal of hazardous materials; and
- f. Properly dispose of discarded containers of fuels and other chemicals.

11. **Mitigation Measure HYD-1: Stormwater Pollution Prevention Plan.** The County shall, by contract specifications, ensure contractors prepare and implement a SWPPP for each phase of the proposed project to be implemented involving grading or earthwork activity. Erosion control measures shall be in place prior to the start of each phase's respective construction activities and remain in place throughout the construction duration. The plan must provide a BMP monitoring and maintenance schedule and identify parties responsible for monitoring and maintenance of construction-phase BMPs. Erosion and water quality control measures identified in the plan must comply with the Construction Site Control requirements (C.6) of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (Order No. R2-2015-004922), and the County's standard Water Pollution Control Plan specifications. At a minimum, the SWPPP shall include, but not be limited to, the following measures (County of San Mateo, 2017):

- a. Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place.
- b. Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures.
- c. A spill prevention and countermeasure plan shall be developed that will identify proper storage, collection, and disposal measures for potential

pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. The plan will also require the proper storage, handling, use, and disposal of petroleum products.

- d. Construction activities shall be scheduled to minimize land disturbance during peak runoff periods and to the immediate area required for construction.
- e. Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction.
- f. Surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location.
- g. Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater.
- h. Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events. All removed topsoil shall be reused during construction to the extent feasible. Unused topsoil, if any, shall be broadly redistributed to the surrounding ruderal/developed areas in such a manner that topography and vegetation cover would not be adversely impacted.
- i. Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff.
- j. Disturbed areas will be re-vegetated after completion of construction activities.

- k. All necessary permits and approvals shall be obtained.
 - l. Provide sanitary facilities for construction workers.
12. **Mitigation Measure TRA-1:** Traffic Control Plan. The County shall require the construction contractor(s) to prepare and implement a traffic control plan to reduce traffic impacts on the roadways at and near the work sites, as well as to reduce potential traffic safety hazards and ensure adequate access for emergency responders and construction vehicles, as appropriate. To the extent applicable, the traffic control plan shall conform to the California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control) (Caltrans 2014). The traffic control plan shall include, but not be limited to, the following elements:
- a. Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone.
 - b. Identifying truck routes designated by the County. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible.
 - c. Sufficient staging areas for trucks accessing construction zones to minimize disruption of access to adjacent public rights-of-way.
 - d. Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by on-site inspectors.
 - e. Scheduling truck trips outside the peak morning and evening commute hours to the extent possible.
 - f. Limiting the duration of road and lane closures to the extent possible.
 - g. Implementing roadside safety protocols. Advance “Road Work Ahead” warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone.
 - h. Coordinating construction administrators of emergency service providers (including all fire protection agencies), and recreational facility managers. Operators shall be notified at least one month in advance of the timing, location, and duration of construction activities and the locations of detours

and lane closures, where applicable. All roads shall remain passable to emergency service vehicles at all times.

- i. Repairing and restoring affected roadway rights-of-way to their original condition after construction is completed.

MITIGATION MONITORING AND REPORTING PROGRAM

This Mitigation, Monitoring and Reporting Program (MMRP) has been prepared pursuant to the CEQA Guidelines, which state:

“When adopting a mitigated negative declaration, the lead agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to mitigate or avoid significant environmental effects” (§15074(d)) and;

“The Lead Agency may choose whether its program will monitor mitigation, report on mitigation, or both. “Reporting” generally consists of a written compliance review that is presented to the decision-making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. “Monitoring” is generally an ongoing or periodic process of project oversight. There is often no clear distinction between monitoring and reporting and the program best suited to ensuring compliance in any given instance will usually involve elements of both.” (§15097 (c))

The following table lists the impacts, mitigation measures, and timing of the mitigation measure (when the measure will be implemented) related to the Quarry County Park Wildfire Reduction and Visitor Services Project. All of the mitigation measures listed here will be implemented by the County or by their appointees.

According to CEQA Guidelines section 15126.4 (a) (2), “Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.” Therefore, all mitigation measures as listed in this MMRP will be adopted by the County Planning Commission when the project is approved.

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
BIOLOGICAL RESOURCES				
Impact: Fuel management activities, fire road construction, or vault toilet installation could impact California strawberry, a species protected by Policy 7.49 of the County LCP, through trampling or inhibiting growth of individuals from dispersed chipped material or other vegetative debris.	Mitigation Measure BLGY-1. California Strawberry Pre-Construction Survey. Within one year of project activities, a qualified biologist shall conduct a pre-construction survey for California Strawberry during the appropriate blooming period (February to March) to determine if this species is present within and adjacent to the vault toilet construction, South Ridge Fire Road, and fuel management work areas. If this species is absent, no further surveys or measures are required. If this species is present, comply with Policy 7.49 of the San Mateo County Local Coastal Program (LCP), which would include the following measures: • If the California strawberry is present in proposed work areas, a qualified professional doing work in strawberry breeding shall determine the value of the plant patch. If the breeder determines that the patch has significant value, project activities shall be designed to avoid direct impacts on the strawberry. Under the direction of the qualified biologist, occupied areas shall be marked with high visibility physical barriers such as orange construction fencing to delineate Environmentally Sensitive Areas (ESAs) where the strawberries are present. For activities involving the use of mechanical equipment, the fencing will be installed around plant occurrences including a 50-foot disturbance-free buffer. For activities involving the use of hand tools, high-visibility flagging may be installed in place of construction fencing, around plant occurrences including a 10-foot disturbance free buffer. In all cases, ESAs shall include signage that states that the area shall be avoided.	Implementation: by Qualified Biologist Timing: Survey during the California strawberry blooming season before project initiation. Preparation of HMMP upon determination of presence of California strawberry within project disturbance area.	Monitoring: The qualified biologist shall prepare a memo or letter report documenting the methods and results of the California strawberry surveys to be submitted to County Parks.	Survey Results Initials: _____ Date: _____ Plan Submittal Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	• If project activities cannot avoid areas high value strawberry patches and would result in the destruction of plants, a Habitat Mitigation Monitoring Plan (HMMP) shall be developed to ensure that impacts are appropriately mitigated. At a minimum, the HMMP shall: ○ Describe proposed impacts to the species. ○ Proposed mitigation including some combination of transplantation or reestablishment of impacted populations and/or preservation and management of existing populations. ○ Identify success criteria, including achieving the establishment of a new viable occurrences of the strawberry or re-establishment of the strawberry, equal or greater in extent and numbers to the affected occurrence. ○ Provide a detailed implementation plan, including relocation methods as well as a schedule for completing and monitoring the relocation. ○ Set goals and performance criteria for transplants or plantings, including (a) survivorship, (b) density, (c) percent cover, and (d) control of invasive weeds with a California Invasive Plant Council Inventory (Cal-IPC) rating of moderate or high. ○ Specify a minimum monitoring period of 3 years, with annual reports. ○ Identify contingency and adaptive management measures if the relocation or reestablishment plantings are not meeting success criteria. • Update the HMMP on an as-needed basis. Because some projects would be initiated over the course of several years, additional pre-			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	activity surveys may detect new California strawberry patches. In that case, if direct impacts on this species cannot be avoided during successive fuel treatment projects, the County will amend the HMMP with applicable information on new impacts and mitigation as outlined above.			
Impact: Fuel reduction will occur in grassland habitat where burrowing owls could potentially occur resulting in potential injury or mortality of wintering owls if present.	Mitigation Measure BLGY-2a. Burrowing Owl Pre-activity Survey and Avoidance. Pre-activity surveys for burrowing owls will be conducted prior to the initiation of all project activities within suitable habitat (e.g., grassland, rocky outcrop, and scrub habitats) in the Highest and Moderate fuel reduction treatment effectiveness areas. Although burrowing owls are not expected to breed on the site, surveys shall be conducted year-round to detect potential dispersing juveniles, non-breeding adults, wintering, and migrating individuals. If burrowing owls are observed during the surveys, then Mitigation Measure BLGY-2b will be implemented. • Pre-construction surveys will be completed in conformance with the CDFW's 2012 guidelines (CDFG 2012), or any more current protocols if any become available, which include the following: • At least 14 days prior to the onset of vegetation mowing/removal or ground disturbing activities, an initial habitat assessment will be conducted in suitable habitat (e.g., grassland, rocky outcrop, and scrub habitats) by a qualified biologist to determine if suitable burrowing owl habitat is present. A qualified biologist is an individual who has a degree in biological sciences or related resource management with a minimum of two seasonal years post-degree experience	Implementation: by Qualified Biologist Timing: Prior to start of project activities (Mitigation Measure BLGY-2a) and during project activities (Mitigation Measure BLGY-2b).	Monitoring: The Qualified Biologist shall prepare a memo or letter report documenting the methods and results of the burrowing owl surveys to be submitted to County Parks. If Mitigation Measure BLGY-2b is required, a post-construction report shall be prepared documenting compliance with the requirements of this measure.	Survey Results Initials: _____ Date: _____ Avoidance / Minimization Measures Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	conducting surveys for burrowing owl. During or following academic training, the qualified biologist will have achieved a high level of professional experience and knowledge in biological sciences and special-status species identification, ecology, and habitat requirements. • During the habitat assessment, the biologist will survey the entire activity area for burrows that could be used by burrowing owls, including burrows of the California ground squirrel (<i>Otospermophilus beecheyi</i>), American badger (<i>Taxidea taxus</i>), striped skunk (<i>Mephitis mephitis</i>), or coyote (<i>Canis latrans</i>) for nesting and roosting, and signs of use (e.g., feathers, pellets, whitewash). • The survey shall also include all areas within 250 feet of the site, as access allows. • If no suitable burrowing owl habitat is present, no additional surveys will be required. • If suitable burrows and signs of activity are found, an additional survey shall be conducted within the 24-hour period prior to the initiation of project activities in any given area. Mitigation Measure BLGY-2b: Implement Buffer Zones for Burrowing Owls. If burrowing owls are determined to be present, a 150-foot buffer zone will be maintained around the occupied burrow(s). If maintaining such a buffer is not feasible, then the buffer must be great enough to avoid injury or mortality of individual owls, as determined by the qualified biologist. No ground-disturbing activities will occur in the buffer until it is determined that the owl has vacated the area. If avoidance of occupied habitat cannot be avoided, the owl(s) will be passively relocated by the qualified biologist using one-way doors, which should be installed in all			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	burrows within the impact area and left in-place for at least two nights. These one-way doors will then be removed and the burrows back-filled immediately prior to vegetation mowing/removal or grading. If relocation occurs during the breeding season (February 1 – August 31) owls will not be relocated unless the biologist can determine that the owls are not actively breeding.			
Impact: Vegetation removal for fuel reduction could remove habitat supporting crotch bumble bee and obscure bumble bee,	Mitigation Measure BLGY-3. Reconnaissance and Focused Surveys. Within one year of initiation of the Project, a qualified biologist shall conduct a reconnaissance survey of all proposed treatment areas in potentially suitable habitat (grassland and scrub habitats) to assess the suitability of the habitat for the crotch bumble bee and obscure bumble bee, including potential foraging, nesting, and overwintering habitat that may support these species. If suitable habitat is present, focused surveys shall be conducted within the year that each treatment project is scheduled to occur. Reconnaissance and focused surveys should be conducted during the flight season (March - September), timed to occur when detection probability is highest, including surveys in early spring (early April) and early summer (early July). Focused surveys should be conducted during two to four evenly spaced sampling periods during the flight season. Surveys shall be conducted by a qualified biologist with knowledge in the life history and ecology of special-status bumble bees and has a minimum of two field seasons of experience conducting focused surveys for these species. If focused surveys do not identify occupied or suitable habitat, no additional surveys and mitigation are warranted. If treatment project sites are occupied by special-status bumble bees or	Implementation: by Qualified Biologist Timing: During the bee flight season (March – September) prior to start of project activities.	Monitoring: The Qualified Biologist shall prepare a memo or letter report documenting the methods and results of the surveys to be submitted to County Parks.	Survey Results Initials: _____ Date: _____ Avoidance / Minimization Measures Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	suitable habitat, Mitigation Measure BLGY-4 shall be implemented. Mitigation Measure BLGY-4. Bumble Bee Avoidance Measures. If focused surveys identify occupied or suitable habitat within the project footprint, the following avoidance measures shall be implemented. a)Avoid Treatment Activities During Active Bumble Bee Season. To the extent feasible, conduct all treatment activities during the time of year when bees are not active (October – February) of any given year. If avoidance of the active bumble bee season is not feasible, implement b) below. b)Avoid Injury and Mortality to Bumble Bee Colonies. If treatment activities cannot avoid the active bumble bee season, the biologist should establish no-work buffers around active nest colonies identified during surveys. The size and configuration of the no-work buffer would be based on the best professional judgment of the biologist. At a minimum, the buffer should provide at least 20 feet of clearance around nest entrances for manual treatment activities with motorized and non-motorized hand tools, and 40 feet of clearance for treatment activities with heavy equipment, but may be adjusted as determined by the qualified biologist using the most current and commonly accepted science and published guidance. Construction activities should not occur within the no-work zone buffers until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days), as determined by the qualified biologist. c)Maintain Habitat Function for Special-Status Bumble Bees. To the extent feasible, treatment			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	activities will be designed to maintain habitat function including maintaining some amount of foraging (i.e., floral resources) and nesting habitat for special-status bumble bees during implementation of all treatment activities in occupied or suitable habitat in two ways. First, habitat function should be maintained by dividing suitable habitat into a smaller number of treatment units so that the entire treatment area is treated across two or more years. This method will maintain suitable habitat for special-status bumble bees during treatment activities and temporary retention of floral resources in the treatment area. Second, maintenance of habitat function shall also be achieved by conducting treatment activities in a patchy pattern such that entire habitat patches (e.g., entire northern coastal scrub habitat on the southern portion of the site) are not treated/removed and untreated portions of occupied or suitable habitat are retained. d) Avoidance of Impacts on Bumble Bees from Herbicide Application. If suitable foraging, nesting, or wintering habitat is present in a proposed work area that supports occupied or suitable habitat for special-status bumble bees, no herbicides will be applied to plants that are in bloom, including any native and non-native plants. Prohibit the use of the herbicide paraquat dichloride at any time, regardless of blooming, in suitable foraging, nesting, or potential wintering habitat of special-status bees.			
Impact: Tree removal could impact non-special-status roosting bats protected by the	Mitigation Measure BLGY-5. Roosting Bat Surveys and Avoidance. To minimize impacts on maternity colonies during the maternity season (March 15 – August 31) or non-reproductive bats	Implementation: by Qualified Biologist Timing: Prior to and during project activities.	Monitoring: The Qualified Biologist shall prepare a memo or letter report documenting the	Survey Results Initials: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
California Fish and Game Code.	during winter torpor season (November 1 – March 1) the following measures will be implemented: In the year of project activities, a qualified biologist shall conduct a bat habitat assessment and map with a GIS device and mark all trees in the work area that support potentially high-quality roost trees. If work is planned to occur during the maternity season, no more than 30 days prior to project activities, a qualified biologist shall conduct a pre-activity survey for roosting bats of all suitable roost trees that were identified during the habitat assessment. The biologist will conduct a survey to look for evidence of bat use within suitable habitat. If evidence of use is observed, or if high-quality roost sites are present in areas where evidence of bat use might not be detectable, an evening emergence survey and/or a nocturnal acoustic survey may be necessary to determine if a bat colony is present and to identify the specific location of the bat colony. If no active maternity colony or non-breeding bat roost is located, project work can continue as planned. If an active maternity colony or non-breeding roost is located, the project work will be modified to avoid disturbance of the roosts, to the extent feasible. If an active maternity colony is located and Project work cannot be modified to avoid removal or disturbance of the occupied tree, disturbance will be scheduled to take place outside the maternity roost season (April 15–August 31), and a disturbance-free buffer zone (determined by a qualified bat biologist) will be implemented during the maternity roost season.		methods and results of the roosting bat survey(s) to be submitted to County Parks. If a bat roost is found, the roost buffer and monitoring shall be documented and submitted to County Parks. If the bat roost cannot be avoided, the eviction method and monitoring shall also be documented and submitted to County Parks.	Date: _____ Avoidance / Minimization Measures Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	If an active non-breeding bat roost is located and project work cannot be modified to avoid removal of the occupied tree, the tree will be removed using methods using a two-day phased method as follows: Day 1, under supervision of a qualified biologist, tree limbs or treetop (tree topping) not containing suitable bat roosting habitat will be removed using chainsaws only; then Day 2, the rest of the tree can be removed. Because bats are rarely detected during the deep torpor period, no surveys are recommended during this time. Instead, if high-quality roost trees are proposed to be removed during the deep torpor season, the County will avoid the removal only of the suitable roost trees to the extent feasible to avoid mortality to hibernating bats. The County will also follow any applicable measures in CDFW Streambed Alteration Agreement permits.			
Impact: Vegetation removal for fuel reduction could alter the functions and values of the wildlife habitat in non-timber woodlands.	Mitigation Measure BLGY-6. Fuel Management Plan. The County shall prepare a management plan to ensure that sensitive resources are not impacted by fuel reduction activities. The plan shall be prepared by a wildland resources expert in coordination with a biologist/ecologist knowledgeable about the habitats. The plan shall include the following: - Describe the purpose of the management plan and focus on protection of biological resources while reducing fuels and providing buffer zones. - Identify the different vegetation treatments associated with fuel reduction areas or zones, if applicable.	Implementation: by County Parks or its Contractor Timing: Prior to start of project activity.	Monitoring: The Fuel Management Plan shall be submitted to County Parks Director for review and approval. County Project Manager or its Contractor shall submit a written report confirming implementation of the Fuel Management Plan.	Plan Submittal Initials: _____ Date: _____ Report Submittal Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	• Describe the sensitive resources and how they will be protected. In particular, the plan shall include protection measures for special-status wildlife that occur or are known to occur in non-timber woodland and other habitats that would be impacted by the Project site including the San Francisco dusky-footed woodrat, California red-legged frog, San Francisco garter snake, burrowing owl, crotch bumble bee, monarch butterfly, special-status birds, common nesting birds and roosting bats; and special-status plants including Hickman's cinquefoil, Marin checker lily, bent-flowered fiddleneck, western leatherwood, perennial goldfields, Oregon polemonium, and San Mateo tree lupine. • Provide BMPs for fuel management, which may include the following: ○ seasonal restrictions on removal of vegetation ○ restrictions on removal of native vegetation ○ pre-activity surveys for sensitive species (e.g., special-status plants and wildlife) ○ protection measures for sensitive species and habitats (e.g., fencing) ○ worker environmental awareness training ○ vegetation disposal guidelines ○ describe protection measures for sensitive resources such as temporary fencing and worker training ○ map sensitive resources (e.g., dusky-footed woodrat nests, rare plants [if found]) with GPS or other method that allows them to be searched for in subsequent years ○ biological monitoring requirements			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	- o guidelines for herbicide treatments and herbicides that should be avoided - o avoidance of removal of native species to the extent practicable - o description of sensitive habitats to avoid			
HAZARDS AND HAZARDOUS MATERIALS				
Impact: Operation and maintenance of equipment could introduce hazardous materials into the environment.	Mitigation Measure HAZ-1: Use of Best Management Practices. The County shall require the construction contractor use the following best management practices (BMPs) to minimize potential release of hazardous materials used during construction activities: • Follow manufacturer's directions on use, storage and disposal of chemical products used in construction; • Avoid overtopping construction equipment fuel gas tanks; • Provide secondary containment for any hazardous materials temporarily stored on site; • During routine maintenance of construction equipment, properly contain and remove grease and oils; • Perform regular inspections of construction equipment and materials storage areas for leaks and maintain records documenting compliance with the storage, handling and disposal of hazardous materials; and • Properly dispose of discarded containers of fuels and other chemicals.	Implementation: by County Parks or its Contractor Timing: Prior to and during project activities.	Monitoring: The Project Manager shall provide written verification to County Parks that BMPs were implemented.	Best Management Practices Initials: _____ Date: _____
HYDROLOGY/WATER QUALITY				
Impact: Fire road construction would disturb project soils	Mitigation Measure HYD-1: Stormwater Pollution Prevention Plan. The County shall, by contract specifications, ensure contractors prepare and	Implementation: by County Parks or its	Monitoring: The Stormwater Pollution Prevention Plan shall	Plan Submittal

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
and could result in soil erosion.	implement a SWPPP for each phase of the proposed project to be implemented involving grading or earthwork activity. Erosion control measures shall be in place prior to the start of each phase's respective construction activities and remain in place throughout the construction duration. The plan must provide a BMP monitoring and maintenance schedule and identify parties responsible for monitoring and maintenance of construction-phase BMPs. Erosion and water quality control measures identified in the plan must comply with the Construction Site Control requirements (C.6) of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (Order No. R2-2015-004922), and the County's standard Water Pollution Control Plan specifications. At a minimum, the SWPPP shall include, but not be limited to, the following measures (County of San Mateo, 2017): • Temporary erosion control measures (such as silt fences, staked straw bales, and temporary revegetation) shall be employed for disturbed areas. No disturbed surfaces will be left without erosion control measures in place. • Sediment shall be retained on-site by a system of sediment basins, traps, or other appropriate measures. • A spill prevention and countermeasure plan shall be developed that will identify proper storage, collection, and disposal measures for potential pollutants (such as fuel, fertilizers, pesticides, etc.) used on-site. The plan will also require the proper storage, handling, use, and disposal of petroleum products. • Construction activities shall be scheduled to minimize land disturbance during peak runoff	Contractor Timing: Prior to (preparation of stormwater pollution prevention plan) and during construction (implementation of the plan).	be included in final project design and construction documents, and County Parks or its designee shall oversee its implementation.	Initials: _____ Date: _____ Monitoring Completion: Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	periods and to the immediate area required for construction. - Existing vegetation will be retained where possible. To the extent feasible, grading activities shall be limited to the immediate area required for construction. - Surface waters, including ponded waters, must be diverted away from areas undergoing grading, construction, excavation, vegetation removal, and/or any other activity which may result in a discharge to the receiving water. Diversion activities must not result in the degradation of beneficial uses or exceedance of water quality objectives of the receiving waters. Any temporary dam or other artificial obstruction constructed must only be built from materials such as clean gravel which will cause little or no siltation. Normal flows must be restored to the affected stream immediately upon completion of work at that location. - Sediment shall be contained when conditions are too extreme for treatment by surface protection. Temporary sediment traps, filter fabric fences, inlet protectors, vegetative filters and buffers, or settling basins shall be used to detain runoff water long enough for sediment particles to settle out. Store, cover, and isolate construction materials, including topsoil and chemicals, to prevent runoff losses and contamination of groundwater. - Topsoil removed during construction shall be carefully stored and treated as an important resource. Berms shall be placed around topsoil stockpiles to prevent runoff during storm events. All removed topsoil shall be reused during construction to the extent feasible. Unused			

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	topsoil, if any, shall be broadly redistributed to the surrounding ruderal/developed areas in such a manner that topography and vegetation cover would not be adversely impacted. • Establish fuel and vehicle maintenance areas away from all drainage courses and design these areas to control runoff. • Disturbed areas will be re-vegetated after completion of construction activities. • All necessary permits and approvals shall be obtained. • Provide sanitary facilities for construction workers.			
TRANSPORTATION				
Impact: Project construction related vehicles and equipment would interact with other vehicles, bicyclists, and pedestrians accessing the adjacent residences and Quarry County Park and could create traffic safety hazards.	Mitigation Measure TRA-1: Traffic Control Plan. The County shall require the construction contractor(s) to prepare and implement a traffic control plan to reduce traffic impacts on the roadways at and near the work sites, as well as to reduce potential traffic safety hazards and ensure adequate access for emergency responders and construction vehicles, as appropriate. To the extent applicable, the traffic control plan shall conform to the California Manual on Uniform Traffic Control Devices (MUTCD), Part 6 (Temporary Traffic Control) (Caltrans 2014). The traffic control plan shall include, but not be limited to, the following elements: • Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone.	Implementation: by County Parks or its Contractor Timing: Prior to (preparation of construction traffic management plan) and during construction (implementation of the plan).	Monitoring: The construction traffic management plan shall be included in final project design and construction documents, and County Parks or its designee shall oversee its implementation.	Plan Submittal Initials: _____ Date: _____ Monitoring Completion: Initials: _____ Date: _____

Impact	Mitigation Measure	Implementation Responsibility/Timing	Monitoring Responsibility	Verified Implementation
	• Identifying truck routes designated by the County. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible. • Sufficient staging areas for trucks accessing construction zones to minimize disruption of access to adjacent public right-of-ways. • Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by on-site inspectors • Scheduling truck trips outside the peak morning and evening commute hours to the extent possible. • Limiting the duration of road and lane closures to the extent possible. • Implementing roadside safety protocols. Advance “Road Work Ahead” warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone. • Coordinating construction administrators of emergency service providers (including all fire protection agencies), and recreational facility managers. Operators shall be notified at least one month in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable. All roads shall remain passable to emergency service vehicles at all times. • Repairing and restoring affected roadway rights-of-way to their original condition after construction is completed.			

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Appendix G

Basis of Design and Focused Engineering Geologic Investigation for Quarry Park Fire Road Extension Design and Construction at Quarry Park

**Pacific Watershed Associates
March 24, 2022**

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**Basis of Design and
Focused Engineering Geologic Investigation
For Quarry Park Fire Road Extension Design and
Construction at Quarry Park**

PWA Report No. 2110415101
March 24, 2022

Task Order #1, County of San Mateo Agreement #: 39000-19-R076458B



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1 PROJECT LOCATION AND DESCRIPTION

Quarry Park is a 567-acre county park located to the east and adjacent to the unincorporated community of El Granada, on the Pacific coast side of San Mateo County, California. Quarry Park is located on coastal footslopes draining to the Half Moon Bay terrace and is mostly covered in dense eucalyptus forest. The project area (Site) is located within an un-sectioned region of the USGS Montara Mountain 7.5-minute quadrangle, originally part of the Corral de Tierra (Map 1). The Cal Watershed HUC 12 is Denniston Creek-Frontal Pacific Ocean 180500060205. Access to the study area at the end of Coronado Avenue is located at 37.499792°N, 122.456430°W.

In 2019, San Mateo County Parks Department (SMCPD) engaged Pacific Watershed Associates (PWA) to provide personnel services under the New Quarry Park Fire Road Design and Construction Project. Services to be rendered by PWA include development of technical design plans, permitting, and construction management services for a new fire access road alignment named the Quarry Park Fire Road Extension, connecting Coronado Avenue with South Ridge Vista Trail within Quarry Park. The purpose of the new road alignment is to provide road redundancy alternatives to El Granada Boulevard for use by the public and emergency response vehicles in the event of wildfire. It is understood that the resulting design of the new fire access road alignment will meet or exceed the requirements of the Calfire Fire Safe Regulations and San Mateo County Fire Marshall's Office regulations for roadways to provide safe and adequate access for emergency equipment, civilian evacuation, and unobstructed traffic circulation during an emergency. The preliminary concept-level Quarry Park Fire Road Extension alignment design is a balanced cut and fill grading of native soil and weathered granitic bedrock materials. It is PWA's understanding that design cuts and fills are not planned to support rigid structures.

In March, 2020, at the request of Sam Herzberg, Senior Planner SMCPD, PWA geologists conducted a focused engineering geologic investigation (Project) to characterize the geology, geomorphology, shallow stratigraphic conditions, and engineering material properties of site soils pertinent to the construction of the Quarry Park Fire Road Extension alignment. The summary results of geologic analyses and geotechnical investigations performed by PWA and presented in this memorandum form the Basis of Design for the Quarry Park Fire Road Extension Design Plans and following recommendations, observations of geologic conditions, risks, and constraints relevant to the proposed project area have been considered and incorporated into the final design plans.

2 PROJECT OBJECTIVES

The primary objective of the Quarry Park Fire Road Extension Design and Construction at Quarry Park Project is to provide professional services for technical design, permitting, and construction management for construction of less than 1 mile of new alignment for the Quarry Park Fire Road Extension at Quarry Park. The following objectives and constraints have guided PWA's design development and engineering geologic and geotechnical investigations supporting the design of the new Quarry Park Fire Road Extension alignment:

- The road alignment must provide alternative wildfire emergency access to and egress from structures located along the upper segment of El Granada Boulevard by connecting the Dolphine Fire Road and South Ridge Vista Trail within Quarry Park to Coronado Ave in El Granada.
- The road alignment must be contained within Quarry Park ownership and be located within the survey area boundaries provided by San Mateo County Parks.
- The road alignment must comply with Calfire Fire Safe Regulations for Emergency Access and Egress Roads Section 1273.00 – 1273.11, including the following conditions:
 - 16% maximum road grade
 - 12 ft minimum road width
 - Horizontal inside radius of curvature of no less than 35 ft
 - Inclusion of turnouts to allow passing along one-way road segments
 - Inclusion of a Roadway Turnaround as feasible
- The design road alignment must meet Federal, State, and local regulatory requirements and construction standards.

3 SITE TOPOGRAPHY AND GEOLOGIC CONDITIONS

Quarry Park is located between Arroyo de en Medio and Deer Creek, in San Mateo County, California. The Project Site is located on gentle to moderately sloping (5-50%) hillslope and elevation ranges from 140 to 425 feet above sea level.

The Project Site is located in the Coast Range geomorphic province of northern California, characterized by northwest trending mountains and valleys which generally mirror the dominant and active San Andreas Fault system and lesser, en echelon fault systems including the nearby San Gregorio fault zone, which includes the Denniston Creek Fault and Sea Cove Fault (Pampeyan, 1994).

The Alquist-Priolo (AP) zoned San Andreas Fault Zone lies approximately 4.5 miles east of the Site. The Pilarcitos Fault is located approximately 3 miles to the east and the San Gregorio Fault Zone is located approximately 1 mile offshore to the west (Jennings, 1994; Brabb, 1998). The Pilarcitos Fault is Quaternary age with an unspecified sense of movement and slip rate, whereas the San Gregorio Fault Zone is Holocene in age, active, and exhibits dextral strike-slip displacement as identified by geomorphic expression and offset of geologic and anthropic deposits (Bryant, 1999).

The distribution of mapped lithological units within vicinity of the Site was compiled from GIS provided by the National Park Service (NPS) Geologic Resources Inventory Program (NPS, 2009) (Map 2). Relevant geological data provided by the NPS Geologic Resources Inventory Program is derived from two sources. Geologic data pertaining to the portion of the project Site within the Half Moon Bay 7½ -minute quadrangle is derived from Brabb (2000), while data pertaining to the Site within the Montara Mountain 7½-minute quadrangle is derived from Pompeyan (1994). Over half of the Site is underlain by Quaternary colluvial slope and ravine debris (Qsr) being the dominant surficial cover material (Map 2). The Qsr unit is described by Pompeyan as unconsolidated to moderately consolidated deposits of sand, silt, clay, and rock

fragments accumulated by slow downslope movement of weathered rock debris and soil and mapped where deposits are more than 5 feet in thickness. Slope and ravine debris of Qsr are primarily found in the steeper, upper half portions of amphitheater shaped sub-basins within Quarry Park. The Qsr colluvial deposits are a result of shallow landslides, bioturbation and soil creep geomorphic processes, and are comprised of unconsolidated deposits of weathered granitic rock and soil.

The Qsr unit was not mapped by Brabb 2000, who instead mapped areas of Qsr as Cretaceous age Granitic rocks of Montara Mountain (Kgr), the parent rock underlying and forming the weathered unit Qsr. Granitic rocks of Montara Mountain (Kgr) underlie a small portion of the ridgetops along the outer edges of the Quarry Park, consisting of highly fractured, deeply weathered, crystalline granitic rock (quartz diorite and granite). These rocks are foliated and found to primarily dominate the higher elevations. Granitic rocks of the Montara Mountain Batholith, the northern-most spur of the Santa Cruz Mountains, comprise the main geological separation of the Peninsula Coast from San Francisco Bay. In general, the underlying geologic units develop friable sandy soils, with moderate to high erosion potential, particularly when disturbed by natural episodic events or anthropogenic activities.

Soil types and characteristics underlying the Site are greater than 75% Miramar soil units, primarily coarse sandy loam along hillsides with moderate to very steep slope gradients and classified as “eroded” by the USDA Natural Resource Conservation Service (NRCS). The remaining ~25% is underlain by loamy Tierra soils, which are primarily loam to sandy clay loam along convex backslopes with moderate slope gradients and classified as “eroded” by the USDA NRCS.

K factors for the Universal Soil Loss Equation (USLE) determined by the National Cooperative Soil Survey (USDA NRCS, 2013) range from as low as 0.15 for the Miramar complex soils to as high as 0.32 for the Tierra complex soils. The higher K factors indicate more potential for erosion. Quarry Park soils generally fall within the low to mid-range of K factors (0.15-0.28) for the identified soil types within the Miramar soil complex.

4 FIELD EXPLORATION

4.1 Summary

Field investigations of the Site consisted of surficial evaluation of existing road cuts and fillslopes, exploratory borings and soil sample collection using a 3-inch diameter hand auger, and sampling of site soils from existing cutbank exposures. Subsurface borings were located to directly investigate site conditions at the concept location of the proposed Quarry Park Fire Road Extension alignment (Map 3). Four hand auger borings, numbered HA1 – HA4, were conducted in the vicinity of the conceptual road alignment and one cutbank exposure, numbered CB1, was logged and sampled (Table 1). All augering, test pit excavations, and sampling performed for the purpose of investigating subsurface conditions and engineering materials properties was conducted on March 12, 2020.

Table 1: Summary of Borings and Cutbank Exposures, Quarry Park, San Mateo, California

Boring ID	Latitude ¹	Longitude ¹	Depth of Boring/Exposure (ft)	Depth to Consolidated Colluvium/Bedrock (ft)
CB1	N37.5022	W122.4540	4.8	2.9
HA1	N37.5004	W122.4546	6.7	1.1
HA2	N37.4997	W122.4544	8.0	2.8
HA3	N37.4994	W122.4545	5.8	2.0
HA4	N37.5001	W122.4559	7.0	5.4

¹All geospatial data is referenced to relative topographical data produced by R.E.Y. Engineers, Inc., 2019.

4.2 Hand Auger Borings and Sampling

Several borings were conducted using a hand auger to investigate site soils and obtain samples for further laboratory testing. Test borings were conducted in the approximate location of the concept design fire access road alignment (Map 3). Borings were augered into site soils by hand using a 3-in soil auger. Auger cuttings were textured, described, and classified according to the Unified Soil Classification System (USCS) in the field using field classification method ASTM D2488-00 (Visual-Manual Procedure). Select samples were collected from the auger cuttings for laboratory analysis to confirm and determine grain size distribution, soil type classification, and other soils engineering properties.

4.3 Cutbank Exposure Logging and Sampling

An existing road cutbank exposure in the vicinity of the proposed Quarry Park Fire Road Extension alignment was logged (CB1) and provided an opportunity to view shallow subsurface stratigraphy, conduct additional in situ materials tests, and obtain soil samples (Map 3). Soils and stratigraphy observed at CB1 were field classified according to the USCS and a detailed stratigraphic log was compiled (Appendix A).

4.4 Soil Conditions

Field texturing and classification of soils was refined by the results of laboratory testing of collected disturbed samples. Finalized soil texturing, USCS classification, and laboratory testing results are presented on the log of test borings, Appendix A. Subsurface stratigraphy was observed to be highly consistent between the borings and cutbank exposures.

4.4.1 Organic Surface Materials

All borings HA1-4 and cutbank exposure CB1, encountered a thin layer of accumulated organic debris at the ground surface of approximately 3 inches in thickness. Organic debris encountered in borings consisted primarily of eucalyptus, oak, and poison oak leaves and stems.

4.4.2 *Sandy Silt*

Sandy silt (ML) soils were encountered in borings HA2-4 and cutbank exposure CB1 beneath the organic surface materials at depths ranging from 2.0 ft to 2.75 ft below ground surface (bgs) and to a depth of 5.4 ft bgs at HA4. *Sandy silt* soils were generally very stiff, dark brown, dry, non-plastic, with low dry strength. Unconfined compressive strength values were measured with a hand penetrometer and ranged from 1.75 - 5.0 tons per square foot (tsf) and averaged 3.5 tsf.

4.4.3 *Deeply Weathered Colluvium Granitic Rock*

Borings HA1-3 and cutbank exposure CB1 encountered deeply weathered colluvial granitic soils between 1.1 ft and 2.9 ft bgs. Located in a footslope setting, deeply weathered granitic bedrock was encountered at 5.4 ft bgs at HA4. The hand auger cut through the saprock with moderate resistance and disturbed samples and cuttings were textured as non-plastic *silty sand* soils (SM).

4.5 Groundwater

Groundwater was not encountered in any of the exploratory borings. No evidence of groundwater inundation such as soil mottling or manganese staining was observed in subsurface soils or in cutbank exposures. Groundwater is not expected to impact construction or the long-term stability of constructed fills.

4.6 Existing Road Cuts and Fills

Existing midslope road prisms constructed at least 5 decades ago with traditional cut and fill methods were examined to identify stable conditions, fill failures, cutbank failures, active surface erosion processes, and other instabilities. Observed cutbank slopes range from 55° to nearly vertical (90°) in slope steepness, and average 8 ft in height. Constructed fillslope angles were observed to range from 32° to 45° in steepness. Midslope roadbeds within Quarry Park vary from insloped, flat, to outsloped. In most locations a well vegetated berm is present on the outboard edge of the road preventing road surface runoff from freely draining off the roadway.

Weathered granitic colluvial soils exposed in road cutbanks showed evidence of ongoing surface erosion processes and bank retreat, and eroded sandy soils are typically deposited at the base of the cutbank (Figure 1). *Sandy Silt* (ML) soils exposed in cutbanks to a depth of approximately 2 ft bgs were observed to erode less rapidly, likely due to soil cohesion and root tensile strength, and residually protrude over the saprock in cutbank exposures (Figure 1). No significant cutbank slumps or debris slides were observed along existing midslope roads within Quarry Park.

A significant past fillslope failure was identified on the South Ridge Vista Trail in a midslope setting similar to the site setting for the proposed Quarry Park Fire Road Extension (Figure 2). The slide failure crown scarp was observed to be located at the contact between the native ground and roadfill. Based on surficial observation of the fillslope failure, we interpret the failure to have resulted from poor road construction practices, specifically, inadequate compaction of fill material and inadequate bonding between fill and native subgrade materials due to lack of scarification or benching prior to the placement of fill.



Figure 1: View of a typical road cutbank along a midslope road within Quarry Park. The A horizon within the soil profile, weathered granitic bedrock, and deposit of sandy soil eroded from the cutbank can be identified in the photograph.



Figure 2: Fillslope failure on the South Ridge Vista Trail.

5 FIELD AND LABORATORY TESTING AND RESULTS

Laboratory tests were performed on representative disturbed samples obtained from the logged cutbank exposure and borings. Test results were used to provide thorough textural analysis for USCS soil type classification and establish material properties for the purpose of providing design constraints and recommendations for road cuts and constructed fills. Summary laboratory test results are shown in Table 2 and complete test results are included in Appendix B.

5.1 Textural Analysis

Two soil samples were analyzed in the laboratory using the State Water Quality Control Board Method for textural analysis. This method was chosen because it can be easily used with smaller disturbed samples and determines clay from silt particles by percentage. Results of soil texturing and USCS classification are presented in Table 2 and Appendix B. Laboratory textural analyses were compared to field interpretation of soils to confirm and refine textural soil classification.

Table 2: Laboratory Test Results, Quarry Park Fire Access Road, San Mateo, California

Borehole ID	Sample Depth BGS(ft)	USCS Group	Soil Textural Analysis				Standard Proctor		Atterberg Limits	
			Gravel %	Sand %	Silt %	Clay %	Maximum Dry Density (pcf)	Optimum Moisture (%)	Liquid Limit	Plasticity Index
HA1	3.0-6.0	SM	2.9	69.2	16.5	11.4	118.2	12.0	N/A	N/A
HA3&4 composite	3.0-6.0	SM	11.6	64.9	13.8	9.7	121.1	12.5	N/A	N/A

5.2 Atterberg Limits Analysis

Atterberg Limits Analyses were performed on both representative soil samples submitted to the laboratory. Both samples were identified as non-plastic and no liquid limit, plastic limit, or plasticity index could be determined, per ASTM D4318. Although clay content ranged from 9.7 - 11.4 percent in samples submitted for laboratory testing, field texturing and laboratory analysis identified all *silty sand* (SM) soils as non-plastic (Appendix B).

5.3 Moisture-density Relation, Standard Proctor Analysis

Standard Proctor Analysis, ASTM D698, was performed on two representative disturbed soil samples to identify maximum dry density and optimum moisture content values for compaction. Relatively consistent maximum dry density values of 118.2 and 121.1 pcf and optimum moisture content values of 12 and 12.5 percent were obtained from testing and are consistent with typical ranges of *silty sand* (SM) soils with non-plastic inorganic fines.

5.4 Direct Shear Analysis of Silty Sand Soils

Silty sand (SM) soils sampled at CB1 and HA2-3 at depths of 3 to 6 ft bgs were remolded in the laboratory after the removal of coarse particles to 95% of the optimum density and analyzed by a direct shear testing (ASTM D3080). Direct shear testing performed on the samples gave an average cohesion value of approximately 320 psf (approximately 15 kPa) and internal friction

angles of 34.5° and 36.4°. Based on the results of laboratory testing, an internal friction angle of 34° was attributed to compacted *silty sand* (SM) soils in slope stability analysis models. Based on the *Seismic Hazard Zone Report 128* (CGS 128), we have attributed an internal friction angle of 36° to the deeply weathered granitic slope wash at the site for slope stability analyses. Given the granular nature of *silty sand* (SM) soils, these soils are considered cohesionless for the purpose of slope stability and reinforced soil slope analyses and design.

6 GEOLOGIC HAZARDS

6.1 Expansive Soils Potential

As described in Section 4.1 and 4.2, subsurface soils consist of a relatively thin (2 – 3 ft thick) unit of *sandy silt* (ML) overlying deeply weathered granitic colluvium produced from the granitic rocks of Montara Mountain. As a result of the granular, non-plastic soils encountered during site investigation and the results of Atterberg Limits tests, expansive soil conditions are not believed to be present at the site or impact the project. Additionally, based on analyses of site soils, no soils were encountered meeting the criteria for expansive soils identified in Section 1803.5.3 of the 2019 California Building Code (CBC).

6.2 Seismic Hazards

6.2.1 Ground Surface Rupture

The project site is located approximately 1.6 miles east northeast of the mapped trace of the Seal Cove Fault and 1.8 miles east southeast of the Denniston Creek Fault. Both faults are components of the San Gregorio Fault Zone. The project site is not located within an Alquist-Priolo Earthquake Fault Zone. No known active faults traverse the site. Based on the information available, the potential for surface fault rupture to occur at the project site within the service life of the project is considered negligible.

6.2.2 Ground Shaking

The project site is located within an active seismic area and could be affected by multiple seismic sources within the greater San Francisco Bay Area (Table 3). Moderate to high magnitude ground motions should be expected during the design life of the project. The USGS, CGS, and Southern California Earthquake Center have worked collaboratively to publish the results of multiple studies to evaluate earthquake probabilities in California. These cooperative publications titled Uniform California Earthquake Rupture Forecast (UCERF) provide estimates of the magnitude, location, and likelihood of earthquake fault rupture through the state. According to Probabilistic ground motion estimates for the area surround the project site are published by the California Geologic Survey (CGS), and according to mapping from the 2018 National Seismic Hazard Model for the conterminous United States, there is a 10% probability in the next 50 years that the area will be subjected to peak ground acceleration (PGA) on the order of 0.4 - 0.8g (Rukstales, K.S., 2019). While no structure is planned for design or construction, earthwork should be designed in accordance with the 2019 CBC, San Mateo County grading ordinance, and the recommendations of this report resulting from site specific investigations.

Table 3. Sources of Seismicity in the vicinity of Quarry Park, San Mateo, California

Seismic Source	30-year probability of event with M>6.7 ¹	Historic Magnitudes ²
San Gregorio	0.10	7.4
San Andreas	0.21	7.9
Hayward	0.27	7.3
Calaveras	0.11	7.5
Mount Diablo	0.03	6.7

¹USGS, 2003

²Site response during strong ground motion will depend on complex interactions between site specific conditions and nature of earth materials, topography, hydrologic conditions, and the distance to the earthquake source.

6.2.3 *Liquifaction*

Liquefaction is a process where loose wet soils temporarily lose bearing strength during a seismic event and behave like a liquid. Liquefaction can result in ground settlement or lateral spreading.

The majority of the project site is located on gentle to moderately sloping hillside with shallow soils ranging from 3 to 5 ft in depth. No indication of groundwater was observed in shallow subsurface investigations and depth to the water table is identified by the NRCS as more than 80 inches bgs in both Miramar and Tierra soils groups.

Liquefaction susceptibility in the Montara Mountain 7½-minute quadrangle was evaluated by CGS in 2019 and resulted in the delineation of Earthquake Zones of Required Investigation (EZRI) for liquefaction hazard. A small portion of the project area falls within a CGS designated EZRI for liquefaction risk (Map 3). This area of the project is a low gradient alluvial deposit approximately 100 ft from a Class III watercourse to the west of the Site (Map 3). Subsurface investigations in this area (HA4) encountered *sandy silt* (ML) soils to a depth of 5.4 ft bgs and moderately consolidated deeply weathered granitic colluvium below 5.4 ft bgs. Soils encountered in HA4 showed no evidence of groundwater inundation.

Due to the presence of freely draining soils, shallow depth to consolidated soils, and relative deep depth to groundwater, we understand the project site to have low susceptibility to liquefaction during a seismic event. The proposed project does not entail the design or construction of a structure for human occupancy and consideration of design elements to mitigate the effects of liquefaction on an engineered structure is not required.

6.2.4 *Densification*

Permanent settlement due to densification from seismically induced ground shaking can deform the ground surface and damage overlying structures. Dynamic densification may occur in very loose to loose sands and silty sands above the water table. Due to the shallow depth of *silty sand* (ML) and *sandy silt* (SM) soils overlying moderately consolidated deeply weathered colluvium, any densification which may occur is expected to be minor and not significantly affect the overall function of the rock aggregate-surfaced Quarry Park Fire Road Extension.

6.2.5 Lateral Spreading

Liquifaction-induced lateral spreading occurs through the lateral displacement of sloping ground due to pore pressure buildup or liquefaction in a shallow underlying deposit. Due to the low potential for liquefaction associated with the site setting and subsurface soils, we consider lateral spreading to have a low likelihood to affect the project.

6.3 Slope Stability

Hillslopes within the project area range from gently sloping along the ridgeline (8%) to slightly greater than 50% (2:1 H:V) along midslope areas. No active mass wasting features were identified within the project site during field investigations or through analysis of historic aerial imagery. No active or dormant mass wasting features with potential to affect the project site from adjacent offsite areas were identified. One existing small relict debris slide within the project site was identified by PWA geologists and is located on the steepest hillslope within the project area (Map 3). Boring HA4 was conducted downslope of the relict slide within slide deposit materials. No seeps, springs, or areas of emergent water were identified within the project site or along the conceptual Quarry Park Fire Road Extension alignment.

Earthquake-induced landslide hazard susceptibility in the Montara Mountain 7½-minute quadrangle was evaluated by CGS in 2019 and resulted in the delineation of Earthquake Zones of Required Investigation (EZRI) for earthquake-induced landslide risk. Portions of the EZRI for earthquake-induced landslide risk fall within the project area (Map 3). To minimize increases in landslide risk associated with project grading, design cut slope heights should be minimized to the extent feasible and limited to 10 ft in height. Excavation of cut slopes within the EZRI for earthquake-induced landslide risk should be minimized and avoided if possible.

Slope stability calculations were performed using GEO5 Software and a conceptual model for road cut slope grading utilizing the findings from project field investigations, laboratory analyses of soils, and published reference values for soils and deeply weathered granitic saprock (Appendix C). The slope stability analysis model is based on the following:

- LiDAR derived maximum slope profile for the project site;
- A 10.5 ft cut slope with a gradient of 2/3:1 (H:V; 151.2%);
- Depth of sandy silt (ML) soils is similar to observations made at CB1 and HA1-4;
- Sandy silt (ML) soils parameters based on lab analysis and published values: Unit weight = 100.5 pcf; Internal friction angle = 32°; Effective cohesion = 100 psf;
- Deeply weathered granitic saprock and colluvium parameters based on conservative published values: Unit weight = 127 pcf; Internal friction angle = 36°; Effective cohesion = 500 psf (CGS, 2019a)
- Horizontal seismic coefficient $K_h = 0.15$.

The slope stability model of the 10.5 ft deep cut slope into in situ earth materials provides for a factor of safety (FS) of 1.84.

6.4 Settlement

Immediate deformation of subgrade materials will occur upon increase of additional effective overburden pressure resulting from road fill placement and compaction. Assuming design fill

depths will be less than 10 ft, immediate settlement, or compaction factor, is expected to be less than 1 inch. Due to the moderately dense granular composition of subgrade materials and materials drainage characteristics, significant long-term settlement is not expected.

7 RECOMMENDATIONS

7.1 Site Preparation and Grading

Site preparation should begin with the removal of all trees, root balls, and organic-rich surface soils within the limits of cutting and filling illustrated on the project's 100% design plans and as staked by the project engineer. All organic materials and unsuitable soils, such as topsoil, shall be removed from the limits of grading prior to construction and stored for future use in locations where it will not interfere with project grading activities. Inspection of the project site and approval by the design engineer or engineering geologist after removal of vegetation and unsuitable soils from the limits of grading is required prior to construction.

7.2 Grading Design and Acceptable Materials

Onsite *sandy silt* (ML) soils and *silty sand* (SM) soil materials obtained from grading of deeply weathered Montara Mountain granitic rocks and colluvium are suitable for use as general fill in the construction of the Quarry Park Fire Road Extension, provided that organic materials constitute less than 3 % of fill materials and include no organic materials exceeding 1 inch in width or 6 inches in length. Mass grading and mixing of *sandy silt* and weathered granitic site soils is expected to result in non-plastic or slightly plastic *silty sand* (SM) earthen fill materials.

Onsite in situ *sandy silt* (ML) soils and graded soils sourced from deeply weathered Montara Mountain granitic rocks and colluvium are suitable for use as subgrade materials in the construction of the Quarry Park Fire Road Extension, provided that all unsuitable organic soil overburden is removed prior to subgrade preparation as described in 7.4 Aggregate Surfacing.

7.2.1 Cut slopes

Quarry Park Fire Road Extension cut slope heights should be minimized in the design to reduce the risk of cut slope failure. Cut slopes should be designed at 2/3:1 horizontal to vertical (151.2% grade), similar to existing midslope roads examined within Quarry Park, to minimize surface erosion processes and removal of trees. Construction of cut slopes at the recommended gradient will not preclude the necessity for periodic maintenance of the slopes to remove minor deposits of eroded cutbank material and maintain functional road width.

7.2.1 Fillslopes

Quarry Park Fire Road Extension cut slopes should be constructed in 4-inch to 8-inch horizontal lifts and compacted to 95% maximum dry density (ASTM D698) by rubber-tired roller or vibrating sheepfoot roller under close control of moisture. Water will likely need to be hauled to the Site and applied to graded materials during grading and compaction activities to achieve optimal moisture content for compaction. Fill faces should not exceed 2:1 H:V in slope steepness unless adequate

reinforcement is provided as per 7.3 Reinforced Fills. Fillslopes 2:1 and less in steepness will be seeded and mulched to reduce surface erosion. Where fillslopes exceed 20 ft in length, fiber rolls will be applied as a surface erosion control measure

In locations where designed fills exceed 5 ft in depth and existing grade is steeper than 5:1 H:V, subgrade materials receiving fill shall be benched in accordance with J107.3 of the 2019 CBC prior to placement and compaction of fill.

7.3 Reinforced Fills

Quarry Park Fire Road Extension design fills constructed with native onsite materials exceeding 2:1 H:V in fill face slope should be reinforced to provide acceptable factor of safety from slope instability under design loading conditions consistent with planned fire response vehicle requirements and Calfire Fire Safe Regulations for San Mateo County. Based on uniform load modeling for a design vehicle with a 40,000 lb/axle load, fillslope reinforcement is specified to permit fills with fillslopes steeper than 2:1 in slope. Reinforced Steep Slope (RSS) fill faces steeper than 2:1 and comprised of locally derived *silty sand* (SM) soils should be seeded with native erosion control seed and protected by application of erosion control blankets or jute netting capable of minimizing surface erosion processes. Long-term stabilization of surface soils will be obtained through volunteer vegetative growth of native plant species.

Slope stability models of preliminary design RSSs stabilized with synthetic geogrid were developed and evaluated for internal, external, and compound failure modes under static and dynamic seismic loading conditions using GEO5 Software. Preliminary design RSS models utilizing a combination of primary and secondary geogrid reinforcement layers and resulting in acceptable factor of safety values are presented in Appendix D. RSS primary reinforcement layers are to be constructed in 6 in thick lifts mechanically compacted to 95% maximum dry density per Typical 1 on Sheet C-8 of the final design plans. RSS primary geogrid reinforcement layers are specified as Mirafi 3XT or equivalent geogrid and are to be installed with no more than 3 ft vertical spacing within the RSS fill. RSS secondary geogrid reinforcement layers are specified as Mirafi BXG-120 or equivalent geogrid and are to be installed at 1 ft vertical spacing between each primary layer.

7.4 Aggregate Surfacing

Site soils are suitable subgrade materials after grading and compaction for the application of rock surfacing. Soils within the upper 1 ft of the roadway surface should be compacted to 100% maximum dry density (ASTM D698) prior to application of rock surfacing. In-place subgrade soils exposed in the road cut bench should be scarified to a depth of at least 6 inches to remove any organic or deleterious materials prior to compaction and preparation for rock surfacing application.

After grading and compaction, the roadway should be surfaced with compacted rock aggregate with a finished depth of at least 6 inches. Rock surfacing should generally meet Caltrans 1½-inch Class 2 Aggregate Base gradation specifications, have no more than 45% particles passing the No. 4 sieve (0.187 inches), and have a fines content of 10-15%. The Plasticity Index of aggregate base materials used for road surfacing should fall between 5 and 11. Aggregate Base surfacing

should be compacted to 95% relative compaction under control of moisture content using vibratory mechanical compaction.

8 PROPOSED DESIGN

Based on the findings and recommendations from the geologic and geotechnical investigations performed at the project site PWA has developed a proposed Quarry Park Fire Road Extension plan to the 100% design level to achieve the objectives of the New Quarry Park Fire Road Extension Design and Construction Project. The proposed design plan details the construction of an approximately 2,240 ft long roadway using balanced cut and fill construction techniques, ranging from 5 to 16 % in road running slope gradient, and ranging from 12 to 20 ft in roadway width. Road cuts are designed at 2/3:1 in steepness and the majority of road fillslopes are designed at 2:1 in slope steepness. At 3 locations along the design road alignment where 2:1 fillslopes were not practically achievable, engineered RSS fills with fillslopes of 1½:1 have been incorporated into the design. The design roadway is outsloped between 3 and 6 % in cross road gradient and incorporates 7 rolling dip road drainage structures to effectively drain road storm runoff and reduce surface erosion. Post-construction surface erosion control and site stabilization will be achieved by a combination of erosion control seed, straw mulch, silt fencing, fiber rolls, and erosion control blankets.

The design roadway incorporates 5 turnouts of 20 to 30 ft in width located at approximately 500 ft intervals along the road alignment and a cul de sac turnaround area to meet or exceed Calfire Fire Safe Regulation requirements. A 14 ft wide gated entrance to the Quarry Park Fire Road Extension at the intersection of Coronado Ave. is incorporated into the design and is located approximately 40 ft up the design road alignment from the transition to asphalt surfacing at Coronado Ave. The entire road driving surface, turnouts, and cul de sac will be surfaced with rock aggregate in conformance with Calfire Fire Safe Regulations.

9 CONCLUSIONS

This Basis of Design and Focused Engineering Geologic Investigation memorandum documents PWA's investigation methods, geologic hazards, Site materials properties, and design recommendations pertaining to the design and construction of the Quarry Park Fire Road Extension at Quarry Park. Based on the focused site investigation performed by PWA engineering geologists, we consider the project site adequate for design and construction of the Quarry Park Fire Road Extension, meeting the San Mateo County grading ordinance, Calfire Fire Safe Regulations, and 2019 CBC requirements.

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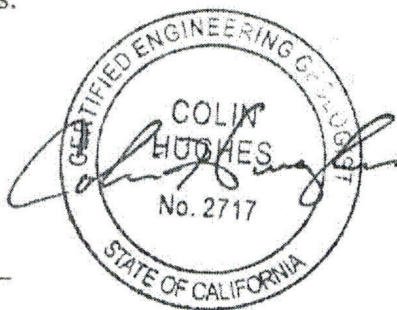
11 CERTIFICATION AND LIMITATIONS

This report, entitled *Basis of Design and Focused Engineering Geologic Investigation For Quarry Park Fire Road Extension Design and Construction at Quarry Park* was prepared by or under the direction of a licensed professional geologist at Pacific Watershed Associates Inc. (PWA), and all information herein is based on data and information collected by PWA staff. The subsurface investigation analysis for the project, as well as engineering design recommendations, were similarly conducted by, or under the responsible charge of, a California licensed Certified Engineering Geologist at PWA.

The interpretations and recommendations presented in this report are based on a study of inherently limited scope. Observations are qualitative, or semi-quantitative, and confined to surface expressions of limited extent and shallow borings of subsurface materials. Interpretations of problematic geologic and geomorphic constraints and erosion processes are based on the information available at the time of the study, and on the nature and distribution of existing features.

The recommendations contained in this report are professional opinions derived in accordance with current standards of professional practice and are valid as of the submittal date. No other warranty, expressed or implied, is made. PWA is not responsible for changes in the conditions of the property with the passage of time, whether due to natural processes or to the works of man or changing conditions on adjacent areas. Furthermore, to be consistent with existing conditions, information contained in this report should be re-evaluated after a period of no more than three years. It is the responsibility of the project engineer and project proponent to ensure that all recommendations in this report are reviewed and implemented according to the conditions existing at the time of construction. Also, PWA, including the licensed professionals, are not responsible for recommendations implemented outside of their professional oversight. Finally, PWA is not responsible for changes in applicable or appropriate standards beyond our control, such as those arising from changes in legislation or the broadening of knowledge, which may invalidate any of our findings.

Certified by:



Colin Hughes, CEG #2717
Certified Engineering Geologist
Pacific Watershed Associates Inc.

21391

Leonard Brad Job, California PE #C55699
Licensed Professional Engineer
Pacific Watershed Associates Inc.



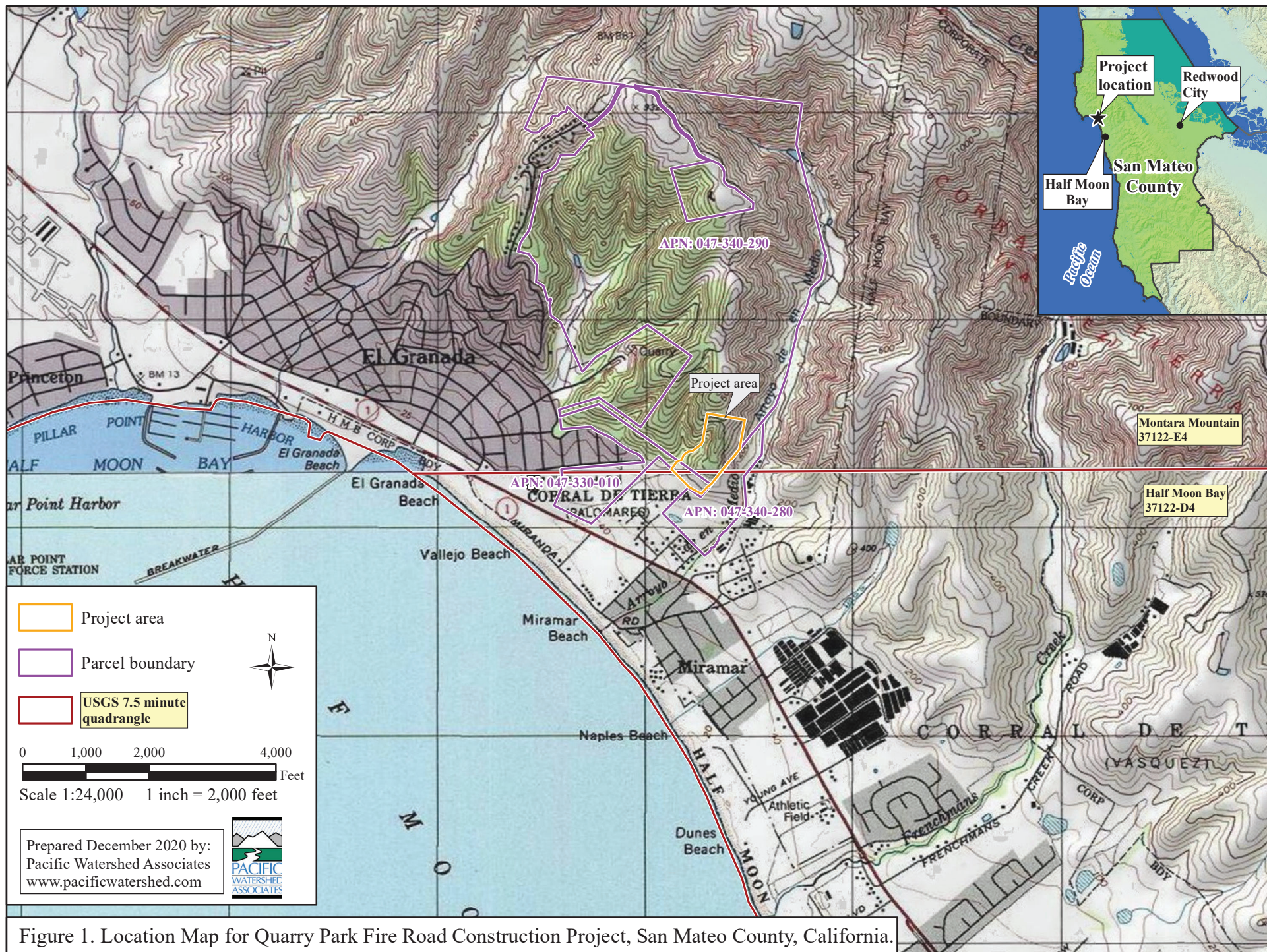
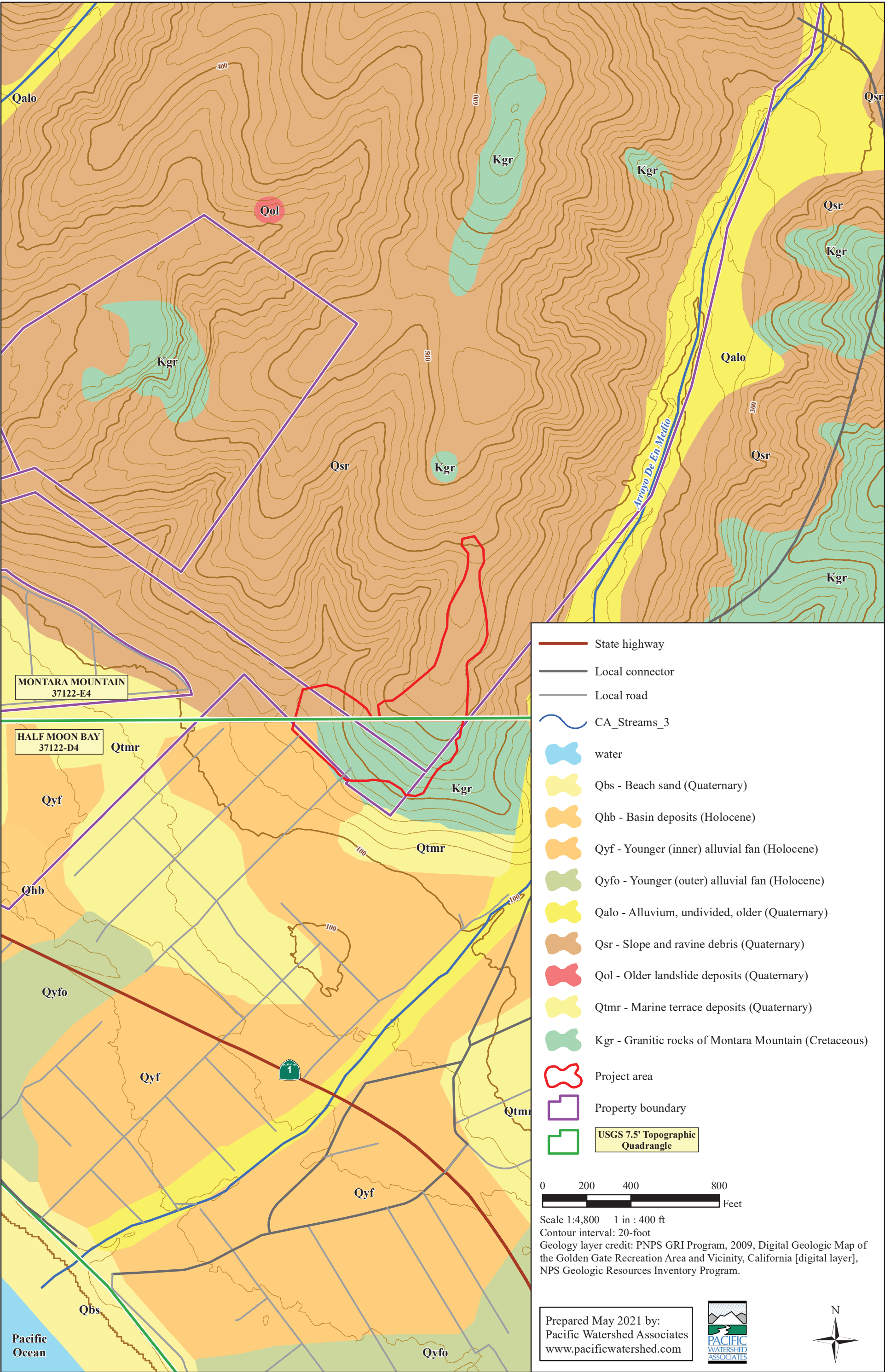
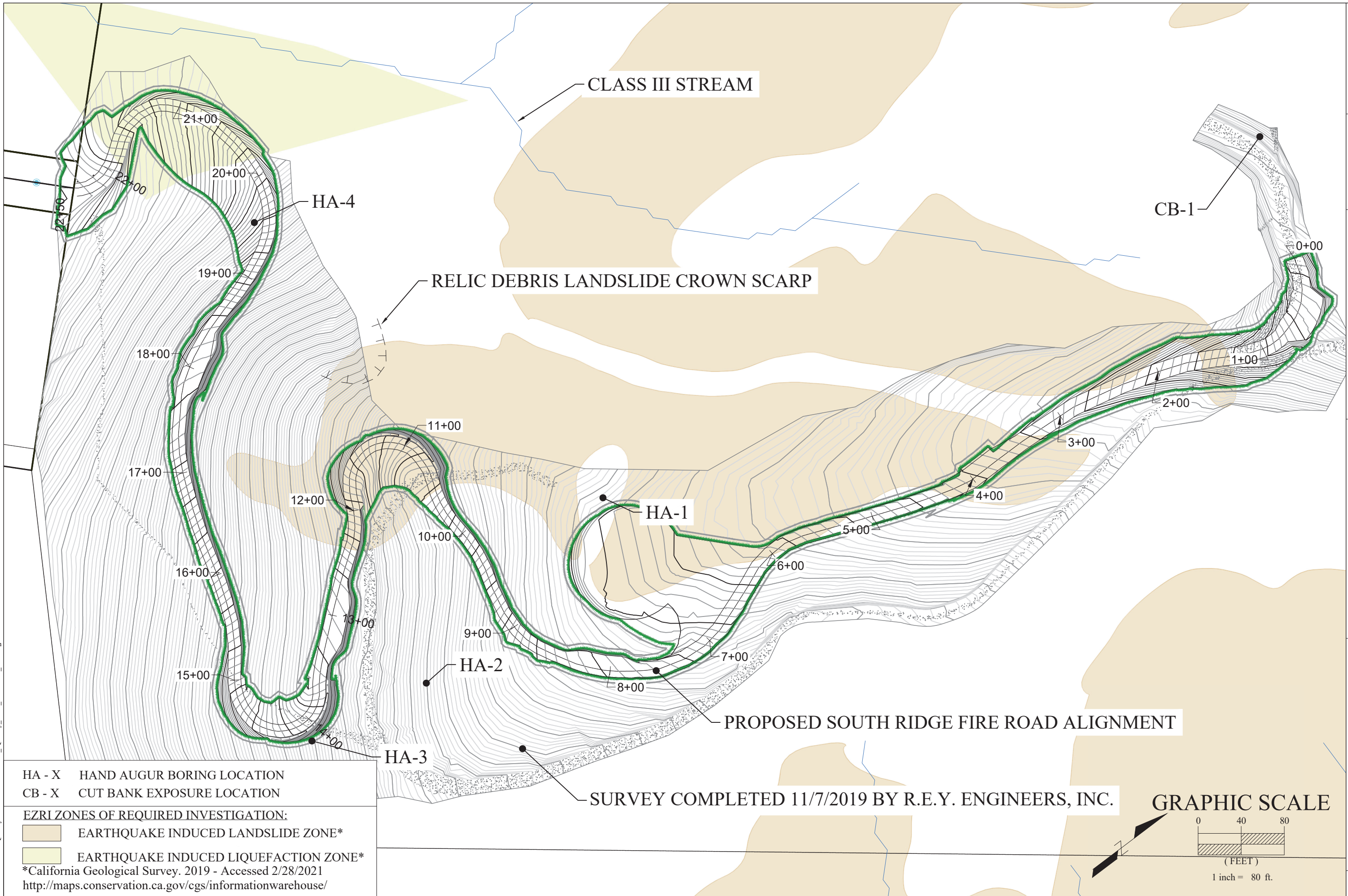


Figure 1. Location Map for Quarry Park Fire Road Construction Project, San Mateo County, California.



Map 2. Geologic Unit Map, Focused Engineering Geologic Investigation for South Ridge Fire Road Design and Construction at Quarry Park, San Mateo County, California.

P:\CAD\104151-QuarryParkFireRoad\104151_Quarry_Park_90Percent_btk.dwg



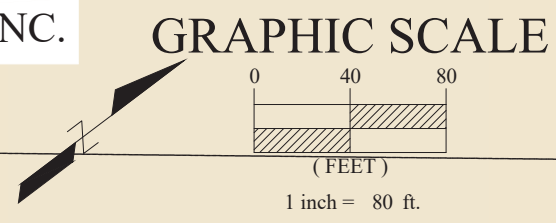
HA - X HAND AUGUR BORING LOCATION
CB - X CUT BANK EXPOSURE LOCATION

EZRI ZONES OF REQUIRED INVESTIGATION:

- EARTHQUAKE INDUCED LANDSLIDE ZONE*
- EARTHQUAKE INDUCED LIQUEFACTION ZONE*

*California Geological Survey. 2019 - Accessed 2/28/2021
<http://maps.conservation.ca.gov/cgs/informationwarehouse/>

SURVEY COMPLETED 11/7/2019 BY R.E.Y. ENGINEERS, INC.



 PACIFIC WATERSHED ASSOCIATES	DATE 4/15/2022
	NOTES PREPARED BY RMS
 PACIFIC WATERSHED ASSOCIATES	FIGURES CREATED BY RMS
	SHEET 1 OF 1
PACIFIC WATERSHED ASSOCIATES, INC. P.O. BOX 4433 ARCATA, CALIFORNIA 95518 PH: (707) 839-5130 FX: (707) 839-8168 www.pacificwatershed.com	
DRAWING DESCRIPTION: ENGINEERING GEOLOGIC SITE MAP	
PROJECT LOCATION: FIRE ROAD EXTENSION QUARRY PARK, HALF MOON BAY SAN MATEO COUNTY, CA	PWA JOB NO.: 104151
MAP 3.5	

Appendix A

Boring and Cutbank Exposure Logs

**Basis of Design and Focused Engineering Geologic Investigation for
Quarry Park Fire Road Extension Design and Construction at Quarry Park
San Mateo County, California**

Project Name South Ridge Fire Road - Quarry Park Project Number 104151

Hole Number CB-1 Hole Size N/A Date Drilled 3/12/2020

Excavation Method Exist. cut bank Logged By CRH/KS Hole Elevation Approx. 425'

Unconfined Compressive strength (tons/sf)	Moisture Content (%)	Shear Strength (tons/sf)	Sampled Interval	Depth (ft)	Field Classification Based on Unified Soil Classification System (texture, consistency, moisture, color, symbol, remarks)
					Organic duff layer - leaf litter - depth 3"
5.0				1 2	Silty Sand (SM); medium dense; reddish-black; moist; 70% SAND, from coarse to fine, subangular to subrounded; 30% fines (60% silt, 40% clay); moderate cementation.
5.0			GRAB SAMPLE	3 4	Silty Sand (SM); medium dense; dark yellowish brown; 75% SAND, from coarse to fine, subangular to subrounded; 25% fines (60% silt, 40% clay); moderate cementation. BOB @ 58"
				5 6 7 8 9 10 11 12	

Project Name South Ridge Fire Road - Quarry Park Project Number 104151

Hole Number HA-1 Hole Size 3" Date Drilled 3/12/2020

Excavation Method 2" Hand Auger Logged By CRH/KS Hole Elevation Approx.331.5'

Unconfined Compressive strength (tons/sf)	Moisture Content (%)	Shear Strength (tons/sf)	Sampled Interval	Depth (ft)	Field Classification Based on Unified Soil Classification System (texture, consistency, moisture, color, symbol, remarks)
					Eucalyptus duff, wood mulch from mastication
2.25		0.45		1	Poorly graded SAND with SILT (SP-SM); loose; dark yellowish brown; moist; 90% SAND, from coarse to fine, subangular to subrounded; 10% fines (75% silt, 25% clay); weak cementation.
5.0				2	80" - SILTY SAND (SM); medium dense; yellowish brown; moist; 75% SAND, from coarse to fine, subangular to subrounded; 25% fines (60% silt, 40% clay); moderate cementation; little mica.
				3	
				4	
				5	
				6	
					BOB 80"
				7	
				8	
				9	
				10	
				11	
				12	

Project Name South Ridge Fire Road - Quarry Park Project Number 104151

Hole Number HA-2 Hole Size 3" Date Drilled 3/12/2020

Excavation Method 2" Hand Auger Logged By CRH/KS Hole Elevation Approx. 295'

Unconfined Compressive strength (tons/sf)	Moisture Content (%)	Shear Strength (tons/sf)	Sampled Interval	Depth (ft)	Field Classification Based on Unified Soil Classification System (texture, consistency, moisture, color, symbol, remarks)
					Organic duff layer - Eucalyptus bark & leaves
3.5, 2.75, 3.75				1	SANDY SILT (ML); very stiff, black; moist; 60% fines (60% silt, 40% clay); 40% SAND, from coarse to fine, subangular to subrounded; non-plastic; low dry strength; rapid dilatancy
				2	
				3	SILTY SAND (SM); dense; light yellowish brown; slightly moist; 80% SAND, from coarse to fine, subangular to subrounded; 20% fines (60% silt, 40% clay); strong cementation.
				4	
				5	
				6	
				7	
				8	
				9	
				10	
				11	
				12	
					BOB @ 96" (8.0')

Project Name South Ridge Fire Road - Quarry Park Project Number 104151

Hole Number HA-3 Hole Size 3" Date Drilled 3/12/2020

Excavation Method 2" Hand Auger Logged By CRH/KS Hole Elevation Approx.265'

Unconfined Compressive strength (tons/sf)	Moisture Content (%)	Shear Strength (tons/sf)	Sampled Interval	Depth (ft)	Field Classification Based on Unified Soil Classification System (texture, consistency, moisture, color, symbol, remarks)
					Organic duff layer - Eucalyptus bark & leaves - depth 3"
5.0		0.5		1	SANDY SILT (ML); very stiff, black; slightly moist; 60% fines (60% silt, 40% clay); 40% SAND, from coarse to fine, subangular to subrounded; non-plastic; low dry strength; rapid dilatency.
				2	
				3	SILTY SAND (SM); dense; light yellowish brown; slightly moist; 80% SAND, from coarse to fine, subangular to subrounded; 20% fines (60% silt, 40% clay); strong cementation.
				4	
				5	
					BOB @ 70" (5.8')
				6	
				7	
				8	
				9	
				10	
				11	
				12	

Project Name South Ridge Fire Road - Quarry Park Project Number 104151

Hole Number HA-4 Hole Size 3" Date Drilled 3/12/2020

Excavation Method 2" Hand Auger Logged By CRH/KS Hole Elevation Approx. 182.5'

Unconfined Compressive strength (tons/sf)	Moisture Content (%)	Shear Strength (tons/sf)	Sampled Interval	Depth (ft)	Field Classification Based on Unified Soil Classification System (texture, consistency, moisture, color, symbol, remarks)
					Organic duff layer - Eucalyptus leaves & pine needles - depth 3"
				1	SANDY SILT (ML); very stiff; dark brown; dry; 60% fines (80% silt, 20% clay); 40% SAND from coarse to fine, subangular to subrounded; non plastic; low dry strength; rapid dilatancy.
				2	
				3	
				4	SANDY SILT (ML); very still; brown; dry; 65% fines (70% silt, 30% clay); 45% SAND, from coarse to fine, subangular to subrounded; non plastic; low dry strength, rapid dilatancy.
			GRAB SAMPLE	5	
				6	SILTY SAND (SM); medium dense; reddish-brown; dry; 75% SAND, from coarse to fine, subangular to subrounded; 25% fines (65% silt, 35% clay); moderate cementation.
				7	
					BOB @ 84" (7.0')
				8	
				9	
				10	
				11	
				12	

Appendix B

Laboratory Testing Results

**Basis of Design and Focused Engineering Geologic Investigation for
Quarry Park Fire Road Extension Design and Construction at Quarry Park
San Mateo County, California**

 21 W. 4th Street Eureka CA 95501	TEXTURAL ANALYSIS		Page 1	Project No. 7965.01
	Project #104151		Tested By DLR	Date 4/13/2020
	Location QUARRY PARK		Checked By ---	Date ---
	Client PACIFIC WATERSHED ASSOCIATES		Sample ID: 20-024EK	

Sample Location	Sample Depth	Total Sample (gm)	Retained on #10 Sieve (gm)	Passing #10 Sieve (gm)	Retained on #10 Sieve (%)	Passing #10 Sieve (%)	Coarse Adjustment (%)
TP-1	3.0'-6.0'	467.6	13.7	453.9	2.9	97.1	0.2
TP-3&4	COMPOSITE	603.7	70.3	533.4	11.6	88.4	1.1

WORK SHEET FOR SOIL TEXTURE (Water Quality Control Board Method)

TP-1		TP-3&4	
3.0'-6.0'		COMPOSITE	
71.2		84.2	
9:20:00 AM		9:25:00 AM	
62		62	
28		30	
-7.6		-7.6	
20		22	
67		67	
15		16	
-6.7		-6.7	
8		9	
71.3		73.4	
11.7		11.0	
17.0		15.6	
SANDY LOAM		SANDY LOAM	
2		2	
28.7		26.6	

SAMPLE DESCRIPTION

SAMPLE DEPTH

A. Owendry Weight (gm)

B. Starting Time (hr: min: sec)

C. Temp @ 40 sec. (⁰F)

D. Hydrometer Reading @ 40 sec. (gm/l)

E. Composite Correction (gm/l)

F. True Density @ 40 sec. (gm/l), (D - E)

G. Temp. @ 2 hrs. (⁰F)

H. Hydrometer Reading @ 2 hrs. (gm/l)

I. Composite Correction (gm/l)

J. True Density @ 2 hrs. (gm/l), (H - I)

K. % Sand = 100 - [(F/A) x 100]

L. % Clay = (J/A) x 100

M. % Silt = 100 - (K+L)

N. USDA Texture

O. Soil Percolation Suitability Chart Zone

P. Combine % Silt and Clay

SOIL SUITABILITY CHART

Page

2

Project No.

7965.01

Project

#104151

Tested By

DLR

Date

4/13/2020

Location

QUARRY PARK

Checked By

Date

Client

PACIFIC WATERSHED ASSOCIATES

Sample ID:

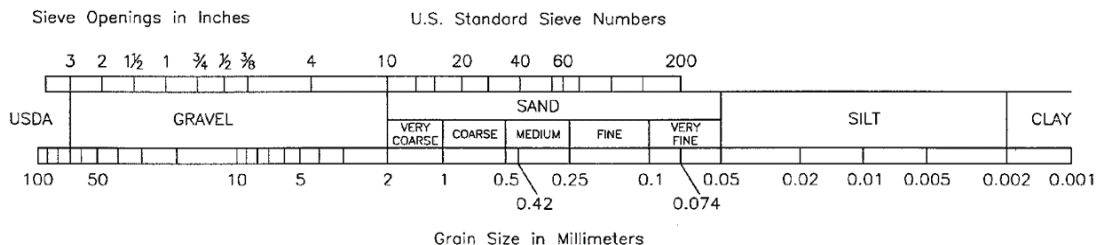
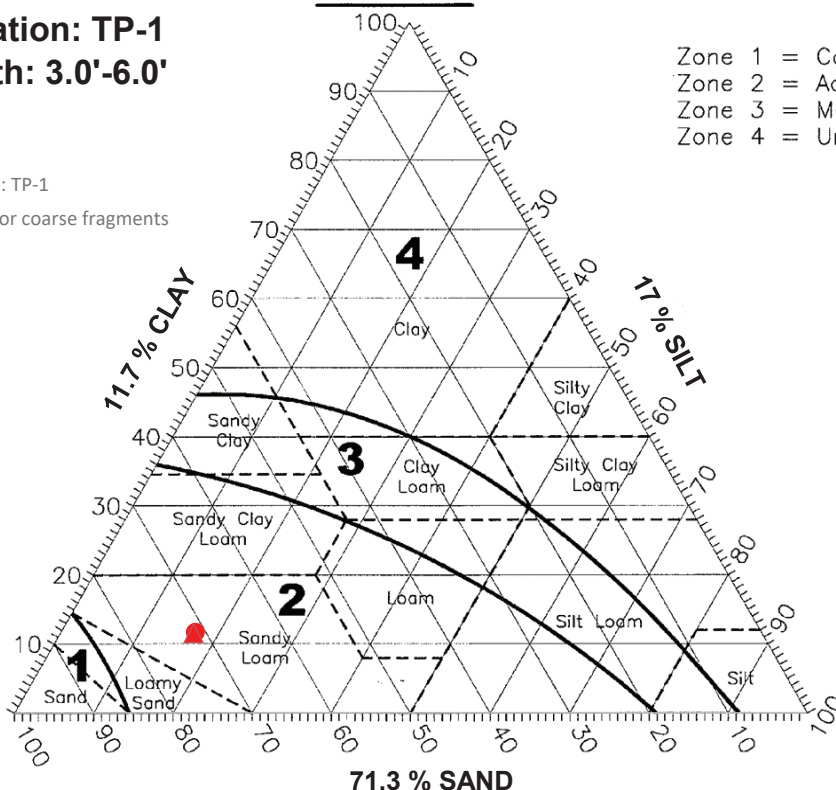
20-024EK

SOIL PERCOLATION SUITABILITY CHART

Sample Location: TP-1
Sample Depth: 3.0'-6.0'

- Sample Location: TP-1
- ▲ Adjusted 0.2 % for coarse fragments

Zone 1 = Coarse
Zone 2 = Acceptable
Zone 3 = Marginal
Zone 4 = Unacceptable





ATTERBERG LIMITS
ASTM D-4318

PROJECT	QUARRY PARK #104151	JOB NO.	7965.01	SHEET
CLIENT	PACIFIC WATERSHED ASSOCIATES	SAMPLE ID	20-024EK	1 of 1
LOCATION	TP-1 at 3.0'-6.0'	TEST BY	DLR	DATE 4/13/20
SOIL TYPE	SAND w/SILT & CLAY	CHECKED BY		CHECK DATE

ASTM D4318 ATTERBERG LIMITS

LIQUID LIMIT = *N/A
PLASTIC LIMIT = N/A
PLASTIC INDEX = NON PLASTIC

COMMENTS: Unable to cut groove without tearing or keep from sliding in cup.

* PER ASTM D4318 SECTION 12.5, LIQUID LIMIT COULD NOT BE DETERMINED.
SAMPLE CLASSIFIED AS NON PLASTIC.



ATTERBERG LIMITS
ASTM D-4318

PROJECT	QUARRY PARK #104151	JOB NO.	7965.01	SHEET
CLIENT	PACIFIC WATERSHED ASSOCIATES	SAMPLE ID	20-024EK	1 of 1
LOCATION	TP-3&4 COMPOSITE	TEST BY	DLR	DATE 4/13/20
SOIL TYPE	SAND w/SILT & CLAY	CHECKED BY		CHECK DATE

ASTM D4318 ATTERBERG LIMITS

LIQUID LIMIT = *N/A
PLASTIC LIMIT = N/A
PLASTIC INDEX = NON PLASTIC

COMMENTS: Unable to cut groove without tearing or keep from sliding in cup.

* PER ASTM D4318 SECTION 12.5, LIQUID LIMIT COULD NOT BE DETERMINED.

SAMPLE CLASSIFIED AS NON PLASTIC.

 Eureka: 21 W. 4th Street · P.O. Box 1023 · Eureka, California 95502 · 707-443-5054 · FAX 707-443-0553 Ukiah: 311 South Main Street · Ukiah, California 95482 · 707-462-0222 · FAX 707-462-0223 800-515-0554 · www.lacowatersheds.com	ASTM D698		Page 1	Project No. 7965.01
	Project #104151		Tested By DLR	Date 4/9/20
	Location QUARRY PARK		Checked By	Date
	Client PACIFIC WATERSHED ASSOCIATES		Sample ID: 20-024EK	

Material Type/ Description

Sample Preparation

Material Source/ Sampled From

TP1@3.0'-6.0'

Total weight **59.8 lbs.**

> 3/8" = **0.00 lbs.** **0.0%**

< 3/8" = **59.80 lbs.** **100.0%**

Compaction Curve Work Sheet ASTM D698 (4" Mold)

Manual Hammer

Method

B

Description	#1	#2	#3	#4	#5
1) Weight of mold & soil (lbs)	12.929	13.518	13.727	13.684	
2) Weight of mold with base (lbs)	9.322	9.322	9.322	9.322	
3) Weight of wet soil (lbs)	3.607	4.196	4.405	4.362	
4) Wet density (pcf) = (3) / .0332	108.6	126.4	132.7	131.4	

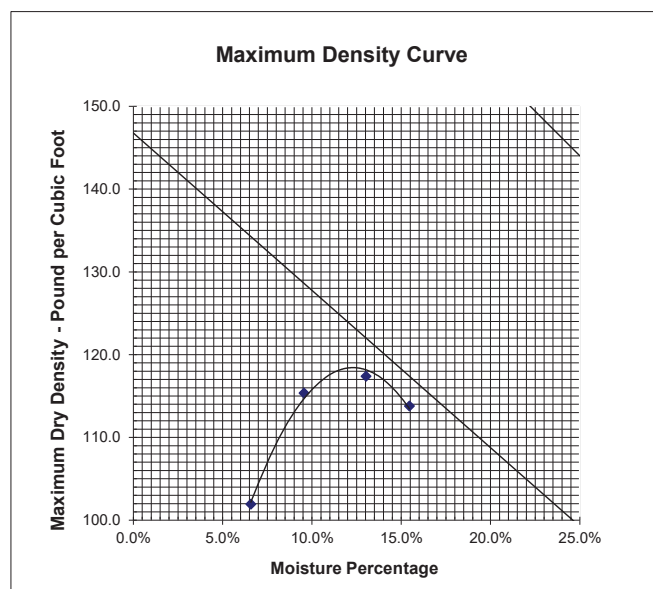
5) 0.0332

Moisture Content		INSITU			
5) Weight of wet soil + pan (gm)	1896.5	1885.3	1941.5	1909.8	
6) Weight of dry soil + pan (gm)	1795.8	1752.2	1760.5	1703.8	
7) Weight of pan (gm)	265.5	358.5	370.4	371.0	
8) Weight of dry soil (gm) = (6) - (7)	1530.3	1393.7	1390.1	1332.8	
9) Weight of moisture (gm) = (5) - (6)	100.7	133.1	181.0	206.0	
10) % Moisture = (9) / (8) x 100	6.6%	9.6%	13.0%	15.5%	
11) Dry density (pcf) = (4) / (1 + (10))	101.9	115.4	117.4	113.8	

Maximum Dry Density (pcf) = **118.2**

Optimum Moisture (%) = **12.0**

Rock Correction - Yes / **No**



 Eureka: 21 W. 4th Street · P.O. Box 1023 · Eureka, California 95502 · 707-443-5054 · FAX 707-443-0553 Ukiah: 311 South Main Street · Ukiah, California 95482 · 707-462-0222 · FAX 707-462-0223 800-515-0554 · www.lacowaterassociates.com	ASTM D1698		Page 1	Project No. 7965.01
	Project #104151		Tested By DLR	Date 4/9/20
	Location QUARRY PARK		Checked By	Date
	Client PACIFIC WATERSHED ASSOCIATES		Sample ID: 20-024EK	

Material Type/ Description

Sample Preparation

Material Source/ Sampled From

Total weight 57.74 lbs.

> 3/8" = 0.00 lbs. 0.0%

TP3&4 COMPOSITE

< 3/8" = 57.74 lbs. 100.0%

Compaction Curve Work Sheet ASTM D698 (4" Mold)

Manual Hammer

Method

B

Description	#1	#2	#3	#4	#5
1) Weight of mold & soil (lbs)	13.276	13.655	13.850	13.812	
2) Weight of mold with base (lbs)	9.322	9.322	9.322	9.322	
3) Weight of wet soil (lbs)	3.954	4.333	4.528	4.490	
4) Wet density (pcf) = (3) / .0332	119.1	130.5	136.4	135.2	

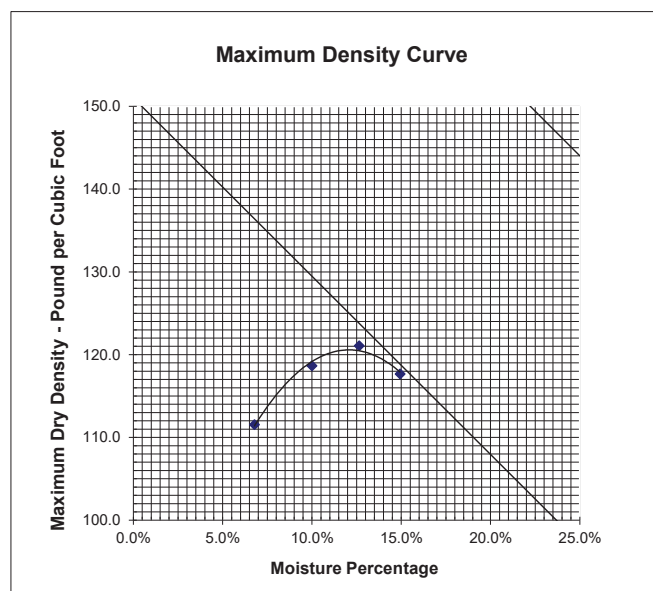
5) 0.0332

Moisture Content	INSITU				
5) Weight of wet soil + pan (gm)	2248.3	2288.9	2425.5	2408.3	
6) Weight of dry soil + pan (gm)	2135.0	2111.1	2196.3	2143.8	
7) Weight of pan (gm)	464.2	333.0	383.9	371.8	
8) Weight of dry soil (gm) = (6) - (7)	1670.8	1778.1	1812.4	1772.0	
9) Weight of moisture (gm) = (5) - (6)	113.3	177.8	229.2	264.5	
10) % Moisture = (9) / (8) x 100	6.8%	10.0%	12.6%	14.9%	
11) Dry density (pcf) = (4) / (1 + (10))	111.5	118.6	121.1	117.7	

Maximum Dry Density (pcf) = **121.1**

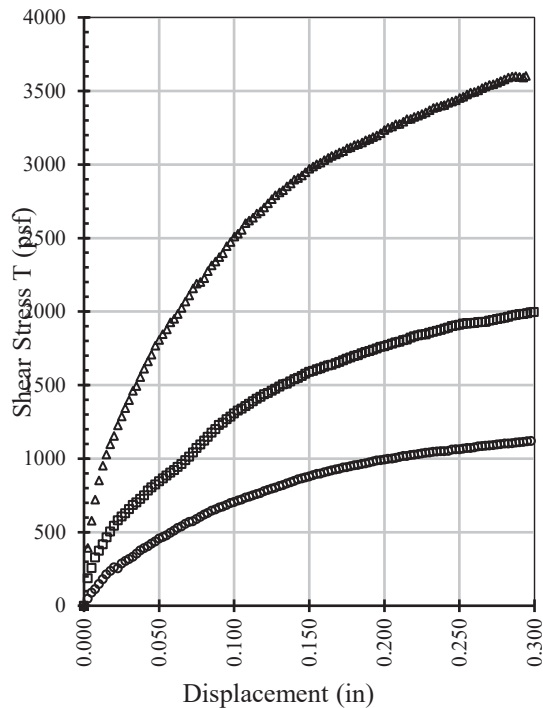
Optimum Moisture (%) = 12.5

Rock Correction - Yes / **No**



PROJECT	QUARRY PARK 104151	JOB NO.	7965.01	SHEET	
CLIENT	PACIFIC WATERSHED ASSOCIATES	SAMPLE ID	20-024EK	1 of 1	
LOCATION	TP1 at 3.0'-6.0'	TEST BY	DLR	DATE	4/14/20
SOIL TYPE	SAND w/SILT & CLAY	CHECKED BY		CHECK DATE	

Shear Stress -vs- Displacement



Sample Dimensions

Diameter (inch) 2.5
Height (inch) 1.0

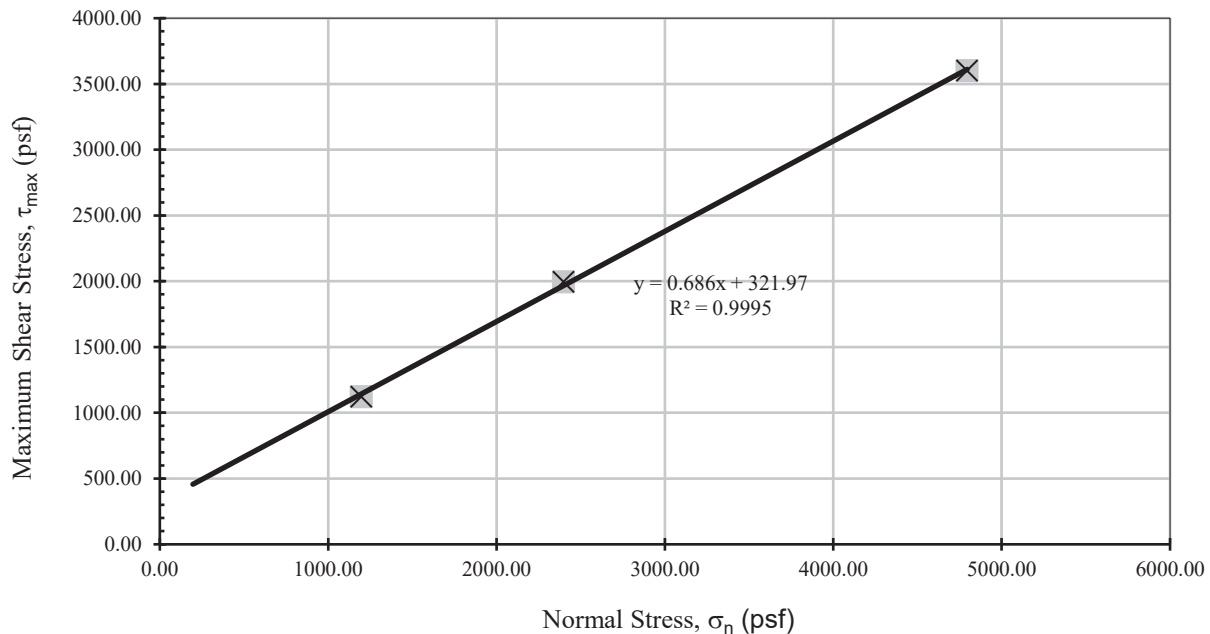
	Point 1	Point 2	Point 3	Average
Water Content (%)	12.0	12.6	12.4	12.3
Dry Density (pcf)	112.3	112.2	112.7	112.4
Void Ratio*	0.5	0.5	0.5	0.5
Peak Shear Stress (psf)	1122.4	1996.6	3600.6	

*Void ratio calculation assumes a specific gravity of 2.65

c - intercept (cohesion) 322
phi (internal friction angle) 34.5°

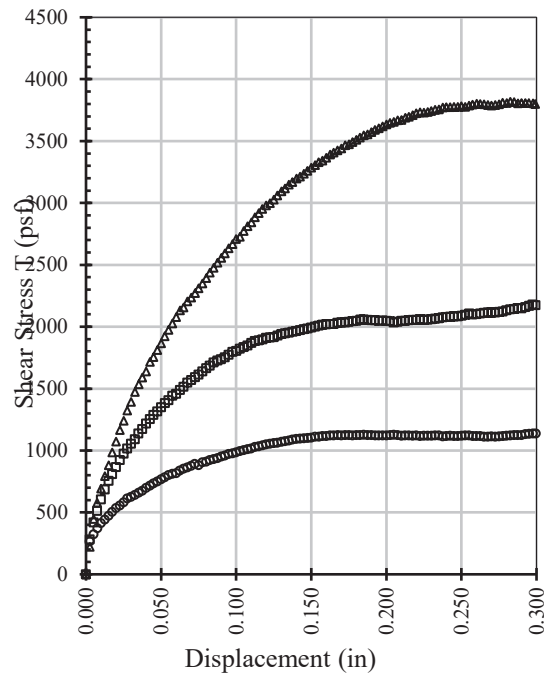
Notes: REMOLDED TO 95% OF DENSITY CURVE NEAR OPTIMUM

Maximum Shear Stress -vs- Normal Stress



PROJECT	QUARRY PARK 104151	JOB NO.	7965.01	SHEET	
CLIENT	PACIFIC WATERSHED ASSOCIATES	SAMPLE ID	20-024EK	1 of 1	
LOCATION	TP-3&4 at COMPOSITE	TEST BY	DLR	DATE	4/14/20
SOIL TYPE	SAND w/SILT&CLAY	CHECKED BY		CHECK DATE	

Shear Stress -vs- Displacement



Sample Dimensions

Diameter (inch) 2.5
Height (inch) 1.0

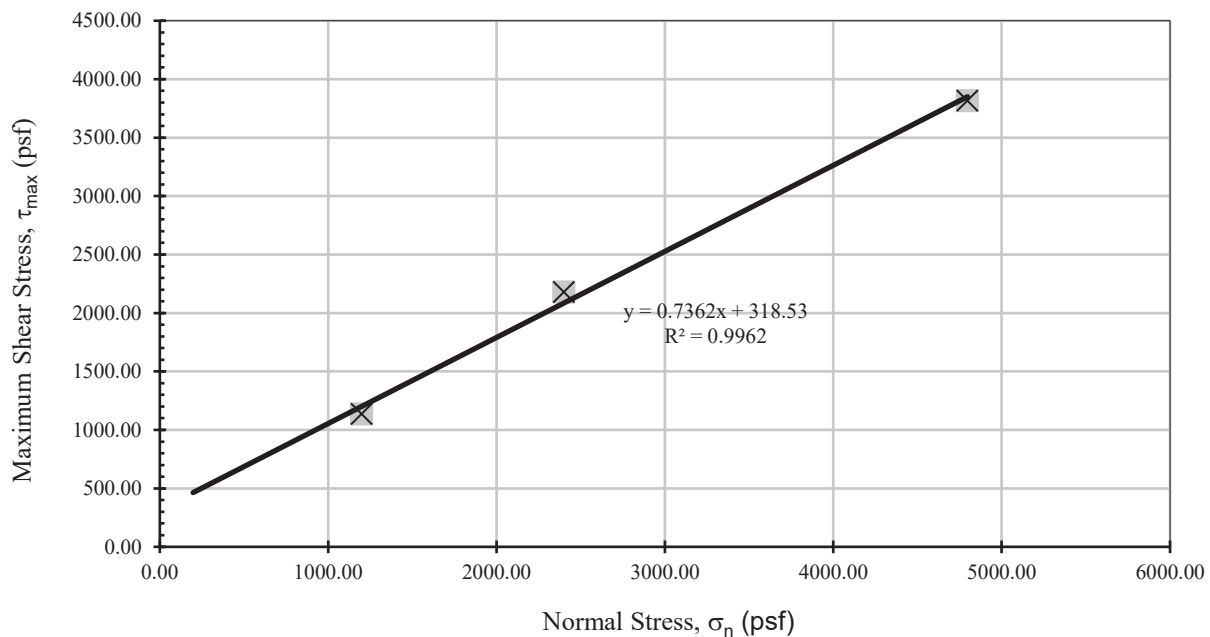
	Point 1	Point 2	Point 3	Average
Water Content (%)	12.9	12.6	12.2	12.6
Dry Density (pcf)	115.3	115.2	115.3	115.3
Void Ratio*	0.4	0.4	0.4	0.4
Peak Shear Stress (psf)	1137.1	2178.6	3817.6	

*Void ratio calculation assumes a specific gravity of 2.65

c - intercept (cohesion) 319
phi (internal friction angle) 36.4°

Notes: REMOLDED TO 95% OF DENSITY CURVE NEAR OPTIMUM

Maximum Shear Stress -vs- Normal Stress



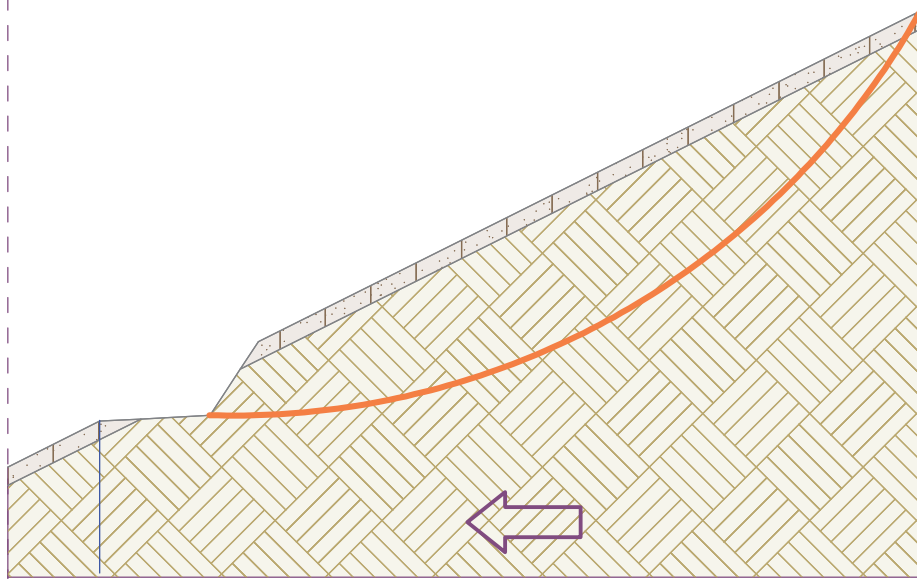
Appendix C

Slope Stability Model of Cut Slope

**Basis of Design and Focused Engineering Geologic Investigation for
Quarry Park Fire Road Extension Design and Construction at Quarry Park
San Mateo County, California**

Name :

Stage - analysis : 2 - 1



Silt A/B Horizon



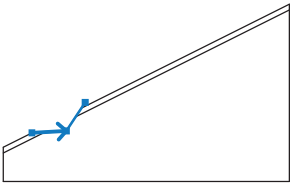
Para Lithic Weathered Granitics

The slip surface after optimization.

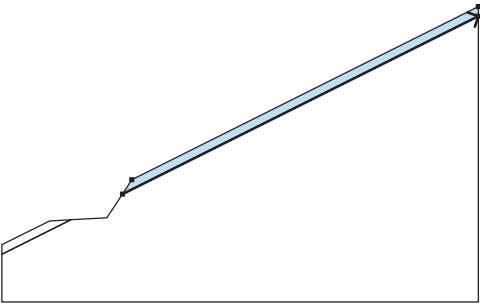
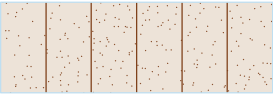
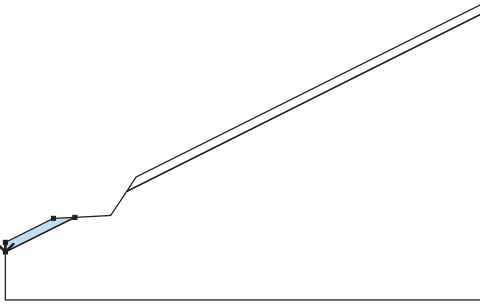
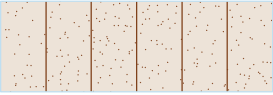
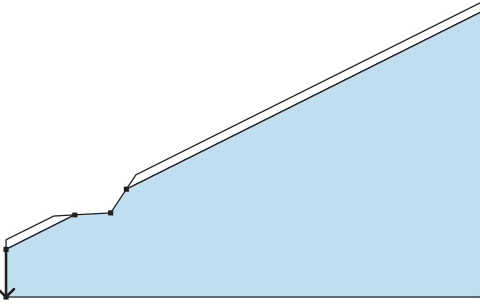
Slope stability verification (Bishop)Sum of active forces : $F_a = 63043.9$ lbf/ftSum of passive forces : $F_p = 119666.8$ lbf/ftSliding moment : $M_a = 5399714.2$ lbfft/ftResisting moment : $M_p = 10249459.9$ lbfft/ftFactor of safety = $1.90 > 1.30$ **Slope stability ACCEPTABLE**

Input data (Stage of construction 2)

Earth cut

No.	Cut location	Coordinates of cut points [ft]					
		x	z	x	z	x	z
1		10.00	5.00	22.00	5.65	28.60	15.65

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		25.30	10.65	100.00	48.00	Silt A/B Horizon 
		100.00	50.00	27.27	13.64	
2		0.00	0.00	0.00	-2.00	Silt A/B Horizon 
		14.49	5.24	10.00	5.00	
3		0.00	-2.00	0.00	-12.00	Para Lithic Weathered Granitics 
		100.00	-12.00	100.00	48.00	
		25.30	10.65	22.00	5.65	
		14.49	5.24			

Earthquake

Horizontal seismic coefficient : $K_h = 0.15$

Vertical seismic coefficient : $K_v = 0.00$

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 2)

Analysis 1 (stage 2)

Circular slip surface

Slip surface parameters					
Center :	x =	24.47 [ft]	Angles :	α_1 =	-1.69 [°]
	z =	91.26 [ft]		α_2 =	60.95 [°]
Radius :	R =	85.65 [ft]			
The slip surface after optimization.					

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	10.00	5.10	10.00	-11.52
2	99.56	49.94	99.56	-11.32

The restrictions of points of circular slip surface

Slope stability verification (Bishop)

Sum of active forces : $F_a = 63043.9$ lbf/ft

Sum of passive forces : $F_p = 119666.8$ lbf/ft

Sliding moment : $M_a = 5399714.2$ lbfft/ft

Resisting moment : $M_p = 10249459.9$ lbfft/ft

Factor of safety = 1.90 > 1.30

Slope stability ACCEPTABLE

Appendix D

Reinforced Steep Slope Analysis Models

**Basis of Design and Focused Engineering Geologic Investigation for
Quarry Park Fire Road Extension Design and Construction at Quarry Park
San Mateo County, California**

Slope stability analysis

Input data

Project

Date : 4/5/2021

Settings

USA - Safety factor - Quarry Park _PWA

Stability analysis

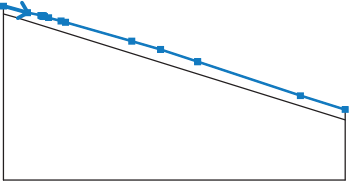
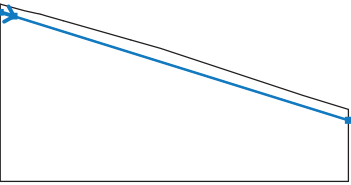
Earthquake analysis : Standard

Verification methodology : Safety factors (ASD)

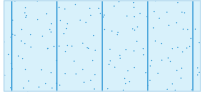
Safety factors			
Permanent design situation			
Safety factor :	SF _s =	1.30	[-]

Safety factors			
Seismic design situation			
Safety factor :	SF _s =	1.15	[-]

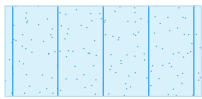
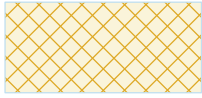
Interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		0.00	25.85	6.04	24.23	9.31	23.53
		9.49	23.48	9.68	23.43	9.82	23.39
		9.89	23.37	9.98	23.34	10.04	23.32
		10.27	23.25	11.30	22.96	14.37	22.10
		15.49	21.78	32.06	17.06	39.25	15.02
		48.51	11.96	48.54	11.95	74.21	3.45
		85.42	0.00				
2		0.00	23.85	3.41	22.90	85.42	-2.63

Soil parameters - effective stress state

No.	Name	Pattern	Φ _{ef} [°]	C _{ef} [psf]	γ [pcf]
1	ML Sandy Silt		32.00	100.0	110.5
2	SM - Silty Sand - Compacted Backfill		32.00	0.0	110.5
3	Para Lithic Weathered Granitics		36.00	500.0	140.0

Soil parameters - uplift

No.	Name	Pattern	γ_{sat} [pcf]	γ_s [pcf]	n [-]
1	ML Sandy Silt		125.6		
2	SM - Silty Sand - Compacted Backfill		112.0		
3	Para Lithic Weathered Granitics		140.0		

Soil parameters

ML Sandy Silt

Unit weight : $\gamma = 110.5$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 32.00^\circ$
 Cohesion of soil : $c_{ef} = 100.0$ psf
 Saturated unit weight : $\gamma_{sat} = 125.6$ pcf

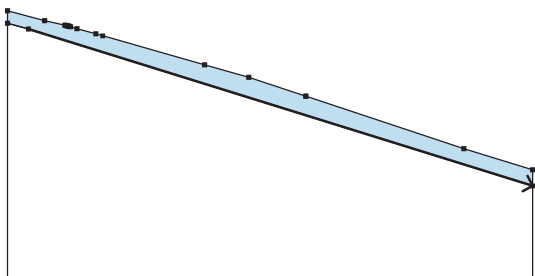
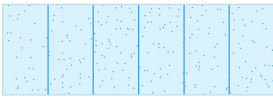
SM - Silty Sand - Compacted Backfill

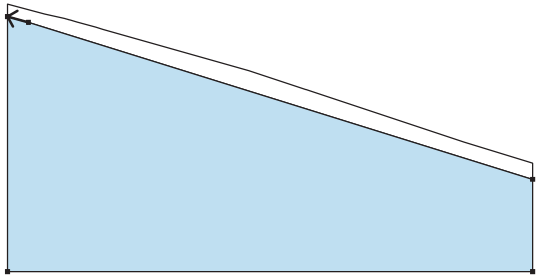
Unit weight : $\gamma = 110.5$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 32.00^\circ$
 Cohesion of soil : $c_{ef} = 0.0$ psf
 Saturated unit weight : $\gamma_{sat} = 112.0$ pcf

Para Lithic Weathered Granitics

Unit weight : $\gamma = 140.0$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 36.00^\circ$
 Cohesion of soil : $c_{ef} = 500.0$ psf
 Saturated unit weight : $\gamma_{sat} = 140.0$ pcf

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		3.41	22.90	85.42	-2.63	ML Sandy Silt 
		85.42	0.00	74.21	3.45	
		48.54	11.95	48.51	11.96	
		39.25	15.02	32.06	17.06	
		15.49	21.78	14.37	22.10	
		11.30	22.96	10.27	23.25	
		10.04	23.32	9.98	23.34	
		9.89	23.37	9.82	23.39	
		9.68	23.43	9.49	23.48	
		9.31	23.53	6.04	24.23	
		0.00	25.85	0.00	23.85	

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
2		3.41	22.90	0.00	23.85	Para Lithic Weathered Granitics 
		0.00	-17.63	85.42	-17.63	
		85.42	-2.63			

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Horizontal seismic coefficient : $K_h = 0.00$

Vertical seismic coefficient : $K_v = 0.00$

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 1)

Analysis 1 (stage 1)

Circular slip surface

Slip surface parameters						
Center :	x =	61.30	[ft]	Angles :	α_1 =	-51.27 [°]
	z =	74.32	[ft]		α_2 =	17.57 [°]
Radius :	R =	77.75	[ft]			
The slip surface after optimization.						

Slope stability verification (Bishop)

Sum of active forces : $F_a = 29753.6$ lbf/ft

Sum of passive forces : $F_p = 125018.5$ lbf/ft

Sliding moment : $M_a = 2313341.5$ lbfft/ft

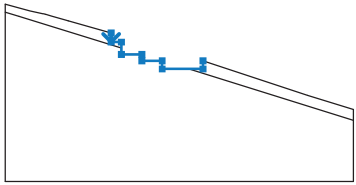
Resisting moment : $M_p = 9720189.7$ lbfft/ft

Factor of safety = $4.20 > 1.30$

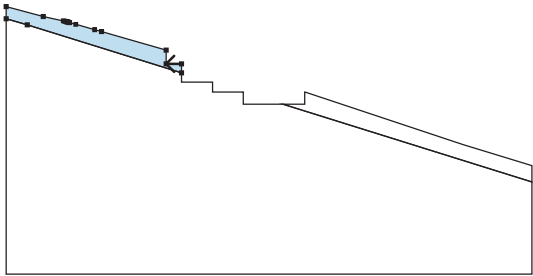
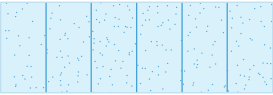
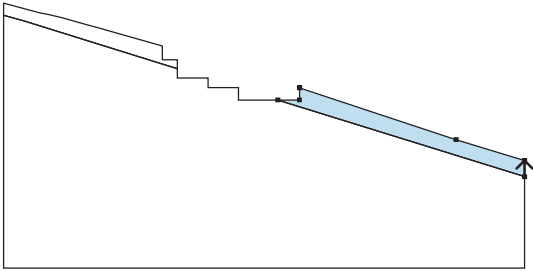
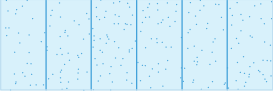
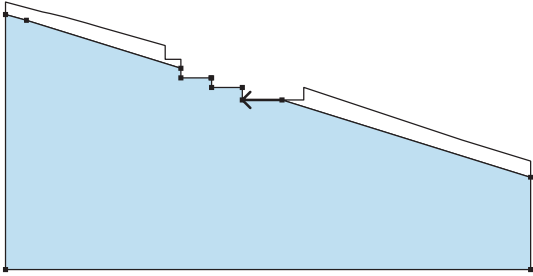
Slope stability ACCEPTABLE

Input data (Stage of construction 2)

Earth cut

No.	Cut location	Coordinates of cut points [ft]					
		x	z	x	z	x	z
1		26.00	18.78	26.00	16.55	28.51	16.55
		28.51	13.55	33.51	13.55	33.51	11.96
		38.51	11.96	38.51	9.96	48.51	9.96
		48.51	11.96				

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		28.51	16.55	26.00	16.55	ML Sandy Silt 
		26.00	18.78	15.49	21.78	
		14.37	22.10	11.30	22.96	
		10.27	23.25	10.04	23.32	
		9.98	23.34	9.89	23.37	
		9.82	23.39	9.68	23.43	
		9.49	23.48	9.31	23.53	
		6.04	24.23	0.00	25.85	
		0.00	23.85	3.41	22.90	
		28.51	15.09			
2		85.42	-2.63	85.42	0.00	ML Sandy Silt 
		74.21	3.45	48.54	11.95	
		48.51	11.96	48.51	9.96	
		44.98	9.96			
3		44.98	9.96	38.51	9.96	Para Lithic Weathered Granitics 
		38.51	11.96	33.51	11.96	
		33.51	13.55	33.44	13.55	
		28.51	13.55	28.51	15.09	
		3.41	22.90	0.00	23.85	
		0.00	-17.63	85.42	-17.63	
		85.42	-2.63			

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Horizontal seismic coefficient : $K_h = 0.15$

Vertical seismic coefficient : $K_v = 0.00$

Settings of the stage of construction

Design situation : seismic

Results (Stage of construction 2)

Analysis 1 (stage 2)

Circular slip surface

Slip surface parameters						
Center :	x =	39.09	[ft]	Angles :	α_1 =	-79.58 [°]
	z =	23.32	[ft]		α_2 =	45.81 [°]
Radius :	R =	17.93	[ft]			
Analysis of the slip surface without optimization.						

Slope stability verification (Bishop)

Sum of active forces : $F_a = 6859.4$ lbf/ft

Sum of passive forces : $F_p = 32055.6$ lbf/ft

Sliding moment : $M_a = 122988.8$ lbfft/ft

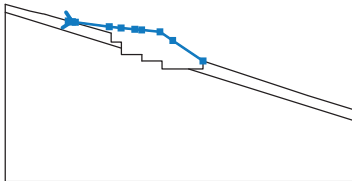
Resisting moment : $M_p = 574756.7$ lbfft/ft

Factor of safety = $4.67 > 1.15$

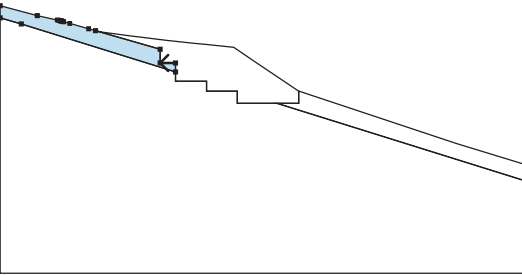
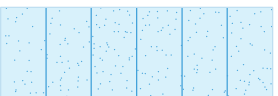
Slope stability ACCEPTABLE

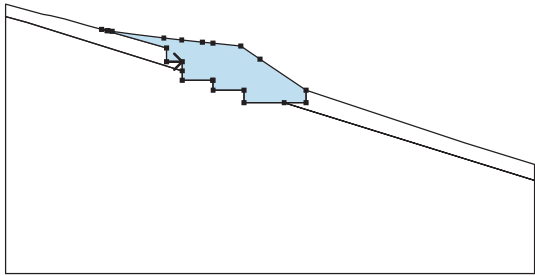
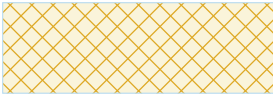
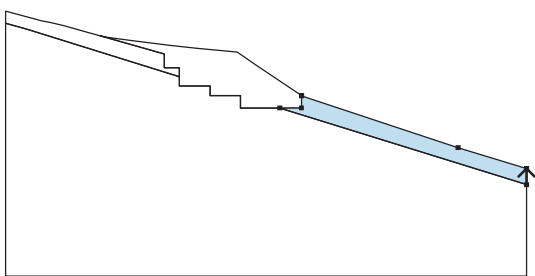
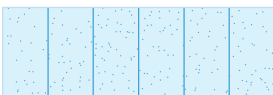
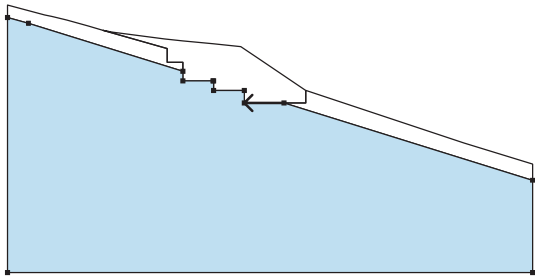
Input data (Stage of construction 3)

Embankment interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		15.49	21.78	16.39	21.58	16.54	21.56
		17.19	21.47	25.55	20.37	28.45	20.06
		31.78	19.72	33.49	19.56	37.97	19.11
		41.10	16.96	48.51	11.96		

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		28.51	16.55	26.00	16.55	ML Sandy Silt 
		26.00	18.78	15.49	21.78	
		14.37	22.10	11.30	22.96	
		10.27	23.25	10.04	23.32	
		9.98	23.34	9.89	23.37	
		9.82	23.39	9.68	23.43	
		9.49	23.48	9.31	23.53	
		6.04	24.23	0.00	25.85	
		0.00	23.85	3.41	22.90	
		28.51	15.09			

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
2		26.00	16.55	28.51	16.55	SM - Silty Sand - Compacted Backfill 
		28.51	15.09	28.51	13.55	
		33.44	13.55	33.51	13.55	
		33.51	11.96	38.51	11.96	
		38.51	9.96	44.98	9.96	
		48.51	9.96	48.51	11.96	
		41.10	16.96	37.97	19.11	
		33.49	19.56	31.78	19.72	
		28.45	20.06	25.55	20.37	
		17.19	21.47	16.54	21.56	
		16.39	21.58	15.49	21.78	
		26.00	18.78			
3		85.42	-2.63	85.42	0.00	ML Sandy Silt 
		74.21	3.45	48.54	11.95	
		48.51	11.96	48.51	9.96	
		44.98	9.96			
4		44.98	9.96	38.51	9.96	Para Lithic Weathered Granitics 
		38.51	11.96	33.51	11.96	
		33.51	13.55	33.44	13.55	
		28.51	13.55	28.51	15.09	
		3.41	22.90	0.00	23.85	
		0.00	-17.63	85.42	-17.63	
		85.42	-2.63			

Reinforcements

No.	inforceme new	Point to the left		Point to the right		Length L [ft]	Strength R _t [lbf/ft]	Pull out resist.	End of reinf.
		x [ft]	z [ft]	x [ft]	z [ft]				
1	Yes	28.60	15.96	42.60	15.96	14.00	3500.0	C = 0.90	Fixed
2	Yes	33.56	12.96	47.00	12.96	13.44	3500.0	C = 0.80	Fixed
3	Yes	41.55	13.96	45.55	13.96	4.00	1310.0	C = 0.80	Fixed
4	Yes	39.90	14.96	43.90	14.96	4.00	1310.0	C = 0.80	Fixed
5	Yes	37.10	16.96	41.10	16.96	4.00	1310.0	C = 0.80	Fixed
6	Yes	35.60	17.96	39.60	17.96	4.00	1310.0	C = 0.80	Fixed

Surcharge

No.	Surcharge		Type	Type of action	Location z [ft]	Origin x [ft]	Length l [ft]	Width b [ft]	Slope α [°]	Magnitude		
	new	change								q, q ₁ , f, F	q ₂	unit
1	Yes		strip	permanent	on terrain	x = 27.00	l = 10.00		0.00	640.0		lbf/ft ²

Surcharges

No.	Name
1	Lane Load

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 3)

Analysis 1 (stage 3)

Circular slip surface

Slip surface parameters						
Center :	x =	46.13	[ft]	Angles :	α_1 =	-56.41 [°]
	z =	32.91	[ft]		α_2 =	15.17 [°]
Radius :	R =	22.95	[ft]			
The slip surface after optimization.						

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	37.96	19.11	41.09	16.96
2	41.09	16.96	48.49	11.96

The restrictions of points of circular slip surface

Reinforcement bearing capacity

Reinforcement Bearing capacity [lbf/ft]

1	1021.5
2	894.4
3	0.0
4	0.0
5	0.0
6	0.0

Slope stability verification (Bishop)

Sum of active forces : $F_a = 7951.3$ lbf/ft

Sum of passive forces : $F_p = 14319.3$ lbf/ft

Sliding moment : $M_a = 182483.1$ lbfft/ft

Resisting moment : $M_p = 328628.9$ lbfft/ft

Factor of safety = 1.80 > 1.30

Slope stability ACCEPTABLE

Slope stability analysis

Input data

Project

Date : 4/5/2021

Settings

USA - Safety factor - Quarry Park _PWA

Stability analysis

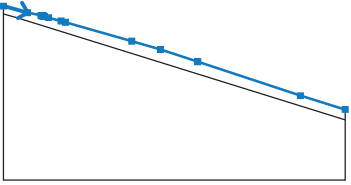
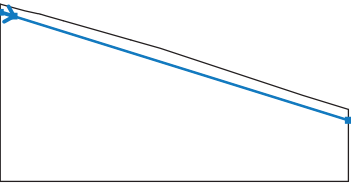
Earthquake analysis : Standard

Verification methodology : Safety factors (ASD)

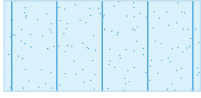
Safety factors			
Permanent design situation			
Safety factor :	SF _s =	1.30	[-]

Safety factors			
Seismic design situation			
Safety factor :	SF _s =	1.15	[-]

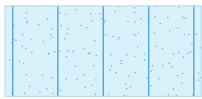
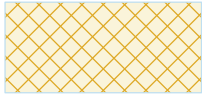
Interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		0.00	25.85	6.04	24.23	9.31	23.53
		9.49	23.48	9.68	23.43	9.82	23.39
		9.89	23.37	9.98	23.34	10.04	23.32
		10.27	23.25	11.30	22.96	14.37	22.10
		15.49	21.78	32.06	17.06	39.25	15.02
		48.51	11.96	48.54	11.95	74.21	3.45
		85.42	0.00				
2		0.00	23.85	3.41	22.90	85.42	-2.63

Soil parameters - effective stress state

No.	Name	Pattern	Φ _{ef} [°]	C _{ef} [psf]	γ [pcf]
1	ML - Sandy Silt		32.00	100.0	110.5
2	SM Silty Sand - Compacted Backfill		32.00	0.0	110.5
3	Para Lithic Weathered Granitics		36.00	500.0	140.0

Soil parameters - uplift

No.	Name	Pattern	γ_{sat} [pcf]	γ_s [pcf]	n [-]
1	ML - Sandy Silt		125.6		
2	SM Silty Sand - Compacted Backfill		112.0		
3	Para Lithic Weathered Granitics		140.0		

Soil parameters

ML - Sandy Silt

Unit weight : $\gamma = 110.5$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 32.00^\circ$
 Cohesion of soil : $c_{ef} = 100.0$ psf
 Saturated unit weight : $\gamma_{sat} = 125.6$ pcf

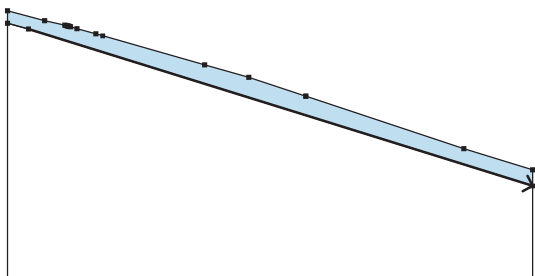
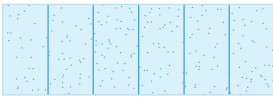
SM Silty Sand - Compacted Backfill

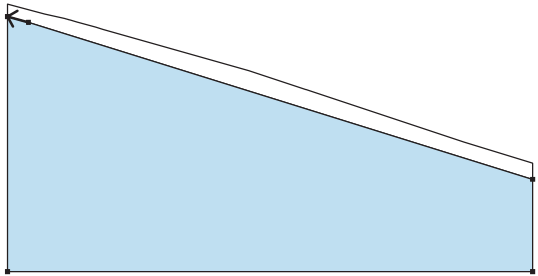
Unit weight : $\gamma = 110.5$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 32.00^\circ$
 Cohesion of soil : $c_{ef} = 0.0$ psf
 Saturated unit weight : $\gamma_{sat} = 112.0$ pcf

Para Lithic Weathered Granitics

Unit weight : $\gamma = 140.0$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 36.00^\circ$
 Cohesion of soil : $c_{ef} = 500.0$ psf
 Saturated unit weight : $\gamma_{sat} = 140.0$ pcf

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		3.41	22.90	85.42	-2.63	ML - Sandy Silt 
		85.42	0.00	74.21	3.45	
		48.54	11.95	48.51	11.96	
		39.25	15.02	32.06	17.06	
		15.49	21.78	14.37	22.10	
		11.30	22.96	10.27	23.25	
		10.04	23.32	9.98	23.34	
		9.89	23.37	9.82	23.39	
		9.68	23.43	9.49	23.48	
		9.31	23.53	6.04	24.23	
		0.00	25.85	0.00	23.85	

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
2		3.41	22.90	0.00	23.85	Para Lithic Weathered Granitics 
		0.00	-17.63	85.42	-17.63	
		85.42	-2.63			

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Horizontal seismic coefficient : $K_h = 0.00$

Vertical seismic coefficient : $K_v = 0.00$

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 1)

Analysis 1 (stage 1)

Circular slip surface

Slip surface parameters					
Center :	x =	61.30	[ft]	Angles :	$\alpha_1 =$ -51.27 [°]
	z =	74.32	[ft]		$\alpha_2 =$ 17.57 [°]
Radius :	R =	77.75	[ft]		
The slip surface after optimization.					

Slope stability verification (Bishop)

Sum of active forces : $F_a = 29753.6$ lbf/ft

Sum of passive forces : $F_p = 125018.5$ lbf/ft

Sliding moment : $M_a = 2313341.5$ lbfft/ft

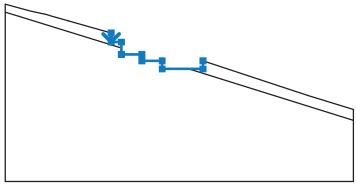
Resisting moment : $M_p = 9720189.7$ lbfft/ft

Factor of safety = 4.20 > 1.30

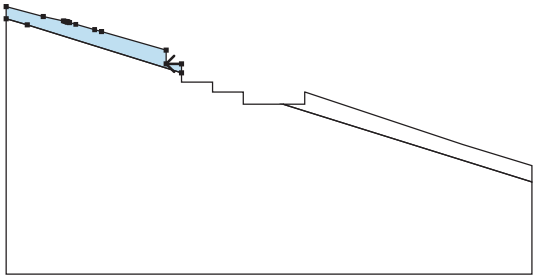
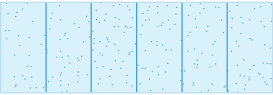
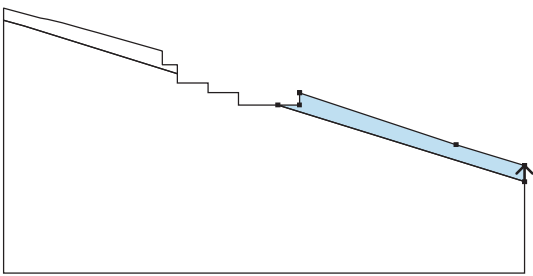
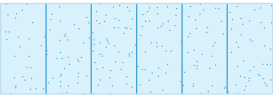
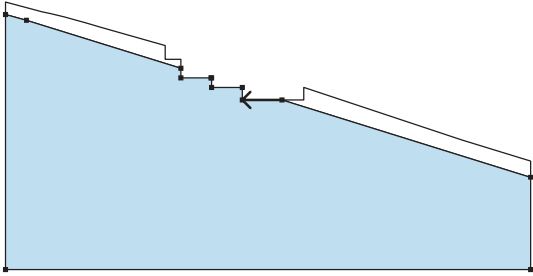
Slope stability ACCEPTABLE

Input data (Stage of construction 2)

Earth cut

No.	Cut location	Coordinates of cut points [ft]					
		x	z	x	z	x	z
1		26.00	18.78	26.00	16.55	28.51	16.55
		28.51	13.55	33.51	13.55	33.51	11.96
		38.51	11.96	38.51	9.96	48.51	9.96
		48.51	11.96				

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		28.51	16.55	26.00	16.55	ML - Sandy Silt 
		26.00	18.78	15.49	21.78	
		14.37	22.10	11.30	22.96	
		10.27	23.25	10.04	23.32	
		9.98	23.34	9.89	23.37	
		9.82	23.39	9.68	23.43	
		9.49	23.48	9.31	23.53	
		6.04	24.23	0.00	25.85	
		0.00	23.85	3.41	22.90	
		28.51	15.09			
2		85.42	-2.63	85.42	0.00	ML - Sandy Silt 
		74.21	3.45	48.54	11.95	
		48.51	11.96	48.51	9.96	
		44.98	9.96			
3		44.98	9.96	38.51	9.96	Para Lithic Weathered Granitics 
		38.51	11.96	33.51	11.96	
		33.51	13.55	33.44	13.55	
		28.51	13.55	28.51	15.09	
		3.41	22.90	0.00	23.85	
		0.00	-17.63	85.42	-17.63	
		85.42	-2.63			

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Horizontal seismic coefficient : $K_h = 0.15$

Vertical seismic coefficient : $K_v = 0.00$

Settings of the stage of construction

Design situation : seismic

Results (Stage of construction 2)

Analysis 1 (stage 2)

Circular slip surface

Slip surface parameters						
Center :	x =	39.09	[ft]	Angles :	α_1 =	-79.58 [°]
	z =	23.32	[ft]		α_2 =	45.81 [°]
Radius :	R =	17.93	[ft]			
Analysis of the slip surface without optimization.						

Slope stability verification (Bishop)

Sum of active forces : $F_a = 6859.4$ lbf/ft

Sum of passive forces : $F_p = 32055.6$ lbf/ft

Sliding moment : $M_a = 122988.8$ lbfft/ft

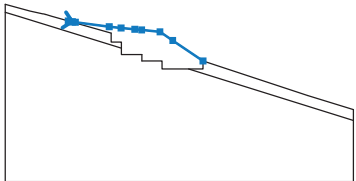
Resisting moment : $M_p = 574756.7$ lbfft/ft

Factor of safety = $4.67 > 1.15$

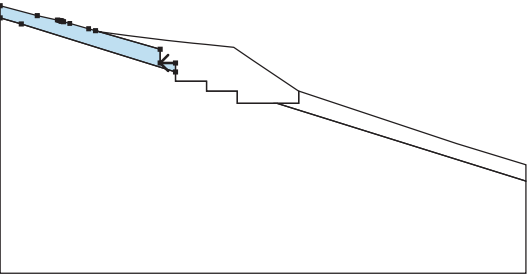
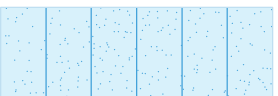
Slope stability ACCEPTABLE

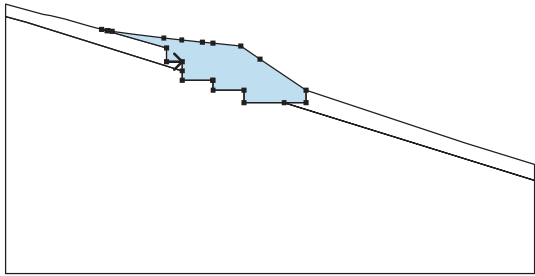
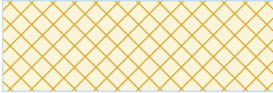
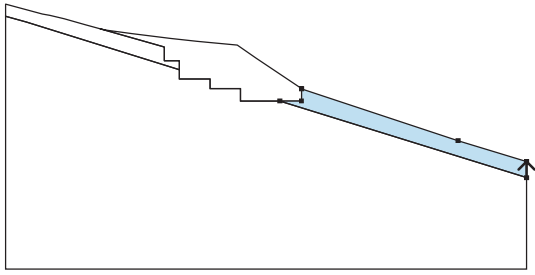
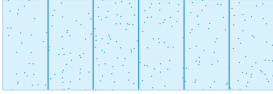
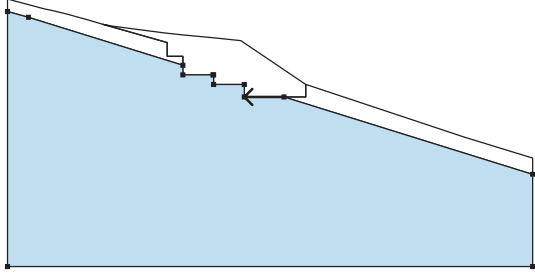
Input data (Stage of construction 3)

Embankment interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		15.49	21.78	16.39	21.58	16.54	21.56
		17.19	21.47	25.55	20.37	28.45	20.06
		31.78	19.72	33.49	19.56	37.97	19.11
		41.10	16.96	48.51	11.96		

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		28.51	16.55	26.00	16.55	ML - Sandy Silt 
		26.00	18.78	15.49	21.78	
		14.37	22.10	11.30	22.96	
		10.27	23.25	10.04	23.32	
		9.98	23.34	9.89	23.37	
		9.82	23.39	9.68	23.43	
		9.49	23.48	9.31	23.53	
		6.04	24.23	0.00	25.85	
		0.00	23.85	3.41	22.90	
		28.51	15.09			

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
2		26.00	16.55	28.51	16.55	SM Silty Sand - Compacted Backfill 
		28.51	15.09	28.51	13.55	
		33.44	13.55	33.51	13.55	
		33.51	11.96	38.51	11.96	
		38.51	9.96	44.98	9.96	
		48.51	9.96	48.51	11.96	
		41.10	16.96	37.97	19.11	
		33.49	19.56	31.78	19.72	
		28.45	20.06	25.55	20.37	
		17.19	21.47	16.54	21.56	
		16.39	21.58	15.49	21.78	
		26.00	18.78			
3		85.42	-2.63	85.42	0.00	ML - Sandy Silt 
		74.21	3.45	48.54	11.95	
		48.51	11.96	48.51	9.96	
		44.98	9.96			
4		44.98	9.96	38.51	9.96	Para Lithic Weathered Granitics 
		38.51	11.96	33.51	11.96	
		33.51	13.55	33.44	13.55	
		28.51	13.55	28.51	15.09	
		3.41	22.90	0.00	23.85	
		0.00	-17.63	85.42	-17.63	
		85.42	-2.63			

Reinforcements

No.	inforceme new	Point to the left		Point to the right		Length L [ft]	Strength R _t [lbf/ft]	Pull out resist.	End of reinf.
		x [ft]	z [ft]	x [ft]	z [ft]				
1	Yes	28.60	15.96	42.60	15.96	14.00	3500.0	C = 0.90	Fixed
2	Yes	33.56	12.96	47.00	12.96	13.44	3500.0	C = 0.80	Fixed
3	Yes	41.55	13.96	45.55	13.96	4.00	1310.0	C = 0.80	Fixed
4	Yes	39.90	14.96	43.90	14.96	4.00	1310.0	C = 0.80	Fixed
5	Yes	37.10	16.96	41.10	16.96	4.00	1310.0	C = 0.80	Fixed
6	Yes	35.60	17.96	39.60	17.96	4.00	1310.0	C = 0.80	Fixed

Surcharge

No.	Surcharge		Type	Type of action	Location z [ft]	Origin x [ft]	Length l [ft]	Width b [ft]	Slope α [°]	Magnitude		
	new	change								q, q ₁ , f, F	q ₂	unit
1	Yes		strip	permanent	on terrain	x = 27.00	l = 10.00		0.00	640.0		lbf/ft ²

Surcharges

No.	Name
1	Lane Load

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Horizontal seismic coefficient : $K_h = 0.15$

Vertical seismic coefficient : $K_v = 0.00$

Settings of the stage of construction

Design situation : seismic

Results (Stage of construction 3)

Analysis 1 (stage 3)

Circular slip surface

Slip surface parameters							
Center :	x =	47.19	[ft]	Angles :	α_1 =	-52.53	[°]
	z =	36.30	[ft]		α_2 =	12.12	[°]
Radius :	R =	26.32	[ft]				
The slip surface after optimization.							

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	37.96	19.11	41.09	16.96
2	41.09	16.96	48.49	11.96

The restrictions of points of circular slip surface

Reinforcement bearing capacity

Reinforcement Bearing capacity [lbf/ft]

1	941.2
2	1070.8
3	0.0
4	0.0
5	0.0
6	0.0

Slope stability verification (Bishop)

Sum of active forces : $F_a = 9865.8$ lbf/ft

Sum of passive forces : $F_p = 13705.9$ lbf/ft

Sliding moment : $M_a = 259666.7$ lbfft/ft

Resisting moment : $M_p = 360740.4$ lbfft/ft

Factor of safety = 1.39 > 1.15

Slope stability ACCEPTABLE

Slope stability analysis

Input data

Project

Date : 4/5/2021

Settings

USA - Safety factor - Quarry Park _PWA

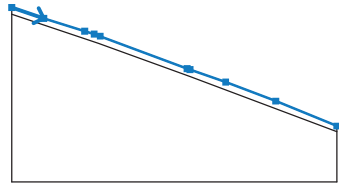
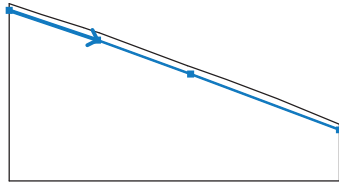
Stability analysis

Earthquake analysis : Standard

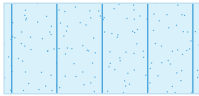
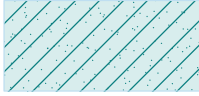
Verification methodology : Safety factors (ASD)

Safety factors			
Permanent design situation			
Safety factor :	SF _s =	1.30	[-]

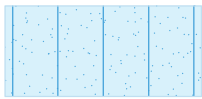
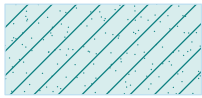
Interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		0.00	35.39	9.56	32.16	21.80	28.33
		24.60	27.43	26.41	26.82	52.38	17.15
		53.20	16.86	63.87	13.15	78.81	7.44
		97.06	0.00				
2		0.00	33.39	25.94	24.69	53.35	14.73
		97.06	-1.68				

Soil parameters - effective stress state

No.	Name	Pattern	Φ _{ef} [°]	C _{ef} [psf]	γ [pcf]
1	ML Sandy Silt		32.00	100.0	110.5
2	SM Silty Sand - Compacted Backfill		32.00	0.0	110.4
3	Para Lithic Weathered Granitics		36.00	500.0	140.0

Soil parameters - uplift

No.	Name	Pattern	γ_{sat} [pcf]	γ_s [pcf]	n [-]
1	ML Sandy Silt		125.6		
2	SM Silty Sand - Compacted Backfill		112.0		
3	Para Lithic Weathered Granitics		140.0		

Soil parameters

ML Sandy Silt

Unit weight : $\gamma = 110.5$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 32.00^\circ$
 Cohesion of soil : $c_{ef} = 100.0$ psf
 Saturated unit weight : $\gamma_{sat} = 125.6$ pcf

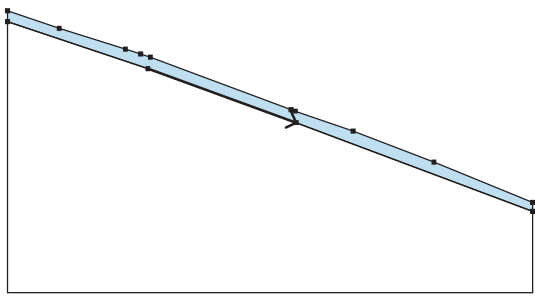
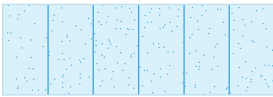
SM Silty Sand - Compacted Backfill

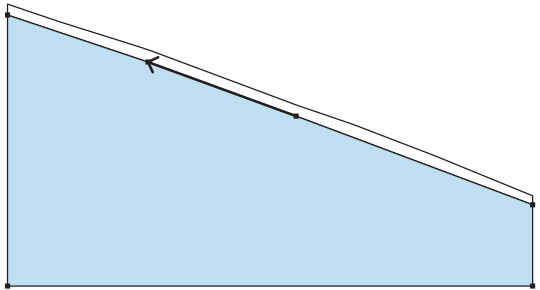
Unit weight : $\gamma = 110.4$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 32.00^\circ$
 Cohesion of soil : $c_{ef} = 0.0$ psf
 Saturated unit weight : $\gamma_{sat} = 112.0$ pcf

Para Lithic Weathered Granitics

Unit weight : $\gamma = 140.0$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 36.00^\circ$
 Cohesion of soil : $c_{ef} = 500.0$ psf
 Saturated unit weight : $\gamma_{sat} = 140.0$ pcf

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		25.94	24.69	53.35	14.73	ML Sandy Silt 
		97.06	-1.68	97.06	0.00	
		78.81	7.44	63.87	13.15	
		53.20	16.86	52.38	17.15	
		26.41	26.82	24.60	27.43	
		21.80	28.33	9.56	32.16	
		0.00	35.39	0.00	33.39	

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
2		53.35	14.73	25.94	24.69	Para Lithic Weathered Granitics 
		0.00	33.39	0.00	-16.68	
		97.06	-16.68	97.06	-1.68	

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 1)

Analysis 1 (stage 1)

Circular slip surface

Slip surface parameters							
Center :	x =	74.43	[ft]	Angles :	α_1 =	-54.00	[°]
	z =	88.77	[ft]		α_2 =	13.94	[°]
Radius :	R =	91.19	[ft]				
The slip surface after optimization.							

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	20.98	28.49	32.21	11.18
2	35.17	9.89	65.35	13.06
3	39.63	25.71	50.61	18.21

The restrictions of points of circular slip surface

Slope stability verification (Bishop)

Sum of active forces : $F_a =$ 47102.0 lbf/ft

Sum of passive forces : $F_p =$ 161303.4 lbf/ft

Sliding moment : $M_a =$ 4295229.9 lbfft/ft

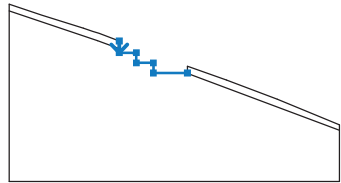
Resisting moment : $M_p =$ 14709252.7 lbfft/ft

Factor of safety = 3.42 > 1.30

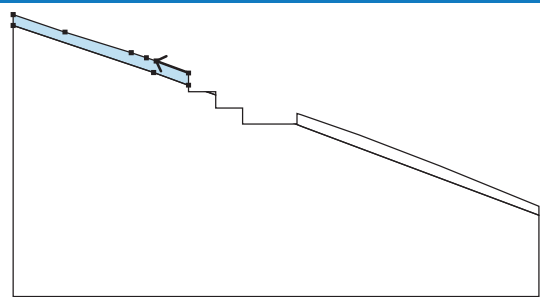
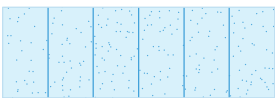
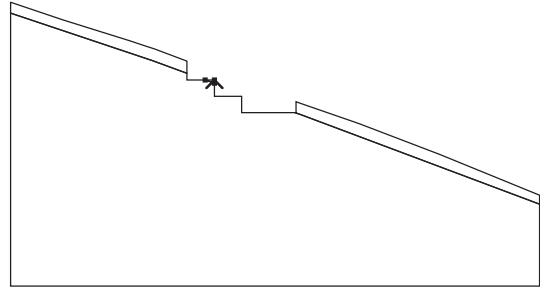
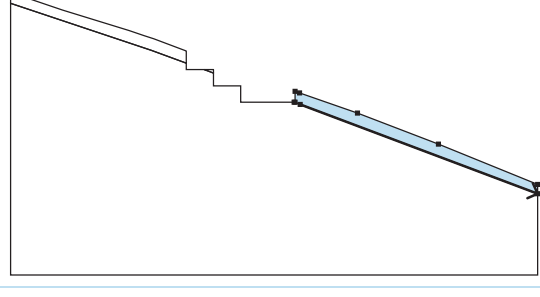
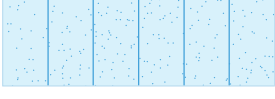
Slope stability ACCEPTABLE

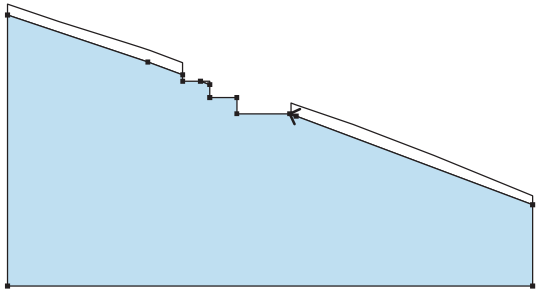
Input data (Stage of construction 2)

Earth cut

No.	Cut location	Coordinates of cut points [ft]					
		x	z	x	z	x	z
1		32.38	24.60	32.38	21.15	37.38	21.15
		37.38	18.15	42.38	18.15	42.38	15.15
		52.38	15.15				

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		32.38	24.60	26.41	26.82	ML Sandy Silt 
		24.60	27.43	21.80	28.33	
		9.56	32.16	0.00	35.39	
		0.00	33.39	25.94	24.69	
		32.38	22.35			
2		37.38	20.53	37.38	21.15	Para Lithic Weathered Granitics 
		35.68	21.15			
3		53.35	14.73	97.06	-1.68	ML Sandy Silt 
		97.06	0.00	78.81	7.44	
		63.87	13.15	53.20	16.86	
		52.38	17.15	52.38	15.15	
		52.19	15.15			

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
4		53.35	14.73	52.19	15.15	Para Lithic Weathered Granitics 
		42.38	15.15	42.38	18.15	
		37.38	18.15	37.38	20.53	
		35.68	21.15	32.38	21.15	
		32.38	22.35	25.94	24.69	
		0.00	33.39	0.00	-16.68	
		97.06	-16.68	97.06	-1.68	

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 2)

Analysis 1 (stage 2)

Circular slip surface

Slip surface parameters							
Center :	x =	74.43	[ft]	Angles :	α_1 =	-54.00	[°]
	z =	88.78	[ft]		α_2 =	13.94	[°]
Radius :	R =	91.20	[ft]				
The slip surface after optimization.							

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	20.98	28.49	32.21	11.18
2	35.17	9.89	65.35	13.06
3	39.63	25.71	50.61	18.21

The restrictions of points of circular slip surface

Slope stability verification (Bishop)

Sum of active forces : $F_a = 44176.0$ lbf/ft

Sum of passive forces : $F_p = 155566.8$ lbf/ft

Sliding moment : $M_a = 4028849.1$ lbfft/ft

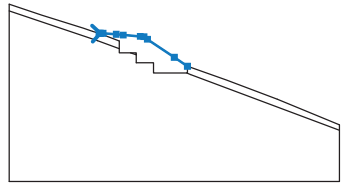
Resisting moment : $M_p = 14187691.0$ lbfft/ft

Factor of safety = 3.52 > 1.30

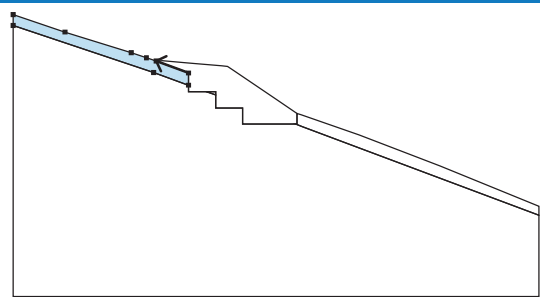
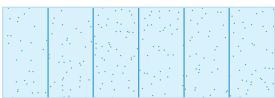
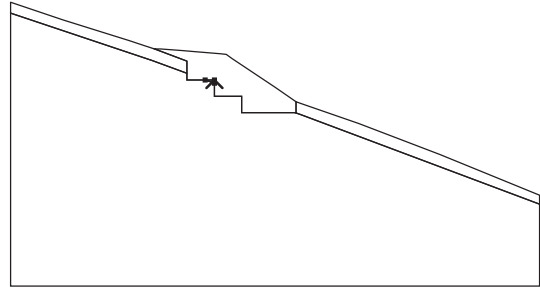
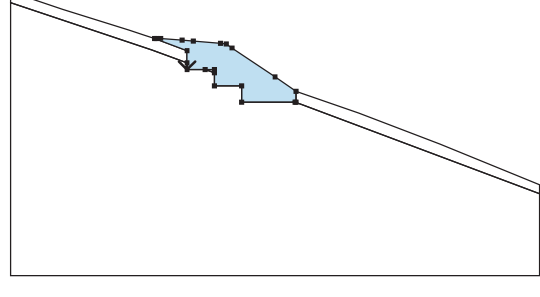
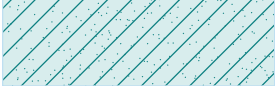
Slope stability ACCEPTABLE

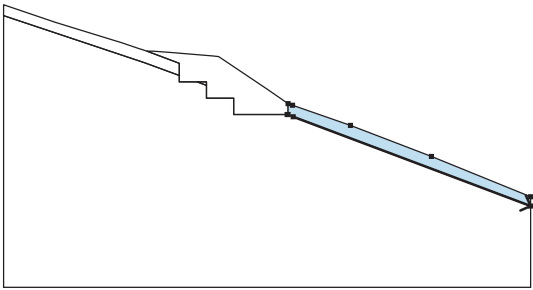
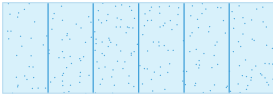
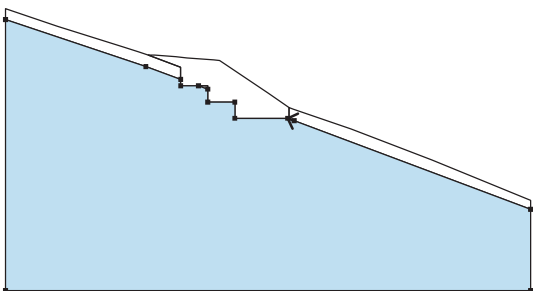
Input data (Stage of construction 3)

Embankment interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		26.41	26.82	26.85	26.84	27.54	26.85
		31.47	26.54	33.55	26.33	38.53	25.94
		39.59	25.84	40.65	25.09	48.53	19.79
		52.38	17.15				

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		32.38	24.60	26.41	26.82	ML Sandy Silt 
		24.60	27.43	21.80	28.33	
		9.56	32.16	0.00	35.39	
		0.00	33.39	25.94	24.69	
		32.38	22.35			
2		37.38	20.53	37.38	21.15	Para Lithic Weathered Granitics 
		35.68	21.15			
3		32.38	22.35	32.38	21.15	SM Silty Sand - Compacted Backfill 
		35.68	21.15	37.38	21.15	
		37.38	20.53	37.38	18.15	
		42.38	18.15	42.38	15.15	
		52.19	15.15	52.38	15.15	
		52.38	17.15	48.53	19.79	
		40.65	25.09	39.59	25.84	
		38.53	25.94	33.55	26.33	
		31.47	26.54	27.54	26.85	
		26.85	26.84	26.41	26.82	
		32.38	24.60			

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
4		53.35	14.73	97.06	-1.68	ML Sandy Silt 
		97.06	0.00	78.81	7.44	
		63.87	13.15	53.20	16.86	
		52.38	17.15	52.38	15.15	
		52.19	15.15			
5		53.35	14.73	52.19	15.15	Para Lithic Weathered Granitics 
		42.38	15.15	42.38	18.15	
		37.38	18.15	37.38	20.53	
		35.68	21.15	32.38	21.15	
		32.38	22.35	25.94	24.69	
		0.00	33.39	0.00	-16.68	
		97.06	-16.68	97.06	-1.68	

Reinforcements

No.	inforceme new	Point to the left		Point to the right		Length L [ft]	Strength R _t [lbf/ft]	Pull out resist.	End of reinf.
		x [ft]	z [ft]	x [ft]	z [ft]				
1	Yes	37.40	18.15	50.95	18.15	13.55	3500.0	C = 0.80	Fixed
2	Yes	32.47	21.15	46.50	21.15	14.03	3500.0	C = 0.80	Fixed
3	Yes	32.38	24.15	42.00	24.15	9.62	3500.0	C = 0.80	Fixed
4	Yes	45.40	19.15	49.40	19.15	4.00	1310.0	C = 0.80	Fixed
5	Yes	43.95	20.15	47.95	20.15	4.00	1310.0	C = 0.80	Fixed
6	Yes	41.00	22.15	45.00	22.15	4.00	1310.0	C = 0.80	Fixed
7	Yes	39.50	23.15	43.50	23.15	4.00	1310.0	C = 0.80	Fixed
8	Yes	36.50	25.15	40.50	25.15	4.00	1310.0	C = 0.80	Fixed

Surcharge

No.	Surcharge		Type	Type of action	Location z [ft]	Origin x [ft]	Length l [ft]	Width b [ft]	Slope α [°]	Magnitude		
	new	change								q, q ₁ , f, F	q ₂	unit
1	Yes		strip	permanent	on terrain	x = 28.00	l = 10.00		0.00	640.0		lbf/ft ²

Surcharges

No.	Name
1	Lane Load

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 3)

Analysis 1 (stage 3)

Circular slip surface

Slip surface parameters						
Center :	x =	50.04	[ft]	Angles :	α_1 =	-59.99 [°]
	z =	38.16	[ft]		α_2 =	14.84 [°]
Radius :	R =	23.02	[ft]			
The slip surface after optimization.						

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	39.51	25.83	52.28	17.17
2	49.80	18.92	40.58	25.13
3	40.58	25.12	39.58	25.84

The restrictions of points of circular slip surface

Reinforcement bearing capacity

Reinforcement	Bearing capacity [lbf/ft]
1	1107.2
2	1193.5
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0

Slope stability verification (Bishop)

Sum of active forces : $F_a = 8496.6$ lbf/ft

Sum of passive forces : $F_p = 18216.5$ lbf/ft

Sliding moment : $M_a = 195592.2$ lbfft/ft

Resisting moment : $M_p = 419343.1$ lbfft/ft

Factor of safety = 2.14 > 1.30

Slope stability ACCEPTABLE

Slope stability analysis

Input data

Project

Date : 4/5/2021

Settings

USA - Safety factor - Quarry Park _PWA

Stability analysis

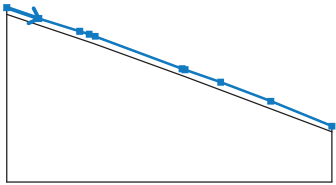
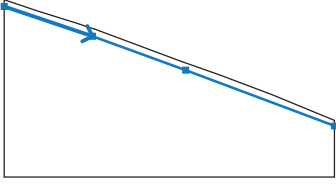
Earthquake analysis : Standard

Verification methodology : Safety factors (ASD)

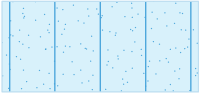
Safety factors			
Permanent design situation			
Safety factor :	SF _s =	1.30	[-]

Safety factors			
Seismic design situation			
Safety factor :	SF _s =	1.15	[-]

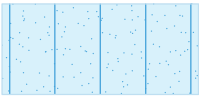
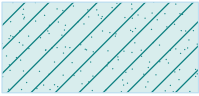
Interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		0.00	35.39	9.56	32.16	21.80	28.33
		24.60	27.43	26.41	26.82	52.38	17.15
		53.20	16.86	63.87	13.15	78.81	7.44
		97.06	0.00				
2		0.00	33.39	25.94	24.69	53.35	14.73
		97.06	-1.68				

Soil parameters - effective stress state

No.	Name	Pattern	Φ _{ef} [°]	C _{ef} [psf]	γ [pcf]
1	ML - Sandy Silt		32.00	100.0	110.5
2	SM Silty Sand - Compacted Backfill		32.00	0.0	110.4
3	Para Lithic Weathered Granitics		36.00	500.0	140.0

Soil parameters - uplift

No.	Name	Pattern	γ_{sat} [pcf]	γ_s [pcf]	n [-]
1	ML - Sandy Silt		125.6		
2	SM Silty Sand - Compacted Backfill		112.0		
3	Para Lithic Weathered Granitics		140.0		

Soil parameters

ML - Sandy Silt

Unit weight :
 γ = 110.5 pcf

Stress-state :
effective

Angle of internal friction :
 φ_{ef} = 32.00 °

Cohesion of soil :
 c_{ef} = 100.0 psf

Saturated unit weight :
 γ_{sat} = 125.6 pcf

SM Silty Sand - Compacted Backfill

Unit weight :
 γ = 110.4 pcf

Stress-state :
effective

Angle of internal friction :
 φ_{ef} = 32.00 °

Cohesion of soil :
 c_{ef} = 0.0 psf

Saturated unit weight :
 γ_{sat} = 112.0 pcf

Para Lithic Weathered Granitics

Unit weight :
 γ = 140.0 pcf

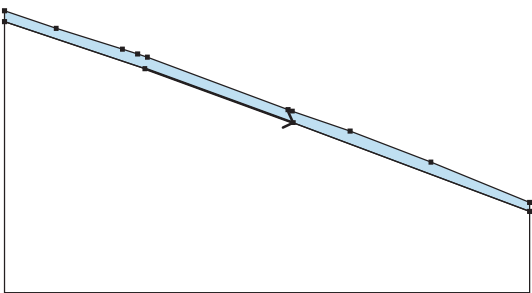
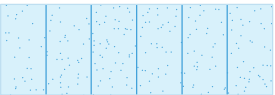
Stress-state :
effective

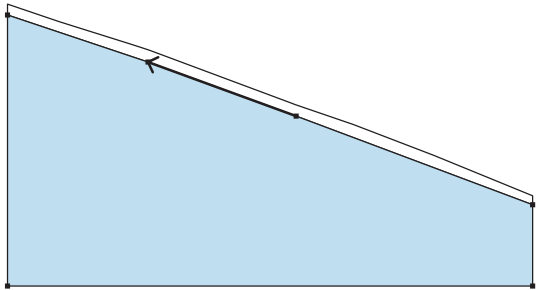
Angle of internal friction :
 φ_{ef} = 36.00 °

Cohesion of soil :
 c_{ef} = 500.0 psf

Saturated unit weight :
 γ_{sat} = 140.0 pcf

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		25.94	24.69	53.35	14.73	ML - Sandy Silt 
		97.06	-1.68	97.06	0.00	
		78.81	7.44	63.87	13.15	
		53.20	16.86	52.38	17.15	
		26.41	26.82	24.60	27.43	
		21.80	28.33	9.56	32.16	
		0.00	35.39	0.00	33.39	

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
2		53.35	14.73	25.94	24.69	Para Lithic Weathered Granitics 
		0.00	33.39	0.00	-16.68	
		97.06	-16.68	97.06	-1.68	

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 1)

Analysis 1 (stage 1)

Circular slip surface

Slip surface parameters					
Center :	x =	74.43 [ft]	Angles :	α_1 =	-54.00 [°]
	z =	88.77 [ft]		α_2 =	13.94 [°]
Radius :	R =	91.19 [ft]			
The slip surface after optimization.					

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	20.98	28.49	32.21	11.18
2	35.17	9.89	65.35	13.06
3	39.63	25.71	50.61	18.21

The restrictions of points of circular slip surface

Slope stability verification (Bishop)

Sum of active forces : $F_a = 47102.0$ lbf/ft

Sum of passive forces : $F_p = 161303.4$ lbf/ft

Sliding moment : $M_a = 4295229.9$ lbfft/ft

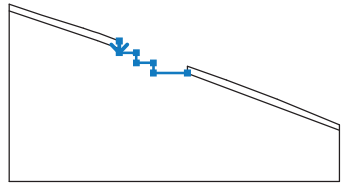
Resisting moment : $M_p = 14709252.7$ lbfft/ft

Factor of safety = 3.42 > 1.30

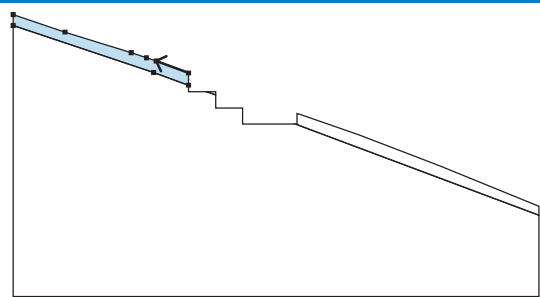
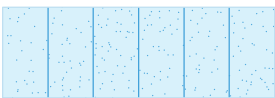
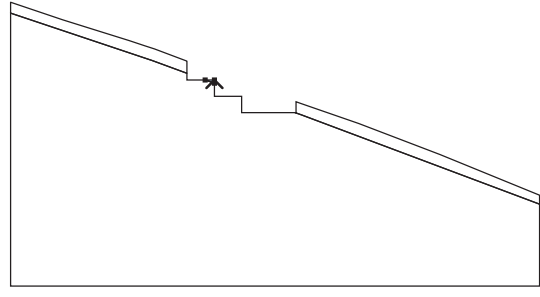
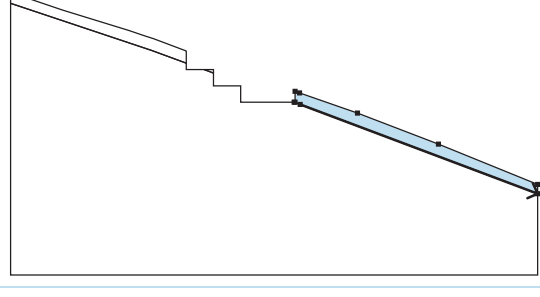
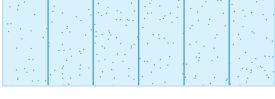
Slope stability ACCEPTABLE

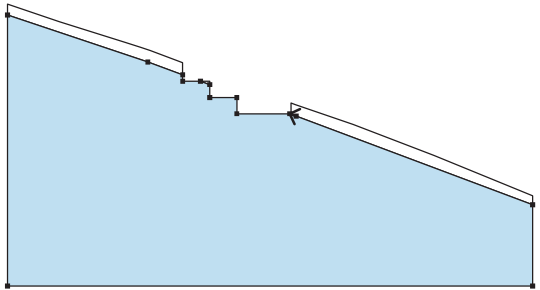
Input data (Stage of construction 2)

Earth cut

No.	Cut location	Coordinates of cut points [ft]					
		x	z	x	z	x	z
1		32.38	24.60	32.38	21.15	37.38	21.15
		37.38	18.15	42.38	18.15	42.38	15.15
		52.38	15.15				

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		32.38	24.60	26.41	26.82	ML - Sandy Silt 
		24.60	27.43	21.80	28.33	
		9.56	32.16	0.00	35.39	
		0.00	33.39	25.94	24.69	
		32.38	22.35			
2		37.38	20.53	37.38	21.15	Para Lithic Weathered Granitics 
		35.68	21.15			
3		53.35	14.73	97.06	-1.68	ML - Sandy Silt 
		97.06	0.00	78.81	7.44	
		63.87	13.15	53.20	16.86	
		52.38	17.15	52.38	15.15	
		52.19	15.15			

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
4		53.35	14.73	52.19	15.15	Para Lithic Weathered Granitics
		42.38	15.15	42.38	18.15	
		37.38	18.15	37.38	20.53	
		35.68	21.15	32.38	21.15	
		32.38	22.35	25.94	24.69	
		0.00	33.39	0.00	-16.68	
		97.06	-16.68	97.06	-1.68	

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 2)

Analysis 1 (stage 2)

Circular slip surface

Slip surface parameters							
Center :	x =	57.23	[ft]	Angles :	α_1 =	-59.49	[°]
	z =	41.22	[ft]		α_2 =	-52.72	[°]
Radius :	R =	31.23	[ft]				
The slip surface after optimization.							

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	20.98	28.49	32.21	11.18
2	35.17	9.89	65.35	13.06
3	39.63	25.71	50.61	18.21

The restrictions of points of circular slip surface

Slope stability verification (Bishop)

Sum of active forces : $F_a = 225.2$ lbf/ft

Sum of passive forces : $F_p = 491.3$ lbf/ft

Sliding moment : $M_a = 7032.2$ lbfft/ft

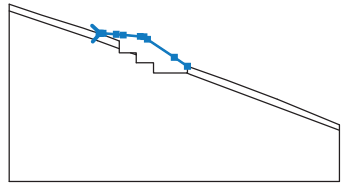
Resisting moment : $M_p = 15343.4$ lbfft/ft

Factor of safety = 2.18 > 1.30

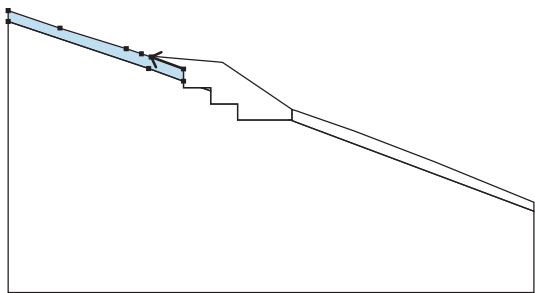
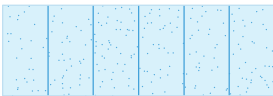
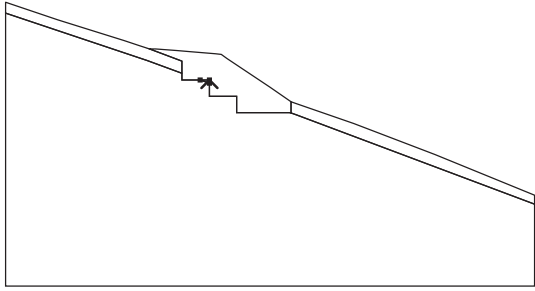
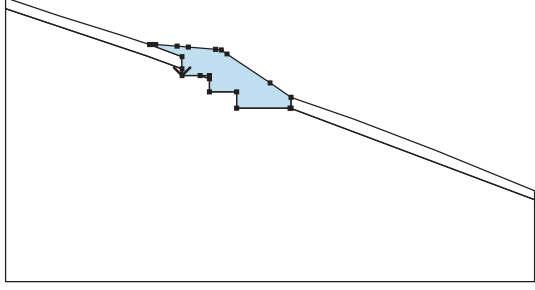
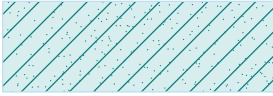
Slope stability ACCEPTABLE

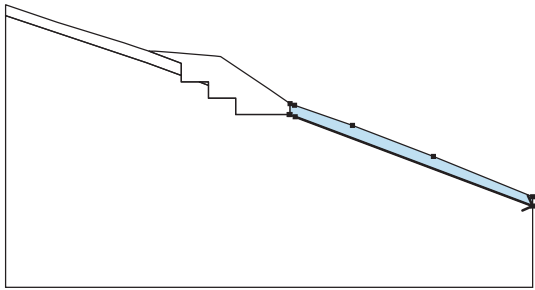
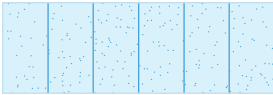
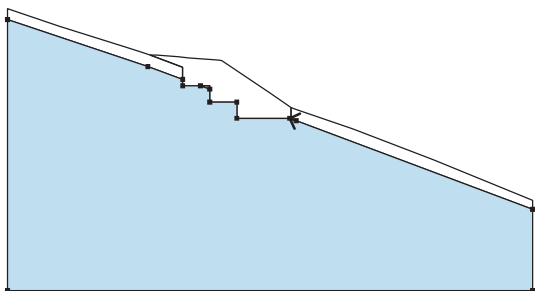
Input data (Stage of construction 3)

Embankment interface

No.	Interface location	Coordinates of interface points [ft]					
		x	z	x	z	x	z
1		26.41	26.82	26.85	26.84	27.54	26.85
		31.47	26.54	33.55	26.33	38.53	25.94
		39.59	25.84	40.65	25.09	48.53	19.79
		52.38	17.15				

Assigning and surfaces

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
1		32.38	24.60	26.41	26.82	ML - Sandy Silt 
		24.60	27.43	21.80	28.33	
		9.56	32.16	0.00	35.39	
		0.00	33.39	25.94	24.69	
		32.38	22.35			
2		37.38	20.53	37.38	21.15	Para Lithic Weathered Granitics 
		35.68	21.15			
3		32.38	22.35	32.38	21.15	SM Silty Sand - Compacted Backfill 
		35.68	21.15	37.38	21.15	
		37.38	20.53	37.38	18.15	
		42.38	18.15	42.38	15.15	
		52.19	15.15	52.38	15.15	
		52.38	17.15	48.53	19.79	
		40.65	25.09	39.59	25.84	
		38.53	25.94	33.55	26.33	
		31.47	26.54	27.54	26.85	
		26.85	26.84	26.41	26.82	
		32.38	24.60			

No.	Surface position	Coordinates of surface points [ft]				Assigned soil
		x	z	x	z	
4		53.35	14.73	97.06	-1.68	ML - Sandy Silt 
		97.06	0.00	78.81	7.44	
		63.87	13.15	53.20	16.86	
		52.38	17.15	52.38	15.15	
		52.19	15.15			
5		53.35	14.73	52.19	15.15	Para Lithic Weathered Granitics 
		42.38	15.15	42.38	18.15	
		37.38	18.15	37.38	20.53	
		35.68	21.15	32.38	21.15	
		32.38	22.35	25.94	24.69	
		0.00	33.39	0.00	-16.68	
		97.06	-16.68	97.06	-1.68	

Reinforcements

No.	inforceme new	Point to the left		Point to the right		Length L [ft]	Strength R _t [lbf/ft]	Pull out resist.	End of reinf.
		x [ft]	z [ft]	x [ft]	z [ft]				
1	Yes	37.40	18.15	50.95	18.15	13.55	3500.0	C = 0.80	Fixed
2	Yes	32.47	21.15	46.50	21.15	14.03	3500.0	C = 0.80	Fixed
3	Yes	32.38	24.15	42.00	24.15	9.62	3500.0	C = 0.80	Fixed
4	Yes	45.40	19.15	49.40	19.15	4.00	1310.0	C = 0.80	Fixed
5	Yes	43.95	20.15	47.95	20.15	4.00	1310.0	C = 0.80	Fixed
6	Yes	41.00	22.15	45.00	22.15	4.00	1310.0	C = 0.80	Fixed
7	Yes	39.50	23.15	43.50	23.15	4.00	1310.0	C = 0.80	Fixed
8	Yes	36.50	25.15	40.50	25.15	4.00	1310.0	C = 0.80	Fixed

Surcharge

No.	Surcharge		Type	Type of action	Location z [ft]	Origin x [ft]	Length l [ft]	Width b [ft]	Slope α [°]	Magnitude		
	new	change								q, q ₁ , f, F	q ₂	unit
1	Yes		strip	permanent	on terrain	x = 28.00	l = 10.00		0.00	640.0		lbf/ft ²

Surcharges

No.	Name
1	Lane Load

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Horizontal seismic coefficient : $K_h = 0.15$

Vertical seismic coefficient : $K_v = 0.00$

Settings of the stage of construction

Design situation : seismic

Results (Stage of construction 3)

Analysis 1 (stage 3)

Circular slip surface

Slip surface parameters						
Center :	x =	51.81	[ft]	Angles :	α_1 =	-52.44 [°]
	z =	45.00	[ft]		α_2 =	9.77 [°]
Radius :	R =	29.85	[ft]			
The slip surface after optimization.						

Segments restricting slip surface

No.	First point		Second point	
	x [ft]	z [ft]	x [ft]	z [ft]
1	39.51	25.83	52.28	17.17
2	49.80	18.92	40.58	25.13
3	40.58	25.12	39.58	25.84

The restrictions of points of circular slip surface

Reinforcement bearing capacity

Reinforcement Bearing capacity [lbf/ft]

1	1201.5
2	801.9
3	0.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0

Slope stability verification (Bishop)

Sum of active forces : $F_a = 11521.8$ lbf/ft

Sum of passive forces : $F_p = 19014.1$ lbf/ft

Sliding moment : $M_a = 343926.9$ lbfft/ft

Resisting moment : $M_p = 567571.7$ lbfft/ft

Factor of safety = 1.65 > 1.15

Slope stability ACCEPTABLE

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PROPOSAL SECTION

Contractor's Check-Off List:

1. Complete **Bidder's Information Sheet** 1
2. Complete **Bid Proposal Sheet** 4
3. Complete **Acknowledgement of Site Visit Form** 6
4. Check off for **Bidder's Security** (cash, cashier's check, certified check,
or bidder's bond) 7
5. Complete **Principal(s) and Title(s) Sheet** 9
6. Complete **State Contractor's License No. and
Department of Industrial Relations Registration No. Sheet** 10
7. Complete **Subcontractor List Sheets** 11
8. Complete **Certification of Intent Sheet** 16
9. **Equal Employment Opportunity Sheets:**
 - i. Complete **Questionnaire for Bidder Sheet** 17
 - ii. Complete **Contractor Report Form** 20
10. Complete **Equal Benefits Compliance Declaration Form** 26
11. Complete **Employee Jury Service Compliance Declaration Form** 30
12. Complete **Non-Collusion Declaration Form** 31

**PROPOSAL TO THE COUNTY OF SAN MATEO
STATE OF CALIFORNIA**

**QUARRY PARK
FIRE ROAD EXTENSION PROJECT**

**TOTAL PROJECT APPROXIMATELY 2,250 FEET IN LENGTH
WITH APPURTENANT WORK THERETO
IN SAN MATEO COUNTY**

**COUNTY PROJECT NO. P32R1
PROJECT FILE NO. E5053**

NAME OF BIDDER: _____
STREET ADDRESS: _____
MAILING ADDRESS: _____
TELEPHONE NUMBER: (_____) _____
FAX NUMBER: (_____) _____
EMAIL FOR OFFICIAL NOTIFICATIONS: _____

The work for which this proposal is submitted is for construction in accordance with the Special Provisions and Agreement annexed hereto, the project plans described below, and the Department of Transportation Standard Plans, Revised Standard Plans, Standard Specifications, Revised Standard Specifications, 2018 edition, the Labor Surcharge and Equipment Rental Rates and the General Prevailing Wage Rates in effect on the date the work is accomplished.

It is the Contractor's obligation and responsibility to ensure that all work associated with this Project complies with all current Orders of the Health Officer of the County of San Mateo related to the Novel Coronavirus Disease 2019 (COVID-19). The County of San Mateo assumes no responsibility for work performed by Contractor that is not in compliance with all current Orders. The Contractor is advised to review the Orders of the Health Officer of the County of San Mateo, which can be found at the following link:

<https://www.smchealth.org/post/health-officer-statements-and-orders>

LOCATION OF WORK

The work will be done in accordance with the Special Provisions and Agreement annexed hereto, and in accordance with the Standard Specifications of the County of San Mateo.

The location and details of said work are further shown on the Plans titled **“Quarry Park Fire Road Extension Project”** File E5053 in the Department of Public Works.

**TO THE BOARD OF SUPERVISORS
COUNTY OF SAN MATEO
STATE OF CALIFORNIA**

The undersigned, as Bidder, declares that the only persons or parties interested in this Proposal as principals are those named herein; that this Proposal is made without collusion with any other person, firm or corporation; that they have carefully examined the location of the proposed work, the annexed proposed form of Agreement, and the Plans and Specifications therein referred to; that they propose, and agrees if this Proposal is accepted, that they will contract with the County of San Mateo, in the form of the copy of the Agreement annexed hereto, to provide all necessary machinery, tools, apparatus and other means of construction and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed and according to the requirements of the Engineer as therein set forth, and that they will accept in full payment therefor the following unit prices, to wit:

PROPOSAL TO THE COUNTY OF SAN MATEO

**QUARRY PARK
FIRE ROAD EXTENSION PROJECT**

**TOTAL PROJECT LENGTH APPROXIMATELY 2,250 FEET IN LENGTH
WITH APPURTENANT WORK THERETO
IN SAN MATEO COUNTY**

Item No.	Section No.	Estimated Quantity	Unit of Measure	Item Description	Item Price (In Figures)	Total (In Figures)
1	11	1	LS	Mobilization	\$	\$
2	12	1	LS	Maintaining Traffic	\$	\$
3	13	1	LS	Water Pollution Control	\$	\$
4	14	1	LS	Construction Waste Management	\$	\$
5	17	1	LS	Clearing and Grubbing	\$	\$
6	17-2	3	EA	Remove Trees and Tree Stumps from 6" to 11.9" in Diameter	\$	\$
7	17-2	116	EA	Remove Trees and Tree Stumps from 12" to 17.9" in Diameter	\$	\$
8	17-2	41	EA	Remove Trees and Tree Stumps from 18" to 23.9" in Diameter	\$	\$
9	17-2	53	EA	Remove Trees and Tree Stumps from 24" to 35.9" in Diameter	\$	\$
10	17-2	33	EA	Remove Trees and Tree Stumps 36" or Greater in Diameter	\$	\$
11	18	1	LS	Dust Palliatives	\$	\$
12	19-5.1 (F)	165	CY	Reinforced Steepened Slopes	\$	\$
13	19-7.1 (F)	3,100	CY	Earthwork Excavation	\$	\$

14	19-7.2	1,000	CY	Earthwork Native Backfill	\$	\$
15	19-7.3	2,000	CY	Earthwork Imported Backfill	\$	\$
16	19-7.4	2,100	CY	Off-Haul Dirt	\$	\$
17	21-1	3,000	LF	Temporary Silt Fence	\$	\$
18	21-2	1	LS	Temporary Erosion Control	\$	\$
19	26-1	1,200	TON	Class 2 Aggregate Base	\$	\$
20	80-2	120	LF	Temporary Construction Fencing	\$	\$
21	80-4	1	LS	Access Gate (Coronado Ave)	\$	\$
22	96-1	45,200	SF	Non-Woven Geotextile	\$	\$
23	96-1	9,150	SF	Primary Geogrid	\$	\$
24	96-1	3,750	SF	Secondary Geogrid	\$	\$
25	100	1	LS	Construction Staking and Layout	\$	\$
TOTAL						\$

Notes: (F) Final Pay Quantities - See Section 9-1.02C, "Final Pay Item Quantities," of the Standard Specifications.

ACKNOWLEDGEMENT OF SITE VISIT

I hereby acknowledge that a representative or representatives from our firm has/have visited the site as required for acceptance of bid for the project **“Quarry Park Fire Road Extension Project”**. Proposal packages from contractors who do not return this form, fully executed, will not be accepted.

 Name of Firm

 Name(s) of Visiting Representative(s)
(Please Print)

 Job Title

 Date of Visit

Acknowledged by,

 Name (Please Print)

 Job Title

 Signature

 Date Signed

Bids are required for the entire work. The amount of the bid for comparison purposes will be the total of all items. The total of unit basis items will be determined by extension of the item price bid on the basis of the estimated quantity set forth for the item.

The Bidder shall set forth for each item of work, in clearly legible figures, an item price and a total for the item in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the “Total” column shall be the extension of the item price bid on the basis of the estimated quantity for the item.

In case of discrepancy between the item price and the total set forth for the item, the item price shall prevail, provided however, if the amount set forth as an item price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or in the case of unit basis items, is the same amount as the entry in the “Total” column, then the amount set

forth in the "Total" column for the item shall prevail in accordance with the following:

1. As to lump sum items, the amount set forth in the "Total" column shall be the item price.
2. As to unit basis items, the amount set forth in the "Total" column shall be divided by the estimated quantity for the item and the price thus obtained shall be the item price.

After acceptance of this Proposal and award of the Contract, if the undersigned should fail to contract as aforesaid or should fail to give the "Performance" Surety Bond in the sum of one hundred percent (100%) of the Contract bid, the "Payment" Surety Bond in the sum of one hundred percent (100%) of the Contract bid, the Certificate of Insurance covering public liability and property damage in the amounts specified in the Agreement portion of these Contract documents, and the Certificate of Insurance covering Workmen's Compensation Insurance, within **TEN (10) WORKING DAYS** after award of the Contract, the County may, at its option, determine that the bidder has abandoned the Contract, thereupon this Proposal and the acceptance thereof shall be null and void, and the forfeiture of such security accompanying this Proposal shall operate and the same shall become the property of the County of San Mateo, State of California.

Accompanying this Proposal is:

- ☐ Cash
- ☐ A Cashier's Check (made payable to the "County of San Mateo")
- ☐ A Certified Check (made payable to the "County of San Mateo")
- ☐ A Bidder's Bond executed by an admitted surety insurer (made payable to the "County of San Mateo") in the amount equal to at least ten percent (10%) of the total bid.

Bidders must, upon request, furnish evidence of their financial responsibility and ability to perform the work herein described.

PROVISIONS OF LABOR CODE

The Contractor shall be required to comply with all the payroll and apprenticeship provisions of Chapter 1, Division 2, Section 1776 and 1777.5 of the California Labor Code.

**BIDDER'S FINANCIAL RESPONSIBILITY
TECHNICAL ABILITY & EXPERIENCE**

THE LOW BIDDER MUST, UPON REQUEST, FURNISH EVIDENCE OF FINANCIAL RESPONSIBILITY AND ABILITY TO PERFORM THE WORK INCLUDED IN THIS PROPOSED CONTRACT. SUCH EVIDENCE MAY INCLUDE, BUT NOT BE LIMITED TO, A FINANCIAL STATEMENT AS OF THE DATE OF BID; A STATEMENT, WITH REFERENCES, OF COMPLETED WORK OF A SIMILAR CHARACTER TO THAT INCLUDED HEREIN; A STATEMENT OF THE LAST TWO PROJECTS PERFORMED REGARDLESS OF THEIR CHARACTER; AND SUCH OTHER INFORMATION WHICH WILL ENABLE THE DIRECTOR OF PUBLIC WORKS TO JUDGE THE BIDDER'S RESPONSIBILITY, EXPERIENCE, SKILL AND BUSINESS STANDING.

The names of all persons interested in the foregoing Proposal as principals are as follows:

(Name of Corporation, Co-partnership, Individual)	
(Name and Title)	(Name and Title)
(Name and Title)	(Name and Title)
(Authorized Signature of Bidder)	(Authorized Signature of Bidder)

***(NOTICE:** If the Bidder is a corporation, the legal name of the corporation and the names of the president, secretary, treasurer, and manager thereof shall be set forth together with the signature of the officer or officers authorized to sign Contracts in behalf of the corporation; if the Bidder is a co-partnership, the true name of the firm and the names of the principal partners shall be set forth together with the signature of the partner or partners authorized to sign Contracts in behalf of the co-partnership; and, if the Bidder is an individual, their full name shall be set forth and their signature shall be as the authorized officer. If the signature is by an agent, other than by an officer of a corporation or a member of a partnership, a Power of Attorney must be on file with the County prior to opening of bids or submitted with the bid; otherwise, the bid will be disregarded as irregular and unauthorized.)

Corporations must, upon request, furnish certification attesting to corporate existence and authority of officers to sign contracts and other documents.

The undersigned is licensed by the Contractor's State License Board of the State of California to perform the work hereinafter described, which State Contractor's License No. is:

State Contractor's License No.: _____
(Expires: _____**)**

Pursuant to State Senate Bill SB 854 (Stat. 2014, chapter 28), effective January 1, 2015, No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

Department of Industrial Relations Registration No.: _____
(Expires: _____**)**

LICENSEE: _____
(Please print)

ADDRESS: _____

CITY AND STATE: _____

Date of Proposal

Signature

SUBCONTRACTORS

DESIGNATION OF SUBCONTRACTORS: Each Bidder shall set forth below the name, business address and telephone number of each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work or improvement to be performed under these Contract Documents. The Bidder shall also list the proposal item number(s) to be done, in whole or in part, by each subcontractor and the total amount of each subcontractor's work in dollars and as a percentage of the total bid amount. The Bidder's attention is directed to Section 5-1.13, "Subcontracting", of the Standard Specifications.

SUBCONTRACTORS

1. Name: _____ Item No(s). _____
 Address: _____ Dollar Amount: \$ _____
 Tel: (____) _____ Percent of Total Bid: _____ %
 License No.: _____
 Department of Industrial Relations Registration No.: _____

2. Name: _____ Item No(s). _____
 Address: _____ Dollar Amount: \$ _____
 Tel: (____) _____ Percent of Total Bid: _____ %
 License No.: _____
 Department of Industrial Relations Registration No.: _____

3. Name: _____ Item No(s). _____
 Address: _____ Dollar Amount: \$ _____
 Tel: (____) _____ Percent of Total Bid: _____ %
 License No.: _____
 Department of Industrial Relations Registration No.: _____

4. Name: _____ Item No(s). _____
 Address: _____ Dollar Amount: \$ _____
 Tel: (____) _____ Percent of Total Bid: _____ %
 License No.: _____
 Department of Industrial Relations Registration No.: _____

SUBCONTRACTORS

(Continued)

5. Name: _____ Item No(s). _____
Address: _____ Dollar Amount: \$ _____
Tel: (_____) _____ Percent of Total Bid: _____ %
License No.: _____
Department of Industrial Relations Registration No.: _____
6. Name: _____ Item No(s). _____
Address: _____ Dollar Amount: \$ _____
Tel: (_____) _____ Percent of Total Bid: _____ %
License No.: _____
Department of Industrial Relations Registration No.: _____
7. Name: _____ Item No(s). _____
Address: _____ Dollar Amount: \$ _____
Tel: (_____) _____ Percent of Total Bid: _____ %
License No.: _____
Department of Industrial Relations Registration No.: _____
8. Name: _____ Item No(s). _____
Address: _____ Dollar Amount: \$ _____
Tel: (_____) _____ Percent of Total Bid: _____ %
License No.: _____
Department of Industrial Relations Registration No.: _____
9. Name: _____ Item No(s). _____
Address: _____ Dollar Amount: \$ _____
Tel: (_____) _____ Percent of Total Bid: _____ %
License No.: _____
Department of Industrial Relations Registration No.: _____
10. Name: _____ Item No(s). _____
Address: _____ Dollar Amount: \$ _____
Tel: (_____) _____ Percent of Total Bid: _____ %
License No.: _____
Department of Industrial Relations Registration No.: _____

**SAN MATEO COUNTY
EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**

CONTRACT COMPLIANCE PROGRAM

The purpose of the **Contract Compliance Program** is two-fold:

- 1. To prohibit and eliminate employment discrimination; and**
- 2. To further the opportunities for minority persons to be gainfully employed in County construction contracts.**

The program requires equal employment opportunity efforts by Contractors to employ minority workers on the County's construction projects. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, national origin, age, disability, ancestry, sexual orientation, or sex. The Contractor will take equal employment opportunity actions to ensure that applicants are employed, and that employees are treated, during employment, without regard to their race, religion, color, national origin, age, disability, ancestry, sexual orientation, or sex; with the goal that the ethnic composition of the Contractor's work force will approximate the ethnic composition of the population of San Mateo County. Such action shall include, but not be limited to, employment, upgrading, demotion or transfer; recruitment; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship training and on-the-job training.

The **San Mateo County Equal Employment Opportunity Program** requires the Contractor to make two certifications. The first assures compliance with laws prohibiting discrimination. The second concerns the intent to develop and implement an equal employment opportunity program.

The Contractor is further required to:

1. Post “**EQUAL EMPLOYMENT OPPORTUNITY NOTICE(S)**”, including the statement: “**AN EQUAL OPPORTUNITY EMPLOYER**”, in all announcements of job openings;
2. Permit access by County and State compliance officials to his employment records; and
3. File monthly reports on prescribed forms:
 - A. **Monthly Manpower-Utilization Report**

- B. **Weekly payroll Form WH-347** (which form can be found on the U.S. Department of Labor, Wage & Hour Division website, which website is addressed as <http://www.dir.ca.gov/dlsr/PWD/Northern.html>)
- C. **Statement of Compliance** (which form is on the back of payroll form WH-347 or separate form WH-348, as requested by the County's contract compliance representative)
- D. Assign an equal opportunity officer full time or as additional duty.

Union employees are to be recruited according to applicable labor agreements. If non-union employees are recruited for the project, the Contractor shall make use of minority-oriented news media and referral sources. The Contractor shall inform all subcontractors hired by them on the project(s) of their obligations under this program; and Contractor **will be responsible for the compliance with these regulations by his subcontractors.**

For failure to comply with the non-discrimination section, the Contractor is subject to a penalty of **two percent (2%) of the total amount payable for each working day during which he was found to be in non-compliance, or the cancellation of the contract in part or whole.**

The County's Contract Compliance Program is monitored by the San Mateo County Department of Public Works, 555 County Center, 5th Floor, Redwood City, California, 94063-1665, telephone (650) 363-4100.

Information and necessary forms are available at the **Department of Public Works**. In addition to evaluating Contractors' and subcontractors' equal opportunity efforts, the **Department of Public Works** will assist Contractors and subcontractors toward meeting these obligations.

**CERTIFICATION OF COMPLIANCE
WITH LAWS PROHIBITING DISCRIMINATION**

We are in compliance with the **EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENT OF THE EXECUTIVE ORDER 11246, TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE CALIFORNIA FAIR EMPLOYMENT AND HOUSING ACT**, any other Federal or State laws relating to equal employment opportunity and the provisions of **Title 2, Chapter 2.50 of the San Mateo County Ordinance Code** and the Board established guidelines implementing them.

We will not discriminate against any employee or applicant for employment based on **race, religion, color, national origin, age, disability, ancestry, sexual orientation, or sex**. This pertains to the areas of **recruitment, hiring, training, upgrading, transfer, compensation and termination**.

CERTIFICATION OF INTENT

We will maintain or develop and implement, during the course of the work concerned, an **Equal Employment Opportunity Program** of hiring and employment conducted without regard to **race, religion, color, national origin, age, disability, ancestry, sexual orientation, or sex** of the applicants. With this Certification we shall submit any and all information that may be required by the County in connection with this program.

We certify that we have read and understood the County of San Mateo's **GENERAL EQUAL EMPLOYMENT OPPORTUNITY STATEMENT SECTION III-A**, which is included in the proposal section of the Specifications.

As a private Contractor, working under contracts with the County of San Mateo, we understand that these policies are the requirements of said County employment and we will, in our recruitment, training and staffing, work to implement this Section as applicable.

Signature and Title of Authorized Representative or Bidder

Date

**SAN MATEO COUNTY
EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**

QUESTIONNAIRE FOR BIDDER

THIS REPORT MUST BE COMPLETED IN FULL BY AN OFFICIAL OF THE COMPANY AND SUBMITTED WITH THE BID.

PROJECT: QUARRY PARK FIRE ROAD EXTENSION PROJECT

NAME OF FIRM: _____

ADDRESS: _____

CITY/ZIP: _____

TELEPHONE: (____)_____ DATE OF SUBMITTAL: _____

OFFICIAL FOR COMPANY: _____

1. _____ Yes _____ No Have you read and are you acquainted with the **Equal Employment Opportunity Requirement** of the Executive Order 11246, Title VII of the **Civil Rights Act of 1964**, the California Fair Employment Practices Act and **Title 2, Chapter 2.50** of the San Mateo County Ordinance Code?

2. _____ Yes _____ No Does your employment advertising state that you are an Equal Opportunity Employer?

3. _____ Yes _____ No Have all recruitment sources been advised that all qualified applicants will be considered for employment without regard to race, religion, color, national origin, age, disability, ancestry, sexual orientation, or sex?

4. _____ Yes _____ No Were any employees hired by means other than the union hiring hall in the past year?

How many? _____

What positions? _____

5. If non-union personnel are employed by the company, or if a position cannot be filled by the union hall, specify the advertisement and recruitment sources that are used. (For example, State HRD, newspapers, high schools, vocational schools, referral agencies/organizations, community groups.)

6. How many apprentices do you employ? _____

How many of these are minorities? _____

7. _____ Yes _____ No Do you have a program for upgrading and counseling present employees?

Describe: _____

8. _____ Yes _____ No Do you have a collective bargaining agreement with a labor union or other organization?

Please list these groups _____

9. What percentage of your work force is covered by union agreement? _____

10. _____ Yes _____ No Have you advised the labor union and/or worker organizations of your company's responsibility under the Equal Employment Opportunity Program?

11. _____ Yes _____ No Does your company's collective bargaining agreement include a provision for non-discrimination in employment?

12. Describe any previous experience with Equal Employment Opportunity Programs:

If your company has a written Equal Employment Opportunity Program now in effect, please attach a copy.

**COUNTY OF SAN MATEO
EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**

**CONTRACTOR REPORT FORM
(To Be Submitted with Original Bid)**

PROJECT: QUARRY PARK FIRE ROAD EXTENSION PROJECT DATE: _____

NAME OF BIDDER: _____

NAME OF PERSON SUBMITTING REPORT: _____

RACIAL/ETHNIC MAKEUP OF THE COMPANY

Be sure to include the total of all employees in each classification in the first column. Report the number of employees enrolled in formal on-the-job (apprenticeship) training programs in parenthesis () for each classification.

Minority Employees										
Job Classification	Total (All Employee s)	Ethnicity								
		American- Indian or Native Alaskan	Asian	Native Hawaiian or Pacific Islander	Black American or African American	Caucasian	Filipino	Hispani c or Latino (1)	Other (2)	Unidentifie d (3)
Total (s)										

Notes: (1) "Hispanic" includes all persons of Mexican, South and Central American, Puerto Rican, Cuban or Spanish ancestry.

(2) "Other" includes all others whose origin consists of two or more races other than Hispanic or Latino.

(3) Use this category for employees who have chosen not to identify any race or ethnicity, including "Other".

**SECTION III-A. GENERAL EQUAL EMPLOYMENT
OPPORTUNITY POLICY STATEMENT**

The Board of Supervisors of the County of San Mateo takes this opportunity to express its commitment to one of its highest priorities in the area of employment. This priority is assuring that all employees and applicants for employment are provided equal access to, and enjoyment of employment opportunities, and that they are not subjected to discrimination because of age (over 40), ancestry, creed, color, disability, marital status, medical condition, national origin, political or religious affiliation, race, sex, or sexual orientation.

The Board of Supervisors is committed to ensuring compliance with all applicable non-discrimination laws and regulations in order to attain a work environment that is free of discrimination so all County employees can provide quality public service.

The County will take positive measures toward eliminating artificial barriers to employment and achieving equal opportunity through its continued implementation and coordination of the County's Equal Employment Opportunity Program and through its review and evaluation of hiring and promotional policies and procedures.

It is the belief of the Board of Supervisors that equal employment opportunity is consistent with the basic merit system principle that all persons be afforded equal access to positions in public service based on their ability to do the job. Employment decisions shall be made on the basis of merit and in conformity with the principles of equal opportunity action.

Through adoption of the Equal Employment Opportunity Program, the Board of Supervisors commits the County, the operating departments, the Equal Employment Opportunity Coordinator, and all employees to a results-oriented Equal Employment Opportunity Program aimed at attaining a balanced workforce at all levels of County employment and achieving equal opportunity in County service.

EQUAL BENEFITS COMPLIANCE ORDINANCE NO. 04026**CHAPTER 2.84**ORDINANCE NO 04026

AN ORDINANCE OF THE SAN MATEO COUNTY ORDINANCE CODE (TITLE 2, ADMINISTRATION), REQUIRING SPECIFIED COUNTY CONTRACTORS TO PROVIDE FOR NON-DISCRIMINATION BY COUNTY CONTRACTORS IN THE PROVISION OF EMPLOYEE BENEFITS

WHEREAS, employee benefits routinely comprise a significant proportion of total employee compensation; and

WHEREAS, discrimination in the provision of employee benefits between employees with domestic partners and employees with spouses results in unequal pay for equal work; and

WHEREAS, County of San Mateo law prohibits discrimination based on marital status and/or sexual orientation; and

WHEREAS, it is the County's intent, through the contracting practices outlined herein, to equalize the total compensation between similarly situated employees with spouses and employees with domestic partners;

Section 1. The Board of Supervisors of the County of San Mateo, State of California, **ORDAINS** as follows:

Chapter 2.84 CONTRACTS – EQUAL BENEFITS**2.84.010 Definitions.**

For the purposes of this chapter,

- A. “Contract” means a legal agreement between the County and a contractor for public works, consulting, or other services, or for purchase of supplies, material or equipment for which the consideration is in excess of \$5,000.
- B. “Contractor” means a party who enters into a contract with the County.
- C. “Contract Awarding Authority” means the Board of Supervisors or the individual authorized by the Board of Supervisors to enter into contracts on behalf of the County.
- D. “Domestic Partner” means any person who is registered as a domestic partner with the Secretary of State, State of California registry or the registry of the state in which the employee is a resident.

- E. "Employee Benefits" means the provision of any benefit other than pension and retirement benefits provided to spouses of employees or provided to an employee on account of the employee's having a spouse, including but not limited to bereavement leave; disability, life, and other types of insurance; family medical leave; health benefits; membership or membership discounts; moving expenses; vacation; travel benefits; and any other benefits given to employees, provided that it does not include benefits to the extent that the application of the requirements of this chapter to such benefits may be preempted by federal or state law.
(Ord. 4324, 08/15/06)

2.84.020 Discrimination in the provision of benefits prohibited.

(a) No contractor on a County contract shall discriminate in the provision of employee benefits between an employee with a domestic partner and an employee with a spouse, subject to the following conditions:

1. In the event that the contractor's actual cost of providing a particular benefit for the domestic partner of an employee exceeds that of providing it for the spouse of an employee, or the contractor's actual cost of providing a particular benefit to the spouse of an employee exceeds that of providing it for the domestic partner of an employee, the contractor shall not be deemed to discriminate in the provision of employee benefits if the contractor conditions providing such benefit upon the employee's agreement to pay the excess costs.
2. The contractor shall not be deemed to discriminate in the provision of employee benefits if, despite taking reasonable measures to do so, the contractor is unable to extend a particular employee benefit to domestic partners, so long as the contractor provides the employee with a cash payment equal to the contractor's cost of providing the benefit to an employee's spouse.

(b) The Board of Supervisors may waive the requirements of this chapter when it determines that it is in the best interests of the County. The County Executive may waive the requirements of this chapter for contracts not needing the approval of the Board of Supervisors where waiver would be in the best interests of the County for such reasons as follows:

1. Award of a contract or amendment is necessary to respond to an emergency;
2. The contractor is a sole source;
3. No compliant contractors are capable of providing goods or services that respond to the County's requirements;
4. The requirements are inconsistent with a grant, subvention or agreement with a public agency;

5. The County is purchasing through a cooperative or joint purchasing agreement;

(c) Contractors should submit requests for waivers of the terms of this chapter to the Contract Awarding Authority for that contract, or in the case of Contracts approved by the Board, the County Executive.

(d) The Contract Awarding Authority, or in the case of contracts approved by the Board, the County Executive, may reject an entity's bid or proposals, or terminate a contract, if the Contract Awarding Authority determines that the entity was set up, or is being used, for the purpose of evading the intent of this chapter.

(e) No Contract Awarding Authority shall execute a contract with a contractor unless such contractor has agreed that the contractor will not discriminate in the provision of employee benefits as provided for in this chapter. (Ord. 4324, 08/15/06)

2.84.030 Application of Chapter.

The requirements of this chapter shall only apply to those portions of a contractor's operations that occur (i) within the County; (ii) on real property outside of the County if the property is owned by the County or if the County has a right to occupy the property, and if the contractor's presence at that location is connected to a Contract with the County; and (iii) elsewhere in the United States where work related to a County Contract is being performed. The requirements of this Chapter shall not apply to subcontracts or subcontractors of any contract or contractor. (Ord. 4324, 08/15/06)

2.84.040 Powers and duties of the County Executive.

The County Executive's office shall have the authority to:

(a) Adopt rules and regulations, in accordance with this chapter and the Ordinance Code of the County of San Mateo, establishing standards and procedures for effectively carrying out this chapter.

(b) Receive notification from employees of contractors regarding violations of this chapter.

(c) Determine and recommend to the Board of Supervisors for final decision the imposition of appropriate sanctions for violation of this chapter by contractors including, but not limited to:

1. Disqualification of the contractor from bidding on or being awarded a County contract for a period of up to 5 years; and
2. Contractual remedies, including, but not limited to termination of contract.
3. Liquidated damages in the amount of \$2,500.

- (d) Examine contractors' benefit programs covered by this chapter;
- (e) Impose other appropriate contractual and civil remedies and sanctions for violations of this chapter;
- (f) Allow for remedial action after a finding of non-compliance, as specified by rule;
- (g) Perform such other duties as may be required or which are necessary to implement the purposes of this chapter. (Ord. 4324, 08/15/06)

2.84.050 Date of Application.

The provisions of this chapter shall apply to any contract awarded or amended on or after July 01, 2001, provided that if the contractor is then signatory to a collective bargaining agreement, this chapter shall only apply to any contract with that contractor which is awarded or amended after the effective date of the next collective bargaining agreement. (Ord. 4324, 08/15/06)

Section 2. Severability – The provisions of this ordinance are declared to be separate and severable. If a court of competent jurisdiction, all appeals having been exhausted or all appeal periods having run, finds any provision of this ordinance to be invalid or unenforceable as to any person or circumstance, such offending provision shall, if feasible, be deemed to be modified to be within the limits of enforceability or validity. However, if the offending provision cannot be so modified, it shall be null and void with respect to the particular person or circumstance, and all other provisions of this ordinance in all other respects, and the offending provision with respect to all other persons and all other circumstances, shall remain valid and enforceable.

COUNTY OF SAN MATEO
Equal Benefits Compliance Declaration Form
 (To Be Submitted with Proposal)

I Vendor Identification

Name of Contractor: _____

Contact Person: _____

Address: _____

Phone Number: _____ Fax Number: _____

II Employees

Does the Contractor have any employees? _____ Yes _____ No

Does the Contractor provide benefits to spouses of employees? _____ Yes _____
 _____ No

*If the answer to one or both of the above is no, please skip to Section IV. *

III Equal Benefits Compliance (Check One)☐ Yes, the Contractor complies by offering equal benefits, as defined by Chapter 2.84, to its employees with spouses and its employees with domestic partners.☐ Yes, the Contractor complies by offering a cash equivalent payment to eligible employees in lieu of equal benefits.☐ No, the Contractor does not comply.☐ (NOTE: **DO NOT CHECK THIS BOX** unless the said agreement was executed/renewed on or before July 1, 2001. If checked, a copy of the collective bargaining agreement shall be submitted with Proposal.)The Contractor is under a collective bargaining agreement which began **on or before July 1, 2001** and expires on _____ (date). (Section 2.84.050)**IV Declaration**

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

Executed this _____ day of _____, 20__ at _____, _____.
 (City) (State)_____
 Signature_____
 Name (Please Print)_____
 Title_____
 Contractor Tax Identification Number

**CONTRACTOR EMPLOYEE JURY SERVICE ORDINANCE NO. 04269
CHAPTER 2.85**

ORDINANCE NO 04269

AN ORDINANCE OF THE SAN MATEO COUNTY ORDINANCE CODE (TITLE 2,
ADMINISTRATION), REQUIRING SPECIFIED COUNTY CONTRACTORS
TO PROVIDE PAID JURY SERVICE TO FULL-TIME EMPLOYEES

The Board of Supervisors of the County of San Mateo, State of California,
ORDAINS as follows:

Chapter 2.85 CONTRACTOR EMPLOYEE JURY SERVICE

2.85.010 Definitions

For the purposes of this chapter,

- (a) "Contract" means a legal agreement between the County and a contractor for public works, consulting, or other services, or for purchase of supplies, material or equipment.
- (b) "Contractor" means a party who enters into a contract with the County for which the contractor receives consideration of \$100,000 or more.
- (c) "Contract Authority" means the Board of Supervisors or the head of the department or agency presenting the proposed contract to the Board of Supervisors.
- (d) "Employee " means any California resident who is a full-time employee of a contractor under the laws of California.
- (e) "Full time " means 40 hours or more worked per week, or a lesser number of hours if (1) the lesser number is a recognized industry standard as determined by the County Executive, or (2) the contractor has a long standing practice that defines the lesser number of hours as full time. (Ord. 4324, 08/15/06)

2.85.020 Contractor jury service policy

- (a) A contractor shall have and adhere to a written policy that provides that its employees shall receive from the contractor, on an annual basis, no less than five days of regular pay for actual jury service in San Mateo County. The policy may provide that employees deposit any fees received for such jury service with the contractor or that the contractor deduct from the employees' regular pay the fees received for jury service.
- (b) At the time of seeking a contract, a contractor shall certify to the County that it has and adheres to a policy consistent with this chapter or will have and adhere to such a policy prior to award of the contract.

- (c) The Board of Supervisors may waive the requirements of this chapter when it determines that it is in the best interests of the County for such reasons as follows:
 - (1) Award of a contract or amendment is necessary to respond to an emergency;
 - (2) The contractor is a sole source;
 - (3) No compliant contractors are capable of providing goods or services that respond to the County's requirements;
 - (4) The requirements are inconsistent with a grant, subvention or agreement with a public agency;
 - (5) The County is purchasing through a cooperative or joint purchasing agreement.
- (d) Contractors should submit requests for waivers of the terms of this chapter to the Contract Authority or the County Executive.
- (e) The County Executive may reject a contractor's bid or proposal, or terminate a contract, if he determines that the contractor is in violation of the requirements of this chapter or was established, or is being used, for the purpose of evading the intent of this chapter.
- (f) No contract shall be executed with a contractor unless such contractor is in compliance with this chapter. (Ord. 4324, 08/15/06)

2.85.030 Powers and duties of the County Executive

The County Executive's office shall have the authority to:

- (a) Adopt rules and regulations, in accordance with this chapter and the Ordinance Code of the County of San Mateo, establishing standards and procedures for effectively carrying out this chapter.
- (b) Receive notification from employees of contractors regarding violations of this chapter.
- (c) Determine and recommend to the Board of Supervisors for final decision the imposition of appropriate sanctions for violation of this chapter by contractors including, but not limited to:
 - (1) Disqualification of the contractor from bidding on or being awarded a County contract for a period of up to 5 years; and
 - (2) Contractual remedies, including, but not limited to termination of contract.
- (d) Impose other appropriate contractual sanctions for violations of this chapter;

- (e) Allow for remedial action after a finding of non-compliance;
- (f) Perform such other duties as may be required or which are necessary to implement the purposes of this chapter. (Ord. 4324, 08/15/06)

2.85.040 Date of Application

The provisions of this chapter shall apply to any contract awarded or amended on or after September 01, 2005, provided that if the contractor is then signatory to a collective bargaining agreement, this chapter shall only apply to any contract with that contractor which is awarded or amended after the effective date of the next collective bargaining agreement. (Ord. 4324, 08/15/06)

Name of Contractor: _____

Contact Person: _____

Address: _____

Phone Number: _____ Fax Number: _____

*If the answer to the above is no, please skip to Section IV. *

The Contractor is under a collective bargaining agreement which began ***on or before September 1, 2005*** and expires on _____ (date). (Section 2.85.040)

Executed this _____ day of _____, 20__ at _____, _____.
(City) (State)

Contractor Tax Identification Number

NON-COLLUSION DECLARATION FORM**THIS FORM SHALL BE EXECUTED BY BIDDER AND SUBMITTED WITH BID.**

The undersigned declares:

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

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

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

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

“Contractor”

(Print)

(Signature)

AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 2023, by and between the COUNTY OF SAN MATEO, State of California, hereinafter called the "County" and _____, hereinafter called the "Contractor,"

W I T N E S S E T H:

THAT, for and in consideration of the mutual covenants and agreements hereinafter contained, the parties hereto agree as follows:

I. Services to be performed by Contractor: The Contractor will at his own proper cost and expense, do all the work and furnish all the labor, materials, equipment and utilities necessary to perform and complete in good workmanlike and substantial manner, and to the satisfaction of the Director of Public Works of the County of San Mateo, hereinafter called "Engineer," for the project

QUARRY PARK FIRE ROAD EXTENSION PROJECT

**TOTAL PROJECT APPROXIMATELY 2,250 FEET IN LENGTH
WITH APPURTENANT WORK THERETO
IN SAN MATEO COUNTY**

**COUNTY PROJECT NO. P32R1
PROJECT FILE NO. E5053**

and all in strict accordance with the Plans, Specifications, Notice to Contractors, Special Provisions and Proposal on file in the office of the Director of Public Works, which said Plans, Specifications, Notice to Contractors, Special Provisions and Proposal are hereby specifically referred to and by such reference made a part thereto.

II. Payments: The Contractor will receive and accept and the County will

pay the prices specified in the Contractor's Proposal, dated _____, 2023, on file in the office of the Director of Public Works of the County of San Mateo and by reference made a part of this Agreement, as full compensation for furnishing all labor, materials and equipment for doing all the work contemplated and embraced in this Agreement; the Contractor assumes any and all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by the County, and for all risks of every description connected with the work, and also assumes any and all expenses incurred by or in consequence of the suspension or discontinuance of work and for well and faithfully completing the work, and the whole thereof, in the manner and to the Plans, Specifications and Special Provisions and requirements of the Engineer hereunder. The Contractor shall guarantee all materials and workmanship for a period of one (1) year from date of acceptance of the project by the Director of Public Works. Any defects due to faulty materials, method of installation or workmanship within that period shall be repaired by the Contractor promptly upon notice by the Engineer, at the expense of the Contractor.

It is distinctly understood that the estimate set forth in the Notice to Contractors is only an approximation of the amount of work to be done and the County does not expressly or by implication agree that the actual amount of work will correspond with the amount set forth therein, and payment shall be made to the Contractor as above set forth.

Payment to the Contractor shall be made progressively by the County for the work and materials furnished under this Agreement in accordance with the provisions of Section 9 of the Special Provisions portion of these Contract documents.

III. Term: Time is of the essence in the Agreement, and the work to be performed hereunder shall be completed within

SIXTY (60) WORKING DAYS

from the date of commencement of the work, which commencement shall be within **TEN (10) CALENDAR DAYS** after receiving Notice to Proceed from the Engineer.

IV. Termination: This Contract is subject to termination as provided by Section 4410 and Section 4411 of the Government Code of the State of California, being portions of the Emergency Termination of Public Contracts Act of 1949. In the event that the Contract is terminated pursuant to said sections, compensation to the Contractor shall be determined on the basis of the reasonable value of the work done, including preparatory work. As an exception to the foregoing, in the case of any fully completed separate item or portion of the work for which there is a separate Contract price, the Contract price shall control.

V. Relationship of Parties: Contractor agrees and understands that the work/services performed under this Agreement are performed as independent contractor and not as an employee of the County and that Contractor acquires none of the rights, privileges, powers, or advantages of County employees.

VI. Merger Clause: This Agreement, together with the Notice to Contractors, the Contractor's Proposal, the Plans, Specifications and Special Provisions and the Payment and Performance Bonds form the Contract, and said documents incorporated herein by reference become as fully a part of the Contract as if hereto attached or herein set forth in full. The Standard Specifications of the County of San Mateo, State of California, which, except as specifically noted in the County Contract documents and specifications, are identical with the Standard Specifications of the State of California, Department of Transportation, 2018 edition, and are on file with the County Executive/Clerk of the Board of Supervisors, County of San Mateo, are incorporated herein by reference as a part of the Contract documents and shall apply to this project except where the terms of this Agreement or other Contract documents are inconsistent therewith, in which case the provisions of this Contract shall prevail.

This Agreement constitutes the sole Agreement of the parties hereto and correctly states the rights, duties, and obligations of each party as of this document's date. Any prior agreement, promises, negotiations, or representations between the parties not expressly stated in this document are not binding. All subsequent modifications shall be in writing and signed by the parties.

VII. Surety Bonds: The performance of this Contract is secured by a "Payment" Surety Bond in the sum of one hundred percent (100%) of the Contract bid, and a "Performance" Surety Bond in the sum of one hundred percent (100%) of the Contract bid. "Payment" and "Performance" Surety Bonds have been approved as to form by County Attorney, of which samples of same are attached as Appendix C in the Special Provisions.

VIII. Insurance: The Contractor shall not commence work under this Contract until they have obtained all insurance required under this paragraph and such insurance has been approved by the County, nor shall the Contractor allow any subcontractor to commence work on their subcontract until all similar insurance required of the subcontractor has been so obtained. The Contractor shall furnish County with certificates of insurance evidencing the required coverage, and there shall be a specific contractual liability endorsement extending the Contractor's coverage to include the contractual liability assumed by the Contractor pursuant to this Contract. Certificates of Insurance shall be filed with the County within **TEN (10) WORKING DAYS** after award of the contract. These certificates shall specify or be endorsed to provide that **THIRTY (30) CALENDAR DAYS'** notice must be given, in writing, to County of any pending change in the limits of liability or of any cancellation or modifications of the policy.

A. Worker's Compensation and Employer's Liability Insurance

The Contractor shall have in effect during the entire life of this Contract, Worker's Compensation and Employer's Liability Insurance providing full statutory coverage; and in case any work is sublet, the Contractor shall require all subcontractors similarly to provide Worker's Compensation and Employer's Liability Insurance to full statutory limits. In signing this Contract, the Contractor makes the following certifications, required by Section 1861 of the Labor Code:

"I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of the code, and I will comply with such provisions

before commencing the performance of the work of this Contract.”

B. Liability Insurance

The Contractor shall take out and maintain during the life of this Contract such Bodily Injury Liability and Property Damage Liability Insurance as shall comply with Section 7-1.05, “Indemnification,” and Section 7-1.06, “Insurance,” of the Standard Specifications and protect him/her and any subcontractor performing work covered by this Contract, from claims for damages for bodily injury, including accidental death, as well as from claims for property damage including third party property damage, to include coverage on property in the care, custody and control of the Contractor, and also including coverage for what are commonly known as the “X, C and U” exclusions (having to do with blasting, collapse and underground property damage), which may arise from the Contractor's operations under this Contract, whether such operations be by himself/herself or by any subcontractor or by anyone directly or indirectly employed by either of them and the amounts of such insurance shall be **ONE MILLION DOLLARS (\$1,000,000)** combined single bodily injury and property damage for each occurrence. The County of San Mateo, and its officers, agents, servants and employees, shall be named as additional insureds on any such policies of insurance, which shall also contain a provision stating that the insurance afforded thereby to the County of San Mateo, and its officers, agents, servants and employees, shall be primary insurance to the full limits of liability of the policy, and that if the County of San Mateo, or its officers and employees, have other insurance against a loss covered by such policy, such other insurance shall be excess insurance only.

Such statements, mentioned above, shall be included on a separate endorsement to be submitted to the County with the Certificate of Insurance.

Such insurance shall include:

- 1) Comprehensive General Liability \$1,000,000**
- 2) Motor Vehicle Liability Insurance \$1,000,000**

C. In case of the breach of any provision of this Article, the County, at its option, may take out and maintain at the expense of the Contractor, or subcontractor, such insurance as the County may deem proper and may deduct the cost of taking out and maintaining such insurance from any sums which may be due, or become due, to the Contractor, under this Contract.

D. Hold Harmless

The Contractor's attention is directed to Section 7-1.05, "Indemnification," and Section 7-1.06, "Insurance," of the Standard Specifications.

The provisions contained in Section 7-1.05, "Indemnification," and Section 7-1.06, "Insurance," of the 2018 Standard Specifications of the State of California, Department of Transportation, shall be applicable with the understanding that where said provisions specifically refer to the State of California, a department or division of the State or an official, officer or employee of the State, said provision shall be interpreted to refer to the County of San Mateo, and all officers, agents, servants and employees thereof connected with the work, including but not limited to the Director of Public Works, their duly authorized representatives, other appropriate department, division, official, officer or employee of the County of San Mateo.

The provisions of Section 7-1.05, "Indemnification," and Section 7-1.06, "Insurance," of the Standard Specifications are superseded by the following:

"To the full extent permitted by law, Contractor shall indemnify and save harmless the County, its officers, employees, and servants from all claims, suits, or actions of every name, kind, and description, brought for, or on account of:

1. Injuries to or death of any person, including Contractor, its officers, employees and servants, or
2. Damage to any property of any kind whatsoever and to whomsoever belonging, or

3. Any sanctions, penalties or claims of damages resulting from Contractor's failure to comply with applicable laws, or
4. Any other loss or cost resulting from the contractor's negligent or reckless acts or omissions or willful misconduct in connection with the performance of any work required of Contractor or payments made pursuant to this Agreement, provided that this shall not apply to injuries or damages for which the County has been found in a court of competent jurisdiction to be liable by reason of its own negligence or willful misconduct.

The duty of Contractor to indemnify and save harmless, as set forth herein, shall include the duty to defend, as set forth In Section 2778 of the California Civil Code.

The obligations set forth in this Section shall continue beyond the term of this Agreement as to any act or omission which occurred during or under this Agreement."

E. Compensation

All insurance required by the paragraphs of this section shall be obtained and maintained by the Contractor at Contractor's own expense and County shall not compensate Contractor for said insurance expenses other than as they are included in the Contract prices the County pays for the various items of work.

F. Nothing herein contained shall be construed as limiting in anyway the extent to which the Contractor may be held responsible for payments of damages resulting from their operation.

IX. Prevailing Wages: Contractor hereby agrees to pay not less than prevailing rates of wages, which are effective on the date the Notice to Contractors is

issued for each craft or type of workman or mechanic needed to execute the Contract as provided for by the County for the performance of public work., and be responsible for compliance with all the provisions of the California Labor Code, Article 2-Wages, Chapter 1, Part 7, Division 2, Section 1770 et seq. and Section 1810 et seq., and particularly Section 1775 and 1776(a) thereof. A copy of the prevailing wage scale established by the Department of Industrial Relations is on file in the office of the Director of Public Works, and available at www.dir.ca.gov/DLSR or by phone at 415-703-4774. California Labor Code Section 1776(a) requires each contractor and subcontractor to keep accurate payroll records of trades workers on all public works projects and to submit copies of certified payroll records upon request.

Additionally, pursuant to State Senate Bill SB 854 (Stat. 2014, chapter 28), effective January 1, 2015:

- No contractor or subcontractor may be listed on a bid proposal for a public works project (submitted on or after March 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].
- No contractor or subcontractor may be awarded a contract for public work on a public works project (awarded on or after April 1, 2015) unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.
- This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

X. California Labor Code: The Contractor expressly covenants and agrees to comply with all the provisions of the Labor Code of the State of California limiting the hours of labor on public works to eight (8) hours during any one calendar day, and forty (40) hours in any one calendar week, requiring the payment of not less than the prevailing wage rates, and further agrees to the forfeitures provided for in said Labor Code and as set forth in Section 7, "Legal Relations and Responsibility to the Public," of the Standard Specifications and all amendments thereto, in the event of a violation of any of the provisions thereof during the course of execution of this Contract.

The Contractor expressly agrees to be responsible for compliance with all

the provisions of Sections 1776 and 1777.5 of the California Labor Code.

XI. Non-Discrimination and Other Requirements:

a. General Non-discrimination:

No person shall be excluded from participation in, denied benefits of, or be subject to discrimination under this Agreement on the basis of their race, color, religion, national origin, ancestry, age, disability (physical or mental), sex, sexual orientation, gender identity, marital or domestic partner status, religion, political beliefs or affiliation, familial or parental status (including pregnancy, childbirth or related conditions), medical condition (including cancer-related), military service, or genetic information. Contractor shall ensure full compliance with Federal, state and local laws, directives and executive orders regarding non-discrimination for all employees and Subcontractors under this Agreement.

b. Equal Employment Opportunity:

Contractor shall ensure equal employment opportunity based on objective standards of recruitment, classification, selection, promotion, compensation, performance evaluation, and management relations for all employees under this Agreement. Contractor's equal employment policies shall be made available to County upon request.

c. Section 504 of the Rehabilitation Act of 1973:

Contractor shall comply with Section 504 of the Rehabilitation Act of 1973, as amended, which provides that no otherwise qualified individual with a disability shall, solely by reason of a disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in the performance of any services this Agreement. This Section applies only to contractors who are providing services to members of the public under this Agreement.

d. Compliance with County's Equal Benefits Ordinance:

Contractor shall comply with all laws relating to the provision of benefits to its employees and their spouses or domestic partners, including, but not limited to, such laws prohibiting discrimination in the provision of such benefits on the

basis that the spouse or domestic partner of the Contractor's employee is of the same or opposite sex as the employee.

e. Discrimination Against Individuals with Disabilities:

The nondiscrimination requirements of 41 C.F.R. 60-741.5(a) are incorporated into this Agreement as if fully set forth here, and Contractor and any subcontractor shall abide by the requirements of 41 C.F.R. 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.

f. History of Discrimination:

Contractor certifies that no finding of discrimination has been issued in the past 365 days against Contractor by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other investigative entity. If any finding(s) of discrimination have been issued against Contractor within the past 365 days by the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or other investigative entity, Contractor shall provide County with a written explanation of the outcome(s) or remedy for the discrimination prior to execution of this Agreement. Failure to comply with this Section shall constitute a material breach of this Agreement and subjects the Agreement to immediate termination at the sole option of the County.

g. Reporting; Violation of Non-discrimination Provisions:

Contractor shall report to the County Executive the filing in any court or with any administrative agency of any complaint or allegation of discrimination on any of the bases prohibited by this Section of the Agreement or the Section titled "Compliance with Laws". Such duty shall include reporting of the filing of any and all charges with the Equal Employment Opportunity Commission, the California Department of Fair Employment and Housing, or any other entity charged with the investigation or adjudication of allegations covered by this subsection within

30 days of such filing, provided that within such 30 days such entity has not notified Contractor that such charges are dismissed or otherwise unfounded. Such notification shall include a general description of the circumstances involved and a general description of the kind of discrimination alleged (for example, gender-, sexual orientation-, religion-, or race-based discrimination).

Violation of the non-discrimination provisions of this Agreement shall be considered a breach of this Agreement and subject the Contractor to penalties, to be determined by the County Executive, including but not limited to:

- i) Termination of this Agreement;
- ii) Disqualification of the Contractor from bidding on or being awarded a County contract for a period of up to 3 years;
- iii) Liquidated damages of \$2,500 per violation; and/or
- iv) Imposition of other appropriate contractual and civil remedies and sanctions, as determined by the County Executive.

To effectuate the provisions of this paragraph, the County Executive shall have the authority to:

- i) Examine Contractor's employment records with respect to compliance with this paragraph;
- ii) Offset all or any portion of the amount described in this paragraph against amounts due to Contractor under the Contract or any other Contract between Contractor and County.

Contractor shall report to the County Executive the filing by any person in any court of any complaint of discrimination or the filing by any person of any and all charges with the Equal Employment Opportunity Commission, the Fair Employment and Housing Commission or any other entity charged with the investigation of allegations within 30 days of such filing, provided that within such 30 days such entity has not notified Contractor that such charges are dismissed or otherwise unfounded. Such notification shall include the name of the complainant, a copy of such complaint and a description of the circumstance. Contractor shall provide County with a copy of its

response to the Complaint when filed.

Compliance with Equal Benefits Ordinance. With respect to the provisions of employee benefits, Contractor shall comply with the County Ordinance which prohibits contractors from discriminating in the provision of employee benefits between an employee with a domestic partner and an employee with a spouse.

XII. Compliance with County Employee Jury Service Ordinance:

Contractor shall comply with Chapter 2.85 of the County's Ordinance Code, which states that Contractor shall have and adhere to a written policy providing that its employees, to the extent they are full-time employees and live in San Mateo County, shall receive from the Contractor, on an annual basis, no fewer than five days of regular pay for jury service in San Mateo County, with jury pay being provided only for each day of actual jury service. The policy may provide that such employees deposit any fees received for such jury service with Contractor or that the Contractor may deduct from an employee's regular pay the fees received for jury service in San Mateo County. By signing this Agreement, Contractor certifies that it has and adheres to a policy consistent with Chapter 2.85. For purposes of this Section, if Contractor has no employees in San Mateo County, it is sufficient for Contractor to provide the following written statement to County: "For purposes of San Mateo County's jury service ordinance, Contractor certifies that it has no full-time employees who live in San Mateo County. To the extent that it hires any such employees during the term of its Agreement with San Mateo County, Contractor shall adopt a policy that complies with Chapter 2.85 of the County's Ordinance Code." The requirements of Chapter 2.85 do not apply if this Agreement's total value listed in the Section 16 is less than one-hundred thousand dollars (\$100,000), but Contractor acknowledges that Chapter 2.85's requirements will apply if this Agreement is amended such that its total value meets or exceeds that threshold amount.

XIII. Termination of Agreement: The Contract may be terminated by the County in the event the Contractor should be adjudged bankrupt, or if they should make a general assignment for the benefit of their creditors, or if a receiver should be

appointed on account of their insolvency, or if they or any of their subcontractors should violate any of the provisions of the Contract, or if they should persistently or repeatedly refuse, or should fail, except in cases where extension of time is provided, to furnish enough properly skilled workmen or proper materials, or if they should fail to make prompt payment to subcontractors, or for materials or labor, or persistently disregard laws, ordinances, or the instructions of the Engineer. In the event of any of the foregoing conditions, the Engineer is authorized and directed to serve written notice upon the Contractor and his Surety of its intention to terminate the Contract, such notice to contain the reasons for action and unless within **TWO (2) CALENDAR DAYS** after serving of such notice such conditions shall be remedied and satisfactory arrangements for continuation be made, the Contract shall, upon expiration of **TWO (2) CALENDAR DAYS**, cease and terminate. In the event of any such termination, the Engineer may take over the work and prosecute the same to completion by Contract or by any other method they may deem advisable, and at the expense of the Contractor, and the Contractor and their Surety shall be liable to the County for any excess cost occasioned thereby, and in such event, the County may without liability to so doing take possession of and utilize such materials, appliances, plant and other property belonging to the Contractor as may be on the site of the work, and necessary therefore. In such cases, the Contractor shall not be entitled to receive any further payment until the work is completed.

XIV. Compliance with Laws: The Contractor shall comply with all existing and future State and Federal and regulating laws and all ordinances and regulations of the County of San Mateo which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

Controlling Law: The validity of this Agreement and of its terms or provisions, as well as the rights and duties of the parties hereunder, the interpretation, and performance of this Agreement shall be governed by the laws of the State of California.

XV. Contract Assignability: Neither party to the Contract shall assign the Contract or sublet it as a whole without written consent of the other, nor shall the Contractor assign any monies due or to become due to them hereunder without the previous written consent of the County. The Contractor shall neither mortgage nor convey title to equipment or material to be used in this work, without the written permission of the County.

XVI. COVID-19: This Provision relates to issues associated with the Novel Coronavirus Disease 2019 (COVID-19) and shall supersede any other conflicting sections or provisions of this Contract and its attachments. The ongoing COVID-19 pandemic may impact the County's ability to proceed with this Project.

Although this Project is proceeding as an Essential Infrastructure Project as determined by the County Board of Supervisors/County Executive, this determination could change in the future based on Health Orders issued by the San Mateo County Health Officer or State of California, or future determinations of the County Board of Supervisors/County Executive. Should future Health Orders or the County Board of Supervisors/County Executive directives preclude the Project from proceeding as scheduled, the County reserves the right to:

- Cancel the Project, terminate the Contractor's work once the Contractor has safely secured the work area, and compensate the Contractor for work completed and materials purchased prior to cancellation of the Project and labor and materials, as approved by the Engineer, required to safely secure the work area such that work can be discontinued on the Project; **or**
- The County and Contractor may reach a mutually agreeable extension for completion of the Project such that the work can resume after being halted provided it complies with all Health Orders issued by the Health Officer of the County of San Mateo or the State of California and as approved by the County Board of Supervisors/County Executive.

It is the Contractor's obligation and responsibility to ensure that all work associated with this Project complies with all current Orders of the Health Officer of the

County of San Mateo related to the Novel Coronavirus Disease 2019 (COVID-19). The County of San Mateo assumes no responsibility for work performed by Contractor that is not in compliance with all current Orders. The Contractor is advised to review the Orders of the Health Officer of the County of San Mateo, which can be found at the following link:

<https://www.smchealth.org/post/health-officer-statements-and-orders>

XVII. Contract Materials: The County hereby promises and agrees with the said Contractor to employ and does hereby employ the said Contractor to provide the materials, unless otherwise specified, and to do the work according to the terms and conditions herein contained and referred to, for the prices aforesaid and hereby contracts to pay the same at the time, in the manner and upon the conditions above set forth, and the said parties for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to the full performance of the covenants herein contained.

XVIII. Retention of Records, Right to Monitor and Audit:

- A.** CONTRACTOR shall maintain all required records for three (3) years after the COUNTY makes final payment and all other pending matters are closed, and shall be subject to the examination and/or audit of the County, a Federal grantor agency, and the State of California.
- B.** Reporting and Record Keeping: CONTRACTOR shall comply with all program and fiscal reporting requirements set forth by appropriate Federal, State and local agencies and as required by the COUNTY.
- C.** CONTRACTOR agrees upon reasonable notice to provide to COUNTY, to any Federal or State department having monitoring or review authority, to COUNTY's authorized representatives, and/or their appropriate audit agencies upon reasonable notice, access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules and regulations, and this Agreement, and to evaluate the

quality, appropriateness and timeliness of services performed.

XIX. Notices: Any notice, request, demand or other communication required or permitted hereunder shall be deemed to be properly given when both: (1) transmitted via email to the email address listed below or transmitted via facsimile, if available, to the number listed below; and (2) sent to the physical address listed below by either being deposited in the United States mail, postage prepaid, or deposited for overnight delivery, charges prepaid, with an established overnight courier that provides a tracking number showing confirmation of receipt.

In the case of County, to:

Ann M. Stillman, Director of Public Works
County of San Mateo
555 County Center, 5th Floor
Redwood City, CA 94063-1665
Facsimile: 650-361-8220
Email: astillman@smcgov.org

In the case of Contractor, to:

(Contractor Name)
(Contractor Address)
(City, State Zip)
Facsimile:
Email:

XX. Contract Amount and Change Orders:

A. Contract Amount

The amount payable to Contractor under the terms of this agreement is _____ DOLLARS (\$_____).

B. Change Orders

The Board of Supervisors has authorized the Director of Public Works to execute change orders to modify the scope of work provided under this agreement, and to increase the County's maximum fiscal obligation to correspond to those changes. The Board of Supervisors has directed that in the event of change orders, the County's maximum fiscal obligation shall not exceed

_____ DOLLARS (\$_____). Any payments in excess of the amount authorized by the Board of Supervisors will require additional approval of the Board of Supervisors.

XXI. Proprietary Rights and Confidentiality: The requirements of this Agreement pertaining to the protection of proprietary rights and confidentiality shall survive termination of this Agreement.

XXII. Electronic Signature: Both County and Contractor wish to permit this Agreement and future documents relating to this Agreement to be digitally signed in accordance with California law and County's Electronic and Facsimile Signatures Administrative Memo (B-29). Any party to this Agreement may revoke such agreement to permit electronic signatures at any time in relation to all future documents by providing notice pursuant to this Agreement.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands the year and date first above written.

“County”

COUNTY OF SAN MATEO
State of California

BY: _____
**President, Board of Supervisors
County of San Mateo**

ATTEST:

Michael Callagy, County Executive/
Clerk of the Board of Supervisors

“Contractor”

Name of Contractor

BY: _____
(Authorized Signature and Seal of Bidder)