



REQUEST FOR PROPOSAL DESIGN-BUILD SERVICES FOR STONE PINE COVE FARMWORKER HOUSING PROJECT

The County of San Mateo – County Executive’s Office

The County of San Mateo (“County”) is seeking to proposals from prequalified Respondents to design, construct, deliver, and install (47) forty-seven Manufactured Housing and Urban Development Homes (“HUD”) for the Stone Pine Cove Farmworker Housing Project located at 880 Stone Pine Road, Half Moon Bay, CA 94019 (“Project”). Pursuant to Section 22164 of the California Public Contract Code, only respondents that have been prequalified by the County in response to the Request for Qualifications (“RFQ”) will be eligible to submit proposals in response to the Request for Proposals (“RFP”) for the Project.

Number of contracts expected to be awarded	1
Funding Sources	☐ Federal ☒ State ☒ County ☒ Other
Expected Contract Duration	307 Calendar Days
Copy proposals required	4 Bound Copies and 1 Electronic Copy
County Mailing Address <i>(for hard-copy communication & proposal submissions)</i>	Project Development Unit 555 County Center 2 nd Floor Redwood City, CA 94063
Authorized Contact Person	Steven McGuckin
Authorized Contact Person E-mail	c-smcguckin@smcgov.org
E-mail Address for Protests	irodriguez@smcgov.org
RFP Released	12/20/2023
Non-Mandatory Preproposal Zoom Meeting	1:00 PM on 1/10/2024
Deadline for Questions, Comments, and Exceptions	4:00 PM on 1/24/24
Final Amendment to RFP	1/26/24
Proposal Due Date and Time	4:00 PM on 1/31/24
Interview Design Build Entities	2/7 to 2/9/24
Issuance of Notice of Intent to Award	2/12/24
Anticipated Contract Award Date	3/12/24
Anticipated Contract Notice to Proceed	3/13/24

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SECTION I – DEFINITIONS

Business Day: Monday through Friday except for holidays as observed per the California Government Code.

Confidential Information: Information in any form that is not generally known and treated as confidential by a party, including business, financial, statistical, and non-public personal information, trade secrets, know-how, applications, documentation, schematics, procedures, Personally Identifiable Information, information covered by legal privilege, and other proprietary information that may be disclosed or incorporated in materials provided to one party by the other, whether or not designated as confidential, whether or not intentionally or unintentionally disclosed, and whether or not subject to legal protections or restrictions.

Contract Materials: finished or unfinished documents, data, studies, maps, photographs, reports, specifications, lists, manuals, software, and other written or recorded materials produced or acquired by the Contractor pursuant to the Contract for or on behalf of the County, whether or not copyrighted.

Contract: The agreement between San Mateo County and Contractor awarded pursuant to this solicitation.

Contractor: The person or other entity awarded a Contract in conformance with the terms of this solicitation and any subsequently-agreed upon terms.

County Data: All information, data, and other content, including Confidential Information and other information whether or not made available by San Mateo County or San Mateo County's agents, representatives or users, to a Contractor or potential Contractor or their employees, agents, representatives or Subcontractors, and any information, data and content directly derived from the foregoing, including data reflecting user access or use.

County Systems: The information technology infrastructure of San Mateo County or any of its designees, including computers, software, databases, networks, and related electronic systems.

County: San Mateo County

Deliverables: Goods or services required to be provided to San Mateo County under the Contract.

DUNS (Data Universal Numbering System): a proprietary nine-digit number issued by Dun and Bradstreet, Inc. to identify unique business entities.

Force Majeure: An event or circumstance not caused by or under the control of a party, and beyond the reasonable anticipation of the affected party, which prevents the party from complying with any of its obligations under the Contract, including acts of God, fires, floods, explosions, riots, wars, hurricane, sabotage, terrorism, vandalism, accident, governmental acts, and other events.

Hosting: Storage, maintenance, and management of hardware, software, and San Mateo County Data by a party other than San Mateo County, on machines and at locations other than those operated by San Mateo County, where a party other than San Mateo County has regular responsibility for back-up, disaster recovery, security, upgrades, replacement, and overall responsibility for ensuring that all hardware and software continues to function as intended.

Key Employee: Employees of the Contractor jointly identified by San Mateo County and the Contractor as possessing unique skill and experience that was a material consideration in San Mateo County's decision to award a contract.

Maintenance Updates: Any revision, update, improvement, modification, enhancement, correction, bug fix, patch, or new release for a system, platform, software or other product, including any change made as a result of applicable federal, State, or local law.

Major Change: A change to the specified performance, maintainability, operation, power requirements, compatibility, measurement, user interface, reliability, quantity, scale, quality, terms, delivery method, or requirement of any product or service that affects the obligations of the parties or reflects a substantial alteration in circumstances surrounding the agreement, or is of such a nature that knowledge of the change would affect a person's decision-making process.

PII (Personally Identifiable Information): information in any format that can be used to identify a specific individual, either used alone or combined with other private or public information that can be linked in some way to a specific individual.

Project Manager: The individual identified by San Mateo County as San Mateo County's primary contact for the receipt and management of the goods and services required under the Contract.

PST: Pacific Standard Time, including Pacific Daylight Time when in effect

Subcontractor: Firms engaged by the Contractor to perform work or provide goods pursuant to the Contract, including vendors and suppliers

Task Order or Purchase Order: A written request from San Mateo County to a vendor to provide goods or services, indicating types, quantities, prices and delivery criteria.

End of Section

SECTION II - INSTRUCTIONS FOR PROPOSERS

2.1 PRE-SUBMITTAL ACTIVITIES

A. Procurement of a Design-Build Entity (“DBE”) for the Project will follow two (2) phases:

- (1) Prequalification – First, by prior Request for Qualifications (“RFQ”), the County prequalified Respondents using a standard template request for statements of qualifications.
- (2) Design-Build Competition – Second, by this Request for Proposals (“RFP”), the County invites only prequalified Respondents to submit competitive Price/Fee Proposals for the Project. The County will use a best value selection method for evaluating Proposals. The selection criteria and procedure are defined in this RFP.

B. Questions, Comments, Exceptions

Submit questions, comments, and exceptions, including notifications of apparent errors, to Steven McGuckin, Project Manager, c_smcguckin@smcgov.org, by the Deadline for Questions, Comments and Exceptions. Questions and comments received after the deadline may not be acknowledged.

(1) Request for Changes

If requesting changes to a part of this solicitation, identify the specific words or phrases and the sections and paragraphs in which they occur. State the reason for each request and provide alternative suggested language. Failure to submit requests by the deadline will be deemed a waiver of any exception. The County’s consideration of a suggestion does not imply acceptance. If sufficient proposals are received with no requested changes, the County may reject those requesting changes.

(2) Request for Substitution of Specified Equipment, Material, or Process

- a) Unless otherwise stated in the solicitation, references to items or processes by trade names, models or catalog numbers are to be regarded as establishing a standard of quality and not construed as limiting competition.
- b) If requesting a substitution for a required item, submit requests by the Deadline for Questions, Comments, and Exceptions. Furnish all necessary information required for the County, in its sole judgement, to make a determination as to the comparative quality and suitability of any suggested alternatives. The County’s decision will be final. If alternatives are accepted, the County will issue an Addendum to the solicitation.

C. Revisions to the Solicitation

The County may cancel, revise, or reissue this solicitation, in whole or in part, for any reason. Revisions will be posted as addenda. No other revision of this solicitation will be valid. Proposers are responsible for ensuring that they have received all addenda from the Project Manager.

D. Contact with County Employees

Violation of the following prohibitions may result in a proposer being found non-responsible, barred from participating in this or future procurements, and becoming subject to other legal penalties.

- (1) As of the issuance date of this RFP and continuing until it is canceled or an award is made, no proposer or person acting on behalf of a prospective proposer may discuss any matter relating to the RFP with any officer, agent, or employee of the County, other than through the Authorized Contact Person, or as outlined in the evaluation or protest procedures.
- (2) Proposers may not agree to pay any consideration to any company or person to influence the award of a contract by the County, nor engage in behavior that may be reasonably construed by the public as having the effect or intent of influencing the award of a contract.

E. Non-mandatory pre-proposal conference and site visits

A non-mandatory pre-proposal conference is scheduled for **January 10, 2024 at 1:00 PM** and will be held by video conferencing to provide the opportunity for DBE and ask questions prior to submitting their proposal. All questions raised will be answered in an Addendum. Site visits can be arranged to provide the opportunity for the DBE to familiarize themselves with the site conditions. Zoom link to video conference:

<https://us02web.zoom.us/j/87649831677?pwd=cFhWcEl6UGVPQTRyNHNDL2k0eU1lZz09>

2.2 PROJECT DESCRIPTION AND SCOPE OF SERVICES

A. Overview

Pursuant to authority set forth in Sections 22160, et seq., of the California Public Contract Code, the County seeks a Design Build Entity (DBE) to prepare a permitting set of plans based on County's approved Schematic and Design Development plans; obtain all necessary permits; and construct the Stone Pine Cove Farmworker Housing and Urban development ("HUD") homes, located at 880 Stone Pine Road, Half Moon Bay, CA 94019 ("Project"). Refer to **APPENDIX C** Conceptual Site Plan for layout and location of unit types.

The selected DBE must be appropriately licensed and registered in the State of California to provide architectural and/or engineering services and licensed in the State of California as a general contractor to provide construction services, as needed to complete the Project. In addition, the selected DBE shall have demonstrated experience demonstrating the ability to successfully provide Design Build construction of Manufactured Homes.

The selected DBE must be registered with the Department of Industrial Relations ("DIR"), as required by law. The selected DBE will be required to comply with all applicable the California Labor Code provisions related to public works, including those related to prevailing wage requirements, skilled and trained workforce requirements, and the County's bonding and insurance requirements. The selected DBE will work cooperatively with the County's Project Manager, County staff, the County, all other technical consultants, the project inspectors, other committees, and the community to facilitate the timely and professional completion of the Project. The services contemplated under this procurement include "public works". For all such work funded by this Agreement, the Contractor is required to comply with state prevailing wage law, Chapter 1 of Part 7 of Division 2 of the Labor Code, commencing with Section 1720 and Title 8, California Code of Regulations, Chapter 8, Subchapter 3, commencing with Section 16000, for any "public works" as that term is defined in the statutes, including all applicable flow-down provisions. For purposes of complying with prevailing wage laws, the Contractor must comply with the provisions applicable to an awarding body.

B. Project Design Criteria Documents

The County has prepared Project Criteria Documents, which are attached hereto as **APPENDIX B** and incorporated herein by this reference. The Criteria Documents may establish, without limitation, the size, type, and desired design character of the Project, performance specifications covering the quality of materials, equipment, systems, workmanship, preliminary plans or building layouts, or any other information deemed necessary to describe adequately the County's needs.

Respondents must completely familiarize themselves with the Criteria Documents prior to submitting a Proposal. The selected DBE will be required to strictly adhere to the Criteria Documents in completing the design and constructing the Project.

C. Scope of Work

Although the final scope of work will be negotiated in the executed Agreement, the selected DBE shall be responsible for performing the following scope of work, at a minimum the following.

(1) Design Phase Services

- a) Complete the design for the Project based on the Project Description, Schedule, and Budget (**APPENDIX A**), **Project Design Criteria (APPENDIX B)**, and supporting documents: Conceptual Site Survey (**APPENDIX C**), and Geotechnical Report (**APPENDIX E**). Also complete design per meetings with the County for input and approval at each design phase for the schematic design, design development, construction phase documents.
 - i. Schematic Design: Prior to starting design, DBE is to conduct site investigations and familiarize themselves with the existing conditions and supporting documents provided by the County. Prepare Schematic Design Documents based on site observations, Criteria Document and supporting documents. Include site layout drawings for approval by the County. Attend review meetings with the County.
 - ii. Design Development: Upon the County's acceptance of the Schematic Design Documents, prepare Design Development Documents for approval by the County from the Criteria Documents, including related architectural, structural, mechanical, electrical, plumbing, and civil plans. Attend review meetings with the County. Submit plans to the County Planning Department for approval. Note that the Parks Department is currently discussing the project with Planning Department. DBE to anticipate a 1-week review period.
 - iii. Construction Documents: Upon the County's acceptance of Design Development Documents, prepare construction documents for approval by the County prior to submitting for permitting. Attend meetings with the County. Perform a quality assurance/quality control and constructability review of the documents.
- b) Submit completed plans and specifications, and obtain all local jurisdictional agency plan approvals and permitting, necessary to meet the County's project schedule. DBE to pay and be reimbursed without mark-up for all permitting fees. The County Building Department will require plans to be stamped by architect and/or engineer of record. The County Building Department will not require local fire jurisdiction review. The County can assist in dropping off and picking up plan submittals prepared by DBE to the County Planning and Building Department. All new buildings to be under one permit.

- c) Any other services that are reasonable and necessary for design and permitting of the Project, including close-out with local jurisdictional agencies.

(2) Preconstruction Services

- a) DBE is to have site meetings with County representatives, as needed to review the current site conditions.
- b) Detailed Construction Critical Path Method (CPM) Project Schedule: Produce detailed construction CPM schedules to be incorporated into the Project documents including identification of the Project critical path at each design phase, and with all local jurisdictional agency plan approvals and permitting. DBE to provide updated schedules on monthly basis.
- c) Construction Planning and Site Logistics Plan: Plan the phases and staging of construction, staging areas, temporary fencing, office trailer placement, temporary facilities, access/winterization, etc., as required.
- d) Any other services that are reasonable and necessary to comply with County's requirements and project schedule.

(3) Construction Services

- a) Administer and coordinate on a daily basis the work of all Trade Partners, and subcontractors the DBE hires to work on the Project.
- b) Enforce strict performance, scheduling, and notice requirements.
- c) Document the progress and costs of the Project on a monthly basis.
- d) Update the Construction CPM Project Schedule on a monthly basis, including but not limited to the following – Establish end of month data date, actual start and actual finish dates, remaining duration calculations for all activities, and updating/calculating the critical path necessary to keep the project on schedule.
- e) Report proactively on potential schedule impacts and recommend potential solutions to schedule problems.
- f) Provide staff training and maintenance personnel on-boarding for all specified mechanical, electrical, plumbing, data, and low voltage systems.
- g) Coordination and documentation of as-builts, record drawings, RFI's and specification changes.
- h) Compilation and turnover of operations and maintenance manuals, warranties/guarantees, certificates, tools, and any other closeout requirements.
- i) Obtaining certificate of occupancy permits and coordinating testing, documentation, and all County inspections and approvals.
- j) Other responsibilities as necessary for the completion of the Project.

D. Design-Build – Fixed Fee Proposal

The Agreement (**APPENDIX F**) will conform to design-build project delivery method.

If an award is made, the Agreement will set a Fixed Fee amount for compensation for the Project. Allowances and/or Contingencies may be included as mutually agreed to address any unknown costs at the time the proposal is accepted and Agreement executed. The DBE is to include any

proposed Allowances and/or Contingencies as part of their proposal. DBE will proceed to complete the design based on the Criteria Documents, with County input and authorization at multiple stages. DBE shall submit complete plans and specifications necessary to obtain all local jurisdictional agency plan approvals and permitting.

2.3 PROPOSAL CONTENT REQUIREMENTS

A. Proposal Format

Material must be in 8½ x 11 inch format with no less than an 11 point font size. The Proposals shall include divider tabs labeled with boldface headers below (e.g. the first tab would be entitled “Cover Letter,” the second tab would be entitled “Table of Contents,” etc.) Four (4) bound copies and electronic copy in PDF format (on USB flash-drive) of the Proposal shall be submitted. Each Proposal shall not contain more than forty-five (45) single-sided pages, excluding front and back covers, tabs, and allowed Appendix content. Each double-sided page is counted as two single-sided pages. Submittals containing more than the authorized number of pages will not be considered. Number all pages of the proposal.

Order each section as follows:

- (1) Cover letter - no longer than one page, signed by an individual authorized to execute legal documents for the proposer, identifying the materials submitted, and indicating that all information contained in the Proposal is true and correct. Identify the name and title of the person to contact regarding the proposal, as well as all other individuals authorized to represent the organization in contract negotiations.
- (2) Table of Contents, listing all major topics and their respective page numbers.
- (3) Exceptions to the solicitation, or to the final revised solicitation, if any.
- (4) Updated Prequalification Submittal Template, APPENDIX D, with any omitted, deferred or new responses from prior submitted in RFP SOQ submission.
- (5) Technical Proposal (see “C” below).
- (6) Supplementary Documents, as requested.
- (7) Review comments on proposed Agreement.
- (8) Proposed Conceptual Design.
- (9) Proposed Schedule.
- (10) Fixed Fee Price Proposal with any proposed Allowances and/or Contingencies.

B. General Overview

Each Proposal shall include a description of the type, technical experience, backgrounds, qualifications and expertise of Respondent. The description shall show that the Respondent possesses the skills and professional experience to perform the functions of the Project and fulfill the goals and vision of the County for the Project. Proposals shall describe in detail the Respondent’s methods and plan for carrying out the Project. Included in this information must be a detailed description of professional design services, construction scheduling, staging, and logistics based on timelines and information provided by the County in this RFP and at the mandatory confidential informational meeting. Describe the Respondent’s approach to the

Project, including any creative methodology and/or technology that the Respondent uses or unique resources that the Respondent can offer to the County and Project.

C. Technical Proposal

Explain responses so as to be understood by people unfamiliar with industry jargon. Use drawings, diagrams, schematics and illustrations as needed, but do not simply refer readers to an exhibit or other section of the proposal in lieu of a complete response.

(1) Proposed Project Team and Expertise:

- a) Include an organizational chart of Respondent. If Respondent is proposing as a design-build team, the chart must identify, at a minimum, all members and their roles.
- b) Describe the proposed Project team, including design professional in general responsible charge, general contractor, and key sub-consultants. Provide resumes for up to six (6) key personnel and explain what each will bring to the Project.
- c) Demonstrate how the proposed Project team will communicate, collaborate, and work together and with the County.
- d) Summarize Respondent's design and construction experience as relevant to this Project. Emphasize work on similar Restroom and Shower projects, accounting for the facility type, features, size, contract value, complexity, and schedule of this Project.
- e) Explain how the proposed Project team's collective expertise will translate into a better value for the County.
- f) Explain how the required "skilled and trained workforce requirements" will be met.

(2) Method and Strategic Plan - Detailed discussion of Respondent's method and strategic plan for carrying out the Project, including:

- a) The technical and managerial approach to Respondent's partnership with the County. Take into account the County's goals for the Project and the general functions required. Respondent may identify additional necessary tasks and discuss these in its proposed method to accomplish the work.
- b) Design capabilities and description of professional services to be provided by Respondent.
- c) Construction means and methods Respondent intends to utilize on the Project.

D. Agreement

Provide any review comments and requested revisions to the proposed Agreement included as **APPENDIX F**.

E. Proposed Conceptual Design

Provide conceptual plans for each of the (6) six types of proposed homes that show the floor plan, elevation, building section, and site plan with standard stair or ADA stair/ramp as required. Include dimensions, square footage, and options for different level of finishes/aesthetics.

F. Project Schedule

Provide project schedule with key milestones identified and confirm compliance with Project Schedule in APPENDIX A . Schedule to include design phase through contract closeout. Allow for 6-weeks for Planning and Permitting review.

G. Fixed Fee Price Proposal

- (1) Place all cost and pricing data in a separate sealed envelope clearly marked "PRICE PROPOSAL".
- (2) Include price options for different level of finishes/aesthetics for each building in a table format similar to the below:

Level of Finish Options	1 Bdrm./ 1 Bath	1 Bdrm./ 1 Bath ADA	2 Bdrm./ 1 Bath	2 Bdrm./ 1 Bath ADA	2 Bdrm./ 1 Bath	2 Bdrm./ 1 Bath ADA
Good						
Better						
Best						

Note that the Owner may elect to use a combination of different options. However, the DBE does not need to offer and can limit the number of choices. It is encouraged that the DBE considers economy of scale and provides option/pricing packages. In general, the Owner would like to have aesthetically pleasing designs as budget permits.

- (3) Include price break-out for delivery and site installation in a table format similar to the below:

Scope	1 Bdrm./ 1 Bath	1 Bdrm./ 1 Bath ADA	2 Bdrm./ 1 Bath	2 Bdrm./ 1 Bath ADA	2 Bdrm./ 1 Bath	2 Bdrm./ 1 Bath ADA
Delivery						
Site Installation						

- (4) Include any proposed Allowances and/or Contingencies with detailed descriptions. The roads in the project will be newly constructed, and need to be protected from damage. However, an allowance may be considered if heavy loads are anticipated. If In-Plant Inspections will be required, include an estimate fee budget for the inspection expenses.

2.4 PROPOSAL SUBMISSION

A. Submit proposal as directed below.

- (1) Conflicts between Certain Requirements

Prior to the submission deadlines and solely relating to a determination of the timeliness of questions, comments, and proposal submissions, information provided by Addenda will take precedence in the event of a discrepancy between that information and the information within the solicitation documents. For all other discrepancies, the information in the solicitation documents will take precedence. In the event that there are any conflicts in the solicitation documents, the more stringent requirements shall prevail.

- (2) Submissions

- a) Submit proposals with all required documents in a sealed package to the designated County Mailing Address. Within the package, submit the Price Proposal in a separate envelope. Clearly mark the following information on the outside of the package:
 - Proposer Name
 - Return address
 - Solicitation title
 - Solicitation number
 - b) Submit proposals and all required documentation so as to physically reach the designated address by the Due Date and Time.
 - c) Provide acknowledgement of any Addendum issued and received.
- (3) Hand-written responses, whether or not submitted electronically, will be rejected, with the exception that signatures may be hand-written.

B. Errors in Proposals

The County will not be liable for any errors in proposals. Proposals may be rejected as unresponsive if they are incomplete, are missing pages or information, or cannot be opened for any reason. The County may waive minor irregularities but such waiver will not modify any remaining RFP requirements.

2.5 PROPOSER CERTIFICATIONS

By submitting a proposal, each proposer certifies under penalty of perjury that:

- Its submission is not the result of collusion or any other activity that would tend to directly or indirectly influence the selection process; and
- Proposer is able or will be able to comply with all requirements of this solicitation at the time of contract award; and
- Neither proposer, its employees, nor any affiliated firm providing the requested goods and services has prepared plans, specifications, terms or requirements for this solicitation, or has any other actual or potential conflict of interest; and
- Proposer is aware of the provisions of Section 1090 et seq. and Section 87100 et seq. of the California Government Code relating to conflict of interest of public officers and employees, and is unaware of any financial or economic interest of any County officer or employee relating to this solicitation

2.6 WITHDRAWAL OF PROPOSALS

Proposals may be withdrawn, modified, or replaced at any time prior to the Due Date and Time. After that time, whether or not a new solicitation is issued for the same subject matter, withdrawal of a proposal may preclude the proposer from participating in the procurement as a proposer or subcontractor, except that an original equipment manufacturer may participate indirectly through a reseller.

2.7 NO COMMITMENT

Neither submission of a proposal nor the County's receipt of proposal materials confers any right to the proposer nor any obligation on the County. This RFP does not commit the County to award a

contract, nor will the County defray any costs incurred in preparing proposals or participating in any presentations or negotiations.

2.8 PROPOSER SELECTION

At any time in the evaluation process, the County may request clarifications from proposers.

A. Determination of Responsiveness

A responsive proposal conforms to the instructions set forth in this solicitation and any modifications to it. Non-responsive proposals will be rejected. The County, in its sole discretion, may waive non-consequential deviations if the deviations cannot have provided an advantage over other proposers.

B. Proposal Evaluation

The County has established an evaluation committee which will evaluate responsive proposals based on the criteria specified in the solicitation. The committee may then recommend one or more top-ranked proposers for final negotiation of contract terms, or may invite one or more proposers for oral presentations and demonstrations, following which those proposers may be allowed to amend their proposals. After evaluating presentations and amended proposals, the committee may recommend one or more top-ranked proposers for final negotiation of contract terms.

C. Determination of Responsibility

The County will make a determination of the responsibility of any proposer under consideration for award, taking into consideration matters such as the proposer's integrity, compliance with public policy and laws, past performance, fiscal responsibility, trustworthiness, financial and technical resources, capacity, and experience to satisfactorily carry out its responsibilities. The County will notify any proposer found non-responsible and allow the finding to be contested.

2.9 CONTRACT AWARD

A. Notice of Intent to Award

Once a decision has been made to award a contract, the County will issue a Notice of Intent to Award (NOIA) and notify the remaining proposers of their non-selection. The NOIA may include authorization to proceed with portions of the scope as may be necessary to maintain schedule and recommendation to award as an agenda item on the Board of Supervisors schedule.

B. Award Procedure

Contract negotiations are neither an offer nor an implicit guarantee that a contract will be executed. Award, if made, will be to the responsive, responsible proposer offering the overall best value to the County for the services and goods described in this solicitation, or as applicable, for a specific portion of the services and goods described. Any agreement reached will be memorialized in a formal agreement using the attached Standard Agreement template (**APPENDIX F**).

C. Commencement of Performance

After all parties have signed the Agreement, the County will notify the proposer and performance may proceed. Prior to County execution of the Agreement, no County employee may authorize work. Any work performed prior to that time may be uncompensated.

2.10 PROTESTS

Protests that do not comply with the protest procedures outlined below will be rejected.

A. Protest Eligibility, Format, and Address

- (1) Protests or objections may be filed regarding the procurement process, the content of the solicitation or any addenda, or contract award.
- (2) The County will only review protests submitted by an interested party, defined as an actual or prospective proposer whose direct economic interest could be affected by the County's conduct of the solicitation. Subcontractors do not qualify as interested parties.

Submit protests to the County by e-mail to:

Project Development Unit (PDU)
Iliana Rodriguez, Assistant County Executive
irodriguez@smcgov.org

B. Protest Deadlines

Submit protests with any supplemental materials by 5 p.m. PST, as appropriate, on the deadlines set forth below. The date of filing is the date the County receives the protest, unless received after 5 p.m. PST, or on other than a Business Day, in which case the date of filing will be the next Business Day. Failure to file by the relevant deadline constitutes a waiver of any protest on those grounds. Supplemental materials filed after the relevant deadline may be rejected by the County.

- (5) If relating to the content of the solicitation or to an addendum, file within five Business Days after the date the County releases the solicitation or addendum.
- (6) If relating to any notice of non-responsiveness or non-responsibility, file within five Business Days after the County issues such notice.
- (7) If relating to intent to award, file within five Business Days after the County issues notice of Intent to Award. No protests will be accepted once actual award has been made.

C. Protest Content

- i. The letter of protest must include all of the following elements:
 - (a) Detailed grounds for the protest, fully supported with technical data, test results, documentary evidence, names of witnesses, and other pertinent information related to the subject being protested; and
 - (b) The law, rule, regulation, ordinance, provision or policy upon which the protest is based, with an explanation of the violation
- ii. Protests that simply disagree with decisions of the Evaluation Committee will be rejected.

D. Reply to Protest

The County will send a written response to the protestor and to any other party named in the protest.

E. No Stay of Procurement Action during Protest

Nothing in these protest requirements will prevent the County from proceeding with negotiations or awarding a purchase order or contract while a protest is pending.

2.11 PUBLIC RECORDS

A. General

- (1) All proposals, protests, and information submitted in response to this solicitation will become the property of the County and will be considered public records. As such, they may be subject to public review.
- (2) Any contract arising from this RFP will be a public record.
- (3) Submission of any materials in response to this RFP constitutes:
 - a) Consent to the County's release of such materials under the Public Records Act without notice to the person or entity submitting the materials; and
 - b) Waiver of all claims against the County and/or its officers, agents, or employees that the County has violated a proposer's right to privacy, disclosed trade secrets, or caused any damage by allowing the proposal or materials to be inspected; and
 - c) Agreement to indemnify and hold harmless the County for release of such information under the Public Records Act; and
 - d) Acknowledgement that the County will not assert any privileges that may exist on behalf of the person or entity submitting the materials.

B. Confidential Information

- (1) The County is not seeking proprietary information and will not assert any privileges that may exist on behalf of the proposer. Proposers are responsible for asserting any applicable privileges or reasons why a document should not be produced in response to a public record request.
- (2) If submitting information protected from disclosure as a trade secret or any other basis, identify each page of such material subject to protection as "CONFIDENTIAL". If requested material has been designated as confidential, the County will attempt to inform the proposer of the public records request in a timely manner to permit assertion of any applicable privileges.
- (3) Failure to seek a court order protecting information from disclosure within ten days of the County's notice of a request to the proposer will be deemed agreement to disclosure of the information and the proposer agrees to indemnify and hold the County harmless for release of such information.
- (4) Requests to treat an entire proposal as confidential will be rejected and deemed agreement to County disclosure of the entire proposal and the proposer agrees to indemnify and hold the County harmless for release of any information requested.
- (5) Trade secrets will only be considered confidential if claimed to be a trade secret when submitted to the County, marked as confidential, and compliant with Government Code Section 6254.7.

End of Section

SECTION III - QUALIFICATIONS, EXPERIENCE, AND EVALUATION CRITERIA

3.1 MINIMUM QUALIFICATIONS

Proposals will be accepted only from organizations that have been pre-qualified through the previous RFQ process.

3.2 EVALUATION CRITERIA

Proposals will be evaluated in accordance with the following evaluation criteria:

30% - Method and approach

- Apparent understanding of the scope of services to be provided.
- Appropriateness of the proposed solution/services.

40% - Experience and organizational capacity.

- Qualifications and experience of both the proposer and key personnel
- Experience with other public agencies.
- Organizational resources and staff, apparent ability to meet any required timelines or other requirements.

30% - Price

End of Section

SECTION IV - INSURANCE

Provide evidence of insurance for each of the checked categories

☒	General Liability (Including operations, products and completed operations, as applicable.)	\$2,000,000 - per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, the general aggregate limit either must apply separately to this project or must be twice the required occurrence limit.
☒	Automobile Liability	\$2,000,000 - per accident for bodily injury and property damage.
☒	Workers' Compensation	As required by the State of California
☒	Employers' Liability	\$2,000,000 - each accident, \$2,000,000 policy limit bodily injury by disease, \$2,000,000 each employee bodily injury by disease.
☒	Professional Liability (Errors and Omissions)	\$2,000,000 - per occurrence.

End of Section

SECTION V - APPENDICIES

APPENDICIES:

APPENDIX A – Project Description, Schedule, and Budget

APPENDIX B – Project Design Criteria

APPENDIX C – Conceptual Site Plan

APPENDIX D – Prequalification Submittal Template

APPENDIX E – Geotechnical Report

APPENDIX F – Standard Agreement Template

APPENDIX A

Project Description, Schedule, and Budget

The County of San Mateo is developing the Stone Pine Cove Farmworker Housing Project with (47) forty-seven Manufactured HUD Homes on a 14.67 acre site located at 880 Stone Pine Road in Half Moon Bay, CA. All site work and related improvements will be provided by a separate Site Improvement Contractor. The Manufactured Home DBE will be responsible for the design, preparation of permitting set of plans, all necessary approvals and off-site construction of units, transportation, and on-site installation.

Project Description:

Provide and install (47) forty-seven Manufactured Homes complying with Housing and Urban Development (HUD) and CA Housing and Community Development (HCD) Title 25 standards. Homes will consist of 1-Bedroom/1-Bath, 2-Bedroom/1-Bath, and 3-Bedroom/2-Bath home types. Up to (7) homes will require ADA accessible features. For locations and layout of homes, a Conceptual Site Plan is attached as **APPENDIX C**.

The Manufactured Home DBE will be responsible for:

1. Design and provide options for residents to select from for exterior appearance options, flooring material options, cabinet and countertop options, exterior and interior color selections for each home.
2. Preparation of HUD permitting set of plans.
3. Obtaining all necessary local approvals/permits.
4. Off-site construction of units.
5. Transportation.
6. Setting and anchoring units.
7. Utility connections and extensions from pedestals and plumbing stubs.
8. Skirting.
9. Stairs and or ramps on ADA homes.
10. Awning at exterior doors.
11. Provide each new owner orientation of their new home inclusive of training and operation/warranty manuals.

Additional building standards, materials, and finishes are described in the Project Design Criteria and is attached as **APPENDIX B**.

Project Schedule: (Revised 12/22/23 for RFP Issuance)

Anticipated Award of Contract	3/12/24
Anticipated Notice to Proceed	3/13/24
Schematic Design Phase	3/18 to 4/12/24
County Review / Approval	4/15 to 4/19/24
Construction Document Phase	4/22 to 5/31/24
County Review / Approval	6/3 to 6/7/24
Prepare Permitting Plans and Obtain Permits	6/10 to 7/19/24
Off-Site Site Fabrication	7/24 to 11/22/24
Site Improvement Construction (By Others) Ready to Start Delivery	11/22/24
Start Transportation / Site Installation	11/25/24

Punchlist/Corrective Work/Final Inspections
Ready for Occupancy

1/6 to 1/10/25
1/13/25

Project Budget:

The Project Budget for design, permitting, off-site construction, delivery, and on-site installation of the Manufactured Homes is \$5.5M to \$6.0M.

APPENDIX B
PROJECT DESIGN CRITERIA



mwa architects

APPENDIX B

Project Design Criteria

Following is the design criteria for the pre-qualified Design-Build Entities (DBE) to use as their basis of design for their proposal during the Request for Proposal (RFP) Phase and will be included in the final Design-Build Agreement.

Project Description:

Provide and install (47) forty-seven Manufactured Homes complying with Housing and Urban Development (HUD) and CA Housing and Community Development (HCD) Title 25 standards as follows:

Quantity	Home Type	Approx. SF	Max Size
12	1 Bedroom/1 Bath	426 SF	11'10"x 36'0"
2	1 Bedroom/1 Bath ADA Accessible	(TBD)	11'10"x (TBD)
17	2 Bedroom/1 Bath	560 SF	11'8"x 48'0"
3	2 Bedroom/1 Bath ADA Accessible	(TBD)	11'8"x (TBD)
11	3 Bedroom/2 Bath	803 SF	14'4"x 56'0"
2	3 Bedroom/2 Bath ADA Accessible	(TBD)	14'4"x (TBD)

For location and layout of project, a Conceptual Site Plan is attached as **APPENDIX C**.

General Requirements:

1. Design and provide options for residents to select from for exterior appearance options, flooring material options, cabinet and countertop options, exterior and interior color selections for each home.
2. All site work and related improvements and utility infrastructure will be provided by a separate Site Improvement Contractor.
3. Electrical, telephone, internet services will be provided on pedestal connection at rear of unit.
4. Standard domestic, fire sprinkler water and sewer connection will be provided at the front of each lot.
5. Homes will be all electric.
6. Homes will be fully equipped with fire sprinkler system.
7. Homes will be placed on engineered gravel building pads with DBE designed code complying foundation support and tie-down anchorage.

8. Up to seven of the units per the above table are required to be ADA Accessibility.
9. Homes must be ENERGY STAR Manufactured New Homes Version 3 compliant.
10. Homes must be Wild Urban Interface (WUI) compliant with all fire-resistant construction.
11. Home must have minimum of an all-inclusive non-prorated 2-year warranty.
12. Homes shall be aesthetically pleasing, durable, and low maintenance.
13. Homes require ample natural and mechanical ventilation due to coastal environment.
14. Homes are required to have daylighting in all rooms.

Foundation Requirements:

1. Manufactured homes will be placed on engineered gravel building pads with DBE designed code complying foundation support and tie-downs.
2. Building pad will be prepared so that there will be no depressions in which surface water shall accumulate beneath the home. The site covered by the manufactured home will be graded and sloped to provide drainage from beneath the home or to property line.
3. Provide a minimum clearance of 18" beneath the lowest member of the main frame.
4. Pier: Adjustable 18" piers; Central Piers CP-Seismic Pier System or equal.
5. Pad: 24"X24" precast concrete pad at each pier.

Exterior Requirements:

1. Roof:
 - a. Homes to have a minimum of 3 to 12 sloped "presidential" composition shingle roof.
 - b. Roofing to have 30-year warranty.
 - c. Provide 20bs PSF roof load.
 - d. 24-gauge GSM rain gutter must be supported by fixed brackets at the stop ends and spaced at not more than 4' along the entire length of the gutter. Eave gutters must have a minimum fall of 1:500.
 - e. 24-gauge GSM rectangular downspouts must be supported with strap anchors at top and bottom with intermediate supports at 36" max. Down spouts to have 6" angled kicker at the bottom. Provide splash blocks at each downspout.
 - f. Provide 4" overhang at sides and rear. Eaves shall be 16" hitch end.
2. Siding and Trim:
 - a. Homes to have options for vertical, board and batten or horizontal fiber concrete siding.
 - b. Flashing, furring, vapor barrier, and sheathing to be installed below siding.
 - c. 0.046 is the minimum thickness siding recommended.
 - d. Provide 4" fiber concrete door/window trim.
 - e. Provide shutters for each window.
3. Soffit and Eaves:
 - a. Provide fiber concrete fascia.
 - b. Provide fiber concrete soffit and WUI compliant soffit vent.
4. Skirting Design and Construction:
 - a. Skirting shall match building exterior materials.
 - b. Skirting shall be attached in a waterproof and secure manner that prevents water to be trapped between the siding and trim or forced up into the wall cavities trim to which it is attached.

- c. Provided removable access panel(s) by utility tie-in locations opening a minimum of 18" x 24" unobstructed by pipes, ducts, or other equipment that may impede access.
- 5. Insulation:
 - a. Floor Insulation R-22.
 - b. Wall Insulation R-21.
 - c. Roof Insulation R-33.
 - d. Comply with Energy Star requirements for CZ-2 zone.
 - e. Envelope shall achieve minimum 0.065 Overall Coefficient of Heat Transmission.
 - f. Solar Heat Gain Coefficient of Heat Transmission shall not exceed 0.25.
- 6. Windows:
 - a. Each room shall be provided with exterior windows having a total glazed area of not less than 8 percent of the gross floor areas.
 - b. All windows shall be operable, latching, vinyl clad with 5/8" double pane insulated, low E glazing.
 - c. Provide not less than 1-1/2 sq. ft. of fully openable glazed area operable window at bathroom.
 - d. Provide casement type operation on ADA units.
 - e. Window U-Factor 0.30 min.
 - f. Provide window perimeter seals at exterior and interior.
 - g. All windows to include removable insect screen.
 - h. Provide window blinds for each window.
- 7. Doors:
 - a. All exterior doors to be solid core.
 - b. Provide minimum of two exterior doors located remote from each other.
 - c. Provide key-operated lock with deadlocking latch or a key-operated dead bolt with a passage latch. Locks shall not require the use of a key for operation from the inside.
 - d. Main exterior door shall be 36" inswing.
 - e. Rear exterior door shall be a 32" inswing with divided lites.
 - f. Exterior door U-Factor 0.40.
 - g. Provide door perimeter seals at exterior and interior.
- 8. Door Awning/Carport:
 - a. Provide door hood over exterior doors.
 - b. Provide structural for future lightweight awning/carport (40# roof load max.) in designated area.
- 9. Exterior Finish Options:
 - a. Five exterior color options: Dark gray, light gray, white, light green, brown

Interior Requirements:

- 1. Every room, bathroom, hallway and foyer shall have a minimum ceiling height of not less than 8'-0".
- 2. Hallways shall have a minimum horizontal dimension of 30" [36" on ADA units] measured from the interior finished surface to the interior finished surface of the opposite wall.
- 3. Minor protrusions to the minimum hallway width by doorknobs, trim, smoke detectors or light fixtures are permitted.

4. Wall Finishes/Trim:
 - a. Drywall with tape, texture, and standard texture.
 - b. Painting to include primer with two finish coats.
 - c. Paint product to be premium quality.
 - d. Kitchen and Bathroom to be gloss sheen. All other rooms to be egg shell sheen.
 - e. Provide 3 ½" min. base board trim.
 - f. Provide 2 ¼" door and window trim.
5. Floor Finishes:
 - a. Provide Luxury Vinyl Tile (LVT) plank flooring in all rooms.
 - b. Provide option for carpet in bedrooms.
6. Interior Doors:
 - a. Provide 30" [34" for ADA units] passage or pocket door with 2-panel profile.
 - b. Provide lever set with privacy locking or pocket hardware with satin chrome or brushed nickel finish.
7. Kitchen/Bath Cabinetry:
 - a. All cabinetry is to be KCMA Certified and constructed of hardwood.
 - b. Provide 36" high base cabinetry.
 - c. Provide 34" high accessible base cabinetry at ADA Homes.
 - d. Provide choice of Door/Drawer panel style for resident selection.
 - e. Provide choice of cabinet finish for resident selection.
 - f. Provide overhead cabinets adjustable shelves at Kitchen.
 - g. Provide overhead cabinet above refrigerator.
 - h. Provide heavy duty drawer glides with soft-close.
 - i. Provide doors concealed hinges.
 - j. Provide choice of drawer hardware/pulls finish for resident selection.
8. Countertops:
 - a. Solid surface [Quartz or approved equal] countertop with square edge and 4" high backsplash.
9. Bathroom Accessories:
 - a. Towel bars and toilet tissue holder.
 - b. Mirror.
 - c. Recessed medicine cabinet.
 - d. Provide siding glass tub/shower enclosure.
10. Closets Shelving:
 - a. Provide wood rod and shelf at closet.
 - b. Provide rod and shelf above washer/dryer at side-by-side layout where applicable.
 - c. Provide open closet storage and accessible shelving at ADA Homes.
11. Appliances:
 - a. Electric Range with oven, 4-burner cooktop, and stainless steel finish; GE JBS60RKSS or approved equal and GE JS645SLSS or approved equal for ADA Homes.
 - b. Refrigerator/Freezer with 19 CF frost-free capacity, ice maker, and stainless steel finish; GE GTE19JSNRSS or approved equal.
 - c. Dishwasher with stainless steel finish; GE GDF460PSTSS or approved equal and GE GDT225SSLSS or approved equal at ADA Homes.
 - d. Exhaust Hood with light and stainless steel finish; GE JVX5305DJSS or approved equal.

- e. Stackable Top or Front Loading Washer and Front Loading Dryer with white finish; GE GUD27EESNWW or approved equal.
- f. Side-by-side Washer with white finish; GE GFW650SSNWW or approved equal.
- g. Side-by-side Dryer with white finish; GFD55ESSNWW or approved equal.
- h. Garbage Disposal: Waste King L-1001 or approved equal.

Plumbing Requirements:

- 1. The plumbing system shall be of durable material, free from defective workmanship, and so designed and constructed as to give satisfactory service for a reasonable life expectancy.
- 2. Water closets shall be selected and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.
- 3. All design, construction, and workmanship shall be in conformance with accepted engineering practices and shall be of such character as to secure the results sought to be obtained by this standard.
- 4. Plumbing fixtures shall have smooth impervious surfaces, be free from defects and concealed fouling surfaces, be capable of resisting road shock and vibration, and shall conform in quality and design to listed standards.
- 5. Water Heater:
 - a. Provide ENERGY STAR certified 30-gallon (min.) high-efficiency electric unit.
- 6. Plumbing Fixtures/Faucets:
 - a. Provide undermount stainless steel sink with single valve faucet, pull-out spray nozzle, and disposal at Kitchen. Finish to be satin chrome or brushed nickel finish.
 - b. Provide undermount porcelain sink with single valve 1.5 GPM faucet at Bath. Finish to be satin chrome or brushed nickel finish.
 - c. Provide elongated toilet.
 - d. 60" One-piece fiberglass tub/shower with single valve faucet, 1.5 GPM tub filler, diverter, and 2.0 GPM shower head.
 - e. Provide washer connection and drain.
 - f. Provide 2 exterior hose bibs. One in front and one in back.

Mechanical Requirements:

- 1. All rooms to have ducted central heating and ventilation.
- 2. All equipment shall be listed or certified by a nationally recognized testing agency for the application for which the unit is intended and installed in accordance with the terms of its listing.
- 3. HVAC Equipment:
 - a. Provide high efficiency electric unit with digital programable thermostat.
 - b. Provide insulated ductwork in floor cavity.
- 4. Dryer Vent:
 - a. Provide ducted vent for electric dryer with exterior weatherproof vent hood cover.
- 5. Exhaust Fans:
 - a. Provide exhaust fans at Bathroom and Laundry closet with separate control switch.
 - b. Exhaust fans must exhaust directly to the outside with exterior weatherproof vent hood cover.

Electrical Requirements:

1. All electrical materials, devices, appliances, fixtures, fittings and other equipment shall be listed or labeled by a nationally recognized testing agency and shall be connected in an approved manner when in service.
2. Electrical Panel:
 - a. Provide panel sized per code based on unit load and with underground service connection to electrical pedestal.
 - b. Maintain code required clearances at panel.
3. Lighting:
 - a. Provide LED light fixture at all locations.
 - b. Provide LED light fixture above Kitchen sink.
 - c. Provide porch LED Dark Sky compliant light fixture at front door and rear door.
 - d. Provide rocker type switching.
4. Exterior Outlets:
 - a. Provide (2) exterior GFI receptacles.
5. Smoke/Carbon Dioxide Detector:
 - a. Provide smoke/carbon dioxide detectors to protect each separate bedroom area.
 - b. A smoke detector shall be installed in the hallway or space communicating with the bedroom area.
 - c. Specific location shall be in the hallway between the living room area and the first bedroom, except that when a door(s) separates the living area from the bedroom area, the detector shall be installed on the living area side as close to the door(s) as practicable.
 - d. Mobile homes having bedrooms separated by any one or combination of common use areas such as kitchens, dining room, living room or family room (but not a bathroom or utility room), shall have at least two smoke detectors, one detector protecting each bedroom area.
 - e. Where practicable, the detector shall be located between the return air intake and the living area.
6. Ceiling Fans:
 - a. Provide braced ceiling fan outlet and switch in Living and Bedroom areas.
7. EV Charging:
 - a. Provide 240v 30amp outlet located at front of unit near car park area for connection of a future Level 2 EV charger that will be provided by others.
 - b. Provide DCC-9 EV energy management system connected to house panel.
8. Phone/Cable TV/Internet:
 - a. Provide service point of connection for phone, cable TV and internet adjacent to electrical service connection at rear of home.

Accessibility Requirements for ADA Units

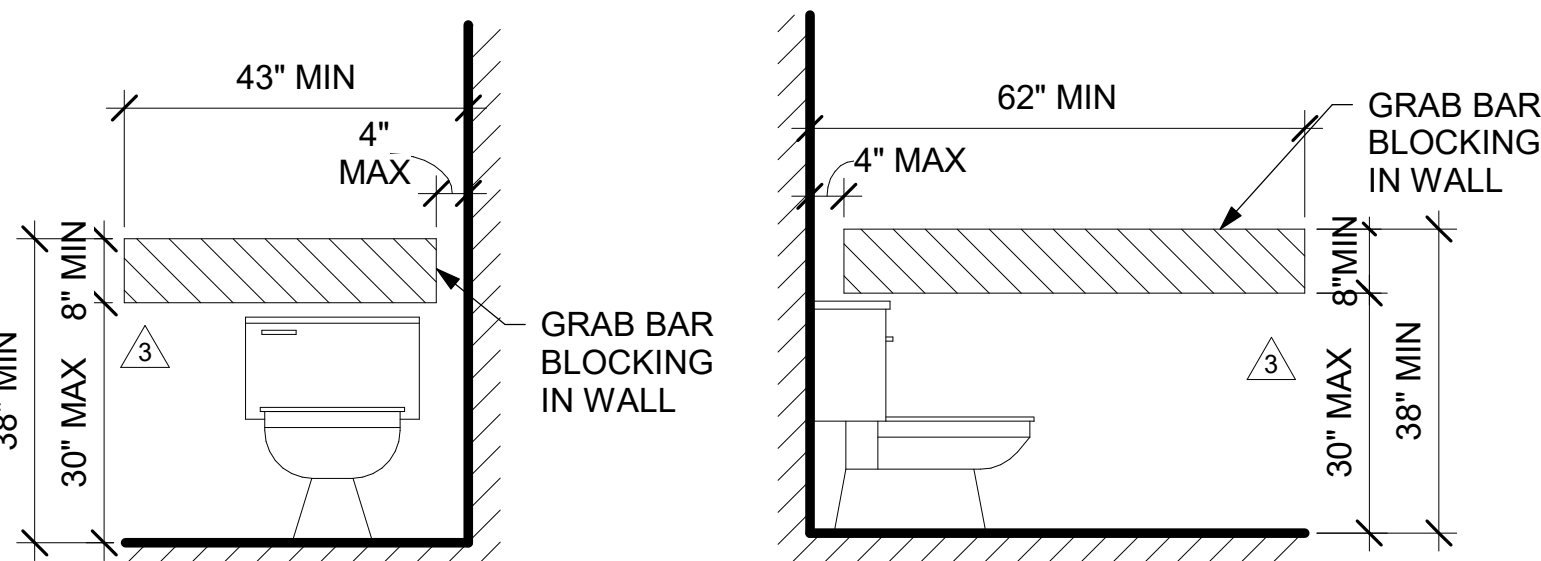
1. Units need to meet all requirements of California Building Code and Americans with Disabilities Act.
2. Required accessible features shall include but is not limited to the following components:

- a. Accessible path from unit entrance to parking and public sidewalk.
 - b. Door widths and maneuvering clearances at doors.
 - c. Reach range and opening force.
 - d. Closets and Shelving
 - e. Switches, Electrical Outlets, and other controls.
 - f. Operable windows and window blinds.
 - g. Kitchen and bath counter heights
 - h. Knee space under sink and work surface.
 - i. ADA compliant appliances.
 - j. Maneuvering space at toilet, sink, tub/shower.
 - k. Seat at tub/shower.
 - l. Grab bars
 - m. Visual doorbell for Hearing/Visual Impairment (HVI)
3. Refer to attached Exhibit 1 – Accessibility Code Analysis for diagrams, mounting heights, and maneuvering clearances, and components of Kitchen and Bath

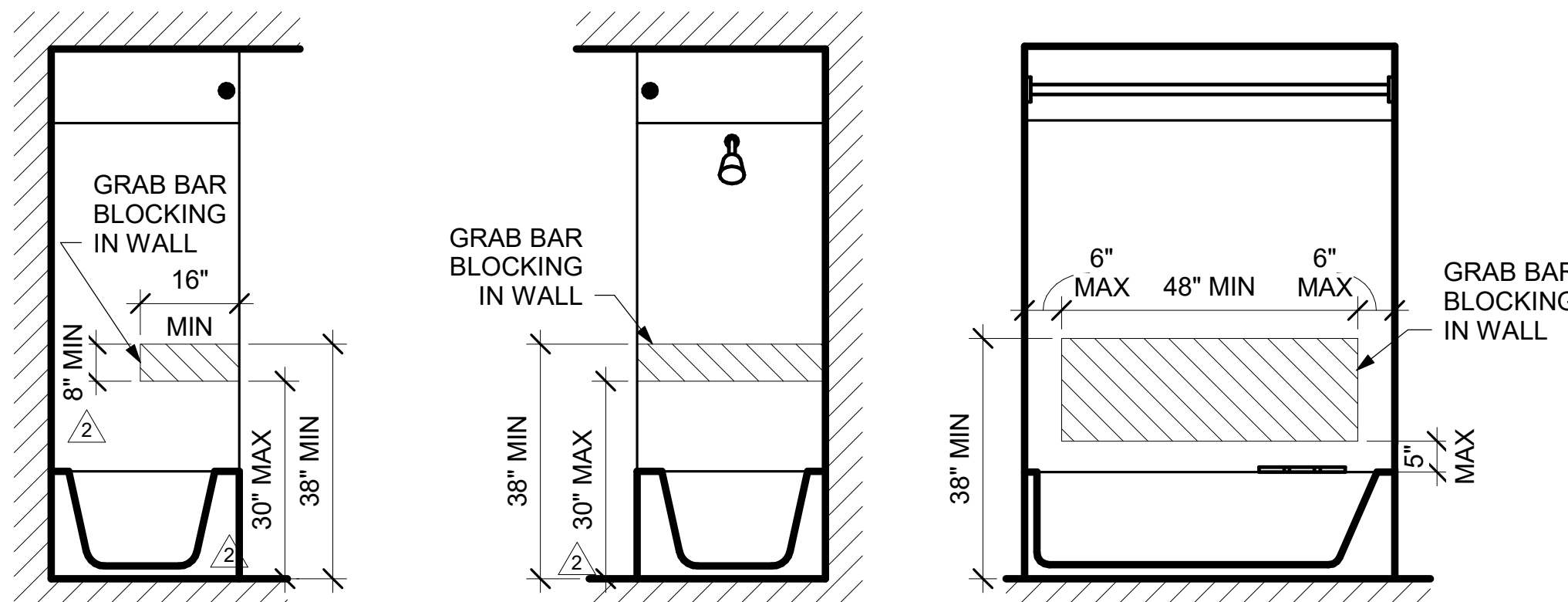
Construction Requirements:

1. The home shall be installed, leveled, and anchored by qualified installation personnel who are acceptable to the authority having jurisdiction.
2. This is a Prevailing Wage Rate Project. On-site Contractor to be DIR registered and comply with all applicable laws.
3. Contractor will be responsible to provide any temporary facilities that may be required on site to implement the work. Job site trailer is not required. However, DBE may provide if desired and if it is in an approved location.
4. Contractor and its sub-contractors are required to comply with all City of Half Moon Bay and San Mateo County rules while onsite. Any violation will result in the immediate removal of person(s) from the project.
5. Contractor to provide notifications at least 48-hours in advanced for any planned power or water shut-offs that may affect areas beyond the building area itself.

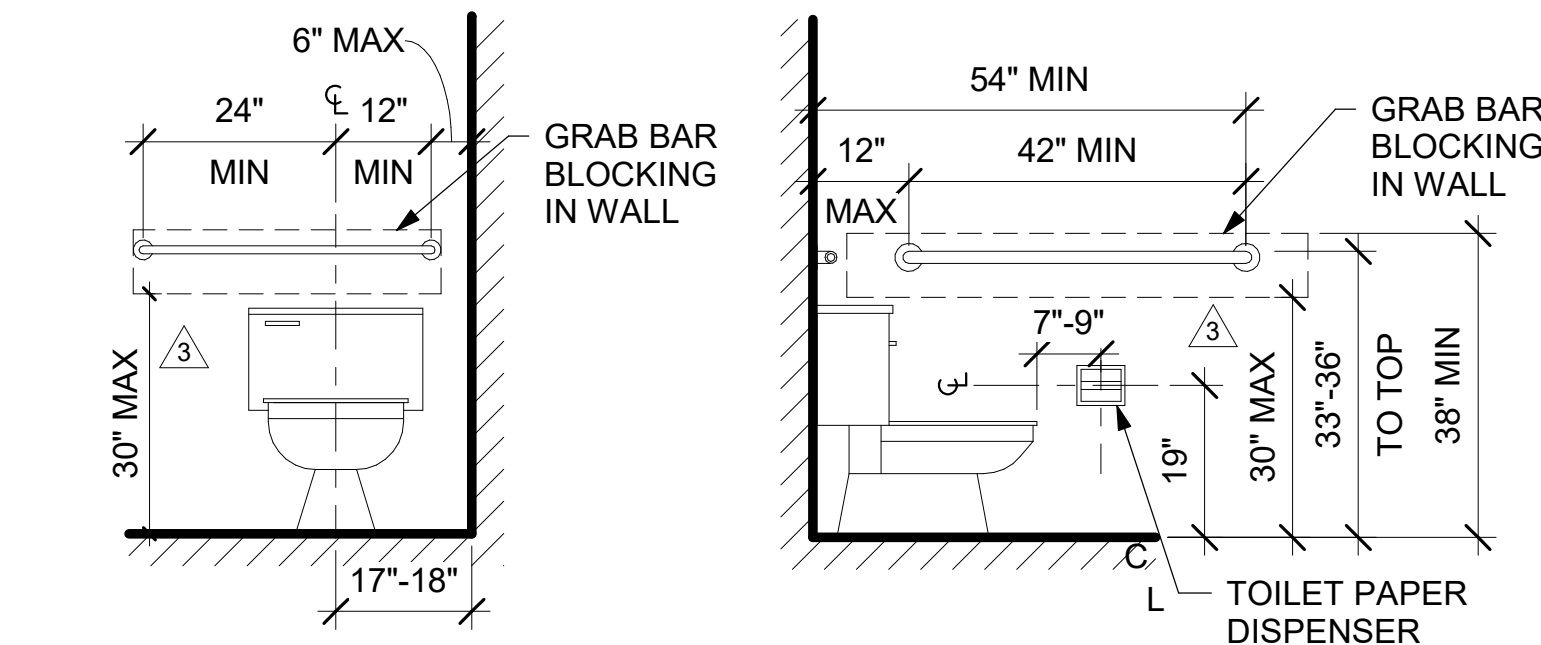
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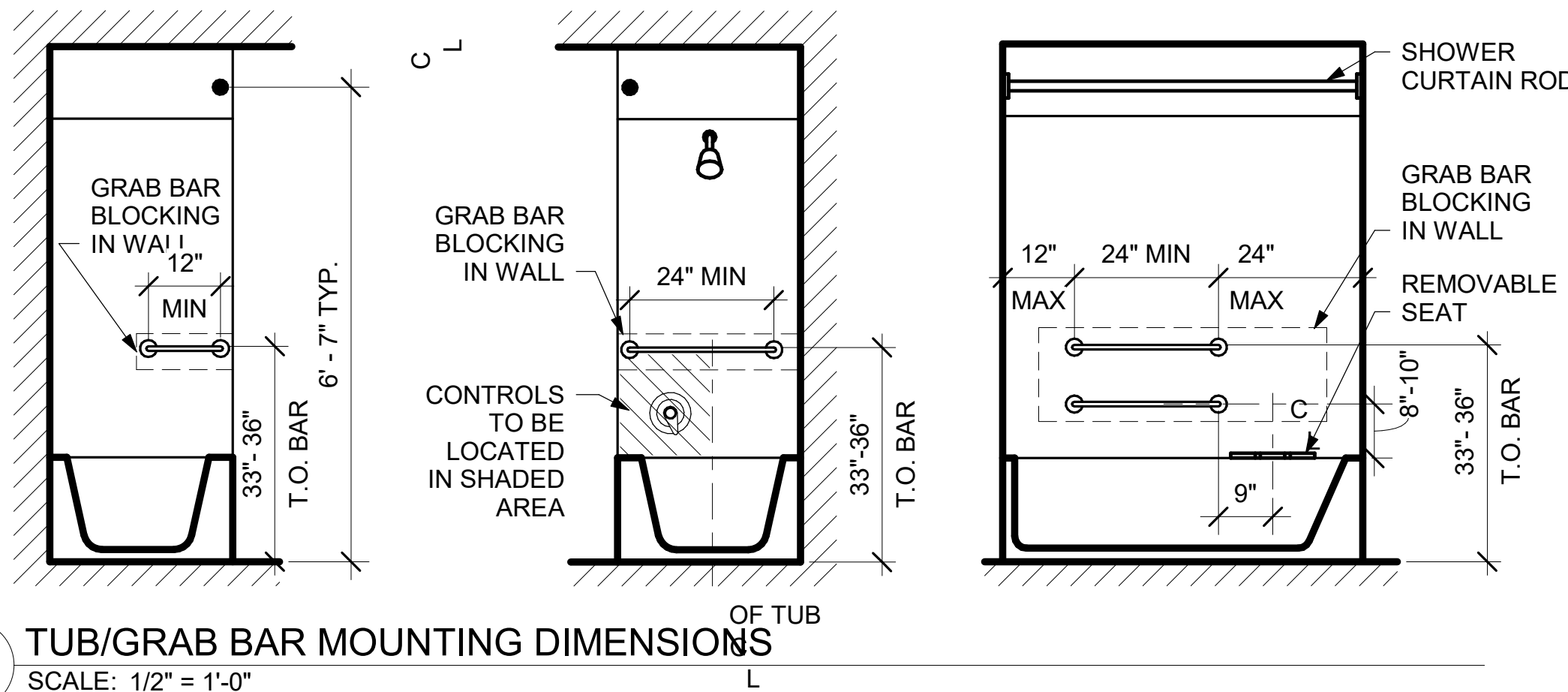
8 TOILET GRAB BAR BLOCKING DIAGRAMS
SCALE: 1/2" = 1'-0"



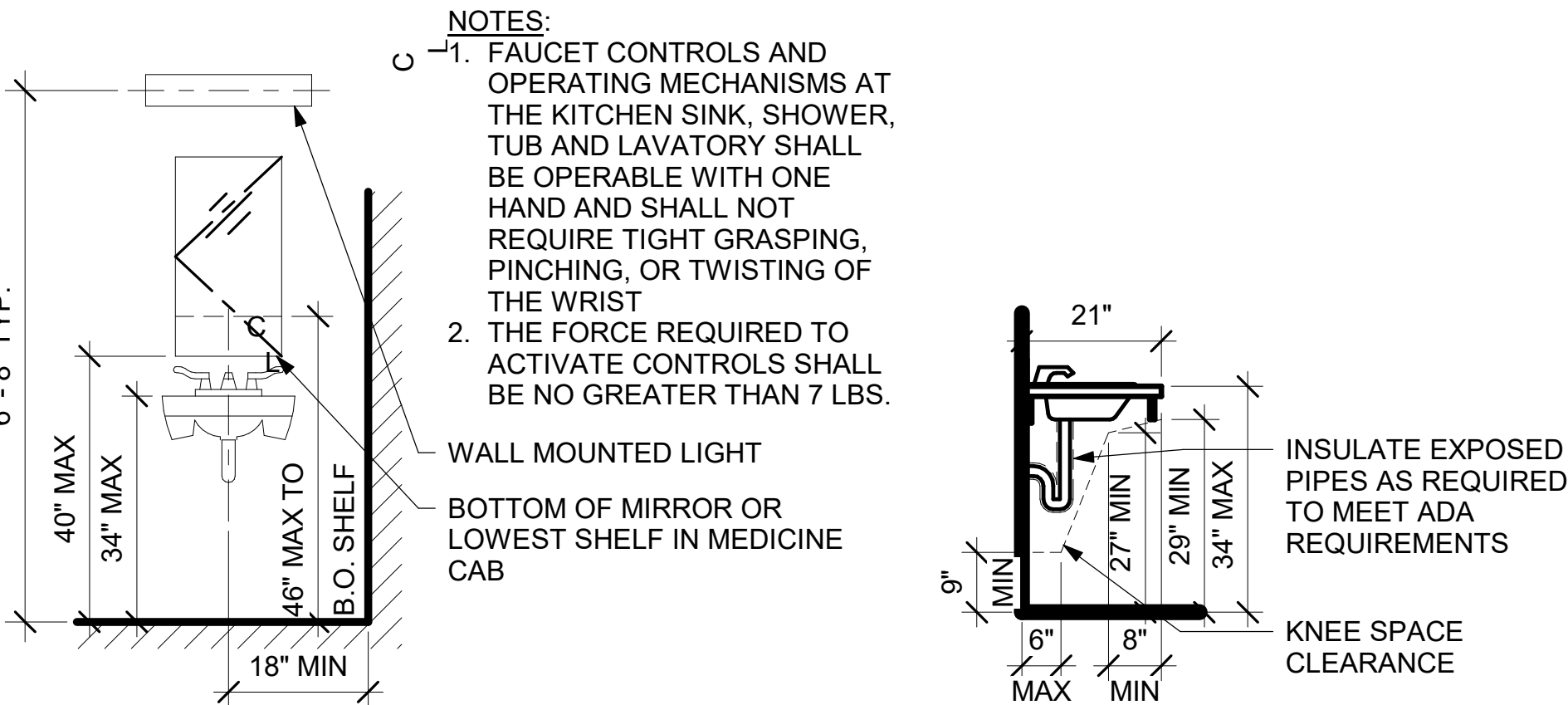
4 TUB/GRAB BAR BLOCKING DIAGRAMS
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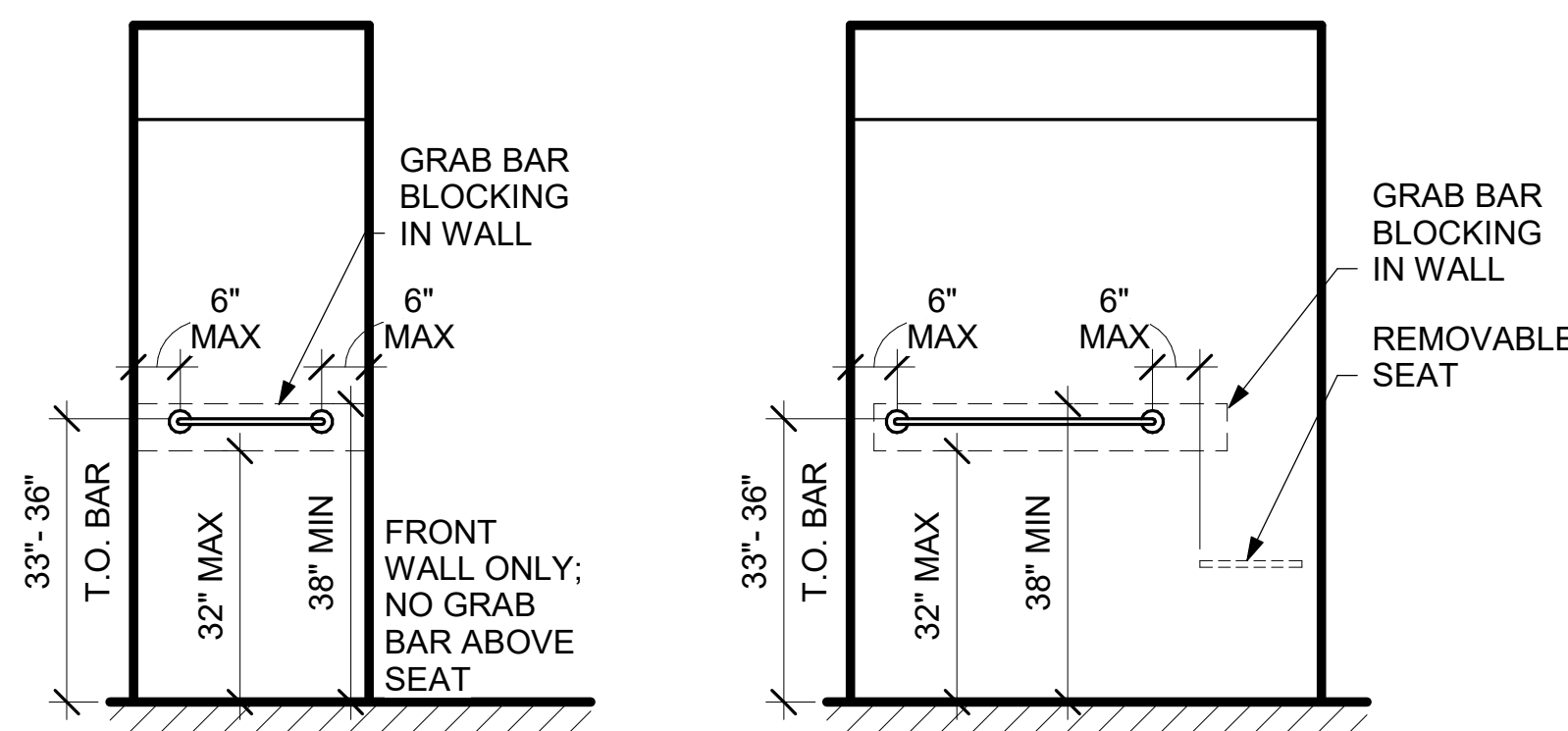
7 TOILET/GRAB BAR MOUNTING DIMENSIONS
SCALE: 1/2" = 1'-0"



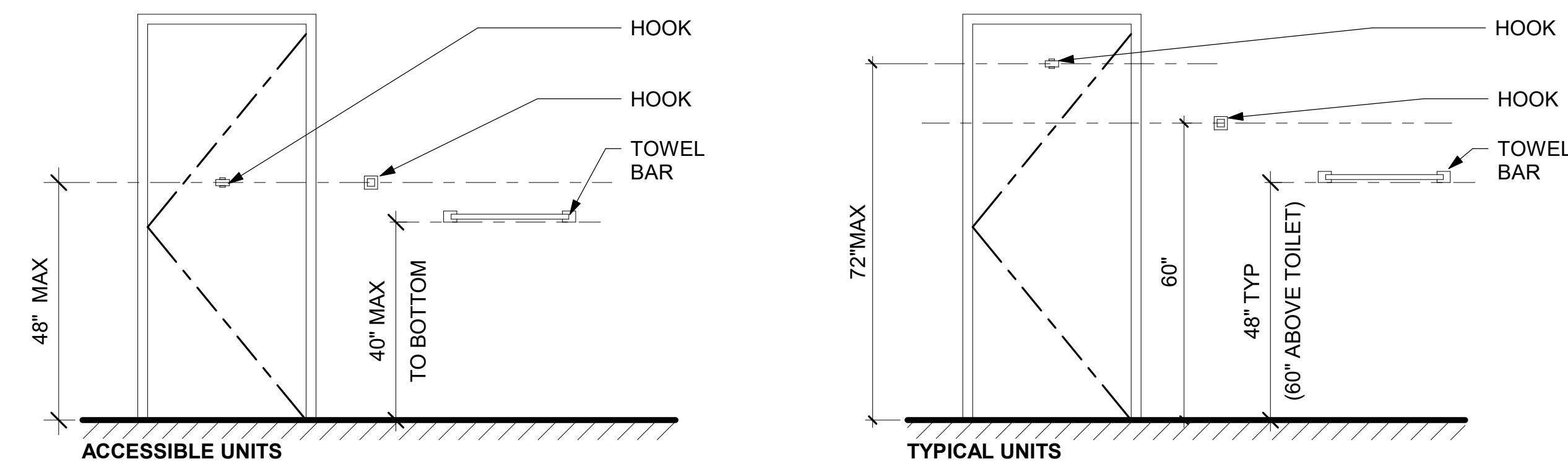
3 TUB/GRAB BAR MOUNTING DIMENSIONS
SCALE: 1/2" = 1'-0"



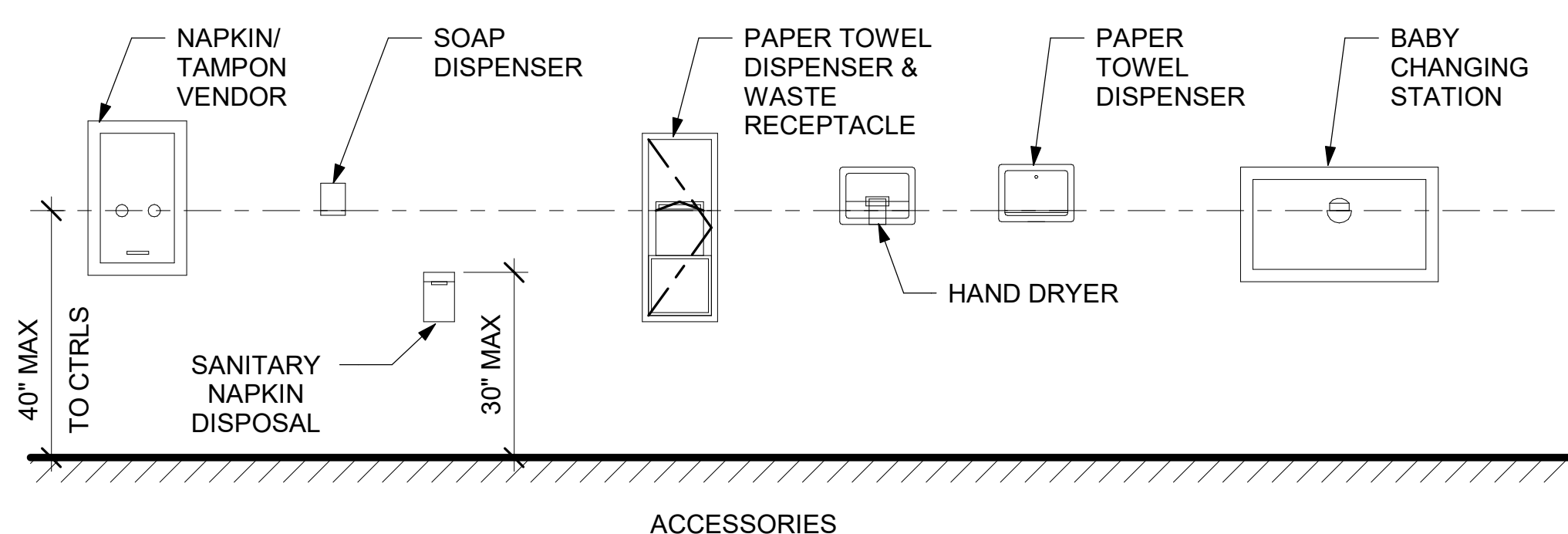
6 LAVATORY DIAGRAMS
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2 SHOWER GRAB BARS/BLOCKING
SCALE: 1/2" = 1'-0"



5 MOUNTING HEIGHTS - BATHROOM
SCALE: 1/2" = 1'-0"



1 MOUNTING HEIGHTS - RESTROOM
SCALE: 1/2" = 1'-0"

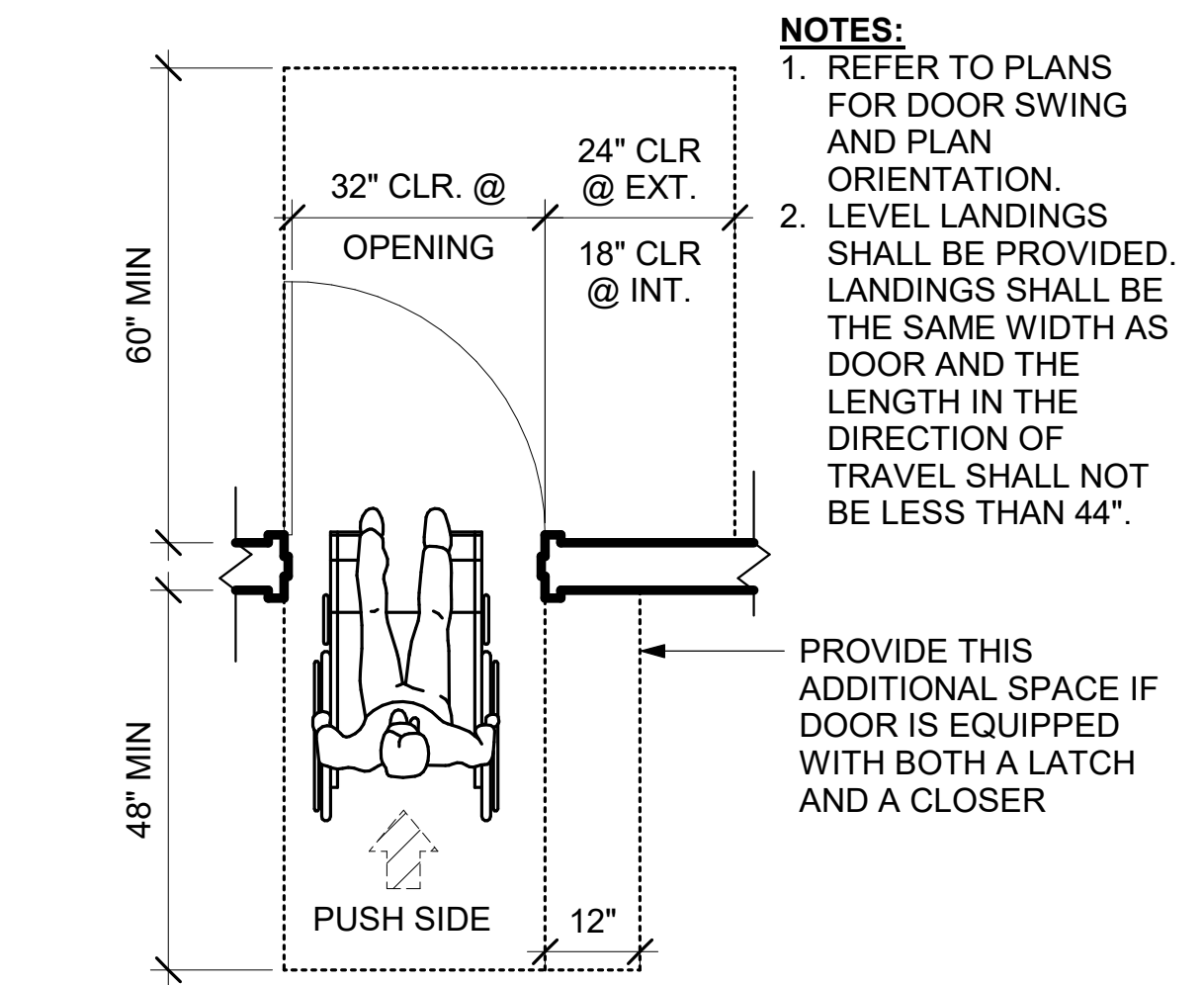
STONE PINE COVE
800 STONE PINE ROAD
HALF MOON BAY, CA

ISSUANCE
DATE
12/14/2023
SCALE
1/2" = 1'-0"
PROJECT NUMBER
202328
DRAWN BY
Author
DRAWING TITLE

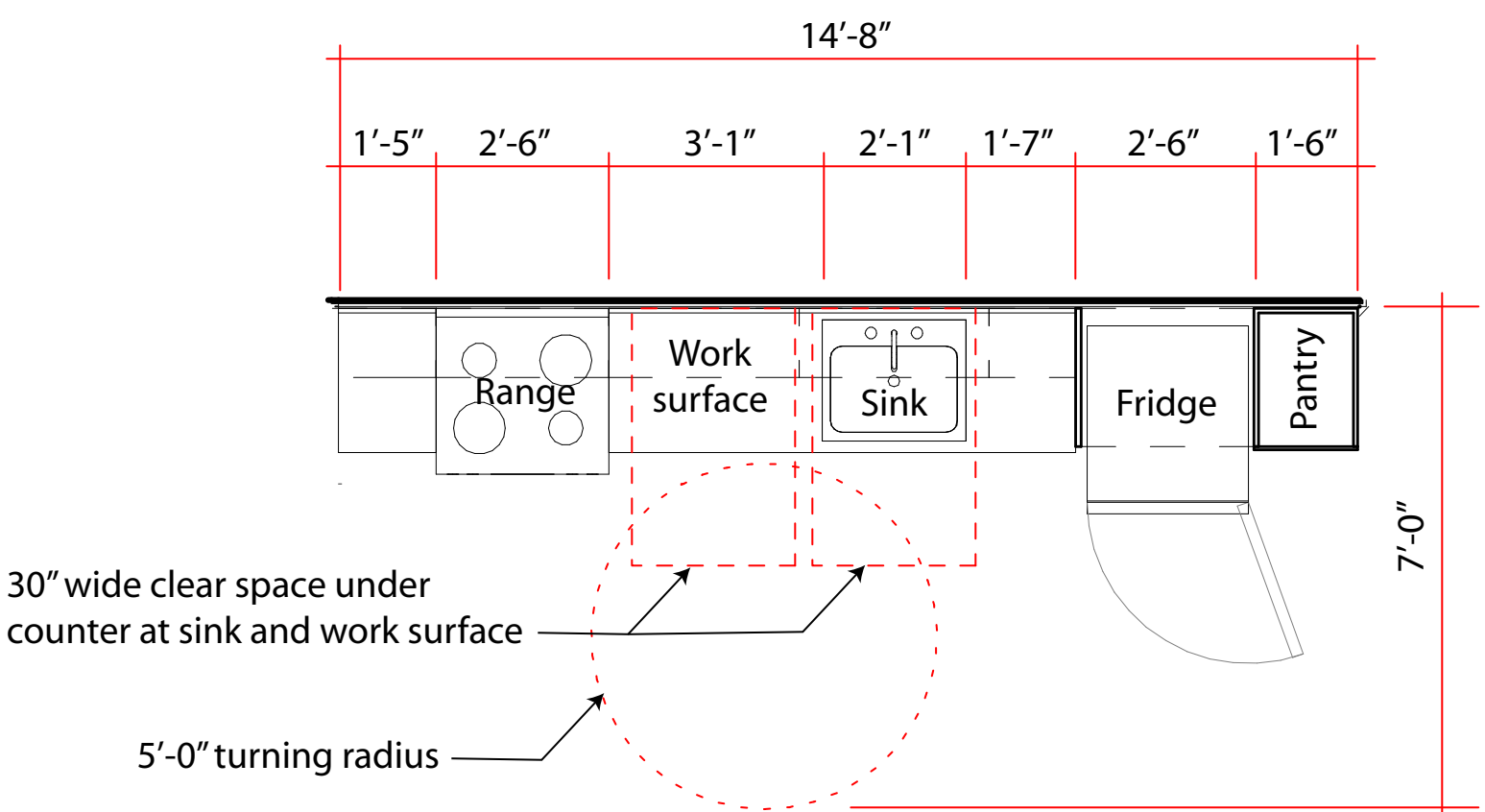
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G5.04

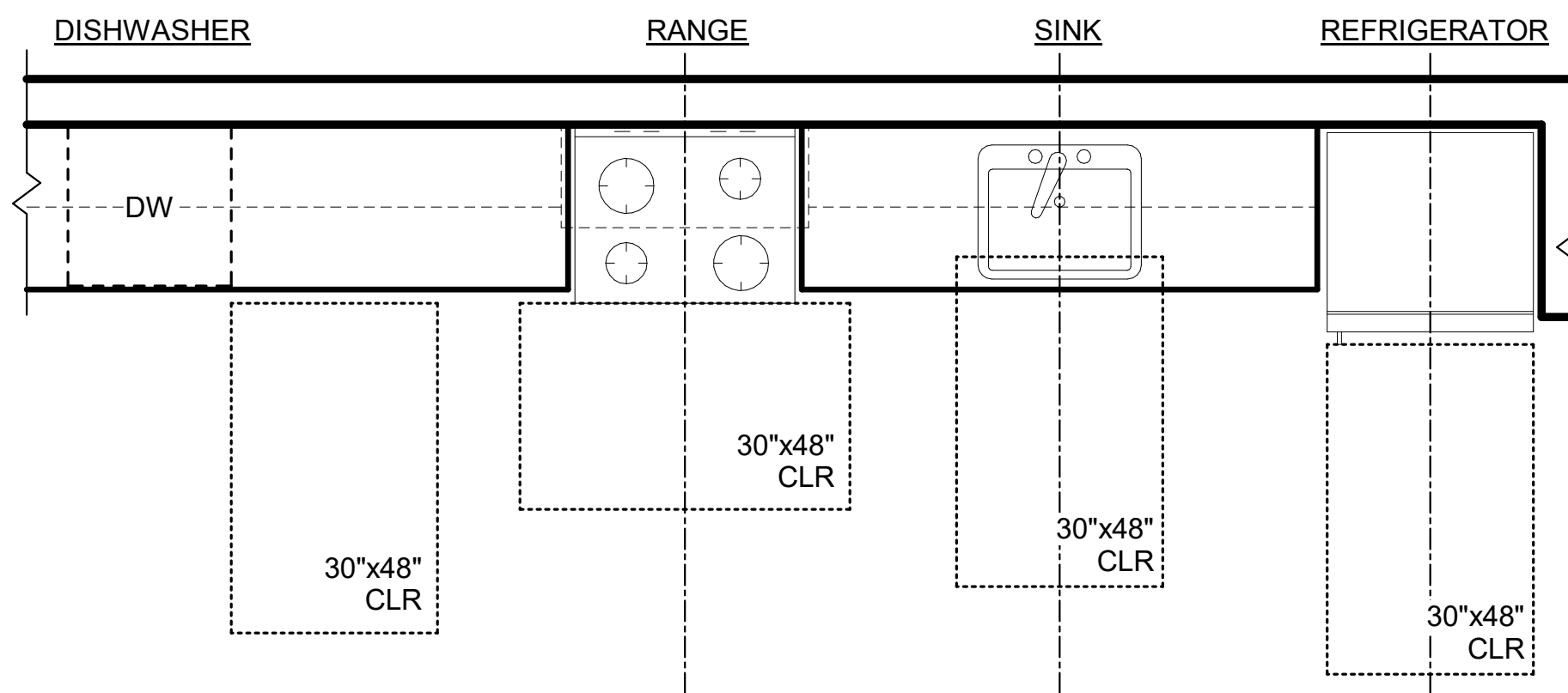
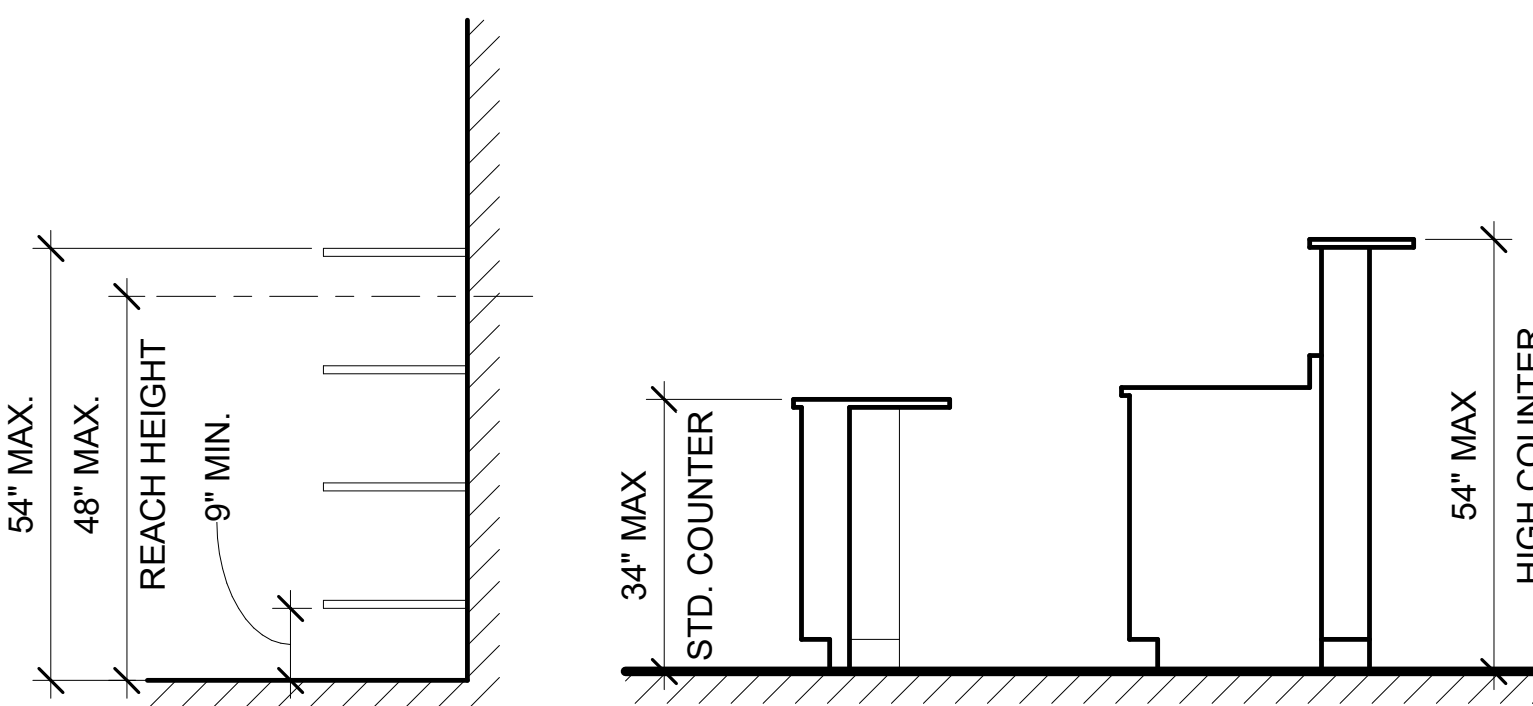
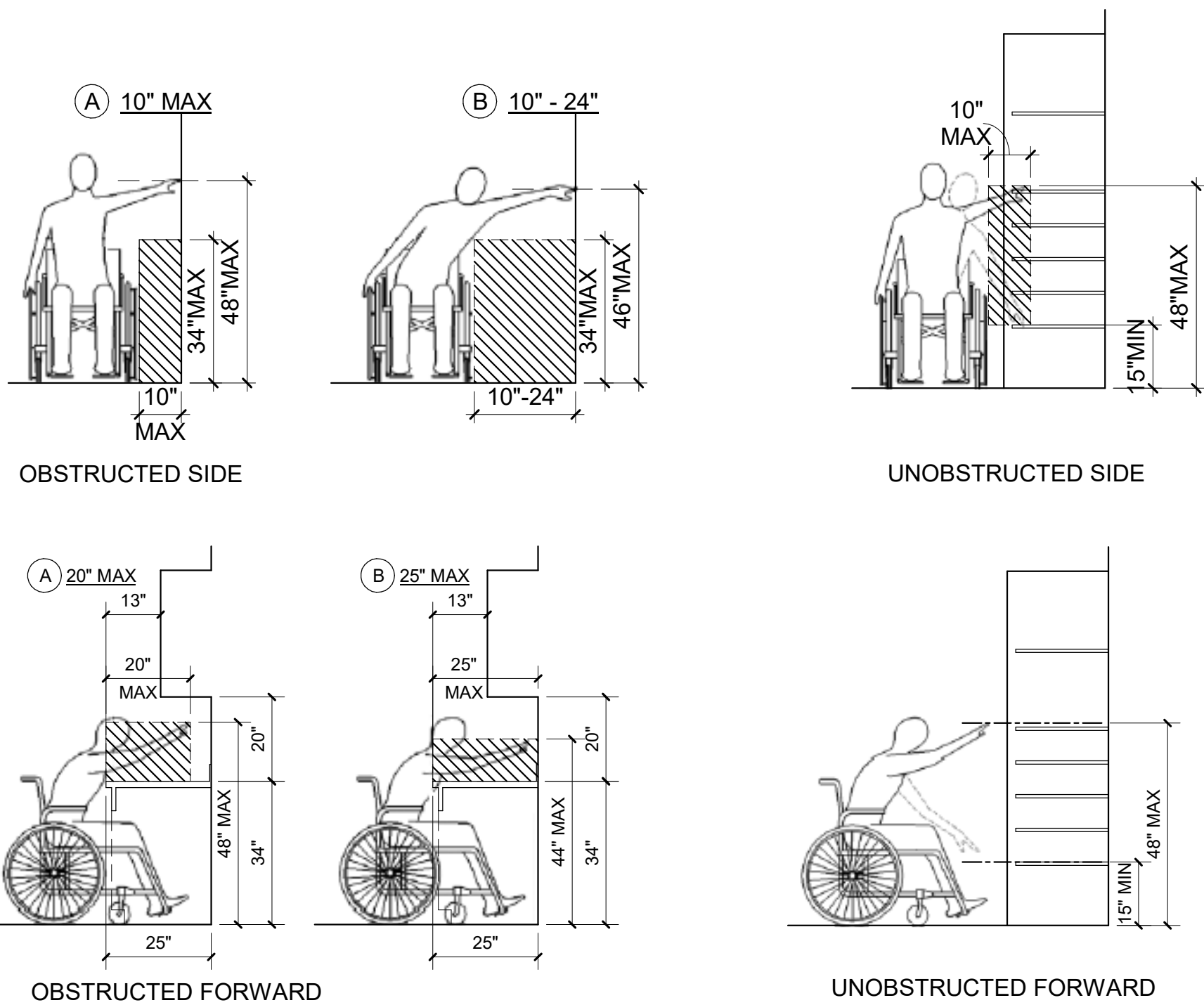
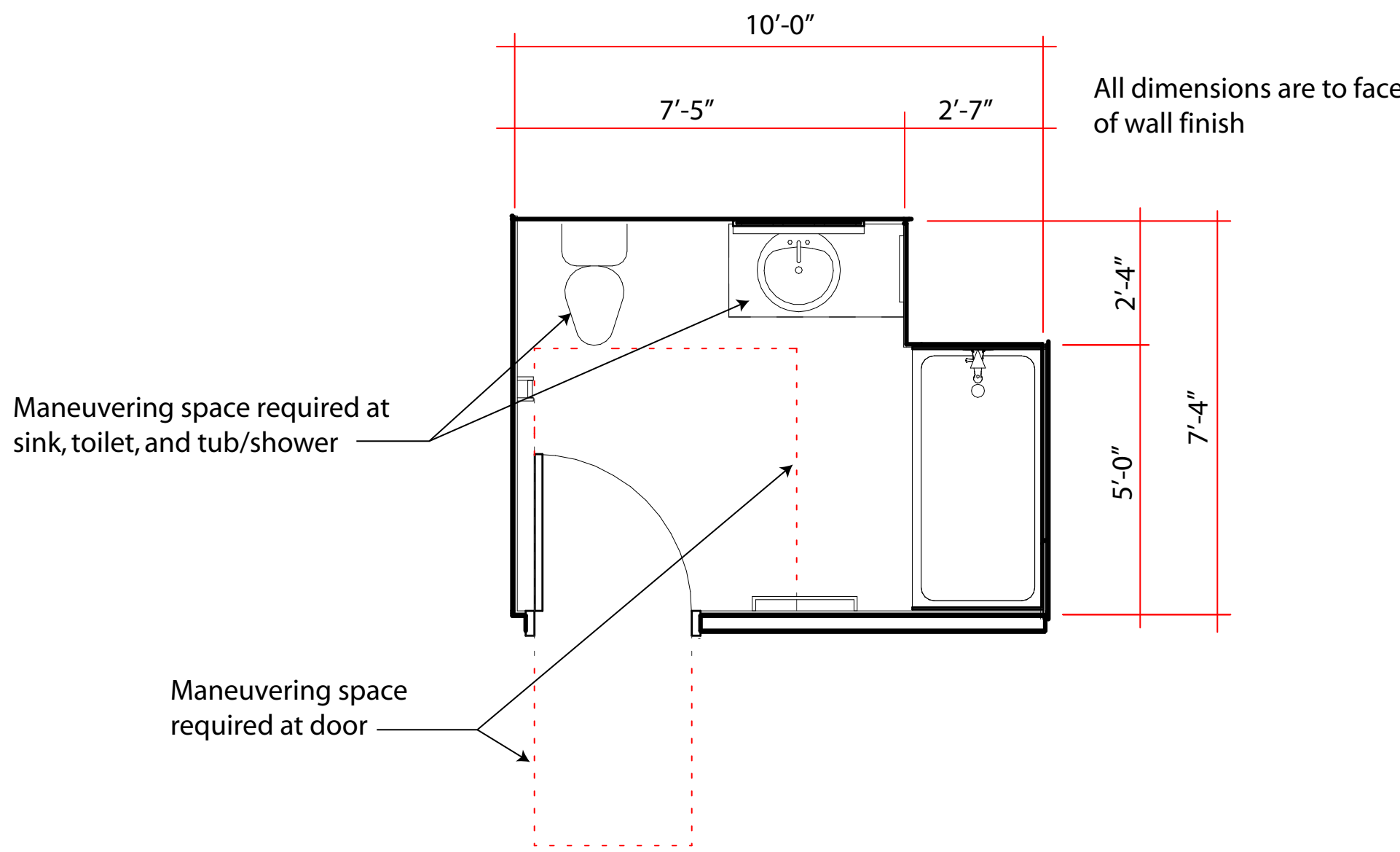
EXHIBIT 1



ACCESSIBLE KITCHEN

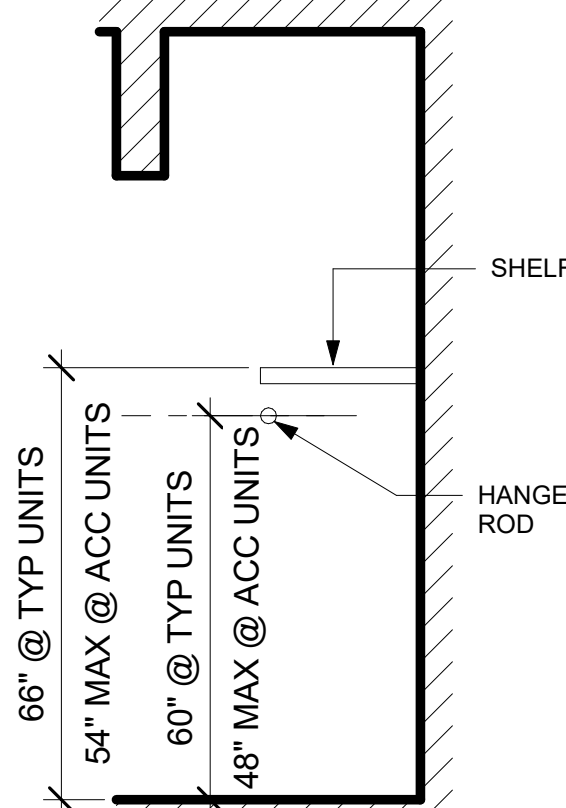


ACCESSIBLE BATHROOM

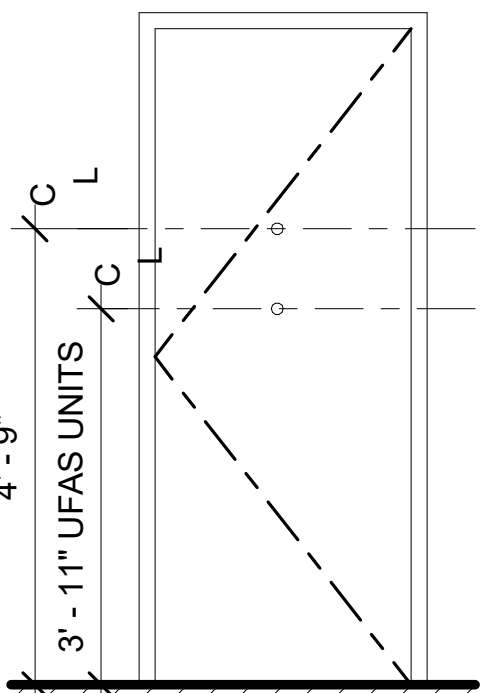


2 ACCESSIBLE KITCHEN CLEARANCES & HEIGHTS
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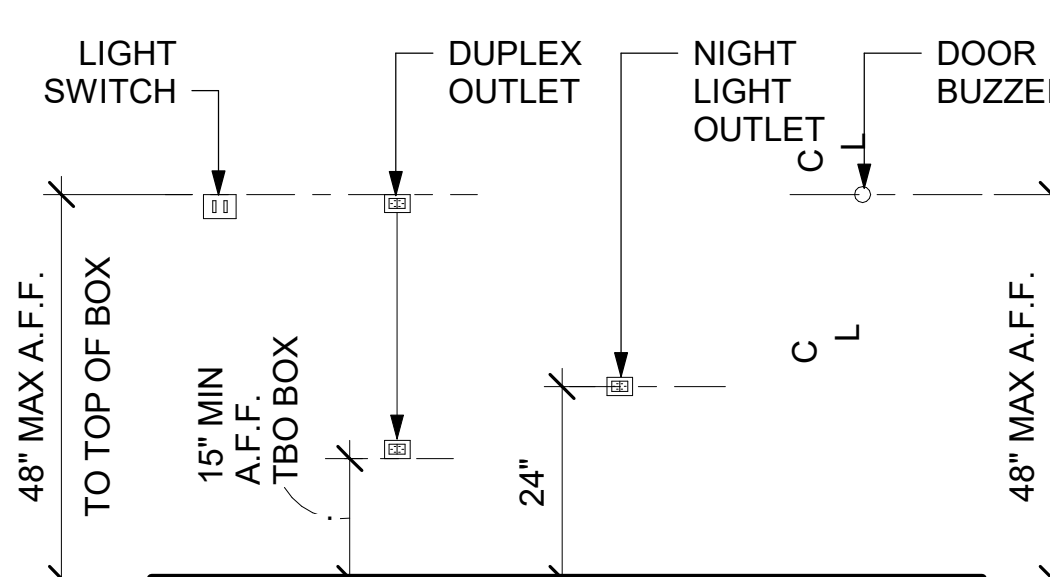
5 MOUNTING HEIGHTS - CLOSET
SCALE: 1/2" = 1'-0"



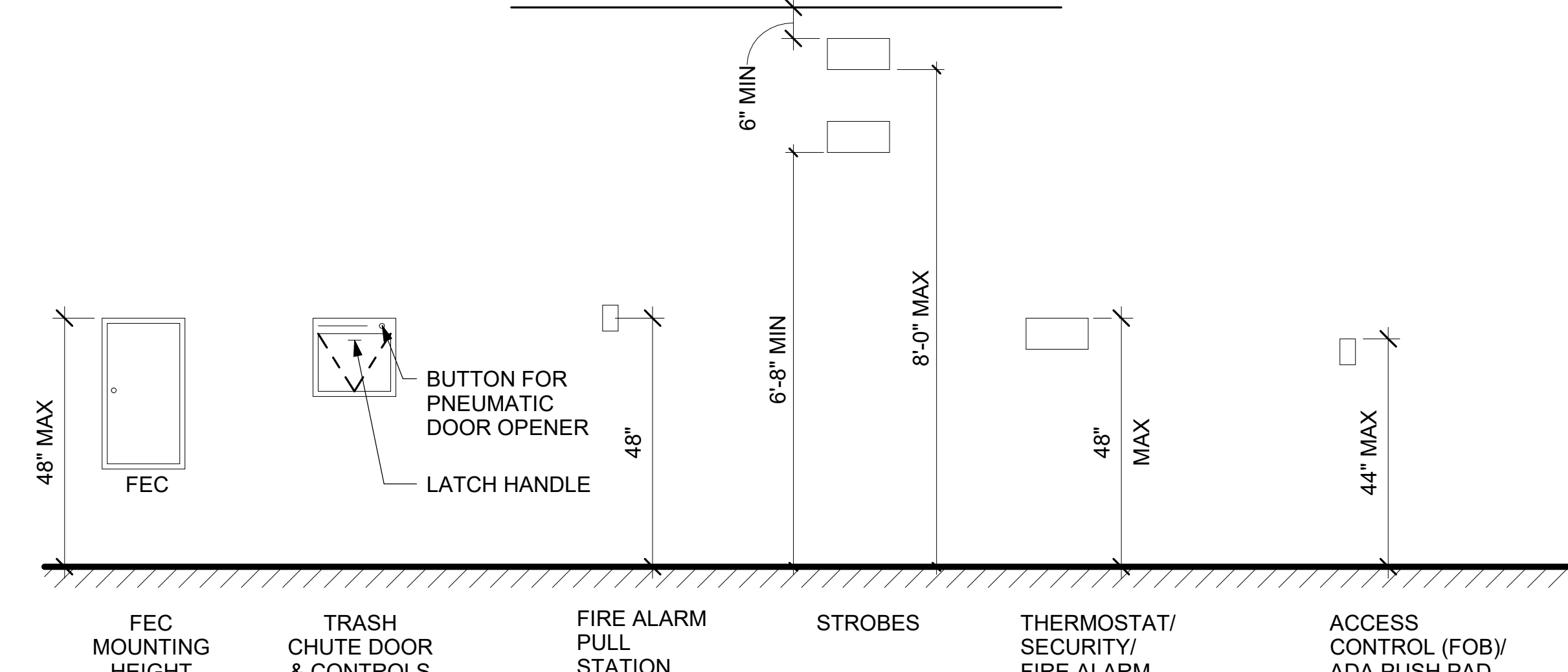
6 DOOR VIEWER HEIGHTS
SCALE: 1/2" = 1'-0"



4 MOUNTING HEIGHTS - ELEC
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1 MOUNTING HEIGHTS - MISC
SCALE: 1/2" = 1'-0"



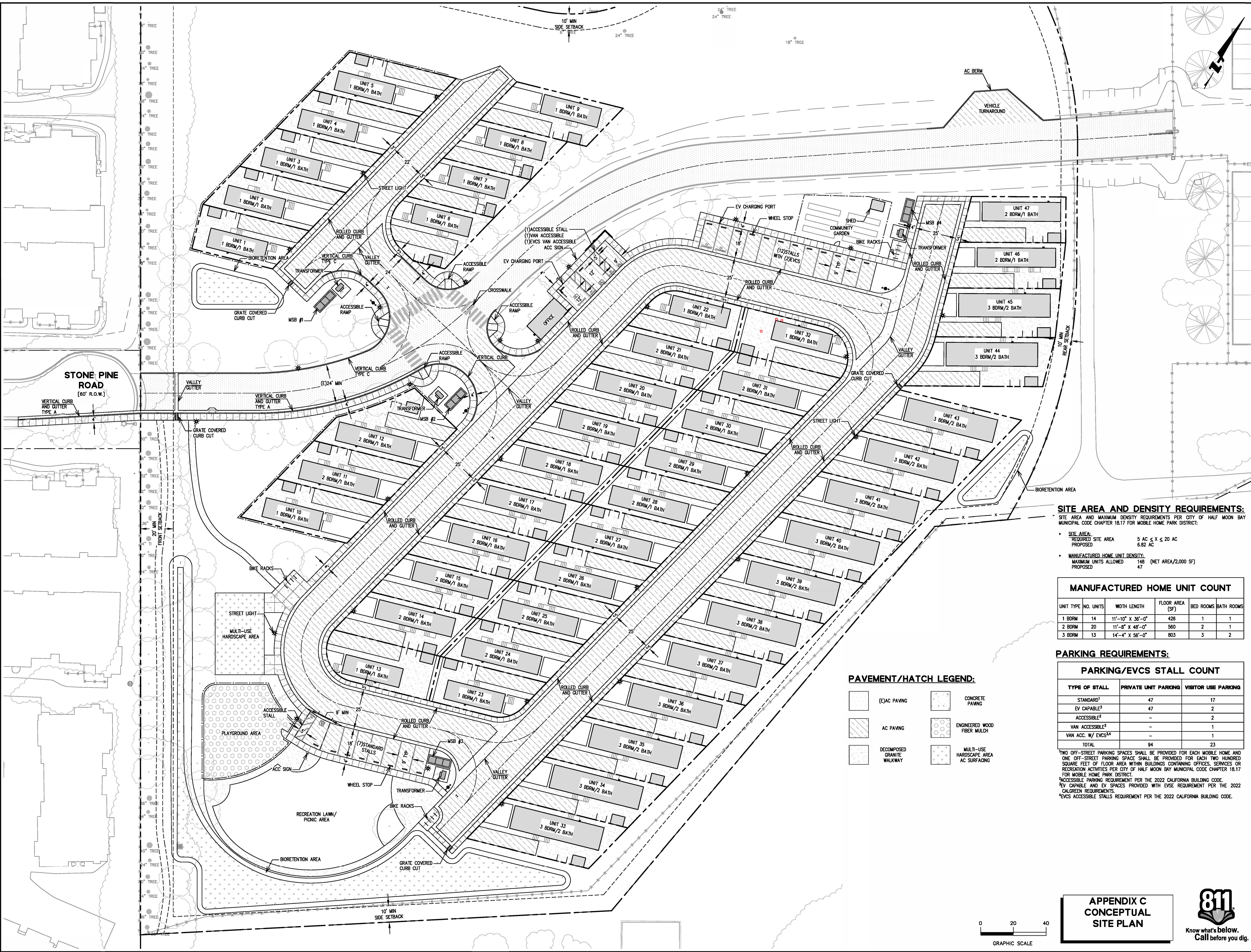
STONE PINE COVE
800 STONE PINE ROAD
HALF MOON BAY, CA

ISSUANCE
DATE
12/14/2023
SCALE
As indicated
PROJECT NUMBER
202328
DRAWN BY
Author
DRAWING TITLE

CODE ANALYSIS -
ACCESSIBILITY
SHEET NUMBER

G5.05

APPENDIX C
CONCEPTUAL SITE PLAN



SITE AREA AND DENSITY REQUIREMENTS:
SITE AREA AND MAXIMUM DENSITY REQUIREMENTS PER CITY OF HALF MOON BAY MUNICIPAL CODE CHAPTER 18.17 FOR MOBILE HOME PARK DISTRICT:

• SITE AREA:	
REQUIRED SITE AREA	5 AC ≤ X ≤ 20 AC
PROPOSED	6.82 AC
• MANUFACTURED HOME UNIT DENSITY:	
MAXIMUM UNITS ALLOWED	148 (NET AREA/2,000 SF)
PROPOSED	47

MANUFACTURED HOME UNIT COUNT

UNIT TYPE	NO. UNITS	WIDTH LENGTH	FLOOR AREA (SF)	BED ROOMS	BATH ROOMS
1 BDRM	14	11'-10" X 36'-0"	426	1	1
2 BDRM	20	11'-8" X 48'-0"	560	2	1
3 BDRM	13	14'-4" X 56'-0"	803	3	2

PARKING REQUIREMENTS:

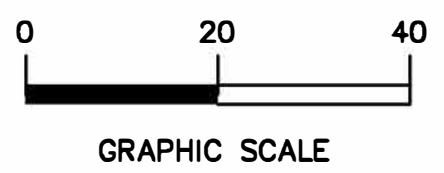
PARKING/EVCS STALL COUNT

TYPE OF STALL	PRIVATE UNIT PARKING	VISITOR USE PARKING
STANDARD ¹	47	17
EV CAPABLE ³	47	2
ACCESSIBLE ²	-	2
VAN ACCESSIBLE ²	-	1
VAN ACC. W/ EVCS ⁴	-	1
TOTAL	94	23

¹TWO OFF-STREET PARKING SPACES SHALL BE PROVIDED FOR EACH MOBILE HOME AND ONE OFF-STREET PARKING SPACE SHALL BE PROVIDED FOR EACH TWO HUNDRED SQUARE FEET OF FLOOR AREA WITHIN BUILDINGS CONTAINING OFFICES, SERVICES OR RECREATION ACTIVITIES PER CITY OF HALF MOON BAY MUNICIPAL CODE CHAPTER 18.17 FOR MOBILE HOME PARK DISTRICT.
²ACCESSIBLE PARKING REQUIREMENT PER THE 2022 CALIFORNIA BUILDING CODE.
³EV CAPABLE AND EV SPACES PROVIDED WITH EVSE REQUIREMENT PER THE 2022 CALIFORNIA REQUIREMENTS.
⁴EVCS ACCESSIBLE STALLS REQUIREMENT PER THE 2022 CALIFORNIA BUILDING CODE.

PAVEMENT/HATCH LEGEND:

(E)AC PAVING	CONCRETE PAVING
AC PAVING	ENGINEERED WOOD FIBER MULCH
DECOMPOSED GRANITE WALKWAY	MULTI-USE HARDSCAPE AREA SURFACING



**APPENDIX C
CONCEPTUAL
SITE PLAN**



APPENDIX D

COUNTY OF SAN MATEO – COUNTY EXECUTIVE OFFICE
PREQUALIFICATION SUBMITTAL TEMPLATE
DESIGN-BUILD ENTITIES

This standard prequalification submittal template should be completed by design-build entities or design-build teams seeking to prequalify for a County of San Mateo (“County”) design-build project.

As used in here:

- “DBE” refers to both design-build entities and design-build teams.
- “Member” refers to individuals or entities identified as members of the DBE, including the general contractor and, if utilized in the design of the project, all electrical, mechanical, and plumbing subcontractors and other trade partners.
- “Associates” refers to all current officers, owners, and/or partners of DBE and of any Member.

Wherever additional space is needed to answer a question fully and accurately, attach additional copies of the template pages and/or additional signed sheets as needed.

I. BUSINESS INFORMATION

Please **attach an introductory paragraph** describing your DBE team’s composition. Name each DBE member, its role and responsibility for this project, and describe the entity’s form of organization (sole proprietor, limited liability, corporation, partnership, etc.).

A. Contact Information

1. DBE Name: _____
2. Primary contact Person: _____
3. Principal office address: _____
4. Phone: _____
5. Fax: _____
6. Email: _____

B. Form of Organization

1. If the DBE or any Member is a **corporation**:

- a. Date incorporated: _____
- b. Under laws of what state: _____
- c. If a privately held corporation, list all shareholders who will perform work on the project:

Name	Ownership Percentage

- d. Attach a copy of the articles of incorporation.

2. If the DBE or any Member is a **limited liability company**:

- a. Date formed: _____
- b. Under laws of what state: _____
- c. List all LLC members who will perform work on the project:

Name	Ownership Percentage

- d. Attach a copy of the articles of organization.

3. If the DBE or any Member is a **partnership**:

- a. Date formed: _____
- b. Under laws of what state: _____
- c. List all partners who will perform work on the project:

Name	Ownership Percentage

- d. Attach a copy of the partnership agreement.

4. If the DBE or any Member is a **joint venture**:

- a. Date formed: _____
- b. Under laws of what state: _____
- c. List all joint venture members who will perform work on the project:

Name	Ownership Percentage

- d. Attach a copy of the joint venture agreement.

5. If the DBE or any Member is a **sole proprietorship**:

- a. Date formed: _____
- b. Under laws of what state: _____
- c. List owner: _____
- d. Attach a copy of organizational documents, if any.

C. Financial Capacity

- 1. Attach an audited financial statement with accompanying notes and supplemental information for the past 2 full fiscal years for DBE and each entity Member (not individual Members). A letter verifying availability of a line of credit may also be attached; however, it will be considered supplemental information only, and is not a substitute for the required financial statement.
- 2. Is DBE or any Member currently, or has DBE or any Member within the last 5 years been, the debtor in a bankruptcy case?

___ Yes ___ No

If “yes,” please attach a copy of the bankruptcy petition and a copy of the bankruptcy court’s discharge or any other document that ended the case, if any.

II. LICENSING AND REGISTRATION

A. General Contractor

- 1. Name of license holder exactly as on file with the Contractors State License Board (“CSLB”):

- 2. License classification(s): _____
- 3. License #: _____
- 4. Issue Date: _____
- 5. Expiration Date: _____
- 6. Public Works Contractor Registration # on file with the Department of Industrial Relations (“DIR”): _____
- 7. Has any CSLB license held by the general contractor or its qualifying individual been suspended or revoked within the last 5 years?

___ Yes ___ No

If “yes,” explain on a separate signed sheet.

8. Has the general contractor changed names or license numbers within the past 5 years?

___ Yes ___ No

If "yes," explain on a separate signed sheet.

B. Architect of Record

The architect of record is the architect whose stamp will appear on the project Construction/Contract Documents.

1. Name of license holder exactly as on file with the California Architects Board ("CAB"): _____

2. License #: _____

3. Issue Date: _____

4. Expiration Date: _____

5. Has any CAB license held by the architect of record been suspended or revoked within the last 5 years?

___ Yes ___ No

If "yes," explain on a separate signed sheet.

6. Has the architect of record changed names or license numbers within the past 5 years?

___ Yes ___ No

If "yes," explain on a separate signed sheet.

C. Engineer(s)

Engineering services will be dictated by the nature of the project. The DBE should respond for all "in house" engineers or consulting engineers that will provide services on the project. If relevant, use additional signed sheets to respond for multiple engineering disciplines.

1. Name of license holder exactly as on file with the Board of Professional Engineers, Land Surveyors, and Geologists ("BPELSG"): _____

2. License Type: _____

3. Licenses #: _____

4. Issue Date: _____

5. Has any BPELSG license held by the engineer been suspended or revoked within the last 5 years?

___ Yes ___ No

If "yes," explain on a separate signed sheet.

6. Has the engineer changed names or license numbers within the past 5 years?

___ Yes ___ No

If "yes," explain on a separate signed sheet.

D. Mechanical, Electrical, Plumbing Subcontractor(s), or other Trade Partners

If utilized in the design of the project, respond for all Member electrical, or plumbing ("MEP") contractors. If relevant, use additional signed sheets to respond for multiple MEP contractors.

1. Name of license holder exactly as on file with the Contractors State License Board ("CSLB"): _____

2. License classification(s): _____

3. License #: _____

4. Issue Date: _____

5. Expiration Date: _____

6. Public Works Contractor Registration # on file with the Department of Industrial Relations ("DIR"): _____

7. Has any CSLB license held by the MEP contractor or its qualifying individual been suspended or revoked within the last 5 years?

___ Yes ___ No

If "yes," explain on a separate signed sheet.

8. Has the general contractor changed names or license numbers within the past 5 years?

___ Yes ___ No

If "yes," explain on a separate signed sheet.

III. PERFORMANCE HISTORY

1. Has DBE or any Member or Associate ever been found liable in a civil suit, or found guilty in a criminal action, for making any false claim or material misrepresentation to any public agency or entity?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, including identifying who was found liable or guilty, the court and case number, the name of the public entity, the civil or criminal verdict, the date, and the basis for the finding.

2. Has DBE or any Member or Associate ever been convicted of a crime involving any federal, state, or local law related to construction or any crime involving fraud, theft, or any other act of dishonesty?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, including identifying who was convicted, the name of the victim, the date of the conviction, the court and case number, the crimes, and the grounds for the conviction.

3. At any time in the last 10 years, has DBE or any Member been assessed liquidated damages under a construction contract?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, including the project, owner, owner’s address, date of completion, and amount of liquidated damages.

4. At any time in the last 5 years, has DBE or any Member or Associate been debarred, disqualified, removed or otherwise prevented from bidding on, or completing, any public works project?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, including the project, the year of the event, owner, owner’s address, and basis for the action.

5. At any time in the last 5 years, has a public agency found that DBE or any Member was not a responsible bidder?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, including the project, the year of the event, owner, owner’s address, and basis for the finding.

6. In the past 5 years, has any claim exceeding \$50,000 been filed by or against DBE or any Member in court or arbitration concerning work or payment on a construction project?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, including the project name, court or arbitration case name and number, and a brief description of the status of the claim.

7. In the past 5 years, has there been more than one occasion in which DBE or any DBE member was required to pay either back wages or penalties for failure to comply with California prevailing wage laws or federal Davis-Bacon prevailing wage requirements?

___ Yes ___ No

If “yes,” explain on a separate signed sheet, describing the nature of the violation(s), project, owner, and amount paid, if any.

8. At any time during the past 5 years, has DBE or any Member been found to have violated any provision of California apprenticeship laws or regulations, or laws pertaining to use of apprentices on public works projects?

___ Yes ___ No

If “yes,” explain on a separate signed sheet, including date(s) of such findings and attaching the DAS’ final decision(s).

IV. **BONDS AND INSURANCE**

A. **Bonds**

1. Attach a notarized statement from an admitted surety insurer (approved by the California Department of Insurance and authorized to issue bonds in the State of California), which states the current bonding capacity of the DBE (both single job limit and aggregate limit). Note: DBE must have capacity to provide 100% payment bond and 100% performance bond, each issued by an admitted surety insurer, without bonding subcontractors.

2. Provide the name, address, and telephone number of the surety agent: _____

3. List all sureties that have written bonds to the DBE or any Member during the last 5 years:

Name	Address	Date of Bond

4. In the last 5 years, has any surety paid on behalf of the DBE or any Member a result of a default to satisfy any claims made against a payment or performance bond?

___ Yes ___ No

If “yes,” explain on a separate signed sheet, including the amount of each claim, name and telephone number of claimant, date of and grounds for the claim, and present status.

5. If DBE or any Member was required to pay a premium of more than 1 percent for a performance and payment bond on any project in the last 5 years, state the percentage:

Explain on a separate signed sheet why DBE or Member was required to pay the premium of more than 1 percent.

6. In the last 5 years, has DBE or any Member been denied bond coverage by a surety company or had no surety bond in place when once was required?

___ Yes ___ No

If “yes,” explain on a separate signed sheet, including the name of the surety company and/or period during which DBE or Member had no bond in place.

B. Insurance

1. Does DBE have liability insurance with a policy limit of at least \$2,000,000 per occurrence and \$4,000,000 aggregate for a California admitted company?

___ Yes ___ No

If “no,” provide on a separate signed sheet what policy limits are available to DBE.

2. Does DBE have current workers’ compensation insurance as required by the California Labor Code or is DBE legally self-insured pursuant the California Labor Code?

3. Does DBE have professional liability (errors and omissions) insurance with a policy limit of at least \$2,000,000 aggregate from a California admitted company?

___ Yes ___ No

If “no,” provide on a separate signed sheet what policy limits are available to DBE.

4. Will you maintain a Builder’s Risk, Course of Construction or similar first party property coverage that will be issued on a full replacement cost value basis consistent with the total

replacement cost of all insurable Work and the Project, as outlined within the Contract Documents?

☐ Yes ☐ No

5. In the last 5 years, has any insurance carrier, for any form of insurance, refused to renew an insurance policy for DBE or any Member?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, including the name of the insurance carrier, form of insurance, and year of the refusal.

V. SAFETY

1. Attach a description, not to exceed 1 page, of DBE’s worker safety program as applicable to this project.
2. Within the past 5 years, has the California or federal Occupation Safety and Health Administration (“OSHA”) cited and assessed penalties against DBE or any Member, for “serious,” “willful” or “repeat” violations of its safety or health regulations?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, identifying the citation(s), nature of the violation(s), project, and amount of penalty paid, if any.

3. Within the past 5 years, has the Environmental Protection Agency (“EPA”) or any Air Quality Management or any Regional Water Quality Control Board cited and assessed penalties against DBE or any Member or the owner of the project on which DBE/Member was the contractor?

☐ Yes ☐ No

If “yes,” explain on a separate signed sheet, identifying the citation(s), nature of the violation(s), project, and amount of penalty paid, if any.

4. State the Workers’ Compensation Experience Modification Rate (“EMR”) for DBE and each Member for the past 3 premium years:

Year	EMR

If EMR was 1.00 or higher in any of 3 years, attach a letter of explanation.

5. State the total recordable injury or illness rate and the lost work rate for DBE and each Member for the past 3 years:

Year	Incident Rate	Lost Work Rate

6. Within the past 5 years, has there ever been a period when DBE or any Member had employees but was without workers' compensation insurance or state-approved self-insurance?

___ Yes ___ No

If "yes," explain on separate signed sheet, including the date(s) and reason(s) for the absence of workers' compensation insurance.

VI. **PROJECT EXPERIENCE AND REFERENCES**

1. How many local design-build projects have the general contractor and architect of record involved in this DBE completed together? _____
2. For the completed local design-build projects identified in the preceding answer, state:
 - a. Total dollar value of all contracts: _____
 - b. Dollar value of single largest contract: _____
3. How many Manufactured Housing construction projects (both under construction and completed) has/have:
 - a. The general contractor for the DBE built in the past 5 years? _____
 - b. The architect of record for the DBE designed in the past 5 years? _____

 - c. The engineer(s) for the DBE designed in the past 5 years? _____

 - d. The MEP contractor(s)/trade partners for the DBE worked on in the past 5 years? _____

4. Describe the DBE's ability to self-perform work, and if so, state the trades.

5. Attach an organizational chart and include resumes or similar documents, not to exceed 1 page each, showing the experience, training, and qualifications for up to 6 proposed key personnel of the DBE.
6. Complete **both** project reference forms attached hereto as **Exhibits A-1 and A-2**. The County may, in its discretion, contact project references.

VII. SKILLED AND TRAINED WORKFORCE COMPLIANCE

1. By this submittal, DBE hereby acknowledges, agrees, and hereby provides an enforceable commitment to the County that:
 - a. DBE and its subcontractors at every tier will use a skilled and trained workforce to perform all work on the project or contract that falls within an apprenticeable occupation in the building and construction trades, in accordance with Public Contract Code section 2600 et seq.

VIII. CERTIFICATION

DBE and all Members must sign. Copy this certification page as needed for each Member.

I certify and declare that I have read all the foregoing answers to this prequalification submittal template; that all answers are correct and complete of my own knowledge and belief. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date: _____, 2023

Name of DBE or Member: _____

Signature by authorized individual: _____

Print Name: _____

Title: _____

EXHIBIT A-1

Design-Build Project References

List the three most recent design-build manufactured home projects, each with a contract price over \$1 million, completed by the general contractor for the DBE. The projects may be public or private. Contact information must be current and viable. (Copy additional sheets.)

1. Project Name: _____

2. Project Address: _____

3. Owner (name and tel. #): _____

4. Architect (name and tel. #): _____

5. Construction Manager (name and tel. #): _____

6. Scope of Work: _____

7. Original Completion Date: _____

8. Actual Complete Date: _____

9. Time Extensions Granted (# of days): _____

10. Initial Contract Value: _____

11. Final Contract Value: _____

Date: _____, 2023

Signature by authorized individual: _____

Print Name: _____

Title: _____

EXHIBIT A-2

Public Construction Project References

List the three most recent public construction projects, each with a contract price over \$1 million, completed by the general contractor for the DBE. Contact information should be current and viable. (Copy additional sheets.)

1. Project Name: _____

2. Project Address: _____

3. Owner (name and tel. #): _____

4. Architect (name and tel. #): _____

5. Construction Manager (name and tel. #): _____

6. Scope of Work: _____

7. Was this a design-build project? _____

8. Original Completion Date: _____

9. Actual Complete Date: _____

10. Time Extensions Granted (# of days): _____

11. Initial Contract Value: _____

12. Final Contract Value: _____

Date: _____, 2023

Signature by authorized individual: _____

Print Name: _____

Title: _____

APPENDIX E
GEOTECHNICAL REPORT

REPORT
GEOTECHNICAL ENGINEERING INVESTIGATION
SMC-HMB FARMWORKER HOUSING PROJECT
880 STONE PINE ROAD
HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA



for
County of San Mateo

August 2023



BAGG Engineers, © August 2023

August 23, 2023
BAGG Job No. COUSM-23-03

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

c/o: Steven McGuckin, AIA
Capital Program Management, Inc

REPORT

Geotechnical Engineering Investigation
SMC-HMB Farmworker Housing Project
880 Stone Pine Road
Half Moon Bay, San Mateo County, California

Dear Mr. McGuckin:

Transmitted herewith is our geotechnical engineering investigation report for the captioned project in the City of Half Moon Bay, County of San Mateo, California. This report presents a description of our investigative procedures and the encountered subsurface conditions, potential geologic and seismic hazards that could impact development on the site, the results of our laboratory testing, and our findings, conclusions and recommendations for the proposed site improvements. As a part of these services, we performed three (3) Cone Penetration Tests and advanced four (4) borings at the site, and collected disturbed bulk and relatively undisturbed ring samples of the site materials for visual examination and laboratory testing, as discussed later in this report.

Our investigation has indicated that the site could be subjected to lateral spreading during a major earthquake. Our best estimate indicates the lateral spreading could be on the order of 6 inches near the center of the project, and increasing to about 1½ feet adjacent to the creek.

Thank you for the opportunity to be of service on this project. Please do not hesitate to contact us should you have any questions or comments.

Very truly yours,

BAGG Engineers


Jingqi Liu
Project Engineer


Jason Van Zwol
VP/Chief Engineer



REPORT
GEOTECHNICAL ENGINEERING INVESTIGATION
SMC-HMB FARMWORKER HOUSING PROJECT
880 STONE PINE ROAD
HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA

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ASFE document titled "Important Information about This Geotechnical Engineering Report"	

REPORT

**GEOTECHNICAL ENGINEERING INVESTIGATION
SMC-HMB FARMWORKER HOUSING PROJECT
880 STONE PINE ROAD
HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA**

1.0 INTRODUCTION

This report presents the results of our geotechnical engineering investigation performed to characterize the subsurface conditions at the site and assess the potential for geologic and geotechnical issues potentially affecting the design and construction of the proposed improvements. The attached Plate 1, Vicinity Map, shows the general location of the subject site, while Plate 2, Site Plan, depicts the site layout, the location of the proposed improvements, the approximate locations of the exploratory borings and Cone Penetration Tests (CPTs) advanced for the corporation yard in 2021, as well as the approximate locations of the borings (B-6 through B-9) and CPTs (CPT-3 through CPT-5) advanced for this investigation. Our services were provided in accordance with the scope outlined in our Proposal No. 23-494 dated June 30, 2023.

The following sections of this report present the result of our reviews, research, findings, and geotechnical evaluations following a site-specific subsurface exploration.

2.0 SITE AND PROJECT DESCRIPTION

The subject site is located on the east end of Stone Pine Road, approximately 2,500 feet east of the State Route 1 and 1¼ miles east of the Pacific shoreline in the City of Half Moon Bay, San Mateo County, California. It is bounded by San Mateo Road (Highway 92) on the northwest, a commercial parcel on the northeast, Pilarcitos Creek on the east and southeast, and residential parcels on the west. The site consists of an irregular-shaped, approximately 20-acre parcel that generally slopes gently to the southeast. The northeastern portion of the site is under construction for a corporation yard with a long, elevated driveway from Stone Pine Road to the new corporation yard site for the City of Half Moon Bay. An existing earth-lined agricultural pond is present on the western corner of the site at an elevation about 50 feet higher than in the project area. The remaining site area is undeveloped.

It is our understanding that the project will consist of the construction of 47 modular houses in the western vacant portion of the parcel on both sides of the new driveway. The houses are anticipated to be constructed on graded building pads and supported on 18-inch-tall, load-bearing piers supported on either 24"x24" pressure treated plywood pad, or 24"x24" pre-cast concrete pads set on compacted base rock surface with tie-downs for seismic resistance. Home Pride earth anchors are anticipated to be used as tie-downs. Other site improvements will include paved driveway and parking lots, a sports court, and landscape areas. We note that this investigation does not address the subsurface conditions and any potential hazards associated with the existing pond.

3.0 PURPOSE AND SCOPE OF SERVICES

The purpose of our services was to conduct a subsurface investigation at the subject site to obtain information required to address the geotechnical engineering aspects of the proposed project. To this end, this report addresses the following:

- Geologic site conditions and seismicity of the project site, including a review of available published geologic maps and reports pertinent to the site area, a discussion of the site geology and seismicity with distance to the active faults in the region, as well as the probability of a major earthquake on each fault;
- Seismic design parameters for the proposed site improvements per the 2022 California Building Code and ASCE 7-16¹;
- Specific subsurface conditions discovered by the borings and CPTs, such as expansive, loose, saturated, collapsible, or soft surface and subsurface soils that may require special mitigation measures or impose restrictions on the project, including the thickness and consistency of the existing fill soils and groundwater levels, as encountered;
- Assessment of liquefaction potential, any adverse impacts it may impose on the project, and remedial measures, as deemed appropriate;
- Criteria for site grading, earthwork, preparation of subgrades and building pads, placement of fills and backfills, and trench backfill requirements, including the suitability of the excavated soils from the site for use as fill and backfill material;

¹ This report assumes the project site can be properly classified as a Site Class D (Stiff Soil) site (discussed later in this report), and that the Exception of the Supplement 3 to Section 11.4.8 of ASCE 7-16 will apply to the proposed structures. Thus, a site-specific ground response analysis in accordance with ASCE 7-16 Section 21.1, and a ground motion hazard analysis in accordance with ASCE 7-16 Section 21.2 are not included in our scope of services.

- Estimates of the allowable bearing values for the 24"x24" plywood/concrete pad, and the resistance to pull-out loads for the anticipated anchor type (Home Pride earth anchors);
- Estimate of the lateral resistance for the proposed foundation system, including the applicable coefficient of friction between the supporting surface (gravel) and plywood/concrete pads;
- Estimate of earth pressures acting on site retaining walls, including vertical and lateral support requirements;
- Estimates of the post-construction total and differential settlements for the new structures supported on the recommended foundation system;
- Criteria for support of exterior concrete flatwork;
- Criteria for the design of rigid and flexible pavements;
- General provisions for the control of surface and subsurface drainage; and
- Preliminary screening for soil corrosivity and its impact on the buried foundation elements and underground utilities.

To fulfill the above purpose, the scope of our investigation consisted of the following specific tasks:

- Reviewed pertinent geotechnical and geological reports, as well as hazard maps and reports relevant to the site and vicinity.
- Marked the planned boring and CPT locations in the field, coordinated the field exploration with the client representatives, retained a utility locating firm to help clear the boring and CPT locations, and notified Underground Service Alert (USA) at least 72 hours in advance.
- Obtained permits for borings and CPTs from the County of San Mateo Department of Environmental Health.
- Drilled, logged, and sampled four borings to approximate depths of 20 to 30 feet using a truck-mounted drilling rig. The borings were advanced under the supervision of one of our engineers who also obtained disturbed bulk and relatively undisturbed ring samples of the subsurface materials at 3- to 5-foot-intervals for visual examination and laboratory testing. The borings were backfilled with cement grout per the permit requirements. The drilling spoils were left at the site.
- Advanced three CPTs to an approximate depth of 50 feet. The CPTs were backfilled with cement grout per the permit requirements.
- Performed a laboratory testing program on the collected soil samples to evaluate the geotechnical engineering characteristics of the subsurface soils. Tests included direct shear

tests, Atterberg Limits, grain-size analyses, moisture-density measurements, R-value, and soil corrosivity testing, as judged appropriate.

- Conducted engineering analyses based on the results obtained from the above tasks and oriented towards the above-stated purpose of the investigation; and
- Prepared this report presenting the results of our investigation, summarizing our findings and recommendations for the subject project, and including a vicinity map, a site plan showing the approximate boring and CPT locations, an area geologic map, a regional fault map, the boring and CPT logs, subsurface profile(s) and the laboratory test results.

4.0 GEOLOGY AND SEISMICITY

4.1 Site and Area Geology

A review of the *Geology of the Onshore Part of San Mateo County, California: Derived from the Digital Database Open-File 98-137*, prepared by Brabb et al. (1998), indicates that the northwestern portion of the site is underlain by Pleistocene age marine terrace deposits (Qmt) described as “poorly consolidated and poorly indurated well- to poorly sorted sand and gravel.” The southeastern portion of the lot along Pilarcitos Creek is mapped as Holocene alluvial fan deposits (Qyf, Qyfo) generally consisting of unconsolidated sand, silt, clayey silt, and gravel.

A portion of the geologic map that includes the site area is presented on Plate 3, Area Geologic Map.

4.2 Faulting and Seismicity

No earthquake faults have been mapped crossing the site area. The distances from the site to the major faults in the area and their estimated probability of generating a major earthquake ($M_w \geq 6.7$) are listed in the Table 1 on the following page. The major active faults with respect to the subject site are also shown on the attached Plate 4, Regional Fault Map.

According to the California Geological Survey (CGS) map of *Earthquake Zones of Required Investigation, Half Moon Bay Quadrangle* (2021), the site is not situated within an Alquist-Priolo Earthquake Fault Zone (AP Zone). However, the site is situated within an area designated as an earthquake-induced liquefaction hazard zone. Evaluation of the potential of the site materials for seismically-induced liquefaction requires the upper 50 feet of soils must be explored and characterized as a minimum (per Special Publication 117A adopted by the State of California).

Table 1
Significant Earthquake Scenarios

Fault	Approximate Distance to Site (kilometers)¹	Location with Respect to Site (Driving Range Tee)	Probability of $M_w \geq 6.7$ within 30 Years²
San Gregorio	4	SW	5%
Pilarcitos	5	NE	0.5%
San Andreas (Entire)	8	NE	33%
San Andreas (Peninsula)	8	NE	9%
Monte Vista – Shannon	21	SE	1%
Hayward-Rodgers Creek	37	NE	32%
Calaveras	50	NE	25%

¹ USGS Fault Files from Google Earth, and CGS Fault Activity Map of California

² Working Group on California Earthquake Probabilities, 2014

5.0 FIELD EXPLORATION AND LABORATORY TESTING

Conditions of the subsurface materials within the project area were explored by drilling four borings to approximate depths of 20 to 30 feet below the existing ground surface (bgs) using a truck-mounted drilling rig equipped with 6-inch diameter continuous flight augers. In order to better address the liquefaction hazards, three 50-foot-deep Cone Penetration Tests (CPTs) were advanced with a truck-mounted CPT rig. The approximate boring and CPT locations are shown on the attached Plate 2, Site Plan. Plate 5, Cross Section A-A', presents our interpretation of the subsurface conditions extrapolated from the information obtained during our site investigation.

A continuous log of the subsurface materials encountered in the boreholes was maintained by our engineer on site. Disturbed bulk and relatively undisturbed ring samples of the site materials were obtained. The subsurface materials were visually classified in the field; the classifications were then checked by visual examination, grain size analysis, and Atterberg Limits testing performed in the laboratory. In addition to sample classification, the boring logs contain interpretation of where stratum changes or gradational changes occur between samples and where subtle changes become significant enough to log. The boring logs depict BAGG's interpretations of subsurface conditions only at the locations indicated on Plate 2, Site Plan, and only on the date noted on the logs.

Cone penetrometer tests (CPT) consist of hydraulically advancing a probe into the soil strata with a truck-mounted CPT rig. The probe is fitted with transducers that read resistance at the tip of the probe, or cone,

friction acting between the sides of the sleeve immediately behind the cone and the surrounding soil, and pore pressure. The resulting data is then correlated to establish soil behavior types, consistencies, and shear strength data. The location of the CPTs are also shown on the attached Plate 2, Site Plan, and the CPT logs are presented in Appendix A.

The boring logs and the CPT data are intended for use only in conjunction with this report, and only for the purpose outlined by this report. The graphical representation of the materials encountered in the borings, and the results of laboratory tests, as well as explanatory/illustrative data are attached, as follows:

- Plate 6, Unified Soil Classification System; illustrates the general features of the soil classification system used on the boring logs;
- Plate 7, Soil Terminology; lists and describes the soil engineering terms used on the boring logs;
- Plate 8, Boring Log Notes; describes general and specific conditions that apply to the boring logs;
- Plate 9, Key to Symbols; describes various symbols used on the boring logs;
- Plates 10-A through 13-B, Boring Logs; describe the subsurface materials encountered, show the depths and blow counts for the samples, and summarize the results of the strength tests, Atterberg Limits, sieve analyses, and moisture-density data;
- Plate 14, Plasticity Data; presents the results of Atterberg Limits tests performed on selected samples of the site materials;
- Plate 15, Gradation Test Data; presents the result of two gradation tests performed on selected samples of the site materials;
- Plate 16, R-Value Test Report; presents the results of an R-value test performed on a sample of the near-surface soil from Boring B-9 near the proposed asphalt driveway; and
- Plate 17, Corrosivity Test Summary; presents the results of corrosivity testing performed by an outside laboratory on two selected soil samples.

Direct shear strength tests were performed on collected soil samples to evaluate the strength parameters of the site earth materials. The direct shear tests were performed at both natural (field) and artificially increased moisture contents, while under various surcharge pressures. The moisture content and dry density of several undisturbed samples were measured to aid in correlating their engineering properties. In addition, Atterberg Limits tests were performed on selected samples to aid in classification as well as obtain

an indication of the samples' expansion potential. Gradation and wash over the No. 200 sieve tests were also performed on selected samples of the site materials to classify the samples. Additionally, an R-value test was conducted on a bulk sample of the near-surface soil to aid in the pavement section design. Furthermore, corrosivity testing was carried out by Cooper Testing Labs on two selected soil samples. The results of the noted tests are shown on the boring logs and on the plates described above.

6.0 SITE CONDITIONS

6.1 Subsurface Conditions

Borings B-4 through B-9 encountered a 1- to 2-foot-thick layer of artificial fill consisting predominantly of stiff sandy lean clay and/or medium dense clayey sand with varying gravel content; however, relatively dry and loose/soft surficial materials were observed at Boring B-6 and B-9 locations. Atterberg Limits testing on a fill soil sample obtained at a depth of about 1 foot below the ground surface (bgs) in Boring B-9 yielded a liquid limit of 40 and a plasticity index of 17, indicating the existing fill material is moderately expansive in nature.

Native soils encountered in the borings consisted predominantly of interlayered lean clay, clayey sand, silty sand, and/or well-graded sand with silt. The upper clay deposits were generally stiff to very stiff and become medium stiff as depth increases. The sandy deposits were mostly medium dense in consistency with a few loose sand layers in the upper about 15 feet of the profile in Boring B-6. In addition, thin, less than 6-inch-thick fat clay layers were observed in the deep borings below about 27 feet bgs. Atterberg Limits testing on native clay and/or clayey sand samples in the upper about 5 feet of the boring profiles yielded liquid limits in the range of 39 to 49 and plasticity indices between 15 and 25, indicating the near-surface native materials are moderately to highly expansive in nature.

CPT-3 through CPT-5 advanced as part of this investigation also revealed interlayered clayey, silty, and/or sandy deposits within the maximum explored depth of 50 feet. The encountered fine-grained soils were medium stiff to very stiff while the granular deposits, consisting predominantly of silty sand to sandy silt and/or clean sand to silty sand, were generally medium dense to dense in consistency. However, the CPT profiles showed large variation in the depth to the first sand layer and the total thickness of the granular deposits. Excluding the surficial ½ foot of topsoil, CPT-3 first encountered sandy deposits at the approximate depth of 8½ feet bgs. CPT-4, however, revealed sandy soils down to the depth of about 12½ feet bgs. At

location of CPT-5, the upper approximately 2½ feet of the profile also consisted of sandy materials; however, below 2½ bgs, CPT-5 revealed mostly clayey deposits with scattered, 2-inch- to 2½-foot-thick, sandy lenses. The total thickness of the medium dense sandy deposits in CPT-5 was about 7 feet, while CPT-3 and CPT-4 encountered approximately 17 feet and 24 feet of medium dense sand, respectively.

BAGG advanced five borings (Borings B-1 through B-5) and two CPTs (CPT-1 and CPT-2) as part of the previous investigation on the northeastern half of the site for the City of Half Moon Bay Corporation Yard project in 2021. The previous Borings B-1 through B-5 revealed predominantly clayey deposits within their maximum explored depths of 5 to 25 feet bgs, except that Boring B-1 encountered medium dense clayey sand below 13 feet to its bottom at 15 feet, and Boring B-2 encountered medium dense to dense clayey sand below 15½ feet to its bottom at 20 feet. The two sand layers may, however, extend further in depth. CPT-1 and CPT-2 revealed interbedded clayey and sandy deposits within the maximum explored depth of 50 feet.

Our boring and CPT profiles indicated the site is generally underlain by interlayered clayey and sandy soils; however, the depths of the sand layers, the thickness and consistency of each sandy layer, as well as the total amount of the sandy deposits with the explored depths, are non-uniform and vary from one location to another. For more information regarding our interpretation of the subsurface materials, we refer you to Plates 10-A through 13-B, Boring Logs. The CPT data is presented in Appendix A attached to this report. The previous Boring B-1 through B-5 logs, as well as CPT-1 and CPT-2 data, are presented in the attached Appendix B.

6.2 Groundwater

Groundwater was first encountered in Borings B-6, B-7, and B-8 at the approximate depth of 17½, 19, and 15 feet bgs, respectively, and was measured upon completion of drilling and sampling at the depths of about 18 feet in B-6 and B-7 and about 9 feet bgs in Boring B-8. Groundwater was not encountered in Boring B-9 within its maximum explored depth of 20 feet. The CPTs estimated groundwater depths of about 15 feet in CPT-3 and about 12½ feet in CPT-5.

Groundwater was not encountered in the previous Borings B-1 through B-5, which were extended to the maximum depth of 25 feet bgs. CPT-1 and CPT-2 estimated groundwater depths of about 10½ and 18 feet bgs, respectively.

Groundwater levels typically fluctuate due to seasonal changes such as variations in rainfall and temperature, hydrogeological variations such as groundwater pumping or recharging, and/or other factors not evident at the time of exploration. Plate 1.3 of the California Geological Survey (CGS, 2021) Seismic Hazard Zone Report 132 (SHZR 132), *Seismic Hazard Zone Report for the Half Moon Bay 7.5-Minute Quadrangle, San Mateo County, California*, indicates the depth to historically high groundwater level in the general site area is less than 10 feet.

7.0 GEO-HAZARD ANALYSIS

7.1 Liquefaction Potential

According to the regulatory Seismic Hazard Zone Official Map prepared by the CGS (2021), the subject site is situated within a Seismic Hazard Zone associated with liquefaction. These zones are defined as “areas where historical occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.”

Soil liquefaction is a condition where saturated granular soils near the ground surface undergo a substantial loss of strength due to increased pore water pressure resulting from cyclic stress applications induced by earthquakes or other vibrations. In the process, the soil acquires mobility sufficient to permit both vertical and horizontal movements, if not confined. Soils most susceptible to liquefaction are loose, uniformly graded, fine-grained, sands, and loose silts with very low cohesion. In general, liquefaction hazards are most severe in the upper 50 feet of the soil profile. In deeper deposits, the greater overburden soils tend to isolate the ground surface from the impact of any liquefaction in deeper soils, and the overburden pressures tend to limit shear strains that occur during liquefaction.

Our boring and CPT data indicated the site is generally underlain by non-uniform, interlayered clayey and sandy deposits. Liquefaction analysis was performed using the CPT soundings and the boring data (within the maximum depths explored) following the procedures recommended by Boulanger and Idriss (2014). For

the purpose of this analysis, we used a groundwater level of 9 feet which was the highest groundwater level measured in our borings. Our analysis used an earthquake magnitude of 7.7 as obtained from the USGS Unified Hazard Tool (<https://earthquake.usgs.gov/hazards/interactive/index.php>), and a Peak Ground Acceleration of 0.89g obtained from the U.S. Seismic Design Maps by California's Office of Statewide Health Planning and Development (OSHPD, <https://seismicmaps.org/>).

Our analysis indicates that the loose to dense sand layers presented beneath the site are potentially liquefiable. The estimated liquefaction settlements are highly associated with the total amount of the potentially liquefiable sands at each of the exploration locations. Our analysis estimated liquefaction settlements of approximately 1½ inches in CPT-3, 2 inches in CPT-4, and ¼ inch in CPT-5. The estimated liquefaction settlements within the maximum explored depth of the borings were about 3 inches in Boring B-6 (30-foot-deep), 1½ inches in B-7 (21½-foot-deep), 2½ inches in B-8 (28½-foot-deep), and ½ inch in B-9 (20-foot-deep). Potentially liquefiable soils are also likely present beneath the explored depths in the borings.

Our analysis also estimated that the seismic compaction within the sandy deposits above the assumed groundwater level (9 feet) in Borings B-6 through B-9 ranged from less than ¼ inch to about ⅓ inch. The estimated seismic compaction in CPT-3 and CPT-5 was negligible; however, we estimated about 1½ inches of seismic compaction in the upper sandy deposits in CPT-4.

With a groundwater level of 9 feet (instead of 11 feet used in our 2021 analysis), we estimated liquefaction settlements of about 1 inch in the previous CPT-1 and ⅓ inch in CPT-2. The estimated seismic compaction was about ½ inch in CPT-1 but was negligible in CPT-2. Estimated seismic settlement was negligible in the previous Borings B-1 through B-5 as they were relatively shallow and the encountered sandy materials were either too clayey or too dense to be considered liquefiable.

We note that the empirical calculation methods, such as the one used here, for estimating expected settlements due to liquefaction are known to be conservative, especially when the soils in question contain in excess of 30 percent fines. Also, our analysis used a relatively conservative groundwater depth of 9 feet which was the groundwater depth measured in Boring B-8 near the creek, while other borings/CPTs measured/estimated groundwater depths in the range of 11 feet (2021) to more than 20 feet bgs. We

therefore anticipate the total seismic settlements in the project area would generally be in the range of $\frac{1}{4}$ to $1\frac{1}{2}$ inches but could be as much as 3 inches or so in some localized areas such as the CPT-4 location.

Based on the estimated seismic settlements and the relative distance between the exploration points, we estimate the differential settlements due to seismic compaction and liquefaction of the granular soils would be approximately 1 inch in 50 feet across the site.

7.2 Lateral Spreading

Lateral spreading is a potential hazard commonly associated with liquefaction where extensional ground cracking and settlement occur as a response to lateral migration of subsurface liquefiable material. Lateral movement can range from a few inches to several feet and can cause significant structural damage. Lateral spreading generally arises where sloping terrain and/or a free-face condition occurs in conjunction with the presence of loose, saturated soils at shallow depths, particularly along riverbanks and shorelines.

Calculations to evaluate the potential for lateral spread toward the adjacent Pilarcitos Creek using the method suggested by Boulanger and Idriss (2014) indicates a possible 1 foot of lateral movement at CPT-3 and $1\frac{1}{4}$ feet at CPT-4, but estimated no lateral movement at CPT-5. Borings B-6 through B-9 using the method suggested by Youd, et al (2002) estimated lateral movements ranging from negligible amount to as much as 12 feet. It should be noted that the above estimates of lateral spreading assume all the liquefiable layers encountered in each boring are continuous toward the creek. As shown on Plate 5, Cross Section A-A', the sandy deposits potentially subject to lateral movement are generally non-uniform and discontinuous, with the exception of a potentially continuous sand layer between the approximate elevations of 50 to 60 feet above the mean sea level, which is about 5 feet below the bottom of Pilarcitos Creek. Assuming this layer is continuous toward the creek, for a design earthquake of Magnitude 7.7 at a distance of about 6 kilometers, we have estimated lateral spreading on the order of 6 inches in the vicinity of Boring B-7 and CPT-4, increasing to about $1\frac{1}{2}$ feet at the creek bank. Because the source of the deformations in this scenario would be at some depth, we anticipate that much of the movement would consist of relatively large soil masses moving toward the creek; however, it is impossible to predict where fractures would occur at the surface.

7.3 Ground Shaking

The site could experience very strong ground shaking from future earthquakes during the anticipated lifetime of the project. The intensity of the ground shaking will depend on the magnitude of the earthquake, distance to the epicenter, and the response characteristics of the on-site soils. While it is not possible to totally preclude damage to structures during major earthquakes, strict adherence to good engineering design and construction practices will help reduce the risk of damage. The 2022 California Building Code defines the minimum standards of good engineering practice.

As discussed above, our investigation indicated the presence of potentially liquefiable soils beneath the site. If the fundamental period of vibration of the planned structures is less than 0.5 seconds, which is likely the case for this project, the site class can be calculated with shear wave velocities, blow counts and/or soil strengths in accordance with Section 20.4 of ASCE 7-16. Based on our boring and CPT data, it is our opinion that a Site Class D may be assumed for design purposes.

Class “D” is defined as a “stiff soil profile” with an average shear wave velocity between 600 and 1,200 feet per second, and/or average undrained shear strength between 1,000 and 2,000 psf in the top 100 feet of the site.

Using the site coordinates of 37.4679° North Latitude and 122.4239° West Longitude, and the OSHPD Seismic Design Maps, earthquake ground motion parameters were computed in accordance with the 2022 California Building Code and the ASCE 7-16, and are listed in the following table. As S_1 is greater than 0.2g, Table 2 below assumes the Exception in Supplement No.3 to Section 11.4.8 of ASCE 7-16 applies. If the Exception does not apply to the design of this project, the seismic design will require a site-specific ground motion hazard analysis in accordance with Section 21.2 of ASCE 7-16. Such analysis is beyond our present scope of services.

Table 2
Parameters for Seismic Design

2022 CBC Site Parameter	Value
Site Latitude	37.4679° N
Site Longitude	122.4239° W
Site Class	Class D, Stiff Soil
Risk Category	III
Mapped Spectral Acceleration for Short Periods S_s	1.93
Mapped Spectral Acceleration for 1-second Period S_1	0.73
Site Coefficient F_a	1.0
Site Coefficient F_v	1.7**
Site-Modified Spectral Acceleration for short Periods S_{Ms}	1.93
Site-Modified Spectral Acceleration for 1-second Period S_{M1}	1.24*
Design Spectral Acceleration for short Periods S_{Ds}	1.29
Design Spectral Acceleration for 1-second Periods S_{D1}	0.83*

* This value has not been increased by 50% per Exception of Supplement No.3 of Section 11.4.8.

** See Table 11.4.2 - This value to be used only for calculation of T_s , for determination of Seismic Design Category and when taking the exception under Item 1 of Section 11.4.8.

8.0 DISCUSSION AND RECOMMENDATIONS

8.1 General

Based on our review of the published geologic and geotechnical documents, research of the existing soils information, and the subsurface exploration conducted at the subject site, as well as the results obtained from our laboratory testing program, we have developed the following geotechnical recommendations and design criteria for the subject project. When the final project plans become available, they should be reviewed by this office to confirm that they have been prepared in accordance with this report, as well as confirm that our recommendations properly address the proposed project in its final form.

Analysis of the boring profiles and the CPT soundings indicates the impact of liquefaction and seismic compaction from a design level earthquake on the site could be seismic settlements on the order of ¼ to 1½ inches with some localized areas potentially having as much as 3 inches of seismic settlement. Our investigation also indicated that the site could be subjected to lateral spreading during a major earthquake. Our best estimate indicates the lateral spreading could be on the order of 6 inches near the center of the project, and increasing to about 1½ feet adjacent to the creek. Despite the liquefaction and lateral spreading potential, our boring data and laboratory test results indicate the subgrade soils generally are capable of supporting the proposed modular structures and the associated improvements.

8.2 Site Grading

Site grading is anticipated to consist of the removal of existing vegetation and debris from the construction areas, preparation of building pads and pavement subgrades, and installation of underground utilities. Site grading may also consist of foundation excavation if concrete footings are required to support site retaining walls, fence posts, etc.

As used in this report, the term 'compact' and its derivatives mean that all engineered fill material, whether imported or on-site material, should be compacted to at least 90% of maximum dry density as determined by ASTM Test Method D1557. The term also implies that immediately prior to being compacted, the fill material should be thoroughly moisture conditioned to a moisture content that is slightly above optimum for imported non-expansive fill material, and at least 2% over optimum for onsite clayey soils. The properly moisture-conditioned fill should be spread evenly in lifts not exceeding 8 inches in loose thickness, and each lift should be thoroughly moisture conditioned and compacted before subsequent lifts are placed. Class II Aggregate Base, and the upper 12 inches of subgrades within pavement and modular building areas, should be compacted to a minimum of 95% of the maximum dry density at the moisture content specified above.

The following grading procedures should be followed in building pad, pavement, and flatwork areas:

- Remove existing bushes, vegetation roots, and other debris from the proposed construction areas. Remove all organically-contaminated soils from the site and do not re-use as site fill except for use in landscaping areas only. Where trees are removed, the removal should include all major root systems down to 1 inch in size or less.
- Excavate to the proposed subgrade elevations. Scarify the exposed surfaces to a depth of 6 to 8 inches. Thoroughly moisture condition the scarified surfaces to a moisture content that is at least 2% over optimum and re-compact as specified above. Further over-excavate as necessary in any areas still containing weak, yielding, or pumping soils, as determined in the field by this office.
- Place fill on the over-excavated surfaces and in the holes/depressions created by the above actions in uniformly moisture conditioned and compacted lifts not exceeding 8 inches in loose thickness. Rocks or cobbles larger than 4 inches in maximum dimensions should not be allowed to remain within the basement area, unless they can be crushed in-place by the construction equipment.

The existing sandy fill soil and the upper native clay are generally suitable for use as structural fill, provided they are free of organic matters and rocks larger than 4 inches in size, and are approved by BAGG's field

representative. Imported fill soil, if any, should be predominantly granular in nature and should be free of organics, debris, or rocks over 4 inches in size, and should be approved by the Geotechnical Engineer before importing to the site. As a general guide to acceptance, imported soils should have a Plasticity Index less than 15, and R-value of at least 20, and fines content between 15 and 60 percent.

It must be the Contractor's responsibility to select equipment and procedures that will accomplish the grading as described above. The Contractor must also organize his work in such a manner that BAGG Engineers can observe and test the grading operations, including excavation, placement of fill and backfill, and compaction of subgrades.

8.3 Foundations

Based on the results of our subsurface exploration and laboratory testing, it is our opinion the proposed modular houses can be supported on surface foundations set on compacted base rock with tie-downs, as proposed. Conventional concrete spread/strip footings can be used to support structures such as retaining walls, seating, fence posts, etc., as necessary. Recommendations for each of the foundation type are presented in the following paragraphs.

8.3.1 Foundations on Ground Surface with Tie-Downs

It is our understanding that the proposed modular house foundations will consist of 18-inch-tall, load bearing piers supported on either 24"x24" pressure treated plywood pad or 24"x24" pre-cast concrete pads. Home Pride earth anchors are anticipated to be installed for seismic resistance. We also understand the housing pads will not be paved with asphaltic concrete but will be covered with compacted base rock.

We recommend the proposed 24"x24" plywood/concrete pads should be placed on minimum 12 inches of Class II aggregate base. The aggregate baserock and the top 12 inches of subgrade should be compacted to a minimum of 95 percent relative compaction while at the moisture content specified under Site Grading.

For 24-inch-wide plywood or concrete pads supported on 12 inches of compacted Class II aggregate base, we estimate the allowable bearing pressures can be taken as 2,500 pounds per square foot (psf) for dead loads and 4,000 psf for total design loads including seismic.

Helical auger tie-downs are frequently a design-build item that are installed to a specified minimum torque. Based on the soils information, we recommend the anchors should be a minimum 30 inches deep. On a preliminary basis, a 30-inch anchor with $\frac{3}{4}$ -inch shaft and two 4-inch discs (Home Pride HP3) installed vertically (with stabilizer) through 12 inches of compacted Class II aggregate base, will be able to resist a pull out load on the order of 3,600 pounds.

Lateral loads may also be resisted by the friction between the bottom of the wood/concrete footings and the aggregate base surface. The friction coefficient between the plywood pad and the supporting aggregate base is estimated to be 0.50. The friction coefficient between the concrete pad and the supporting aggregate base is estimated to be 0.40.

8.3.2 Spread/Strip Footings

Spread/strip footings, if required, should be properly established a minimum of 24 inches below the lowest adjacent grade. The minimum required width for the isolated and continuous shallow footings is 24 inches and 12 inches, respectively. At this depth, the allowable bearing value should be taken as 2,500 psf for dead loads and 3,750 psf for total design loads for all footings. The latter value may be increased by one-third, when resisting transient and seismic loads.

For concrete footings, lateral loads may be resisted by passive soil pressures against the sides of the footings in conjunction with the friction between concrete footing bottom and the soil below. The allowable passive resistance to wind or seismic loads can be taken as an equivalent fluid pressure of 350 pounds per cubic foot (pcf) in compacted fill and undisturbed native materials. The top 12 inches of the passive resistance should be ignored, unless the foundation is protected by a pavement or a concrete slab. A coefficient of friction of 0.3 between compacted fill/undisturbed soil and the bottom of concrete footings may be used in conjunction with the passive pressure.

Concrete foundations must be appropriately reinforced as deemed appropriate by the project structural engineers. The bottom of the footing excavations should be relatively clean, firm, and free of any loose or yielding soils before reinforcing steel and concrete are placed. It is critical that foundation excavations are not allowed to dry out and crack before concrete is poured and that the exposed soils are at the recommended moisture content when concrete is poured. Any dried and cracked soils should be entirely removed as directed by this office, and replaced with properly compacted fill or lean concrete.

8.4 Settlement

Total static settlements for foundations constructed as recommended are anticipated to be less than ½-inch with differential settlement of approximately half this value. The seismically induced liquefaction settlement discussed in Section 7.1, Liquefaction Potential, should be considered additional to the estimated static settlements.

8.5 Retaining Walls and Temporary Shoring

Retaining walls, if any, should be designed to resist lateral earth pressures from the adjoining soil and surcharge loads from adjacent structures. Walls that are restrained from movement at the top should be designed to resist an equivalent fluid pressure of 70 pcf for level backfill. Free standing walls should be designed to resist active lateral earth pressures taken as an equivalent fluid pressure of 50 pounds per cubic foot (pcf) for level backfill. For sloping backfill, the above pressures should be increased by 3 pcf for every 5-degree increase in the backfill slope angle up to a maximum gradient of 2H:1V (Horizontal to Vertical). Surcharge loads should be added to the above pressures at a rate of 33% and 50% of the applied surcharge load for cantilever and restrained walls, respectively.

Seismic pressures on the retaining walls may be simulated by a rectangular pressure distribution against the wall equal to 10H, where H is the height of the wall.

The above lateral pressures do not include any hydrostatic pressures resulting from groundwater, seepage water, or infiltration of natural rainfall and/or irrigation water behind the walls. Therefore, all walls over 2 feet in height should be provided with a drainage blanket behind the wall. The drainage blanket should consist of a pre-manufactured drainage panel, or a one-foot-thick blanket of Caltrans Class 2 Permeable material, or a one-foot-thick blanket of free-draining gravel encapsulated by a suitable filter fabric. A 12-inch cap of relatively impermeable soil should be placed at the top of the drainage blanket to minimize infiltration of surface water. The cap material should be compacted to a minimum of 90 percent relative compaction at a moisture content of at least 2 percent over optimum. In addition, a 4-inch diameter perforated PVC pipe should be installed holes facing down at the base of the drainage layer to facilitate removal of water collected behind the wall. The perforated pipe should drain via gravity flow to an approved discharge point.

General backfill behind the walls, excluding drainage materials, should conform to the fill requirements included under the “Site Grading” section of this report. Retaining walls should be supported on concrete footings as recommended under Foundations.

Vertical site excavations measuring 5 feet or more in height should be properly shored as per the Cal-OSHA guidelines. Temporary shoring may consist of approved soldier-pile and wood lagging walls, soil-nail or tie-back walls with shotcrete, or other approved alternative. The temporary shoring should be designed to withstand an active earth pressure of 45 pcf. Construction equipment should not be allowed at the top of the excavation closer than a distance equal to the height of the excavation. Where a temporary sloped excavation is desired, the side slope gradient of 1H:1V should be utilized if the excavation exposes clayey soils and a gradient of 1½H:1V should be utilized if the excavation exposes silty and/or sandy soils.

8.6 Exterior Flatwork

All concrete slabs should be constructed on a well compacted and moisture conditioned soil subgrade as recommended in the “Site Grading” section of this report. Once the subgrade has been prepared, it should be maintained above optimum moisture content until the concrete slab is placed. The subgrade should be approved by the Geotechnical Engineer immediately before the slab is poured. The slab should be reinforced as per the project Structural Engineer’s recommendations.

Where new exterior slabs will be constructed adjacent to irrigated landscape areas, or where natural runoff will drain toward the subgrade area, below-grade concrete curbs should be constructed at the edges of planters and landscaping areas. The intent is to minimize moisture seeping from landscaping areas into the pavement subgrade through the aggregate base. The curbs should extend 2 to 3 inches below the bottom of the aggregate base. Where trees will be located adjacent to pavement areas, a suitable root barrier will also help limit migration of irrigation water into the aggregate base.

8.7 Pavement Design

8.7.1 Flexible Pavements

An R-value test was performed on a sample of the near-surface clayey soil obtained from Boring B-9 near the proposed driveway area. The test results indicated an R-value of 9, as shown on the attached Plate 16,

R-Value Test Report. The two R-value tests carried out as part of our previous investigation for the corporation yard project estimated R-values of 19 and 13.

Considering the variability of the soils cross the project area, for purpose of this investigation, we used an R-value of 9 to calculate the pavement sections for Traffic Indices of 5.0, 6.0, and 7.0. Generally, a Traffic Index (TI) of 5.0 is appropriate for automobile parking stalls, whereas a Traffic Index of 6.0 would be appropriate for heavily-used automobile driveways with only occasional use by heavy trucks (such as once a week or so by garbage trucks), and Traffic Indices of 7.0 or higher are used where the pavement would be subject to more frequent truck traffic such as daily use by delivery trucks. The estimated pavement sections with aggregate base and subbase are tabulated below.

Table 3
Summary of Asphaltic Concrete Pavement Sections
(Subgrade R-value=9)

Pavement Component	TI=5.0		TI=6.0		TI=7.0	
Asphaltic Concrete (AC) in Inches	3	3	3½	3½	4	4
Class II Aggregate Base (R _{Min} =78)	9	4	12	4	14½	5
Class II Aggregate Subbase or Recycled AB (R _{Min} =50)	--	5½	--	8½	--	10½
Total Thickness in Inches	12	12½	15½	16	18½	19½

The pavement sections presented in the above table have been calculated using the design method described in the Caltrans Highway Design Manual (Topic 633, May 2012) with the added safety factors. The method characterizes the subgrade soil conditions with R-values, and characterizes the traffic loading conditions with a Traffic Index. All materials and construction procedures, including placement and compaction of pavement components, should be performed in conformance with the latest edition of the Caltrans Standard Specifications, except that compaction should be performed in accordance with ASTM Test Method D1557.

All pavement components should be compacted to at least 95 percent of the maximum dry density at moisture contents specified under the Site Grading section of this report. All over-sized rocks and cobbles larger than 4 inches should be completely removed, unless they can be crushed in place with the construction equipment.

8.7.2 Rigid Pavements

Where Portland Cement Concrete (rigid) Pavements are to be used, they should be supported on a subgrade that has been prepared as recommended under "Site Grading". Concrete pavements exposed to regular automobiles and weekly use by a garbage truck (if applicable), should consist of 6 inches of concrete with a minimum compressive strength of 3,700 psi (MR=550 psi) supported on at least 6 inches of Class II Aggregate Base material compacted to a minimum of 95 percent relative compaction.

As a minimum, concrete pavements should be reinforced with deformed bars in both directions to control cracking, and joints should be provided in both directions within the pavement designed to prevent formation of irregular cracks.

Where traffic can drive over the edge of the concrete pavement, such as at transition to AC paving, the Portland Cement Association suggests the thickened edge should be increased by 20 percent, and tapered back to normal slab thickness over a distance of 10 times the slab thickness.

8.8 Utility Trench Backfill

Utility trenches may be backfilled with on-site soils that are free of debris, roots and other organic matter, and rocks or lumps exceeding 2 inches in greatest dimension. The fill should also be uniformly moisture conditioned to the proper moisture content and compacted as per the recommendations included above.

The utility lines should be properly bedded and shaded with granular material, such as, sand or pea gravel. As a general rule, the bedding layer should be 2 to 4 inches thick and the utility lines should be shaded with the granular materials to a minimum of 4 inches above the utility line. The bedding and shading layers should be compacted using a vibratory compactor before subsequent backfill is placed. The contractor should use extreme caution with the vibratory compactor on the shading layer, as excessive vibrations and/or imbalanced shading materials could result in dislodging the pipe and loosening the joints.

BAGG Engineers should be allowed an opportunity to observe the trench backfill operations and perform field compaction tests to evaluate the moisture content and relative compaction of the fill materials.

Alternatively, the utility trenches may be backfilled with flowable fill (a cementitious slurry consisting of a mixture of fine aggregate or filler, water, and cementitious material(s) capable of filling all voids in irregular excavations and hard to reach places). The flowable fill is self-leveling material that hardens in a matter of a few hours without the need for compaction in layers. Flowable fill is sometimes referred to as controlled density fill (CDF), controlled low strength material (CLSM), and lean concrete slurry. A 1- to 2-sack flowable fill material is usually considered to be acceptable for the subject project.

8.9 Drainage

It is recommended that a minimum 5-percent slope away from the structures for a horizontal distance of at least 5 feet be established in adjacent planter areas and a minimum 1-percent slope away from the structures for a horizontal distance of at least 5 feet be established in areas containing hardscape. Drainage should not be allowed to pond on the site or adjacent to any foundation, and should be directed towards appropriate discharge points. Surface waters should not be permitted to drain over slopes. Any area where surface run-off becomes concentrated should be provided with a catch basin that discharges the collected runoff in a manner that will not cause erosion. Surface and subsurface drainage facilities and catchment areas should be checked frequently and cleaned or maintained throughout the project life, as necessary.

8.10 Corrosion Potential

Two near-surface soil samples obtained from Borings B-6 and B-8 were submitted to Cooper Testing Laboratories for corrosivity testing. The results of chemical analyses, pH, ORP, and resistivity are tabulated in the following table, and attached on Plate 17, Corrosivity Tests Summary. The following table also presents the results of our preliminary screening of the corrosivity of the samples tested.

Table 4
Corrosion Test Results

Analysis/Test	Boring B-6 @ 2' – 5'	Boring B-8 @ 1.5' – 4'	Corrosivity Classification
Resistivity @ 100% Saturation [Ohm-Cm]	7,471	3,851	Mildly Corrosive ¹
pH	7.4	7.5	Neutral ²
ORP (Redox) [mV]	486	492	Non-Corrosive ²
Chloride [mg/Kg]	<2	4	Negligible ³
Sulfate [mg/Kg]	8	3	Negligible ⁴
Sulfide (Qualitative by Lead)	Negative	Negative	Not Present
Moisture Content (%)	15.0	17.7	N.A.

¹National Association of Corrosion Engineers (NACE) Corrosion Basics, page 191.

²Standard Method 2580B.

³For metals encased in concrete, extrapolated from CTM 372.

⁴For metals encased in concrete, ACI-318, Building Code Requirements for Reinforced Concrete.

The results for pH, ORP (redox), chloride, and sulfate content as well as sulfide were essentially reported as negligible amounts in terms of corrosion. With respect to resistivity, the samples were classified as “mildly corrosive”. Corrosive effects to concrete and masonry materials will be moderate, while the effects may be noticeable with metals in direct contact with the soil subgrade.

To minimize the corrosive degradation of any steel, ductile iron, or copper pipes over time, we recommend that these types of pipes be coated or polyethylene sleeved, or cathodic protection should be designed and implemented for the protection of such pipes. The soils can severely degrade copper pipes over a short period of time, as such, copper pipes should not be in contact with soil.

Subsurface conditions are not the only factors that may cause corrosion; design and construction practice may also be primary causes for failure. A review of plans and specifications for underground structures may be conducted by a qualified corrosion engineer prior to installation, if desired.

8.11 Plan Review

It is recommended that the Geotechnical Engineer (BAGG Engineers) be retained to review the final project plans. This review is intended to assess general suitability of our recommendations for the project in its final form, and to verify the appropriate implementation of our recommendations into the project plans and specifications.

8.12 Observation and Testing

It is recommended that the Geotechnical Engineer (BAGG Engineers) be retained to provide observation and testing services during site grading, foundation construction, utility trench excavation and backfill, and subgrade preparation phases of the work. This is intended to verify that the work in the field is performed as recommended and in accordance with the approved plans and specifications, as well as verify that subsurface conditions encountered during construction are similar to those anticipated during the design phase. Unanticipated soil conditions may warrant revised recommendations. For this reason, we cannot accept responsibility for the recommendations contained in this report if we are not given the opportunity to observe and test the construction activities.

9.0 CLOSURE

This report has been prepared in accordance with generally accepted engineering practices for the strict use of County of San Mateo and other professionals associated with the specific project described in this report. The recommendations presented in this report are based on our understanding of the subject site improvement as described herein, and upon the subsurface conditions encountered in the exploratory borings and the CPTs advanced for this project.

It is not uncommon for unanticipated conditions to be encountered during site grading and/or foundation installation and it is not possible for all such variations to be found by a field exploration program appropriate for this type of project. The recommendations contained in this report are therefore contingent upon the review of the final improvement plans by this office, and upon geotechnical observation and testing by BAGG Engineers of all pertinent aspects of the project, including grading, excavation and backfilling, subgrade preparation, and installation of foundations.

Subsurface conditions and standards of practice change with time. Therefore, we should be consulted to update this report, if the construction does not commence within 18 months from the date this report is submitted. Additionally, the recommendations of this report are only valid for the proposed development as described herein. If the proposed project is modified, our recommendations should be reviewed and either approved or modified by this office in writing.

The following plates and appendices are attached and complete this report:

Plate 1	Vicinity Map
Plate 2	Site Plan
Plate 3	Area Geologic Map
Plate 4	Regional Fault Map
Plate 5	Cross Section A-A'
Plate 6	Unified Soil Classification System
Plate 7	Soil Terminology
Plate 8	Boring Log Notes
Plate 9	Key to Symbols
Plates 10-A through 13-B	Boring Logs
Plate 14	Plasticity Data
Plate 15	Gradation Test Data
Plate 16	R-Value Test Report
Plate 17	Corrosivity Tests Summary
Appendix A	Cone Penetration Test (CPT) Results (CPT-3 through CPT-5)
Appendix B	2021 Boring & CPT Logs (B-1 through B-5; CPT-1 & CPT-2)

ASFE document titled "Important Information about This Geotechnical Engineering Report"

10.0 REFERENCES

- ACI Committee 318, 2008, *ACI 318-08, Building Code Requirements for Structural Concrete and Commentary*, American Concrete Institute.
- American Society of Civil Engineers, 2017, *Minimum Design Loads and Associated Criteria for Buildings and Other Structures*, ASCE Standard, ASCE/SEI 7-16.
- Boulanger and Idriss, 2014, *CPT and SPT Based Liquefaction Triggering Procedures*, UC Davis, Center for Geotechnical Modeling, Report No. UCD/CGM-14/01.
- Brabb, E.E., Graymer, R.W., and Jones, D.L., 1998, *Geology of the Onshore Part of the San Mateo County, California: a Digital Database*, U.S. Geological Survey Open-File Report 98-137.
- California Code of Regulations, January 2023, *2022 California Building Code (CBC)*, Title 24, Part 2, Volume 2 of 2, California Building Standards Commission, Based on 2021 International Building Code.
- California Department of Conservation, Division of Mines and Geology, 2000, *Digital Images of Official maps of Alquist-Priolo Earthquake Fault Zones of California, Central Coast Region*.
- California Geological Survey, 2021, *Earthquake Zones of Required Investigation, Half Moon Bay Quadrangle*.
- California Geological Survey, 2021, *Seismic Hazard Zone Report 132 (SHZR 132), Seismic Hazard Zone Report for the Half Moon Bay 7.5-Minute Quadrangle, San Mateo County, California*.

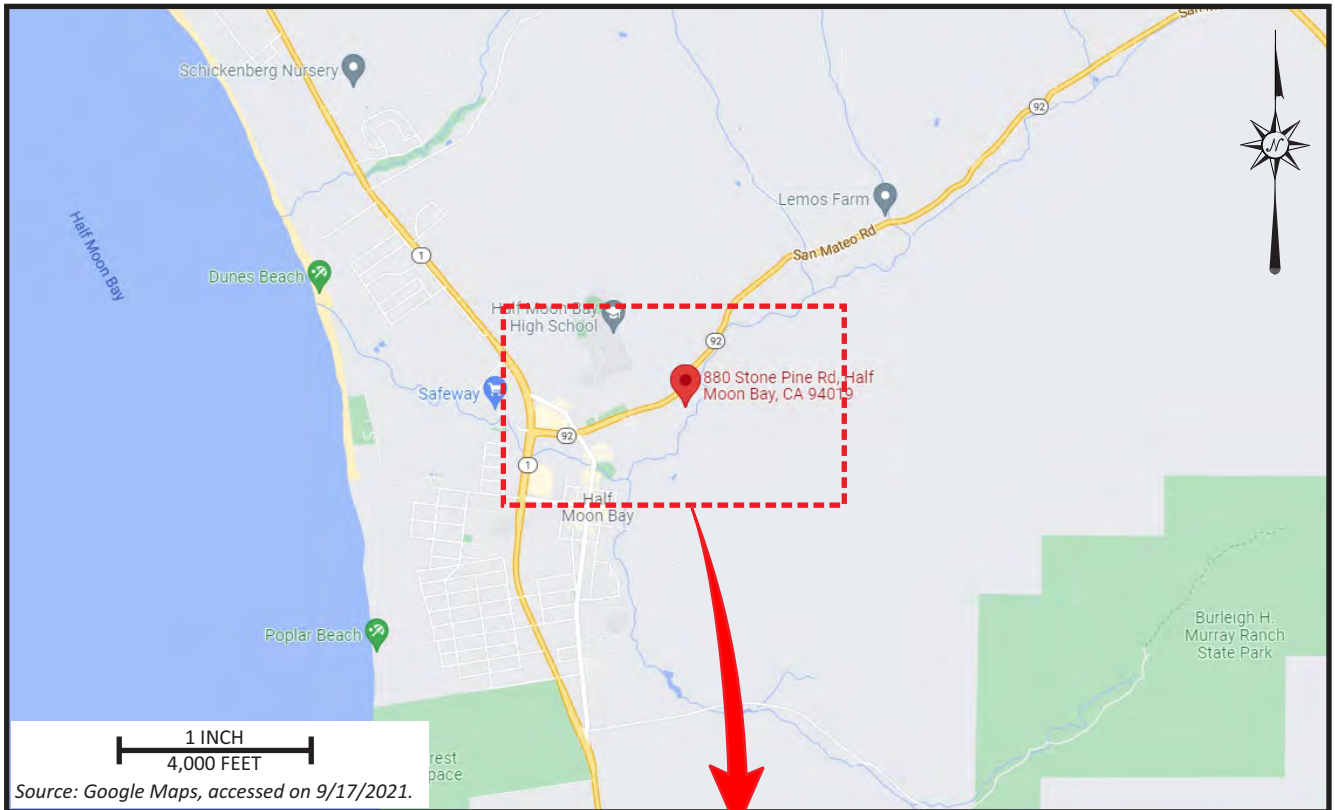
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California's Office of Statewide Health Planning and Development (OSHPD), U.S. Seismic Design Maps, <https://seismicmaps.org/>.

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Working Group on California Earthquake Probabilities, 2013, *The Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3)*, U. S. Geological Survey Open File Report 2013-1165.

Working Group on California Earthquake Probabilities, 2014, *Long-Term Time-Dependent Probabilities for the Third Uniform California Earthquake Rupture Forecast (UCERF3)*, Bulletin of the Seismological Society of America, Vol. 105, No. 2A, April 2015.



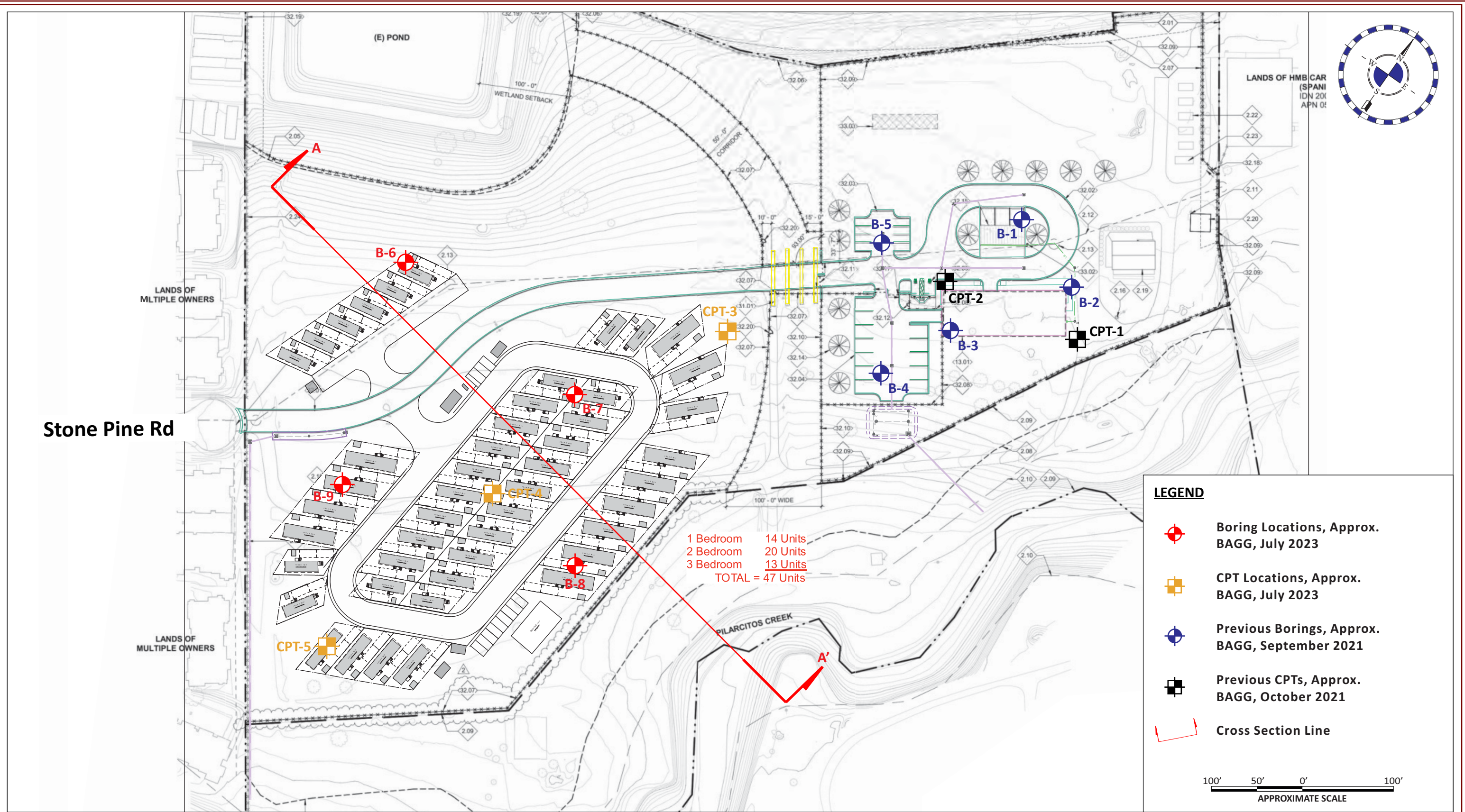
**GEOTECHNICAL ENGINEERING INVESTIGATION
SMC-HMB FARMWORKER HOUSING PROJECT
880 STONE PINE ROAD
HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA**

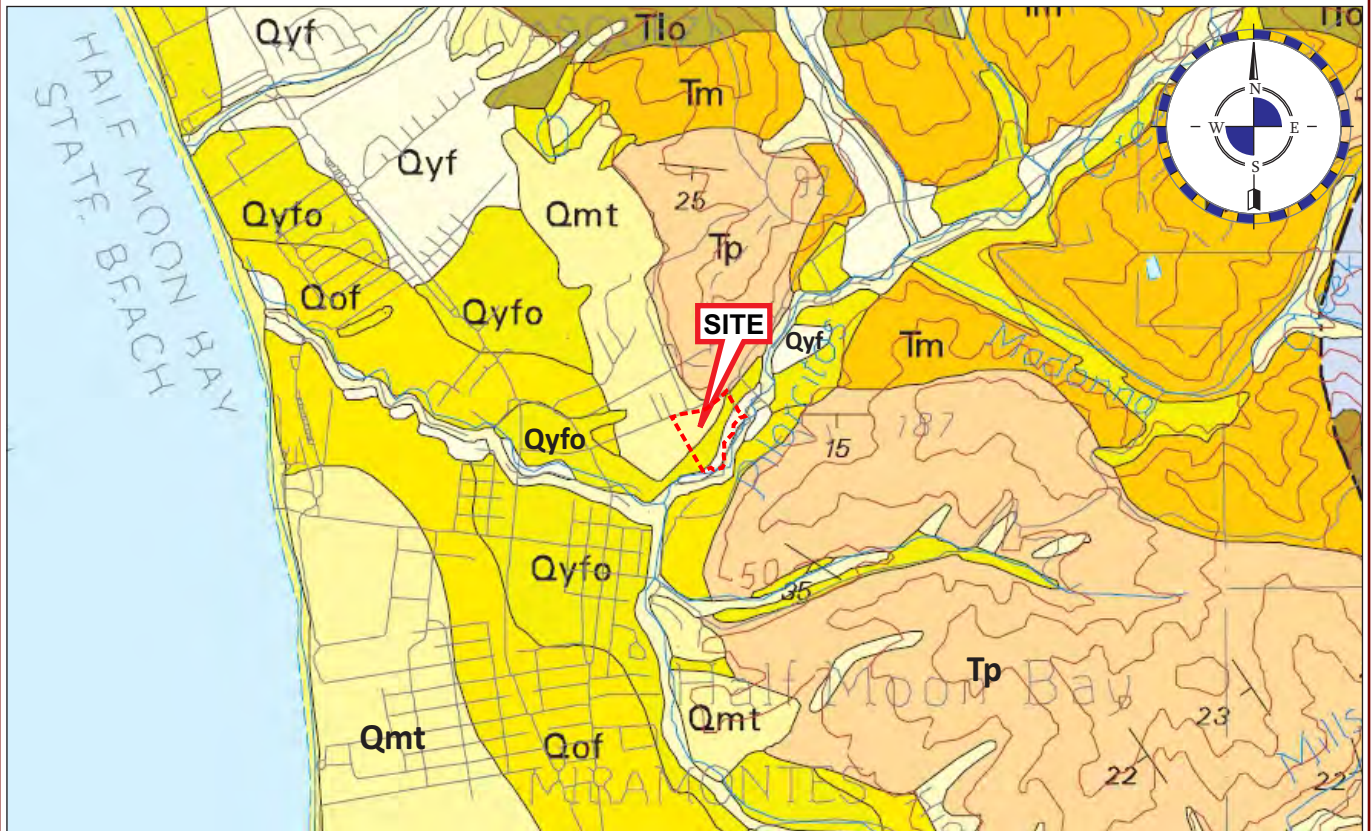
VICINITY MAP

DATE:
August 2023

JOB NUMBER:
COUSM-23-03

PLATE
1



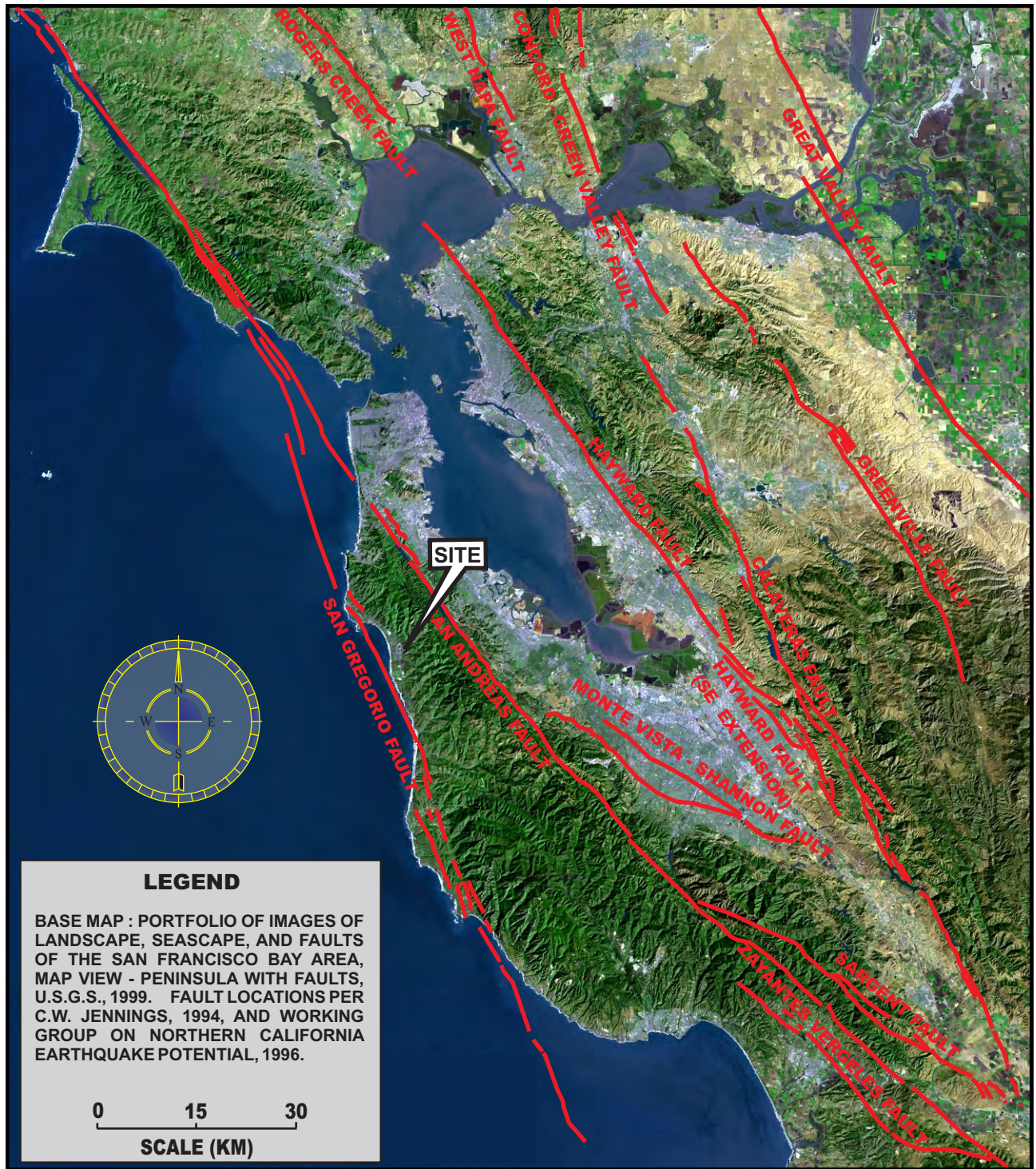


LEGEND

- Qyf** Younger (inner) alluvial fan deposits (Holocene) – Unconsolidated fine- to coarse-grained sand, silt, and gravel.
- Qyfo** Younger (outer) alluvial fan deposits (Holocene) – Unconsolidated fine sand, silt, and clayey silt.
- Qof** Coarse-grained older alluvial fan and stream terrace deposits (Pleistocene) – Poorly consolidated gravel, sand, and silt.
- Qmt** Marine terrace deposits (Pleistocene) – Poorly consolidated and poorly indurated well- to poorly-sorted sand and gravel.
- Tp** Purisima Formation (Pliocene and upper Miocene) – Predominantly gray and greenish-gray to buff fine-grained sandstone, siltstone, and mudstone, but also includes some porcelaneous shale and mudstone, chert, silty mudstone, and volcanic ash.
- Tm** Monterey Formation (middle Miocene) – Grayish-brown and brownish-black to very pale orange and white, porcelaneous shale with chert, porcelaneous mudstone, impure diatomite, calcareous claystone, and with small amounts of siltstone and sandstone near base.
- Tlo** Lompico Sandstone (middle Miocene) – Very pale orange, fine to coarse-grained, mostly well-cemented and hard arkosic sandstone.

Reference: Geology of the Onshore Part of San Mateo County: Derived From the Digital Database Open-File 98-137, by Brabb et al., 1998.

GEOTECHNICAL ENGINEERING INVESTIGATION SMC-HMB FARMWORKER HOUSING PROJECT 880 STONE PINE ROAD HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA	AREA GEOLOGIC MAP		
	DATE: August 2023	JOB NUMBER: COUSM-23-03	PLATE: 3



GEOTECHNICAL ENGINEERING INVESTIGATION
SMC-HMB FARMWORKER HOUSING PROJECT
880 STONE PINE ROAD
HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA

REGIONAL FAULT MAP

DATE:
August 2023

JOB NUMBER:
COUSM-23-03

PLATE
4

COARSE-GRAINED SOILS

LESS THAN 50% FINES*

GROUP SYMBOLS	ILLUSTRATIVE GROUP NAMES	MAJOR DIVISIONS
GW	Well graded gravel Well graded gravel with sand	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size
GP	Poorly graded gravel Poorly graded gravel with sand	
GM	Silty gravel Silty gravel with sand	
GC	Clayey gravel Clayey gravel with sand	
SW	Well graded sand Well graded sand with gravel	SANDS More than half of coarse fraction is smaller than No. 4 sieve size
SP	Poorly graded sand Poorly graded sand with gravel	
SM	Silty sand Silty sand with gravel	
SC	Clayey sand Clayey sand with gravel	

NOTE: Coarse-grained soils receive dual symbols if:

- (1) their fines are CL-ML (e.g. SC-SM or GC-GM) or
- (2) they contain 5-12% fines (e.g. SW-SM, GP-GC, etc.)

FINE-GRAINED SOILS

MORE THAN 50% FINES*

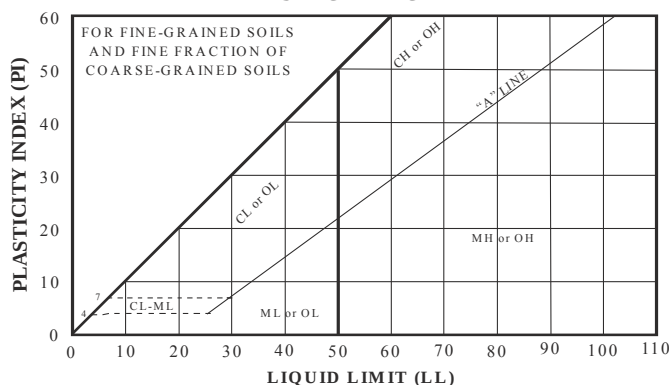
GROUP SYMBOLS	ILLUSTRATIVE GROUP NAMES	MAJOR DIVISIONS
CL	Lean clay Sandy lean clay with gravel	SILTS AND CLAYS liquid limit less than 50
ML	Silt Sandy silt with gravel	
OL	Organic clay Sandy organic clay with gravel	
CH	Fat clay Sandy fat clay with gravel	SILTS AND CLAYS liquid limit more than 50
MH	Elastic silt Sandy elastic silt with gravel	
OH	Organic clay Sandy organic clay with gravel	
PT	Peat Highly organic silt	HIGHLY ORGANIC SOIL

NOTE: Fine-grained soils receive dual symbols if their limits in the hatched zone on the Plasticity Chart (L-M)

SOIL SIZES

COMPONENT	SIZE RANGE
BOULDERS	ABOVE 12 in.
COBBLES	3 in. to 12 in.
GRAVEL	No. 4 to 3 in.
Coarse	¾ in to 3 in.
Fine	No. 4 to ¾ in.
SAND	No. 200 to No.4
Coarse	No. 10 to No. 4
Medium	No. 40 to No. 10
Fine	No. 200 to No. 40
*FINES:	BELOW No. 200

NOTE: Classification is based on the portion of a sample that passes the 3-inch sieve.

PLASTICITY CHART

Reference: ASTM D 2487-06, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System).

GENERAL NOTES: The tables list 30 out of a possible 110 Group Names, all of which are assigned to unique proportions of constituent soils. Flow charts in ASTM D 2487-06 aid assignment of the Group Names. Some general rules for fine grained soils are: less than 15% sand or gravel is not mentioned; 15% to 25% sand or gravel is termed "with sand" or "with gravel", and 30% to 49% sand or gravel is termed "sandy" or "gravelly". Some general rules for coarse-grained soils are: uniformly-graded or gap-graded soils are "Poorly" graded (SP or GP); 15% or more sand or gravel is termed "with sand" or "with gravel", 15% to 25% clay and silt is termed clayey and silty and any cobbles or boulders are termed "with cobbles" or "with boulders".

UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL TYPES (Ref 1)

- Boulders:** particles of rock that will not pass a 12-inch screen.
- Cobbles:** particles of rock that will pass a 12-inch screen, but not a 3-inch sieve.
- Gravel:** particles of rock that will pass a 3-inch sieve, but not a #4 sieve.
- Sand:** particles of rock that will pass a #4 sieve, but not a #200 sieve.
- Silt:** soil that will pass a #200 sieve, that is non-plastic or very slightly plastic, and that exhibits little or no strength when dry.
- Clay:** soil that will pass a #200 sieve, that can be made to exhibit plasticity (putty-like properties) within a range of water contents, and that exhibits considerable strength when dry.

MOISTURE AND DENSITY

- Moisture Condition:** an observational term; dry, moist, wet, or saturated.
- Moisture Content:** the weight of water in a sample divided by the weight of dry soil in the soil sample, expressed as a percentage.
- Dry Density:** the pounds of dry soil in a cubic foot of soil.

DESCRIPTORS OF CONSISTENCY (Ref 3)

- Liquid Limit:** the water content at which a soil that will pass a #40 sieve is on the boundary between exhibiting liquid and plastic characteristics. The consistency feels like soft butter.
- Plastic Limit:** the water content at which a soil that will pass a #40 sieve is on the boundary between exhibiting plastic and semi-solid characteristics. The consistency feels like stiff putty.
- Plasticity Index:** the difference between the liquid limit and the plastic limit, i.e. the range in water contents over which the soil is in a plastic state.

MEASURES OF CONSISTENCY OF COHESIVE SOILS (CLAYS) (Ref's 2 & 3)

Very Soft	N=0-1*	C=0-250 psf	Squeezes between fingers
Soft	N=2-4	C=250-500 psf	Easily molded by finger pressure
Medium Stiff	N=5-8	C=500-1000 psf	Molded by strong finger pressure
Stiff	N=9-15	C=1000-2000 psf	Dented by strong finger pressure
Very stiff	N=16-30	C=2000-4000 psf	Dented slightly by finger pressure
Hard	N>30	C>4000 psf	Dented slightly by a pencil point

*N=blows per foot in the Standard Penetration Test. In cohesive soils, with the 3-inch-diameter ring sampler, 140-pound weight, divide the blow count by 1.2 to get N (Ref 4).

MEASURES OF RELATIVE DENSITY OF GRANULAR SOILS (GRAVELS, SANDS, AND SILTS) (Ref's 2 & 3)

Very Loose	N=0-4**	RD=0-30	Easily push a ½-inch reinforcing rod by hand
Loose	N=5-10	RD=30-50	Push a ½-inch reinforcing rod by hand
Medium Dense	N=11-30	RD=50-70	Easily drive a ½-inch reinforcing rod
Dense	N=31-50	RD=70-90	Drive a ½-inch reinforcing rod 1 foot
Very Dense	N>50	RD=90-100	Drive a ½-inch reinforcing rod a few inches

**N=Blows per foot in the Standard Penetration Test. In granular soils, with the 3-inch-diameter ring sampler, 140-pound weight, divide the blow count by 2 to get N (Ref 4).

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

- Ref 1: ASTM Designation: D 2487-06, **Standard Classification of Soils for Engineering Purposes** (Unified Soil Classification System).
- Ref 2: Terzaghi, Karl, and Peck, Ralph B., **Soil Mechanics in Engineering Practice**, John Wiley & Sons, New York, 2nd Ed., 1967, pp. 30, 341, and 347.
- Ref 3: Sowers, George F., **Introductory Soil Mechanics and Foundations: Geotechnical Engineering**, Macmillan Publishing Company, New York, 4th Ed., 1979, pp. 80, 81, and 312.
- Ref 4: Lowe, John III, and Zaccheo, Phillip F., **Subsurface Explorations and Sampling**, Chapter 1 in "Foundation Engineering Handbook," Hsai-Yang Fang, Editor, Van Nostrand Reinhold Company, New York, 2nd Ed, 1991, p. 39.

SOIL TERMINOLOGY

GENERAL NOTES FOR BORING LOGS:

The boring logs are intended for use only in conjunction with the text, and for only the purposes the text outlines for our services. The Plate "Soil Terminology" defines common terms used on the boring logs.

The plate "Unified Soil Classification System," illustrates the method used to classify the soils. The soils were visually classified in the field; the classifications were modified by visual examination of samples in the laboratory, supported, where indicated on the logs, by tests of Liquid Limit, Plasticity Index, and/or gradation. In addition to the interpretations for sample classification, there are interpretations of where stratum changes occur between samples, where gradational changes substantively occur, and where minor changes within a stratum are significant enough to log.

There may be variations in subsurface conditions between borings. Soil characteristics change with variations in moisture content, with exchange of ions, with loosening and densifying, and for other reasons. Groundwater levels change with seasons, with pumping, from leaks, and for other reasons. Thus boring logs depict interpretations of subsurface conditions only at the locations indicated, and only on the date(s) noted.

SPECIAL FIELD NOTES FOR THIS REPORT:

1. The borings were advanced on July 24, 2023, using a truck-mounted drilling rig equipped with 6-inch diameter continuous flight augers. The Cone Penetration Tests (CPTs) were advanced on July 26, 2023, with a truck-mounted CPT rig. The boreholes and the CPTs were backfilled with cement grout.
2. The boring/CPT locations were approximately located using existing site features such as trees, poles, etc.
3. The soils' Group Names [e.g. LEAN CLAY] and Group Symbols [e.g. (CL)] were determined or estimated per ASTM D 2487, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System, see Plate 6). Other engineering terms used on the boring logs are defined on Plate 7, Soil Terminology.
4. Groundwater was encountered in Borings B-6 through B-8 on the date and at the depths noted on the boring logs; however, groundwater was not encountered in Boring B-9 advanced to about 20 feet below the ground surface. The pore pressure dissipation tests performed in CPT-3 and CPT-5 estimated groundwater depths of approximately 15 and 12½ feet, respectively.
5. The soil samples were obtained using the sampler type noted on the boring logs and described on Plate 9, Key to Symbols.
6. The "Blow Count" Column on the boring logs indicates the number of blows required to drive the Modified California and/or Standard Penetration Test sampler below the bottom of the boring, with the blow counts given for each 6 inches of sampler penetration.
7. The tabulated strength values on the boring logs are peak strength values.



KEY TO SYMBOLS

Symbol Description

Strata symbols



Sandy lean clay



Clayey sand



Well-graded sand with silt



Lean Clay



Silty sand



Lean clay with sand



Clayey sand with gravel

Misc. Symbols



Water first encountered during drilling



Water level at completion of boring



Boring continues

Soil Samplers



Modified California Sampler:
18" long, 2.375" ID by 3" OD,
split-barrel sampler driven w/
140-pound hammer falling 30 inches
(ASTM D3550)

Symbol Description



Standard Penetration Test:
18" long, 1.375" ID by 2" OD,
split-spoon sampler driven w/
140-pound hammer falling 30 inches
(ASTM D 1586-11)

Line Types



Denotes a sudden, or well
identified strata change



Denotes a gradual, or poorly
identified strata change

Laboratory Data

DS Direct shear test performed
on a sample at natural or
field moisture content
(ASTM D3080).

DSX Direct shear test performed
after the sample was submerged
in water until volume changes
ceased (ASTM D3080).

LL Liquid Limit established per
ASTM D4318 Test Method

PI Plasticity Index established per
ASTM D4318 Test Method

Gravel (%) Percent soil particles finer
than a 3" sieve and coarser than
a No. 4 sieve (ASTM C136/C117)

Sand (%) Percent soil particles finer
than a No. 4 sieve and coarser than
a No. 200 sieve (ASTM C136/C117)

Fines (%) Percent soil particles finer
than a No. 200 sieve (ASTM C117)

Swell (%) Percent expansion of a submerged
sample under a given surcharge pressure

Nat. Natural or field water content

bgs Below the ground surface



BORING LOG

Boring No. B-6
Page 1 of 2

JOB NAME: SMC-HMB Farmworker Housing Project

JOB NO.: COUSM-23-03

CLIENT: County of San Mateo

DATE DRILLED: 7/24/2023

LOCATION: 880 Stone Pine Road, Half Moon Bay, CA

ELEVATION: 83± feet

DRILLER: Cenozoic Exploration

LOGGED BY: JL

DRILL METHOD: Truck-Mounted Drilling Rig - 6" Diam. Continuous Flight Augers

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DSX	320	20.3	630	8.6	105	0		CL	SANDY LEAN CLAY: dark brown, soft on the surface, stiff below, dry to moist, fine to medium sand, trace coarse sand, trace fine gravel, little organics	Fill 1% Gravel 41% Sand 58% Fines Native 0.5% Swell
DS	400	Nat.	660	13.1	102	3		CL	SANDY LEAN CLAY: dark gray, very stiff, dry to moist, fine to medium sand, few coarse sand, trace fine gravel	
						4		SC	CLAYEY SAND: dark gray, medium dense, moist, mostly medium sand, few fine sand, few coarse sand	29% Fines LL=39, PI=15
						6			... color change to brown	
DS	1200	Nat.	760	11.0	99	9		SW-SM	WELL-GRADED SAND with SILT: brown and gray, loose, wet, well-graded sand	5% Fines
DS	2500	Nat.	1730	11.6	95	9		CL	LEAN CLAY: gray-brown with orange-brown mottling, medium stiff, moist, trace fine sand	
						12		SC	CLAYEY SAND: brown to orange-brown, loose, wet, fine to medium sand	
						15			... approximately 6" of stiff, moist, lean clay	40% Fines LL=32, PI=11
DS	1800	Nat.	890	25.1	102	15		SM	SILTY SAND: brown, medium dense, wet, fine sand, contains 1" to 2" thick lean clay layers	
						18				48% Fines



BORING LOG

Boring No. B-6
Page 2 of 2

JOB NAME: SMC-HMB Farmworker Housing Project

JOB NO.: COUSM-23-03

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	2300	Nat.	1530	30.0	91	21		CL	... gray-brown, medium dense, wet SANDY LEAN CLAY: dark gray to dark blue-gray, medium stiff, moist, fine sand	Non-Plastic
DS	2600	Nat.	1630	27.1 25.8	98	24		SM	SILTY SAND: gray-brown, medium dense, wet, fine sand	23% Fines Non-Plastic
				22.4 27.2		30			... dark gray to dark blue-gray, medium dense, saturated, fine to medium sand ... about 5" bluish gray fat clay	30% Fines Non-Plastic
						33			The boring was terminated at approximately 30 feet bgs. Groundwater was encountered at about 17½ feet bgs and was measured at about 18 feet bgs upon completion of the boring. The borehole was backfilled with cement grout.	
						36				
						39				



BORING LOG

Boring No. B-7
Page 1 of 2

JOB NAME: SMC-HMB Farmworker Housing Project
CLIENT: County of San Mateo
LOCATION: 880 Stone Pine Road, Half Moon Bay, CA
DRILLER: Cenozoic Exploration
DRILL METHOD: Truck-Mounted Drilling Rig - 6" Diam. Continuous Flight Augers

JOB NO.: COUSM-23-03
DATE DRILLED: 7/24/2023
ELEVATION: 80± feet
LOGGED BY: JL

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	320	Nat.	2380	21.1	97	0		SC	CLAYEY SAND: dark gray, medium dense, dry to moist, well-graded sand	Fill?
						13		CL	SANDY LEAN CLAY: dark gray, very stiff, moist, fine to medium sand, trace organics	Native LL=46, PI=20
						3		SC	CLAYEY SAND: dark brown to brown, medium dense, moist, fine to medium sand	
DSX	700	26.3	610	25.8	97	6		CL	SANDY LEAN CLAY: brown, medium stiff, moist, fine to medium sand	
						7		SM	SILTY SAND: brown to dark brown, medium dense, moist, fine to medium sand	
DS	1400	Nat.	1110	23.2	105	9			... dark brown, loose, wet, fine to medium sand	30% Fines Non-Plastic
DS	3000	Nat.	2150	17.9	108	12		SW-SM-SC	WELL-GRADED SAND with SILT: orange-brown and gray, medium dense, wet, well-graded sand, trace fine gravel	
						15			CLAYEY SAND: brown to orange-brown, medium dense, wet, fine to medium sand	
DS	2000	Nat.	1580	23.0	99	18			... about 6" of sandy lean clay	
									... medium dense clayey fine sand	



BORING LOG

Boring No. B-7
Page 2 of 2

JOB NAME: SMC-HMB Farmworker Housing Project

JOB NO.: COUSM-23-03

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	2400	Nat.	1370	24.3	103	21		CL	LEAN CLAY with SAND: dark gray, stiff, moist, little fine sand	
								SM	SILTY SAND: brown to orange-brown, medium dense, moist, fine sand	
									The boring was terminated at approximately 21½ feet bgs.	
									Groundwater was encountered at about 19 feet bgs and was measured at about 18 feet bgs upon completion of the boring.	
									The borehole was backfilled with cement grout.	
						24				
						27				
						30				
						33				
						36				
						39				



BORING LOG

Boring No. B-8
Page 1 of 2

JOB NAME: SMC-HMB Farmworker Housing Project
CLIENT: County of San Mateo
LOCATION: 880 Stone Pine Road, Half Moon Bay, CA
DRILLER: Cenozoic Exploration
DRILL METHOD: Truck-Mounted Drilling Rig - 6" Diam. Continuous Flight Augers

JOB NO.: COUSM-23-03
DATE DRILLED: 7/24/2023
ELEVATION: 77± feet
LOGGED BY: JL

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DSX	320	18.7	1110	15.6	113	0		SC	CLAYEY SAND: dark brown, medium dense, moist, well-graded sand, trace fine gravel, few organics	Fill
DSX	1500	17.0	2410	14.5	115	3		SC	CLAYEY SAND: brown to orange-brown, medium dense, moist, well-graded sand, trace fine gravel	Native 0.9% Swell
DS	500	Nat.	1970	29.9	92	6		CL	LEAN CLAY: dark brown with red-brown stains, very stiff, moist, few well-graded sand	92% Fines LL=49, PI=25
DS	1000	Nat.	1030	17.7	110	9		SC	CLAYEY SAND: dark brown, medium dense, moist, medium to coarse sand	
						12		CL	LEAN CLAY: brown to gray-brown with orange-brown stains, stiff, moist, few fine sand	
DS	1400	Nat.	1030	28.8	95	15		CL	SANDY LEAN CLAY: brown to orange-brown, stiff, moist to wet, well-graded sand	66% Fines
						18		SC	CLAYEY SAND: brown, medium dense, wet, well-graded sand	
								SW-SM	WELL-GRADED SAND with SILT: brown, medium dense, saturated, well-graded sand, few	



BORING LOG

Boring No. B-8
Page 2 of 2

JOB NAME: SMC-HMB Farmworker Housing Project

JOB NO.: COUSM-23-03

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	1700	Nat.	1890	14.8	114	17			fine gravel	6% Gravel 84% Sand 10% Fines
						21				... caving
				15.3		24			... medium dense, saturated, mostly medium-grained sand	10% Fines
						27		SM	SILTY SAND: dark bluish gray, medium dense, saturated, fine sand, contains thin layers of dark blue-gray fat clay	... borehole collapsing, unable to sample
						30			The boring was terminated at approximately 28½ feet bgs. Groundwater was encountered at about 15 feet bgs and was measured at about 9 feet bgs upon completion of the boring. The borehole was backfilled with cement grout.	
						33				
						36				
						39				



BORING LOG

Boring No. B-9
Page 1 of 2

JOB NAME: SMC-HMB Farmworker Housing Project
CLIENT: County of San Mateo
LOCATION: 880 Stone Pine Road, Half Moon Bay, CA
DRILLER: Cenozoic Exploration
DRILL METHOD: Truck-Mounted Drilling Rig - 6" Diam. Continuous Flight Augers

JOB NO.: COUSM-23-03
DATE DRILLED: 7/24/2023
ELEVATION: 78± feet
LOGGED BY: JL

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	320	Nat.	340	12.0	97	0		SC	CLAYEY SAND with GRAVEL: brown, loose and dry on surface, medium dense and moist below, well-graded sand, little fine gravel	Fill
DS	1500	Nat.	1710	6.5	108	8		CL	LEAN CLAY with SAND: dark gray, stiff, moist, little fine to medium sand, trace organics ... brown at about 2½ feet, well-graded sand, trace fine gravel	LL=40, PI=17 Native R-Value=9
DSX	500	21.6	710	22.4 20.7	104	3			... orange-brown, stiff, moist	75% Fines
DS	1200	Nat.	1400	19.3 16.4	113	9		SC	CLAYEY SAND: orange-brown, medium dense, moist, well-graded sand, trace fine gravel	31% Fines
DS	1800	Nat.	920	39.2	84	12		CL	LEAN CLAY: orange-brown with dark gray stains, medium stiff, moist to wet, few fine sand	
						15		SC	CLAYEY SAND: orange-brown, medium dense, moist, well-graded sand	
						18		CL	LEAN CLAY with SAND: orange-brown to brown, medium stiff, moist to wet, few to little fine sand	



BORING LOG

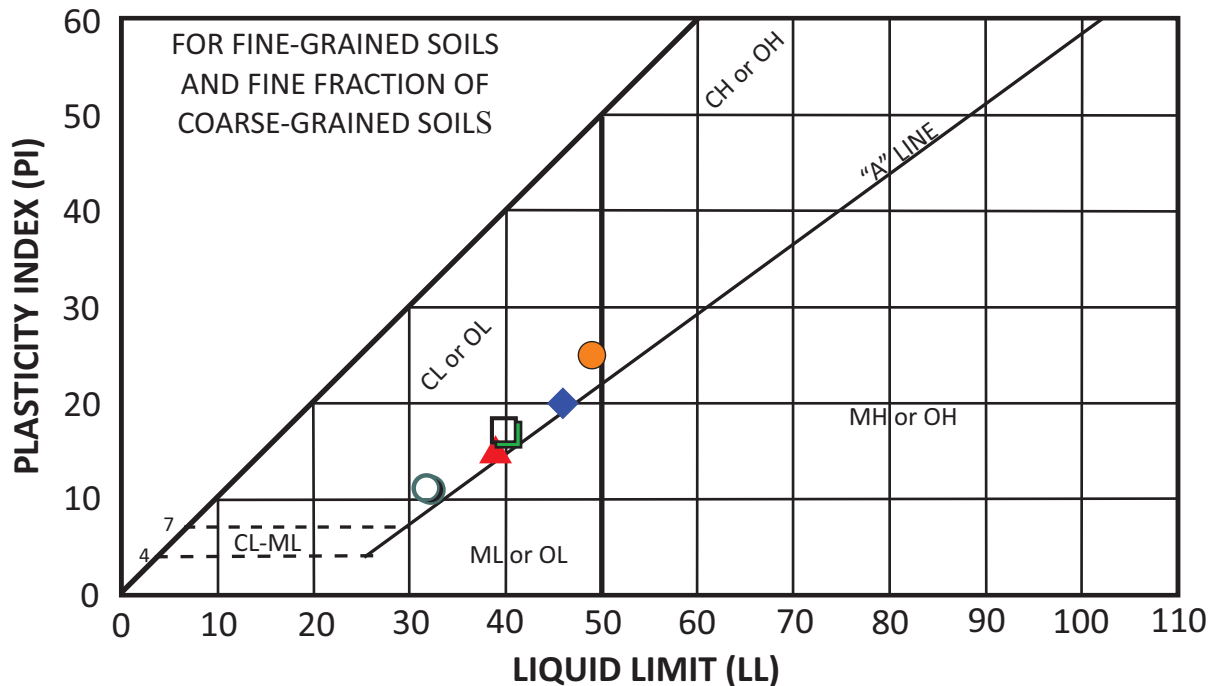
Boring No. B-9
Page 2 of 2

JOB NAME: SMC-HMB Farmworker Housing Project

JOB NO.: COUSM-23-03

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
				22.9	104	21			... about 2" of medium-grained sand lense ... increased sand content at 20' bgs The boring was terminated at approximately 20 feet bgs. Groundwater was not encountered in the boring. The borehole was backfilled with cement grout.	
						24				
						27				
						30				
						33				
						36				
						39				

PLASTICITY CHART



SYMBOL	SAMPLE SOURCE	DEPTH (FEET)	NATURAL WATER CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	SOIL DESCRIPTION
▲	Boring B-6	3.5	13.9	39	24	15	Dark Gray Clayey Sand (SC)
○	Boring B-6	14	25.1	32	21	11	Brown Clayey Sand (SC)
-	Boring B-6	19	30.0		Non-Plastic		Gray-Brown Silty Sand (SM)
-	Boring B-6	23.5	27.1		Non-Plastic		Gray-Brown Silty Sand (SM)
-	Boring B-6	28.5	22.4		Non-Plastic		Dark Blue-Gray Silty Sand (SM)
◆	Boring B-7	1.5	21.1	46	26	20	Dark Gray Sandy Lean Clay (CL)
-	Boring B-7	10.5	23.2		Non-Plastic		Dark Brown Silty Sand (SM)
●	Boring B-8	4	29.9	49	24	25	Dark Brown Lean Clay (CL)
◻	Boring B-9	1.5	12.0	40	23	17	Brown Clayey Sand w/ Gravel (SC)

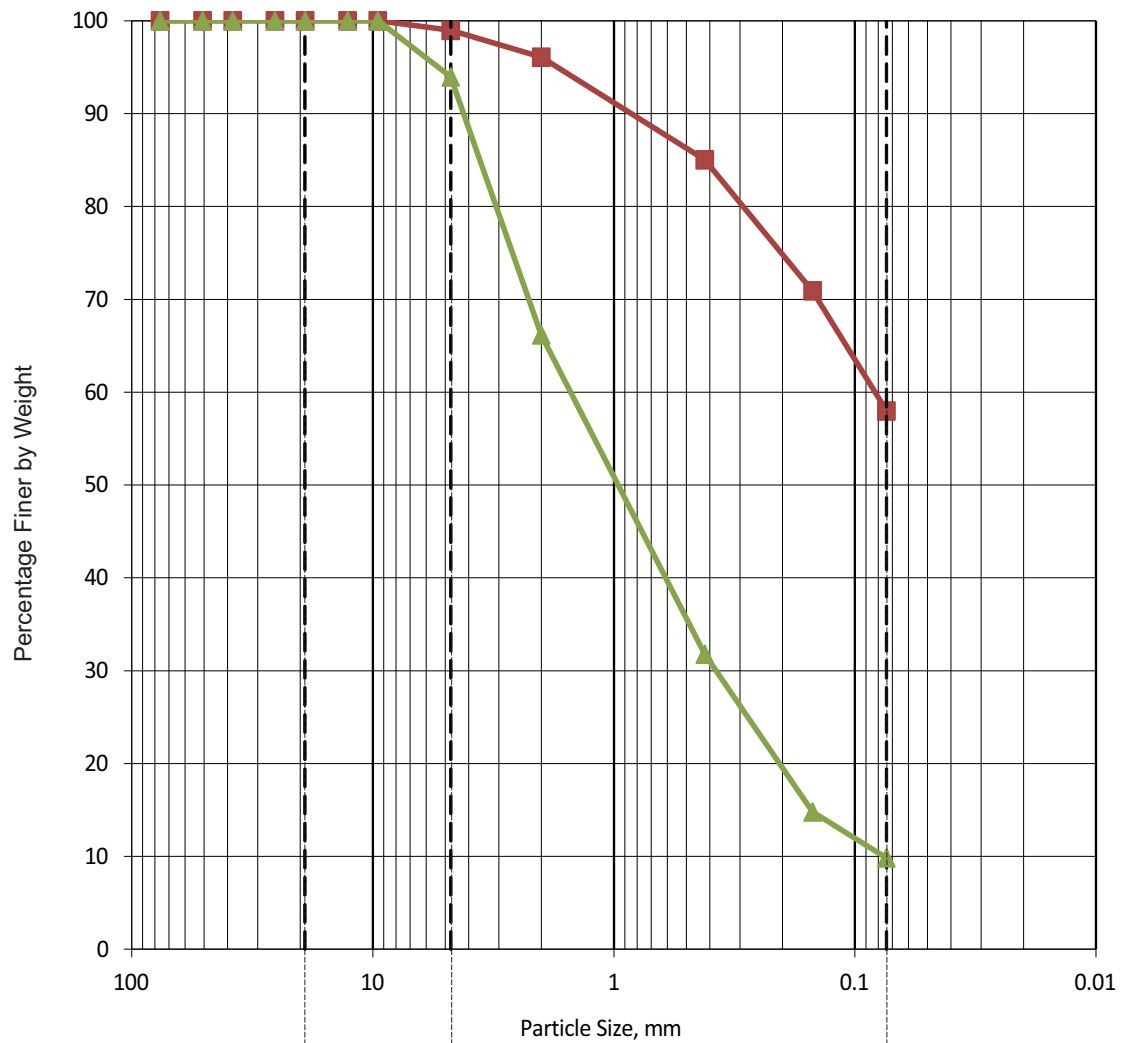
GEOTECHNICAL ENGINEERING INVESTIGATION
SMC-HMB FARMWORKER HOUSING PROJECT
880 STONE PINE ROAD
HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA

PLASTICITY DATA

DATE:
 August 2023

JOB NUMBER:
 COUSM-23-03

PLATE
 14



COBBLES	GRAVEL		SAND			SILT OR CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	

LEGEND				
BORING NUMBER	B-6	B-8		
DEPTH (FEET)	1	18.5		
SOIL DESCRIPTION	Sandy Lean Clay (CL)	Well-Graded Sand with Silt (SW-SM)		

GEOTECHNICAL ENGINEERING INVESTIGATION
 SMC-HMB FARMWORKER HOUSING PROJECT
 880 STONE PINE ROAD
 HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA

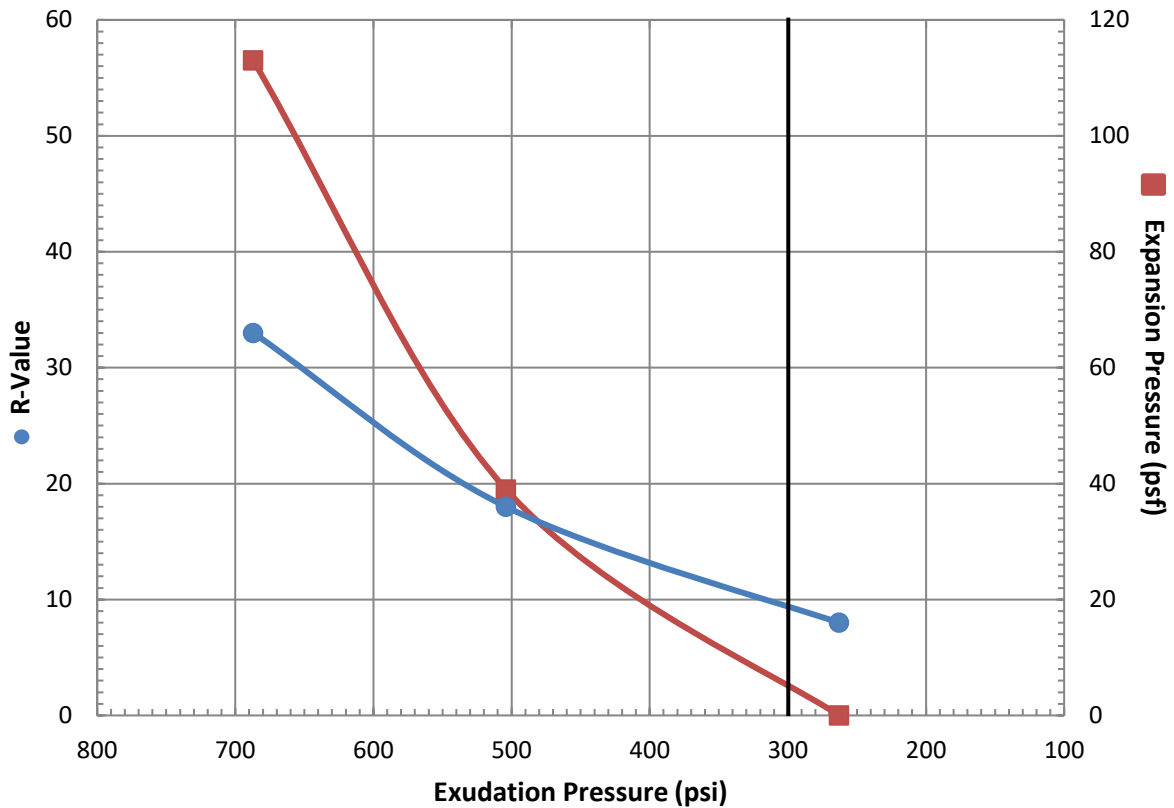
GRADATION TEST DATA

DATE:
 August 2023

JOB NUMBER:
 COUSM-23-03

PLATE:
 15

B-9 Bulk Sample at Depth 1.5-3.5 FT



Resistance R-Value and Expansion Pressure - Cal Test 301

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psf	Horizontal Press. Psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	320	113.3	15.1	113	98	2.54	687	33	33
2	250	110.5	15.9	39	123	2.59	504	18	19
3	140	106.4	18.1	0	139	2.64	263	8	9

R-value at 300 psi exudation pressure = 9

Exp. Pressure at 300 psi exudation pressure = 6 psf

**GEOTECHNICAL ENGINEERING INVESTIGATION
SMC-HMB FARMWORKER HOUSING PROJECT**

**880 STONE PINE ROAD
HALF MOON BAY, SAN MATEO COUNTY, CALIFORNIA**

R-VALUE TEST REPORT

DATE:
August 2023

JOB NUMBER:
COUSM-23-03

PLATE
16



Checked: _____ PJ

Proj. No: C00SM-23-03

[illegible]

APPENDIX A

Cone Penetration Test (CPT) Results (CPT-3 through CPT-5)

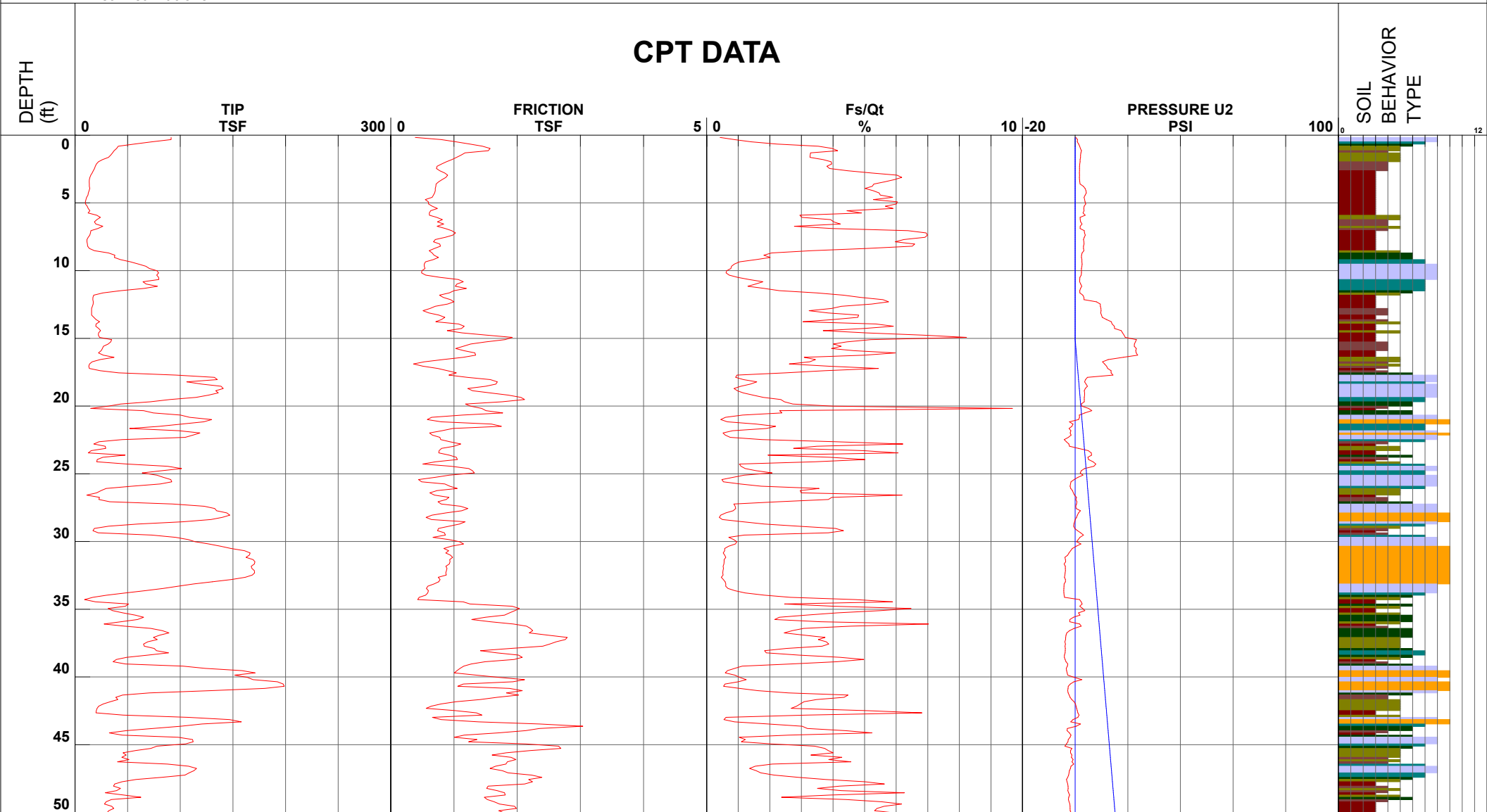


BAGG Engineering

Project SMC-HMB Farmworker Housing project
Job Number COUSM-23-03
Hole Number CPT-03
EST GW Depth During Test
Operator
Cone Number DDG1589
Date and Time 7/26/2023 10:51:49 AM

Filename SDF(864).cpt
GPS
Maximum Depth 50.52 ft

Net Area Ratio .8



- | | | | |
|----------------------------|-------------------------------|------------------------------|----------------------------------|
| 1 - sensitive fine grained | 4 - silty clay to clay | 7 - silty sand to sandy silt | 10 - gravelly sand to sand |
| 2 - organic material | 5 - clayey silt to silty clay | 8 - sand to silty sand | 11 - very stiff fine grained (*) |
| 3 - clay | 6 - sandy silt to clayey silt | 9 - sand | 12 - sand to clayey sand (*) |

Cone Size 15cm²

S*Soil behavior type and SPT based on data from UBC-1983

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(864).cpt
CPT Date: 7/26/2023 10:51:49 AM
GW During Test: 15 ft

Page: 1
Sounding ID: CPT-03
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	Slv Stss tsf	pore prss (psi)	Frct Rato %	Mat Typ Zon	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	OCR -	Fin Ic -	D50 mm	Ic SBT Indx	Nk -
0.33	91.3	146.4	156.5	91.3	0.8	0.9	0.9	6	clean SAND to silty SAND	125	5.0	29	18	26	80	48	-	-	7	0.350	1.75	16
0.49	73.0	117.1	146.5	73.0	1.0	0.8	1.4	6	clean SAND to silty SAND	125	5.0	23	15	23	72	48	-	-	12	0.350	1.96	16
0.66	56.3	90.3	146.1	56.3	1.3	1.3	2.2	5	silty SAND to sandy SILT	120	3.0	30	19	19	64	48	-	-	18	0.200	2.18	16
0.82	41.1	65.9	157.9	41.1	1.5	1.7	3.5	4	clay SILT to silty CLAY	115	2.0	33	21	15	-	-	2.9	9.9	27	0.070	2.42	15
0.98	39.5	63.4	166.0	39.5	1.6	2.0	4.0	4	clay SILT to silty CLAY	115	2.0	32	20	15	-	-	2.8	9.9	29	0.070	2.47	15
1.15	37.2	59.7	165.4	37.2	1.5	2.4	4.2	4	clay SILT to silty CLAY	115	2.0	30	19	15	-	-	2.6	9.9	31	0.070	2.50	15
1.31	35.7	57.2	142.2	35.7	1.2	2.2	3.3	4	clay SILT to silty CLAY	115	2.0	29	18	14	-	-	2.5	9.9	28	0.070	2.44	15
1.48	33.9	54.4	138.8	33.9	1.1	2.0	3.3	4	clay SILT to silty CLAY	115	2.0	27	17	13	-	-	2.4	9.9	29	0.070	2.46	15
1.64	31.8	51.0	134.9	31.9	1.0	2.0	3.3	4	clay SILT to silty CLAY	115	2.0	26	16	12	-	-	2.2	9.9	30	0.070	2.47	15
1.80	26.2	42.0	132.7	26.2	1.0	1.9	3.7	4	clay SILT to silty CLAY	115	2.0	21	13	11	-	-	1.8	9.9	34	0.070	2.57	15
1.97	22.3	35.8	-	22.3	0.9	1.9	4.0	4	clay SILT to silty CLAY	115	2.0	18	11	9	-	-	1.6	9.9	38	0.070	2.64	15
2.13	20.3	32.6	-	20.4	0.8	1.7	4.0	4	clay SILT to silty CLAY	115	2.0	16	10	9	-	-	1.4	9.9	39	0.070	2.67	15
2.30	19.3	30.9	-	19.3	0.7	1.7	3.8	4	clay SILT to silty CLAY	115	2.0	15	10	8	-	-	1.4	9.9	39	0.070	2.68	15
2.46	18.6	29.8	-	18.6	0.7	1.6	3.9	4	clay SILT to silty CLAY	115	2.0	15	9	8	-	-	1.3	9.9	40	0.070	2.70	15
2.62	17.4	27.8	-	17.4	0.8	1.6	4.5	3	silty CLAY to CLAY	115	1.5	19	12	8	-	-	1.2	9.9	44	0.005	2.76	15
2.79	16.4	26.2	-	16.4	0.9	1.6	5.3	3	silty CLAY to CLAY	115	1.5	17	11	8	-	-	1.1	9.9	48	0.005	2.83	15
2.95	14.9	24.0	-	15.0	0.9	1.7	6.1	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.0	9.9	52	0.005	2.90	15
3.12	14.1	22.7	-	14.2	0.9	1.6	6.3	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	1.0	9.9	54	0.005	2.93	15
3.28	13.7	21.9	-	13.7	0.8	1.7	6.0	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	1.0	9.9	54	0.005	2.93	15
3.45	13.4	21.5	-	13.5	0.8	1.7	5.7	3	silty CLAY to CLAY	115	1.5	14	9	7	-	-	0.9	9.9	53	0.005	2.92	15
3.61	13.5	21.7	-	13.6	0.7	1.9	5.4	3	silty CLAY to CLAY	115	1.5	14	9	7	-	-	0.9	9.9	52	0.005	2.90	15
3.77	13.6	21.8	-	13.7	0.7	3.1	5.3	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	0.9	9.9	51	0.005	2.89	15
3.94	14.0	22.5	-	14.1	0.7	3.7	5.1	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	1.0	9.9	50	0.005	2.87	15
4.10	13.4	21.4	-	13.4	0.7	4.1	5.4	3	silty CLAY to CLAY	115	1.5	14	9	6	-	-	0.9	9.9	52	0.005	2.90	15
4.27	12.7	20.3	-	12.8	0.7	4.3	5.6	3	silty CLAY to CLAY	115	1.5	14	8	6	-	-	0.9	9.9	54	0.005	2.93	15
4.43	12.3	19.7	-	12.3	0.7	3.8	5.6	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8	9.9	55	0.005	2.94	15
4.59	11.1	17.8	-	11.2	0.7	3.4	6.0	3	silty CLAY to CLAY	115	1.5	12	7	6	-	-	0.8	9.9	58	0.005	3.00	15
4.76	10.3	16.6	-	10.4	0.5	3.6	5.4	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7	9.9	58	0.005	2.99	15
4.92	9.8	15.8	-	9.9	0.6	3.8	6.2	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7	9.9	62	0.005	3.05	15
5.09	9.9	16.0	-	10.0	0.6	4.0	6.2	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7	9.9	61	0.005	3.04	15
5.25	11.6	18.6	-	11.7	0.7	3.4	5.8	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8	9.9	57	0.005	2.97	15
5.41	12.5	20.0	-	12.6	0.7	3.3	6.1	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.9	9.9	56	0.005	2.96	15
5.58	14.2	22.8	-	14.3	0.6	3.4	4.5	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	1.0	9.9	48	0.005	2.83	15
5.74	12.4	19.9	-	12.5	0.6	3.0	5.0	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.9	9.9	52	0.005	2.91	15
5.91	20.7	33.2	108.3	20.8	0.6	3.8	3.0	4	clay SILT to silty CLAY	115	2.0	17	10	8	-	-	1.4	9.9	35	0.070	2.59	15
6.07	24.1	38.6	116.2	24.1	0.7	1.9	3.1	4	clay SILT to silty CLAY	115	2.0	19	12	10	-	-	1.7	9.9	33	0.070	2.55	15
6.23	20.8	33.3	-	20.8	0.8	1.9	4.0	4	clay SILT to silty CLAY	115	2.0	17	10	9	-	-	1.4	9.9	39	0.070	2.67	15
6.40	18.4	29.4	-	18.4	0.7	2.1	4.1	4	clay SILT to silty CLAY	115	2.0	15	9	8	-	-	1.3	9.9	42	0.070	2.72	15
6.56	19.8	31.7	-	19.8	0.8	2.6	4.3	4	clay SILT to silty CLAY	115	2.0	16	10	9	-	-	1.4	9.9	41	0.070	2.71	15
6.73	26.4	41.1	114.1	26.5	0.7	1.9	2.8	4	clay SILT to silty CLAY	115	2.0	21	13	10	-	-	1.8	9.9	31	0.070	2.50	15
6.89	21.8	35.0	-	21.8	0.9	1.9	4.0	4	clay SILT to silty CLAY	115	2.0	17	11	9	-	-	1.5	9.9	38	0.070	2.66	15
7.05	15.1	24.2	-	15.2	1.0	3.5	6.5	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.0	9.9	53	0.005	2.92	15
7.22	14.7	23.6	-	14.8	1.0	3.5	7.1	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.0	9.9	56	0.005	2.96	15
7.38	14.0	22.5	-	14.1	1.0	3.9	7.2	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	1.0	9.9	57	0.005	2.98	15
7.55	12.5	20.0	-	12.6	0.9	3.5	7.2	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.9	9.9	59	0.005	3.01	15
7.71	11.3	18.1	-	11.4	0.7	3.2	6.5	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8	8.0	60	0.005	3.02	15
7.87	11.3	18.1	-	11.4	0.7	3.3	6.2	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8	7.9	59	0.005	3.00	15
8.04	11.8	18.9	-	11.8	0.8	3.4	6.9	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8	8.0	60	0.005	3.02	15
8.20	12.1	19.4	-	12.1	0.8	3.2	6.8	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8	8.1	59	0.005	3.01	15
8.37	13.6	21.8	-	13.7	0.7	3.1	5.3	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	0.9	8.9	52	0.005	2.89	15
8.53	18.3	29.4	-	18.4	0.6	3.3	3.4	4	clay SILT to silty CLAY	115	2.0	15	9	8	-	-	1.3	9.9	39	0.070	2.67	15
8.69	31.8	43.5	100.3	31.8	0.7	2.6	2.1	5	silty SAND to sandy SILT	120	3.0	15	11	10	40	38	-	-	26	0.200	2.40	16
8.86	37.9	51.4	101.1	38.0	0.7	2.4	1.8	5	silty SAND to sandy SILT	120	3.0	17	13	11	45	39	-	-	23	0.200	2.31	16
9.02	37.4	50.3	105.4	37.4	0.8	2.4	2.0	5	silty SAND to sandy SILT	120	3.0	17	12	11	44	39	-	-	24	0.200	2.34	16
9.19	42.9	57.2	99.6	43.0	0.7	2.6	1.6	5	silty SAND to sandy SILT	120	3.0	19	14	12	49	39	-	-	20	0.200	2.23	16
9.35	52.7	69.6	95.5	52.8	0.5	2.6	1.1	6	clean SAND to silty SAND	125	5.0	14	11	14	55	40	-	-	14	0.350	2.05	16
9.51	60.4	78.9	98.9	60.4	0.5	2.6	0.9	6	clean SAND to silty SAND	125	5.0	16	12	15	59	41	-	-	12	0.350	1.96	16
9.68	67.3	87.1	103.4	67.3	0.5	2.6	0.8	6	clean SAND to silty SAND	125	5.0	17	13	16	62	41	-	-	10	0.350	1.90	16
9.84	70.6	90.7	105.9	70.7	0.5	2.4	0.8	6	clean SAND to silty SAND	125	5.0	18	14	17	64	42	-	-	10	0.350	1.88	16
10.01	77.8	98.9	109.3	77.8	0.5	2.4	0.6	6	clean SAND to silty SAND	125	5.0	20	16	18	67	42	-	-	8	0.350	1.80	16
10.17	79.5	100.2	109.9	79.5	0.5	2.4	0.6	6	clean SAND to silty SAND	125	5.0	20	16	18	67	42	-	-	8	0.350	1.79	16
10.34	77.5	96.9	109.9	77.6	0.6	2.3	0.7	6	clean SAND to silty SAND	125	5.0	19	16	18	66	42	-	-	9	0.350	1.84	16
10.50	79.7	98.4	118.5	79.4	0.8	1.8	1.0	6	clean SAND to silty SAND	125	5.0	20	16	19	66	42	-	-	11	0.350	1.92	16
10.66	79.7	97.9	128.1	79.7	1.1	1.8	1.4	6	clean SAND to silty SAND	125	5.0	20	16	19	66	42	-	-	13	0.350	2.01	16
10.83	64.5	78.7	123.9	64.6	1.1	1																

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(864).cpt
CPT Date: 7/26/2023 10:51:49 AM
GW During Test: 15 ft

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Sounding ID: CPT-03
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	Slv Stss tsf	pore prss (psi)	Frct Rato %	* Mat Typ Zon	* Material Behavior Description	Unit Wght pcf	* Qc to N	* SPT R-N1 60%	* SPT R-N 60%	* SPT IcN1 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	OCR -	* Fin Ic -	* D50 mm	* Ic SBT Indx	* Nk -
15.58	27.0	30.3	-	27.4	1.1	22.5	4.4	3	silty CLAY to CLAY	115	1.5	20	18	8	-	-	1.8 9.7	42	0.005	2.74	15	
15.75	26.0	29.1	-	26.5	1.0	23.2	4.1	4	clay SILT to silty CLAY	115	2.0	15	13	8	-	-	1.8 9.3	42	0.070	2.73	15	
15.91	24.9	27.7	-	25.3	1.2	23.0	4.8	3	silty CLAY to CLAY	115	1.5	18	17	8	-	-	1.7 8.8	46	0.005	2.79	15	
16.08	22.3	24.7	-	22.8	1.3	23.2	6.2	3	silty CLAY to CLAY	115	1.5	16	15	7	-	-	1.5 7.8	52	0.005	2.91	15	
16.24	26.8	29.6	-	27.3	1.3	23.8	5.2	3	silty CLAY to CLAY	115	1.5	20	18	8	-	-	1.8 9.4	46	0.005	2.79	15	
16.40	37.2	37.9	118.3	37.6	1.1	18.3	3.2	4	clay SILT to silty CLAY	115	2.0	19	19	10	-	-	2.6 9.9	34	0.070	2.57	15	
16.57	24.0	26.2	-	24.2	0.8	12.6	3.6	4	clay SILT to silty CLAY	115	2.0	13	12	7	-	-	1.6 8.3	42	0.070	2.73	15	
16.73	16.3	17.7	-	16.5	0.5	10.4	3.5	3	silty CLAY to CLAY	115	1.5	12	11	5	-	-	1.1 5.5	49	0.005	2.86	15	
16.90	13.8	14.9	-	14.0	0.4	11.2	2.8	3	silty CLAY to CLAY	115	1.5	10	9	4	-	-	0.9 4.6	50	0.005	2.87	15	
17.06	13.1	14.1	-	13.4	0.5	11.9	4.2	3	silty CLAY to CLAY	115	1.5	9	9	4	-	-	0.9 4.3	58	0.005	2.99	15	
17.23	13.6	14.6	-	13.9	0.7	12.4	5.9	3	silty CLAY to CLAY	115	1.5	10	9	5	-	-	0.9 4.5	63	0.005	3.07	15	
17.39	24.0	25.6	-	24.3	0.9	13.6	3.9	4	clay SILT to silty CLAY	115	2.0	13	12	7	-	-	1.6 8.1	44	0.070	2.76	15	
17.55	41.6	41.6	109.6	41.8	1.0	13.7	2.6	4	clay SILT to silty CLAY	115	2.0	21	21	10	-	-	2.9 9.9	29	0.070	2.47	15	
17.72	96.0	95.9	115.8	96.3	0.9	14.4	1.0	6	clean SAND to silty SAND	125	5.0	19	19	18	66	41	-	-	11	0.350	1.92	16
17.88	132.5	131.9	145.8	132.5	1.2	4.7	0.9	6	clean SAND to silty SAND	125	5.0	26	26	24	76	42	-	-	10	0.350	1.80	16
18.05	135.3	134.4	155.4	135.4	1.6	3.9	1.2	6	clean SAND to silty SAND	125	5.0	27	27	25	77	42	-	-	10	0.350	1.86	16
18.21	106.2	105.2	141.9	106.3	1.7	3.6	1.6	5	silty SAND to sandy SILT	120	3.0	35	35	21	69	41	-	-	14	0.200	2.03	16
18.37	120.4	119.0	148.0	120.5	1.7	4.2	1.4	6	clean SAND to silty SAND	125	5.0	24	24	23	73	42	-	-	12	0.350	1.95	16
18.54	138.6	136.6	155.0	138.7	1.5	4.7	1.1	6	clean SAND to silty SAND	125	5.0	27	28	25	77	42	-	-	9	0.350	1.84	16
18.70	140.8	138.4	149.9	140.9	1.2	3.9	0.9	6	clean SAND to silty SAND	125	5.0	28	28	25	78	42	-	-	7	0.350	1.77	16
18.87	133.7	131.0	146.7	133.7	1.3	3.5	1.0	6	clean SAND to silty SAND	125	5.0	26	27	24	76	42	-	-	8	0.350	1.82	16
19.03	136.1	133.0	153.9	136.1	1.6	3.6	1.2	6	clean SAND to silty SAND	125	5.0	27	27	25	76	42	-	-	10	0.350	1.86	16
19.19	126.8	123.7	154.8	126.9	1.9	3.6	1.5	6	clean SAND to silty SAND	125	5.0	25	25	24	74	42	-	-	12	0.350	1.96	16
19.36	115.0	111.8	153.9	115.1	2.1	3.5	1.8	5	silty SAND to sandy SILT	120	3.0	37	38	22	71	41	-	-	14	0.200	2.05	16
19.52	90.3	87.6	148.8	90.3	2.1	3.5	2.4	5	silty SAND to sandy SILT	120	3.0	29	30	19	63	40	-	-	19	0.200	2.21	16
19.69	71.6	69.3	135.3	71.7	1.8	3.5	2.5	5	silty SAND to sandy SILT	120	3.0	23	24	15	55	39	-	-	23	0.200	2.30	16
19.85	43.3	41.8	115.5	43.3	1.2	2.3	2.8	4	clay SILT to silty CLAY	115	2.0	21	22	10	-	-	3.0 9.9	31	0.070	2.50	15	
20.01	31.5	31.0	-	31.6	1.3	2.6	4.2	4	clay SILT to silty CLAY	115	2.0	16	16	8	-	-	2.2 9.9	41	0.070	2.71	15	
20.18	14.9	14.6	-	15.0	1.4	5.1	9.9	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	1.0 4.4	75	0.005	3.22	15	
20.34	65.2	62.6	125.1	65.3	1.5	6.3	2.4	5	silty SAND to sandy SILT	120	3.0	21	22	14	52	38	-	-	23	0.200	2.32	16
20.51	74.4	71.2	135.0	74.5	1.8	3.7	2.4	5	silty SAND to sandy SILT	120	3.0	24	25	16	56	39	-	-	22	0.200	2.28	16
20.67	100.1	95.6	120.5	100.1	1.1	1.6	1.1	6	clean SAND to silty SAND	125	5.0	19	20	19	66	40	-	-	12	0.350	1.97	16
20.83	108.8	103.7	112.4	108.8	0.6	1.6	0.6	6	clean SAND to silty SAND	125	5.0	21	22	19	68	41	-	-	7	0.350	1.77	16
21.00	129.9	123.4	123.4	129.9	0.6	1.3	0.4	6	clean SAND to silty SAND	125	5.0	25	26	21	74	42	-	-	5	0.350	1.63	16
21.16	122.1	115.8	124.3	122.1	0.8	-2.2	0.7	6	clean SAND to silty SAND	125	5.0	23	24	21	72	41	-	-	7	0.350	1.75	16
21.33	101.4	95.9	133.4	101.3	1.6	-0.8	1.6	5	silty SAND to sandy SILT	120	3.0	32	34	19	66	40	-	-	15	0.200	2.06	16
21.49	80.3	75.8	133.5	80.3	1.8	-1.2	2.2	5	silty SAND to sandy SILT	120	3.0	25	27	16	58	39	-	-	20	0.200	2.24	16
21.65	51.9	48.8	102.2	51.8	1.0	-2.3	1.9	5	silty SAND to sandy SILT	120	3.0	16	17	11	43	36	-	-	24	0.200	2.34	16
21.82	98.8	92.8	109.5	98.7	0.8	-1.6	0.8	6	clean SAND to silty SAND	125	5.0	19	20	17	65	40	-	-	10	0.350	1.89	16
21.98	118.7	111.3	116.2	118.7	0.6	-1.9	0.5	6	clean SAND to silty SAND	125	5.0	22	24	20	71	41	-	-	6	0.350	1.71	16
22.15	112.0	104.7	113.1	111.9	0.7	-1.6	0.6	6	clean SAND to silty SAND	125	5.0	21	22	19	69	41	-	-	7	0.350	1.76	16
22.31	104.7	97.7	111.6	104.7	0.8	-2.5	0.8	6	clean SAND to silty SAND	125	5.0	20	21	18	66	40	-	-	9	0.350	1.85	16
22.47	44.7	41.6	92.9	44.6	0.8	-4.2	1.8	5	silty SAND to sandy SILT	120	3.0	14	15	10	38	35	-	-	26	0.200	2.38	16
22.64	22.9	20.9	-	22.8	0.9	-3.4	4.3	3	silty CLAY to CLAY	115	1.5	14	15	6	-	-	1.5 6.5	50	0.005	2.86	15	
22.80	17.8	16.2	-	17.8	1.1	-2.4	6.7	3	silty CLAY to CLAY	115	1.5	11	12	5	-	-	1.2 5.0	64	0.005	3.07	15	
22.97	28.7	26.0	-	28.6	1.0	-2.1	3.7	4	clay SILT to silty CLAY	115	2.0	13	14	7	-	-	1.9 8.2	42	0.070	2.74	15	
23.13	29.3	26.4	-	29.3	0.8	1.2	2.9	4	clay SILT to silty CLAY	115	2.0	13	15	7	-	-	2.0 8.3	39	0.070	2.66	15	
23.30	15.4	13.9	-	15.5	0.8	5.0	5.4	3	silty CLAY to CLAY	115	1.5	9	10	5	-	-	1.0 4.2	63	0.005	3.07	15	
23.46	12.5	11.2	-	12.7	0.8	6.1	6.8	3	silty CLAY to CLAY	115	1.5	7	8	4	-	-	0.8 3.3	74	0.005	3.21	15	
23.62	47.6	43.7	99.1	47.7	0.9	6.2	2.0	5	silty SAND to sandy SILT	120	3.0	15	16	10	40	36	-	-	26	0.200	2.39	16
23.79	26.5	23.6	-	26.6	1.0	4.8	4.1	3	silty CLAY to CLAY	115	1.5	16	18	7	-	-	1.8 7.4	46	0.005	2.81	15	
23.95	21.0	18.6	-	21.1	1.1	5.1	5.4	3	silty CLAY to CLAY	115	1.5	12	14	6	-	-	1.4 5.7	56	0.005	2.96	15	
24.12	20.7	18.3	-	20.8	0.7	6.8	3.7	3	silty CLAY to CLAY	115	1.5	12	14	5	-	-	1.4 5.6	50	0.005	2.86	15	
24.28	49.3	44.9	76.4	49.5	0.5	7.9	1.1	5	silty SAND to sandy SILT	120	3.0	15	16	10	41	36	-	-	19	0.200	2.21	16
24.44	87.9	79.9	105.9	88.0	1.0	7.1	1.1	6	clean SAND to silty SAND	125	5.0	16	18	16	60	39	-	-	13	0.350	2.02	16
24.61	101.2	91.8	119.7	101.3	1.2	3.6	1.2	6	clean SAND to silty SAND	125	5.0	18	20	18	64	40	-	-	13	0.350	2.00	16
24.77	82.8	74.9	115.1	82.8	1.3	2.4	1.6	5	silty SAND to sandy SILT	120	3.0	25	28	16	57	39	-	-	17	0.200	2.14	16
24.94	63.8	57.6	114.7	63.8	1.3	1.9	2.1	5	silty SAND to sandy SILT	120	3.0	19	21	13	49	37	-	-	23	0.200	2.31	16
25.10	77.8	70.1	100.5	77.9	0.9	2.9	1.2	5	silty SAND to sandy SILT	120	3.0	23	26	14	55	38	-	-	15	0.200	2.09	16
25.26	83.9	75.5	95.4	83.9	0.7	1.1	0.9	6	clean SAND to silty SAND	125	5.0	15	17	15	58	39	-	-	12	0.350	1.97	16
25.43	91.0	81.6	91.0	91.0	0.4	-0.4	0.5	6	clean SAND to silty SAND	125	5.0	16	18	15	60	39	-	-	8	0.350	1.81	16
25.59	91.9	82.3	92.9	91.9	0.5	-1.6	0.5	6	clean SAND to silty SAND	125	5.0	16	18	15	61	39	-	-	9	0.350	1.83	16
25.76	81.0	72.4	98.8	81.0	0.9	-1.8	1.1	6	clean SAND to silty SAND	125	5.0	14	16	14	56	38	-	-	14	0.350	2.05	16
25.92	54.1	48.2	97.7	54.0	0.9	-1.9	1.8	5	silty SAND to sandy SILT	120	3.0	16	18									

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(864).cpt
CPT Date: 7/26/2023 10:51:49 AM
GW During Test: 15 ft

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Sounding ID: CPT-03
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	Slv Stss tsf	pore prss (psi)	Frct Rto %	Mat Typ Zon	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	OCR -	Fin Ic %	D50 mm	Ic SBT Indx	Nk -
31.01	165.5	139.1	139.9	165.4	0.9	-2.8	0.6	6	clean SAND to silty SAND	125	5.0	28	33	24	78	42	-	-	5	0.350	1.65	16
31.17	162.4	136.3	139.2	162.4	1.0	-3.9	0.6	6	clean SAND to silty SAND	125	5.0	27	32	24	77	42	-	-	6	0.350	1.68	16
31.33	169.1	141.6	141.6	169.1	0.9	-3.7	0.6	6	clean SAND to silty SAND	125	5.0	28	34	24	78	42	-	-	5	0.350	1.64	16
31.50	170.8	142.7	142.7	170.8	0.9	-3.6	0.6	6	clean SAND to silty SAND	125	5.0	29	34	25	79	42	-	-	5	0.350	1.63	16
31.66	170.4	142.1	142.1	170.3	0.9	-4.2	0.5	6	clean SAND to silty SAND	125	5.0	28	34	24	79	42	-	-	5	0.350	1.63	16
31.83	167.4	139.3	139.3	167.3	0.9	-3.8	0.5	6	clean SAND to silty SAND	125	5.0	28	33	24	78	42	-	-	5	0.350	1.63	16
31.99	168.0	139.6	139.6	168.0	0.9	-3.7	0.5	6	clean SAND to silty SAND	125	5.0	28	34	24	78	42	-	-	5	0.350	1.63	16
32.15	170.4	141.3	141.3	170.4	0.9	-3.7	0.5	6	clean SAND to silty SAND	125	5.0	28	34	24	78	42	-	-	5	0.350	1.62	16
32.32	170.6	141.2	141.2	170.5	0.9	-3.8	0.5	6	clean SAND to silty SAND	125	5.0	28	34	24	78	42	-	-	5	0.350	1.62	16
32.48	168.5	139.2	139.2	168.4	0.9	-3.9	0.5	6	clean SAND to silty SAND	125	5.0	28	34	24	78	42	-	-	5	0.350	1.63	16
32.65	161.7	133.4	133.4	161.6	0.8	-4.1	0.5	6	clean SAND to silty SAND	125	5.0	27	32	23	77	41	-	-	5	0.350	1.62	16
32.81	148.6	122.3	125.2	148.5	0.8	-3.7	0.5	6	clean SAND to silty SAND	125	5.0	24	30	21	74	41	-	-	6	0.350	1.68	16
32.97	130.4	107.1	115.1	130.3	0.8	-3.7	0.6	6	clean SAND to silty SAND	125	5.0	21	26	19	69	40	-	-	7	0.350	1.75	16
33.14	112.8	92.5	103.6	112.7	0.7	-4.2	0.6	6	clean SAND to silty SAND	125	5.0	19	23	17	64	39	-	-	9	0.350	1.82	16
33.30	98.0	80.3	93.2	98.0	0.6	-4.2	0.6	6	clean SAND to silty SAND	125	5.0	16	20	15	60	39	-	-	10	0.350	1.87	16
33.47	83.8	68.5	85.4	83.7	0.6	-4.3	0.7	6	clean SAND to silty SAND	125	5.0	14	17	13	54	38	-	-	12	0.350	1.96	16
33.63	66.5	54.2	80.1	66.4	0.6	-4.3	0.9	5	silty SAND to sandy SILT	120	3.0	18	22	11	47	36	-	-	16	0.200	2.11	16
33.79	48.0	39.1	77.8	47.9	0.6	-4.3	1.3	5	silty SAND to sandy SILT	120	3.0	13	16	9	36	34	-	-	23	0.200	2.31	16
33.96	30.0	21.0	-	30.0	0.5	-4.2	2.0	4	clay SILT to silty CLAY	115	2.0	11	15	6	-	-	2.0	6.5	38	0.070	2.65	15
34.12	16.9	11.8	-	16.9	0.4	-4.0	3.0	3	silty CLAY to CLAY	115	1.5	8	11	4	-	-	1.1	3.4	57	0.005	2.98	15
34.29	9.1	6.3	-	9.1	0.4	1.7	6.1	3	silty CLAY to CLAY	115	1.5	4	6	3	-	-	0.5	1.6	92	0.005	3.43	15
34.45	19.5	13.5	-	19.5	1.1	2.3	6.6	3	silty CLAY to CLAY	115	1.5	9	13	5	-	-	1.3	4.0	68	0.005	3.14	15
34.61	50.8	41.1	110.4	50.9	1.3	2.7	2.6	4	clay SILT to silty CLAY	115	2.0	21	25	10	-	-	3.5	9.9	30	0.070	2.48	15
34.78	47.9	33.0	-	47.9	1.9	1.7	4.2	4	clay SILT to silty CLAY	115	2.0	17	24	9	-	-	3.3	9.9	40	0.070	2.70	15
34.94	31.4	21.6	-	31.5	2.0	2.8	6.9	3	silty CLAY to CLAY	115	1.5	14	21	7	-	-	2.1	6.7	58	0.005	2.99	15
35.11	35.7	24.5	-	35.8	2.0	3.7	5.8	3	silty CLAY to CLAY	115	1.5	16	24	7	-	-	2.4	7.6	52	0.005	2.90	15
35.27	45.5	31.1	-	45.5	1.9	1.3	4.3	3	silty CLAY to CLAY	115	1.5	21	30	8	-	-	3.1	9.8	42	0.005	2.73	15
35.43	57.1	45.8	131.1	57.2	1.8	1.8	3.3	4	clay SILT to silty CLAY	115	2.0	23	29	11	-	-	3.9	9.9	31	0.070	2.52	15
35.60	65.2	52.2	116.7	65.2	1.5	-0.6	2.4	5	silty SAND to sandy SILT	120	3.0	17	22	12	46	36	-	-	26	0.200	2.38	16
35.76	59.4	47.5	108.8	59.4	1.3	-2.0	2.2	5	silty SAND to sandy SILT	120	3.0	16	20	11	42	35	-	-	26	0.200	2.39	16
35.93	43.6	29.5	-	43.6	1.6	-2.1	3.8	4	clay SILT to silty CLAY	115	2.0	15	22	8	-	-	3.0	9.3	41	0.070	2.71	15
36.09	27.6	18.6	-	27.6	1.9	1.7	7.6	3	silty CLAY to CLAY	115	1.5	12	18	6	-	-	1.8	5.7	63	0.005	3.07	15
36.26	47.0	31.6	-	47.1	2.1	2.3	4.8	3	silty CLAY to CLAY	115	1.5	21	31	9	-	-	3.2	9.9	43	0.005	2.75	15
36.42	72.0	57.3	141.2	72.0	2.2	-0.4	3.2	4	clay SILT to silty CLAY	115	2.0	29	36	14	-	-	5.0	9.9	28	0.070	2.44	15
36.58	82.9	65.8	140.2	82.9	2.2	-2.1	2.8	5	silty SAND to sandy SILT	120	3.0	22	28	15	53	37	-	-	25	0.200	2.35	16
36.75	89.3	70.8	137.7	89.2	2.2	-3.2	2.5	5	silty SAND to sandy SILT	120	3.0	24	30	16	56	38	-	-	22	0.200	2.30	16
36.91	80.5	63.7	148.4	80.4	2.5	-3.5	3.2	4	clay SILT to silty CLAY	115	2.0	32	40	15	-	-	5.6	9.9	27	0.070	2.40	15
37.08	74.4	58.8	160.0	74.4	2.8	-3.6	3.9	4	clay SILT to silty CLAY	115	2.0	29	37	14	-	-	5.2	9.9	30	0.070	2.49	15
37.24	78.1	61.6	157.8	78.0	2.8	-3.6	3.6	4	clay SILT to silty CLAY	115	2.0	31	39	15	-	-	5.4	9.9	29	0.070	2.46	15
37.40	69.1	54.4	155.8	69.0	2.6	-3.9	3.9	4	clay SILT to silty CLAY	115	2.0	27	35	13	-	-	4.8	9.9	32	0.070	2.52	15
37.57	65.1	51.2	153.8	65.1	2.5	-3.7	4.0	4	clay SILT to silty CLAY	115	2.0	26	33	13	-	-	4.5	9.9	33	0.070	2.54	15
37.73	65.8	51.7	149.6	65.7	2.4	-3.8	3.8	4	clay SILT to silty CLAY	115	2.0	26	33	13	-	-	4.5	9.9	32	0.070	2.52	15
37.90	75.3	59.0	128.9	75.2	1.9	-3.8	2.6	5	silty SAND to sandy SILT	120	3.0	20	25	13	50	36	-	-	25	0.200	2.27	16
38.06	77.4	60.6	111.6	77.3	1.4	-3.8	1.9	5	silty SAND to sandy SILT	120	3.0	20	26	13	50	37	-	-	21	0.200	2.26	16
38.22	88.8	69.5	120.5	88.8	1.7	-3.8	1.9	5	silty SAND to sandy SILT	120	3.0	23	30	15	55	37	-	-	20	0.200	2.23	16
38.39	69.4	54.2	134.3	69.4	2.0	-4.1	3.0	4	clay SILT to silty CLAY	115	2.0	27	35	13	-	-	4.8	9.9	28	0.070	2.44	15
38.55	49.1	31.7	-	49.0	2.1	-4.1	4.4	3	silty CLAY to CLAY	115	1.5	21	33	9	-	-	3.4	9.9	42	0.005	2.73	15
38.72	39.3	25.2	-	39.2	2.0	-3.8	5.3	3	silty CLAY to CLAY	115	1.5	17	26	7	-	-	2.7	7.8	49	0.005	2.86	15
38.88	36.2	23.2	-	36.2	1.5	-3.5	4.4	3	silty CLAY to CLAY	115	1.5	15	24	7	-	-	2.5	7.2	48	0.005	2.83	15
39.04	47.8	30.6	-	47.8	1.3	-2.8	2.8	4	clay SILT to silty CLAY	115	2.0	15	24	8	-	-	3.3	9.6	36	0.070	2.61	15
39.21	102.4	79.4	107.1	102.4	1.2	-3.0	1.2	6	clean SAND to silty SAND	125	5.0	16	20	16	59	38	-	-	14	0.350	2.03	16
39.37	123.6	95.7	114.2	123.6	1.1	-3.4	0.9	6	clean SAND to silty SAND	125	5.0	19	25	18	66	39	-	-	10	0.350	1.90	16
39.54	158.6	122.6	130.4	158.5	1.0	-3.2	0.7	6	clean SAND to silty SAND	125	5.0	25	32	22	74	41	-	-	7	0.350	1.74	16
39.70	171.1	132.1	135.4	171.1	1.0	-3.0	0.6	6	clean SAND to silty SAND	125	5.0	26	34	23	76	41	-	-	6	0.350	1.68	16
39.86	151.7	116.9	132.5	151.6	1.4	-2.8	0.9	6	clean SAND to silty SAND	125	5.0	23	30	22	72	40	-	-	9	0.350	1.84	16
40.03	163.7	126.0	144.8	163.7	1.7	-0.3	1.1	6	clean SAND to silty SAND	125	5.0	25	33	23	75	41	-	-	9	0.350	1.86	16
40.19	169.1	129.9	154.4	169.2	2.1	2.6	1.3	6	clean SAND to silty SAND	125	5.0	26	34	25	76	41	-	-	10	0.350	1.90	16
40.36	192.1	147.3	162.4	192.1	1.9	-0.5	1.0	6	clean SAND to silty SAND	125	5.0	29	38	27	80	41	-	-	8	0.350	1.79	16
40.52	197.8	151.4	151.4	197.7	1.1	-1.8	0.6	6	clean SAND to silty SAND	125	5.0	30	40	26	81	42	-	-	5	0.350	1.63	16
40.68	198.8	151.9	151.9	198.7	1.1	-2.6	0.5	6	clean SAND to silty SAND	125	5.0	30	40	26	81	42	-	-	5	0.350	1.61	16
40.85	180.2	137.5	154.9	180.1	1.9	-2.7	1.1	6	clean SAND to silty SAND	125	5.0	28	36	25	78	41	-	-	9	0.350	1.83	16
41.01	128.5	97.9	137.2	128.5	2.1	-2.8	1.7	5	silty SAND to sandy SILT	120	3.0	33	43	20	66	39	-	-	15	0.200	2.07	16
41.18	70.6	53.7	126.1	70.6	1.8	-2.7	2.7	5	silty SAND to sandy SILT	120	3.0	18	24	13	47	36	-	-	27	0.200	2.41	16
41.34	45.2	27.7	-																			

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(864).cpt
CPT Date: 7/26/2023 10:51:49 AM
GW During Test: 15 ft

Page: 4
Sounding ID: CPT-03
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	qt PS tsf	Slv Stss tsf	pore prss (psi)	Frct Rato %	Mat Typ Zon	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	OCR -	Fin Ic %	D50 mm	Ic SBT Indx	Nk -
46.43	87.7	64.0	121.7	87.7	1.8	-0.6	2.1	5	silty SAND to sandy SILT	120	3.0	21	29	14	52	37	-	-	22	0.200	2.28	16
46.59	107.9	78.6	118.4	107.9	1.7	-1.6	1.6	5	silty SAND to sandy SILT	120	3.0	26	36	16	59	38	-	-	17	0.200	2.13	16
46.75	115.5	84.0	117.8	115.5	1.6	-1.8	1.4	5	silty SAND to sandy SILT	120	3.0	28	39	17	61	38	-	-	15	0.200	2.07	16
46.92	112.9	82.0	122.1	112.8	1.8	-2.2	1.6	5	silty SAND to sandy SILT	120	3.0	27	38	17	60	38	-	-	16	0.200	2.12	16
47.08	108.4	78.6	123.6	108.4	1.9	-2.3	1.8	5	silty SAND to sandy SILT	120	3.0	26	36	16	59	38	-	-	18	0.200	2.16	16
47.25	104.4	75.6	133.5	104.4	2.2	-2.5	2.2	5	silty SAND to sandy SILT	120	3.0	25	35	16	58	37	-	-	20	0.200	2.24	16
47.41	82.2	59.5	140.2	82.2	2.4	-2.8	3.0	4	clayey SILT to silty CLAY	115	2.0	30	41	14	-	-	5.7	9.9	27	0.070	2.41	15
47.57	57.9	32.0	-	57.8	2.2	-3.3	4.0	4	clayey SILT to silty CLAY	115	2.0	16	29	9	-	-	4.0	9.9	40	0.070	2.69	15
47.74	44.8	24.7	-	44.8	2.2	-3.1	5.3	3	silty CLAY to CLAY	115	1.5	16	30	7	-	-	3.0	7.7	50	0.005	2.87	15
47.90	37.6	20.7	-	37.6	2.1	-2.9	6.1	3	silty CLAY to CLAY	115	1.5	14	25	6	-	-	2.5	6.3	56	0.005	2.97	15
48.07	36.6	20.1	-	36.6	1.5	-2.7	4.6	3	silty CLAY to CLAY	115	1.5	13	24	6	-	-	2.5	6.1	52	0.005	2.89	15
48.23	43.3	23.7	-	43.2	1.5	-2.7	3.8	4	clayey SILT to silty CLAY	115	2.0	12	22	7	-	-	2.9	7.3	45	0.070	2.78	15
48.39	39.5	21.6	-	39.4	1.7	-2.8	4.6	3	silty CLAY to CLAY	115	1.5	14	26	6	-	-	2.7	6.6	50	0.005	2.87	15
48.56	28.8	15.7	-	28.7	1.8	-2.5	7.0	3	silty CLAY to CLAY	115	1.5	10	19	5	-	-	1.9	4.7	66	0.005	3.10	15
48.72	46.2	25.2	-	46.2	1.8	-2.1	4.2	3	silty CLAY to CLAY	115	1.5	17	31	7	-	-	3.1	7.8	45	0.005	2.79	15
48.89	62.6	44.8	112.7	62.5	1.5	-2.5	2.5	5	silty SAND to sandy SILT	120	3.0	15	21	11	40	34	-	-	28	0.200	2.45	16
49.05	34.6	18.7	-	34.5	1.5	-2.6	4.8	3	silty CLAY to CLAY	115	1.5	12	23	6	-	-	2.3	5.7	54	0.005	2.94	15
49.22	29.5	16.0	-	29.5	1.6	-2.3	6.2	3	silty CLAY to CLAY	115	1.5	11	20	5	-	-	2.0	4.7	63	0.005	3.06	15
49.38	27.9	15.0	-	27.8	1.7	-2.0	6.9	3	silty CLAY to CLAY	115	1.5	10	19	5	-	-	1.8	4.4	67	0.005	3.12	15
49.54	34.9	18.8	-	34.8	2.0	-1.9	6.1	3	silty CLAY to CLAY	115	1.5	13	23	6	-	-	2.3	5.7	59	0.005	3.00	15
49.71	36.9	19.8	-	36.8	2.0	-1.9	5.9	3	silty CLAY to CLAY	115	1.5	13	25	6	-	-	2.5	6.0	57	0.005	2.97	15
49.87	32.1	17.2	-	32.1	1.7	-1.9	5.9	3	silty CLAY to CLAY	115	1.5	11	21	6	-	-	2.1	5.2	60	0.005	3.02	15
50.04	30.6	16.3	-	30.5	1.8	-1.6	6.5	3	silty CLAY to CLAY	115	1.5	11	20	5	-	-	2.0	4.9	63	0.005	3.07	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

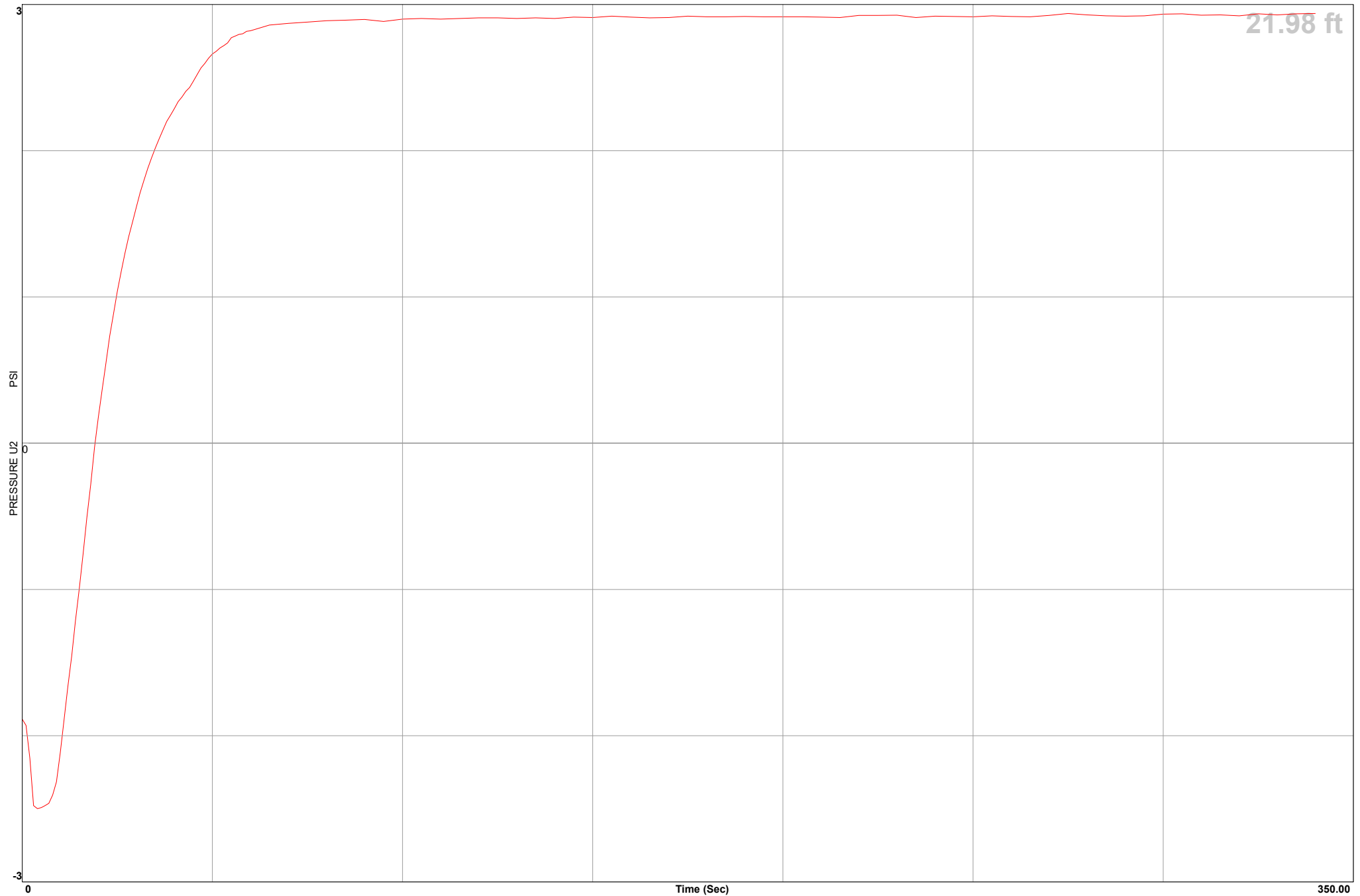
Middle Earth Geo Testing



BAGG Engineering

Location	SMC-HMB Farmworker Housing project	Operator	AJ-ER
Job Number	COUSM-23-03	Cone Number	DDG1589
Hole Number	CPT-03	Date and Time	7/26/2023 10:51:49 AM
Equilized Pressure	2.9	EST GW Depth During Test	15.1

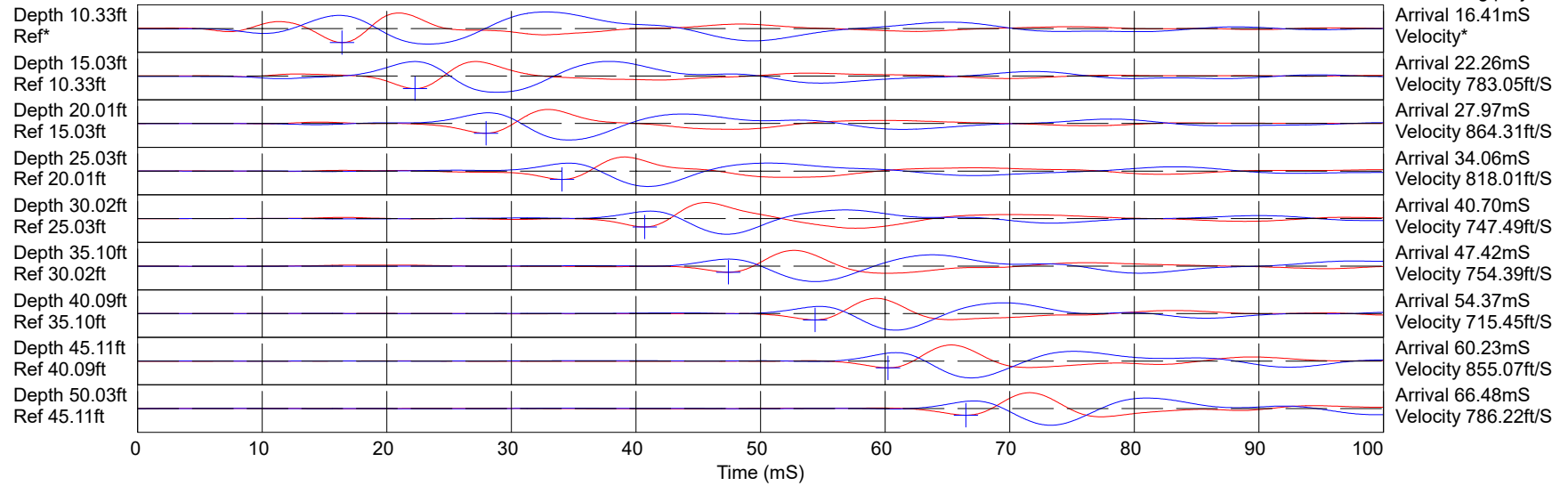
GPS



CPT-03

BAGG Engineering

SMC-HMB Farmworker Housing project



Hammer to Rod String Distance (ft): 2.67

* = Not Determined

COMMENT:

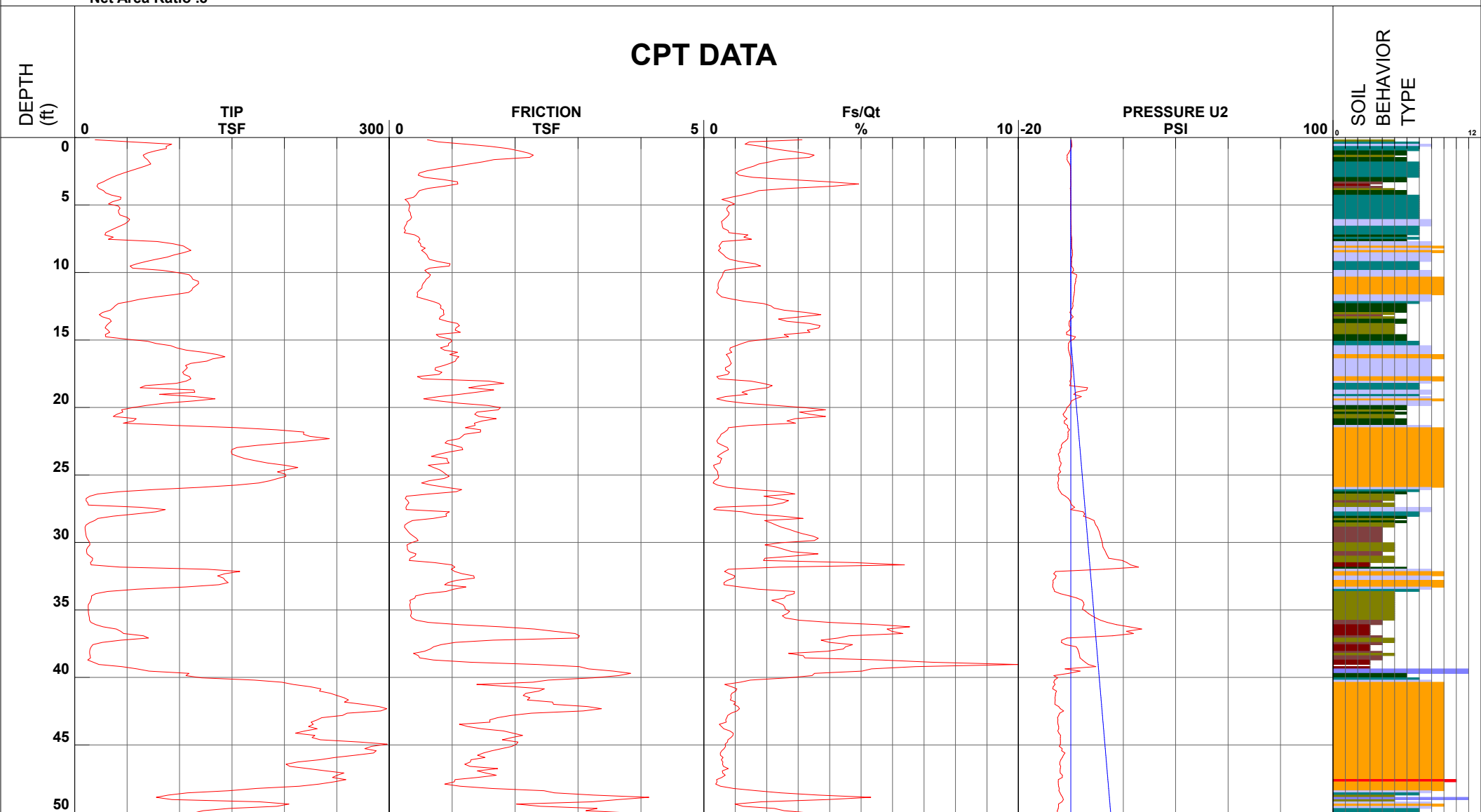


BAGG Engineering

Project SMC-HMB Farmworker Housing project Operator AJ-ER
Job Number COUSM-23-03 Cone Number DDG1589
Hole Number CPT-04 Date and Time 7/26/2023 10:01:25 AM
EST GW Depth During Test 15.00 ft

Filename SDF(863).cpt
GPS
Maximum Depth 50.52 ft

Net Area Ratio .8



- | | | | |
|----------------------------|-------------------------------|------------------------------|----------------------------------|
| 1 - sensitive fine grained | 4 - silty clay to clay | 7 - silty sand to sandy silt | 10 - gravelly sand to sand |
| 2 - organic material | 5 - clayey silt to silty clay | 8 - sand to silty sand | 11 - very stiff fine grained (*) |
| 3 - clay | 6 - sandy silt to clayey silt | 9 - sand | 12 - sand to clayey sand (*) |

Cone Size 15cm²

S*Soil behavior type and SPT based on data from UBC-1983

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
 Data File: SDF(863).cpt
 CPT Date: 7/26/2023 10:01:25 AM
 GW During Test: 15 ft

Page: 1
 Sounding ID: CPT-04
 Project No: COUSM-23-03
 Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	* qt PS	slv Stss	pore prss (psi)	Frct Ratio	* Mat Typ	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	* Rel Den %	Ftn Ang deg	Und Shr tsf	OCR %	* Fin Ic %	* D50 mm	* Ic SBT Indx	* Nk -
0.33	53.8	86.3	120.2	53.8	0.8	0.2	1.4	5	silty SAND to sandy SILT	120	3.0	29	18	17	62	48	-	-	15	0.200	2.06	16
0.49	92.5	148.4	171.7	92.5	1.2	0.4	1.3	6	clean SAND to silty SAND	125	5.0	30	19	28	80	48	-	-	10	0.350	1.86	16
0.66	87.2	139.9	180.1	87.2	1.6	0.4	1.8	6	clean SAND to silty SAND	125	5.0	28	17	27	78	48	-	-	13	0.350	1.99	16
0.82	87.5	140.3	190.2	87.5	1.9	0.0	2.2	5	silty SAND to sandy SILT	120	3.0	47	29	28	78	48	-	-	14	0.200	2.04	16
0.98	77.4	124.2	191.5	77.4	2.1	-0.4	2.7	5	silty SAND to sandy SILT	120	3.0	41	26	26	74	48	-	-	17	0.200	2.14	16
1.15	69.3	111.2	195.6	69.3	2.2	-0.8	3.2	5	silty SAND to sandy SILT	120	3.0	37	23	24	71	48	-	-	20	0.200	2.24	16
1.31	65.2	104.6	199.1	65.2	2.3	-1.4	3.5	5	silty SAND to sandy SILT	120	3.0	35	22	23	68	48	-	-	22	0.200	2.29	16
1.48	66.6	106.7	196.4	66.5	2.2	-1.4	3.4	5	silty SAND to sandy SILT	120	3.0	36	22	23	69	48	-	-	21	0.200	2.26	16
1.64	69.4	111.3	171.1	69.4	1.7	-1.4	2.4	5	silty SAND to sandy SILT	120	3.0	37	23	23	71	48	-	-	17	0.200	2.14	16
1.80	71.1	114.0	164.1	71.0	1.5	-1.0	2.1	5	silty SAND to sandy SILT	120	3.0	38	24	23	71	48	-	-	16	0.200	2.09	16
1.97	72.6	116.5	155.9	72.6	1.3	-0.5	1.8	5	silty SAND to sandy SILT	120	3.0	39	24	23	72	48	-	-	14	0.200	2.03	16
2.13	66.8	107.1	142.5	66.8	1.1	-0.2	1.6	5	silty SAND to sandy SILT	120	3.0	36	22	21	69	48	-	-	14	0.200	2.02	16
2.30	60.1	96.4	126.3	60.1	0.8	-0.1	1.3	6	clean SAND to silty SAND	125	5.0	19	12	19	66	48	-	-	13	0.350	2.01	16
2.46	53.4	85.7	111.2	53.4	0.6	-0.1	1.1	6	clean SAND to silty SAND	125	5.0	17	11	17	62	47	-	-	13	0.350	2.00	16
2.62	46.8	75.0	99.1	46.8	0.5	-0.1	1.0	6	clean SAND to silty SAND	125	5.0	15	9	15	58	46	-	-	13	0.350	2.02	16
2.79	40.6	65.2	93.7	40.6	0.5	0.0	1.1	5	silty SAND to sandy SILT	120	3.0	22	14	13	53	45	-	-	16	0.200	2.09	16
2.95	35.7	57.3	98.9	35.7	0.6	0.0	1.6	5	silty SAND to sandy SILT	120	3.0	19	12	12	49	44	-	-	20	0.200	2.22	16
3.12	31.3	50.2	122.2	31.3	0.9	0.0	2.8	4	clay SILT to silty CLAY	115	2.0	25	16	12	-	-	2.2 9.9	38	0.070	2.43	15	
3.28	27.2	43.6	141.4	27.2	1.1	0.0	4.0	4	clay SILT to silty CLAY	115	2.0	22	14	11	-	-	1.9 9.9	35	0.070	2.59	15	
3.45	22.1	35.5	-	22.1	1.1	0.1	5.0	3	silty CLAY to CLAY	115	1.5	24	15	10	-	-	1.5 9.9	41	0.005	2.72	15	
3.61	21.2	34.0	-	21.2	0.9	0.0	4.1	4	clay SILT to silty CLAY	115	2.0	17	11	9	-	-	1.5 9.9	39	0.070	2.67	15	
3.77	23.0	36.8	106.2	23.0	0.6	-0.2	2.7	4	clay SILT to silty CLAY	115	2.0	18	11	9	-	-	1.6 9.9	32	0.070	2.52	15	
3.94	27.4	43.9	92.6	27.4	0.5	-0.1	1.8	5	silty SAND to sandy SILT	120	3.0	15	9	10	40	41	-	-	24	0.200	2.35	16
4.10	29.5	47.3	89.7	29.5	0.4	0.0	1.5	5	silty SAND to sandy SILT	120	3.0	16	10	10	42	41	-	-	22	0.200	2.28	16
4.27	35.0	56.2	88.9	35.0	0.4	0.0	1.2	5	silty SAND to sandy SILT	120	3.0	19	12	12	48	42	-	-	18	0.200	2.16	16
4.43	44.1	70.7	91.8	44.1	0.4	0.0	0.9	6	clean SAND to silty SAND	125	5.0	14	9	14	56	43	-	-	13	0.350	2.00	16
4.59	43.7	70.1	83.3	43.7	0.3	0.0	0.6	6	clean SAND to silty SAND	125	5.0	14	9	13	55	43	-	-	10	0.350	1.90	16
4.76	36.2	58.0	79.6	36.2	0.3	0.0	0.8	6	clean SAND to silty SAND	125	5.0	12	7	12	49	42	-	-	14	0.350	2.05	16
4.92	32.2	51.7	78.9	32.2	0.3	0.0	1.0	5	silty SAND to sandy SILT	120	3.0	17	11	11	45	41	-	-	17	0.200	2.14	16
5.09	41.7	66.9	86.3	41.7	0.3	-0.1	0.8	6	clean SAND to silty SAND	125	5.0	13	8	13	54	42	-	-	13	0.350	1.99	16
5.25	43.3	69.4	86.9	43.3	0.3	-0.1	0.7	6	clean SAND to silty SAND	125	5.0	14	9	13	55	42	-	-	12	0.350	1.96	16
5.41	41.7	66.9	85.0	41.7	0.3	0.0	0.7	6	clean SAND to silty SAND	125	5.0	13	8	13	54	42	-	-	12	0.350	1.98	16
5.58	42.0	67.4	87.2	42.0	0.3	0.1	0.8	6	clean SAND to silty SAND	125	5.0	13	8	13	54	42	-	-	13	0.350	2.00	16
5.74	43.2	69.3	88.3	43.2	0.3	0.0	0.8	6	clean SAND to silty SAND	125	5.0	14	9	14	55	42	-	-	12	0.350	1.98	16
5.91	49.7	79.8	95.3	49.7	0.4	0.1	0.7	6	clean SAND to silty SAND	125	5.0	16	10	15	60	42	-	-	11	0.350	1.91	16
6.07	52.4	84.0	97.0	52.4	0.3	0.1	0.6	6	clean SAND to silty SAND	125	5.0	17	10	16	61	42	-	-	9	0.350	1.86	16
6.23	50.8	80.3	91.6	50.8	0.3	0.1	0.6	6	clean SAND to silty SAND	125	5.0	16	10	15	60	42	-	-	9	0.350	1.84	16
6.40	47.7	74.4	87.2	47.7	0.3	0.1	0.6	6	clean SAND to silty SAND	125	5.0	15	10	14	57	42	-	-	10	0.350	1.88	16
6.56	43.2	66.5	80.8	43.2	0.3	0.1	0.6	6	clean SAND to silty SAND	125	5.0	13	9	13	54	41	-	-	11	0.350	1.93	16
6.73	38.4	58.4	74.9	38.4	0.2	0.1	0.6	6	clean SAND to silty SAND	125	5.0	12	8	11	49	40	-	-	13	0.350	1.99	16
6.89	33.7	50.6	72.9	33.7	0.3	0.1	0.8	5	silty SAND to sandy SILT	120	3.0	17	11	10	45	39	-	-	16	0.200	2.09	16
7.05	29.7	44.1	68.5	29.7	0.2	0.1	0.8	5	silty SAND to sandy SILT	120	3.0	15	10	9	40	38	-	-	17	0.200	2.15	16
7.22	28.8	42.3	83.0	28.8	0.4	0.2	1.4	5	silty SAND to sandy SILT	120	3.0	14	10	9	39	38	-	-	19	0.200	2.30	16
7.38	36.7	53.3	88.4	36.7	0.5	0.3	1.3	5	silty SAND to sandy SILT	120	3.0	18	12	11	46	39	-	-	19	0.200	2.20	16
7.55	32.1	46.0	89.1	32.1	0.5	0.4	1.5	5	silty SAND to sandy SILT	120	3.0	15	11	10	41	39	-	-	22	0.200	2.30	16
7.71	78.7	111.7	118.5	78.7	0.5	0.3	0.6	6	clean SAND to silty SAND	125	5.0	22	16	20	71	43	-	-	7	0.350	1.73	16
7.87	93.9	131.8	132.4	93.9	0.5	0.3	0.5	6	clean SAND to silty SAND	125	5.0	26	19	23	76	44	-	-	5	0.350	1.65	16
8.04	103.7	144.1	144.1	103.7	0.5	0.3	0.5	6	clean SAND to silty SAND	125	5.0	29	21	24	79	44	-	-	5	0.350	1.60	16
8.20	107.0	147.2	147.2	107.0	0.6	0.4	0.5	6	clean SAND to silty SAND	125	5.0	29	21	25	80	44	-	-	5	0.350	1.61	16
8.37	110.9	150.9	150.9	110.9	0.5	0.6	0.5	6	clean SAND to silty SAND	125	5.0	30	22	25	81	44	-	-	5	0.350	1.57	16
8.53	104.0	140.2	140.2	104.0	0.6	0.6	0.5	6	clean SAND to silty SAND	125	5.0	28	21	24	78	44	-	-	5	0.350	1.63	16
8.69	95.0	126.8	132.3	95.0	0.6	0.7	0.6	6	clean SAND to silty SAND	125	5.0	25	19	22	75	43	-	-	6	0.350	1.71	16
8.86	88.2	116.6	126.1	88.2	0.6	0.4	0.7	6	clean SAND to silty SAND	125	5.0	23	18	21	72	43	-	-	7	0.350	1.76	16
9.02	77.2	101.1	116.5	77.2	0.6	0.3	0.8	6	clean SAND to silty SAND	125	5.0	20	15	19	67	42	-	-	9	0.350	1.86	16
9.19	68.0	88.3	113.9	68.0	0.8	0.3	1.1	6	clean SAND to silty SAND	125	5.0	18	14	17	63	42	-	-	13	0.350	1.99	16
9.35	59.5	76.5	117.5	59.5	1.0	0.2	1.6	5	silty SAND to sandy SILT	120	3.0	25	20	16	58	41	-	-	17	0.200	2.14	16
9.51	52.9	67.4	114.9	52.9	1.0	0.3	1.8	5	silty SAND to sandy SILT	120	3.0	22	18	14	54	40	-	-	19	0.200	2.21	16
9.68	55.1	69.6	98.9	55.1	0.6	0.8	1.2	5	silty SAND to sandy SILT	120	3.0	23	18	14	55	40	-	-	15	0.200	2.08	16
9.84	83.6	104.9	115.6	83.6	0.6	1.1	0.7	6	clean SAND to silty SAND	125	5.0	21	17	19	69	42	-	-	8	0.350	1.79	16
10.01	98.4	122.3	128.2	98.4	0.6	0.4	0.6	6	clean SAND to silty SAND	125	5.0	24	20	22	74	43	-	-	6	0.350	1.72	16
10.17	109.1	134.5	137.4	109.2	0.7	2.2	0.6	6	clean SAND to silty SAND	125	5.0	27	22	23	77	43	-	-	6	0.350	1.68	16
10.34	111.4	136.3	137.4	111.5	0.6	2.2	0.6	6	clean SAND to silty SAND	125	5.0	27	22	24	77	43	-	-	5	0.350	1.66	16
10.50	112.5	136.5	136.5	112.6	0.6	1.8	0.5	6	clean SAND to silty SAND	125	5.0	27	23	24	77	43	-	-	5	0.350	1.64	16
10.66	117.9	141.9	141.9	117.9	0.6	1.8	0.5	6	clean SAND to silty SAND	125	5.0	28	24	24	79	44	-	-</				

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(863).cpt
CPT Date: 7/26/2023 10:01:25 AM
GW During Test: 15 ft

Page: 2
Sounding ID: CPT-04
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	Slv Stss tsf	pore prss (psi)	Frct Rto %	Mat Typ zon	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	OCR -	Ftn Ic %	D50 mm	Ic SBT Indx	Nk -
15.58	97.3	98.3	114.5	97.3	0.8	-1.0	0.8	6	clean SAND to silty SAND	125	5.0	20	19	18	66	41	-	-	10	0.350	1.87	16
15.75	106.3	107.1	121.8	106.3	0.9	-0.9	0.8	6	clean SAND to silty SAND	125	5.0	21	21	20	69	41	-	-	9	0.350	1.84	16
15.91	122.5	123.0	137.3	122.5	1.1	-0.6	0.9	6	clean SAND to silty SAND	125	5.0	25	25	23	74	42	-	-	8	0.350	1.81	16
16.08	135.7	136.0	142.7	135.7	1.0	-0.4	0.7	6	clean SAND to silty SAND	125	5.0	27	27	24	77	42	-	-	6	0.350	1.72	16
16.24	143.3	143.2	150.8	143.3	1.1	-0.2	0.8	6	clean SAND to silty SAND	125	5.0	29	29	25	79	43	-	-	7	0.350	1.72	16
16.40	131.5	131.0	142.0	131.5	1.1	0.0	0.8	6	clean SAND to silty SAND	125	5.0	26	26	24	76	42	-	-	7	0.350	1.77	16
16.57	126.1	125.3	137.7	126.1	1.1	0.1	0.8	6	clean SAND to silty SAND	125	5.0	25	25	23	74	42	-	-	8	0.350	1.79	16
16.73	110.7	109.7	125.4	110.7	1.0	0.2	0.9	6	clean SAND to silty SAND	125	5.0	22	22	20	70	41	-	-	9	0.350	1.85	16
16.90	105.7	104.5	119.4	105.7	0.9	0.4	0.8	6	clean SAND to silty SAND	125	5.0	21	21	19	68	41	-	-	9	0.350	1.85	16
17.06	107.5	105.9	116.8	107.5	0.7	0.3	0.7	6	clean SAND to silty SAND	125	5.0	21	21	19	69	41	-	-	8	0.350	1.79	16
17.23	105.4	103.6	115.0	105.4	0.7	0.3	0.7	6	clean SAND to silty SAND	125	5.0	21	21	19	68	41	-	-	8	0.350	1.81	16
17.39	102.9	100.9	116.2	102.9	0.8	0.2	0.8	6	clean SAND to silty SAND	125	5.0	20	21	19	67	41	-	-	9	0.350	1.86	16
17.55	104.3	102.0	115.6	104.3	0.8	0.2	0.8	6	clean SAND to silty SAND	125	5.0	20	21	19	68	41	-	-	9	0.350	1.84	16
17.72	109.5	106.8	108.6	109.5	0.4	0.2	0.4	6	clean SAND to silty SAND	125	5.0	21	22	19	69	41	-	-	6	0.350	1.67	16
17.88	110.8	107.8	111.9	110.8	0.5	0.0	0.5	6	clean SAND to silty SAND	125	5.0	22	22	19	69	41	-	-	6	0.350	1.70	16
18.05	106.3	103.2	137.3	106.3	1.6	-0.4	1.5	5	silty SAND to sandy SILT	120	3.0	34	35	20	68	41	-	-	14	0.200	2.02	16
18.21	96.9	93.8	140.4	96.9	1.8	-0.1	1.9	5	silty SAND to sandy SILT	120	3.0	31	32	19	65	40	-	-	17	0.200	2.12	16
18.37	67.5	65.2	123.6	67.5	1.5	-0.4	2.2	5	silty SAND to sandy SILT	120	3.0	22	23	14	53	38	-	-	22	0.200	2.28	16
18.54	62.4	60.2	115.2	62.6	1.3	6.4	2.1	5	silty SAND to sandy SILT	120	3.0	20	21	13	50	38	-	-	22	0.200	2.29	16
18.70	113.8	109.4	141.8	113.9	1.7	6.0	1.5	6	clean SAND to silty SAND	125	5.0	22	23	21	70	41	-	-	13	0.350	2.00	16
18.87	114.6	109.9	135.2	114.7	1.4	2.1	1.2	6	clean SAND to silty SAND	125	5.0	22	23	21	70	41	-	-	11	0.350	1.94	16
19.03	80.8	77.3	111.9	80.8	1.1	1.1	1.4	5	silty SAND to sandy SILT	120	3.0	26	27	16	58	39	-	-	16	0.200	2.10	16
19.19	114.6	109.4	119.9	114.7	0.8	4.0	0.7	6	clean SAND to silty SAND	125	5.0	22	23	20	70	41	-	-	8	0.350	1.79	16
19.36	133.9	127.5	127.5	133.9	0.5	1.8	0.4	6	clean SAND to silty SAND	125	5.0	25	27	22	75	42	-	-	5	0.350	1.60	16
19.52	113.4	107.7	118.8	113.4	0.8	0.3	0.7	6	clean SAND to silty SAND	125	5.0	22	23	20	69	41	-	-	8	0.350	1.80	16
19.69	85.9	81.4	112.6	85.9	1.1	-0.1	1.3	5	silty SAND to sandy SILT	120	3.0	27	29	16	60	39	-	-	15	0.200	2.06	16
19.85	68.4	64.6	126.3	68.4	1.6	-0.6	2.3	5	silty SAND to sandy SILT	120	3.0	22	23	14	53	38	-	-	23	0.200	2.30	16
20.01	55.5	52.3	137.3	55.4	1.8	-1.5	3.3	4	clayey SILT to silty CLAY	115	2.0	26	28	13	-	-	3.8	9.9	29	0.070	2.47	15
20.18	44.8	42.0	-	44.7	1.7	-1.7	4.0	4	clayey SILT to silty CLAY	115	2.0	21	22	11	-	-	3.1	9.9	35	0.070	2.60	15
20.34	45.9	43.1	123.9	45.9	1.4	-2.3	3.1	4	clayey SILT to silty CLAY	115	2.0	22	23	11	-	-	3.2	9.9	32	0.070	2.52	15
20.51	40.2	37.6	124.7	40.1	1.4	-2.9	3.5	4	clayey SILT to silty CLAY	115	2.0	19	20	10	-	-	2.8	9.9	35	0.070	2.60	15
20.67	36.9	34.2	-	36.8	1.4	-2.5	4.0	4	clayey SILT to silty CLAY	115	2.0	17	18	9	-	-	2.5	9.9	39	0.070	2.67	15
20.83	58.7	54.8	133.0	58.7	1.7	-1.4	3.0	4	clayey SILT to silty CLAY	115	2.0	27	29	13	-	-	4.1	9.9	28	0.070	2.43	15
21.00	56.0	52.2	124.1	55.9	1.5	-2.5	2.7	5	silty SAND to sandy SILT	120	3.0	17	19	12	46	37	-	-	27	0.200	2.42	16
21.16	46.4	43.1	121.2	46.3	1.4	-2.5	3.0	4	clayey SILT to silty CLAY	115	2.0	22	23	11	-	-	3.2	9.9	31	0.070	2.51	15
21.33	95.2	88.4	122.8	95.2	1.4	-1.3	1.5	5	silty SAND to sandy SILT	120	3.0	29	32	18	63	40	-	-	15	0.200	2.06	16
21.49	154.5	143.1	151.2	154.5	1.2	-1.2	0.8	6	clean SAND to silty SAND	125	5.0	29	31	25	79	42	-	-	7	0.350	1.73	16
21.65	192.3	177.7	177.8	192.3	1.5	-0.5	0.8	6	clean SAND to silty SAND	125	5.0	36	38	31	86	43	-	-	5	0.350	1.65	16
21.82	218.5	201.4	201.4	218.5	1.5	-1.1	0.7	6	clean SAND to silty SAND	125	5.0	40	44	34	90	44	-	-	5	0.350	1.57	16
21.98	218.3	200.7	200.7	218.2	1.2	-1.0	0.6	6	clean SAND to silty SAND	125	5.0	40	44	33	90	44	-	-	5	0.350	1.51	16
22.15	224.4	205.9	205.9	224.4	1.2	-1.1	0.5	6	clean SAND to silty SAND	125	5.0	41	45	34	91	44	-	-	5	0.350	1.49	16
22.31	243.0	222.4	222.4	242.9	1.1	-1.2	0.5	6	clean SAND to silty SAND	125	5.0	44	49	36	93	44	-	-	5	0.350	1.43	16
22.47	222.4	203.1	203.1	222.3	0.9	-2.0	0.4	6	clean SAND to silty SAND	125	5.0	41	44	33	90	44	-	-	5	0.350	1.44	16
22.64	199.3	181.6	181.6	199.2	0.9	-3.1	0.4	6	clean SAND to silty SAND	125	5.0	36	40	30	87	43	-	-	5	0.350	1.49	16
22.80	174.7	158.8	158.8	174.6	1.0	-3.6	0.6	6	clean SAND to silty SAND	125	5.0	32	35	27	82	43	-	-	5	0.350	1.61	16
22.97	154.7	140.3	147.7	154.7	1.2	-3.5	0.8	6	clean SAND to silty SAND	125	5.0	28	31	25	78	42	-	-	7	0.350	1.72	16
23.13	149.8	135.6	144.9	149.7	1.2	-4.2	0.8	6	clean SAND to silty SAND	125	5.0	27	30	24	77	42	-	-	7	0.350	1.75	16
23.30	149.4	134.9	139.5	149.3	1.0	-4.0	0.6	6	clean SAND to silty SAND	125	5.0	27	30	24	77	42	-	-	6	0.350	1.69	16
23.46	149.9	135.1	134.9	149.8	0.8	-4.8	0.5	6	clean SAND to silty SAND	125	5.0	27	30	23	77	42	-	-	5	0.350	1.64	16
23.62	155.7	140.0	140.0	155.6	0.7	-4.5	0.4	6	clean SAND to silty SAND	125	5.0	28	31	24	78	42	-	-	5	0.350	1.58	16
23.79	162.0	145.4	145.4	161.9	0.9	-4.3	0.6	6	clean SAND to silty SAND	125	5.0	29	32	25	79	42	-	-	5	0.350	1.64	16
23.95	172.5	154.4	154.4	172.4	0.9	-4.2	0.5	6	clean SAND to silty SAND	125	5.0	31	34	26	81	42	-	-	5	0.350	1.60	16
24.12	183.9	164.2	164.2	183.8	1.0	-3.7	0.5	6	clean SAND to silty SAND	125	5.0	33	37	28	83	43	-	-	5	0.350	1.57	16
24.28	200.4	178.6	178.6	200.3	0.6	-3.9	0.3	6	clean SAND to silty SAND	125	5.0	36	40	29	86	43	-	-	5	0.350	1.41	16
24.44	212.9	189.3	189.3	212.8	0.7	-4.4	0.3	6	clean SAND to silty SAND	125	5.0	38	43	30	88	43	-	-	5	0.350	1.41	16
24.61	202.1	179.4	179.4	202.1	0.8	-4.4	0.4	6	clean SAND to silty SAND	125	5.0	36	40	29	86	43	-	-	5	0.350	1.47	16
24.77	193.4	171.3	171.3	193.3	0.9	-3.8	0.4	6	clean SAND to silty SAND	125	5.0	34	39	28	85	43	-	-	5	0.350	1.51	16
24.94	201.0	177.6	177.6	200.9	0.9	-4.7	0.4	6	clean SAND to silty SAND	125	5.0	36	40	29	86	43	-	-	5	0.350	1.50	16
25.10	201.4	177.6	177.6	201.3	1.0	-4.8	0.5	6	clean SAND to silty SAND	125	5.0	36	40	29	86	43	-	-	5	0.350	1.52	16
25.26	193.8	170.5	170.5	193.7	0.9	-4.6	0.5	6	clean SAND to silty SAND	125	5.0	34	39	28	85	43	-	-	5	0.350	1.52	16
25.43	186.2	163.5	163.5	186.1	0.6	-4.7	0.3	6	clean SAND to silty SAND	125	5.0	33	37	27	83	43	-	-	5	0.350	1.47	16
25.59	175.7	153.9	153.9	175.6	0.5	-5.0	0.3	6	clean SAND to silty SAND	125	5.0	31	35	25	81	42	-	-	5	0.350	1.46	16
25.76	154.2	134.9	134.9	154.1	0.7	-4.8	0.4	6	clean SAND to silty SAND	125	5.0	27	31	23	77	4						

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(863).cpt
CPT Date: 7/26/2023 10:01:25 AM
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Sounding ID: CPT-04
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	* qt PS	slv Stss tsf	pore prss (psi)	Frct Rto %	* Mat Typ Zon	* Material Description	Unit Wght pcf	* Qc to N	* SPT R-N1 60%	* SPT R-N 60%	* SPT IcN1 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	OCR -	* Fin Ic %	* D50 mm	* Ic SBT Indx	* Nk -
31.01	14.3	10.4	-	14.5	0.4	14.0	3.3	3	silty CLAY to CLAY	115	1.5	7	10	3	-	-	0.9	3.0	62	0.005	3.06	15
31.17	17.1	12.4	-	17.4	0.3	14.4	2.2	4	clay SILT to silty CLAY	115	2.0	6	9	4	-	-	1.1	3.6	51	0.070	2.88	15
31.33	16.8	12.1	-	17.2	0.3	19.6	2.1	4	clay SILT to silty CLAY	115	2.0	6	8	4	-	-	1.1	3.6	51	0.070	2.89	15
31.50	15.0	10.8	-	15.4	0.7	21.4	5.5	3	silty CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.1	71	0.005	3.17	15
31.66	15.6	11.2	-	16.0	1.0	22.8	7.3	3	silty CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	76	0.005	3.24	15
31.83	43.3	35.6	103.6	43.8	1.0	25.9	2.5	4	clay SILT to silty CLAY	115	2.0	18	22	9	-	-	3.0	9.8	32	0.070	2.53	15
31.99	126.4	103.7	117.9	126.7	1.0	12.7	0.8	6	clean SAND to silty SAND	125	5.0	21	25	19	68	40	-	-	9	0.350	1.84	16
32.15	157.5	129.0	135.5	157.4	1.0	-5.8	0.7	6	clean SAND to silty SAND	125	5.0	26	32	23	75	41	-	-	6	0.350	1.72	16
32.32	143.2	117.0	130.2	143.1	1.2	-6.5	0.8	6	clean SAND to silty SAND	125	5.0	23	29	21	72	41	-	-	8	0.350	1.81	16
32.48	136.4	111.2	130.2	136.2	1.3	-5.6	1.0	6	clean SAND to silty SAND	125	5.0	22	27	21	71	40	-	-	10	0.350	1.88	16
32.65	141.8	115.5	133.0	141.7	1.4	-5.9	1.0	6	clean SAND to silty SAND	125	5.0	23	28	22	72	40	-	-	9	0.350	1.86	16
32.81	143.5	116.6	127.9	143.3	1.1	-6.8	0.8	6	clean SAND to silty SAND	125	5.0	23	29	21	72	41	-	-	8	0.350	1.79	16
32.97	146.4	118.7	126.5	146.2	0.9	-6.7	0.6	6	clean SAND to silty SAND	125	5.0	24	29	21	73	41	-	-	7	0.350	1.74	16
33.14	137.5	111.4	120.4	137.4	0.9	-6.9	0.6	6	clean SAND to silty SAND	125	5.0	22	27	20	71	40	-	-	7	0.350	1.76	16
33.30	105.7	85.5	112.8	105.6	1.2	-6.9	1.2	6	clean SAND to silty SAND	125	5.0	17	21	17	62	39	-	-	13	0.350	2.01	16
33.47	59.5	48.0	98.0	59.3	1.0	-6.5	1.8	5	silty SAND to sandy SILT	120	3.0	16	20	11	43	35	-	-	24	0.200	2.33	16
33.63	31.4	21.6	-	31.2	0.9	-6.2	3.1	4	clay SILT to silty CLAY	115	2.0	11	16	6	-	-	2.1	6.7	44	0.070	2.76	15
33.79	20.1	13.8	-	20.0	0.6	-4.0	3.2	3	silty CLAY to CLAY	115	1.5	9	13	4	-	-	1.3	4.1	54	0.005	2.94	15
33.96	16.1	11.0	-	16.0	0.4	-0.5	3.0	3	silty CLAY to CLAY	115	1.5	7	11	4	-	-	1.0	3.2	59	0.005	3.01	15
34.12	15.9	10.9	-	16.0	0.4	2.4	2.9	3	silty CLAY to CLAY	115	1.5	7	11	3	-	-	1.0	3.1	59	0.005	3.01	15
34.29	15.2	10.3	-	15.3	0.3	4.3	2.5	3	silty CLAY to CLAY	115	1.5	7	10	3	-	-	1.0	2.9	58	0.005	3.00	15
34.45	14.4	9.8	-	14.5	0.3	4.9	2.8	3	silty CLAY to CLAY	115	1.5	7	10	3	-	-	0.9	2.8	61	0.005	3.04	15
34.61	12.9	8.7	-	13.0	0.3	5.0	3.0	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.8	2.4	66	0.005	3.11	15
34.78	12.9	8.7	-	13.0	0.3	4.6	3.1	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.8	2.4	67	0.005	3.12	15
34.94	12.9	8.7	-	13.0	0.3	4.5	3.1	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.8	2.4	67	0.005	3.12	15
35.11	12.9	8.7	-	13.0	0.4	5.7	3.3	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.8	2.4	68	0.005	3.13	15
35.27	13.2	8.8	-	13.3	0.4	6.7	3.2	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.8	2.4	67	0.005	3.12	15
35.43	13.6	9.0	-	13.7	0.3	8.0	3.0	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.9	2.5	65	0.005	3.09	15
35.60	14.0	9.3	-	14.2	0.4	9.5	3.1	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.9	2.6	65	0.005	3.09	15
35.76	14.2	9.4	-	14.4	0.4	11.3	3.6	3	silty CLAY to CLAY	115	1.5	6	9	3	-	-	0.9	2.6	67	0.005	3.12	15
35.93	15.5	10.3	-	15.8	0.6	13.9	4.6	3	silty CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	2.9	69	0.005	3.15	15
36.09	20.2	13.3	-	20.5	1.1	17.5	6.2	3	silty CLAY to CLAY	115	1.5	9	13	5	-	-	1.3	3.9	68	0.005	3.13	15
36.26	27.0	17.7	-	27.5	1.8	22.3	7.1	3	silty CLAY to CLAY	115	1.5	12	18	6	-	-	1.8	5.4	63	0.005	3.06	15
36.42	39.7	26.0	-	40.2	2.3	27.0	6.2	3	silty CLAY to CLAY	115	1.5	17	26	8	-	-	2.7	8.1	52	0.005	2.89	15
36.58	43.9	28.7	-	44.3	2.6	21.2	6.3	3	silty CLAY to CLAY	115	1.5	19	29	8	-	-	3.0	9.0	50	0.005	2.87	15
36.75	46.7	30.4	-	47.2	3.0	23.9	6.6	3	silty CLAY to CLAY	115	1.5	20	31	9	-	-	3.2	9.6	50	0.005	2.86	15
36.91	65.4	42.5	-	65.8	3.0	16.0	4.8	4	clay SILT to silty CLAY	115	2.0	21	33	11	-	-	4.5	9.9	38	0.070	2.66	15
37.08	70.3	45.5	-	70.2	3.0	-1.4	4.4	4	clay SILT to silty CLAY	115	2.0	23	35	12	-	-	4.9	9.9	36	0.070	2.61	15
37.24	44.3	28.6	-	44.3	1.7	-3.5	3.9	4	clay SILT to silty CLAY	115	2.0	14	22	8	-	-	3.0	9.0	42	0.070	2.73	15
37.40	26.3	17.0	-	26.3	1.1	-3.6	4.4	3	silty CLAY to CLAY	115	1.5	11	18	5	-	-	1.8	5.1	55	0.005	2.94	15
37.57	17.4	11.2	-	17.4	0.8	-2.0	5.4	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.1	3.2	70	0.005	3.16	15
37.73	15.7	10.0	-	15.7	0.7	2.0	5.3	3	silty CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	2.8	73	0.005	3.19	15
37.90	14.7	9.4	-	14.8	0.7	2.6	5.2	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.6	75	0.005	3.22	15
38.06	14.3	9.1	-	14.4	0.6	2.9	4.7	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.5	73	0.005	3.20	15
38.22	14.3	9.1	-	14.3	0.4	3.1	3.2	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.5	66	0.005	3.11	15
38.39	14.7	9.3	-	14.7	0.5	3.3	3.7	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.6	68	0.005	3.14	15
38.55	15.1	9.5	-	15.2	0.5	3.5	3.8	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	1.0	2.7	68	0.005	3.13	15
38.72	12.4	7.8	-	12.5	0.7	4.4	7.0	3	silty CLAY to CLAY	115	1.5	5	8	3	-	-	0.8	2.1	87	0.005	3.37	15
38.88	17.8	11.2	-	17.9	1.3	5.5	8.4	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.1	3.2	79	0.005	3.28	15
39.04	23.1	14.5	-	23.3	2.4	6.7	9.9	3	silty CLAY to CLAY	115	1.5	10	15	5	-	-	1.5	4.3	76	0.005	3.23	15
39.21	44.8	28.0	-	45.3	3.0	9.5	7.1	3	silty CLAY to CLAY	115	1.5	19	30	8	-	-	3.1	8.8	53	0.005	2.91	15
39.37	59.4	37.0	-	59.3	3.2	-2.2	5.6	3	silty CLAY to CLAY	115	1.5	25	40	10	-	-	4.1	9.9	43	0.005	2.75	15
39.54	70.9	44.1	-	71.0	3.6	3.5	5.2	3	silty CLAY to CLAY	115	1.5	29	47	12	-	-	4.9	9.9	39	0.005	2.67	15
39.70	109.0	83.4	180.7	109.0	3.8	-0.8	3.6	4	clay SILT to silty CLAY	115	2.0	42	54	19	-	-	7.6	9.9	25	0.070	2.36	15
39.86	106.0	81.0	175.9	105.9	3.6	-6.4	3.5	4	clay SILT to silty CLAY	115	2.0	40	53	18	-	-	7.4	9.9	25	0.070	2.36	15
40.03	121.0	92.3	164.5	120.9	3.2	-5.0	2.7	5	silty SAND to sandy SILT	120	3.0	31	40	20	64	39	-	-	21	0.200	2.24	16
40.19	171.2	130.4	161.5	171.1	2.5	-6.2	1.5	6	clean SAND to silty SAND	125	5.0	26	34	25	76	41	-	-	12	0.350	1.95	16
40.36	197.6	150.2	169.5	197.4	2.3	-6.5	1.2	6	clean SAND to silty SAND	125	5.0	30	40	28	80	42	-	-	9	0.350	1.83	16
40.52	208.5	158.3	159.1	208.4	1.4	-6.0	0.7	6	clean SAND to silty SAND	125	5.0	32	42	27	82	42	-	-	5	0.350	1.65	16
40.68	224.5	170.2	177.5	224.4	2.0	-6.7	0.9	6	clean SAND to silty SAND	125	5.0	34	45	30	85	42	-	-	6	0.350	1.71	16
40.85	234.8	177.4	190.1	234.7	2.5	-6.9	1.1	6	clean SAND to silty SAND	125	5.0	36	47	32	86	42	-	-	7	0.350	1.75	16
41.01	233.5	176.4	187.9	233.4	2.4	-5.5	1.0	6	clean SAND to silty SAND	125	5.0	35	47	31	86	42	-	-	7	0.350	1.74	16
41.18	244.0	184.1	189.2	243.9	2.2	-5.8	0.9	6	clean SAND to silty SAND	125	5.0	37	49	32	87	43	-	-	6	0.350	1.69	16
41.34	250.0	188.3	190.9	249.9	2.1	-5.9	0.9	6	clean SAND to silty SAND	125	5.0	38	50	33								

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
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CPT Date: 7/26/2023 10:01:25 AM
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Sounding ID: CPT-04
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS tsf	* qc1n PS	* q1ncs PS	* qt PS tsf	Slv Stss tsf	pore prss (psi)	Frct Rato %	Mat Typ Zon	* Material Behavior Description	Unit Wght pcf	Qc to N	* SPT R-N1 60%	* SPT R-N 60%	* SPT IcN1 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	OCR -	* Fin Ic %	* D50 mm	* Ic SBT Indx	* Nk -
46.43	201.5	145.0	145.7	201.4	1.2	-4.2	0.6	6	clean SAND to silty SAND	125	5.0	29	40	25	79	41	-	-	5	0.350	1.65	16
46.59	205.2	147.5	148.9	205.1	1.3	-3.8	0.6	6	clean SAND to silty SAND	125	5.0	29	41	26	80	41	-	-	5	0.350	1.66	16
46.75	222.6	159.7	164.9	222.5	1.7	-4.0	0.8	6	clean SAND to silty SAND	125	5.0	32	45	28	82	42	-	-	6	0.350	1.69	16
46.92	239.5	171.6	171.6	239.4	1.4	-4.1	0.6	6	clean SAND to silty SAND	125	5.0	34	48	29	85	42	-	-	5	0.350	1.59	16
47.08	256.7	183.7	183.7	256.6	1.5	-4.0	0.6	6	clean SAND to silty SAND	125	5.0	37	51	31	87	42	-	-	5	0.350	1.57	16
47.25	250.5	179.0	179.0	250.5	1.7	-3.2	0.7	6	clean SAND to silty SAND	125	5.0	36	50	31	86	42	-	-	5	0.350	1.62	16
47.41	245.8	175.4	175.4	245.7	1.4	-3.2	0.6	6	clean SAND to silty SAND	125	5.0	35	49	30	86	42	-	-	5	0.350	1.57	16
47.57	258.6	184.3	184.3	258.6	1.0	-4.7	0.4	6	clean SAND to silty SAND	125	5.0	37	52	30	87	42	-	-	5	0.350	1.47	16
47.74	247.3	176.0	176.0	247.2	1.0	-4.8	0.4	6	clean SAND to silty SAND	125	5.0	35	49	29	86	42	-	-	5	0.350	1.49	16
47.90	233.1	165.7	165.7	233.0	0.9	-4.8	0.4	6	clean SAND to silty SAND	125	5.0	33	47	27	84	42	-	-	5	0.350	1.49	16
48.07	214.3	152.1	152.1	214.2	1.1	-4.7	0.5	6	clean SAND to silty SAND	125	5.0	30	43	26	81	41	-	-	5	0.350	1.60	16
48.23	173.1	122.7	139.1	173.0	1.6	-4.4	1.0	6	clean SAND to silty SAND	125	5.0	25	35	23	74	40	-	-	9	0.350	1.84	16
48.39	147.2	104.2	144.4	147.1	2.5	-4.5	1.7	5	silty SAND to sandy SILT	120	3.0	35	49	21	68	39	-	-	15	0.200	2.06	16
48.56	107.6	76.1	142.8	107.5	2.6	-4.1	2.5	5	silty SAND to sandy SILT	120	3.0	25	36	17	58	37	-	-	22	0.200	2.28	16
48.72	89.2	63.0	162.9	89.2	3.2	-3.7	3.8	4	clayey SILT to silty CLAY	115	2.0	32	45	15	-	-	6.2	9.9	29	0.070	2.46	15
48.89	77.8	41.0	-	77.7	4.1	-3.1	5.5	3	silty CLAY to CLAY	115	1.5	27	52	11	-	-	5.4	9.9	41	0.005	2.71	15
49.05	92.7	65.3	172.9	92.6	3.6	-2.8	4.1	4	clayey SILT to silty CLAY	115	2.0	33	46	16	-	-	6.4	9.9	30	0.070	2.48	15
49.22	176.4	124.2	166.9	176.4	3.2	-3.4	1.9	5	silty SAND to sandy SILT	120	3.0	41	59	25	74	40	-	-	14	0.200	2.03	16
49.38	204.4	143.7	158.7	204.3	2.0	-4.7	1.0	6	clean SAND to silty SAND	125	5.0	29	41	26	79	41	-	-	8	0.350	1.80	16
49.54	192.9	135.4	159.3	192.8	2.4	-4.7	1.3	6	clean SAND to silty SAND	125	5.0	27	39	25	77	41	-	-	10	0.350	1.89	16
49.71	147.3	103.2	161.3	147.2	3.3	-4.8	2.3	5	silty SAND to sandy SILT	120	3.0	34	49	22	68	39	-	-	18	0.200	2.15	16
49.87	122.6	85.8	155.0	122.5	3.1	-5.1	2.6	5	silty SAND to sandy SILT	120	3.0	29	41	19	62	38	-	-	21	0.200	2.25	16
50.04	115.3	80.6	169.7	115.2	3.7	-5.1	3.3	5	silty SAND to sandy SILT	120	3.0	27	38	18	60	38	-	-	24	0.200	2.35	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Middle Earth Geo Testing

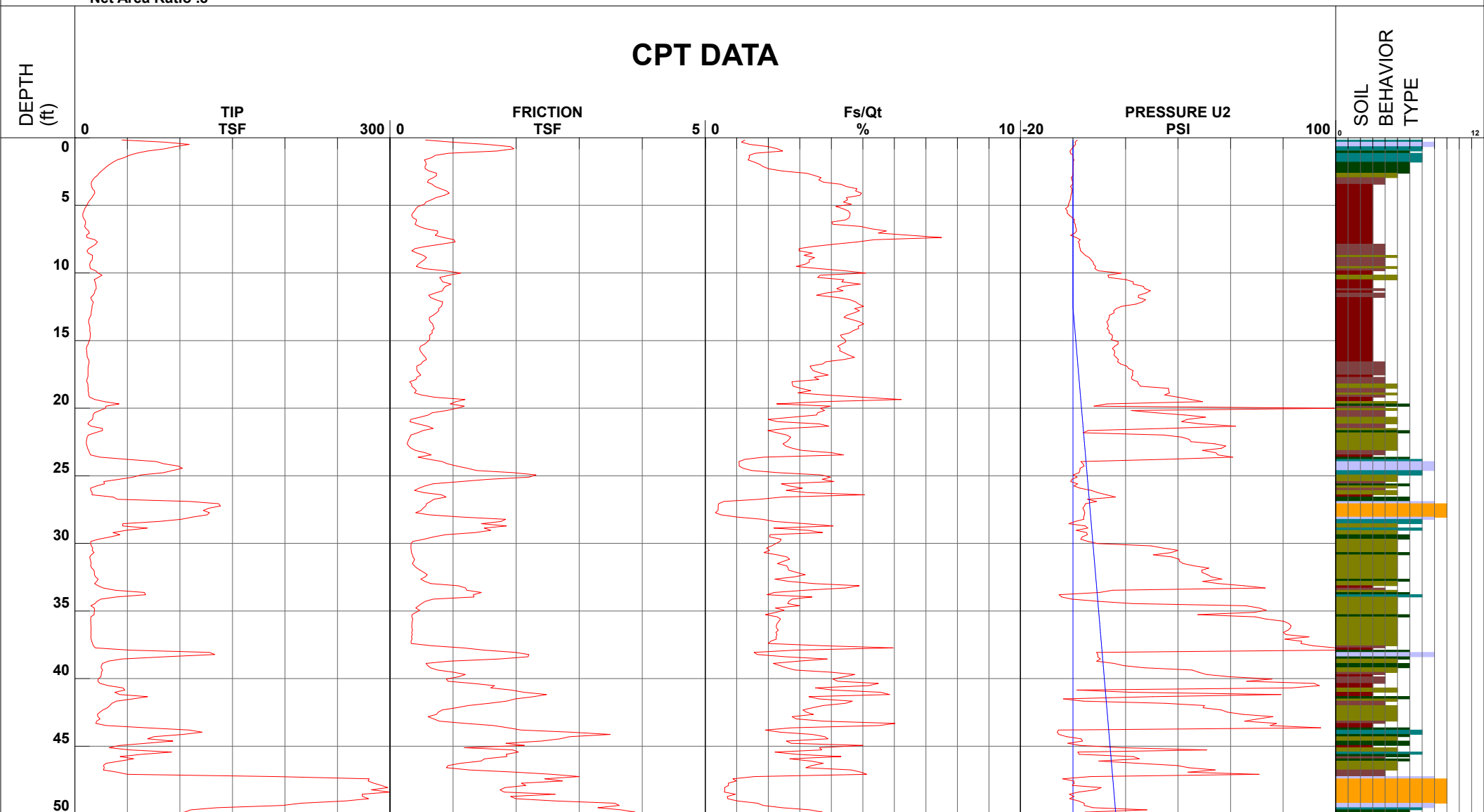


BAGG Engineering

Project SMC-HMB Farmworker Housing project Operator AJ-ER
Job Number COUSM-23-03 Cone Number DDG1589
Hole Number CPT-05 Date and Time 7/26/2023 1:04:56 PM
EST GW Depth During Test 12.50 ft

Filename SDF(865).cpt
GPS
Maximum Depth 50.52 ft

Net Area Ratio .8



- | | | | |
|----------------------------|-------------------------------|------------------------------|----------------------------------|
| 1 - sensitive fine grained | 4 - silty clay to clay | 7 - silty sand to sandy silt | 10 - gravelly sand to sand |
| 2 - organic material | 5 - clayey silt to silty clay | 8 - sand to silty sand | 11 - very stiff fine grained (*) |
| 3 - clay | 6 - sandy silt to clayey silt | 9 - sand | 12 - sand to clayey sand (*) |

Cone Size 15cm²

S*Soil behavior type and SPT based on data from UBC-1983

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(865).cpt
CPT Date: 7/26/2023 1:04:56 PM
GW During Test: 13 ft

Page: 1
Sounding ID: CPT-05
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	Slv Stss tsf	pore prss (psi)	Frct Rto %	Mat Typ Zon	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	OCR -	Fin Ic %	D50 mm	Ic SBT Indx	Nk -
0.33	85.5	137.2	156.9	85.5	1.0	0.8	1.2	6	clean SAND to silty SAND	125	5.0	27	17	25	77	48	-	-	9	0.350	1.85	16
0.49	108.8	174.4	198.4	108.8	1.5	1.0	1.4	6	clean SAND to silty SAND	125	5.0	35	22	32	85	48	-	-	9	0.350	1.84	16
0.66	95.4	152.9	197.4	95.4	1.9	0.2	2.0	5	silty SAND to sandy SILT	120	3.0	51	32	30	81	48	-	-	13	0.200	1.99	16
0.82	85.9	137.8	192.3	85.9	2.0	-0.5	2.3	5	silty SAND to sandy SILT	120	3.0	46	29	28	78	48	-	-	15	0.200	2.07	16
0.98	69.0	110.7	172.2	69.0	1.7	-1.1	2.5	5	silty SAND to sandy SILT	120	3.0	37	23	23	70	48	-	-	17	0.200	2.15	16
1.15	58.6	94.0	130.7	58.6	0.9	-0.9	1.6	5	silty SAND to sandy SILT	120	3.0	31	20	19	65	48	-	-	15	0.200	2.06	16
1.31	51.6	82.7	115.6	51.6	0.7	0.1	1.4	5	silty SAND to sandy SILT	120	3.0	28	17	17	61	48	-	-	15	0.200	2.07	16
1.48	47.0	75.4	109.7	47.0	0.7	0.1	1.4	5	silty SAND to sandy SILT	120	3.0	25	16	15	58	48	-	-	16	0.200	2.10	16
1.64	40.2	64.5	99.2	40.2	0.5	0.3	1.4	5	silty SAND to sandy SILT	120	3.0	21	13	13	53	47	-	-	17	0.200	2.14	16
1.80	36.4	58.3	99.4	36.4	0.6	0.1	1.6	5	silty SAND to sandy SILT	120	3.0	19	12	12	49	46	-	-	20	0.200	2.22	16
1.97	33.3	53.4	99.6	33.3	0.6	0.1	1.7	5	silty SAND to sandy SILT	120	3.0	18	11	12	46	46	-	-	22	0.200	2.27	16
2.13	30.3	48.6	98.2	30.3	0.6	0.1	1.8	5	silty SAND to sandy SILT	120	3.0	16	10	11	43	45	-	-	23	0.200	2.32	16
2.30	27.8	44.6	99.1	27.8	0.6	0.0	2.0	5	silty SAND to sandy SILT	120	3.0	15	9	10	40	44	-	-	25	0.200	2.38	16
2.46	25.3	40.6	105.3	25.3	0.6	0.1	2.5	5	silty SAND to sandy SILT	120	3.0	14	8	10	37	43	-	-	29	0.200	2.46	16
2.62	23.0	36.9	117.0	23.0	0.7	0.0	3.2	4	clay SILT to silty CLAY	115	2.0	18	11	9	-	-	1.6	9.9	34	0.070	2.57	15
2.79	21.3	34.1	-	21.3	0.7	0.0	3.5	4	clay SILT to silty CLAY	115	2.0	17	11	9	-	-	1.5	9.9	36	0.070	2.62	15
2.95	18.7	30.0	-	18.7	0.7	-0.6	3.7	4	clay SILT to silty CLAY	115	2.0	15	9	8	-	-	1.3	9.9	39	0.070	2.68	15
3.12	17.0	27.3	-	17.0	0.6	-0.4	3.6	4	clay SILT to silty CLAY	115	2.0	14	8	7	-	-	1.2	9.9	41	0.070	2.71	15
3.28	15.8	25.3	-	15.8	0.6	-0.1	3.8	4	clay SILT to silty CLAY	115	2.0	13	8	7	-	-	1.1	9.9	43	0.070	2.74	15
3.45	15.6	24.9	-	15.6	0.7	-0.2	4.4	3	silty CLAY to CLAY	115	1.5	17	10	7	-	-	1.1	9.9	45	0.005	2.79	15
3.61	15.9	25.6	-	15.9	0.7	-1.0	4.5	3	silty CLAY to CLAY	115	1.5	17	11	7	-	-	1.1	9.9	46	0.005	2.79	15
3.77	16.7	26.8	-	16.7	0.8	-0.4	4.9	3	silty CLAY to CLAY	115	1.5	18	11	8	-	-	1.2	9.9	46	0.005	2.80	15
3.94	18.8	30.1	-	18.8	0.9	-0.3	4.8	3	silty CLAY to CLAY	115	1.5	20	13	8	-	-	1.3	9.9	44	0.005	2.76	15
4.10	19.0	30.4	-	18.9	0.9	-0.6	5.0	3	silty CLAY to CLAY	115	1.5	20	13	8	-	-	1.3	9.9	44	0.005	2.77	15
4.27	17.5	28.1	-	17.5	0.9	-0.8	5.0	3	silty CLAY to CLAY	115	1.5	19	12	8	-	-	1.2	9.9	45	0.005	2.79	15
4.43	16.3	26.2	-	16.3	0.7	-0.8	4.6	3	silty CLAY to CLAY	115	1.5	17	11	7	-	-	1.1	9.9	45	0.005	2.79	15
4.59	14.6	23.3	-	14.5	0.7	-1.0	4.6	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.0	9.9	48	0.005	2.83	15
4.76	13.0	20.8	-	12.9	0.6	-1.4	4.5	3	silty CLAY to CLAY	115	1.5	14	9	6	-	-	0.9	9.9	49	0.005	2.86	15
4.92	11.8	18.9	-	11.7	0.5	-1.7	4.8	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8	9.9	53	0.005	2.91	15
5.09	10.7	17.2	-	10.7	0.4	-1.8	4.3	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7	9.9	53	0.005	2.91	15
5.25	9.4	15.1	-	9.3	0.4	-2.8	4.5	3	silty CLAY to CLAY	115	1.5	10	6	5	-	-	0.6	9.7	57	0.005	2.97	15
5.41	8.6	13.8	-	8.6	0.4	-2.2	4.7	3	silty CLAY to CLAY	115	1.5	9	6	4	-	-	0.6	8.6	59	0.005	3.01	15
5.58	7.8	12.5	-	7.7	0.4	-2.2	4.8	3	silty CLAY to CLAY	115	1.5	8	5	4	-	-	0.5	7.5	62	0.005	3.06	15
5.74	7.5	12.0	-	7.4	0.3	-1.3	4.8	3	silty CLAY to CLAY	115	1.5	8	5	4	-	-	0.5	7.0	63	0.005	3.07	15
5.91	7.9	12.7	-	7.9	0.4	-0.3	4.8	3	silty CLAY to CLAY	115	1.5	8	5	4	-	-	0.5	7.2	62	0.005	3.05	15
6.07	9.5	15.2	-	9.5	0.4	0.5	4.6	3	silty CLAY to CLAY	115	1.5	10	6	5	-	-	0.6	8.4	57	0.005	2.98	15
6.23	10.2	16.4	-	10.2	0.4	0.4	4.2	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7	8.9	53	0.005	2.92	15
6.40	9.8	15.7	-	9.8	0.4	0.8	4.2	3	silty CLAY to CLAY	115	1.5	10	7	5	-	-	0.7	8.3	55	0.005	2.94	15
6.56	9.3	15.0	-	9.4	0.5	0.9	5.1	3	silty CLAY to CLAY	115	1.5	10	6	5	-	-	0.6	7.7	59	0.005	3.01	15
6.73	10.7	17.2	-	10.8	0.6	1.2	5.4	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7	8.7	57	0.005	2.98	15
6.89	13.1	21.1	-	13.2	0.8	1.4	5.9	3	silty CLAY to CLAY	115	1.5	14	9	6	-	-	0.9	9.9	54	0.005	2.94	15
7.05	13.8	22.1	-	13.8	0.8	0.7	5.7	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	0.9	9.9	53	0.005	2.91	15
7.22	11.0	17.7	-	11.0	0.7	-0.9	6.8	3	silty CLAY to CLAY	115	1.5	12	7	6	-	-	0.7	8.3	61	0.005	3.04	15
7.38	11.4	18.3	-	11.4	0.9	1.2	7.8	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8	8.4	63	0.005	3.07	15
7.55	18.9	30.4	-	19.0	1.0	2.7	5.5	3	silty CLAY to CLAY	115	1.5	20	13	9	-	-	1.3	9.9	46	0.005	2.80	15
7.71	21.4	34.4	-	21.5	1.0	2.0	4.9	3	silty CLAY to CLAY	115	1.5	23	14	9	-	-	1.5	9.9	42	0.005	2.73	15
7.87	19.8	31.7	-	19.8	0.8	2.4	4.2	4	clay SILT to silty CLAY	115	2.0	16	10	9	-	-	1.4	9.9	41	0.070	2.70	15
8.04	16.6	26.7	-	16.7	0.6	2.4	3.5	4	clay SILT to silty CLAY	115	2.0	13	8	7	-	-	1.1	9.9	41	0.070	2.71	15
8.20	13.2	21.2	-	13.3	0.4	2.7	3.1	4	clay SILT to silty CLAY	115	2.0	11	7	6	-	-	0.9	8.8	43	0.070	2.75	15
8.37	11.6	18.7	-	11.7	0.3	2.9	3.1	4	clay SILT to silty CLAY	115	2.0	9	6	5	-	-	0.8	7.5	46	0.070	2.80	15
8.53	12.6	20.2	-	12.7	0.4	3.8	3.5	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.9	8.0	46	0.005	2.81	15
8.69	16.8	27.0	-	16.9	0.5	4.7	3.2	4	clay SILT to silty CLAY	115	2.0	14	8	7	-	-	1.2	9.9	40	0.070	2.68	15
8.86	16.7	26.8	-	16.8	0.6	6.1	3.6	4	clay SILT to silty CLAY	115	2.0	13	8	7	-	-	1.1	9.9	41	0.070	2.72	15
9.02	16.5	26.4	-	16.6	0.5	6.9	3.4	4	clay SILT to silty CLAY	115	2.0	13	8	7	-	-	1.1	9.9	41	0.070	2.71	15
9.19	14.9	23.9	-	15.1	0.5	7.7	3.4	4	clay SILT to silty CLAY	115	2.0	12	7	7	-	-	1.0	8.9	43	0.070	2.74	15
9.35	14.1	22.6	-	14.3	0.4	7.8	3.3	4	clay SILT to silty CLAY	115	2.0	11	7	6	-	-	1.0	8.2	43	0.070	2.75	15
9.51	14.4	23.1	-	14.6	0.4	8.6	3.0	4	clay SILT to silty CLAY	115	2.0	12	7	6	-	-	1.0	8.2	41	0.070	2.72	15
9.68	14.8	23.7	-	15.0	0.5	8.3	3.7	4	clay SILT to silty CLAY	115	2.0	12	7	7	-	-	1.0	8.3	44	0.070	2.77	15
9.84	19.8	31.8	-	20.0	0.9	9.6	4.6	3	silty CLAY to CLAY	115	1.5	21	13	9	-	-	1.4	9.9	42	0.005	2.73	15
10.01	22.1	35.4	-	22.4	1.1	18.4	5.2	3	silty CLAY to CLAY	115	1.5	24	15	10	-	-	1.5	9.9	42	0.005	2.74	15
10.17	25.9	36.7	-	26.1	0.9	13.3	3.7	4	clay SILT to silty CLAY	115	2.0	18	13	9	-	-	1.8	9.9	36	0.070	2.62	15
10.34	22.1	35.4	-	22.4	0.8	13.6	3.7	4	clay SILT to silty CLAY	115	2.0	18	11	9	-	-	1.5	9.9	37	0.070	2.63	15
10.50	18.5	29.7	-	18.9	0.8	20.2	4.5	3	silty CLAY to CLAY	115	1.5	20	12	8	-	-	1.3	9.7	43	0.005	2.75	15
10.66	19.3	30.9	-	19.7	0.8	22.9	4.5	3	silty CLAY to CLAY	115	1.5	21	13	8	-	-	1.3	9.9	42	0.005	2.73	15
10.83	19.7	31.2	-	20.1	1.0	22.9	5.1	3	silty CLAY to CLAY	115	1.5	21	13	9	-	-	1.3					

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
Data File: SDF(865).cpt
CPT Date: 7/26/2023 1:04:56 PM
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Sounding ID: CPT-05
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	* qt PS	slv Stss tsf	pore prss (psi)	Frct Rto %	* Mat Typ Zon	* Material Behavior Description	Unit Wght pcf	Qc to N	* SPT R-N1 60%	* SPT R-N 60%	* SPT IcN1 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	OCR -	* Fin Ic %	* D50 mm	* Ic SBT Indx	* Nk -
15.58	10.9	13.3	-	11.2	0.5	15.0	4.7	3	silty CLAY to CLAY	115	1.5	9	7	4	-	-	0.7 4.0	61	0.005	3.04	15	
15.75	11.3	13.7	-	11.6	0.5	15.8	4.6	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.7 4.1	61	0.005	3.03	15	
15.91	11.4	13.7	-	11.7	0.5	15.9	4.8	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.7 4.2	61	0.005	3.04	15	
16.08	11.6	13.9	-	11.9	0.5	15.6	5.0	3	silty CLAY to CLAY	115	1.5	9	8	5	-	-	0.8 4.2	61	0.005	3.04	15	
16.24	11.9	14.2	-	12.2	0.6	16.4	5.1	3	silty CLAY to CLAY	115	1.5	9	8	5	-	-	0.8 4.3	62	0.005	3.05	15	
16.40	13.1	15.6	-	13.5	0.6	17.3	4.8	3	silty CLAY to CLAY	115	1.5	10	9	5	-	-	0.9 4.8	58	0.005	2.99	15	
16.57	13.5	16.0	-	13.9	0.5	17.0	4.1	3	silty CLAY to CLAY	115	1.5	11	9	5	-	-	0.9 4.9	55	0.005	2.94	15	
16.73	13.3	15.6	-	13.6	0.5	18.1	4.0	3	silty CLAY to CLAY	115	1.5	10	9	5	-	-	0.9 4.8	55	0.005	2.94	15	
16.90	12.7	14.9	-	13.1	0.4	20.5	3.6	3	silty CLAY to CLAY	115	1.5	10	8	5	-	-	0.8 4.5	54	0.005	2.93	15	
17.06	12.6	14.7	-	13.0	0.4	21.1	3.6	3	silty CLAY to CLAY	115	1.5	10	8	5	-	-	0.8 4.5	55	0.005	2.94	15	
17.23	12.5	14.4	-	12.9	0.4	22.9	3.7	3	silty CLAY to CLAY	115	1.5	10	8	4	-	-	0.8 4.4	55	0.005	2.95	15	
17.39	12.6	14.5	-	13.0	0.5	22.6	4.0	3	silty CLAY to CLAY	115	1.5	10	8	5	-	-	0.8 4.4	56	0.005	2.97	15	
17.55	12.5	14.3	-	13.0	0.5	22.8	4.2	3	silty CLAY to CLAY	115	1.5	10	8	5	-	-	0.8 4.4	58	0.005	2.99	15	
17.72	12.3	14.0	-	12.7	0.4	22.3	3.8	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.8 4.2	56	0.005	2.97	15	
17.88	11.5	13.0	-	11.9	0.4	22.5	4.0	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.7 3.9	59	0.005	3.01	15	
18.05	11.4	12.8	-	11.8	0.3	24.7	3.0	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.7 3.8	55	0.005	2.95	15	
18.21	12.4	13.9	-	12.9	0.3	24.9	3.0	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.8 4.2	53	0.005	2.91	15	
18.37	12.4	13.9	-	12.9	0.3	25.7	3.1	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.8 4.2	53	0.005	2.92	15	
18.54	12.7	14.2	-	13.4	0.4	36.4	3.3	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.8 4.3	54	0.005	2.93	15	
18.70	12.5	13.8	-	13.2	0.4	36.4	3.7	3	silty CLAY to CLAY	115	1.5	9	8	4	-	-	0.8 4.2	56	0.005	2.97	15	
18.87	13.2	14.5	-	13.9	0.4	36.7	3.2	3	silty CLAY to CLAY	115	1.5	10	9	4	-	-	0.9 4.4	53	0.005	2.91	15	
19.03	13.1	14.4	-	13.8	0.5	34.9	4.2	3	silty CLAY to CLAY	115	1.5	10	9	5	-	-	0.9 4.4	57	0.005	2.98	15	
19.19	14.1	15.4	-	14.9	0.7	40.2	5.4	3	silty CLAY to CLAY	115	1.5	10	9	5	-	-	0.9 4.7	61	0.005	3.03	15	
19.36	19.1	20.8	-	20.0	1.2	45.0	6.6	3	silty CLAY to CLAY	115	1.5	14	13	7	-	-	1.3 6.4	58	0.005	2.99	15	
19.52	28.2	30.5	-	29.2	1.0	49.3	3.9	4	clay SILT to silty CLAY	115	2.0	15	14	8	-	-	1.9 9.7	40	0.070	2.70	15	
19.69	42.1	42.4	105.6	42.4	1.0	13.1	2.3	5	silty SAND to sandy SILT	120	3.0	14	14	10	39	36	-	28	0.200	2.44	16	
19.85	29.7	31.8	-	29.9	1.2	8.0	4.1	4	clay SILT to silty CLAY	115	2.0	16	15	9	-	-	2.0 9.9	41	0.070	2.70	15	
20.01	29.0	30.8	-	30.9	1.1	99.5	3.8	4	clay SILT to silty CLAY	115	2.0	15	14	8	-	-	2.0 9.8	40	0.070	2.69	15	
20.18	23.8	25.2	-	24.2	0.9	22.2	4.0	3	silty CLAY to CLAY	115	1.5	17	16	7	-	-	1.6 7.9	44	0.005	2.77	15	
20.34	18.7	19.8	-	19.3	0.7	31.4	3.8	3	silty CLAY to CLAY	115	1.5	13	12	6	-	-	1.3 6.1	49	0.005	2.84	15	
20.51	17.2	18.1	-	18.0	0.6	42.8	3.8	3	silty CLAY to CLAY	115	1.5	12	11	5	-	-	1.1 5.5	51	0.005	2.88	15	
20.67	17.2	18.0	-	18.2	0.5	50.5	3.0	4	clay SILT to silty CLAY	115	2.0	9	9	5	-	-	1.1 5.5	47	0.070	2.81	15	
20.83	16.5	17.2	-	17.4	0.3	43.4	2.1	4	clay SILT to silty CLAY	115	2.0	9	8	5	-	-	1.1 5.3	43	0.070	2.75	15	
21.00	13.7	14.2	-	14.5	0.3	41.3	2.5	4	clay SILT to silty CLAY	115	2.0	7	7	4	-	-	0.9 4.3	50	0.070	2.86	15	
21.16	12.3	12.7	-	13.3	0.4	48.7	4.0	3	silty CLAY to CLAY	115	1.5	8	8	4	-	-	0.8 3.8	60	0.005	3.02	15	
21.33	15.2	15.6	-	16.4	0.6	61.9	4.3	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	1.0 4.7	56	0.005	2.96	15	
21.49	26.2	26.8	-	26.9	0.7	35.8	2.7	4	clay SILT to silty CLAY	115	2.0	13	13	7	-	-	1.8 8.4	38	0.070	2.65	15	
21.65	26.3	25.8	83.8	26.5	0.5	5.8	2.1	4	clay SILT to silty CLAY	115	2.0	13	13	7	-	-	1.8 8.4	35	0.070	2.59	15	
21.82	19.3	19.6	-	19.4	0.4	3.9	2.4	4	clay SILT to silty CLAY	115	2.0	10	10	5	-	-	1.3 6.0	42	0.070	2.73	15	
21.98	12.8	12.9	-	13.5	0.3	34.6	2.9	3	silty CLAY to CLAY	115	1.5	9	9	4	-	-	0.8 3.8	54	0.005	2.93	15	
22.15	11.7	11.7	-	12.5	0.3	41.4	3.0	3	silty CLAY to CLAY	115	1.5	8	8	4	-	-	0.8 3.4	57	0.005	2.98	15	
22.31	11.2	11.2	-	12.1	0.3	44.3	3.0	3	silty CLAY to CLAY	115	1.5	7	7	4	-	-	0.7 3.3	59	0.005	3.00	15	
22.47	11.0	10.9	-	11.9	0.3	44.9	2.9	3	silty CLAY to CLAY	115	1.5	7	7	4	-	-	0.7 3.2	59	0.005	3.00	15	
22.64	11.0	10.9	-	12.0	0.3	54.0	2.8	3	silty CLAY to CLAY	115	1.5	7	7	3	-	-	0.7 3.2	58	0.005	2.99	15	
22.80	11.6	11.5	-	12.8	0.3	58.2	2.9	3	silty CLAY to CLAY	115	1.5	8	8	4	-	-	0.8 3.4	57	0.005	2.98	15	
22.97	12.1	12.0	-	13.3	0.3	56.5	3.1	3	silty CLAY to CLAY	115	1.5	8	8	4	-	-	0.8 3.5	57	0.005	2.98	15	
23.13	13.2	12.9	-	14.2	0.4	49.3	3.4	3	silty CLAY to CLAY	115	1.5	9	9	4	-	-	0.9 3.8	57	0.005	2.98	15	
23.30	13.9	13.5	-	14.9	0.6	54.4	4.4	3	silty CLAY to CLAY	115	1.5	9	9	4	-	-	0.9 4.0	60	0.005	3.03	15	
23.46	14.9	14.5	-	16.0	0.7	55.1	4.8	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	1.0 4.3	60	0.005	3.02	15	
23.62	24.0	23.2	-	25.2	0.4	60.8	2.0	4	clay SILT to silty CLAY	115	2.0	12	12	6	-	-	1.6 7.2	36	0.070	2.61	15	
23.79	49.0	46.7	84.2	49.7	0.6	35.6	1.3	5	silty SAND to sandy SILT	120	3.0	16	16	10	42	36	-	21	0.200	2.25	16	
23.95	77.4	73.6	100.1	77.5	0.8	3.0	1.1	6	clean SAND to silty SAND	125	5.0	15	15	15	57	39	-	14	0.350	2.04	16	
24.12	84.9	80.5	106.1	84.9	0.9	3.8	1.1	6	clean SAND to silty SAND	125	5.0	16	17	16	60	39	-	13	0.350	2.01	16	
24.28	98.4	93.1	116.9	98.5	1.1	4.2	1.1	6	clean SAND to silty SAND	125	5.0	19	20	18	65	40	-	12	0.350	1.96	16	
24.44	102.3	96.7	123.4	102.4	1.2	2.7	1.2	6	clean SAND to silty SAND	125	5.0	19	20	19	66	40	-	12	0.350	1.98	16	
24.61	92.9	87.5	123.5	93.0	1.4	2.6	1.5	5	silty SAND to sandy SILT	120	3.0	29	31	18	63	40	-	15	0.200	2.07	16	
24.77	84.6	79.5	141.0	84.6	2.0	2.3	2.4	5	silty SAND to sandy SILT	120	3.0	27	28	17	59	39	-	20	0.200	2.24	16	
24.94	63.1	59.2	157.3	63.1	2.3	0.1	3.8	4	clay SILT to silty CLAY	115	2.0	30	32	14	-	-	4.4 9.9	30	0.070	2.48	15	
25.10	55.4	51.9	155.7	55.4	2.2	1.6	4.1	4	clay SILT to silty CLAY	115	2.0	26	28	13	-	-	3.8 9.9	33	0.070	2.54	15	
25.26	42.1	38.9	-	42.1	1.6	-0.4	3.8	4	clay SILT to silty CLAY	115	2.0	19	21	10	-	-	2.9 9.9	36	0.070	2.62	15	
25.43	27.6	25.4	-	27.5	1.1	-0.9	4.3	3	silty CLAY to CLAY	115	1.5	17	18	7	-	-	1.9 7.9	46	0.005	2.79	15	
25.59	28.3	26.0	-	28.3	0.7	1.7	2.5	4	clay SILT to silty CLAY	115	2.0	13	14	7	-	-	1.9 8.1	37	0.070	2.64	15	
25.76	20.8	19.0	-	20.8	0.6	0.3	2.9	4	clay SILT to silty CLAY	115	2.0	10	10	5	-	-	1.4 5.8	45	0.070	2.79	15	
25.92	14.9	13.6	-	15.0	0.5	2.7	3.4	3	silty CLAY to CLAY	115	1.5	9	10	4	-	-	1.0 4.0	56	0.005	2.96	15	
26.08	15.1	13.7	-	15.2	0.4	7.0	2.9	3	silty CLAY to CLAY	115	1.5	9	10	4	-	-	1.0 4.1	53	0.005	2.93	15	
26.25	16.5	14.9	-	16.7	0.5	9.4	3.															

SMC-HMB Farmworker Housing project

Project ID: BAGG Engineering
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Sounding ID: CPT-05
Project No: COUSM-23-03
Cone/Rig: DDG1589

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	Slv Stss tsf	pore prss (psi)	Frct Ratio	Mat Typ	Zone	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	OCR -	Fin Ic -	D50 mm	Ic SBT Indx	Nk -	
31.01	14.1	11.4	-	14.9	0.4	37.7	3.0	3	silty	CLAY to CLAY	115	1.5	8	9	4	-	-	0.9	3.3	58	0.005	3.00	15	
31.17	14.6	11.7	-	15.4	0.4	40.3	3.1	3	silty	CLAY to CLAY	115	1.5	8	10	4	-	-	0.9	3.4	58	0.005	2.99	15	
31.33	15.2	12.2	-	16.0	0.4	40.6	2.8	3	silty	CLAY to CLAY	115	1.5	8	10	4	-	-	1.0	3.5	56	0.005	2.96	15	
31.50	15.5	12.3	-	16.3	0.4	42.0	2.6	3	silty	CLAY to CLAY	115	1.5	8	10	4	-	-	1.0	3.6	54	0.005	2.93	15	
31.66	15.0	11.9	-	15.9	0.4	46.1	2.9	3	silty	CLAY to CLAY	115	1.5	8	10	4	-	-	1.0	3.4	57	0.005	2.98	15	
31.83	16.1	12.8	-	17.2	0.4	51.7	3.0	3	silty	CLAY to CLAY	115	1.5	9	11	4	-	-	1.1	3.7	55	0.005	2.95	15	
31.99	18.1	14.3	-	19.1	0.5	49.0	3.0	3	silty	CLAY to CLAY	115	1.5	10	12	4	-	-	1.2	4.2	52	0.005	2.90	15	
32.15	18.6	14.6	-	19.6	0.5	49.2	3.2	3	silty	CLAY to CLAY	115	1.5	10	12	4	-	-	1.2	4.3	53	0.005	2.92	15	
32.32	18.6	14.6	-	19.6	0.6	51.3	3.5	3	silty	CLAY to CLAY	115	1.5	10	12	4	-	-	1.2	4.3	55	0.005	2.94	15	
32.48	19.7	15.4	-	20.7	0.6	52.7	3.1	3	silty	CLAY to CLAY	115	1.5	10	13	5	-	-	1.3	4.6	51	0.005	2.89	15	
32.65	22.2	17.3	-	23.3	0.5	56.7	2.4	4	clay	SILT to silty	CLAY	115	2.0	9	11	5	-	-	1.5	5.2	45	0.070	2.78	15
32.81	20.9	16.2	-	21.9	0.6	49.3	2.9	3	silty	CLAY to CLAY	115	1.5	11	14	5	-	-	1.4	4.9	49	0.005	2.85	15	
32.97	18.8	14.5	-	19.9	0.6	55.3	3.8	3	silty	CLAY to CLAY	115	1.5	10	13	5	-	-	1.2	4.3	56	0.005	2.97	15	
33.14	22.1	17.0	-	23.3	1.1	65.1	5.4	3	silty	CLAY to CLAY	115	1.5	11	15	5	-	-	1.5	5.1	58	0.005	3.00	15	
33.30	26.9	20.7	-	28.3	1.2	73.2	4.8	3	silty	CLAY to CLAY	115	1.5	14	18	6	-	-	1.8	6.3	52	0.005	2.90	15	
33.47	38.4	29.4	-	38.7	1.2	15.1	3.3	4	clay	SILT to silty	CLAY	115	2.0	15	19	8	-	-	2.6	9.2	39	0.070	2.67	15
33.63	66.2	56.2	117.3	66.4	1.4	10.1	2.3	5	silty	SAND to sandy	SILT	120	3.0	19	22	13	48	37	-	-	24	0.200	2.34	16
33.79	67.3	57.0	111.9	67.2	1.3	-5.3	2.0	5	silty	SAND to sandy	SILT	120	3.0	19	22	13	48	37	-	-	23	0.200	2.30	16
33.96	39.4	29.8	-	39.3	1.3	-4.3	3.6	4	clay	SILT to silty	CLAY	115	2.0	15	20	8	-	-	2.7	9.4	40	0.070	2.69	15
34.12	24.8	18.8	-	24.8	0.7	-0.5	3.0	4	clay	SILT to silty	CLAY	115	2.0	9	12	5	-	-	1.7	5.7	46	0.070	2.80	15
34.29	21.1	15.9	-	21.3	0.6	9.7	2.9	3	silty	CLAY to CLAY	115	1.5	11	14	5	-	-	1.4	4.7	50	0.005	2.86	15	
34.45	19.1	14.4	-	19.6	0.5	22.9	2.9	3	silty	CLAY to CLAY	115	1.5	10	13	4	-	-	1.3	4.2	52	0.005	2.90	15	
34.61	15.2	11.4	-	16.5	0.5	65.7	3.5	3	silty	CLAY to CLAY	115	1.5	8	10	4	-	-	1.0	3.3	61	0.005	3.04	15	
34.78	18.3	13.7	-	19.7	0.4	70.9	2.5	3	silty	CLAY to CLAY	115	1.5	9	12	4	-	-	1.2	4.0	51	0.005	2.88	15	
34.94	18.7	13.9	-	20.2	0.5	73.6	2.8	3	silty	CLAY to CLAY	115	1.5	9	12	4	-	-	1.2	4.1	52	0.005	2.90	15	
35.11	18.4	13.6	-	19.7	0.4	68.9	2.5	3	silty	CLAY to CLAY	115	1.5	9	12	4	-	-	1.2	4.0	51	0.005	2.89	15	
35.27	18.2	13.5	-	19.2	0.3	47.5	2.2	4	clay	SILT to silty	CLAY	115	2.0	7	9	4	-	-	1.2	3.9	49	0.070	2.85	15
35.43	15.2	11.2	-	16.6	0.3	69.4	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	57	0.005	2.98	15	
35.60	15.1	11.1	-	16.5	0.4	73.4	2.8	3	silty	CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	58	0.005	2.99	15	
35.76	15.1	11.0	-	16.7	0.4	80.2	2.7	3	silty	CLAY to CLAY	115	1.5	7	10	3	-	-	1.0	3.1	58	0.005	2.99	15	
35.93	15.2	11.1	-	16.8	0.3	82.1	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	57	0.005	2.98	15	
36.09	15.3	11.1	-	17.0	0.3	82.9	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	57	0.005	2.98	15	
36.26	15.4	11.2	-	17.0	0.3	82.8	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	57	0.005	2.98	15	
36.42	15.4	11.2	-	17.0	0.4	81.9	2.7	3	silty	CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	57	0.005	2.98	15	
36.58	15.3	11.1	-	16.9	0.3	80.1	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	3	-	-	1.0	3.1	57	0.005	2.98	15	
36.75	15.5	11.1	-	17.1	0.4	81.1	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.2	57	0.005	2.98	15	
36.91	15.1	10.8	-	16.9	0.3	89.8	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	3	-	-	1.0	3.1	58	0.005	2.99	15	
37.08	15.5	11.0	-	17.1	0.3	80.6	2.6	3	silty	CLAY to CLAY	115	1.5	7	10	3	-	-	1.0	3.1	57	0.005	2.98	15	
37.24	16.1	11.4	-	17.8	0.3	87.1	2.4	3	silty	CLAY to CLAY	115	1.5	8	11	4	-	-	1.0	3.3	55	0.005	2.95	15	
37.40	16.9	12.0	-	18.6	0.3	86.8	2.3	3	silty	CLAY to CLAY	115	1.5	8	11	4	-	-	1.1	3.4	53	0.005	2.92	15	
37.57	17.7	12.5	-	19.4	0.7	91.3	4.3	3	silty	CLAY to CLAY	115	1.5	8	12	4	-	-	1.1	3.6	62	0.005	3.06	15	
37.73	19.4	13.7	-	21.5	1.2	103.1	6.7	3	silty	CLAY to CLAY	115	1.5	9	13	5	-	-	1.3	4.0	69	0.005	3.14	15	
37.90	52.0	42.4	121.5	54.4	1.5	121.6	3.0	4	clay	SILT to silty	CLAY	115	2.0	21	26	10	-	-	3.6	9.9	32	0.070	2.52	15
38.06	128.2	104.2	140.5	128.3	2.0	9.0	1.6	5	silty	SAND to sandy	SILT	120	3.0	35	43	21	68	40	-	-	14	0.200	2.03	16
38.22	133.3	108.2	147.1	133.4	2.2	9.5	1.7	5	silty	SAND to sandy	SILT	120	3.0	36	44	22	70	40	-	-	14	0.200	2.04	16
38.39	86.0	69.7	139.5	86.1	2.2	9.5	2.6	5	silty	SAND to sandy	SILT	120	3.0	23	29	16	55	38	-	-	23	0.200	2.32	16
38.55	44.6	31.0	-	44.8	1.7	10.4	4.1	4	clay	SILT to silty	CLAY	115	2.0	15	22	8	-	-	3.1	9.7	41	0.070	2.71	15
38.72	32.1	22.2	-	32.2	0.9	9.0	3.2	4	clay	SILT to silty	CLAY	115	2.0	11	16	6	-	-	2.2	6.8	44	0.070	2.76	15
38.88	26.5	18.3	-	26.8	0.6	15.6	2.4	4	clay	SILT to silty	CLAY	115	2.0	9	13	5	-	-	1.8	5.5	43	0.070	2.75	15
39.04	25.2	17.4	-	25.6	0.6	19.3	2.6	4	clay	SILT to silty	CLAY	115	2.0	9	13	5	-	-	1.7	5.2	46	0.070	2.80	15
39.21	25.0	17.1	-	25.5	0.6	27.1	2.8	4	clay	SILT to silty	CLAY	115	2.0	9	12	5	-	-	1.7	5.1	47	0.070	2.83	15
39.37	26.4	18.0	-	27.3	0.8	45.3	3.1	3	silty	CLAY to CLAY	115	1.5	12	18	5	-	-	1.8	5.4	48	0.005	2.83	15	
39.54	25.2	17.2	-	26.2	1.0	47.9	4.4	3	silty	CLAY to CLAY	115	1.5	11	17	5	-	-	1.7	5.2	55	0.005	2.94	15	
39.70	25.2	17.1	-	26.2	1.2	50.9	5.2	3	silty	CLAY to CLAY	115	1.5	11	17	5	-	-	1.7	5.1	58	0.005	2.99	15	
39.86	24.7	16.7	-	25.8	1.1	59.7	4.9	3	silty	CLAY to CLAY	115	1.5	11	16	5	-	-	1.6	5.0	57	0.005	2.98	15	
40.03	22.1	14.9	-	23.6	0.9	75.8	4.5	3	silty	CLAY to CLAY	115	1.5	10	15	5	-	-	1.5	4.4	59	0.005	3.00	15	
40.19	21.9	14.8	-	23.2	0.9	66.1	4.7	3	silty	CLAY to CLAY	115	1.5	10	15	5	-	-	1.4	4.4	60	0.005	3.02	15	
40.36	23.9	16.0	-	25.7	1.3	91.7	6.1	3	silty	CLAY to CLAY	115	1.5	11	16	5	-	-	1.6	4.8	62	0.005	3.06	15	
40.52	32.0	21.4	-	33.8	1.7	93.8	5.6	3	silty	CLAY to CLAY	115	1.5	14	21	7	-	-	2.2	6.5	54	0.005	2.93	15	
40.68	45.7	30.5	-	47.4	1.6	83.2	3.7	4	clay	SILT to silty	CLAY	115	2.0	15	23	8	-	-	3.1	9.6	40	0.070	2.69	15
40.85	47.6	31.7	-	47.6	1.9	1.5	4.3	4	clay	SILT to silty	CLAY	115	2.0	16	24	9	-	-	3.3	9.9	41	0.070	2.72	15
41.01	38.1	25.3	-	38.6	2.1	22.1	5.9	3	silty	CLAY to CLAY	115	1.5	17	25	8	-	-	2.6	7.8	51	0.005	2.89	15	
41.18	42.5	28.1	-	44.																				

SMC-HMB Farmworker Housing project

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Sounding ID: CPT-05
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Cone/Rig: DDG1589

Depth ft	qc PS tsf	qc1n PS -	q1ncs PS -	qt PS tsf	Slv Stss tsf	pore prss (psi)	Frct Rato %	Mat Typ Zon	Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	Rel Den %	Ftn Ang deg	Und Shr tsf	OCR -	Fin Ic %	D50 mm	Ic SBT Indx	Nk -
46.43	27.2	16.5	-	28.0	0.9	39.8	3.8	3	silty CLAY to CLAY	115	1.5	11	18	5	-	-	1.8	4.9	53	0.005	2.92	15
46.59	28.0	16.9	-	28.9	0.9	44.1	3.5	3	silty CLAY to CLAY	115	1.5	11	19	5	-	-	1.9	5.1	51	0.005	2.89	15
46.75	27.1	16.4	-	28.2	1.3	54.2	5.1	3	silty CLAY to CLAY	115	1.5	11	18	5	-	-	1.8	4.9	59	0.005	3.00	15
46.92	40.4	24.3	-	41.2	2.0	43.7	5.3	3	silty CLAY to CLAY	115	1.5	16	27	7	-	-	2.7	7.5	50	0.005	2.87	15
47.08	50.2	30.1	-	51.6	2.6	70.9	5.4	3	silty CLAY to CLAY	115	1.5	20	33	9	-	-	3.4	9.4	46	0.005	2.81	15
47.25	191.3	143.7	176.5	191.4	3.0	6.7	1.6	6	clean SAND to silty SAND	125	5.0	29	38	28	79	41	-	-	11	0.350	1.94	16
47.41	280.2	210.2	210.2	280.1	2.5	-4.0	0.9	6	clean SAND to silty SAND	125	5.0	42	56	36	92	43	-	-	5	0.350	1.64	16
47.57	279.2	209.1	213.6	279.2	2.7	0.3	1.0	6	clean SAND to silty SAND	125	5.0	42	56	37	91	43	-	-	6	0.350	1.68	16
47.74	284.6	212.8	212.8	284.6	2.1	0.5	0.7	6	clean SAND to silty SAND	125	5.0	43	57	36	92	43	-	-	5	0.350	1.58	16
47.90	291.8	217.9	217.9	291.8	2.2	-0.2	0.7	6	clean SAND to silty SAND	125	5.0	44	58	37	93	43	-	-	5	0.350	1.58	16
48.07	297.8	222.0	222.0	298.0	1.8	10.7	0.6	6	clean SAND to silty SAND	125	5.0	44	60	37	93	43	-	-	5	0.350	1.51	16
48.23	282.4	210.2	210.2	282.5	1.7	8.6	0.6	6	clean SAND to silty SAND	125	5.0	42	56	35	92	43	-	-	5	0.350	1.54	16
48.39	300.1	223.1	223.1	300.2	1.8	2.1	0.6	6	clean SAND to silty SAND	125	5.0	45	60	37	93	43	-	-	5	0.350	1.51	16
48.56	273.4	202.9	207.6	273.4	2.6	-1.4	1.0	6	clean SAND to silty SAND	125	5.0	41	55	35	90	43	-	-	6	0.350	1.68	16
48.72	273.8	202.9	202.9	273.8	1.9	0.3	0.7	6	clean SAND to silty SAND	125	5.0	41	55	34	90	43	-	-	5	0.350	1.58	16
48.89	279.6	206.9	206.9	279.5	2.0	-1.2	0.7	6	clean SAND to silty SAND	125	5.0	41	56	35	91	43	-	-	5	0.350	1.58	16
49.05	257.4	190.2	199.7	257.5	2.6	2.1	1.0	6	clean SAND to silty SAND	125	5.0	38	51	34	88	43	-	-	6	0.350	1.72	16
49.22	215.3	158.8	193.0	215.3	3.6	4.3	1.7	6	clean SAND to silty SAND	125	5.0	32	43	30	82	42	-	-	11	0.350	1.93	16
49.38	197.6	145.5	186.8	197.7	3.6	4.3	1.9	6	clean SAND to silty SAND	125	5.0	29	40	28	79	41	-	-	13	0.350	1.99	16
49.54	135.3	99.5	164.0	135.5	3.3	7.6	2.5	5	silty SAND to sandy SILT	120	3.0	33	45	21	67	39	-	-	19	0.200	2.19	16
49.71	110.5	81.1	173.3	111.0	3.7	28.1	3.4	5	silty SAND to sandy SILT	120	3.0	27	37	18	60	38	-	-	25	0.200	2.35	16
49.87	104.5	76.6	179.9	104.6	3.9	4.7	3.8	4	clay SILT to silty CLAY	115	2.0	38	52	18	-	-	7.3	9.9	27	0.070	2.41	15
50.04	93.0	68.1	157.8	93.2	3.0	12.5	3.3	4	clay SILT to silty CLAY	115	2.0	34	46	16	-	-	6.4	9.9	26	0.070	2.40	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

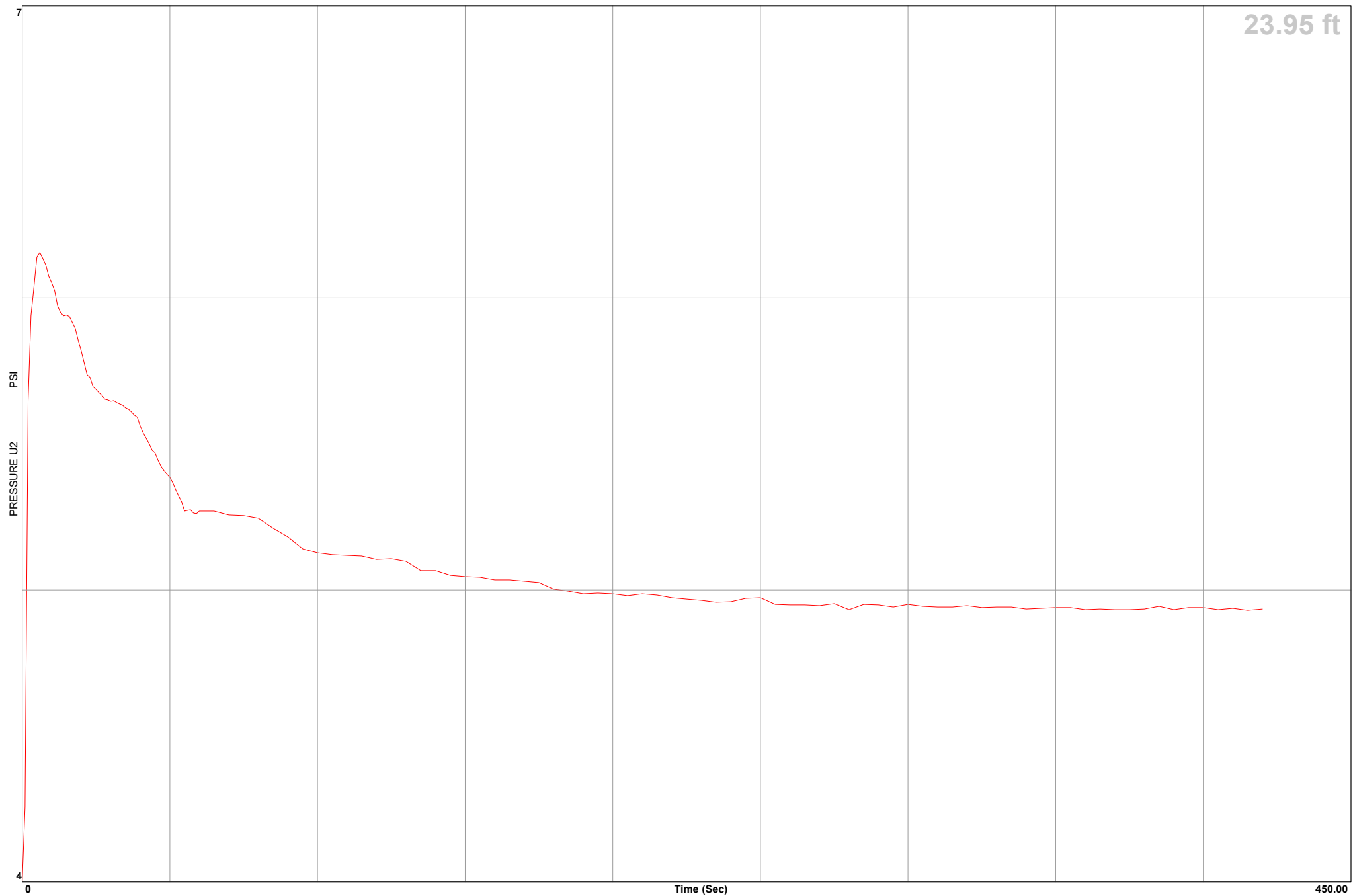
Middle Earth Geo Testing



BAGG Engineering

Location	SMC-HMB Farmworker Housing project	Operator	AJ-ER
Job Number	COUSM-23-03	Cone Number	DDG1589
Hole Number	CPT-05	Date and Time	7/26/2023 1:04:56 PM
Equilized Pressure	4.9	EST GW Depth During Test	12.5

GPS

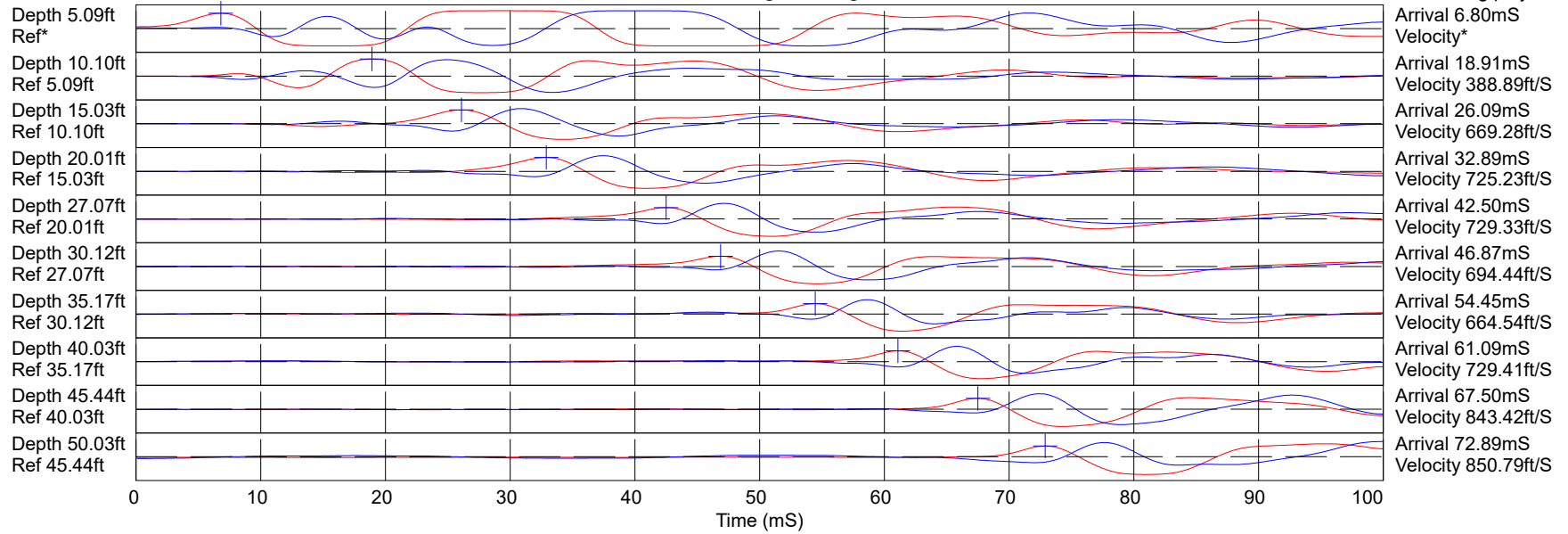


23.95 ft

CPT-05

BAGG Engineering

SMC-HMB Farmworker Housing project



Hammer to Rod String Distance (ft): 2.67

* = Not Determined

COMMENT:

APPENDIX B

*2021 Boring & CPT Logs
(B-1 through B-5; CPT-1 & CPT-2)*



BORING LOG

Boring No. B-1
Page 1 of 1

JOB NAME: Proposed Corporation Yard Renovation, City of Half Moon Bay **JOB NO.:** HALFM-21-01
CLIENT: City of Half Moon Bay **DATE DRILLED:** 9/29/2021
LOCATION: 880 Stone Pine Rd, Half Moon Bay **ELEVATION:** 86± feet
DRILLER: West Coast Exploration Inc. **LOGGED BY:** JL
DRILL METHOD: Truck-Mounted Drilling Rig - 4½" Diam. Continuous Flight Augers

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DSX	320	26.9	480	15.8	88	0		CL	Approx. 6" topsoil over screen SANDY LEAN CLAY: dark brown, very stiff, dry to moist, well-graded sand, few organic	Swell=0.2%
DSX DSX	500 2000	13.6 15.2	1050 1630	8.8 9.4	119 112	3			... brown to dark brown with orange-brown specks, very stiff, moist, increased sand content, some medium to coarse sand	
DS	1100	NAT	920	19.9	107	9			... contains pockets of wet medium-grained sand ... brown, stiff, moist to wet, fine to medium sand, few coarse sand, contains lense of sandy silt ... lense of medium to coarse sand ... lense of sandy silt	Fines=31% LL=28, PI=9
DS DS	1800 3500	NAT NAT	1630 2720	21.2 18.9 19.5	101 104	12		SC	CLAYEY SAND: dark brown, medium dense, wet, medium to coarse sand	
						15			The boring was terminated at approximately 15 feet bgs. Groundwater was not encountered in the boring. The borehole was backfilled with cement grout.	
						18				



BORING LOG

Boring No. B-2
Page 1 of 2

JOB NAME: Proposed Corporation Yard Renovation, City of Half Moon Bay **JOB NO.:** HALFM-21-01
CLIENT: City of Half Moon Bay **DATE DRILLED:** 9/29/2021
LOCATION: 880 Stone Pine Rd, Half Moon Bay **ELEVATION:** 86± feet
DRILLER: West Coast Exploration Inc. **LOGGED BY:** JL
DRILL METHOD: Truck-Mounted Drilling Rig - 4½" Diam. Continuous Flight Augers

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DSX DSX	320 1500	20.3 20.7	790 1500	2.3 18.8	122 102	0 3		CL	Approx. 2" gravel over 1" sand SANDY LEAN CLAY: dark gray, very stiff, moist, well-graded sand, reworked in the upper approx. 1' ... dark brown at about 2' ... brown, stiff, moist, fine sand, few medium sand ... mottled brown and orange-brown, very stiff, moist, fine sand, trace medium sand ... lense of wet medium-grained sand ... brown, medium stiff, moist to wet ... pockets of wet well-graded sand with fine gravel CLAYEY SAND: brown, medium dense to dense, wet, fine to medium sand, few coarse sand	Swell=0.5%
DS	1000	NAT	1340	30.8	91	9				
DS	3000	NAT	1400	22.7	104	15		SC		



BORING LOG

Boring No. B-2
Page 2 of 2

JOB NAME: Proposed Corporation Yard Renovation, City of Half Moon Bay JOB NO.: HALFM-21-01

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	2500	NAT	1790	23.1	102					Fines=37%
						21			The boring was terminated at approximately 20 feet bgs.	
									Groundwater was not encountered in the boring.	
						24			The borehole was backfilled with cement grout.	
						27				
						30				
						33				
						36				
						39				



BORING LOG

Boring No. B-3
Page 1 of 2

JOB NAME: Proposed Corporation Yard Renovation, City of Half Moon Bay **JOB NO.:** HALFM-21-01
CLIENT: City of Half Moon Bay **DATE DRILLED:** 9/29/2021
LOCATION: 880 Stone Pine Rd, Half Moon Bay **ELEVATION:** 84± feet
DRILLER: West Coast Exploration Inc. **LOGGED BY:** JL
DRILL METHOD: Truck-Mounted Drilling Rig - 4½" Diam. Continuous Flight Augers

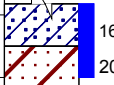
Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	320	NAT	2720	12.9	107	0		CH	Approx. 6" topsoil over screen SANDY FAT CLAY: dark gray to dark brown, hard, moist, well-graded sand, few organic	LL=52, PI=25
DS	1500	NAT	3130	16.0	97	3		CL	SANDY LEAN CLAY: dark brown, hard, moist, some medium sand, few fine and coarse sand	Fines=59%
DS	400	NAT	2250	14.4	112	9			... mottled brown and orange-brown, very stiff, moist, fine sand, few medium to coarse sand	
DS	1700	NAT	1160	27.0	98	15			... mottled brown and orange-brown with dark gray specks, stiff, moist, moderately plastic ... lense of sandy silt	
				30.3	91	18				



BORING LOG

Boring No. B-3
Page 2 of 2

JOB NAME: Proposed Corporation Yard Renovation, City of Half Moon Bay JOB NO.: HALFM-21-01

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	3000	NAT	1340	30.6	92	16		CH	... brown, stiff, moist to wet FAT CLAY with SAND: dark olive-gray with trace dark gray, medium stiff, moist, few fine sand	
				23.9	104	21			... stiff, moist, increased fine sand content	
						24			The boring was terminated at approximately 25 feet bgs.	
						27			Groundwater was not encountered in the boring.	
						30			The borehole was backfilled with cement grout.	
						33				
						36				
						39				



BORING LOG

Boring No. B-4
Page 1 of 1

JOB NAME: Proposed Corporation Yard Renovation, City of Half Moon Bay **JOB NO.:** HALFM-21-01
CLIENT: City of Half Moon Bay **DATE DRILLED:** 9/29/2021
LOCATION: 880 Stone Pine Rd, Half Moon Bay **ELEVATION:** 83± feet
DRILLER: West Coast Exploration Inc. **LOGGED BY:** JL
DRILL METHOD: Truck-Mounted Drilling Rig - 4½" Diam. Continuous Flight Augers

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DSX	320	21.9	1210	16.1	108	0			Approx. 6" topsoil over screen	Swell=4.6%
								CH	SANDY FAT CLAY: dark gray-brown, hard, dry to moist, well-graded sand, few fine gravel, trace organic	
						3		CL	SANDY LEAN CLAY: dark brown, very stiff, dry to moist, some well-graded sand, trace fine gravel	
				13.5	115	6			The boring was terminated at approximately 5 feet bgs. Groundwater was not encountered in the boring. The borehole was backfilled with cement grout.	
						9				
						12				
						15				
						18				



BORING LOG

Boring No. B-5
Page 1 of 1

JOB NAME: Proposed Corporation Yard Renovation, City of Half Moon Bay **JOB NO.:** HALFM-21-01
CLIENT: City of Half Moon Bay **DATE DRILLED:** 9/29/2021
LOCATION: 880 Stone Pine Rd, Half Moon Bay **ELEVATION:** 85± feet
DRILLER: West Coast Exploration Inc. **LOGGED BY:** JL
DRILL METHOD: Truck-Mounted Drilling Rig - 4½" Diam. Continuous Flight Augers

Type of Strength Test	Test Surcharge Pressure, psf	Test Water Content, %	Shear Strength, psf	In-Situ Water Content, %	In-Situ Dry Unit Weight, pcf	Depth, ft.	Soil Symbols, Samplers and Blow Counts	USCS	Description	Remarks
DS	320	NAT	420	14.4	85	0			Approx. 6" topsoil	LL=31, PI=12
								CL	SANDY LEAN CLAY: dark gray, very stiff, dry to moist, well-graded sand, trace organic	
DS	400	NAT	740	13.2	107	3			... dark brown, stiff, moist, increased sand content, well-graded sand, trace organic	
DS	2000	NAT	1710	13.2	107					
						6			The boring was terminated at approximately 5 feet bgs.	
									Groundwater was not encountered in the boring.	
						9			The borehole was backfilled with cement grout.	
						12				
						15				
						18				

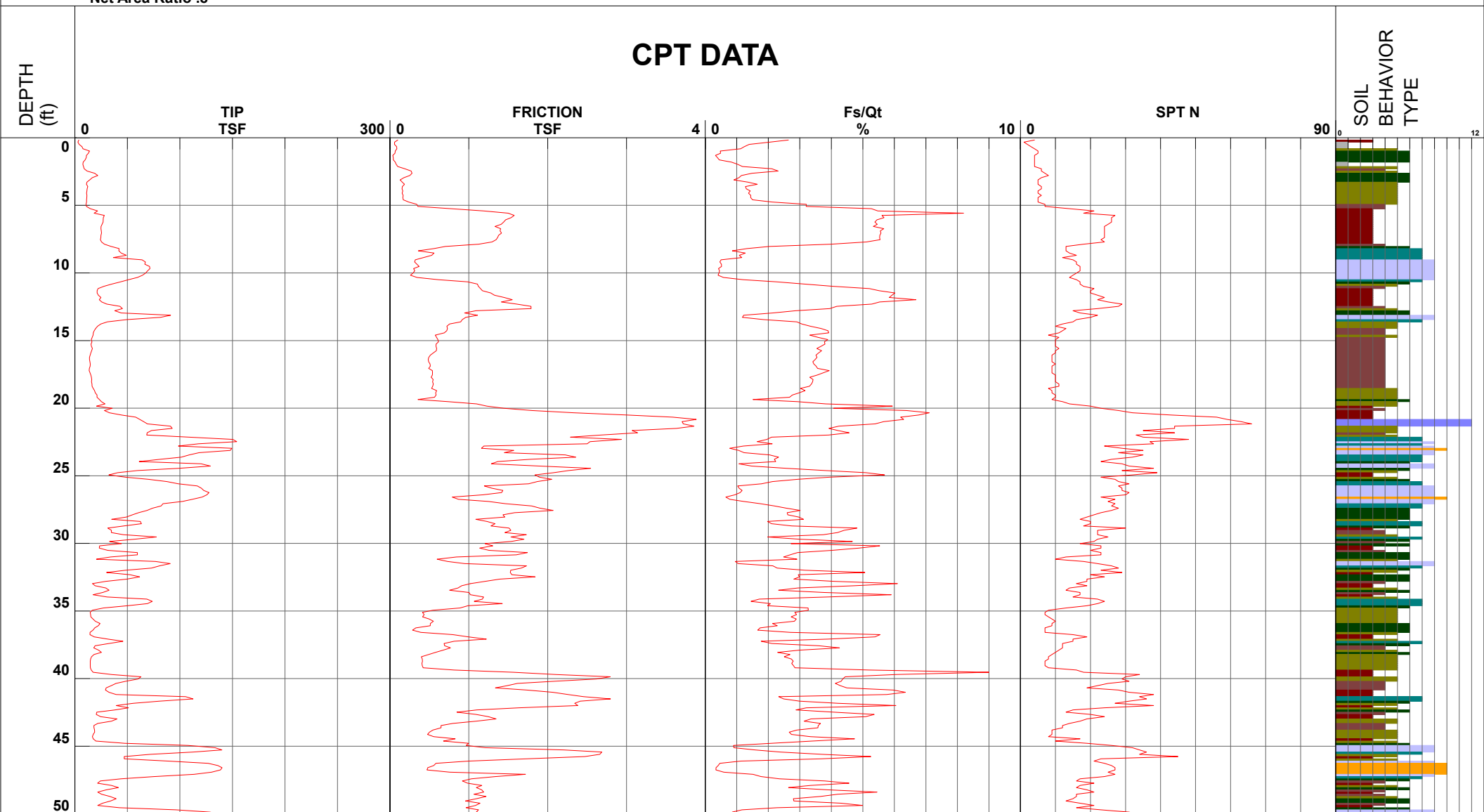


BAGG Engineers

Project Corporation Yard Improvements Project Operator JM-IY
Job Number HALFM-21-01 Cone Number DPG1556
Hole Number CPT-01 Date and Time 10/8/2021 2:00:06 PM
EST GW Depth During Test 19.00 ft

Filename SDF(359).cpt
GPS
Maximum Depth 50.69 ft

Net Area Ratio .8



- | | | | |
|------------------------------|---------------------------------|--------------------------------|------------------------------------|
| ■ 1 - sensitive fine grained | ■ 4 - silty clay to clay | ■ 7 - silty sand to sandy silt | ■ 10 - gravelly sand to sand |
| ■ 2 - organic material | ■ 5 - clayey silt to silty clay | ■ 8 - sand to silty sand | ■ 11 - very stiff fine grained (*) |
| ■ 3 - clay | ■ 6 - sandy silt to clayey silt | ■ 9 - sand | ■ 12 - sand to clayey sand (*) |

Cone Size 15cm squared

S*Soil behavior type and SPT based on data from UBC-1983

Corporation Yard Improvements Project

Project ID: BAGG Engineers
Data File: SDF(359).cpt
CPT Date: 10/8/2021 2:00:06 PM
GW During Test: 18 ft

Page: 1
Sounding ID: CPT-01
Project No: HALFM-21-01
Cone/Rig: DPG1556

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	Slv Stss	pore prss	Frct Rato	Mat Typ	Material Behavior	Unit Wght	Qc N	SPT R-N1	SPT 60%	SPT R-N	SPT 60%	Rel Den	Ftn Ang	Und Shr	OCR tsf	Fin Ic	D50 mm	Ic SBT	Nk Indx
0.33	2.8	4.5	-	2.8	0.1	0.3	2.1	3	silty CLAY to CLAY	115	1.5	3	2	2	-	-	-	0.2	9.9	73	0.005	3.21	15
0.49	4.1	6.6	-	4.1	0.1	0.1	1.4	3	silty CLAY to CLAY	115	1.5	4	3	2	-	-	-	0.3	9.9	57	0.005	2.98	15
0.66	6.8	10.9	-	6.8	0.1	0.3	1.2	4	clayey SILT to silty CLAY	115	2.0	5	3	3	-	-	-	0.5	9.9	44	0.070	2.77	15
0.82	7.8	12.5	-	7.8	0.1	0.2	1.1	4	clayey SILT to silty CLAY	115	2.0	6	4	3	-	-	-	0.5	9.9	40	0.070	2.70	15
0.98	13.9	22.4	43.9	13.9	0.1	0.2	0.5	5	silty SAND to sandy SILT	120	3.0	7	5	5	18	45	-	-	-	23	0.200	2.31	16
1.15	12.8	20.6	43.0	12.8	0.1	0.7	0.5	5	silty SAND to sandy SILT	120	3.0	7	4	5	15	44	-	-	-	24	0.200	2.34	16
1.31	11.0	17.7	37.1	11.1	0.0	0.6	0.3	5	silty SAND to sandy SILT	120	3.0	6	4	4	10	42	-	-	-	24	0.200	2.34	16
1.48	10.8	17.4	38.5	10.8	0.0	0.4	0.4	5	silty SAND to sandy SILT	120	3.0	6	4	4	9	42	-	-	-	25	0.200	2.38	16
1.64	9.7	15.5	38.8	9.7	0.0	0.6	0.4	5	silty SAND to sandy SILT	120	3.0	5	3	4	6	41	-	-	-	28	0.200	2.44	16
1.80	8.0	12.8	-	8.0	0.1	0.4	0.8	4	clayey SILT to silty CLAY	115	2.0	6	4	3	-	-	-	0.6	9.9	37	0.070	2.63	15
1.97	7.6	12.2	-	7.6	0.1	0.4	1.0	4	clayey SILT to silty CLAY	115	2.0	6	4	3	-	-	-	0.5	9.9	40	0.070	2.69	15
2.13	8.3	13.3	-	8.3	0.1	0.4	1.2	4	clayey SILT to silty CLAY	115	2.0	7	4	4	-	-	-	0.6	9.9	40	0.070	2.69	15
2.30	8.9	14.3	-	8.9	0.2	0.5	2.1	4	clayey SILT to silty CLAY	115	2.0	7	4	4	-	-	-	0.6	9.9	46	0.070	2.79	15
2.46	11.6	18.6	-	11.6	0.3	0.5	2.3	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	41	0.070	2.72	15
2.62	18.8	30.2	74.0	18.8	0.3	0.7	1.5	5	silty SAND to sandy SILT	120	3.0	10	6	7	27	42	-	-	-	28	0.200	2.43	16
2.79	21.8	35.0	70.1	21.8	0.3	1.2	1.2	5	silty SAND to sandy SILT	120	3.0	12	7	8	32	42	-	-	-	23	0.200	2.32	16
2.95	16.6	26.6	61.7	16.6	0.2	0.6	1.1	5	silty SAND to sandy SILT	120	3.0	9	6	6	23	40	-	-	-	26	0.200	2.40	16
3.12	14.1	22.7	55.1	14.2	0.1	0.6	0.9	5	silty SAND to sandy SILT	120	3.0	8	5	5	18	39	-	-	-	28	0.200	2.43	16
3.28	11.5	18.4	60.8	11.5	0.2	0.6	1.4	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	35	0.070	2.60	15
3.45	11.1	17.8	-	11.1	0.2	0.4	1.7	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	38	0.070	2.66	15
3.61	12.3	19.8	60.7	12.3	0.2	0.2	1.3	4	clayey SILT to silty CLAY	115	2.0	10	6	5	-	-	-	0.9	9.9	33	0.070	2.56	15
3.77	11.7	18.8	60.3	11.7	0.2	0.3	1.3	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	34	0.070	2.58	15
3.94	11.4	18.3	-	11.4	0.2	0.3	1.5	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	36	0.070	2.61	15
4.10	11.2	17.9	-	11.2	0.2	0.3	1.4	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	36	0.070	2.61	15
4.27	11.5	18.4	-	11.5	0.2	0.4	1.5	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	36	0.070	2.61	15
4.43	11.4	18.2	-	11.4	0.2	0.4	1.5	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	36	0.070	2.62	15
4.59	11.1	17.9	-	11.2	0.2	0.2	1.5	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	37	0.070	2.64	15
4.76	11.2	17.9	-	11.2	0.2	0.2	2.2	4	clayey SILT to silty CLAY	115	2.0	9	6	5	-	-	-	0.8	9.9	41	0.070	2.72	15
4.92	10.6	17.0	-	10.6	0.3	0.1	3.3	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	-	0.7	9.9	49	0.005	2.84	15
5.09	11.0	17.7	-	11.0	0.4	0.5	3.3	3	silty CLAY to CLAY	115	1.5	12	7	5	-	-	-	0.8	9.9	48	0.005	2.83	15
5.25	14.6	23.5	-	14.7	0.8	0.9	5.4	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	-	1.0	9.9	50	0.005	2.87	15
5.41	21.7	34.8	-	21.7	1.2	0.8	5.6	3	silty CLAY to CLAY	115	1.5	23	14	10	-	-	-	1.5	9.9	44	0.005	2.76	15
5.58	18.3	29.3	-	18.3	1.5	0.5	8.3	3	silty CLAY to CLAY	115	1.5	20	12	9	-	-	-	1.3	9.9	54	0.005	2.94	15
5.74	28.1	45.1	-	28.1	1.6	0.6	5.7	3	silty CLAY to CLAY	115	1.5	30	19	12	-	-	-	2.0	9.9	40	0.005	2.69	15
5.91	27.1	43.4	-	27.1	1.5	0.1	5.7	3	silty CLAY to CLAY	115	1.5	29	18	12	-	-	-	1.9	9.9	41	0.005	2.70	15
6.07	26.9	43.2	-	26.9	1.5	-0.3	5.5	3	silty CLAY to CLAY	115	1.5	29	18	12	-	-	-	1.9	9.9	40	0.005	2.69	15
6.23	26.8	43.0	-	26.8	1.4	-0.6	5.5	3	silty CLAY to CLAY	115	1.5	29	18	11	-	-	-	1.9	9.9	40	0.005	2.69	15
6.40	25.9	41.5	-	25.8	1.4	-2.3	5.5	3	silty CLAY to CLAY	115	1.5	28	17	11	-	-	-	1.8	9.9	41	0.005	2.70	15
6.56	25.0	40.1	-	25.0	1.3	-1.4	5.4	3	silty CLAY to CLAY	115	1.5	27	17	11	-	-	-	1.7	9.9	41	0.005	2.71	15
6.73	24.8	39.7	-	24.7	1.4	-0.9	5.8	3	silty CLAY to CLAY	115	1.5	26	17	11	-	-	-	1.7	9.9	42	0.005	2.73	15
6.89	25.1	40.3	-	25.1	1.4	-0.5	5.6	3	silty CLAY to CLAY	115	1.5	27	17	11	-	-	-	1.7	9.9	41	0.005	2.72	15
7.05	25.4	40.7	-	25.4	1.4	0.1	5.7	3	silty CLAY to CLAY	115	1.5	27	17	11	-	-	-	1.8	9.9	41	0.005	2.72	15
7.22	24.9	39.9	-	24.9	1.4	1.5	5.6	3	silty CLAY to CLAY	115	1.5	27	17	11	-	-	-	1.7	9.9	42	0.005	2.72	15
7.38	24.7	39.6	-	24.7	1.4	1.1	5.6	3	silty CLAY to CLAY	115	1.5	26	16	11	-	-	-	1.7	9.9	42	0.005	2.72	15
7.55	24.3	39.0	-	24.3	1.3	1.7	5.6	3	silty CLAY to CLAY	115	1.5	26	16	11	-	-	-	1.7	9.9	42	0.005	2.73	15
7.71	25.3	40.6	-	25.3	1.3	2.2	5.2	3	silty CLAY to CLAY	115	1.5	27	17	11	-	-	-	1.8	9.9	40	0.005	2.69	15
7.87	28.2	45.2	145.1	28.2	1.1	0.0	4.1	4	clayey SILT to silty CLAY	115	2.0	23	14	11	-	-	-	2.0	9.9	34	0.070	2.58	15
8.04	34.4	49.0	104.8	34.4	0.7	-1.0	2.1	5	silty SAND to sandy SILT	120	3.0	16	11	11	43	39	-	-	-	25	0.200	2.36	16
8.20	42.1	59.3	94.8	42.1	0.6	0.1	1.3	5	silty SAND to sandy SILT	120	3.0	20	14	12	50	40	-	-	-	18	0.200	2.17	16
8.37	41.9	58.4	81.4	41.9	0.4	0.2	0.9	5	silty SAND to sandy SILT	120	3.0	19	14	12	49	40	-	-	-	15	0.200	2.06	16
8.53	44.1	60.8	94.4	44.1	0.6	0.2	1.3	5	silty SAND to sandy SILT	120	3.0	20	15	13	51	40	-	-	-	17	0.200	2.15	16
8.69	49.1	67.0	94.4	49.1	0.5	0.7	1.1	5	silty SAND to sandy SILT	120	3.0	22	16	14	54	40	-	-	-	15	0.200	2.07	16
8.86	36.6	49.6	82.5	36.7	0.4	0.6	1.2	5	silty SAND to sandy SILT	120	3.0	17	12	11	44	39	-	-	-	19	0.200	2.20	16
9.02	64.0	85.7	94.7	64.0	0.3	0.4	0.5	6	clean SAND to silty SAND	125	5.0	17	13	16	62	42	-	-	-	8	0.350	1.80	16
9.19	67.1	89.1	96.3	67.1	0.3	0.3	0.5	6	clean SAND to silty SAND	125	5.0	18	13	16	63	42	-	-	-	7	0.350	1.76	16
9.35	66.6	87.6	96.5	66.7	0.3	0.4	0.5	6	clean SAND to silty SAND	125	5.0	18	13	16	63	42	-	-	-	8	0.350	1.79	16
9.51	71.1	92.7	100.9	71.1	0.4	0.5	0.5	6	clean SAND to silty SAND	125	5.0	19	14	17	64	42	-	-	-	8	0.350	1.77	16
9.68	71.5	92.4	97.6	71.6	0.3	0.6	0.4	6	clean SAND to silty SAND	125	5.0	18	14	16	64	42	-	-	-	7	0.350	1.73	16
9.84	69.2	88.6	95.6	69.2	0.3	0.6	0.5	6	clean SAND to silty SAND	125	5.0	18	14	16	63	41	-	-	-	7	0.350	1.76	16
10.01	67.4	85.4	92.5	67.4	0.3	0.6	0.4	6	clean SAND to silty SAND	125	5.0	17	13	15	62	41	-	-	-	7	0.350	1.77	16
10.17	64.4	81.0	88.0	64.4	0.3	0.5	0.4	6	clean SAND to silty SAND	125	5.0	16	13	15	60	41	-	-	-	8	0.350	1.77	16
10.34	59.5	74.2	87.0	59.5	0.3	0.4	0.6	6	clean SAND to silty SAND	125	5.0	15	12	14	57	40	-	-	-	10	0.350	1.88	16
10.50	51.0	63.0	94.6	51.0	0.6	0.4	1.2	5	silty SAND to sandy SILT	120	3.0	21	17	13	52	39	-	-	-	17	0.200	2.12	16
10.66	43.5																						

Corporation Yard Improvements Project

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CPT Date: 10/8/2021 2:00:06 PM
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Project No: HALFM-21-01
Cone/Rig: DPG1556

Depth ft	qc PS	* qc1n PS	* q1ncs PS	* qt PS	* slv Stss tsf	* pore prss (psi)	* Frct Rto	* Mat Typ	* Material Behavior Description	Unit Wght pcf	* Qc N	* SPT R-N1 60%	* SPT R-N 60%	* SPT IcN1 60%	* Rel Den %	* Ftn Ang deg	Und Shr	* OCR tsf	* Fin Ic	* D50 mm	* Ic SBT	* Nk Indx
15.58	16.7	18.3	-	16.9	0.6	11.0	3.7	3	silty CLAY to CLAY	115	1.5	12	11	5	-	-	1.1 5.7	50	0.005	2.86	15	
15.75	15.9	17.3	-	16.1	0.6	7.3	3.9	3	silty CLAY to CLAY	115	1.5	12	11	5	-	-	1.1 5.4	52	0.005	2.90	15	
15.91	15.3	16.4	-	15.4	0.5	6.4	3.8	3	silty CLAY to CLAY	115	1.5	11	10	5	-	-	1.0 5.1	53	0.005	2.91	15	
16.08	14.6	15.5	-	14.7	0.5	7.2	3.8	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	1.0 4.8	54	0.005	2.92	15	
16.24	13.9	14.6	-	14.1	0.5	8.8	3.8	3	silty CLAY to CLAY	115	1.5	10	9	5	-	-	0.9 4.5	55	0.005	2.95	15	
16.40	13.9	14.5	-	14.1	0.5	9.7	3.7	3	silty CLAY to CLAY	115	1.5	10	9	4	-	-	0.9 4.4	55	0.005	2.95	15	
16.57	14.3	14.8	-	14.5	0.5	10.1	3.7	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	0.9 4.6	54	0.005	2.93	15	
16.73	14.7	15.1	-	15.0	0.5	11.0	3.7	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	1.0 4.6	54	0.005	2.93	15	
16.90	14.6	14.7	-	14.8	0.5	10.6	3.8	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	1.0 4.5	55	0.005	2.94	15	
17.06	13.8	13.8	-	14.0	0.5	11.0	3.8	3	silty CLAY to CLAY	115	1.5	9	9	4	-	-	0.9 4.2	57	0.005	2.97	15	
17.23	13.7	13.6	-	13.9	0.5	11.7	4.2	3	silty CLAY to CLAY	115	1.5	9	9	4	-	-	0.9 4.1	59	0.005	3.01	15	
17.39	14.4	14.2	-	14.7	0.5	13.3	4.0	3	silty CLAY to CLAY	115	1.5	9	10	4	-	-	0.9 4.4	57	0.005	2.97	15	
17.55	15.1	14.7	-	15.4	0.5	13.5	3.8	3	silty CLAY to CLAY	115	1.5	10	10	5	-	-	1.0 4.5	55	0.005	2.95	15	
17.72	15.8	15.2	-	16.0	0.5	14.7	3.5	3	silty CLAY to CLAY	115	1.5	10	11	5	-	-	1.0 4.7	53	0.005	2.92	15	
17.88	16.1	15.4	-	16.4	0.5	15.8	3.7	3	silty CLAY to CLAY	115	1.5	10	11	5	-	-	1.1 4.7	53	0.005	2.92	15	
18.05	15.9	15.1	-	16.2	0.5	17.5	3.6	3	silty CLAY to CLAY	115	1.5	10	11	5	-	-	1.0 4.7	54	0.005	2.93	15	
18.21	16.3	15.5	-	16.7	0.5	18.4	3.6	3	silty CLAY to CLAY	115	1.5	10	11	5	-	-	1.1 4.8	53	0.005	2.91	15	
18.37	16.4	15.5	-	16.7	0.5	17.9	3.5	3	silty CLAY to CLAY	115	1.5	10	11	5	-	-	1.1 4.8	53	0.005	2.91	15	
18.54	17.4	16.4	-	17.8	0.5	19.4	3.2	3	silty CLAY to CLAY	115	1.5	11	12	5	-	-	1.2 5.1	50	0.005	2.86	15	
18.70	18.7	17.5	-	19.1	0.6	20.7	3.4	3	silty CLAY to CLAY	115	1.5	12	12	5	-	-	1.2 5.4	49	0.005	2.85	15	
18.87	19.5	18.2	-	19.9	0.6	23.1	3.2	3	silty CLAY to CLAY	115	1.5	12	13	5	-	-	1.3 5.7	47	0.005	2.82	15	
19.03	21.2	19.7	-	21.6	0.6	24.5	2.9	4	clay SILT to silty CLAY	115	2.0	10	11	5	-	-	1.4 6.2	44	0.070	2.77	15	
19.19	21.1	19.6	-	21.7	0.6	30.2	2.8	4	clay SILT to silty CLAY	115	2.0	10	11	5	-	-	1.4 6.1	44	0.070	2.76	15	
19.36	23.4	21.8	69.9	24.0	0.4	32.7	1.6	4	clay SILT to silty CLAY	115	2.0	11	12	6	-	-	1.6 6.8	34	0.070	2.58	15	
19.52	25.2	23.2	-	26.0	0.7	37.7	3.1	4	clay SILT to silty CLAY	115	2.0	12	13	6	-	-	1.7 7.3	42	0.070	2.73	15	
19.69	28.8	26.3	-	29.4	1.1	34.6	4.0	4	clay SILT to silty CLAY	115	2.0	13	14	7	-	-	2.0 8.3	43	0.070	2.75	15	
19.85	20.7	18.9	-	21.4	1.2	33.2	6.3	3	silty CLAY to CLAY	115	1.5	13	14	6	-	-	1.4 5.9	58	0.005	3.00	15	
20.01	35.5	32.2	-	36.2	1.4	35.8	4.2	4	clay SILT to silty CLAY	115	2.0	16	18	9	-	-	2.4 9.9	41	0.070	2.70	15	
20.18	28.2	25.5	-	29.4	1.8	60.8	6.7	3	silty CLAY to CLAY	115	1.5	17	19	8	-	-	1.9 8.1	53	0.005	2.92	15	
20.34	32.8	29.6	-	34.1	2.3	64.2	7.4	3	silty CLAY to CLAY	115	1.5	20	22	9	-	-	2.2 9.4	52	0.005	2.90	15	
20.51	44.4	39.9	-	45.6	3.0	61.3	7.0	3	silty CLAY to CLAY	115	1.5	27	30	11	-	-	3.1 9.9	45	0.005	2.79	15	
20.67	57.8	51.7	-	58.1	3.6	13.1	6.3	3	silty CLAY to CLAY	115	1.5	34	39	14	-	-	4.0 9.9	40	0.005	2.68	15	
20.83	61.7	55.0	-	61.8	3.9	4.6	6.4	3	silty CLAY to CLAY	115	1.5	37	41	15	-	-	4.3 9.9	39	0.005	2.67	15	
21.00	65.5	58.1	-	65.7	3.7	8.9	5.8	4	clay SILT to silty CLAY	115	2.0	29	33	15	-	-	4.5 9.9	36	0.070	2.62	15	
21.16	69.0	63.1	202.1	69.3	3.7	12.2	5.5	4	clay SILT to silty CLAY	115	2.0	32	35	16	-	-	4.8 9.9	34	0.070	2.58	15	
21.33	91.0	82.9	198.9	91.1	3.9	8.5	4.3	4	clay SILT to silty CLAY	115	2.0	41	45	19	-	-	6.3 9.9	27	0.070	2.42	15	
21.49	92.6	84.3	191.6	92.6	3.6	-0.5	4.0	4	clay SILT to silty CLAY	115	2.0	42	46	19	-	-	6.5 9.9	26	0.070	2.39	15	
21.65	73.0	66.3	178.3	73.0	3.1	-1.2	4.3	4	clay SILT to silty CLAY	115	2.0	33	37	16	-	-	5.1 9.9	30	0.070	2.48	15	
21.82	68.8	62.4	182.1	68.9	3.1	6.1	4.6	4	clay SILT to silty CLAY	115	2.0	31	34	15	-	-	4.8 9.9	32	0.070	2.53	15	
21.98	68.4	61.8	165.8	68.5	2.7	7.3	4.0	4	clay SILT to silty CLAY	115	2.0	31	34	15	-	-	4.7 9.9	30	0.070	2.48	15	
22.15	108.8	98.2	151.3	109.0	2.3	12.6	2.1	5	silty SAND to sandy SILT	120	3.0	33	36	20	66	40	-	-	17	0.200	2.14	16
22.31	150.3	135.5	180.4	150.4	2.9	2.5	2.0	5	silty SAND to sandy SILT	120	3.0	45	50	27	77	42	-	-	14	0.200	2.02	16
22.47	154.1	138.6	173.7	154.2	2.5	2.5	1.7	6	clean SAND to silty SAND	125	5.0	28	31	27	78	42	-	-	12	0.350	1.96	16
22.64	117.8	105.7	158.7	117.8	2.5	2.8	2.1	5	silty SAND to sandy SILT	120	3.0	35	39	22	69	41	-	-	17	0.200	2.12	16
22.80	98.6	88.3	116.3	99.0	1.2	21.1	1.2	6	clean SAND to silty SAND	125	5.0	18	20	17	63	40	-	-	13	0.350	2.01	16
22.97	149.5	133.5	143.0	149.6	1.2	6.9	0.8	6	clean SAND to silty SAND	125	5.0	27	30	24	77	42	-	-	7	0.350	1.75	16
23.13	147.9	131.9	150.2	148.0	1.6	3.5	1.1	6	clean SAND to silty SAND	125	5.0	26	30	24	76	42	-	-	9	0.350	1.84	16
23.30	118.2	105.2	131.5	118.3	1.4	2.2	1.2	6	clean SAND to silty SAND	125	5.0	21	24	20	69	40	-	-	12	0.350	1.96	16
23.46	108.9	96.7	148.1	109.0	2.2	3.8	2.1	5	silty SAND to sandy SILT	120	3.0	32	36	20	66	40	-	-	17	0.200	2.14	16
23.62	101.3	89.8	150.4	101.4	2.4	2.9	2.4	5	silty SAND to sandy SILT	120	3.0	30	34	19	63	40	-	-	19	0.200	2.20	16
23.79	81.2	71.8	130.3	81.3	1.8	1.7	2.2	5	silty SAND to sandy SILT	120	3.0	24	27	16	56	38	-	-	21	0.200	2.26	16
23.95	61.1	54.0	115.6	61.2	1.4	3.7	2.3	5	silty SAND to sandy SILT	120	3.0	18	20	12	47	37	-	-	25	0.200	2.36	16
24.12	120.2	105.9	127.6	120.5	1.3	15.2	1.1	6	clean SAND to silty SAND	125	5.0	21	24	20	69	40	-	-	11	0.350	1.92	16
24.28	129.0	113.4	145.7	129.1	1.9	3.0	1.5	6	clean SAND to silty SAND	125	5.0	23	26	22	71	41	-	-	13	0.350	1.99	16
24.44	99.4	87.2	155.1	99.4	2.5	2.8	2.6	5	silty SAND to sandy SILT	120	3.0	29	33	19	62	39	-	-	20	0.200	2.24	16
24.61	59.6	52.2	151.9	59.7	2.3	2.8	3.9	4	clay SILT to silty CLAY	115	2.0	26	30	13	-	-	4.1 9.9	32	0.070	2.53	15	
24.77	40.7	33.0	-	40.9	2.1	8.3	5.3	3	silty CLAY to CLAY	115	1.5	22	27	9	-	-	2.8 9.9	44	0.005	2.77	15	
24.94	32.3	26.1	-	33.2	1.8	41.7	6.0	3	silty CLAY to CLAY	115	1.5	17	22	8	-	-	2.2 8.2	51	0.005	2.88	15	
25.10	48.1	38.6	-	48.9	1.9	44.6	4.1	4	clay SILT to silty CLAY	115	2.0	19	24	10	-	-	3.3 9.9	37	0.070	2.64	15	
25.26	70.0	60.9	140.3	70.3	2.1	16.5	3.0	4	clay SILT to silty CLAY	115	2.0	30	35	14	-	-	4.9 9.9	26	0.070	2.40	15	
25.43	87.4	75.8	132.5	87.6	1.9	10.2	2.2	5	silty SAND to sandy SILT	120	3.0	25	29	16	58	39	-	-	20	0.200	2.23	16
25.59	98.4	85.3	130.5	98.6	1.8	6.3	1.8	5	silty SAND to sandy SILT	120	3.0	28	33	18	62	39	-	-	17	0.200	2.14	16
25.76	116.5	100.7	122.1	116.6	1.2	4.7	1.0	6	clean SAND to silty SAND	125	5.0	20	23	19	67	40	-	-	11	0.350	1.92	16
25.92	120.4	103.8	126.0	120.4	1.3	3.0	1.1	6	clean SAND to silty SAND	125	5.0	21	24	20	68	40	-	-	11	0.350	1.93	16
26.08	122.6	105.6	130																			

Corporation Yard Improvements Project

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Project No: HALFM-21-01
Cone/Rig: DPG1556

Depth ft	qc PS	qc1n PS	q1ncs PS	qt PS	slv Stss	pore prss	Frct Rato	Mat Typ	Material Description	Unit Wght	Qc N	SPT R-N1 60%	SPT R-N 60%	SPT R-N1 60%	Rel Den	Ftn Ang deg	Und Shr	OCR tsf	Fin Ic	D50 mm	Ic SBT	Nk Indx
31.01	33.9	24.1	-	34.0	0.8	1.2	2.6	4	clay SILT to silty CLAY	115	2.0	12	17	6	-	-	2.3	7.5	39	0.070	2.67	15
31.17	20.6	14.5	-	20.7	0.6	4.9	3.2	3	silty CLAY to CLAY	115	1.5	10	14	4	-	-	1.4	4.4	53	0.005	2.91	15
31.33	76.6	62.5	88.1	76.9	0.7	17.2	1.0	5	silty SAND to sandy SILT	120	3.0	21	26	13	51	37	-	-	15	0.200	2.07	16
31.50	90.8	73.9	99.9	90.8	0.9	2.3	1.1	6	clean SAND to silty SAND	125	5.0	15	18	15	57	38	-	-	14	0.350	2.04	16
31.66	80.6	65.5	124.0	80.6	1.7	0.5	2.2	5	silty SAND to sandy SILT	120	3.0	22	27	14	53	37	-	-	22	0.200	2.28	16
31.83	72.9	59.2	122.1	72.9	1.7	-0.6	2.3	5	silty SAND to sandy SILT	120	3.0	20	24	13	50	37	-	-	24	0.200	2.33	16
31.99	48.5	33.7	-	48.4	1.5	-1.7	3.3	4	clay SILT to silty CLAY	115	2.0	17	24	9	-	-	3.3	9.9	36	0.070	2.62	15
32.15	30.1	20.9	-	30.1	1.5	-0.8	5.4	3	silty CLAY to CLAY	115	1.5	14	20	6	-	-	2.0	6.5	54	0.005	2.93	15
32.32	52.4	42.3	122.3	52.5	1.5	2.8	3.1	4	clay SILT to silty CLAY	115	2.0	21	26	10	-	-	3.6	9.9	32	0.070	2.52	15
32.48	61.6	49.7	131.0	61.6	1.8	1.1	3.1	4	clay SILT to silty CLAY	115	2.0	25	31	12	-	-	4.3	9.9	29	0.070	2.47	15
32.65	49.6	39.9	116.7	49.6	1.4	-0.7	2.9	4	clay SILT to silty CLAY	115	2.0	20	25	10	-	-	3.4	9.9	32	0.070	2.53	15
32.81	29.5	20.3	-	29.5	1.2	-1.4	4.4	3	silty CLAY to CLAY	115	1.5	14	20	6	-	-	2.0	6.2	50	0.005	2.88	15
32.97	16.8	11.5	-	16.8	1.0	-0.2	6.9	3	silty CLAY to CLAY	115	1.5	8	11	4	-	-	1.1	3.3	74	0.005	3.21	15
33.14	19.2	13.1	-	19.3	0.9	4.9	5.3	3	silty CLAY to CLAY	115	1.5	9	13	4	-	-	1.3	3.9	64	0.005	3.09	15
33.30	29.4	20.0	-	29.7	0.9	15.1	3.1	4	clay SILT to silty CLAY	115	2.0	10	15	6	-	-	2.0	6.2	45	0.070	2.79	15
33.47	32.6	22.1	-	32.8	0.8	12.0	2.5	4	clay SILT to silty CLAY	115	2.0	11	16	6	-	-	2.2	6.8	40	0.070	2.69	15
33.63	26.5	17.9	-	26.8	1.0	10.6	4.1	3	silty CLAY to CLAY	115	1.5	12	18	5	-	-	1.8	5.5	52	0.005	2.90	15
33.79	17.3	11.6	-	17.5	1.0	12.9	6.7	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.1	3.4	73	0.005	3.20	15
33.96	30.7	20.6	-	31.1	1.2	21.1	4.1	3	silty CLAY to CLAY	115	1.5	14	20	6	-	-	2.1	6.4	49	0.005	2.85	15
34.12	68.6	54.5	102.8	68.8	1.2	11.7	1.8	5	silty SAND to sandy SILT	120	3.0	18	23	12	47	36	-	-	22	0.200	2.28	16
34.29	73.7	58.5	98.9	73.7	1.1	0.5	1.5	5	silty SAND to sandy SILT	120	3.0	19	25	12	49	36	-	-	19	0.200	2.21	16
34.45	69.1	54.7	112.5	69.1	1.4	2.5	2.1	5	silty SAND to sandy SILT	120	3.0	18	23	12	47	36	-	-	24	0.200	2.33	16
34.61	49.9	39.5	97.3	49.9	1.0	0.3	2.1	5	silty SAND to sandy SILT	120	3.0	13	17	9	36	34	-	-	28	0.200	2.44	16
34.78	27.2	18.0	-	27.3	0.9	1.4	3.5	3	silty CLAY to CLAY	115	1.5	12	18	5	-	-	1.8	5.5	50	0.005	2.86	15
34.94	16.6	10.9	-	16.8	0.5	10.5	3.7	3	silty CLAY to CLAY	115	1.5	7	11	4	-	-	1.1	3.2	63	0.005	3.07	15
35.11	14.5	9.6	-	15.2	0.4	35.2	3.3	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.7	65	0.005	3.09	15
35.27	14.9	9.8	-	15.7	0.4	38.9	3.4	3	silty CLAY to CLAY	115	1.5	7	10	3	-	-	0.9	2.8	64	0.005	3.09	15
35.43	15.2	9.9	-	16.0	0.4	40.8	3.2	3	silty CLAY to CLAY	115	1.5	7	10	3	-	-	1.0	2.8	63	0.005	3.06	15
35.60	17.2	11.2	-	18.0	0.5	43.4	3.3	3	silty CLAY to CLAY	115	1.5	7	11	4	-	-	1.1	3.2	60	0.005	3.02	15
35.76	19.4	12.6	-	20.2	0.5	40.5	3.2	3	silty CLAY to CLAY	115	1.5	8	13	4	-	-	1.3	3.7	56	0.005	2.97	15
35.93	24.0	15.6	-	25.0	0.5	49.0	2.3	4	clay SILT to silty CLAY	115	2.0	8	12	4	-	-	1.6	4.7	47	0.070	2.81	15
36.09	22.3	14.4	-	23.0	0.5	36.6	2.5	4	clay SILT to silty CLAY	115	2.0	7	11	4	-	-	1.5	4.3	50	0.070	2.86	15
36.26	18.9	12.2	-	19.7	0.3	42.8	2.0	4	clay SILT to silty CLAY	115	2.0	6	9	4	-	-	1.2	3.6	50	0.070	2.87	15
36.42	17.2	11.1	-	18.2	0.3	46.5	1.9	4	clay SILT to silty CLAY	115	2.0	6	9	3	-	-	1.1	3.2	52	0.070	2.90	15
36.58	14.5	9.3	-	15.4	0.4	47.6	3.2	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.6	65	0.005	3.09	15
36.75	14.4	9.2	-	15.5	0.8	54.8	6.5	3	silty CLAY to CLAY	115	1.5	6	10	4	-	-	0.9	2.6	80	0.005	3.28	15
36.91	18.4	11.8	-	19.6	1.0	61.2	6.1	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.2	3.4	71	0.005	3.17	15
37.08	31.4	20.0	-	32.3	1.2	42.1	4.2	3	silty CLAY to CLAY	115	1.5	13	21	6	-	-	2.1	6.1	50	0.005	2.87	15
37.24	45.8	35.4	89.2	46.2	0.8	18.8	1.9	5	silty SAND to sandy SILT	120	3.0	12	15	8	33	33	-	-	28	0.200	2.45	16
37.40	32.4	20.5	-	32.6	0.7	8.9	2.3	4	clay SILT to silty CLAY	115	2.0	10	16	5	-	-	2.2	6.3	40	0.070	2.70	15
37.57	19.2	12.1	-	19.6	0.7	20.7	4.1	3	silty CLAY to CLAY	115	1.5	8	13	4	-	-	1.2	3.5	62	0.005	3.05	15
37.73	18.0	11.3	-	18.9	0.8	44.3	4.9	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.2	3.3	67	0.005	3.12	15
37.90	22.5	14.1	-	23.5	0.7	48.9	3.3	3	silty CLAY to CLAY	115	1.5	9	15	4	-	-	1.5	4.2	54	0.005	2.94	15
38.06	25.2	15.8	-	26.2	0.6	50.7	2.5	4	clay SILT to silty CLAY	115	2.0	8	13	5	-	-	1.7	4.7	47	0.070	2.82	15
38.22	18.2	11.4	-	19.1	0.5	45.3	3.1	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.2	3.3	59	0.005	3.00	15
38.39	15.8	9.9	-	16.9	0.4	53.8	2.9	3	silty CLAY to CLAY	115	1.5	7	11	3	-	-	1.0	2.8	62	0.005	3.05	15
38.55	15.0	9.3	-	16.1	0.4	58.3	3.2	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.6	65	0.005	3.10	15
38.72	14.7	9.1	-	16.0	0.4	61.7	3.3	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.5	66	0.005	3.11	15
38.88	14.7	9.1	-	16.0	0.4	62.7	3.2	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.5	66	0.005	3.11	15
39.04	14.6	9.0	-	15.9	0.4	63.6	3.3	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.5	67	0.005	3.12	15
39.21	14.8	9.1	-	16.1	0.4	66.6	3.4	3	silty CLAY to CLAY	115	1.5	6	10	3	-	-	0.9	2.5	67	0.005	3.12	15
39.37	15.6	9.6	-	16.9	0.8	66.9	6.1	3	silty CLAY to CLAY	115	1.5	6	10	4	-	-	1.0	2.7	77	0.005	3.25	15
39.54	17.4	10.6	-	18.9	1.6	74.9	9.9	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.1	3.0	85	0.005	3.35	15
39.70	34.8	21.2	-	36.4	2.1	82.4	6.5	3	silty CLAY to CLAY	115	1.5	14	23	7	-	-	2.3	6.5	57	0.005	2.97	15
39.86	62.9	38.2	-	63.9	2.8	47.7	4.6	4	clay SILT to silty CLAY	115	2.0	19	31	10	-	-	4.3	9.9	39	0.070	2.68	15
40.03	60.0	36.4	-	60.1	2.6	5.6	4.5	4	clay SILT to silty CLAY	115	2.0	18	30	10	-	-	4.1	9.9	40	0.070	2.69	15
40.19	48.4	29.2	-	48.4	2.1	0.1	4.5	3	silty CLAY to CLAY	115	1.5	19	32	8	-	-	3.3	9.2	44	0.005	2.76	15
40.36	39.2	23.6	-	39.2	1.6	3.1	4.4	3	silty CLAY to CLAY	115	1.5	16	26	7	-	-	2.7	7.3	47	0.005	2.83	15
40.52	34.7	20.9	-	34.8	1.5	5.7	4.6	3	silty CLAY to CLAY	115	1.5	14	23	6	-	-	2.3	6.4	51	0.005	2.88	15
40.68	29.7	17.8	-	29.9	1.3	8.1	4.9	3	silty CLAY to CLAY	115	1.5	12	20	6	-	-	2.0	5.4	55	0.005	2.95	15
40.85	29.1	17.4	-	29.3	1.7	12.3	6.5	3	silty CLAY to CLAY	115	1.5	12	19	6	-	-	1.9	5.3	62	0.005	3.04	15
41.01	32.5	19.4	-	32.8	2.1	15.8	6.9	3	silty CLAY to CLAY	115	1.5	13	22	6	-	-	2.2	5.9	60	0.005	3.02	15
41.18	39.3	23.4	-	39.7	2.3	22.7	6.1	3	silty CLAY to CLAY	115	1.5	16	26	7	-	-	2.7	7.2	54	0.005	2.93	15
41.34	105.4	78.9	141.6	105.6	2.5	8.2	2.4	5	silty SAND to sandy SILT	120	3.0	26	35	17	59	38	-	-	21	0.200	2.25	16
41.50	112.5	84.0	150.9	112.5	2.8	-0.3	2.5	5														

Corporation Yard Improvements Project

Project ID: BAGG Engineers
Data File: SDF(359).cpt
CPT Date: 10/8/2021 2:00:06 PM
GW During Test: 18 ft

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Sounding ID: CPT-01
Project No: HALFM-21-01
Cone/Rig: DPG1556

Depth	qc	qcln	qinc	qt	Slv	pore	Frct	Mat	Material	Unit	Qc	SPT	SPT	SPT	Rel	Ftn	Und	OCR	Fin	D50	Ic	Nk
ft	PS	PS	PS	PS	Stss	prss	Rato	Typ	Behavior	Wght	to	R-N1	R-N	IcN1	Den	Ang	Shr	-	Ic	-	SBT	-
	tsf	-	-	tsf	tsf	(psi)	%	Zon	Description	pcf	N	60%	60%	60%	%	deg	tsf	-	%	mm	Indx	-
46.43	136.2	98.0	102.2	136.2	0.6	-0.5	0.4	6	clean SAND to silty SAND	125	5.0	20	27	17	66	39	-	-	6	0.350	1.71	16
46.59	140.1	100.7	101.8	140.1	0.5	0.1	0.3	6	clean SAND to silty SAND	125	5.0	20	28	17	67	39	-	-	5	0.350	1.66	16
46.75	138.6	99.4	100.7	138.6	0.5	0.0	0.3	6	clean SAND to silty SAND	125	5.0	20	28	17	67	39	-	-	5	0.350	1.66	16
46.92	130.1	93.2	103.7	130.1	0.8	-0.5	0.6	6	clean SAND to silty SAND	125	5.0	19	26	17	65	39	-	-	8	0.350	1.81	16
47.08	113.5	81.1	119.9	113.4	1.7	-0.8	1.6	5	silty SAND to sandy SILT	120	3.0	27	38	17	60	38	-	-	16	0.200	2.11	16
47.25	75.6	54.0	104.8	75.6	1.3	-0.7	1.8	5	silty SAND to sandy SILT	120	3.0	18	25	12	47	35	-	-	22	0.200	2.30	16
47.41	43.9	23.7	-	43.9	1.0	0.1	2.5	4	clayey SILT to silty CLAY	115	2.0	12	22	6	-	-	3.0	7.3	39	0.070	2.67	15
47.57	24.2	13.0	-	24.7	0.9	22.7	4.3	3	silty CLAY to CLAY	115	1.5	9	16	4	-	-	1.6	3.8	61	0.005	3.04	15
47.74	21.6	11.6	-	22.4	1.0	38.3	5.2	3	silty CLAY to CLAY	115	1.5	8	14	4	-	-	1.4	3.3	68	0.005	3.14	15
47.90	34.9	18.7	-	35.9	1.2	51.5	3.6	3	silty CLAY to CLAY	115	1.5	12	23	5	-	-	2.3	5.7	49	0.005	2.86	15
48.07	41.4	22.1	-	41.7	1.1	11.4	2.8	4	clayey SILT to silty CLAY	115	2.0	11	21	6	-	-	2.8	6.8	42	0.070	2.73	15
48.23	30.0	16.0	-	30.1	1.2	6.9	4.3	3	silty CLAY to CLAY	115	1.5	11	20	5	-	-	2.0	4.8	56	0.005	2.96	15
48.39	21.8	11.6	-	22.0	1.2	12.8	6.3	3	silty CLAY to CLAY	115	1.5	8	15	4	-	-	1.4	3.3	72	0.005	3.19	15
48.56	25.4	13.5	-	25.7	1.1	16.7	4.7	3	silty CLAY to CLAY	115	1.5	9	17	4	-	-	1.7	3.9	62	0.005	3.05	15
48.72	33.4	17.7	-	33.7	1.2	17.9	4.0	3	silty CLAY to CLAY	115	1.5	12	22	5	-	-	2.2	5.3	52	0.005	2.90	15
48.89	39.2	20.7	-	39.5	1.1	12.0	3.0	4	clayey SILT to silty CLAY	115	2.0	10	20	6	-	-	2.6	6.3	44	0.070	2.77	15
49.05	34.1	18.0	-	34.1	1.0	2.7	3.1	3	silty CLAY to CLAY	115	1.5	12	23	5	-	-	2.3	5.4	48	0.005	2.83	15
49.22	26.5	13.9	-	26.6	1.1	3.9	4.8	3	silty CLAY to CLAY	115	1.5	9	18	5	-	-	1.7	4.1	62	0.005	3.04	15
49.38	21.7	11.4	-	21.9	1.1	7.3	5.8	3	silty CLAY to CLAY	115	1.5	8	14	4	-	-	1.4	3.3	71	0.005	3.17	15
49.54	42.3	22.1	-	42.5	1.0	13.9	2.5	4	clayey SILT to silty CLAY	115	2.0	11	21	6	-	-	2.9	6.8	40	0.070	2.69	15
49.71	96.2	67.6	98.7	96.3	1.1	4.3	1.2	5	silty SAND to sandy SILT	120	3.0	23	32	14	54	37	-	-	16	0.200	2.10	16
49.87	128.4	90.1	108.5	128.5	1.1	5.7	0.9	6	clean SAND to silty SAND	125	5.0	18	26	17	64	38	-	-	11	0.350	1.92	16
50.04	137.7	96.5	115.6	137.8	1.3	3.5	0.9	6	clean SAND to silty SAND	125	5.0	19	28	18	66	39	-	-	11	0.350	1.91	16
50.20	165.3	115.6	126.5	165.4	1.2	8.9	0.7	6	clean SAND to silty SAND	125	5.0	23	33	21	72	40	-	-	8	0.350	1.78	16

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

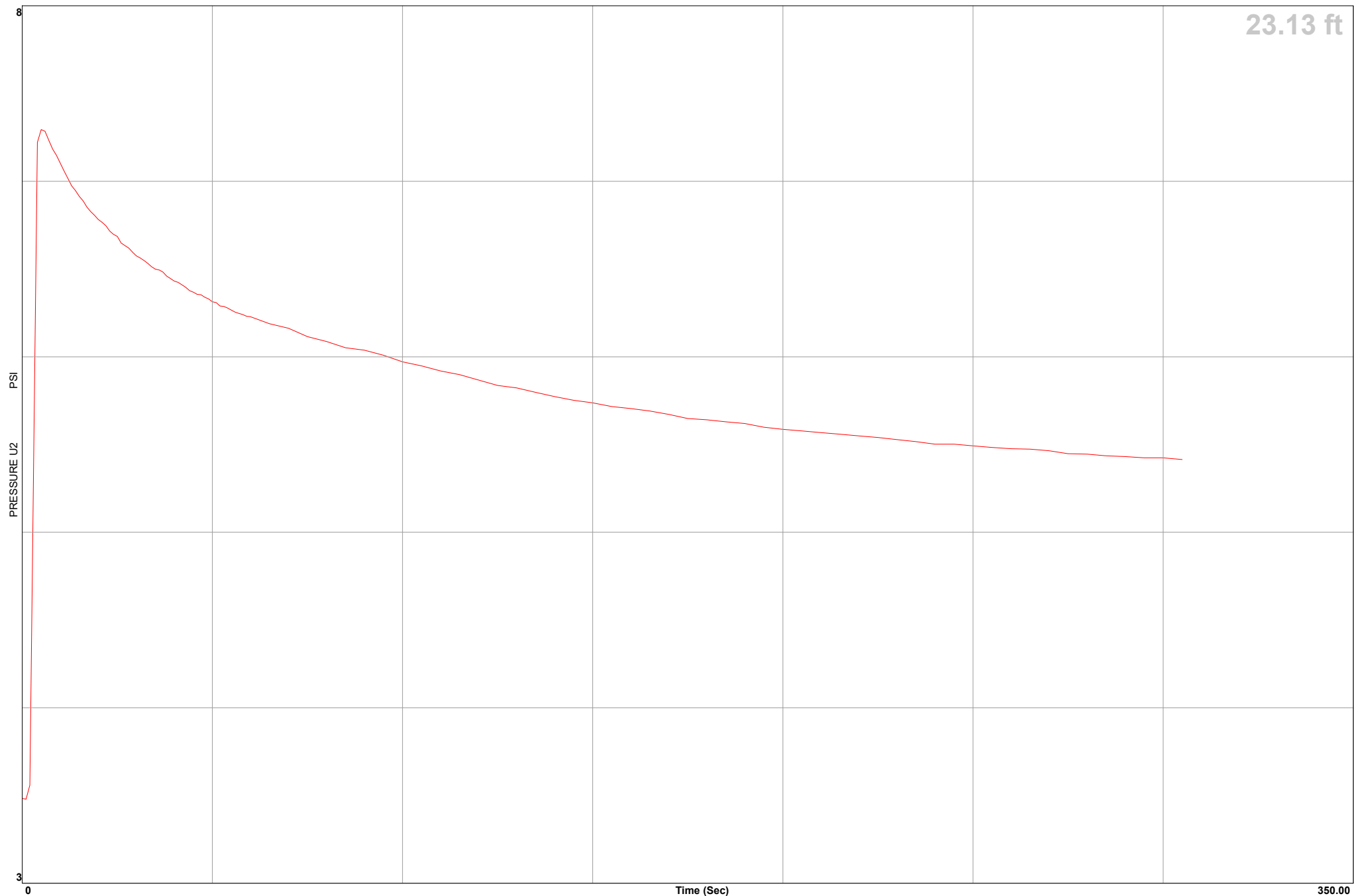
Middle Earth Geo Testing



BAGG Engineers

Location	Corporation Yard Improvements Project	Operator	JM-IY
Job Number	HALFM-21-01	Cone Number	DPG1556
Hole Number	CPT-01	Date and Time	10/8/2021 2:00:06 PM
Equilized Pressure	5.4	EST GW Depth During Test	10.6

GPS



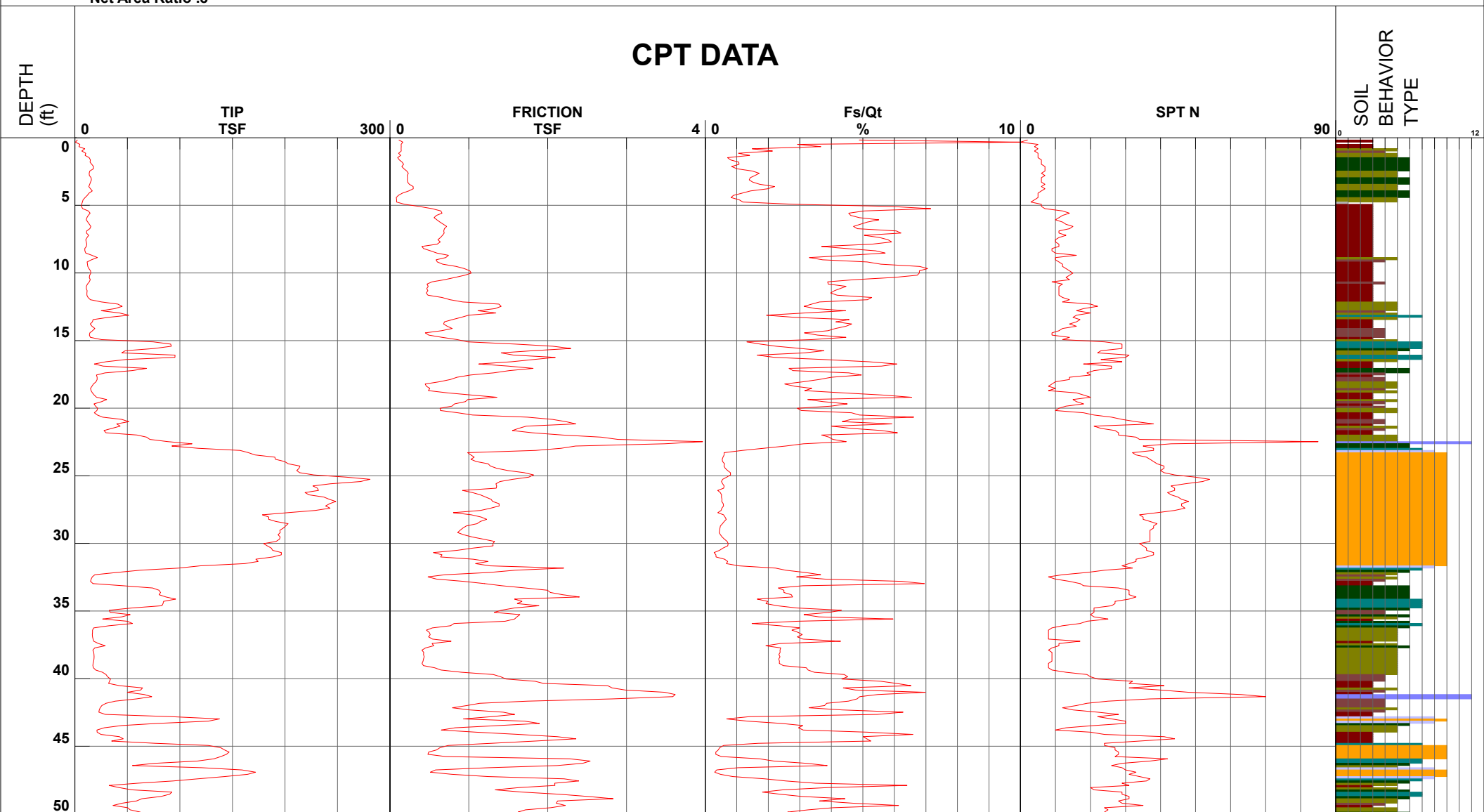


BAGG Engineers

Project Corporation Yard Improvements Project Operator JM-IY
Job Number HALFM-21-01 Cone Number DPG1556
Hole Number CPT-02 Date and Time 10/8/2021 3:02:21 PM
EST GW Depth During Test 18.30 ft

Filename SDF(360).cpt
GPS
Maximum Depth 50.69 ft

Net Area Ratio .8



- | | | | |
|------------------------------|---------------------------------|--------------------------------|------------------------------------|
| ■ 1 - sensitive fine grained | ■ 4 - silty clay to clay | ■ 7 - silty sand to sandy silt | ■ 10 - gravelly sand to sand |
| ■ 2 - organic material | ■ 5 - clayey silt to silty clay | ■ 8 - sand to silty sand | ■ 11 - very stiff fine grained (*) |
| ■ 3 - clay | ■ 6 - sandy silt to clayey silt | ■ 9 - sand | ■ 12 - sand to clayey sand (*) |

Cone Size 15cm squared

S*Soil behavior type and SPT based on data from UBC-1983

Corporation Yard Improvements Project

Project ID: BAGGS Engineering
Data File: SDF(360).cpt
CPT Date: 10/8/2021 3:02:21 PM
GW During Test: 18 ft

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Sounding ID: CPT-02
Project No: HALFM-21-01
Cone/Rig: DPG1556

Depth ft	qc PS tsf	* qc1n PS -	q1ncs PS -	* qt PS tsf	slv Stss tsf	pore prss tsf (psi)	Frct Rto %	* Mat Typ Zon	* Material Behavior Description	Unit Wght pcf	Qc to N	SPT R-N1 60%	SPT R-N 60%	SPT IcN1 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	OCR -	* Fin Ic %	* D50 mm	* Ic SBT Indx	* Nk -
0.33	1.1	0.9	-	1.1	0.2	1.3	9.9	2	Organic SOILS - Peats	100	1.0	1	1	1	-	-	0.1 9.9	95	0.100	4.16	10	
0.49	4.9	7.8	-	4.9	0.1	1.1	2.9	3	silty CLAY to CLAY	115	1.5	5	3	3	-	-	0.3 9.9	64	0.005	3.08	15	
0.66	3.9	6.2	-	3.9	0.1	0.9	3.7	3	silty CLAY to CLAY	115	1.5	4	3	2	-	-	0.3 9.9	75	0.005	3.22	15	
0.82	9.5	15.2	-	9.5	0.1	1.1	1.5	4	clay SILT to silty CLAY	115	2.0	8	5	4	-	-	0.7 9.9	39	0.070	2.68	15	
0.98	6.7	10.7	-	6.7	0.1	1.1	2.1	4	clay SILT to silty CLAY	115	2.0	5	3	3	-	-	0.5 9.9	52	0.070	2.89	15	
1.15	10.4	16.6	52.7	10.4	0.1	1.1	1.1	4	clay SILT to silty CLAY	115	2.0	8	5	4	-	-	0.7 9.9	34	0.070	2.57	15	
1.31	9.7	15.5	-	9.7	0.1	1.8	1.4	4	clay SILT to silty CLAY	115	2.0	8	5	4	-	-	0.7 9.9	38	0.070	2.66	15	
1.48	13.6	21.8	49.4	13.6	0.1	1.7	0.7	5	silty SAND to sandy SILT	120	3.0	7	5	5	17	43	-	26	0.200	2.39	16	
1.64	14.8	23.7	53.0	14.8	0.1	1.6	0.8	5	silty SAND to sandy SILT	120	3.0	8	5	5	19	43	-	26	0.200	2.38	16	
1.80	14.5	23.2	58.7	14.5	0.2	2.0	1.1	5	silty SAND to sandy SILT	120	3.0	8	5	6	19	42	-	28	0.200	2.45	16	
1.97	16.1	25.8	61.0	16.1	0.2	1.7	1.1	5	silty SAND to sandy SILT	120	3.0	9	5	6	22	42	-	27	0.200	2.41	16	
2.13	17.8	28.5	57.6	17.8	0.1	2.0	0.8	5	silty SAND to sandy SILT	120	3.0	10	6	6	26	42	-	23	0.200	2.32	16	
2.30	17.6	28.3	61.4	17.7	0.2	1.9	1.0	5	silty SAND to sandy SILT	120	3.0	9	6	6	25	42	-	25	0.200	2.36	16	
2.46	14.2	22.8	67.5	14.3	0.2	1.6	1.5	5	silty SAND to sandy SILT	120	3.0	8	5	6	18	41	-	32	0.200	2.54	16	
2.62	13.5	21.7	70.7	13.6	0.2	1.5	1.7	4	clay SILT to silty CLAY	115	2.0	11	7	6	-	-	0.9 9.9	35	0.070	2.59	15	
2.79	13.8	22.2	68.6	13.9	0.2	1.7	1.6	4	clay SILT to silty CLAY	115	2.0	11	7	6	-	-	1.0 9.9	33	0.070	2.56	15	
2.95	15.4	24.8	68.2	15.5	0.2	2.0	1.4	5	silty SAND to sandy SILT	120	3.0	8	5	6	21	40	-	31	0.200	2.50	16	
3.12	15.7	25.1	67.8	15.7	0.2	1.8	1.4	5	silty SAND to sandy SILT	120	3.0	8	5	6	21	40	-	30	0.200	2.49	16	
3.28	14.9	23.8	69.0	14.9	0.2	1.5	1.5	5	silty SAND to sandy SILT	120	3.0	8	5	6	20	39	-	32	0.200	2.52	16	
3.45	14.2	22.7	72.3	14.2	0.2	1.5	1.8	4	clay SILT to silty CLAY	115	2.0	11	7	6	-	-	1.0 9.9	34	0.070	2.58	15	
3.61	13.3	21.4	-	13.4	0.3	1.6	2.2	4	clay SILT to silty CLAY	115	2.0	11	7	6	-	-	0.9 9.9	38	0.070	2.66	15	
3.77	14.9	23.9	78.4	14.9	0.3	1.9	2.0	4	clay SILT to silty CLAY	115	2.0	12	7	6	-	-	1.0 9.9	35	0.070	2.59	15	
3.94	16.6	26.6	70.2	16.6	0.2	1.6	1.5	5	silty SAND to sandy SILT	120	3.0	9	6	6	23	39	-	30	0.200	2.47	16	
4.10	13.5	21.6	60.2	13.5	0.2	1.6	1.2	5	silty SAND to sandy SILT	120	3.0	7	4	5	16	37	-	31	0.200	2.50	16	
4.27	11.8	18.9	52.1	11.8	0.1	1.5	0.9	5	silty SAND to sandy SILT	120	3.0	6	4	5	12	36	-	31	0.200	2.50	16	
4.43	9.7	15.6	48.1	9.7	0.1	1.5	0.8	5	silty SAND to sandy SILT	120	3.0	5	3	4	6	35	-	33	0.200	2.56	16	
4.59	7.9	12.7	-	7.9	0.1	1.2	1.1	4	clay SILT to silty CLAY	115	2.0	6	4	3	-	-	0.5 9.4	40	0.070	2.70	15	
4.76	7.1	11.4	-	7.2	0.1	1.1	1.2	4	clay SILT to silty CLAY	115	2.0	6	4	3	-	-	0.5 8.2	44	0.070	2.76	15	
4.92	6.5	10.4	-	6.5	0.2	1.1	3.0	3	silty CLAY to CLAY	115	1.5	7	4	3	-	-	0.4 7.1	58	0.005	3.00	15	
5.09	6.3	10.1	-	6.3	0.4	1.2	6.2	3	silty CLAY to CLAY	115	1.5	7	4	4	-	-	0.4 6.7	73	0.005	3.20	15	
5.25	7.5	12.0	-	7.5	0.5	1.2	7.5	3	silty CLAY to CLAY	115	1.5	8	5	4	-	-	0.5 7.8	72	0.005	3.19	15	
5.41	12.8	20.5	-	12.8	0.6	1.4	5.2	3	silty CLAY to CLAY	115	1.5	14	9	6	-	-	0.9 9.9	52	0.005	2.91	15	
5.58	14.5	23.3	-	14.5	0.7	1.8	4.7	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.0 9.9	48	0.005	2.83	15	
5.74	12.8	20.5	-	12.8	0.6	2.2	4.7	3	silty CLAY to CLAY	115	1.5	14	9	6	-	-	0.9 9.9	51	0.005	2.88	15	
5.91	11.4	18.3	-	11.5	0.6	2.7	5.0	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8 9.9	54	0.005	2.94	15	
6.07	10.8	17.3	-	10.9	0.6	3.7	5.7	3	silty CLAY to CLAY	115	1.5	12	7	5	-	-	0.7 9.8	58	0.005	2.99	15	
6.23	12.3	19.7	-	12.4	0.6	5.1	5.3	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8 9.9	54	0.005	2.93	15	
6.40	13.8	22.1	-	13.9	0.7	5.7	5.1	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	0.9 9.9	50	0.005	2.88	15	
6.56	15.3	24.5	-	15.4	0.7	6.1	4.8	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.1 9.9	48	0.005	2.83	15	
6.73	14.3	22.9	-	14.4	0.7	3.3	5.0	3	silty CLAY to CLAY	115	1.5	15	10	7	-	-	1.0 9.9	49	0.005	2.86	15	
6.89	11.2	18.0	-	11.3	0.7	3.2	6.3	3	silty CLAY to CLAY	115	1.5	12	7	6	-	-	0.8 9.0	59	0.005	3.01	15	
7.05	11.1	17.8	-	11.2	0.7	4.4	6.4	3	silty CLAY to CLAY	115	1.5	12	7	6	-	-	0.8 8.6	60	0.005	3.02	15	
7.22	13.2	21.1	-	13.3	0.7	5.4	5.2	3	silty CLAY to CLAY	115	1.5	14	9	6	-	-	0.9 9.9	52	0.005	2.90	15	
7.38	11.6	18.6	-	11.7	0.6	4.3	5.7	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8 8.6	57	0.005	2.97	15	
7.55	10.5	16.8	-	10.6	0.6	4.9	6.1	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7 7.6	60	0.005	3.02	15	
7.71	10.8	17.3	-	10.9	0.6	6.2	6.2	3	silty CLAY to CLAY	115	1.5	12	7	6	-	-	0.7 7.6	60	0.005	3.02	15	
7.87	11.3	18.1	-	11.4	0.6	6.4	5.5	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8 7.9	56	0.005	2.97	15	
8.04	11.0	17.6	-	11.1	0.4	6.6	3.9	3	silty CLAY to CLAY	115	1.5	12	7	5	-	-	0.7 7.5	51	0.005	2.88	15	
8.20	9.5	15.2	-	9.6	0.4	7.3	4.7	3	silty CLAY to CLAY	115	1.5	10	6	5	-	-	0.6 6.2	58	0.005	2.99	15	
8.37	9.5	15.2	-	9.7	0.5	8.2	5.7	3	silty CLAY to CLAY	115	1.5	10	6	5	-	-	0.6 6.1	61	0.005	3.04	15	
8.53	10.4	16.7	-	10.6	0.6	8.8	6.0	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7 6.6	60	0.005	3.02	15	
8.69	16.3	26.2	-	16.5	0.7	8.9	4.7	3	silty CLAY to CLAY	115	1.5	17	11	7	-	-	1.1 9.9	46	0.005	2.80	15	
8.86	21.4	34.4	-	21.6	0.7	6.4	3.4	4	clay SILT to silty CLAY	115	2.0	17	11	9	-	-	1.5 9.9	36	0.070	2.62	15	
9.02	15.7	25.2	-	15.8	0.6	6.4	3.9	4	clay SILT to silty CLAY	115	2.0	13	8	7	-	-	1.1 9.6	44	0.070	2.76	15	
9.19	11.7	18.7	-	11.8	0.6	7.4	5.4	3	silty CLAY to CLAY	115	1.5	12	8	6	-	-	0.8 6.9	55	0.005	2.95	15	
9.35	12.0	19.3	-	12.2	0.7	8.2	5.8	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8 7.0	56	0.005	2.97	15	
9.51	12.3	19.8	-	12.5	0.8	8.2	7.1	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8 7.1	60	0.005	3.02	15	
9.68	13.4	21.4	-	13.5	0.9	9.3	7.4	3	silty CLAY to CLAY	115	1.5	14	9	7	-	-	0.9 7.5	59	0.005	3.00	15	
9.84	14.9	23.9	-	15.1	1.0	10.2	7.1	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.0 8.3	55	0.005	2.95	15	
10.01	15.2	24.3	-	15.4	1.0	9.8	7.1	3	silty CLAY to CLAY	115	1.5	16	10	8	-	-	1.0 8.3	55	0.005	2.95	15	
10.17	14.1	22.7	-	14.3	1.0	9.9	7.0	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	1.0 7.6	56	0.005	2.97	15	
10.34	13.7	22.0	-	13.9	0.8	9.5	6.3	3	silty CLAY to CLAY	115	1.5	15	9	7	-	-	0.9 7.3	55	0.005	2.94	15	
10.50	14.7	23.5	-	14.9	0.7	10.4	4.9	3	silty CLAY to CLAY	115	1.5	16	10	7	-	-	1.0 7.6	49	0.005	2.85	15	
10.66	13.7	22.0	-	13.9	0.5	10.1	4.1	3	silty CLAY to CLAY	115	1.5	15	9	6	-	-	0.9 7.0	47	0.005	2.82	15	
10.83	12.0	19.2	-	12.2	0.5	10.2	4.1	3	silty CLAY to CLAY	115	1.5	13	8	6	-	-	0.8 6.0	50	0.005	2.87	15	
10.99	10.9	17.1	-	11.1	0.5	10.2	4.7	3	silty CLAY to CLAY	115	1.5	11	7	5	-	-	0.7 5.3	55	0.005	2.95	15	
11.16	10.9	16.9	-	11.1	0.5	10.3	4.5	3	silty CLAY to CLAY													

Corporation Yard Improvements Project

Project ID: BAGGS Engineering
Data File: SDF(360).cpt
CPT Date: 10/8/2021 3:02:21 PM
GW During Test: 18 ft

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Sounding ID: CPT-02
Project No: HALFM-21-01
Cone/Rig: DPG1556

Depth ft	qc PS	* qc1n PS	* q1ncs PS	* qt PS	* Slv Stss tsf	* pore prss (psi)	* Frct Rato %	* Mat Typ Zon	* Material Behavior Description	Unit Wght pcf	* Qc N	* SPT R-N1 60%	* SPT R-N 60%	* SPT IcN1 60%	* Rel Den %	* Ftn deg	* Und Shr tsf	* OCR -	* Fin Ic -	* D50 mm	* Ic SBT Indx	* Nk -
15.58	75.6	77.4	158.6	75.8	2.3	7.5	3.1	5	silty SAND to sandy SILT	120	3.0	26	25	17	59	40	-	-	24	0.200	2.33	16
15.75	48.0	48.9	145.8	48.2	1.8	10.0	3.8	4	clayey SILT to silty CLAY	115	2.0	24	24	12	-	-	3.3	9.9	33	0.070	2.54	15
15.91	44.7	45.2	128.1	45.0	1.4	15.0	3.2	4	clayey SILT to silty CLAY	115	2.0	23	22	11	-	-	3.1	9.9	31	0.070	2.51	15
16.08	95.4	96.1	135.4	95.8	1.6	22.7	1.7	5	silty SAND to sandy SILT	120	3.0	32	32	19	66	41	-	-	15	0.200	2.07	16
16.24	95.3	95.5	151.4	95.5	2.1	9.1	2.2	5	silty SAND to sandy SILT	120	3.0	32	32	20	65	41	-	-	18	0.200	2.17	16
16.40	48.8	48.6	145.0	48.9	1.8	5.7	3.8	4	clayey SILT to silty CLAY	115	2.0	24	24	12	-	-	3.4	9.9	33	0.070	2.54	15
16.57	29.7	31.0	-	29.9	1.5	8.7	5.4	3	silty CLAY to CLAY	115	1.5	21	20	9	-	-	2.0	9.9	45	0.005	2.79	15
16.73	18.5	19.2	-	18.8	1.1	12.0	6.4	3	silty CLAY to CLAY	115	1.5	13	12	6	-	-	1.2	6.0	58	0.005	3.00	15
16.90	26.9	27.6	-	27.3	1.5	19.4	5.8	3	silty CLAY to CLAY	115	1.5	18	18	8	-	-	1.8	8.8	49	0.005	2.85	15
17.06	68.3	66.8	138.0	68.6	1.8	15.6	2.7	5	silty SAND to sandy SILT	120	3.0	22	23	15	54	38	-	-	24	0.200	2.34	16
17.23	54.4	52.9	127.6	54.5	1.5	9.3	2.8	4	clayey SILT to silty CLAY	115	2.0	26	27	12	-	-	3.8	9.9	27	0.070	2.42	15
17.39	28.8	28.6	-	29.1	1.3	12.7	4.7	3	silty CLAY to CLAY	115	1.5	19	19	8	-	-	2.0	9.1	45	0.005	2.78	15
17.55	20.6	20.3	-	21.0	1.0	19.9	5.2	3	silty CLAY to CLAY	115	1.5	14	14	6	-	-	1.4	6.4	53	0.005	2.92	15
17.72	21.2	20.7	-	21.6	0.8	20.2	4.2	3	silty CLAY to CLAY	115	1.5	14	14	6	-	-	1.4	6.5	49	0.005	2.85	15
17.88	21.2	20.5	-	21.6	0.8	19.4	3.8	3	silty CLAY to CLAY	115	1.5	14	14	6	-	-	1.4	6.4	48	0.005	2.83	15
18.05	20.1	19.4	-	20.5	0.6	20.2	3.3	4	clayey SILT to silty CLAY	115	2.0	10	10	6	-	-	1.4	6.1	46	0.070	2.81	15
18.21	17.7	17.0	-	18.1	0.4	18.9	2.7	4	clayey SILT to silty CLAY	115	2.0	8	9	5	-	-	1.2	5.3	46	0.070	2.80	15
18.37	16.3	15.5	-	16.7	0.5	19.6	3.0	3	silty CLAY to CLAY	115	1.5	10	11	5	-	-	1.1	4.8	50	0.005	2.87	15
18.54	14.9	14.2	-	15.3	0.5	19.8	3.6	3	silty CLAY to CLAY	115	1.5	9	10	4	-	-	1.0	4.3	55	0.005	2.95	15
18.70	15.4	14.6	-	15.9	0.5	25.4	3.4	3	silty CLAY to CLAY	115	1.5	10	10	4	-	-	1.0	4.5	53	0.005	2.92	15
18.87	16.7	15.8	-	17.2	0.7	26.2	4.7	3	silty CLAY to CLAY	115	1.5	11	11	5	-	-	1.1	4.9	57	0.005	2.98	15
19.03	18.4	17.2	-	18.9	1.0	26.8	6.0	3	silty CLAY to CLAY	115	1.5	11	12	6	-	-	1.2	5.3	60	0.005	3.02	15
19.19	20.7	19.4	-	21.2	1.4	27.5	6.9	3	silty CLAY to CLAY	115	1.5	13	14	6	-	-	1.4	6.0	60	0.005	3.02	15
19.36	30.4	28.3	-	30.9	1.0	27.6	3.4	4	clayey SILT to silty CLAY	115	2.0	14	15	8	-	-	2.1	9.0	40	0.070	2.68	15
19.52	25.5	23.7	-	25.9	1.0	18.3	3.9	3	silty CLAY to CLAY	115	1.5	16	17	7	-	-	1.7	7.5	45	0.005	2.79	15
19.69	18.2	16.8	-	18.6	0.8	20.0	4.8	3	silty CLAY to CLAY	115	1.5	11	12	5	-	-	1.2	5.2	56	0.005	2.96	15
19.85	19.7	18.1	-	20.2	0.8	23.4	4.2	3	silty CLAY to CLAY	115	1.5	12	13	5	-	-	1.3	5.6	52	0.005	2.90	15
20.01	21.7	19.9	-	22.2	0.6	22.0	3.1	4	clayey SILT to silty CLAY	115	2.0	10	11	6	-	-	1.5	6.2	45	0.070	2.78	15
20.18	21.0	19.1	-	21.4	0.6	22.4	3.2	4	clayey SILT to silty CLAY	115	2.0	10	10	5	-	-	1.4	6.0	46	0.070	2.81	15
20.34	18.5	16.8	-	19.0	0.9	24.0	5.0	3	silty CLAY to CLAY	115	1.5	11	12	5	-	-	1.2	5.2	57	0.005	2.97	15
20.51	21.4	19.4	-	21.9	1.0	25.1	5.2	3	silty CLAY to CLAY	115	1.5	13	14	6	-	-	1.4	6.1	54	0.005	2.93	15
20.67	26.4	23.8	-	26.9	1.7	26.1	6.9	3	silty CLAY to CLAY	115	1.5	16	18	7	-	-	1.8	7.5	55	0.005	2.95	15
20.83	44.6	40.1	-	45.1	2.1	26.2	4.8	4	clayey SILT to silty CLAY	115	2.0	20	22	11	-	-	3.1	9.9	39	0.070	2.67	15
21.00	51.4	46.0	-	51.6	2.2	7.4	4.4	4	clayey SILT to silty CLAY	115	2.0	23	26	12	-	-	3.6	9.9	36	0.070	2.61	15
21.16	39.9	35.5	-	40.0	2.4	7.6	6.1	3	silty CLAY to CLAY	115	1.5	24	27	10	-	-	2.7	9.9	45	0.005	2.79	15
21.33	43.1	38.3	-	43.3	1.7	7.8	4.1	4	clayey SILT to silty CLAY	115	2.0	19	22	10	-	-	3.0	9.9	37	0.070	2.64	15
21.49	35.2	31.2	-	35.3	1.6	4.5	4.8	3	silty CLAY to CLAY	115	1.5	21	23	9	-	-	2.4	9.9	43	0.005	2.75	15
21.65	27.7	24.5	-	27.8	1.6	4.6	5.9	3	silty CLAY to CLAY	115	1.5	16	18	7	-	-	1.9	7.7	52	0.005	2.89	15
21.82	29.6	26.0	-	29.7	1.8	8.0	6.4	3	silty CLAY to CLAY	115	1.5	17	20	8	-	-	2.0	8.2	52	0.005	2.90	15
21.98	59.2	53.8	151.0	59.4	2.2	9.1	3.8	4	clayey SILT to silty CLAY	115	2.0	27	30	13	-	-	4.1	9.9	31	0.070	2.51	15
22.15	68.3	61.9	166.2	68.4	2.7	4.5	4.0	4	clayey SILT to silty CLAY	115	2.0	31	34	15	-	-	4.7	9.9	30	0.070	2.48	15
22.31	71.4	64.7	172.4	71.5	2.9	4.5	4.1	4	clayey SILT to silty CLAY	115	2.0	32	36	16	-	-	5.0	9.9	30	0.070	2.48	15
22.47	88.7	80.2	202.1	88.8	4.0	5.4	4.5	4	clayey SILT to silty CLAY	115	2.0	40	44	19	-	-	6.2	9.9	28	0.070	2.45	15
22.64	111.6	100.6	184.9	111.6	3.5	3.9	3.2	5	silty SAND to sandy SILT	120	3.0	34	37	22	67	40	-	-	21	0.200	2.26	16
22.80	92.4	83.1	150.8	92.4	2.4	2.0	2.6	5	silty SAND to sandy SILT	120	3.0	28	31	18	61	39	-	-	21	0.200	2.26	16
22.97	117.3	105.4	150.0	117.5	2.2	12.2	1.9	5	silty SAND to sandy SILT	120	3.0	35	39	21	69	41	-	-	15	0.200	2.08	16
23.13	157.3	141.0	161.6	157.3	1.8	3.1	1.2	6	clean SAND to silty SAND	125	5.0	28	31	26	78	42	-	-	9	0.350	1.85	16
23.30	165.3	147.8	147.6	165.4	1.0	3.3	0.6	6	clean SAND to silty SAND	125	5.0	30	33	26	80	42	-	-	5	0.350	1.64	16
23.46	171.3	152.9	152.9	171.4	1.0	2.9	0.6	6	clean SAND to silty SAND	125	5.0	31	34	26	81	42	-	-	5	0.350	1.63	16
23.62	190.4	169.6	169.6	190.5	1.1	3.0	0.6	6	clean SAND to silty SAND	125	5.0	34	38	29	84	43	-	-	5	0.350	1.58	16
23.79	190.9	169.7	169.7	191.0	1.0	3.1	0.5	6	clean SAND to silty SAND	125	5.0	34	38	29	84	43	-	-	5	0.350	1.57	16
23.95	199.7	177.1	177.1	199.8	1.1	2.5	0.6	6	clean SAND to silty SAND	125	5.0	35	40	30	86	43	-	-	5	0.350	1.56	16
24.12	203.2	179.8	179.8	203.2	1.2	2.7	0.6	6	clean SAND to silty SAND	125	5.0	36	41	30	86	43	-	-	5	0.350	1.58	16
24.28	214.2	189.1	189.1	214.2	1.3	2.7	0.6	6	clean SAND to silty SAND	125	5.0	38	43	32	88	43	-	-	5	0.350	1.56	16
24.44	213.4	188.0	188.0	213.4	1.4	2.5	0.6	6	clean SAND to silty SAND	125	5.0	38	43	32	88	43	-	-	5	0.350	1.58	16
24.61	211.3	185.8	185.8	211.3	1.5	2.5	0.7	6	clean SAND to silty SAND	125	5.0	37	42	32	87	43	-	-	5	0.350	1.61	16
24.77	213.9	187.7	187.5	214.0	1.7	2.5	0.8	6	clean SAND to silty SAND	125	5.0	38	43	32	88	43	-	-	5	0.350	1.64	16
24.94	227.3	199.1	199.1	227.4	1.8	2.8	0.8	6	clean SAND to silty SAND	125	5.0	40	45	34	90	44	-	-	5	0.350	1.63	16
25.10	258.6	225.9	225.9	258.6	1.8	3.1	0.7	6	clean SAND to silty SAND	125	5.0	45	52	38	94	44	-	-	5	0.350	1.54	16
25.26	280.9	244.9	244.9	281.0	1.6	2.6	0.6	6	clean SAND to silty SAND	125	5.0	49	56	40	95	45	-	-	5	0.350	1.45	16
25.43	271.9	236.6	236.6	272.0	1.4	2.4	0.5	6	clean SAND to silty SAND	125	5.0	47	54	38	95	44	-	-	5	0.350	1.44	16
25.59	243.1	211.1	211.1	243.2	1.3	2.0	0.6	6	clean SAND to silty SAND	125	5.0	42	49	35	92	44	-	-	5	0.350	1.50	16
25.76	226.7	196.5	196.5	226.8	1.4	1.9	0.6	6	clean SAND to silty SAND	125	5.0	39	45	33	89	44	-	-	5	0.350	1.55	

Corporation Yard Improvements Project

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Project No: HALFM-21-01
Cone/Rig: DPG1556

Depth ft	qc PS	* qc1n PS	* q1ncs PS	* qt PS	* Slv Stss tsf	* pore prss (psi)	* Frct Rto %	* Mat Typ Zon	* Material Behavior Description	Unit Wght pcf	* Qc to N	* SPT R-N1 60%	* SPT R-N 60%	* SPT RcN1 60%	* Rel Den %	* Ftn Ang deg	Und Shr tsf	* OCR -	* Fin Ic %	* D50 mm	* Ic SBT Indx	* Nk -
31.01	188.4	153.5	153.5	188.3	0.6	-4.1	0.3	6	clean SAND to silty SAND	125	5.0	31	38	25	81	42	-	-	5	0.350	1.49	16
31.17	172.3	140.2	142.6	172.3	1.1	-2.4	0.6	6	clean SAND to silty SAND	125	5.0	28	34	24	78	42	-	-	6	0.350	1.67	16
31.33	174.4	141.6	147.6	174.3	1.2	-3.5	0.7	6	clean SAND to silty SAND	125	5.0	28	35	25	78	42	-	-	6	0.350	1.71	16
31.50	161.9	131.2	137.7	161.8	1.1	-4.0	0.7	6	clean SAND to silty SAND	125	5.0	26	32	23	76	41	-	-	6	0.350	1.72	16
31.66	119.2	96.5	119.4	119.1	1.3	-4.7	1.1	6	clean SAND to silty SAND	125	5.0	19	24	19	66	39	-	-	12	0.350	1.95	16
31.83	98.9	79.9	139.1	98.8	2.2	-4.9	2.3	5	silty SAND to sandy SILT	120	3.0	27	33	17	60	38	-	-	20	0.200	2.23	16
31.99	62.1	50.1	120.7	62.0	1.6	-4.3	2.6	5	silty SAND to sandy SILT	120	3.0	17	21	12	44	36	-	-	27	0.200	2.42	16
32.15	39.8	27.3	-	39.7	1.3	-3.7	3.3	4	clay SILT to silty CLAY	115	2.0	14	20	7	-	-	2.7	8.6	40	0.070	2.69	15
32.32	19.1	13.1	-	19.0	0.7	-2.1	4.1	3	silty CLAY to CLAY	115	1.5	9	13	4	-	-	1.2	3.9	60	0.005	3.02	15
32.48	16.6	11.4	-	16.6	0.5	-0.2	3.3	3	silty CLAY to CLAY	115	1.5	8	11	4	-	-	1.1	3.3	60	0.005	3.02	15
32.65	15.5	10.6	-	15.5	0.6	1.0	4.3	3	silty CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	3.1	67	0.005	3.12	15
32.81	14.9	10.1	-	15.0	0.9	1.9	7.2	3	silty CLAY to CLAY	115	1.5	7	10	4	-	-	1.0	2.9	78	0.005	3.27	15
32.97	17.3	11.7	-	17.3	1.2	2.7	7.8	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.1	3.4	76	0.005	3.24	15
33.14	45.8	30.9	-	45.9	1.4	2.4	3.2	4	clay SILT to silty CLAY	115	2.0	15	23	8	-	-	3.1	9.8	37	0.070	2.64	15
33.30	74.0	58.9	123.0	74.0	1.7	0.7	2.4	5	silty SAND to sandy SILT	120	3.0	20	25	13	50	37	-	-	24	0.200	2.34	16
33.47	80.1	63.7	132.0	80.0	2.0	-1.5	2.6	5	silty SAND to sandy SILT	120	3.0	21	27	14	52	37	-	-	24	0.200	2.34	16
33.63	81.6	64.8	133.1	81.6	2.0	-2.4	2.6	5	silty SAND to sandy SILT	120	3.0	22	27	15	53	37	-	-	24	0.200	2.33	16
33.79	80.2	63.6	138.4	80.1	2.2	-3.0	2.8	5	silty SAND to sandy SILT	120	3.0	21	27	15	52	37	-	-	25	0.200	2.37	16
33.96	86.7	68.7	144.3	86.6	2.4	-3.1	2.8	5	silty SAND to sandy SILT	120	3.0	23	29	16	55	37	-	-	24	0.200	2.34	16
34.12	95.8	75.8	118.7	95.8	1.6	-3.7	1.7	5	silty SAND to sandy SILT	120	3.0	25	32	16	58	38	-	-	18	0.200	2.16	16
34.29	84.5	66.7	120.5	84.4	1.7	-3.8	2.0	5	silty SAND to sandy SILT	120	3.0	22	28	15	54	37	-	-	21	0.200	2.25	16
34.45	84.0	66.2	118.4	83.9	1.6	-3.7	2.0	5	silty SAND to sandy SILT	120	3.0	22	28	14	53	37	-	-	21	0.200	2.25	16
34.61	82.9	65.2	127.6	82.8	1.9	-4.2	2.3	5	silty SAND to sandy SILT	120	3.0	22	28	14	53	37	-	-	23	0.200	2.30	16
34.78	54.2	42.6	121.9	54.1	1.6	-4.8	3.0	4	clay SILT to silty CLAY	115	2.0	21	27	10	-	-	3.7	9.9	32	0.070	2.52	15
34.94	32.7	21.3	-	32.6	1.4	-4.8	4.6	3	silty CLAY to CLAY	115	1.5	14	22	6	-	-	2.2	6.6	50	0.005	2.87	15
35.11	33.6	21.9	-	33.5	1.3	-3.6	4.2	3	silty CLAY to CLAY	115	1.5	15	22	6	-	-	2.3	6.8	48	0.005	2.84	15
35.27	52.6	34.1	-	52.6	1.6	-3.5	3.3	4	clay SILT to silty CLAY	115	2.0	17	26	9	-	-	3.6	9.9	36	0.070	2.61	15
35.43	44.6	28.9	-	44.5	1.6	-4.0	3.8	4	clay SILT to silty CLAY	115	2.0	14	22	8	-	-	3.0	9.1	41	0.070	2.71	15
35.60	26.5	17.1	-	26.4	1.6	-3.5	6.5	3	silty CLAY to CLAY	115	1.5	11	18	6	-	-	1.8	5.2	62	0.005	3.05	15
35.76	50.0	32.2	-	50.0	1.5	-2.5	3.0	4	clay SILT to silty CLAY	115	2.0	16	25	8	-	-	3.4	9.9	36	0.070	2.61	15
35.93	54.8	42.7	87.5	54.8	0.8	-3.2	1.5	5	silty SAND to sandy SILT	120	3.0	14	18	10	39	34	-	-	24	0.200	2.33	16
36.09	32.5	20.8	-	32.5	0.8	-3.6	2.5	4	clay SILT to silty CLAY	115	2.0	10	16	6	-	-	2.2	6.4	41	0.070	2.72	15
36.26	18.0	11.5	-	18.0	0.5	-2.9	3.4	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.2	3.3	60	0.005	3.02	15
36.42	16.8	10.7	-	16.8	0.5	-1.9	3.2	3	silty CLAY to CLAY	115	1.5	7	11	3	-	-	1.1	3.1	61	0.005	3.03	15
36.58	16.9	10.7	-	16.8	0.5	-1.5	3.4	3	silty CLAY to CLAY	115	1.5	7	11	4	-	-	1.1	3.1	62	0.005	3.05	15
36.75	16.6	10.5	-	16.6	0.5	-1.2	3.5	3	silty CLAY to CLAY	115	1.5	7	11	4	-	-	1.1	3.0	63	0.005	3.07	15
36.91	16.7	10.6	-	16.7	0.5	-0.9	3.4	3	silty CLAY to CLAY	115	1.5	7	11	3	-	-	1.1	3.0	62	0.005	3.05	15
37.08	17.4	11.0	-	17.4	0.5	-0.7	3.5	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.1	3.2	62	0.005	3.05	15
37.24	18.1	11.3	-	18.0	0.8	-0.5	4.9	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.2	3.3	67	0.005	3.12	15
37.40	22.4	14.0	-	22.4	0.5	-0.1	2.6	3	silty CLAY to CLAY	115	1.5	9	15	4	-	-	1.5	4.2	51	0.005	2.88	15
37.57	28.9	18.0	-	28.9	0.6	-0.3	2.1	4	clay SILT to silty CLAY	115	2.0	9	14	5	-	-	1.9	5.5	42	0.070	2.72	15
37.73	18.9	11.8	-	18.9	0.5	-0.4	2.7	3	silty CLAY to CLAY	115	1.5	8	13	4	-	-	1.2	3.4	56	0.005	2.96	15
37.90	17.1	10.6	-	17.1	0.4	0.7	2.7	3	silty CLAY to CLAY	115	1.5	7	11	3	-	-	1.1	3.0	59	0.005	3.00	15
38.06	18.0	11.2	-	18.0	0.4	0.8	2.7	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.2	3.2	57	0.005	2.98	15
38.22	18.2	11.2	-	18.2	0.4	0.9	2.7	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.2	3.3	57	0.005	2.97	15
38.39	18.3	11.3	-	18.3	0.4	1.0	2.7	3	silty CLAY to CLAY	115	1.5	8	12	4	-	-	1.2	3.3	57	0.005	2.98	15
38.55	18.2	11.2	-	18.2	0.4	1.1	2.7	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.2	3.2	57	0.005	2.98	15
38.72	17.8	10.9	-	17.8	0.4	1.2	2.7	3	silty CLAY to CLAY	115	1.5	7	12	3	-	-	1.1	3.1	58	0.005	2.99	15
38.88	17.3	10.6	-	17.3	0.4	1.3	2.7	3	silty CLAY to CLAY	115	1.5	7	12	3	-	-	1.1	3.0	59	0.005	3.00	15
39.04	17.1	10.4	-	17.2	0.4	1.4	2.9	3	silty CLAY to CLAY	115	1.5	7	11	3	-	-	1.1	3.0	60	0.005	3.02	15
39.21	17.7	10.7	-	17.7	0.6	1.5	3.7	3	silty CLAY to CLAY	115	1.5	7	12	4	-	-	1.1	3.1	64	0.005	3.07	15
39.37	19.8	12.0	-	19.8	0.6	1.6	3.7	3	silty CLAY to CLAY	115	1.5	8	13	4	-	-	1.3	3.5	60	0.005	3.03	15
39.54	26.3	15.9	-	26.3	0.9	2.0	3.8	3	silty CLAY to CLAY	115	1.5	11	18	5	-	-	1.7	4.8	54	0.005	2.93	15
39.70	29.7	17.9	-	29.7	1.3	1.7	4.8	3	silty CLAY to CLAY	115	1.5	12	20	6	-	-	2.0	5.4	55	0.005	2.95	15
39.86	31.1	18.7	-	31.1	1.4	1.7	4.9	3	silty CLAY to CLAY	115	1.5	12	21	6	-	-	2.1	5.7	54	0.005	2.94	15
40.03	34.0	20.4	-	34.0	1.5	1.7	4.7	3	silty CLAY to CLAY	115	1.5	14	23	6	-	-	2.3	6.3	52	0.005	2.89	15
40.19	33.0	19.8	-	33.1	1.8	1.6	6.0	3	silty CLAY to CLAY	115	1.5	13	22	6	-	-	2.2	6.1	57	0.005	2.98	15
40.36	32.1	19.2	-	32.2	1.9	1.8	6.5	3	silty CLAY to CLAY	115	1.5	13	21	6	-	-	2.2	5.9	59	0.005	3.01	15
40.52	42.3	25.2	-	42.4	2.8	2.0	6.9	3	silty CLAY to CLAY	115	1.5	17	28	8	-	-	2.9	7.8	54	0.005	2.94	15
40.68	64.4	38.2	-	64.4	2.8	1.5	4.5	4	clay SILT to silty CLAY	115	2.0	19	32	10	-	-	4.4	9.9	39	0.070	2.67	15
40.85	62.6	37.1	-	62.6	3.0	-1.7	5.0	3	silty CLAY to CLAY	115	1.5	25	42	10	-	-	4.3	9.9	41	0.005	2.71	15
41.01	49.9	29.5	-	49.9	3.5	-1.6	7.3	3	silty CLAY to CLAY	115	1.5	20	33	9	-	-	3.4	9.3	52	0.005	2.90	15
41.18	66.1	38.9	-	66.1	3.6	-1.0	5.7	3	silty CLAY to CLAY	115	1.5	26	44	11	-	-	4.6	9.9	42	0.005	2.74	15
41.34	73.2	43.0	-	73.2	3.6	-1.4	5.1	3	silty CLAY to CLAY	115	1.5	29	49	11	-	-	5.1	9.9	39	0.005	2.67	

Corporation Yard Improvements Project

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Depth	qc	qc1n	qc1ncs	qt	Slv	pore	Frct	Mat	Material	Unit	Qc	SPT	SPT	SPT	Rel	Ftn	Und	OCR	Fin	D50	Ic	Nk			
ft	PS	PS	PS	PS	tsf	tsf (psi)	Rato	Typ	Behavior	Wght	to	R-N1	R-N	IcN1	Den	Ang	Shr	tsf	Ic	mm	SBT	Indx			
	tsf	-	-	tsf			%	Zon	Description	pcf	N	60%	60%	60%	%	deg			%						
46.43	54.8	29.7	-	54.8	2.1	-2.0	4.1	4	clay	SILT	to silty	CLAY	115	2.0	15	27	8	-	-	3.7	9.3	42	0.070	2.72	15
46.59	120.7	86.2	110.5	120.7	1.3	-0.9	1.1	6	clean	SAND	to silty	SAND	125	5.0	17	24	17	62	38	-	-	13	0.350	1.99	16
46.75	159.2	113.6	113.6	159.1	0.6	-2.6	0.4	6	clean	SAND	to silty	SAND	125	5.0	23	32	19	71	40	-	-	5	0.350	1.63	16
46.92	171.9	122.5	122.5	171.8	0.5	-3.4	0.3	6	clean	SAND	to silty	SAND	125	5.0	24	34	21	74	40	-	-	5	0.350	1.56	16
47.08	164.5	117.0	119.5	164.4	0.8	-3.7	0.5	6	clean	SAND	to silty	SAND	125	5.0	23	33	20	72	40	-	-	6	0.350	1.68	16
47.25	142.6	101.3	118.7	142.5	1.2	-4.3	0.9	6	clean	SAND	to silty	SAND	125	5.0	20	29	19	67	39	-	-	10	0.350	1.88	16
47.41	117.2	83.2	132.5	117.1	2.2	-2.9	1.9	5	silty	SAND	to sandy	SILT	120	3.0	28	39	17	61	38	-	-	18	0.200	2.17	16
47.57	93.6	66.3	137.1	93.5	2.4	-4.5	2.6	5	silty	SAND	to sandy	SILT	120	3.0	22	31	15	53	37	-	-	24	0.200	2.34	16
47.74	59.8	31.8	-	59.7	2.1	-5.5	3.7	4	clay	SILT	to silty	CLAY	115	2.0	16	30	8	-	-	4.1	9.9	39	0.070	2.67	15
47.90	32.7	17.3	-	32.6	2.1	-5.5	7.0	3	silty	CLAY	to CLAY	CLAY	115	1.5	12	22	6	-	-	2.2	5.2	63	0.005	3.07	15
48.07	42.2	22.3	-	42.1	1.6	-4.6	4.2	3	silty	CLAY	to CLAY	CLAY	115	1.5	15	28	6	-	-	2.8	6.9	48	0.005	2.83	15
48.23	54.1	28.6	-	54.0	1.3	-4.9	2.6	4	clay	SILT	to silty	CLAY	115	2.0	14	27	7	-	-	3.7	8.9	36	0.070	2.61	15
48.39	92.4	65.1	115.2	92.3	1.7	-4.6	1.9	5	silty	SAND	to sandy	SILT	120	3.0	22	31	14	53	36	-	-	20	0.200	2.24	16
48.56	90.3	63.5	129.5	90.2	2.1	-4.9	2.5	5	silty	SAND	to sandy	SILT	120	3.0	21	30	14	52	36	-	-	24	0.200	2.33	16
48.72	82.0	57.6	142.4	81.9	2.5	-4.9	3.2	4	clay	SILT	to silty	CLAY	115	2.0	29	41	14	-	-	5.7	9.9	28	0.070	2.44	15
48.89	63.9	33.4	-	63.8	2.8	-4.5	4.6	3	silty	CLAY	to CLAY	CLAY	115	1.5	22	43	9	-	-	4.4	9.9	42	0.005	2.73	15
49.05	58.7	30.6	-	58.6	2.1	-4.4	3.8	4	clay	SILT	to silty	CLAY	115	2.0	15	29	8	-	-	4.0	9.6	40	0.070	2.70	15
49.22	45.0	23.4	-	44.9	2.1	-4.6	5.0	3	silty	CLAY	to CLAY	CLAY	115	1.5	16	30	7	-	-	3.0	7.2	50	0.005	2.87	15
49.38	36.3	18.8	-	36.2	2.2	-4.2	6.7	3	silty	CLAY	to CLAY	CLAY	115	1.5	13	24	6	-	-	2.4	5.7	60	0.005	3.03	15
49.54	50.2	26.0	-	50.2	2.0	-3.9	4.3	3	silty	CLAY	to CLAY	CLAY	115	1.5	17	33	7	-	-	3.4	8.1	45	0.005	2.79	15
49.71	52.6	27.2	-	52.5	1.7	-4.2	3.5	4	clay	SILT	to silty	CLAY	115	2.0	14	26	7	-	-	3.6	8.5	41	0.070	2.71	15
49.87	62.1	43.3	117.3	62.1	1.6	-4.3	2.7	4	clay	SILT	to silty	CLAY	115	2.0	22	31	10	-	-	4.3	9.9	30	0.070	2.49	15
50.04	58.9	30.3	-	58.8	1.8	-4.4	3.2	4	clay	SILT	to silty	CLAY	115	2.0	15	29	8	-	-	4.0	9.5	38	0.070	2.65	15
50.20	44.0	22.6	-	44.0	2.1	-4.5	5.1	3	silty	CLAY	to CLAY	CLAY	115	1.5	15	29	7	-	-	3.0	7.0	51	0.005	2.88	15

* Indicates the parameter was calculated using the normalized point stress.
The parameters listed above were determined using empirical correlations.
A Professional Engineer must determine their suitability for analysis and design.

Middle Earth Geo Testing

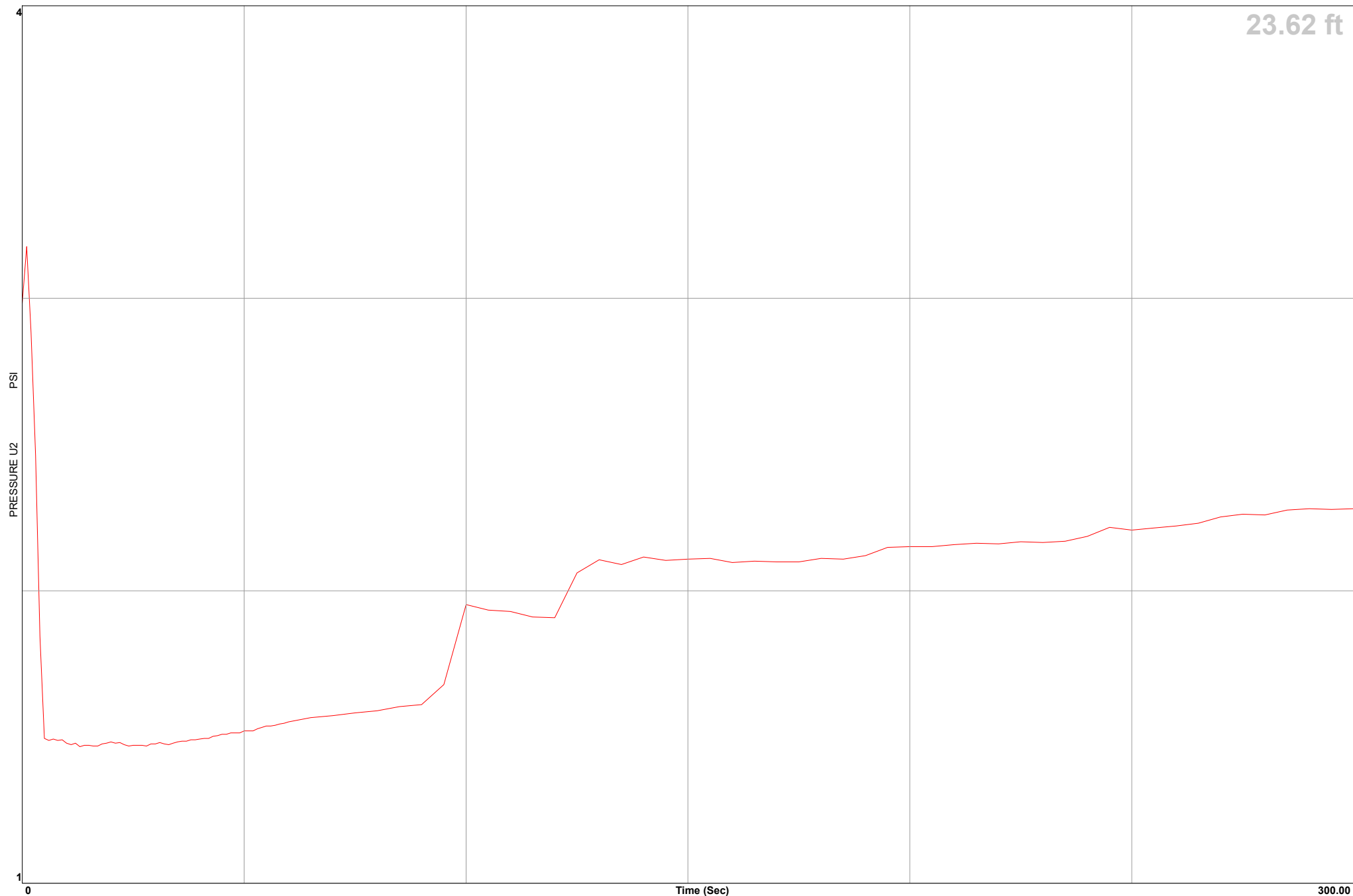


BAGG Engineers

Location	Corporation Yard Improvements Project	Operator	JM-IY
Job Number	HALFM-21-01	Cone Number	DPG1556
Hole Number	CPT-02	Date and Time	10/8/2021 3:02:21 PM
Equilized Pressure	2.2	EST GW Depth During Test	18.3

GPS

23.62 ft



Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled.* No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be, and, in general, if you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying it.* A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may

perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old*.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration*. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. *Geotechnical engineers are not building-envelope or mold specialists*.



GEOPROFESSIONAL
BUSINESS
ASSOCIATION

Telephone: 301/565-2733

e-mail: info@geoprofessional.org www.geoprofessional.org

APPENDIX F
AGREEMENT

[To be issued by Addendum]



REQUEST FOR PROPOSAL DESIGN-BUILD SERVICES FOR STONE PINE COVE FARMWORKER HOUSING PROJECT

The County of San Mateo – County Executive’s Office

ADDENDUM 1

January 17, 2024

Owner: County of San Mateo
County Executive Office
400 County Center, 1st Floor
Redwood City, CA 94063

Project Manager: Steven McGuckin
c_smcguckin@smcgov.org

This Addendum has been prepared to clarify, modify, delete, or add to the RFP and revisions to items listed here shall supersede description thereof prior to the above stated date. All conditions not specifically referenced here shall remain the same.

Acknowledge receipt of this addendum by inserting its number and date in the cover letter of the proposal response.

All addenda items refer to the RFP issued December 20, 2023 unless specifically noted otherwise.

PART A - RFP SCHEDULE

- 1.1** The proposal due date has not changed. Proposals are due Wednesday, January 31, 2024, by 4:00 p.m. and delivered to:

Iliana Rodriguez, Assistant County Executive
Project Development Unit
555 County Center, 2th Floor
Redwood City, CA 94063

PART B - RFP REQUIREMENTS

1.2 Refer to RFP, page 1, Authorized Contact Person E-mail.

Revise to read as follows:

Authorized Contact Person E-mail	c_smcguckin@smcgov.org
----------------------------------	------------------------

1.3 Refer to RFP, 2.3 Proposal Content Requirements, paragraph A - Proposal Format, item (1) Cover Letter.

Add the following after the last sentence:

Acknowledge receipt of any Addendum issued and received.

1.4 Refer to RFP, APPENDIX F – Standard Agreement Template.

Add APPENDIX F – Standard Agreement Template in its entirety.

List of Attachments

1.5 Pre-Proposal Agenda, dated January 10, 2024 (1 page)

1.6 Exhibit F – Standard Agreement Template (73 pages)

End of Addendum

County of San Mateo - County Executive's Office
Stone Pine Cove Farmworker Housing Project – Manufactured Housing Design Build RFP
880 Stone Pine Road, Half Moon Bay, CA 94019
Project ID - CEOFW

PRE-PROPOSAL CONFERENCE AGENDA

Date: Wednesday, January 10, 2024

Time: 1:00 PM

Project: Stone Pine Cove Farmworker Housing Project

Due Date: **Wednesday, January 31, 2024 by 4:00:00 PM at:**

Project Development Unit
555 County Center, 2nd Floor,
Redwood City, CA 94063

I. Meeting Called to Order

II. Introduction of Project Team members:

- A. San Mateo County Executive's Office Representative(s) – Iliana Rodriguez, Assistant County Executive; Robert Manchia, Chief Financial Officer.
- B. San Mateo County Housing and Community Development - Raymond Hodges, Director, Rose Cade, Deputy Director, and Helen Tong-Ishikawa, Senior Policy Analyst.
- C. Bridging Architect - Chris Remedios, Senior Project Manager; MWA Architects.
- D. Owner's Representative – Mike Wassermann, Project Executive and Steven McGuckin, Project Manager, Capital Program Management, Taylor Fanning, Assistant PM
- E. Owner's Representative/Construction Manager – Matthew Estes and Justin Cadotte, Capital Program Management.

III. Review of RFP Documents: <https://smcgov.box.com/s/7thq4921dkmj6w1zs7qbehmwjd53u7q5>

- A. Project Description and Scope of Services
- B. Proposal Content Requirement
- C. Proposal Submission
- D. Proposer Certification
- E. Withdrawal of Proposals
- F. Proposer Selection
- G. Evaluation Criteria
- H. Insurance
- I. Prevailing Wages: Certified payrolls, payroll records and other documents shall be required along with your progress billings. www.dir.ca.gov/dlsr/DPreWageDetermination.htm.

IV. Review of Appendices:

- A. APPENDIX A – Project Scope Description, Schedule, and Budget
- B. APPENDIX B – Project Design Criteria
- C. APPENDIX C – Conceptual Site Plan
- D. APPENDIX D – Prequalification Submittal Template
- E. APPENDIX E – Geotechnical Report
- F. APPENDIX F – Standard Agreement Template

V. Site Information:

- A. Site access, use of existing facilities, staging areas and parking.
- B. Transportation of units to site: Pending construction improvements on Hwy. 92.
- B. DBE's supervision and Conduct on park premises, working hours.

VI. Site Walk: Can be arranged by contacting Owner's Representative team.

VII. Questions

VIII. Adjournment

Important note: Responses to inquiries and discussions occurring at this pre-proposal meeting shall in no way change or modify the RFP documents. The RFP documents will be affected only by addenda issued prior to the proposal due date.

Send inquiries to: Steven McGuckin at c_smcguckin@smcgov.org by 4:00PM on Wednesday, January 24, 2024

APPENDIX F

STANDARD AGREEMENT TEMPLATE

(Manufactured Housing Design-Build)

STONE PINE COVE FARMWORKER HOUSING PROJECT

PROJECT ID: CEOFW

THIS AGREEMENT, dated this _____ day of _____, 2024 by and between _____, whose place of business is located: _____ (“Design-Build Entity” or “DBE”), and the County of San Mateo (“Owner”), acting under and by virtue of the authority vested in Owner by the laws of the State of California for preconstruction and construction services (“Work”) for the Stone Pine Cove Farmworker Housing Project (“Project”) in accordance with the Contract Documents. By executing this Agreement, each of the Signatories represents that he or she has the authority to bind the Party on whose behalf his or her execution is made.

Owner:

County of San Mateo
County Executive Office
400 County Center, 1st Floor
Redwood City, CA 94063

Design-Builder:

By: _____
(Signature)

Name:

Telephone No.:

Facsimile No.:

Email:

By: _____
(Signature)

Name:

Telephone No.:

Facsimile No.:

Email:

CA License No.:

DIR Registration No.:

THE PARTIES AGREE TO THE FOLLOWING TERMS AND CONDITIONS

TABLE OF EXHIBITS

All Exhibits set forth below are incorporated into the Agreement.

Exhibit 1	Supplemental Conditions	Attached
Exhibit 2	Bridging Contract Documents	
Exhibit 2A	Project Description, Schedule, and Budget	RFP Appendix A
Exhibit 2B	Project Design Criteria	RFP Appendix B
Exhibit 2C	Conceptual Site Plan	RFP Appendix C
Exhibit 2D	Geotechnical Report	RFP Appendix E
Exhibit 3	Scope of Work	
Exhibit 3A	Scope of Work	<DBE to Provide>
Exhibit 4	Price Proposal	
Exhibit 4A	Price Proposal	<DBE to Provide>
Exhibit 4B	Schedule of Values	<DBE to Provide>
Exhibit 5	Personnel & Equipment	
Exhibit 5A	Staffing Plan	<DBE to Provide>
Exhibit 5B	Key Personnel	<DBE to Provide>
Exhibit 6	Schedule and Site Logistics Plan	
Exhibit 6A	Project Baseline Schedule	<DBE to Provide>
Exhibit 6B	Site Logistics Plan	<DBE to Provide>
Exhibit 7	Schematic Design Documents	<DBE to Provide>
Exhibit 8	Design-Builder's Proposal	<DBE to Provide>

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DESIGN-BUILD AGREEMENT

This Design-Build Agreement (“**Agreement**”) is executed as of _____ 2024 (“**Effective Date**”) by and between the “**Owner**” and “**Design-Builder**” for completion of the “**Project**.” The Owner and Design-Builder may collectively be referred to as “**the Parties**.”

Owner:

County of San Mateo
County Executive Office
400 County Center, 1st Floor
Redwood City, CA 94063

Design-Builder:

Project:

Stone Pine Cove Farmworker Housing Project
880 Stone Pine Road
Half Moon Bay, CA, 94019

The Owner and Design-Builder agree as set forth below:

1. GENERAL

- 1.1 **Definitions.** All defined terms will be capitalized throughout the Agreement. The definitions for this Agreement appear in alphabetical order in Section 1 of the “**Supplemental Conditions**” to the Agreement and may also be set forth herein for convenience as defined terms the first time the term is used.
- 1.2 **Project Description.** The Project involves **Preconstruction Phase Services and Construction Phase Services** for Housing and Urban Development (HUD) and CA Housing and Community Development (HCD) title 25 standards Homes will consist of 1-Bedroom/1-Bath, 2-Bedroom/1-Bath, and 3-Bedroom/2-Bath home types. Up to (7) homes will require ADA accessible features. For project description ,locations and layout of homes, refer to the Exhibit 2A - Project Description, Schedule, and Budget, Exhibit 2B - Project Design Criteria, and Exhibit 2C - Conceptual Site Plan attached hereto.
- 1.3 **Project Delivery.** The Project will be delivered using a design-build delivery method pursuant to Sections 22160, et seq., of the California Public Contract Code.

2. THE DESIGN-BUILD TEAM AND RELATIONSHIP OF THE PARTIES

- 2.1 **Design-Build Team.** The Design-Builder is responsible to the Owner for completion of the Project. The Design-Build Team includes all team members providing services for or on behalf of the Design-Builder, and is comprised of, at a minimum, the “**General Contractor**,” the “**Design Professionals**” and “**Design-Build Subcontractors**,”. All “**Design Services**” will be performed by the Architect

of Record and/or other design consultants (collectively, “**Design Professionals**”). The Design-Builder shall name the Owner as a third party beneficiary to all design service agreements and/or design-build subcontracts and the parties agree that the Owner is an intended third party beneficiary of such contracts. The Design-Build Team is currently comprised of the entities identified in **Exhibit 5B Key Personnel**.

- 2.2 Licensing.** Design-Builder must possess a valid California state class “B” General Building Contractor license during the entire term of this Agreement. All members of the Design-Build Team must possess the appropriate California state design licenses for their particular discipline. Subcontractors must all possess the appropriate California state specialty license for their particular trade. Nothing in this Agreement will require a Design-Build Team member, or any of their respective Consultants or Subcontractors, to perform any portion of the Work outside of their respective licenses or contrary to Applicable Law.
- 2.3 Good Faith.** The Design-Builder will perform all Work under this Agreement in compliance with each of the following requirements: (i) use its best skill and judgment in pursuit of the Project; (ii) furnish effective and efficient design, construction administration and supervision; (iii) furnish at all times an adequate supply of “**Skilled Labor**” and materials; and (iv) perform the Work in the most expeditious and economical manner consistent with the Bridging Contract Documents in **Exhibit 2**, and good engineering practices.
- 2.4 Standard of Care.** The Design-Builder warrants that it possesses the design and construction licenses and expertise required for this Project under Section 2.2 and will use the same degree of care and skill customarily used by California state licensed professionals performing similar services for residential construction projects in the state of California.
- 2.5 Collaboration.** Owner and Design-Builder commit at all times to cooperate fully with each other and proceed on the basis of trust and good faith to permit each party to realize the benefits afforded under this Agreement. Design-Builder and its Design Professionals, Subcontractors, suppliers, and equipment vendors will perform their respective portions of the Work using collaborative tools and methods. The Design-Build Team will actively participate and collaborate with Owner to achieve best value, optimal design, increased labor efficiency, and elimination of waste and re-work. The Design-Builder will collaborate with Owner to develop the design within the Contract Price, and to ensure that the design satisfies the Bridging Contract Documents.
- 2.6 Communications.** All communications from the Design-Builder shall be directed to Owner via the Owner’s Representative, Capital Program Management, Inc. Project Manager, Steven McGuckin, and others as designated and directed by the Owner’s Project Manager.
- 2.7 Relationship of the Parties.** The Design-Builder’s relationship with the Owner is that of an independent contractor whose involvement in the Project is to act solely in the capacity of a California licensed design professional and general contractor and not as an agent, fiduciary, partner, member of, subsidiary of, or otherwise affiliated with the Owner.

- 2.8 Responsibility.** Design-Builder acknowledges and agrees that it is solely responsible to Owner for the sufficiency, quality, adequacy and completeness of the Work, and that Design-Builder is responsible for any acts, errors, or omissions of the Design-Builder's principals, employees, agents, and/or any other parties either directly or indirectly in privity of contract with Design-Builder including, but not limited to, the Architect of Record and other Design Professionals, Subcontractors, suppliers, equipment vendors, and their agents and employees, and other persons performing any portion of the Work on behalf of Design-Builder.
- 2.9 Conflicts of Interest.** Design-Builder warrants that it is not aware of any existing conflicts of interest under Applicable Law that would prevent any member of the Design-Build Team from participating in the Project. Design-Builder has an ongoing obligation to monitor and disclose conflicts or potential conflicts of interest. If an organizational conflict of interest is discovered, the Design-Builder must make an immediate and full written disclosure to the Owner that includes a description of the action that the Design-Builder has taken or proposes to take to avoid or mitigate the conflict. If the contract is terminated due to a conflict of interest that existed at the time of the award, the Owner has no obligation, responsibility or liability to reimburse all or part of the costs incurred or alleged to have been incurred by the Design- Builder.
- 2.10 Prevailing Wage.** The Design-Builder must be appropriately, licensed and registered in the State of California Department of Industrial Relations (DIR), as required by law. The DBE will be required to comply with all applicable California Labor Code provisions related to public works project, including those related to prevailing wage requirements, skilled and trained workforce requirements, and the County's bonding and insurance requirements,

3. CONTRACT DOCUMENTS

- 3.1 Contract Documents.** The “**Contract Documents**” consist of this Agreement, the Supplemental Conditions, and all other Exhibits attached to this Agreement, all subsequent modifications through amendments and change orders executed by Owner and Design-Builder, and the Construction Documents to be developed by the Design-Builder.
- 3.2 Interpretation and Intent.** The intent of the Contract Documents is to include all items necessary for proper completion of all Work within the “**Contract Time**” and within the “**Contract Price.**” The Contract Documents are intended to be complementary and what is required by any one of them is as binding as if called for by all of them.
- 3.3 Sufficiency of Contract Documents.** The Design-Builder acknowledges that all documents and materials submitted by the Owner to the Design-Builder in connection with the process culminating in the execution of this Design-Build Agreement, are complete and sufficient for pricing, changes, and conditions to have enabled the Design-Builder to determine the cost of the work in order to enter into this Agreement. The Design-Builder confirms that it has examined the site and all physical, legal and other conditions affecting the Work and is fully familiar with the site and with such conditions. The Design-Builder specifically represents to the Owner that it has examined (a) the nature, location, and character of the

Project and the site, including, without limitation, the surface conditions of the site and subsurface conditions of the site to the extent that such conditions affect the design and constructability of the Project, and all structures and obstructions on the site and thereunder, both natural and man-made, and all surface and subsurface water conditions of the site and the surrounding area; (b) the nature, location, and character of the general area in which the Project is located, including without limitation, its climatic conditions, available labor supply and labor costs, and available equipment supply and equipment costs; and (c) the quality and quantity of all materials, supplies, tools, equipment, labor, and professional services necessary to complete the Work in the manner and within the cost and time required by the Contract Documents. In connection with the foregoing, and having carefully examined all Contract Documents, and having examined the site, the Design-Builder acknowledges and declares that it has no knowledge of any discrepancies, omissions, ambiguities or conflicts in the Contracts Documents and agrees that if it becomes aware of any such discrepancies, omissions, ambiguities or conflicts, it shall promptly notify the Owner thereof.

3.4 Order of Precedence. In the event of inconsistencies between requirements contained in different components of the Contract Documents, the content of each document listed below prevails over any inconsistent content in any document listed below it:

3.4.1 Amendments of the Design-Build Agreement;

3.4.2 Change Orders approved by Owner;

3.4.3 The Design-Build Agreement executed between Owner and Design-Builder not including Exhibits;

3.4.4 Project Baseline Schedule, as approved by Owner and updated pursuant to Section 8.2 of this Agreement;

3.4.5 The Scope of Work set forth in **Exhibit 3** to the Agreement;

3.4.6 The Supplemental Conditions included in **Exhibit 1** to the Agreement;

3.4.7 The Bridging Contract Documents included as **Exhibit 2**;

3.4.8 100% Construction Documents developed by Design-Builder;

3.4.9 All other Exhibits to the Design-Build Agreement and all other Contract Documents not listed above;

3.4.10 Proposal submitted by Design-Builder;

4. OWNER'S OBLIGATIONS

4.1 Information and Documents. The Owner may make various Background Documents related to the Project available to the Design-Builder, including but not limited to any surveys and other information that describe the Project Site as well as schedule requirements, budget constraints and other criteria, and procurement

schedules. Any Background Documents provided are for information only and will not be included as part of the Contract Documents.

- 4.2 Bridging Contract Documents.** The “Bridging Contract Documents,” consisting of the Design Criteria, both included in **Exhibit 2** to this Agreement, were developed by the Owner to provide an understanding of the baseline design requirements for the Project. The Bridging Contract Documents, along with other information provided during the RFP and proposal process, provides a basis for the Contract Price, initial Project Baseline Schedule, and initial design work. The Design-Builder must conduct all Work in accordance with the Bridging Contract Documents.
- 4.3 Ownership of Facilities.** The Owner will own the Facilities, and control easements on which certain Facilities are to be built. Owner will provide Design-Builder with access to the Work site and easements for the purpose of fulfilling its obligations under this Agreement.
- 4.4 Governmental Approvals.** The Design Builder will be responsible for obtaining the permits and approvals for the Project facilities. Owner shall reimburse the Design Builder without mark-up for all permits and fees associated with this work. Design-Builder's responsibility for permits, licenses, and approvals is set forth in Section 5.5.
- 4.5 Owner's Project Manager.** Owner's interests on the Project will be represented by the Owner's Representative, Capital Program Management, Inc- Project Manager, Steven McGuckin, as well as any other individuals authorized by the Owner. The Project Manager is authorized to act on the Owner's behalf with respect to the daily operations of the Project, including, without limitation, review of Work, invoices, claims, change orders, and submittals, or may delegate authority to another representative. For simplicity, where this Agreement refers to the Owner, Design- Builder may assume that the Project Manager is the appropriate point of contact. Where necessary, the Project Manager will elevate issues to the County Board of Supervisors or to appropriate executives.
- 4.6 Stop Payment Notice.** The Owner will comply with all stop payment notices submitted in compliance with applicable laws by withholding appropriate amounts from payments otherwise due to Design-Builder or otherwise responding consistent with legal requirements.
- 4.7 Separate Contracts.** The Owner reserves the right to perform construction, maintenance, and operations related to the Project with the Owner's own forces, and to award contracts for work that lies outside of the Design-Builder's Project Scope of Work. The Design- Builder and Owner will coordinate to allow for any other separate contracts to be performed, and to minimize interference with the Work and the work that the Owner is having performed through separate contract or contracts. Design-Builder shall perform all Work in such a manner as to avoid any material interruption of Owner's existing operations, including, without limitation, use of the athletic fields. When performing construction, maintenance, or operations related to the Project, the Owner agrees that its separate contractors will be subject to the same obligations as the Design-Builder with respect to insurance, indemnification, safety, protection, inspections and non-conforming

work. The Owner will remain responsible to the Design-Builder for any delays to the Contract Time or cost impacts resulting from work performed by its separate contractors. Any cost and/or time impacts will be addressed through the Change Order process set forth in Section 9.

4.8 Timeliness. In order to avoid any impacts to the Contract Time, information or services under the Owner's control, including reviews and approvals, will be furnished within the timeframes set forth in the Contract Documents.

4.9 Owner Direct Payments. In case of a material breach by the Design-Builder, the Owner hereby retains the right to make direct payment to Subcontractors and Design Professionals, less retention, and to deduct the amounts from future payment requests from Design-Builder. Owner shall give Design-Builder notice and a reasonable opportunity to cure the material breach before exercising any rights described in this Section 4.9.

5. DESIGN-BUILDER'S OBLIGATIONS

5.1 Design-Build Services. Design-Builder will provide all labor, materials and equipment necessary to complete the Work in compliance with the Contract Documents as described in further detail in the Scope of Work included in **Exhibit 3**. Unless otherwise provided in the Contract Documents, the Design-Builder shall provide or cause to be provided, and shall pay for services, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

5.2 Preconstruction Phase Services – Preparation of Design and Construction Documents. Design-Builder will work collaboratively with Owner to validate Conceptual Design (**Exhibit 7**), propose alternatives where such alternatives create value to the Owner, evaluate design and construction phasing alternatives, and potential early work packages. Design Builder to produce Schematic, Design Development, and Construction Documents for the Project in accordance with: Bridging Contract Documents (**Exhibit 2**), its attachments, and supporting documents: Project Description, Schedule, and Budget, Project Design Criteria, Conceptual Site Plan, Geotechnical Report; and Scope of Work (**Exhibit 3**). Also complete design per meetings with the County for input, conformance with Criteria Documents, and approval at each design phase for the schematic design, design development, construction phase documents.

5.2.1 Conduct of Design Services. Design-Builder must perform all design-services, including architectural, engineering and other design professional services, consistent with applicable state licensing laws, and through qualified, licensed design professionals employed by Design-Builder, or procured from qualified, independent licensed Design Professionals, and in accordance with the standard of care described in Section 2.4. The Design-Builder's Architect shall be the Architect-of-Record.

5.2.2 Schematic Design. Prior to starting design, DBE is to conduct site

investigations and familiarize themselves with the existing conditions and supporting documents provided by the County. Prepare Schematic Design Documents based on the Conceptual Drawings, site observations, Criteria Document and supporting documents. Include site layout drawings for approval by the County. Attend review meetings with the County and incorporate conformance review comments.

5.2.3 Design Development. Upon the County's written acceptance of the Schematic Design Documents, prepare Design Development Documents for approval by the County from the Criteria Documents, including related architectural, structural, mechanical, electrical, plumbing, and civil plans. Attend review meetings with the County and incorporate conformance review comments.

5.2.4 Construction Documents. Upon the County's written acceptance of Design Development Documents, prepare 100% complete construction documents for review and written approval by the County prior to submitting for permitting. Perform quality assurance/quality control and constructability reviews of the documents prior to submitting to the County. The County will perform its own constructability and conformance reviews. The 100% Construction Documents shall consist of complete detailed working drawings and Specifications addressing required materials, products, equipment, their installation and operation, quality assurances, reference standards, product data, warranty data, etc. These 100% Construction Documents shall contain all required drawings and Specifications completed in detail sufficient to construct the Project, confirm conformance with Bridging Contract Documents, and obtain agency approvals. The 100% Construction Documents shall be consistent with approved interim design submissions, as such submissions may have been modified in a design review meeting and recorded in the meetings minutes. Design-Builder shall remain responsible for correcting any deviation from the Bridging Contract Documents, whether discovered prior to or during construction work. Attend meetings with the County and incorporate review comments prior to submitting for permitting purposes.

5.2.5 Permitting. Submit completed accepted plans and specifications and obtain all local jurisdictional agency plan approvals and permitting, necessary to meet the Project Schedule (**Exhibit 6**). DBE to pay and be reimbursed without mark-up for all permitting fees.

5.2.6 Any other services that are reasonable and necessary for design and permitting of the Project, including close-out with local jurisdictional agencies.

5.3 Construction Phase Notice to Proceed. Prior to commencing any work on the Construction Phase of the Project, the Design-Builder will submit a Final Design Package to Owner that Design-Builder proposes would govern the Construction Phase work. The Final Design Package shall be comprised of the following documents: 1) the 100% Construction Documents; 2) a Construction Phase project schedule; 3) all documents required as part of the Project Manual for Construction Phase Work, including a number of forms and plans (Safety Plan,

Traffic Control Plan, Quality Control Plan, various mitigation plans) to be identified by Owner and developed by Design- Builder during the course of the Preconstruction Phase; and 5) any other documents or materials reasonably required by Owner inclusive of justifiable wage rates for all contractors. Design-Builder must submit one (1) electronic set and (5) sets of prints. Owner shall review the Final Design Package in order to determine whether this Design-Build Agreement provides Owner with the best value for completing the Construction Phase of the Project. Owner reserves the right to take any of the following actions in response to the proposed Final Design Package submitted by Design-Builder.

5.3.1 Owner may elect to proceed with the Construction Phase of this Agreement by delivering to the Design-Builder a written Notice to Proceed with Construction (the "NTP "), Builder elect to proceed with the Construction (in reasonably acceptable form), Building Permit and Clearance of Bird Nesting. Design-Builder will coordinate in good faith and in a commercially reasonable manner with respect to securing the Building Permit and the Clearance of Bird Nesting.

5.3.2 The Owner may notify the Design-Builder of any objections to the Final Design Package within fourteen (14) calendar days after their submittal. In the event that the Owner makes objections to the 100% Construction Documents, the Design-Builder may complete, correct and/or modify the 100% Construction Documents in question and resubmit the Final Design Package to the Owner. If the need for re-submittal of the Final Design Package (or any part of it) shall not be due to a change requested by the Owner in the Final Design Package, then the Design-Builder shall have ten (10) calendar days within which to correct, complete and re-submit the Final Design Package, but there shall be no extension of the dates in the Project Baseline Schedule. In the event the Owner shall request any change in the Final Design Package that represents a change in the Scope of Work, such request may require an adjustment of time and compensation pursuant to a Change Order.

5.3.3 The Owner may elect not to proceed with the Construction Phase of this Agreement in its sole discretion, and may take such action without cause and for its own convenience whether or not the Owner elects to have the project constructed, terminate the Agreement with Design-Builder for convenience in accordance with Article 16.3, and take possession of the 100% Construction Documents and all other design documents and related work product developed by Design-Builder for potential award to a separate contractor.

5.4 Construction Phase Services. Design-Builder shall proceed to execute and complete the Construction Phase services only upon issuance by the Owner to the Design- Builder of a NTP and other Documents set for the in Section 5.3.1 of this Agreement with the construction phase of the Work. Design-Builder will provide all Construction Phase Services required for the Project. Design-Builder's construction Phase services will also include each of the responsibilities summarized below.

5.4.1 Unless otherwise provided in the Contract Documents to be the responsibility of Owner or a separate contractor, Design-Builder shall provide through itself or Subcontractors the necessary supervision, labor, inspection, testing, start-up, material, equipment, machinery, temporary utilities and other temporary facilities to permit Design-Builder to complete the Construction Services consistent with the Contract Documents.

5.4.2 (Not Used)

5.4.3 Design-Builder shall perform all construction activities efficiently and with the requisite expertise, skill and competence to satisfy the requirements of the Contract Documents. Design-Builder shall at all times exercise complete and exclusive control over the means, methods, sequences and techniques of construction.

5.4.4 Design-Builder shall coordinate the activities of all Subcontractors. If Owner performs other work at the Site with separate contractors under Owner's control, Design-Builder agrees to reasonably cooperate and coordinate its activities with those of such separate contractors so that the Project can be completed in an orderly and coordinated manner without unreasonable disruption to the Work or the work that the Owner is having performed by separate contractors.

5.4.5 Design-Builder shall fully comply with all environmental and permit mitigation requirements set forth in these Contract Documents, including, without limitation, remediation of all hazardous materials, including preexisting hazardous materials, at the Project Site.

5.4.6 Design-Builder must promptly remove from the Project Site, or from property adjacent to the site of the Work, all unused and rejected materials, and construction waste, to permit Design-Builder to perform its Construction Phase Services efficiently, safely and without interfering with the use of adjacent property. In particular, the Design-Builder shall keep the Project Site clean to maintain safe access and to avoid fire hazard. Upon Substantial Completion of the Work, or a portion of the Work, Design-Builder shall remove all debris, trash, construction waste, materials, equipment, machinery and tools arising from the Work or applicable portions thereof to permit Owner to occupy the Project for its intended use. Upon Substantial Completion of the Work, Design-Builder shall return the premises to its pre-existing condition or better, based on a preconstruction survey to be performed by Design-Builder.

5.5 Governmental Approval Services. Design-Builder is responsible for obtaining all permits, licenses, and approvals necessary for the completion of the Work.

5.5.1 Review of Approvals. Owner reserves the right to review any submittals and final terms and conditions of permits, licenses, and approvals obtained pursuant to this Section 5.5, and to deal directly with any agencies responsible for the approvals. Design-Builder will be entitled to an extension of time to the extent that a delay is caused by Owner's unreasonable delay in reviewing and/or approving such approvals.

5.5.2 Permit Documents. Only documents prepared for or by Design- Builder for this project may be used for obtaining building permits for construction. No drawings or specifications prepared by the Owner or by the Project Manager or by their representatives shall be used for permits or construction without the Owner's and the Project Manager's prior written permission in each instance.

5.6 Project Support Services. Owner may require Design-Builder to provide other incidental services relating to the Project, including, without limitation, public outreach, and presentations at Board of Supervisor meetings. The parties acknowledge and agree that, to the extent that the services described in this Section 5.6 are, in fact, incidental, the Design-Builder shall perform them without additional compensation. In the event that the Owner requests services pursuant to this Section 5.6 and the Design- Builder asserts that such services are not incidental, the Design-Builder shall promptly, and before performing any such work, notify the Owner of its contention and shall provide any supporting documentation. Owner shall promptly respond to any such notice from the Design-Builder and the parties shall meet and confer in good faith regarding any disagreements with respect to services under this Section 5.6.

5.7 Site Investigations. By executing this Agreement, the Design-Builder represents that it has visited the Project premises and is familiar with the local conditions under which the Work is to be performed.

5.8 Test and Inspections. The Design-Builder shall be responsible for and coordinate all inspections required of the Design Build homes by any governmental body that has jurisdiction over the Project. IFailure to obtain any permits, licenses, or other approvals because of the failure of the Design-Builder to conform to this paragraph will not extend the Contract Time and the contractor shall not be entitled to an increase in the Contract Price, therefore. Further, the Design-Builder shall be liable to the Owner for any financial damage such failure may cause the Owner. The Owner will pay for all third party (owner directed) testing and inspection including the special inspections, structural, mechanical, chemical, air and water pollution tests, tests for hazardous materials, and other laboratory and environmental tests, inspections and reports required by law or the Contract Documents, however, the Design-Builder shall be responsible for costs related to any tests required for corrective work.

5.9 Coordination with Owner and Owner's Separate Contractors. The Design-Builder will coordinate its Work with any of Owner's employees or contractors performing work in the vicinity of the Project Site.

5.10 Sole Responsibility. The Design-Builder acknowledges and agrees that it is solely responsible to the Owner for the sufficiency, quality, adequacy and completeness of all services performed by the Design-Builder, including, without limitation, design work (whether during the Preconstruction Phase or Construction Phase), and construction services. Design- Builder is responsible for any acts, errors, or omissions of the Design-Builder, its Design Professionals, its Subcontractors, employees, agents, and/or any other parties either directly or indirectly in privity of contract with Design-Builder including, but not limited to, the "Design-Build Team" identified in Section 2.1, second tier-subcontractors, and

vendors who are performing any portion of the Work. The Design-Builder's design must meet the minimum design requirements as defined by the Bridging Contract Documents, and all other design requirements included in the agreement. The Owner may review (at its sole discretion) and as it may deem necessary or desirable, the design at specific design development milestones for consistency and compliance with such design requirements. If the Owner shall elect to review any such documents, it shall be entitled (but not obligated) to limit its review to a cursory review or to such review as may be required to enable the Owner to determine rate of progress. Owner's review and/or approval submittals, including, without limitation, interim and final design submittals, does not reduce Design-Builder's obligations under this section.

5.10.1 Nothing in this Agreement shall relieve the Design-Builder of its obligations to complete the Project in full accordance with all applicable laws and regulations and suitable for the Owner's intended purposes.

5.10.2 The Design-Builder, on behalf of itself and its design Team, specifically acknowledges and agrees that the Owner shall have the discretion to determine whether the 100% Construction Documents comply with the requirements of the Contract Documents.

5.11 Applicable Laws.

5.11.1 Statutory Authority. The Owner is awarding this Project pursuant to the design-build authority provided under Sections 22160, et seq., of the California Public Contract Code. The Design-Builder and the Owner acknowledge that they have reviewed this statutory authority, are familiar with all requirements, and will comply with applicable requirements and duties.

5.11.2 Compliance with All Applicable Laws. The Design-Builder and the Owner agree to comply with all Federal, State, Municipal and local laws, ordinances, rules, regulations, building codes and standards, orders, notices and requirements applicable to proper design and construction of this Project.

5.12 **Staffing Plan and Key Personnel.** The Design-Builder agrees that it will staff this Project in accordance with the staffing plan included in **Exhibit 5A**. The Staffing Plan will include a staff-level organizational chart indicating hierarchy and reporting responsibilities, as well as all Key Personnel.

5.12.1 **Key Personnel.** The Design-Builder will identify all "**Key Personnel**" in **Exhibit 5B** and will not remove any of its Key Personnel from this Project without the express written consent of the Owner, except for death, disability or departure of person from employment. The Owner's Project Manager will be able to request the removal of any person employed by the Design-Builder whom it believes is incompetent, improper or a hindrance to the design-build process. If any Design-Builder personnel become unavailable to work on the Project, or if the Owner requests that an employee be removed, the Design-Builder will propose a replacement person within 10 business days for approval by the Owner. The

recommended replacement person will have similar or better qualifications and experience, and must be approved in writing by the Owner. Additional Staffing and Key Personnel requirements are set forth in the Scope of Work in **Exhibit 3**.

5.13 Safety. The Design-Builder is the “Controlling Employer” as defined by Cal/OSHA and will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work and in accordance with the Design- Builder’s Health and Safety Program. The Design-Builder shall comply with all statutory safety requirements.

5.14 Project Baseline Schedule. The initial Project Baseline Schedule is attached as **Exhibit 6A**. This initial Project Baseline Schedule will be regularly updated in conjunction with Section 8.2 of this Agreement (at least monthly) and refined as project development and design proceeds. The updates to the initial Project Baseline Schedule will coordinate and integrate the progress of Design Services with milestone dates for design development and Construction Documents, procurement of long lead items and Subcontracts, and construction of major components of the Project. The initial Project Baseline Schedule, and all subsequent versions, shall include all major components of the Work and the Owner’s occupancy requirements projecting milestones for each of the following:

- Completion of Schematic Design
- Completion of 100% Construction Documents
- Submission of Final Design Package
- Issuance of Construction Phase Notice to Proceed
- “Substantial Completion” of the Project including Issuance of Final Certificate of Occupancy for the Project
- “Final Completion” of the Project

The Project Baseline Schedule must be prepared utilizing CPM scheduling software. The schedule must be broken down by activity and duration highlighting the critical path.

The schedule submitted by the Design-Builder and agreed to by the Owner shall be referred to as the Project Baseline Schedule, and shall not be adjusted except through Change Order under Section 9 for permitted delays as defined in Section 8. The Project owns all float in the Project Baseline Schedule and monthly updates. Therefore, there will not be any adjustments to the Contract Time until all Project float is exhausted and the critical path is impacted.

5.15 Taxes and Fees. The Design-Builder will pay all sales, consumer, use, gross receipts, and other similar taxes legally related to the work enacted at the time of Contract Award.

5.16 Consultants and Laboratories. The Design-Builder will make recommendations to the Owner regarding selecting, retaining and coordinating any additional professional services, special consultants and testing laboratories required for the Project.

5.17 Construction Administration.

5.17.1 Preliminary Notices. Within 5 business day's receipt, Design-Builder will forward to the Owner all Preliminary Notices (Civil Code sections 9300, 9500 and 9560) served on it by any person or entity entitled to assert a payment bond or stop payment notice claim. Design-Builder will maintain a written record of all Preliminary Notices received by it including the manner of receipt, date of receipt, and name and address of person or entity serving the Preliminary Notice. This written record will be turned over to the Owner at Project Close-out.

5.17.2 Supervision. The Design-Builder will manage, supervise and direct the Work using its best skill and judgment. The Design-Builder shall identify the ("Design-Builder's Manager") who will represent the Design-Builder with respect to the daily operations of the Project or may delegate authority to another representative. For simplicity, where this Agreement refers to the Design-Builder, Owner may assume that the Design-Builder's Manager is the appropriate point of contact. The Design-Builder's Manager may not be changed without Owner's written consent. The Design-Builder will also provide a qualified superintendent and assistant superintendent at the Project Site to properly supervise all of Design-Builder's employees, Subcontractors and their agents and employees, and other persons performing construction work and to ensure that the construction work is carried out in strict accordance with the Contract Documents. Both the superintendent and assistant superintendent shall be English language proficient and approved by Owner in its sole discretion. Neither the superintendent nor the assistant superintendent may have other project or business responsibilities or calls on his or her time other than this Project.

5.17.3 Discipline. The Design-Builder will always enforce strict discipline and good order among Design-Builder's employees, Design Professionals and Subcontractors and will not employ or contract with any unfit or unskilled person(s) or entities on this Project. The Design-Builder and its Design-Professionals and Subcontractors will comply with all Owner policies, standards, and procedures throughout the duration of this Project.

5.17.4 Construction Coordination. Before starting each portion of the construction work, the Design-Builder will: (i) coordinate with Owner's Project Manager, or his designee, to coordinate any necessary shut-down of equipment, and related operations issues; (ii) review and compare the various Contract Documents relative to that portion of the construction work, as well as the information furnished by the Owner, Design Professionals and Subcontractors that may affect proper installation of the work; (iii) field measure existing conditions related to that portion of the work; and (iv) observe any conditions at the site directly affecting that portion of the work.

5.17.5 Field Measurements. The Design-Builder will take field measurements to ensure proper matching and fitting of new construction with existing conditions at the Project Site.

5.17.6 Submittals. The Design-Builder and its Subcontractors shall provide timely submittal of all "Shop Drawings," "Product Data," "Samples" and

similar submittals (collectively referred to as “Submittals”) required by the Contract Documents, to the Architect of Record for review and approval. After approval by the Architect of Record, all Submittals will also be provided to the Owner for Owner’s information. All Submittals will be submitted in a sequence that avoids delays in the Project Schedule. Design-Builder will not submit any Submittal that is merely a tracing or copy of any of the Construction Documents. Each Submittal will be prepared by the Design-Builder and/or its Subcontractors or suppliers and will be submitted according to the Project specifications. No construction work will be performed without approval by the Design-Builder, as required. Regardless of the Submittal process, the Design-Builder remains responsible to the Owner for proper design and construction in compliance with all requirements set forth in this Agreement. Refer to OMR for additional provisions on Submittals.

5.17.6.1 Response Times to Design-Builder Submittals. Unless otherwise provided in the Contract Documents, Owner shall respond to reviews, approvals, and data needs to Design-Builder within 14 calendar days, provided that the Design-Builder shall, at Owner’s request, act reasonably in allowing Owner an extension of time to respond to review, approvals, and data based on a high volume of submittals or complexity of submittals under review at a given time.

5.17.6.2 Design-Build Subcontractors. All Submittals prepared by Design-Builder and its Subcontractors shall be reviewed and approved by the Design-Builder’s Architect of Record who will remain responsible to the Design-Builder and Owner for the design.

5.17.7 Coordination of MEP. Mechanical, electrical, plumbing, fire protection and fire and life safety work will be coordinated, as appropriate, to avoid obstructions, conflicts, keep openings and other passageways clear, overcome interference with structural, framing, and equipment conditions, and coordinate with other trades.

5.17.8 Layout and Protection. The Design-Builder is responsible for all layouts and will preserve and protect all line and grade benchmarks. Any additional surveying or layout caused as a result of Design-Builder or any of its Subcontractor’s failure to take the necessary precautions to protect the data will be performed at Design-Builder’s own cost and expense.

5.17.9 Materials and Equipment. All materials and equipment required under the Contract Documents will be new and of good quality. Once the Construction Documents are complete, no substitutions will be accepted on this Project unless: (i) the specified materials or equipment have been discontinued; or (ii) the Owner has approved the substitution through written Change Order. Materials and equipment will be furnished in ample quantities and procured in time to ensure uninterrupted progress of construction. All materials and equipment will be properly stored and protected as required by the Contract Documents and any loss or damage due to improper storage or protection will be borne by the Design-Builder.

5.17.9.1 Long Lead Items. The Design-Builder will collaborate with Owner to establish a program to expedite ordering and delivery of materials and equipment requiring long lead time.

5.17.9.2 Shipment and Deliveries. Prior to shipment, delivery and installation of materials and equipment, the Design-Builder will verify the Phase of completion of the Project with Owner to determine the availability of facilities for access, delivery, transportation and storage, and to correlate these observations with the requirements of the Contract Documents. All shipments and deliveries will be scheduled and coordinated in accordance with the most current approved site logistics plan and the most current approved Project Schedule.

5.17.9.3 Storage of Materials and Equipment. Storage of equipment and materials will be coordinated through the Design-Builder and the Owner. Design-Builder will maintain, or cause its Subcontractor's to maintain, all storage areas and will keep storage areas clean, safe, and secure. Storage areas shall also provide for proper protection of all stored materials and equipment from all forms of corrosion. Design-Builder must request and receive Owner's approval, granted at Owner's sole discretion, for offsite storage. Any materials or equipment stored offsite will be insured or stored in a bonded warehouse. The risk of loss will remain on the Design-Builder for all materials and equipment stored off-site.

5.17.9.4 Risk of Loss. All construction work stored at the Project Site, or work related to the preparation or delivery of materials or equipment to the Project Site, will remain at the risk of the Design-Builder or appropriate insurance carrier until Final Completion of the Project.

5.17.9.5 Maintenance. The Design-Builder will provide all maintenance for systems and equipment at its own costs and expense until Substantial Completion.

5.17.10 Correction of Work. At any time prior to Final Completion, Owner may require Design-Builder to correct work that does not comply with the Contract Documents. Design-Builder must correct such defective work immediately (unless otherwise approved by Owner), at its sole cost and expense, and in a manner that does not delay the completion of the Project.

5.17.11 Covering and Uncovering Work. Design-Builder must provide notice to Owner as to the schedule for covering Work so that the Owner has adequate time to observe Work to be covered. Owner may require any Work to be uncovered, whether or not prior information was provided as to the schedule for covering. Should Work so uncovered prove to be in non-compliance with the Contract Documents, the cost of uncovering, correction of the Work and re-covering shall be borne by the Design-Builder and the Owner is not be liable for any schedule recovery costs Design-Builder may incur. If Design-Builder provided adequate notice of

covering and the work is compliant with the Contract Documents, Design-Builder is entitled to a change order for any extra cost caused Design-Builder, including any cost of schedule recovery. Design-Builder may comply with the notice requirements of this section as part of the project schedules described in Section 8.2 of the Design-Build Agreement.

6. SUBCONTRACTORS

- 6.1 Procurement.** Those portions of the Work that the Design-Builder will not self-perform, or that will not be performed by Design Professionals or Subcontractors named in Design-Builder's proposal, will be performed by Subcontractors added during the course of the Work in accordance with the bidding process in Public Contract Code Sections 4100, et seq. All subcontracted work shall be performed under written subcontracts or purchase orders. The Design-Builder must furnish to the Owner in writing the names of the persons or entities the Design-Builder proposes to engage as subcontractors at least ten (10) days before said entity shall start any Work as a subcontractor. The Design-Builder may not contract with any subcontractor to whom the Owner has made reasonable and timely objection.
- 6.2 Written Agreements.** All subcontracts will be in writing and will bind the Subcontractor to the Design-Builder by the terms of the Contract Documents, and Subcontractor will assume toward the Design-Builder all the obligations and responsibilities that the Design-Builder assumes toward the Owner, including but not limited to obligations related to prevailing wage under California law. Each subcontract agreement will preserve and protect the rights of the Owner and Design-Builder under the Contract Documents with respect to the portion of the Work to be performed by the Subcontractor so that subcontracting the Work does not prejudice the Owner's rights. Where appropriate, the Design-Builder will require Subcontractors to enter into similar agreements with its tier-subcontractors. The Supplemental Conditions to this Agreement and all necessary Exhibits to this Agreement will be a part of each Subcontract Agreement.
- 6.3 Licensing Requirements.** All Subcontractors will be properly licensed for their respective portion of the Work.
- 6.4 Standard of Care.** All Subcontractors will warrant that they possess the design and/or construction licenses and expertise required for this Project and will use the same degree of care and skill customarily used by California state licensed professionals and contractors performing similar services for residential facilities construction in the state of California during the same time frame.
- 6.5 Responsibility.** Design-Builder assumes responsibility to Owner for the proper performance of the Work of Subcontractors and any acts and omissions in connection with such performance. Nothing in the Contract Documents is intended or deemed to create any legal or contractual relationship between Owner and any Subcontractor or Sub-Subcontractor, including but not limited to any third-party beneficiary rights. Design-Builder shall coordinate the activities of all Subcontractors.
- 6.6 Conflicting Terms.** All conflicts arising out of any subcontract agreement will be resolved in accordance with the order of precedence set forth in Section 3.4, and

this Agreement will take precedence over any terms and provisions in a subcontract.

6.7 Assignment. Each subcontract agreement will include an assignment provision. The assignment provision will allow for assignment of subcontracts to the Owner upon termination of the Design-Builder for cause or convenience provided: (i) Owner accepts assignment by written notification to the Subcontractor and Design-Builder; and (ii) assignment is subject to the rights of the surety, if any, obligated under a bond or bonds relating to this Agreement. The Design-Builder will not be responsible for acts and omissions of the Subcontractors that occur after the effective date of assignment.

6.8 Claims and Dispute Resolution. The Subcontractor will be bound to the same claims and dispute resolution procedures as set forth in Section 14.12 of the Supplemental Conditions.

6.9 Insurance. The Design-Builder may, at its discretion, require its Subcontractors, through written subcontract, to carry appropriate insurance and bonding. Design-Builder's insurance must satisfy all requirements set forth in **Paragraph 12** regardless of any subcontractor coverage.

6.10 Indemnity. The Design-Builder will cause its Subcontractors, through written subcontract, to include the indemnification provisions set forth in Section 11 and to indemnify and defend the Owner and its Board of Supervisors, the Owner, and Design-Builder from all claims, damages and liability pursuant to the provisions in Section 11, except to the extent that such subcontractors cannot legally be required to indemnify (e.g., with respect to design-related claims) .

6.10.1 Third Party Beneficiary. The Owner will be an express third party beneficiary to all design-build subcontracts.

6.10.2 Subcontracts. Subcontracts may be awarded on a lump sum or best value basis.

6.10.3 Contract Time. Subcontractors will be tied to similar provisions governing Contract Time under Section 8.

7. COMPENSATION

7.1 Preconstruction Phase Compensation. During the Preconstruction Phase of the Project, the Design-Builder will complete all Preconstruction Phase Services summarized in Section 5.2 of this Agreement and elaborated in more detail in the Scope of Work in **Exhibit 3**. Compensation for all Preconstruction Phase Services, including labor, materials, overhead, and profit of Design-Builder and all of its Design Professionals, and design-assist Subcontractors, will be on the basis of a lump-sum amount of _____ (\$_____) as full compensation to the Design- Builder for the Work called for in Step One ("Preconstruction Phase Price"). Payments will be made based on monthly invoices, with monthly invoices/payments based on the percentage complete of the scope of work for the Preconstruction Phase services.

- 7.2 Construction Phase Compensation.** During the Construction Phase of the Project, the Design-Builder will perform all Construction Phase Services, as summarized in Section 5.4 of this Agreement. Compensation for the Construction Phase Services will be on the basis of a lump sum of _____ (\$_____) which will cover all labor, equipment, materials, profit, overhead, taxes and any other expenses to be incurred by the Design-Builder ("Construction Phase Price"). Design-Builder will be paid pursuant to monthly invoices based on a Schedule of Values and percentage of completion of the Work and verifiable by an Inspector of Record and as stated in Section 10 Payments. The Preconstruction Phase Compensation and the Construction Phase Compensation shall, in the aggregate, constitute the Contract Price.
- 7.3 Construction Contingency.** The Contract Price includes a Construction Contingency (which is not to be used for trade damage or re-work) in the amount of _____ (\$_____). The Construction Contingency is Owner controlled. Use of the Construction Contingency requires Owner's prior approval. All unspent funds in the Contingency at Final Completion shall accrue to Owner. The Construction Contingency is available for Design-Builder to cover cost of the Work unanticipated by Design-Builder on the effective date of the Design-Build Agreement, such as unanticipated field conditions or differing site condition, re-sequencing the Work for the good of the Project, acceleration in the Schedule for improvement in the overall Contract Time, and Owner requested changes.
- 7.4 Contract Price.** The Contract Price is the sum of the Preconstruction Phase Price, Construction Phase Price, and Construction Contingency, and shall represent the sum total of all compensation due to the Design-Builder for all design and construction services under the Agreement. The Contract Price for this Agreement is the lump sum of _____ (\$_____).
- 7.5 Design-Builder's Fee.** The Design-Builder's Fee is included in the Contract Price. However, the Design-Builder's Fee of ____% can be applied to the direct cost of the construction in the event of contingency work and approved change orders. Design-Builder will not be entitled to Design-Builder's Fee for work necessitated by its own substandard workmanship, errors or omissions.
- 7.6 Design-Builder Allowances.** Design-Builder may propose additional allowance, including appropriate allowances for defined items of Work that cannot be appropriately quantified and estimated at the time the Design-Build Agreement is executed, only with specific approval of Owner. Each such item of Work will be covered in a separate line item and have a clear description of what is covered by such allowance. Allowance items will be converted to, and included as, typical contract work by Change Order once conditions exist that allow them to be properly quantified and priced. Allowance items that cannot reasonably be quantified and estimated before the allowance work begins will be reconciled based on the actual cost of the allowance Work. If the actual cost of the Work for any item of Work covered by an allowance will be greater than the amount of the allowance, Design-Builder will so notify Owner and if Owner authorizes the allowance Work in a Change Order, the Construction Phase Price will be

increased by such difference with an additional agreed upon amount for overhead and profit. If the cost of any item to which such an allowance applies is less than the amount of the allowance, Owner may issue a Change Order decreasing the Construction Phase Price by the sum of the amount of such difference and the mark-up for overhead and profit on the difference.

8. CONTRACT TIME

8.1 Contract Time. The Design-Builder must achieve Final Completion of the Work using best practical safe speed to achieve Final Completion as soon as reasonably possible. The Contract Time is the time allotted for the Design-Builder to achieve Substantial Completion and Final Completion of the Work. Completion of the Preconstruction Phase must be achieved within _____ (_____) calendar days from issuance of the Notice to Proceed for the Preconstruction Services. Substantial Completion must be achieved within _____ (_____) calendar days from issuance of the Notice to Proceed for the Construction Phase Services. Final Completion must be achieved within _____ (_____) calendar days of achieving Substantial Completion. The Design-Builder must also achieve all specific milestone completion dates as set forth in the Project Baseline Schedule in Exhibit 6A.

8.2 Monthly Project Schedules. The Design-Builder will create monthly updates of the initial Project Baseline Schedule, referred to as "Monthly Project Schedules," incorporating activities and schedule updates of the Design Professionals and Subcontractors on the Project as necessary to reflect the status of design and construction and projected milestone dates for Substantial Completion and Final Completion. The Design-Builder will provide for Owner's approval information in an agreed upon format, and as requested by the Owner, for the scheduling of times and sequences of operations required for its Work in coordination with the work of Owner's employees and separate contractors, if any.

8.2.1 3 Week Look-Ahead Schedules. The Owner will require the Design-Builder, with the assistance of its Design Professionals and Subcontractors, to create 3 Week Look-Ahead Schedules for the performance of upcoming Work and document all Work performed during the prior 3 week period. The Design-Builder will require its Subcontractors and Design Professionals to continuously monitor the Monthly Project Schedule and 3 Week Look-Ahead schedules to understand the timing, phasing and sequencing of operations of their respective work with other Work being performed at the Project. The 3 Week Look-Ahead Schedules are to be used as a working tool to evaluate any schedule slippages and collaborate on methods for labor efficiency. Work flow will be scheduled based on providing information, material and resources as required by the user of the information, material or resources, optimizing the flow of Work and reducing bottlenecks and activity that will not advance the Project Schedule. The Design-Builder will provide Owner with copies of the 3 Week Look-Ahead Schedules and will meet with Owner to review and coordinate with any work being performed by Owner's separate contractors. Design-Builder shall request input from Owner on 3 Week

Look-Ahead Schedules, as necessary, no less than one week before the 3 Week Look-Ahead Schedule submission date.

8.3 Prosecution of the Work. The Design-Builder will commence the Work within 5 days of receipt of a Notice to Proceed by the Owner and receipt of performance bond. Design-Builder will be expected to diligently prosecute and complete its Work pursuant to the most approved current Monthly Project Schedule.

8.3.1 Schedule Slippage. The Design-Builder will notify Owner and the Owner within 72 hours of any slippage in the Monthly Project Schedule as a result of its Work and must submit a detailed recovery plan for evaluation and approval by Owner. All costs associated with the recovery, which shall provide for completion of the Project within the Contract Time, will be the responsibility of the Design-Builder unless the Design-Builder is entitled to an extension of time under Section 8.4

8.3.2 Acceleration. The Owner may direct the Design-Builder and its Subcontractors and Design Professionals to work overtime in order to accelerate the Project schedule. If the Design-Builder and its Subcontractors and Design Professionals are not in default under any of the terms or provisions of this Agreement, their respective subcontracts and/or agreements, or any of the other Contract Documents, the Owner will pay the Design-Builder, its Subcontractors and Design Professionals for actual additional wages and/or billable rates paid, if any. All additional wages and billable rates paid will be subject to audit.

8.4 Permitted Delays. If the Design-Builder is delayed, obstructed, hindered or interfered with in the commencement, prosecution or completion of the Work by: (i) any negligent act or omission of the Owner, or Owner's separate contractors; (ii) "**Owner Elected Changes;**" (iii) delay caused by a "**Force Majeure Event;**" (iv) "**Unforeseen and Differing Site Conditions;**" and/or (v) "**Owner's Suspension of the Work,**" such that the critical path of the most current, approved Project Baseline Schedule is impacted extending the Final Completion Date, the Substantial Completion Date, or any specific milestone completion dates, then the Design-Builder will be entitled to an extension for the same period of time that the Design-Builder was delayed provided that the delay, obstruction, interference or hindrance was not caused, in whole or in part by any fault, neglect, act or omission of the Design-Builder, its employees, Design Professionals, Subcontractors or suppliers.

Notwithstanding the above, the Design-Builder will not be entitled to an extension of time unless the Design-Builder provides the Owner with notice in writing of potential delay, obstruction, hindrance or interference within 72 hours of the discovery of the potential delay. Design-Builder shall follow up with all practical speed, but not later than 7 days after the initial notice, to summarize the cause or causes of the delay, and demonstrates that it could not have anticipated or avoided the delay, obstruction, hindrance or interference and has used all available means to minimize the consequences of the delay. The Design-Builder may also be entitled to an adjustment in the Contract Price based on demonstration that the delay and resulting adverse material effect in the cost of

completing the Work, after implementation of all reasonable mitigation, materially adversely affected Design-Builder's cost of completing the Work.

- 8.5 Liquidated Damages.** The Owner and Design-Builder acknowledge and agree that if Design-Builder fails to complete Work within the time set forth in section 8.1, the Owner will suffer damages that are both extremely difficult and impracticable to ascertain. Therefore, Owner and Design-Builder agree that, liquidated damages shall be enforced on failure to achieve Substantial Completion in the amount of \$3,000 per day, and failure to achieve Final Completion in the amount of \$1,000 per day.

Payment of liquidated damages represents a reasonable estimate of fair compensation for the losses that reasonably may be anticipated as a result of Design-Builder's delays in completing the Work. Owner and Design-Builder acknowledge and agree that these liquidated damages provision will be Owner's sole remedy for delay damages caused by Design-Builder's failure to achieve Substantial Completion or Final Completion, within the time set forth in Section 8.1, and/or any of the specific milestone completion dates. Nothing contained in this Section 8.5 shall preclude Owner from recovery for actual damages unrelated to Design-Builder's delays, including, but not limited to, claims for actual losses incurred due to breach of contract, negligence, defective work, injury to persons or property or third-party claims.

9. CHANGES

- 9.1 Change Orders.** A Change Order is a mutually agreed upon written order adjusting the Design-Builder's Scope of Work, Contract Price, Contract Time or any combination. A Change Order may come through an Owner Elected Change, or Design-Builder's request. All changes in the Work will only be authorized by two (2) Authorized Owner Executives and one (1) owner representative Project Manager. An Owner Elected Change, or Owner executed Change Order and performed under the applicable conditions of the Contract Documents. A Change Order signed by the Design-Builder and Owner indicates an agreement to any adjustment in the Contract Time, and/or Contract Price, which includes all Costs of Work plus Fee, and that the adjustments in the Change Order fully and completely resolves any claim by Design-Builder for additional compensation or time arising from or related to the subject of the Change Order. Change Orders for additional Work that was not considered as part of the Contract Price are limited to the following circumstances and therefore may impact the Contract Price, and may or may not impact Contract Time:

9.1.1 Owner Elected Changes

9.1.2 Force Majeure Events

9.1.3 Unforeseen and Differing Site Conditions

9.1.4 Owner's Suspension of the Work as defined in Section 16.2

9.1.5 Changes in applicable law

- 9.2 Owner Elected Change.** The Owner will initiate a Change Order by providing the Design-Builder with a written summary of the Owner Elected Change. Within 10

business days of receipt of an Owner Elected Change, or such other mutually-agreed upon period for more complex or extensive Owner Elected Changes, the Design-Builder must submit a complete cost proposal for the revised scope to the Owner, as well as any proposed change in Contract Time under Section 8. The Owner will review and evaluate the Design-Builder's cost proposal and any proposed change in Contract Time, before presenting the Design-Builder with a proposed Change Order at either its regular weekly meeting or a special meeting.

- 9.3 Design-Builder Initiated Changes.** The Design-Builder must provide the Owner written notice of a proposed change within 5 business days of discovery of the facts or circumstances giving rise to the proposed change order. The Owner will meet and discuss the proposed change either at its regular weekly meeting or at a special meeting.
- 9.4 Submission.** All claims for additional compensation or extensions in Contract Time will be presented in writing to the Owner for review. The Owner will either discuss the proposed change at its regular weekly meeting or will call a special meeting to meet and review the proposed change. At the conclusion of the meeting an Owner Elected Change may be issued. Consistent with Owner's internal procedures, a change order request may require approval from Owner's Board of Trustees. All Change Orders must be approved by the Owner before the expense is incurred. Additive Change Orders will affect Contract Price and may affect Contract Time, subject to Section 8. Deductive Change Orders will affect Contract Price and may affect Contract Time.
- 9.5 Continued Performance.** No Work will be allowed to lag pending the adjustment through Change Order, but will be promptly executed as directed through Owner Elected Change, even if a dispute arises. Disputes will be resolved in accordance with Section 14.12. Failure of the Design-Builder to provide the Owner with notice of its disputed claim and to submit the written claim within 10 business days of completion of the Work in dispute constitutes an agreement on the part of the Design-Builder that it will not be paid for its Work. No claim will be considered after the Work in question has been performed unless a written Change Order has been executed or timely written notice of claim has been made by the Design-Builder. The Design-Builder will not be entitled to claim or to bring suit for damages, whether for loss of profits or otherwise, on account of an omission of any item or portion of Work covered by the executed Change Order.
- 9.6 Omitted Work.** If the Design-Builder omits any portion of the Work that is included in the Contract Documents, the Owner will have the right to withhold from payments due or to become due to the Design-Builder in an amount which, in the Owner's opinion, is equal to the value of portion of the Work that was omitted until the omitted Work is performed.
- 9.7 Contract Price Reduction.** The Owner may also reduce the Contract Price to reflect back-charges or payments withheld pursuant to the Contract Documents upon written notice, and 48 hours opportunity to cure.
- 9.8 Contract Time Impacts and Extended Costs.** The Design-Builder will not reserve a right to assert impact costs, extended job site costs, extended overhead, constructive acceleration and/or actual acceleration beyond what is allowable

under Section 8 and claimed in a proposed change order under Section 9.3. No claims will be allowed for impact, extended overhead costs, constructive acceleration and/or actual acceleration due to a multiplicity of changes and/or clarifications. Nothing contained in this Section will be construed as restricting the rights and remedies of Design-Builder in violation of Civil Code section 2782 or Public Contract Code section 7102. If this provision is determined to conflict with Public Contract Code section 7102 or Civil Code section 2782, this provision will be reformed to provide the greatest protection to the Owner under the law.

- 9.9 Surety.** All changes, additions or omissions in the Work ordered through an Owner Elected Change, or Change Order are part of the Work and will be performed and furnished in strict accordance with all of the terms and provisions of the executed Change Order and the other Contract Documents. The Design-Builder will keep its surety informed of all modifications to this Agreement. The obligations of Design-Builder's surety are not to be reduced, waived or adversely affected by the issuance of Change Orders even if the Design- Builder fails to inform the surety of the Change Order(s) and the Owner will not be required to obtain consent of the surety to the Design-Builder or any of its Subcontractors.

10. PAYMENT

- 10.1 Progress Payments.** In accordance with Public Contract Code section 20104.50, the Owner will make monthly progress payments on all undisputed Work performed within 45 calendar days of receipt of an approved monthly invoice and a monthly progress report that were properly submitted pursuant to the procedures set forth in this Section and as further established by the Owner. Each invoice will be submitted on the forms provided by the Owner, will include an itemized list of the work performed, be based on the percentage of the Work completed, and provide a level of detail to allow Owner to make a fair and reasonable estimate of the value of Work completed. The invoice must be made out to the owner, certified by the Design-Builder, and inspector of record verifying the percentage complete. . Before making payment, the Owner will review the invoice for accuracy of the Work completed to date. No such payment shall be required to be made when, in the judgment of the Owner, the request for payment is in excess of the percentage of Work completed. Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation into the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment stored off of the site at a location agreed upon in writing, provided that such off-site location shall be a bonded warehouse or secured by other means acceptable to the Owner.

- 10.1.1 Schedule of Values.** Design-Builder must submit a draft schedule of values to Owner for approval prior to the first payment and within ten days after Notice to Proceed. As approved by Owner, the schedule of values shall be used for preparing future estimates for partial payments to the Design-Builder, and shall list the major items of Work, including materials and services, with a cost fairly apportioned to each item so that the total of the prices for all items equal the lump sum price. The schedule of values shall be by area, structure, or other logical division of work. The insurance, bond, Elevator, Car Lift, Doors & Frames, Finish Hardware, Cabinets,

Appliances, Windows, Scaffolding and overhead costs will be carried on separate line items and the Design-Builder shall be entitled to bill for reimbursement for costs related to Elevators and Car Lifts as such costs are incurred, subject to documentation of such costs, prior to the Elevators and Car Lifts being installed in the premises. The schedule of values shall not be considered in determining payment or credit for additional or deleted work. The final Schedule of Values will be added to the Design-Build Agreement as Exhibit 4B.

10.1.2 Monthly Progress Reports. Each monthly invoice must include a report providing an overall status of the Project's progress, and any concerns or impacts.

10.1.3 Evaluation of Invoice. The Owner will review the invoice based on the approved schedule of values, monthly progress report, on-site observations, inspector of record review of percentage complete, and evaluation of the Work, and on the data and documentation substantiating the invoice. Upon request, Design-Builder must substantiate the cost for any or all items and provide additional level of detail, including quantities of work. Based on that review, Owner will pay all undisputed items. An approval of an invoice is subject to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion of the Work and to specific qualifications expressed by the Owner. Owner is entitled to rely on the accuracy and completeness of the information furnished by the Design-Builder and approval will not be deemed to represent that a detailed examination, audit, or arithmetic verification of the documentation submitted with the Design-Builder's invoice has been made or that exhaustive or continuous on-site inspections have been made to verify that the Work is in accordance with the Contract Documents. A payment by Owner does not represent that Owner has ascertained how or for what purpose the Design-Builder has used money previously paid.

10.1.4 Retention. The Owner will withhold 5% of each progress payment during the Project. Retention will be withheld until the Project achieves Final Completion.

10.1.4.1 Substitution of Securities. To the extent required by law, Owner will consider and approve reasonable and appropriate requests under Public Contract Code section 22300 for substitution of securities or establishment of an escrow account for retention. Nothing contained in this Section will prevent Owner from withholding payment when grounds exist for doing so under the Contract Documents.

10.1.5 Change Orders. Applications for payment may include requests for payment on account of changes in the Work that have been properly authorized and work has been completed. When billing for any change order work, copies of the approved change order must be attached to the pay application.

10.1.6 Stored Materials and Equipment. Stored materials and equipment may be included in the invoice provided the materials and equipment are properly stored in accordance with Section 5.17.9.3 and a complete invoice accompanies the invoice. Owner will not pay for materials or equipment storage.

10.1.7 Stop Payment Notices and Claims. Upon submission of an invoice, the Design-Builder warrants that all Work included in the invoice has been performed in accordance with the Contract Documents and to the best of the Design-Builder's knowledge, information and belief, title to all Work covered by the invoice will pass to the Owner free and clear of all stop payment notices, claims, security interests or encumbrances. Design-Builder will provide executed conditional waivers and release of claims for all amounts included in the invoice. Waivers must comply with the requirements of California Civil Code section 8132.

10.1.8 Owner Payment to Design Professionals, Subcontractors and Suppliers. The Owner will not have an obligation to pay a Design Professional or Subcontractor for work performed unless required by law. However, if the Owner is not in default of payment provisions and receives a stop payment notice or has reason to believe that the Design-Builder is not paying its Design Professionals or Subcontractors and suppliers, the Owner may make payment of sums due to Design-Builder through joint check or pay Design Professionals and Subcontractors and suppliers directly and withhold those payments from Design-Builder. The Owner shall not exercise any rights granted under this Section prior to issuing a notice to the Design-Builder and granting the Design-Builder a reasonable opportunity to cure.

10.2 Final Payment. Upon Final Completion of the Work, the Design-Builder will submit a final payment application. All prior progress estimates will be subject to correction in the final invoice. If items remain to be completed at that time, then the Design-Builder in conjunction with Owner will revise the Final Punch List and will include 150% of the estimated cost to complete each remaining item. The Owner may withhold from the final payment 150% of the estimated cost to complete the Work. The amount retained by the Owner for Final Punch List items will be released to the Design-Builder as each item is completed. Upon Final Completion of the Project, and submission of Owner's Release of Claims form, by Design-Builder, final payment of all remaining retention, if unencumbered, will be paid on all undisputed amounts no later than 30 calendar days after either Final Completion of the entire Project or recordation of a Notice of Completion (whichever is later), and in no event later than the time prescribed under Section 7107 of the Public Contract Code.

10.2.1 Contract Price Reduction. Upon Final Completion of the Project, the Owner after written notice to Design-Builder may reduce the Contract Price to reflect costs charged to the Design-Builder, back-charges or payments withheld pursuant to the Contract Documents.

10.2.2 Evidence. Before issuance of final payment, Owner may request satisfactory evidence that: (i) all payrolls, materials bills and other

indebtedness connected with the Work have been paid or otherwise satisfied; (ii) insurance required by the Contract Documents will remain in force after final payment and will not be canceled or allowed to expire until at least 30 calendar days prior written notice has been given to the Owner; (iii) the Design- Builder knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (iv) surety, if any, has consented to final payment, (v) Owner has received all close-out documents required by the Contract Documents; and (vi), other data establishing payment or satisfaction of obligations, such as releases and waivers of stop payment notices, claims, security interests or encumbrances arising out of this Agreement have been received.

10.2.3 Payment Not Acceptance of Work. Approval of an invoice (final or otherwise) or partial or entire use or occupancy of the Project by the Owner will not be used as conclusive evidence that the Work was properly performed or constitute acceptance of Work that is not in accordance with the Contract Documents.

10.3 Payments Withheld. In addition to the 5% retention, the Owner may withhold payments due to the Design-Builder that may be necessary to cover: (i) stop payment notice claims; (ii) defective Work not remedied; (iii) failure of Design-Builder to make proper payments to its Design Professionals, Subcontractors or suppliers; (iv) damage to Design Professionals, Subcontractors or third party caused by Design-Builder; (v) amounts due to the Owner for claims against Design-Builder; (vi) failure to provide Owner with timely schedule updates under Section 8.2; (vii) disputed amounts in the invoice; and (viii) legally permitted penalties.

10.4 Waiver of Claims. Acceptance of final payment by the Design-Builder constitutes a waiver of claims by Design-Builder and its Design Professionals, Subcontractors and suppliers except for those previously made in writing and identified by the Design-Builder as unsettled at the time of final invoice. The Design-Builder must acknowledge this waiver on a form provided by the Owner prior to Design-Builder's receipt of the final payment.

11. INDEMNIFICATION

11.1 Indemnification. Design-Builder shall defend, indemnify, and hold harmless San Mateo County, and its trustees, officers, employees and agents, and their successors and assigns (collectively referred to as "Indemnitees") from and against all third party claims, demands, liability, suits, actions, costs or expenses (including reasonable attorneys' fees) for any and all loss or damage, including, but not limited to, personal injury or property damage, arising out of or resulting from allegations of:

- a. The failure or alleged failure by any Design-Build Team member to comply with any applicable law, order, citation, rule, regulation, standard, ordinance or statute, including rules and regulations imposed by Cal-OSHA and caused by the act or omission of the Design-Builder;

- b. The negligent act, omission, misconduct, or fault, or the alleged negligent act, omission, misconduct or fault of any Design-Build Team member;
- c. Any and all claims by any governmental or taxing authority claiming unpaid taxes based on gross receipts, purchases or sales, the use of any property or income of any Design-Build Team member with respect to any payment for the Work made to or earned by the Design-Build Team member under the Contract Documents;
- d. Any and all stop payment notices and/or liens filed in connection with the Work, including all expenses and attorneys' fees incurred by the Owner in discharging any stop payment notice or lien, provided that the Owner is not in default on payments owing to the Design-Builder with respect to such Work;
- e. Failure of the Design-Builder to comply with the Insurance provisions set forth in Paragraph 12;
- f. Any release of hazardous materials:
 - 1. Brought onto the Site by any Design-Build Team member; or
 - 2. Where the removal or handling involved negligence, willful misconduct, or breach of Contract by any Design-Build Team member; and
 - 3. Nothing in this section shall require the Design-Builder to defend, indemnify or hold harmless the Indemnitees for the Indemnitees' sole negligence, willful misconduct, or active negligence.

11.2 Indemnification for Infringement of Intellectual Property Rights.

The Design-Builder agrees to fully defend, indemnify, and hold harmless the Indemnitees against any demand, claim, cause of action, suit, proceeding, or judgment that design, service, method, or product called for and provided by the Design-Builder or any Design-Build Team member (herein called "deliverables") that infringes or allegedly infringes any patent, copyright, trademark, service mark, trade dress, utility model, industrial design, mask work, trade secret, or other proprietary right of a third party (collectively "Intellectual Property Right").

The Design-Builder shall pay any and all costs of such defense and settlement (including interest, fines, penalties, costs of investigation, costs of appeals, and attorney 's fees), and will pay any and all costs and damages finally awarded against any of the Indemnitees. The Design- Builder shall have the exclusive right to conduct its legal defense.

In the event that any deliverable furnished hereunder, or called for in any design or services provided under this Agreement, is in any suit, proceeding, or judgment held to constitute an infringement on any third party's Intellectual Property Right, and its use is enjoined, the Design- Builder shall, at its own expense accomplish the following:

- a. Procure the fully paid-up, irrevocable, and perpetual right for the Owner to continue using the deliverable;
- b. Modify the deliverable; or

- c. Provide for the replacement of the deliverable with an alternative product that is functionally equivalent to the deliverable.

If the Design-Builder is unable to provide the Owner with one of the forms of relief described above, the Design-Builder shall also reimburse to the Owner the total paid by the Owner for the deliverable that is held to constitute an infringement.

11.3 Indemnification for Design Defects. To the fullest extent permitted by law, the Design-Builder shall fully defend (with counsel acceptable to the Owner), indemnify, and hold harmless Indemnitees from any and all claims, demands, causes of action, damages, costs, expenses (including legal, expert witness, and consulting fees and costs), losses, or liabilities of whatsoever nature that arise out of, pertain to, or relate to the negligence, recklessness or willful misconduct of the Design-Builder, its employees, any of the Design-Builder's Design Professionals or Subcontractors of any tier, or anyone for whom Design-Builder or any of its Design Professionals or Subcontracts may be liable, in relation to any of their design services, including but not limited to errors, omissions, inconsistencies, inaccuracies, deficiencies, or other defects whether or not contained in the Construction Documents furnished by the Design-Builder, and whether or not such errors, omissions, inconsistencies, inaccuracies, deficiencies, or other defects were also included in the Contract Documents provided by the Owner. The Design-Builder agrees that, because the Bridging Contract Documents are preliminary and conceptual in nature and are subject to review and modification by the Design-Builder, such documents shall not be deemed a "design furnished" by the Owner or any of the other Indemnitees, as the term "design furnished" is used in Civil Code Section 2782, and that this clause is governed by Civil Code Section 2782.8. In addition, Design-Builder shall defend the Owner, or pay for the costs of such defense, to the extent of Design-Builder's proportionate percentage of fault for the underlying claim. In addition, Design-Builder shall defend the Owner, or pay for the costs of such defense, to the extent of Design-Builder's proportionate percentage of fault for the underlying claim.

11.4 Exception. The indemnification provisions in this Section 11 will extend to claims occurring after this Agreement is terminated as well as while it is in force. However, Design-Builder will not be obligated to indemnify or provide a defense to the Indemnitees from claims arising from the active negligence or willful misconduct of Indemnitees. If any of the Indemnitees are actively negligent, the Design-Builder will continue to indemnify and provide a defense to Indemnitees but only to the extent and in proportion to the degree that the Indemnitees were not actively negligent. Nothing contained in Section 11 will be construed to impose any obligation in conflict with the provisions of Civil Code section 2782 and/or Insurance Code section 11580.04. In the event of a conflict, the provision conflicting with Civil Code section 2782 and/or Insurance Code section 11580.04 will be modified to limit Design-Builder's obligations to the greatest extent permitted by law. The section does not apply to the duty to defend claims arising from design defects, which obligation is addressed separately in Section 11.3. The section does not apply to the duty to defend claims arising from design defects, which obligation is addressed separately in Section 11.3.

11.5 Duty to Defend. Except as otherwise provided herein, the Design-Builder will defend all claims defined in Section 11.1 at its own cost, expense and risk and pay

and satisfy any judgment or decree that may be rendered against any Indemnatee arising out of a claim, or reimburse Indemnatee(s) for any and all legal expenses incurred by any of them in connection with the claim or in enforcing the indemnity granted in this section. The duty to defend will apply, and Design-Builder will be required to furnish a defense, regardless of whether the matter has been adjudicated. The Owner shall have the right to approve counsel defending it, which approval will not be unreasonably withheld. Following the resolution of any such dispute, the Owner shall reimburse Design-Builder for the costs incurred by Design-Builder for any Indemnitees' defense, to the extent of the Owner's proportionate responsibility or fault, as determined by court or arbitrator or as agreed by settlement or otherwise.

12. INSURANCE AND BONDS

12.1 Design-Builder's Insurance Requirements. The Owner and its trustees, officers, employees, agents, and volunteers will be a named additional insured under all of Design-Builder's insurance policies except errors and omissions policies and workers' compensation policies. Likewise, the Design-Builder will require all Subcontractors to name the Owner, and its trustees, officers, employees, agents, and volunteers as additional insured on all Subcontractor policies except errors and omissions policies and workers' compensation policies. Before commencement of the Work, the Design-Builder will provide certificates of insurance and endorsements per the following as evidence of insurance and Owner's, and Owner's additional insured status under those policies.

12.2 DBE Provided Insurance

12.2.1 General DBE shall procure and maintain for the duration of this Contract at its sole cost and expense, insurance against claims which may arise from, or in connection with, the performance of the Work by, or on behalf of (whether directly or indirectly), the DBE.

Each insurance policy required by this Contract shall be endorsed to state that coverage shall not be suspended, voided, canceled, or reduced in coverage or in limits except after thirty (30) days' prior written notice has been given to the Owner, except that ten (10) days' prior written notice shall apply in the event that cancellation for non-payment of premium.

12.2.2 Commercial General Liability: \$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit; and

12.2.3 Workers' Compensation and Employers' Liability: Workers' Compensation limits as required by the California Labor Code and Employers Liability limits of \$1,000,000 per accident; and

12.2.4 Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage.

12.2.5 Builder's Risk/Course of Construction: DBE shall procure and maintain in effect a Builders' Risk (course of construction) insurance for completed value of the Work. No deductible shall exceed \$100,000, per occurrence except for earthquakes, earth movement or flood. Builder's Risk Policies shall contain the following provisions:

12.2.5.1 Owner and Subcontractors of every tier shall be named as an additional insured loss payee; and

12.2.5.2 Coverage shall contain a mutual waiver of subrogation in favor of the Design Build Entity, Subcontractors at every tier, and the Owner, its officials, employees, agents, and only to the extent of onsite activity, design or engineering professionals.

12.2.5.3 Owner and Design Build Entity will share equally in payment of all deductibles from a covered event due to act of God events including earthquake, earth movement, and flood.

12.2.6 Contractor's Pollution Liability Insurance on an occurrence basis, with limits of at least \$10,000,000 per occurrence and \$10,000,000 policy term aggregate for bodily injury, property damage, cleanup costs and claim expenses, arising at or emanating from the Project Site arising from all operations performed on behalf of the Design Build Entity. Subcontractors will provide Pollution Liability coverage as required by their specific Subcontract.

Such insurance shall provide liability coverage for both sudden and gradual releases arising from the Work. CPL policy shall name Owner, Design-Build Entity and all Subcontractors of all tiers as insureds.

Contractor shall be responsible at its own expense for an obligation for each loss payable under this insurance that is attributable to the Design-Build Entity's acts, errors, or omissions, or the acts, errors, or omissions of any of its Subcontractors, or any other entity or person for whom Design-Build Entity may be responsible. The amount of the obligation shall be based on the amount of the initial Contract Price, as follows:

12.2.6.1 The portion of the obligation applying to the Design-Build Entity or Subcontractor shall be the responsibility of the Design Build Entity and shall remain uninsured. Design Build Entity shall promptly pay its charge pertaining to any loss. The Owner, in addition to its other remedies, may back charge Design-Build Entity for the obligation and deduct the back-charged amount from Design-Build Entity's next progress payment or final payment.

12.2.7 Professional Liability Errors and Omissions Insurance: \$1,000,000 per claim/\$2,000,000 aggregate limit

12.2.8 Waivers

12.2.8.1 Owner and Design-Build Entity waive all rights against each other

and any of their consultants, including Construction Manager, Bridging Architect and their consultants to the extent of their onsite exposure, separate contractors, if any, Subcontractors, Designers, agents and employees, each of the other, and any of their contractors, subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by Builder's Risk insurance obtained pursuant to paragraph 1.2 above, or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner in good faith. Owner or Design-Build Entity, as appropriate, shall require of the separate contractors, if any, and the Subcontractors, Designers, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to any individual or entity even if such individual or entity (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium directly or indirectly, and (c) whether or not such individual or entity had an insurable interest in the property damaged. The only exceptions to this waiver of subrogation are for claims that may be covered by any Professional Liability insurance to the extent that insurance responds to any loss.

12.2.8.2 Owner waives subrogation rights under the Contractor's Pollution Liability Policy, to the greatest extent permitted by law, against all other project participants, including Design-Build Entity and Subcontractors of any tier.

12.3 Performance and Payment Bonds. Prior to commencement of the Construction Phase and within 10 days of the Notice to Proceed, the Design-Builder will furnish a payment bond and a performance bond to the Owner, each in the amount equal to 100% of the amount of the Construction Phase Price, covering all construction work and warranties, on the forms acceptable to the Owner. The payment and performance bonds will be provided prior to commencement of Work. The surety supplying the bonds must be an admitted surety insurer, as defined in Code of Civil Procedure Section 995.120, authorized to do business as a surety in the State of California and satisfactory to the Owner. Failure to furnish the required payment and performance bonds to the Owner constitutes a default under this Agreement and the Owner will have all of the rights and remedies provided under the Contract Documents and afforded by law including, but not limited to, forfeiture of the bidder's bid deposit or bond to the Owner and the Owner may award this contract to another responsive and responsible bidder, or may call for new bids. Full compensation for furnishing the payment and performance bonds are included in the Contract Price.

12.4 Payment of Subcontractors. Without limiting the responsibilities of Design-Builder and its surety under the terms of this Agreement, the Design-Builder and its surety agree to promptly pay all lawful claims of Subcontractors, materialmen, laborers, persons, firms or corporations for labor or services performed or materials, supplies, machinery equipment, rentals, fuels, oils, tools, appliances,

insurance and other items furnished, used, or consumed in connection with the prosecution of the construction work including Change Orders, and will indemnify and save harmless the Owner, and Owner from and against all liability loss, damage and expense, including interest, costs and attorneys' fees, which the Owner, and Owner and/or its surety may sustain by reason of Design-Builder's or its surety's failure to do so.

13. WARRANTY OF THE WORK

- 13.1 Design-Builder Warranty.** The Design-Builder shall provide a two-year warranty on all furnished labor and materials, commencing on the date of Final Completion of all Work under the Agreement. Design-Builder shall perform all required corrective work, and shall be responsible for the cost of all labor, materials, equipment, transport, installation and re-testing required for the corrective work. Moreover, in the event that corrective work is required under the Design-Builder Warranty, a one-year warranty shall apply to the corrected work covering any discrepancies and defects in the corrected work that are discovered after the corrected work is accepted.

The Design-Builder Warranty shall warrant that:

- a. The Work conforms to the requirements of the Contract Documents;
- b. All Design Services furnished under the Agreement conforms to all professional engineering principles generally accepted as standards of the industry in the State of California and complies with the standard of care of a reasonable professional that is performing the same or similar work, at the same time and locality and under the same or similar conditions;

The construction Work furnished under the Agreement is free from defects in workmanship, and was performed in a workmanlike manner and conforms to the standards of care and diligence normally practiced by recognized construction firms performing construction of a similar nature in the State of California, and conforms to the requirements of the Bridging Contract Documents and the 100% Construction Documents, as these documents may have amended during the course of Work under the Agreement;
- c. Materials and equipment furnished under the Contract Documents are of good quality and new;
- d. The Facilities are fit for the purposes intended in the Contract Documents;
- e. The Facilities shall be free of defects in design, material, and workmanship; and
- f. The Facilities shall function up to the standards set forth in the Bridging Contract Documents and all other reliability standards established in the Contract Documents.

- 13.2 Subcontractor Warranties.** The Design-Builder shall obtain one year warranties commencing on the date of Final Completion of all Work under the Agreement from all Subcontractors and Design-Build Team members providing design services, labor, equipment, materials, supplies and maintenance equipment; require all such warranties to be executed in writing for the benefit of the Owner

and enforce all warranties for the benefit of the Owner, if so directed by the Owner. Warranties by subcontractors are in addition to, and do not replace or reduce, any other warranty obligations stated in the Contract Documents, including but not limited to the Design-Builder Warranty. All such Subcontractor warranties from Design-Build Team members shall run directly to and be enforceable by the Design-Builder and the Owner, and their respective successors and assigns.

The Design-Builder hereby assigns to the Owner all of the Design-Builder's rights and interest in all warranties that are received by the Design-Builder from any Subcontractor or Design-Build Team members unless necessary for enforcement. All such warranties shall survive Final Completion, acceptance, final payment, and termination of the Agreement if the stated warranty period extends beyond the Final Completion, acceptance, final payment, and termination of the Agreement.

13.3 Manufacturers' Warranties. The Design-Builder shall obtain manufacturers' warranties for all equipment procured and installed on the Project and shall assign all such warranties to the Owner prior to Final Completion. Owner and Design-Builder shall agree upon acceptable warranty periods for each item of equipment prior to the procurement of the equipment of not less than one year from Final Completion. Manufacturers' warranties shall all commence on Final Completion.

13.4 Remedy. The Design-Builder shall remedy, at its own expense, any failure to conform to the warranty requirements set forth in this Section 13 Warranty of the Work. If the Design-Builder fails to remedy any such failure within a mutually agreeable timeframe after receipt of notice (or immediately in the case of an emergency), the Owner shall have the right in its sole discretion to replace, remove, or otherwise remedy the failure at the Design-Builder's expense.

13.4.1 Notification to Design-Builder. The Owner shall notify the Design-Builder, in writing, within a reasonable time after the discovery of any failure to conform to the warranty requirements set forth in this Section 13, Warranty of the Work.

13.4.2 Warranties Do Not Limit the Design-Builder's Liability. The foregoing warranties are in addition to all rights and remedies available under the Agreement or applicable law, and shall not limit the Design-Builder's liability or responsibility imposed by the Agreement or applicable law with respect to the Work, including:

- a. Liability for design defects;
- b. Latent construction defects;
- c. Strict liability;
- d. Negligence; and
- e. Fraud.

13.5 Assignment of Warranty. Upon providing written notice to the Design-Builder, the Design-Builder's warranties, including all warranties from Subcontractors and Design-Build Team members that have been assigned to the Design-Builder, shall

be immediately assignable by the Owner to any entity, in the Owner's sole discretion.

14. OWNERSHIP AND USE OF DOCUMENTS

- 14.1 Ownership of Construction Documents.** The drawings, specifications and other documents prepared by or on behalf of the Design-Builder pursuant to this Agreement (including, without limitation, the Construction Documents), including all drafts, and the copyright thereto, shall at all times be and remain the property of the Owner, whether or not the Project for which they are made is commenced, so long as the Owner shall not be in default of its obligations under this Design-Build Agreement. Neither the Design-Builder nor any subcontractor or material or equipment supplier shall own or claim a copyright in such drawings, specifications and other similar or related documents, and Owner shall retain all common law, statutory, and other reserved rights with respect thereto. All copies of such documents shall be delivered by the Design-Builder to the Owner upon completion of the Work or upon the prior termination of this Agreement. Such drawings, specifications and other documents shall be used by the Design-Builder solely with respect to this Project and shall not be used by the Design-Builder or any subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner in each instance.
- 14.2 Ownership under Termination.** Should the Owner elect to terminate this agreement, the Design-Builder agrees that (1) for itself and its Architect, that the Owner will be the sole and absolute owner of the 100% Construction Documents, and shall have the right to use or to modify the 100% Construction Documents in any manner it wishes, including, without limitation, using the 100% Construction Documents in construction contracts with third parties; and (2) there shall be no limitation on the Owner by the Design-Builder should the Owner subsequently engage the Design-Builder's Architect of Record for services on this project or for other services.
- 14.3 Confidentiality.** The documents, materials and information prepared by or on behalf of, or furnished to the Design-Builder in connection with the Work, including, without limitation, the RFP, the Contract Documents, the 100% Construction Documents and any other plans, specifications, drawings, shop drawings or details relating to the Project and the terms and provisions of this Agreement, shall be kept strictly confidential by the Design-Builder. The Design-Builder shall not disclose, furnish or make known or accessible to or use for the benefit of anyone, any such documents, materials or information or make available any reports, recommendations and/or conclusions which the Design-Builder may make for the Owner to any person, firm or corporation or use such documents or information in any manner whatsoever without obtaining the Owner's prior written approval in each instance unless such disclosure is required by law. The Design-Builder acknowledges that the Owner will incur significant damages in the event of a breach by the Design-Builder of its obligations under this Section 14.3. The provisions of Article 14 shall survive the expiration or prior termination of this Agreement.

- 14.4 Licensing.** The Design-Builder, its Design Professionals and Design-Build Subcontractors are granted a limited, non-exclusive, license to use and reproduce applicable portions of the Design and Construction Documents and other documents prepared by the Design-Builder for use in the performance of the Design-Builder's Work under this Agreement. Additionally, the Owner grants the Design-Build Team members a non-exclusive, perpetual license for use, or display of the Project information solely for either educational or promotional purposes.
- 14.5 Exception.** Nothing contained in Section 14.1 will be construed to limit the Design-Builder, its Design Professionals and Design-Build Subcontractors rights, title and interest to continue to use their respective general design details that each of them uses or has used on multiple projects, or new standard design details that were developed during design of this facility.
- 14.6 Copies.** All copies made under this license will bear the statutory copyright notice, if any, shown on the Design and Construction Documents and any other documents prepared by the Design-Builder, its Design Professionals and Design-Build Subcontractors. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project will not be construed as publication in derogation of the Owner's copyright or other reserved rights and interests.

15. ACCOUNTING RECORDS

- 15.1 Audit.** In accordance with Government Code Section 8546.7, records of both the Owner and the Design-Builder will be subject to examination and audit by the State Auditor General or the County of San Mateo for a period of 10 years after final payment. Design-Builder will make available to the Owner any of the Design-Builder's documents related to the Work and project accounting records immediately upon request of the Owner as set forth in Section 15.2.
- 15.2 Records.** The Design-Builder will keep full and detailed accounts and exercise controls as may be necessary for proper financial management under this Agreement. In addition to the State Auditor rights above, the Owner will have the right during normal business hours to audit and copy or request copies of the Design-Builder's documents related to this Project including, but not limited to, accounting records, books, estimates, correspondence, instructions, drawings, receipts and invoices for materials, supplies and equipment, temporary facilities, etc., contracts, purchase orders, vouchers, memorandums, Change Orders and all substantiating documentation such as general conditions and general requirements, certified payroll, and other data relating to the Cost of Work, the Contract Price in order to evaluate accuracy and completeness of Design-Builder's billing. The Design-Builder will preserve all Project records for a period of at least 3 years after final payment, or for such longer period as may be required by law. The Design-Builder will incorporate Section 15 accounting and auditing provisions into all Design Professional agreements and Subcontracts and require Design Professionals and Subcontractors to keep detailed and accurate accounting records for their portion of the Work for a period of at least 3 years.

16. TERMINATION, SUSPENSION AND ABANDONMENT

- 16.1 Termination for Fault.** The Owner may terminate this Agreement upon not less than 7 calendar days' written notice and an additional 7 calendar days to commence curing upon the Design-Builder's failure to perform any material obligation under the Agreement. The Design-Builder will have 7 days after receiving reasonably detailed written notice thereof from the Owner, provided that, if the nature of the breach is such that it will reasonably require more than 7 days to commence curing, the Owner may not terminate so long as Design-Builder (1) promptly, upon receipt of notice to cure, submits a plan to initiate all actions reasonably necessary to correct the default and prevent its reoccurrence, and (2) Owner accepts Design- Builder's plan, and (3) Design-Builder commences and continuously implements the plan to Owner's satisfaction.

The Owner may also terminate this Agreement without notice or opportunity to cure upon the occurrence of the following Design-Builder events of default: 1) the failure to obtain and maintain any contract security instrument, 2) the failure to achieve acceptance of the Facilities through the acceptance process, and 3) the insolvency or bankruptcy of the Design-Builder. The notice will set forth the reason for termination and the effective date of termination. If the Owner terminates this Agreement for cause, the Design-Builder will not be entitled to any further payments except for work already completed. Unless otherwise limited herein, nothing stated in this paragraph will prevent the Owner from pursuing and recovering any damages allowed by law from Design-Builder arising out of a breach of this Agreement. If a court of competent jurisdiction deems that termination of the Design-Builder was wrongful or otherwise improper, the termination will be deemed a termination for convenience under Section 16.3.

- 16.2 Suspension By Owner.** If the Project is suspended by the Owner and not due to any fault of the Design-Builder or any of its Design Professionals or Subcontractors, the Design- Builder will be entitled to receive payment for all Work performed as of the effective date of the suspension, plus any documented reasonable direct costs incurred by Design-Builder to implement the suspension. The written notice of suspension will set forth the reason for suspension and the effective date of suspension. If the Project is resumed, and provided that the suspension was not caused or due to any fault or neglect of the Design-Builder or any of its Design Professionals or Subcontractors, then the Design-Builder's compensation will be equitably adjusted through Change Order under Section 9.1.4 and the Contract Time will be equitably adjusted for the additional time required to achieve Final Completion.

- 16.3 Termination For Convenience.** The Owner may terminate this Agreement, in whole or in part, for convenience upon 30 calendar days' written notice at any time. The notice will state the extent of the termination and effective date of termination. For convenience termination during the Preconstruction Phase and through the issuance of a Notice to Proceed for Construction Phase, the Design-Builder will be entitled to receive payment for the percentage of Preconstruction Phase work completed, not to exceed the Preconstruction Phase lump sum amount. For convenience termination following the issuance of a Notice to Proceed for Construction Phase Services, the Design-Builder will be entitled to payment for all Work performed as of the effective date of termination based on the compensation provisions set forth in Section 7 of this Agreement, as well as reasonable demobilization costs and unmitigable costs incurred by termination. In

the event that the Owner terminates the Design-Build Agreement for convenience, Design-Builder must assign all subcontracts executed pursuant to the performance of the Design-Build Agreement to Owner promptly upon request. Design-Builder is entitled to compensation for all authorized payments made to any subcontractor prior to termination, which payments will be credited to Owner under the respective subcontracts, plus Design-Builder's approved costs that are incurred prior to any termination. In addition, in the event Owner terminates the Design-Build Agreement for convenience, Design-Builder must execute any documents establishing Owner's ownership of completed Work upon request. Any dispute over the amount to be paid upon termination will be resolved in accordance with the claims procedures set forth in Section 14.12 of the Supplemental Conditions.

17. MISCELLANEOUS PROVISIONS

- 17.1 Governing Law.** This Agreement will be governed and construed in accordance with the laws of the State of California without regard to the principles of the conflict of laws. The Parties agree that any claim or enforcement of a judgment or alternative dispute award will be filed with the appropriate court of law in San Mateo County.
- 17.2 No Solicitation of Employees.** Owner will not solicit or employ any of Design-Builder's Project personnel for the duration of the Project.
- 17.3 Assignment.** The Owner and Design-Builder, respectively bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, successors, assigns and legal representatives of the other party with respect to all covenants of this Agreement. Neither Owner nor Design-Builder will assign this Agreement without the written consent of the other, and such consent will not be unreasonably withheld or delayed.
- 17.4 Severability.** The terms and conditions of this Agreement will be interpreted in accordance with their plain meaning, and not strictly for or against either party. Any rule of construction or interpretation to the contrary will be of no force or effect with respect to this Agreement. If a court of competent jurisdiction finds any term or provision of this Agreement to be void or unenforceable for any reason that term or provision will be deemed severed, and the remainder of the Agreement will remain in full force and effect according to its terms and provisions, to the maximum extent permitted by law.
- 17.5 No Third Party Beneficiaries.** Nothing contained in this Agreement creates a contractual relationship with, or a cause of action in favor of any third party against, either the Owner or Design-Builder. Owner and Design-Builder acknowledge and agree that the obligations of the Design-Builder are solely for the benefit of the Owner and are not intended in any respect to benefit any other third parties.
- 17.6 Waiver.** No action or failure to act by the Owner or Design-Builder will constitute a waiver of a right or duty afforded them under this Agreement, nor will such action or failure to act constitute approval of or acquiescence in a breach of this Agreement, unless specifically agreed to in writing.

17.7 Time is of the Essence. Time is of the essence with respect to each and every provision of the Agreement and any subsequent Change Orders.

17.8 Notice. Any notice required to be given by this Agreement will be in writing and deemed effective upon personal delivery, or 1 business day after being sent via registered or certified mail return receipt requested or by overnight commercial courier providing next business day delivery and addressed to the following respective parties:

To Owner: County Executive Office Hall of Justice
Attention: <Name>
400 County Center, 1st Floor
Redwood City, CA 94063

Copy to: Office of the San Mateo County Counsel
Attn: Brian Wong, Deputy County Counsel
400 County Center, 6th Floor
Redwood City, CA 94063

To Design-Builder: <Name/Address>

17.9 Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original, and all of which when taken together will constitute one instrument. The counterparts of this Agreement, and all amendments, must be manually executed, but the exchange of copies of this Agreement and of manually executed signature pages by facsimile or by electronic mail as an attachment in portable document format (.pdf) to the addresses provided in this Agreement shall constitute effective delivery of this Agreement as to the Parties and may be used as a fully binding original in lieu of the original Agreement for all purposes.

17.10 Modifications. All modifications to the terms and conditions set forth in this Agreement must be in writing and signed by an authorized representative of both parties.

17.11 Section Headings. The Section headings contained in this Agreement are for reference purposes only and will not in any way affect the meaning or interpretation of this Agreement.

17.12 Legal Citations. Legal citations to statutory requirements are included in the Agreement for convenience and an omission of any statutory requirement will not relieve the Design-Builder or its Design Professionals and Subcontractors from compliance with the law.

17.13 Exhibits. The Supplemental Conditions and following Exhibits are incorporated by reference into the Agreement as though set forth in full.

17.14 Entire Agreement. This Agreement represents the entire integrated agreement between the Owner and Design-Builder and supersedes all prior oral and written negotiations, representations or agreements by the parties with respect to this subject matter. This Agreement is entered into as of the Effective Date first written above.

COUNTY OF SAN MATEO

DESIGN-BUILDER

Signature

Signature

Printed Name

Printed Name

Exhibit 1
SUPPLEMENTAL CONDITIONS
DESIGN-BUILD AGREEMENT

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SUPPLEMENTAL CONDITIONS TO DESIGN-BUILD AGREEMENT

1. DEFINITIONS

1.1 “Agreement” means the Design-Build Agreement between County of San Mateo and Design-Builder, dated _____, 2024, including the Supplemental Conditions to the Agreement and all Exhibits.

1.2 “Allowance” is a non-binding, good faith, estimate of all Cost of Work attributable to the Allowance item carried in the Contract Price. An Allowance is necessary in certain circumstances because the item, components and/or systems are anticipated but undefined at the time that the Contract Price is set, and may require further development by the Architect of Record, Owner, or other Design Professionals.

1.3 “Architect of Record” is the entity retained by the Design-Builder as the lead Design Professional that is responsible for the design of the Project. The Architect of Record for this Project is _____.

1.4 “Background Documents” means any existing drawings Owner provides to Design-Builder for reference. Background Documents are not part of the Contract Documents.

1.5 “Bridging Contract Documents” is defined in Section 4.2

1.6 “Change Order” is defined in Section 9.1.

1.7 “Construction Documents” means the documents developed by Design-Builder that establish all requirements for work during the Construction Phase of the Project. The Construction Documents will be informed by, and be consistent with the Bridging Contract Documents.

1.8 “Construction Phase Services” means all labor, materials, equipment and appurtenances provided by the Design-Builder and its Subcontractors to complete construction of the Project in strict accordance with the 100% Construction Documents and other components of the Contract Documents, ensure that all mechanical and support systems, as applicable, are properly and fully operational, and obtain all required certificates, approvals, and temporary or permanent permits for occupancy, use and completion of the Project have been issued by appropriate governmental authorities.

1.9 “Contract Documents” are set forth in Section 3.1 of the Agreement and include the Agreement inclusive of Exhibits, the Supplemental Conditions to the Agreement, and the Construction Documents, to be developed by the Design-Builder, and all subsequent contract modifications issued after execution of the Agreement, such as Change Orders.

1.10 “Contract Price” is set forth in Section 7 of the Agreement and reflects the sum total of all compensation due to the Design-Builder for all design and construction services under the Agreement. The Contract Price is the sum of the Preconstruction Price and the Construction Price.

1.11 “Contract Time” is the time within which the Design-Builder must achieve Final Completion of all Work on the Project. The Contract Time is set forth in Section 8.1. **“Daily Construction Reports”** means the daily log kept by the Design-Builder that describes the weather, each Subcontractor’s work on the site, the number of workers per trade, identification of equipment, construction work accomplished, problems encountered, and other similar relevant data such as accidents, service connections or disconnections, construction work stoppage, delays, material and labor shortages, and any applicable orders or requests from governing authorities.

1.12 “Design-Builder, Design-Build Entity” the entity that will enter into the Agreement with Owner and that will be the single point of accountability to Owner for delivering the services and the Project.

1.13 “Design-Build Subcontractors” means all Subcontractors that contract directly with the Design-Builder to perform design and construction services related to a specific trade or discipline.

1.14 “Design-Build Team” includes the General Contractor, Design Professionals and Design-Build Subcontractors members of the Design-Builder performing Preconstruction Phase Services and Construction Phase Services for the Project.

1.15 “Design Guide Illustrations” mean the drawings prepared by Owner and made a part of the Bridging Contract Documents.

1.16 “Design Professionals” means the Architect of Record, the structural engineer, and any other design consultants who are performing design services for the Project on behalf of Design-Builder but do not perform any Construction Phase Services.

1.17 “Design Services” includes all required design work required to complete the Project, consistent with the Bridging Contract Documents.

1.18 “Effective Date” means the date that the Design-Builder and Owner entered into the Agreement, which is set forth on page 1 of the Agreement.

1.19 “Facilities” means all equipment, products, materials, controls, software, both individually and collectively as a completed system.

1.20 “Final Completion” occurs on the date when Design-Builder has achieved Substantial Completion; all Final Punch List items have been completed and accepted by the Owner; all close-out documentation required under the Project specifications has been transmitted to the Owner’s Project Manager.

1.21 “Final Completion Date” is set forth in Section 8.1 of the Agreement.

1.22 “Final Design Package” is defined in Section 5.3 of the Design-Build Agreement.

1.23 “Final Punch List” is the punch list prepared by the Design-Builder in conjunction with the Owner after completing a Project walk-through upon Substantial Completion.

1.24 “Force Majeure Event” means an Act of God as defined under Public Contract Code section 7105, civil disobedience, an act of terror, or unavoidable casualties beyond the

Design-Builder's control, and not due to any act or omission of the Design-Builder or its Design Professionals and/or Subcontractors, that necessarily extends the Final Completion Date.

1.25 "Hazardous Materials and Substances" means any substance, product, waste, or other material of any nature that is or becomes listed, regulated or addressed under one or more of the following Environmental Laws: (1) CERCLA, (2) Hazardous Materials Transportation Act, (3) RCRA, (4) the Clean Water Act, (5) the Toxic Substance Control Act, (6) HSAA, (7) the California Porter-Cologne Water Quality Control Act, (8) the California Hazardous Waste Management Act, (9) the California Safe Drinking Water Act, (10) the California Waste Management Act, and (11) any other Federal or State law or local ordinance concerning hazardous, toxic or dangerous substances, wastes, or materials.

1.26 "Key Personnel" means the Design-Builder's personnel identified as key to the overall success of the Project, and, at a minimum, including those positions defined as Key Personnel in the RFQ and RFP. The Design-Builder's Key Personnel are specifically identified in **Exhibit 5B**.

1.27 "Owner" means San Mateo County - Parks.

1.28 "Owner-Elected Changes" are changes in the Work directed by the Owner that may impact the Contract Price, and Final Completion Date and are not: (i) reasonably inferable from the Bridging Contract Documents or Contract Documents; or (ii) required as a result of design errors and omissions.

1.29 "Owner's Minimum Requirements" mean the performance specifications and prescriptive specifications prepared by Owner and made a part of the Bridging Contract Documents.

1.30 "Owner's Suspension of Work" is when the Owner elects to suspend progress of Work on the Project under Section 16.2 of the Agreement.

1.31 "Party" or "Parties" means the Design-Builder or the Owner in the singular or the Design-Builder and Owner collectively who have executed the Agreement.

1.32 "Preconstruction Phase Services" means all services, labor, materials, equipment and appurtenances provided by the Design-Builder and its Subcontractors to prepare a Preliminary Design for the Project, as further defined in **Exhibit 3**.

1.33 "Preconstruction Survey" Design-Builder's deliverable comprised of a comprehensive preconstruction survey of the Work site as described in more detail in the Scope of Work.

1.34 "Product Data" includes illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Design-Builder's Subcontractors illustrating materials or equipment for some portion of the construction work.

1.35 "Project" means the completion of the Preconstruction Phase Services and Construction Phase Services.

1.36 "Project Site" means that certain real property located at 9500 Pescadero Creek Rd, Loma Mar, CA 94021 commonly known Memorial County Park.

1.37 "Project Baseline Schedule" means the approved critical path schedule prepared by the Design-Builder for performance of all Work within the Contract Time, as approved by the Owner.

1.38 "Punch List" is a list prepared by the Owner's Project Manager, when Design-Builder considers a portion of the construction work substantially complete, that includes all items that are incomplete or unsatisfactorily finished and a schedule for their completion.

1.39 "Request for Information" ("RFI") means written requests prepared by the Design-Builder and/or its Subcontractors requesting clarification about design or raising coordination issues that impact design, cost or schedule. RFIs will be handled internally by the Design-Builder, with copies to the Owner.

1.40 "Samples" means physical examples of materials, equipment or workmanship required by the Construction Documents that are used to establish standards by which the construction work will be judged.

1.41 "Shop Drawings" means drawings, diagrams, and other data specially prepared by the Design-Builder and/or its Subcontractors, manufacturers, suppliers or distributors to demonstrate the way in which materials and equipment will perform in accordance with the design illustrated in the Construction Documents. Shop Drawings will be approved by Design-Builder, but Owner will also review.

1.42 "Site Logistics Plan" will provide phasing, establish the areas of the site that will be used for trailers, deliveries, staging, ingress and egress, location of major pieces of equipment, storage containers, stockpiles of materials, clearways used for emergency access, environmental controls, trailers for Design-Builder and Owner, parking facilities for Design- Builders, employees, and Owner, access road, fence line, etc.

1.43 "Specifications" means the component of the Construction Documents separate from the drawings, addressing all required materials, products and equipment, their installation and operation, quality assurances, reference standards, submittal requirements etc., not already addressed in the OMRs. The Specifications shall be developed in conjunction with the Construction Specifications Institute ("CSI") 16 Division/Three Part Format, as established in the CSI Manual of Practice.

1.44 "Staffing Plan" means the plan submitted by the Design-Builder with its proposal.

1.45 "Subcontractor" means all contractors under direct contract with Design-Builder for performance of a portion of the construction work as well as any lower tier-subcontractors. The term subcontractor includes Design-Build Subcontractors.

1.46 "Submittals" includes Shop Drawings, Product Data, Samples and similar documentation required by the Project specifications or other Construction Documents.

1.47 "Substantial Completion" means completion of all Preconstruction Phase Services and Construction Phase Services in accordance with the Contract Documents, and sufficient

for the Owner to occupy and use the Facilities for their intended purpose; notwithstanding the foregoing, incomplete minor Punch List work that does not affect Owner's ability to occupy and use the Facilities for their intended purpose shall not prevent achievement of Substantial Completion.

1.48 "Substantial Completion Date" The Substantial Completion Date is set forth in Section 8.1 of the Agreement.

1.49 "Supplemental Conditions" means the Supplemental Conditions to the Agreement.

1.50 "Unforeseen Site Conditions" or "Differing Site Conditions" means discovery of unknown, unforeseen or differing site conditions, as defined in Public Contract Code section 7104, any unknown existing conditions in concealed spaces of the renovated portions of the Project.

1.51 "Work" means all work, including all services, labor, materials, equipment, tools, and appurtenances, necessary to complete the Preconstruction Phase Services and Construction Stage Services, as described in, or reasonably inferable from, the Contract Documents.

2. WORK RESTRICTIONS

2.1 Work Hours. All construction work will be performed between 7:00 a.m. and 7:00 p.m. unless further restricted by permit requirements or compliance with the US Department of Interior Department of Fish and Wildlife protective measures for marbled murrelet for construction during their breeding season. Design-Builder will provide Owner with written notice for any construction work that will need to be performed after hours. All after hour construction work requires Owner's written approval prior to commencement.

2.2 Signs. Design-Builder shall not erect any sign on the Project Site without the prior written consent of the Owner, which shall be at the sole discretion of the Owner.

2.3 Parking. Design-Builder works parking must be in Owner approved area.

2.4 Staging and Storage. Material will be stored only in the areas indicated on the Site Logistics Plan. Limited short term staging areas will be designated in the Site Logistics Plan.

3. SOILS INVESTIGATIONS AND HAZARDOUS MATERIALS

3.1 Site Inspection. The Design-Builder is required to examine the Project Site before submitting its proposal. Design-Builder may not rely exclusively on Background Documents to determine the status of soil conditions, except for issues involving Unforeseen and Differing Site Conditions.

3.2 Hazardous Materials and Substances. The Design-Builder is responsible for the proper handling, removal and disposal of the "**Hazardous Materials or Substances**" that were pre-existing at the Project Site before commencement of construction and are part of the Work. The Design-Builder will not be considered the generator of any pre-existing

hazardous materials on the Project Site. The Design-Builder is also responsible for all Hazardous Materials and Substances that it either requires through the Project design specifications or that are brought onto the Project Site by its employees and/or Subcontractors.

3.2.1 Unsafe or Hazardous Conditions. If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from any Hazardous Materials or Substances encountered at the Project Site, the Design-Builder will stop any part of the Work that it deems unsafe until corrective measures have been taken. If the Design-Builder fails to take corrective measures, the Owner may do so. Failure on the part of the Owner to stop unsafe practices, or the Owner's efforts to take corrective measures after the Design-Builder fails to do so, does not relieve or diminish the Design-Builder's safety responsibilities.

3.2.2 Verification. Upon discovery of any Hazardous Material or Substance that has not previously been identified in the Design-Builder's Hazardous Material Survey, the Design-Builder will immediately notify the Owner's Project Manager and stop all construction work in the area if necessary. The Design-Builder will retain the services of a licensed laboratory to verify the presence or absence of the preexisting Hazardous Material or Substance. If preexisting Hazardous Material or Substance is discovered, the Design-Builder will contact its licensed laboratory to verify that the condition has been rendered harmless before construction work recommences in the affected area. The Design-Builder may be entitled to an adjustment in the Contract Time if the Hazardous Material or Substance is deemed an Unforeseen or Differing Site Condition and impacts the Final Completion Date of the Project. If the Hazardous Material or Substance was pre-existing the Owner will pay for the services of the licensed laboratory. The Design-Builder will reimburse the Owner for the services of the licensed laboratory if the Hazardous Material or Substance was brought on-site by the Design-Builder or any of its Subcontractors or vendors.

4. SAFETY

4.1 Signs. The Design-Builder will erect and maintain, as required by existing conditions and performance of the construction work, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

4.2 Weekly Safety Meetings. The Design-Builder will hold weekly meetings with its Subcontractors to review Subcontractor compliance with the Design-Builder's Health and Safety Program.

4.3 Daily Jobsite Walks. The Design-Builder will also conduct daily jobsite inspections to verify that the construction work is being performed in a safe and workmanlike manner and in accordance with the Design-Builder's Health and Safety Program. The Design-Builder will provide written notice to its Subcontractors demanding immediate correction of any known safety violation.

5. QUALITY ASSURANCE AND QUALITY CONTROL

5.1 Quality Control Plan. The Design-Builder will prepare and submit to the Owner's Project Manager for approval a plan that describes the procedures and methods the Design-Builder will utilize to control the quality of the construction work. The Quality Control Plan must be approved before the start of construction. The Owner reserves the right to require revisions of the Quality Control Plan that are necessary to ensure the specified quality of the construction work. The Design-Builder will assign appropriate site personnel to oversee quality control. No change in the Quality Control Plan will be implemented without prior Owner approval. At a minimum the Quality Control Plan will provide information regarding the following:

5.1.1 Quality control supervision and document control.

5.1.2 Identification of personnel for required training and qualification activities.

5.1.3 Procedures for testing and inspections that identify individual inspection or testing points and acceptance criteria, and include provisions for recording results and the responsible inspection/test personnel.

5.1.4 Procedures for identifying what applicable technical and quality requirements will be required of vendors supplying materials, parts and services to ensure compliance with the Contract Documents.

5.1.5 Procedures for receiving, inspecting and accepting materials and equipment. The procedures will include, at a minimum, examination of the physical condition for compliance with the Contract Documents, purchase order and/or subcontract agreement, and identifying and processing any non-conforming goods.

5.1.6 Provisions for identifying and timely remedying non-conforming or defective construction work.

5.1.7 Documentation control to maintain records of the activities included in the Quality Control Plan. All documentation will be submitted to the Owner as part of the close-out documentation for this Project and therefore must be logically organized and indexed for reference.

5.2 Design Quality Control Plan. The Design-Builder will prepare and submit to the Owner for approval a Design-Quality Control Plan that describes the procedures and methods the Design-Builder will utilize to control the quality of the construction work. The Design Quality Control Plan must be approved before the start of construction. The Owner reserves the right to require revisions of the Design Quality Control Plan that are necessary to ensure the specified quality of the construction work. The Design-Builder will assign appropriate site personnel to oversee quality control. No change in the Design Quality Control Plan will be implemented without prior Owner approval.

5.3 Manufacturer's Field Services. To the extent required, the Design-Builder will engage in a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. All manufacturers'

field service reports must be in writing and included as part of the records turned over to Owner during close-out.

5.3.1 Quality Control Reports. The Design-Builder will keep daily Quality Control Reports throughout the duration of the construction process certifying that the relevant area of the construction work has been inspected. The Quality Control Reports will be prepared, signed and dated by the personnel identified as the supervisor in the Quality Control Plan and will include, at a minimum, the following information: Identification of the material, equipment or component that was inspected and indicate, if applicable, if the Submittals have been reviewed and approved by the Design-Builder.

5.3.2 Indicate that materials and/or equipment comply with the requirements of Section 5.19.9 of the Agreement and are properly stored, if not yet installed.

5.3.3 Indicate that the construction work has been coordinated under Sections 5.19.4 and 5.19.5 of the Agreement, that all required preliminary work has been inspected by Quality Control personnel, was properly performed, and that the area is ready to receive subsequent construction work. If the construction work is not acceptable, provide a written description of any rework required in the area inspected with an explanation of the cause of the re-work (including which Subcontractors are involved), any cost involved in the required re-work, and the expected completion date of the required re-work.

5.4.4 Results of any off-site testing or quality control work and any required further actions.

5.4.5 Other necessary information including, directions received, quality control problem areas, deviations from the Quality Control Plan, construction deficiencies encountered, Quality Control meetings held, acknowledgement that as-built drawings have been updated (if applicable), corrective direction given by Quality Control personnel, and corrective action taken by the Design-Builder.

5.5 Quality Control Design Reports. The Design-Builder will keep daily Quality Control Design Reports throughout the duration of the construction process certifying that the relevant area of the construction work has been inspected. The Quality Control Design Reports will be prepared, signed and dated by the personnel identified as the supervisor in the Design Quality Control Plan. Quality Control Design Reports should be submitted as part of each design submittal.

5.6 Test and Inspection Logs. The Design-Builder will maintain an on-site inspection log that is accessible by the Owner. The log will document all tests and inspections performed at the Project during construction. In addition, the Design-Builder will prepare a sequentially numbered record of tests and inspections. The record of tests will include the following information:

5.6.1 Request for Inspection.

5.6.2 Date test or inspection was conducted.

5.6.3 Identity of testing agency or special inspector.

5.6.4 Description of the construction work tested or inspected.

5.6.5 Identification of any drawings or applicable details on the Construction Documents or Submittals that were used during testing and inspection.

5.6.6 Date that the test or inspection was concluded and the date that the results were transmitted to Owner.

6. TEMPORARY FACILITIES

6.1 Temporary Electricity. Design-Builder will provide, maintain, and pay for temporary electrical power at the Project Site for construction purposes and trailers.

6.2 Temporary Communications. The Design-Builder will provide, maintain, and pay for all applicable communications and data service connections for field offices pursuant to **Exhibit 6B** of the Agreement, including all installation and connection charges.

6.3 Temporary Water. The Design-Builder will provide, maintain, and pay for all required potable water required for construction field personnel as well as water required for and in connection with the construction operations such as dust control. Unnecessary waste of water will not be permitted. The Design-Builder must use special hydrant wrenches for opening and closing fire hydrants in lieu of pipe wrenches.

6.4 Temporary Fences. The Design-Builder will provide all necessary temporary fencing and gates required for the Project Site. Temporary fencing will be subject to restrictions in the use permit. The Design-Builder will maintain all fences through Final Completion of the Project. Gates are to remain closed and locked during off-hours.

6.5 Temporary Sanitary Facilities. Provide and maintain all required temporary toilets for use of all design and construction personnel and field labor at the Project Site through Final Completion of the Project. Location of temporary sanitary facilities will be approved by Owner's Project Manager prior to delivery. The Design-builder will provide at least 1 temporary toilet facility for every 20 persons. The Design-Builder will cause all design and construction personnel (including field labor) to use temporary sanitary facilities rather than Owner's facilities. All temporary sanitary facilities will comply with the Department of Health standards.

6.6 Temporary Barriers and Enclosures. Provide barriers to prevent unauthorized entry to construction areas, to allow for Owner's safe use of the Project premise, and to protect existing facilities and adjacent properties from damage from construction operations per Section 8.

6.7 Water Control. Design-Builder will grade the Project Site as required by the civil design included in the Construction Document. During construction, the Design-Builder will maintain all trenches and excavated areas free from water accumulation and will provide the necessary barriers to protect the Project Site from ponding, running water and soil erosion. The Design-Builder will provide for increased drainage of storm water and any

water that may be applied or discharged on the Project Site during performance of the construction work. All drainage facilities will be adequate to prevent damage to the construction work, Project Site, and adjacent property. Design-Builder will construct dikes, if necessary, to divert any increased runoff from entering adjacent property (except in natural channels), to protect Owner's facilities and the construction work, and to direct water to drainage channels or conduits. Design-Builder will provide ponding as necessary to prevent downstream flooding. Design-Builder shall be solely liable for any loss or damages resulting from Design-Builder's failure to comply with the provisions of the Dept. of Water Resources Best Management Practices and County requirements.

6.8 Pollution Control. The Design-Builder will provide a plan that meets the requirements of California Storm Best Management Practices (Stormwater Quality Task Force, 1993) to prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances and/or soil erosion during construction operations:

6.8.1 No sanitary wastes will be permitted to enter any drain or watercourse other than sanitary sewers. No sediment, debris, or other substance will be permitted to enter sanitary sewers without authorization of the receiving sanitary sewer service, and all possible best management practices will be taken to prevent materials from entering into any drain or watercourse.

6.8.2 In the event that dewatering of excavations is required, Design-Builder will obtain the necessary permits from local governmental authorities for discharge of the dewatering effluent. The Design-Builder will be responsible for assuring that water quality of the discharge meets the appropriate permit requirements prior to any discharge.

6.8.3 Erosion and sedimentation control practices will include installation of silt fences, straw wattle, soil stabilization, re-vegetation, and runoff control to limit increases in sediment in storm water runoff, including but not limited to, detention basins, straw bales, silt fences, check-dams, geo-fabrics, drainage swales, and sand bag dikes.

6.8.4 The construction work will be scheduled to expose areas subject to erosion for the shortest possible time, and natural vegetation will be preserved to the greatest extent practicable. Temporary storage and construction buildings will be located, and construction traffic routed, to minimize erosion. Temporary fast-growing vegetation or other suitable ground cover will be provided as necessary to control runoff.

6.9 Construction Equipment and Aids. Design-Builder will furnish, install, maintain, and operate all construction equipment required by the performance of the construction work. Construction aids include elevators and hoists, cranes, temporary enclosures, swing staging, scaffolding and temporary stairs. When sandblasting, spray painting, spraying of insulation, or other activities inconveniencing or dangerous to property or the health of design or construction personnel, Owner's staff, or the public are in progress, Design-Builder will enclose the area of activity to contain the dust, over-spray, or other hazard.

6.10 Traffic Control. The Design-Builder will provide a traffic control plan in accordance with the California Department of Transportation Traffic Manual as part of its Site Logistics set forth in **Exhibit 6B**. The Design-Builder will submit its traffic control plan to the

appropriate agency for approval, as necessary, before commencement of the construction work:

6.11 Removal of Temporary Facilities and Equipment. The Design-Builder will remove all temporary utilities, equipment, facilities, and materials before final inspection of the Project and clean and repair any damage caused by installation or use of temporary work restoring existing facilities to their original conditions.

7. SURVEYING

7.1 Field Engineering. The Design-Builder will employ a California State licensed civil engineer or land surveyor to provide field engineering services to establish benchmarks and line and grade for horizontal and vertical control.

8. DEMOLITION

8.1 Demolition Plan. Prior to commencing any required demolition work, the Design-Builder will submit a plan to the Owner's Project Manager for review and approval. Under no circumstances, can demolition interrupt the Owner's operations. The Design-Builder's plan, at a minimum, will address the following:

8.1.1 Identify areas that will require demolition and provide a schedule for those demolition activities that is coordinated with the Owner's operations and the approved Project Baseline Schedule.

8.1.2 Inventory materials and equipment that will be salvaged during demolition and whether the salvaged materials and equipment will be reused, returned to the Owner, or sold at fair market value on behalf of the Owner.

8.1.3 Document procedures for protecting the existing structure and/or building materials, equipment and components that are remaining, as well as protection plans for adjacent property and persons.

8.1.4 Document procedures for proper ventilation, noise, and dust control during demolition operations and clean-up after demolition is completed.

8.1.5 Document procedures for required disruption of any utility service as a result of demolition activities and a record of any utilities that are capped during the process. Any required shut-off or interruption of service must be approved in writing by the Owner 14 business days in advance, and all necessary water, emergency power, etc., must be in place prior to shut-off or disruption.

8.1.6 Provide for all required temporary sheeting, shoring, bracing or other structural support necessary to ensure stability of the existing structure or adjacent properties and prevent movement, settlement or collapse during demolition operations. All required temporary structural support will be designed by a California licensed structural or civil engineer.

8.1.7 Document procedures to deal with encountering Hazardous Materials or Substances that comply with the requirements of Supplemental Conditions Section 3 and procedures regarding Unforeseen or Differing Site Conditions that comply with Supplemental Conditions Section 14.14.

8.1.8 Document procedures for hauling away and disposal of any demolished materials and equipment. The procedures should include, among other things, requirements for refrigerant recovery under Environmental Protection Agency, a list of all required hauling permits, requirements for hauling and disposing of Hazardous Waste, volatile organic compounds or any other substance that is regulated by Health and Safety Code, the Bay Area Air Quality Management Owner "BAAQMD" or any other governmental agency that regulates the proper hauling and disposal of certain materials and substances.

8.1.9 Document procedures to ensure that removal and replacement of equipment will not void any existing warranties.

8.1.10 Require a survey of existing conditions and video or photographic documentation before commencement of the demolition activity to demonstrate existing conditions of adjacent areas or property.

8.2 Permits and Fees. The Design-Builder will secure all required hauling permits. The Owner will reimburse the Design-Builder at cost, for all permits and dumping fees as part of the Cost of Work.

9. PROTECTION OF WORK AND PROPERTY

9.1 Design-Builder will be responsible for providing a safe place for the performance of the construction work and for the physical conditions and safety of areas affected by the construction work. Design-Builder will take all necessary precautions to provide for the safety and protection of all persons who may come in contact with the construction work and for all property and equipment within or adjacent to the Project Site including adequate precautions to protect existing trees, equipment, materials, utilities, and other adjoining property and structures. Design-Builder will repair any damage caused by its operations at its own expense and will provide protection to prevent damage, injury or loss to:

9.1.1 Owner's employees and other persons at the Project Site.

9.1.2 Equipment, materials, and vehicles stored at the site or off-site if under the care, custody, or control of the Design-Builder or its Design Professionals or Subcontractors.

9.1.3 Existing trees, structures, roads, equipment, property and the work of others when carrying out Design-Builder's Work. Refer to Tree Protection specifications as included as part of the Criteria document includes as **Exhibit 2B**.

9.2 These precautionary measures will apply continuously and not be limited to normal working hours.

9.3 If damage to persons or property occur as a result of the construction work, Design-Builder will be responsible for proper investigation, documentation, including video or photography, to adequately memorialize and make a record of what transpired. The Owner will be entitled to inspect and copy any documentation, video, or photographs.

10. WORKERS AND WORKERS' COMPENSATION

10.1 Design-Builder will at all times enforce strict discipline and good order among its employees. Design-Builder will not employ on the Project any unfit person or unskilled labor.

10.2 Design-Builder and its Subcontractors are required to secure the payment of compensation of its employees in accordance with Labor Code section 3700. Before commencing the Work, the Design-Builder, its Design-Build Team members, and its Subcontractors will sign and file a certification with the Owner under Labor Code section 1861 stating the following:

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self- insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the any work or services under the Design-Build Agreement or any subcontract or design service agreements.

11. CHANGE IN NAME OR LEGAL ENTITY

11.1 If a change in name or nature of the Design-Builder's legal entity is anticipated, the Design-Builder will notify the Owner to ensure that the change will be properly reflected on the Agreement.

12. PROHIBITED INTERESTS

12.1 No public official or representative of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, supervise, make, accept, approve, or to take part in negotiating, supervising, making, accepting or approving any engineering, inspection, construction or material supply contract or any subcontract in connection with design and construction of the Project, will be or become directly or indirectly interested financially in this Agreement.

13. LAWS AND REGULATIONS

13.1 Design-Builder will give all notices and comply with all laws, ordinances, rules and regulations bearing on conduct of Work. If Design-Builder observes that the Contract Documents are at variance with any laws, ordinances, etc., Design-Builder will promptly notify the Owner's Project Manager, in writing, and any necessary changes will be adjusted. If Design-Builder performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without notice to the Owner's Project Manager, it will bear all costs associated with any required corrections or repairs.

14. STATUTORY PUBLIC WORKS CONTRACT REQUIREMENTS

The following requirements apply to all public works construction work performed under this Agreement.

14.1 Public Works Registration. Design-Builder or its contractor, and all subcontractors, must be registered with the California Department of Industrial Relations pursuant to Labor Code Section 1725.5. This Agreement is subject to monitoring and enforcement by the DIR pursuant to Labor Code Section 1771.4. Design-Builder shall furnish the records specified in Labor Code Section 1776 directly to the Labor Commissioner on a monthly basis, and in a format prescribed by the Labor Commissioner. Design-Builder must also post notices at the work site pursuant to Title 8 California Code of Regulations Section 16451.

14.2 Use of Subcontractors. Design-Builder shall not subcontract any work to be performed by it under this Agreement without the prior written approval of Owner, which approval will not be unreasonably withheld. Design-Builder shall be solely responsible for reimbursing any subcontractors and Owner shall have no obligation to them. Attention is directed to the requirements of Section 4100 to 4113, inclusive of the California Public Contract Code which are applicable to the work covered by this Agreement.

14.3 Prohibition Against Contracting with Debarred Subcontractors. Design-Builder is prohibited from performing work on a public works project with a subcontractor who is ineligible to perform work on the public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code.

14.4 Prompt Payment to Subcontractors. Design-Builder shall pay any subcontractors approved by Owner for work that has been satisfactorily performed no later than seven (7) days from the date of Design-Builder's receipt of progress payments by Owner. Within thirty (30) days of receipt of retention by Design-Builder and satisfactory completion of all work required of the subcontractor, Design-Builder shall release any retention payments withheld to the subcontractor. In the event Design-Builder does not make progress payments or release retention to the subcontractors in accordance with the time periods in this section, Design-Builder will be subject to a charge of two percent (2%) per month on the untimely or improperly withheld payment. Owner may require Design-Builder to provide documentation satisfactory to Owner of Design-Builder's compliance with this requirement as a condition of final payment and release of contract retentions, if any.

14.5 Payment Bond for Construction Work. Pursuant to Civil Code Section 9550, Design-Builder shall furnish to Owner a Payment Bond in the amount of all equipment and construction costs, to provide Owner with security for Design-Builder's full payment to workers and subcontractors for costs of materials, equipment, supplies, and labor furnished in the course of the performance of the work applicable to this section.

14.6 Labor Code Provisions. In the performance of this Contract, Design-Builder's attention is directed to the following requirements of the Labor Code:

Hours of Labor. Eight hours labor constitutes a legal day's work. Design-Builder shall forfeit, as penalty to Owner, \$25 for each worker employed in the performance of the

Agreement by Design-Builder or by any subcontractor under it for each calendar day during which such worker is required or permitted to work more than eight hours in any one day and 40 hours in any one calendar week in violation of the provisions of the California Labor Code and in particular, Sections 1810 to 1815, inclusive. Work performed by employees of the Design- Builder in excess of eight hours per day and 40 hours during any one week shall be permitted upon compensation for all hours worked in excess of eight hours per day at not less than one- and-one-half times the basic rate of pay, as provided in Section 1815.

Prevailing Wages. Design-Builder shall comply with California Labor Code Sections 1770 to 1780, inclusive. In accordance with Section 1775, the Design-Builder shall forfeit as a penalty to Owner an amount as determined by the Labor Commissioner not to exceed \$200 for each calendar day or portion thereof for each worker paid less than stipulated prevailing wage rates for such work or craft in which such worker is employed for any work done under the Agreement by him or by any subcontractor under it in violation of the revisions of the Labor Code and in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by Design- Builder. Pursuant to the provisions of Section 1773 of the Labor Code, Owner has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work applicable to the work to be done from the Director of the Department of Industrial Relations. Copies of the prevailing wage rates are on file at Owner and are available for review upon request.

Payroll Records. The Design-Builder's attention is directed to the following provisions of Labor Code Section 1776. The Design-Builder shall be responsible for the compliance with these provisions by his subcontractors.

- a. Each contractor and subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work.
- b. The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Design-Builder on the following basis:
 1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to such employee or his or her authorized representative on request.
 2. A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to Owner, the Division of Labor Standards Enforcement and the Division of Apprenticeship Standards of the Department of Industrial Relations.

3. A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request to the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either Owner, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the Design-Builder, subcontractor and the entity through which the request was made. The public shall not be given access to such records at the principal office of the Design-Builder.
 - c. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the Division.
 - d. The Design-Builder shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested such records within ten (10) days after receipt of a written request.
 - e. Any copy of records made available for inspection as copies and furnished upon request to the public or Owner, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address and social security number. The name and address of the Design-Builder shall not be marked or obliterated.
 - f. The Design-Builder shall inform Owner of the location of records enumerated under subdivision (a), including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.
 - g. In the event of noncompliance with the requirements of this Section, the Design- Builder shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects such contractor must comply with this Section. Should noncompliance still be evident after such 10-day period, the Design-Builder shall, as a penalty the State or Owner, forfeit Twenty-five Dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payments then due. The penalties specified in subdivision (g) of Labor Code Section 1776 for noncompliance with the provisions of said Section 1776 may be deducted from any monies due or which may become due to the Design-Builder.
 - h. The Design-Builder and each subcontractor shall preserve their payroll records for a period of three (3) years from the date of completion of the Contract.

Labor Non-discrimination. Attention is directed to Section 1735 of the Labor Code which provides that Design-Builder shall not discriminate against any employee or applicant for employment because of race or color, religion, physical or mental disability, national origin or ancestry, medical condition, marital status or sex of such persons, except as provided in Section 12940 of the Government Code. Design-Builder further agrees to include a similar provision in all subcontracts, except subcontracts for standard commercial supplies or raw materials.

Apprentices. The Design-Builder and all subcontractors shall comply with the requirements of California Labor Code sections 1777.5, 1777.6 and 1777.7 regarding the employment and of apprentices.

14.7 Skilled and Trained Labor Force Requirements. Design-Builder agrees to comply with all requirements related to providing a skilled and trained workforce, pursuant to Public Contract Code section 22164(c), and Public Contract Code sections 2600-2603, including but not limited to the requirement to submit monthly reports to the Owner.

14.8 Retention on Progress Payments. Owner will deduct and hold in retention five percent (5%) from each progress payment to Design-Builder for construction work, or portion thereof. The remainder, less any other deductions taken in accordance with the Agreement, will be paid to Design-Builder as progress payments.

14.9 Securities in Lieu of Retention. Pursuant to Public Contract Code Section 22300, Design-Builder may elect, in lieu of having progress payments retained by Owner, to deposit in escrow with Owner, or with a bank acceptable to Owner, securities eligible for investment under Government Code Section 16430, bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by Design-Builder and Owner. If Design-Builder elects to submit securities in lieu of having progress payments retained by Owner, Design-Builder shall, at the request of any subcontractor performing more than 5% of Design-Builder's total bid, make the same option available to the subcontractor.

14.10 Assignment of Claims. In entering into a public works contract or a subcontract to supply goods, services, or materials, Design-Builder or subcontractor offers and agrees to assign to Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time Owner tenders final payment to Design-Builder, without further acknowledgement by the parties.

14.11 Third-Party Claims. Pursuant to Public Contracts Code Section 9201, Owner shall have full authority to compromise or otherwise settle any claim relating to the Agreement at any time. Owner shall provide for timely notification to Design-Builder of the receipt of any third-party claim, relating to the contract. Notice shall be in writing and will be provided within thirty (30) days.

14.12 Public Contract Code Claims Procedures

14.12.1 Mandatory Prerequisites to Filing a Construction Claim. Prior to filing a construction claim pursuant to Public Contract Code Sections 9203 and 20104-20104.6 and this section, Design-Builder must first complete all Change Order procedures in Section 9 of the Design-Build Agreement. Any claim submitted prior to satisfaction of the Change Order procedures will be rejected as premature and untimely. A construction claim must be submitted no later than (a) 30 days after the completion of all Dispute Resolution Board procedures are completed, or (b) 30 days after the occurrence of the event giving rise to the claim.

14.12.2 Claims Procedures. In accordance with the procedures set forth in Public Contract Code sections 9204 and 20104-20104.6, Design-Builder may submit a claim by registered 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 the Owner; (b) payment by the Owner of money or damages arising from work done by, or on behalf of, the Design-Builder pursuant to this contract and payment for which is not otherwise expressly provided or to which the Design-Builder is not otherwise entitled; or (c) payment of an amount that is disputed by the Owner.

14.12.3 Support for Claim. The Design-Builder shall furnish reasonable documentation to support the claim, including but not limited to: 1) a clear, concise recital of the basis upon which the claim is asserted, including a designation of the provisions of the Contract Documents upon which the claim is based, 2) a statement as to the amount of time and/or compensation sought pursuant to the claim; 3) whether the Design-Builder's claim arises from an ongoing occurrence, and if so a description of the specific Work activities affected by the claim, 4) a time impact analysis in the event that Design-Builder requests a time extension, 5) full and complete cost records supporting the amount of any claim for additional compensation, and 6) a notarized certification by the Design-Builder as follows: "Under the penalty of law for perjury or falsification and with specific reference to the California False Claims Act, Government Code Section 12650 et seq., the undersigned hereby certifies that the information contained herein is a true, accurate and complete statement of all features relating to the claim asserted." Failure by the Design-Builder to provide sufficient documentation will result in denial of the claim. The Owner reserves the right to request additional documentation, or clarification of the documentation provided.

14.12.4 Response to Claim. Upon receipt of a claim, the Owner will conduct a reasonable review and provide a written statement to the Design-Builder identifying what portion of the claim is disputed and what portion is undisputed within 45 days of receipt of the claim. The Owner and Design-Builder may, by mutual agreement, extend the 45 day time period. For any undisputed portion of a claim, the Owner must make payment within 60 days of its issuance of the written statement.

If the Design-Builder disputes the Owner's written statement, or if the Owner fails to respond, the Design-Builder may demand an informal conference to meet and confer for settlement of the issues in dispute. The Owner will then schedule the meet and confer conference within 30 days of the demand. Within 10 business days following

the meet and confer conference, the Owner will provide a written statement identifying the portion of the claim that remain in dispute. Any payment due on an undisputed portion of the claim will be made within 60 days of the meet and confer conference.

After the meet and confer conference, any disputed portion of the claim shall be submitted to non-binding mediation. Alternatively, 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. If mediation is unsuccessful, the parts of the claim that remain in dispute shall be subject to applicable procedures set forth below.

Failure of Owner to respond to a claim within the time periods described above shall result in the claim being deemed rejected in its entirety. Additionally, amounts not paid in a timely manner shall bear interest at 7 percent per year.

In the event that the mediation is unsuccessful, Design-Builder must file a government claim pursuant to Government Code section 910 et seq. in order to initiate a civil action.

14.13 Utility Relocation. Pursuant to California Government Code Section 4215, if during the course of the work Design-Builder encounters utility installations which are not shown or indicated in the contract plans or in the specifications or which are found in a location substantially different from that shown, and such utilities are not reasonably apparent from visual examination of the work site, then it shall promptly notify Owner in writing. Where necessary for the work of the Contract, Owner will amend the Agreement to adjust the scope of work to allow Design-Builder to make such adjustment, rearrangement, repair, removal, alteration, or special handling of such utility, including repair of the damaged utility. If Design-Builder fails to give the notice specified above and thereafter acts without instructions from Owner, then it shall be liable for any or all damage to such utilities or other work of the Agreement which arises from its operations subsequent to the discovery, and it shall repair and make good suchx damage at its own cost.

14.14 Trenching, Shoring, and Differing Site Conditions.

14.14.1 Compliance. Design-Builder will comply with Labor Code sections 6500, 6705, and 6707, and Public Contract Code section 7104 regarding trenching and shoring.

14.14.2 Permit Requirements for Trenches 5'-0" or More in Depth. Design-Builder agrees to comply in full with Section 6500 of the Labor Code and to provide the required permits prior to the initiation of any work, method, operation or process that involves: (i) construction of trenches or excavations that are 5'-0" or deeper and into which a person is required to descend; (ii) the construction of any building, structure, falsework, or scaffolding more than 3 stories high or the equivalent height; (iii) the demolition of any building, structure, falsework, or scaffold more than 3 stories high or the equivalent height; or (iv) the underground use of diesel engines in work in mines and tunnels.

14.14.2.1 Detailed Plans for Trenches 5'-0" or More in Depth. In compliance with Labor Code section 6705, the Design-Builder will submit to the Owner's Project Manager, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping or other provisions to be made for worker protection from the hazard of caving ground during the excavation of any trench or trenches 5'-0" or more in depth. If the plan varies from shoring system standards, the plan will be prepared by a registered civil or structural engineer. The plan will not be less effective than the shoring, bracing, sloping, or other provisions of the Construction Safety Orders, as defined in the California Code of Regulations.

14.14.2.2 Separate Bid Items for Sheet piling, Shoring, etc. To the extent that Design-Builder's Work involves construction of a pipeline, sewer, sewage disposal system, boring and jacking pits, or similar trenches or open excavations, which are 5'-0" or deeper, Design-Builder will comply with all applicable laws, regulations, and codes and its bid and the Contract Price will contain, as a line item, adequate sheet piling, shoring, and bracing, or equivalent method, for the protection of life or limb pursuant to Labor Code section 6707, which will conform to applicable safety orders. Nothing in this section will be construed to impose tort liability on the Owner or any of its employees.

14.14.3 Excavations Deeper than 4'-0". If Work under this Agreement involves digging trenches or other excavation that extends deeper than 4'-0" below the surface, Design-Builder will promptly, and before the following conditions are disturbed, notify Owner's Project Manager, in writing, in accordance with Public Contract Code section 7104, of any:

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

14.14.3.2 Subsurface or latent physical conditions at the site differing from those indicated.

14.14.3.3 Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in the construction work of the character provided for in the Bid Documents and under this Agreement.

14.14.4 Differing Site Conditions. Design-Builder's notice to Owner shall be issued by telephone or in person and followed within 24 hours thereafter by written notice, providing a brief description of why the condition encountered is considered a Differing Site Condition. Promptly upon receipt of Design-Builder's notice, Owner will investigate the site conditions. If, during construction, the Design-Builder encounters an alleged Differing Site Condition, the Design-Builder shall immediately give written notice and may

continue work; provided however that the following documents and information shall be submitted on a daily basis:

1. Digital photographs (paper and electronic copy) that detail the Differing Site Conditions;
2. An electronic copy of the pertinent data (e.g. settlement monitoring data, boring logs, dewatering production rates, etc.) for the previous 24 hours;
3. As applicable, sample of soil and groundwater in the alleged Differing Site Condition area.
4. Design-Builder's applicable daily reports for each day that the alleged Differing Site Condition exists; and
5. Detailed daily records (which shall include, but not be limited to, labor and equipment), describing the alleged Differing Site Conditions and the impact the Differing Site Conditions are having on the progress of the construction.

Immediate written notice shall describe the specific ground conditions encountered and the measures taken to deal with the ground conditions. The Design-Builder will provide the OR with written notice within 5 business days discovery of an Unforeseen and Differing Site Condition. The OR, in conjunction with the Owner and IOR, will promptly investigate the conditions, and if they find that the conditions do so materially differ, or do involve hazardous waste, and cause a decrease or increase in Design-Builder's Contract Price or Contract Time for any part of the Work, the OR will recommend that the Owner issue a Change Order under Section 9 of the Agreement. If it is determined that physical conditions at the site are not materially different from those indicated in Bid Documents or that no change in terms of the Contract Documents is justified, the OR will notify Design-Builder in writing, stating reasons the Design-Builder will not be entitled to an adjustment in the Contract Price or Contract Time. Such reasons may include any of the following:

1. Design-Builder knew of the existence of the conditions at the time Design-Builder submitted its proposal; or
2. Design-Builder should have known of the existence of the conditions as a result of having complied with the requirements of Contract Documents; or
3. The information or conditions claimed by Design-Builder to be latent or materially different consist of information, conclusions, opinions or deductions of the kind that precludes reliance upon; or

4. Design-Builder was required to give written notice of differing site conditions under the Contract Documents and failed to do so within the time required.

The Design-Builder will not be excused from the Contract Time to complete its Work and will proceed with all Work to be performed under the Agreement unless or until it is determined that Design-Builder is entitled to an adjustment under Section 9 of the Agreement. If the Design-Builder disagrees with the decision regarding an alleged Differing Site Condition, Design-Builder may pursue a claim under Section 14.12 of these Supplemental Conditions.

14.15 Design-Builder's License Requirements. Design-Builder and any approved subconsultants (for architectural design, engineering, construction project management services) or subcontractors shall hold such current and valid licenses as required by California Law, including the Department of Industrial Relations (DIR) contractor and subcontractor registration requirements articulated in part by Cal. Labor Code section 1725.5.

14.16 Examination and Audit of Records. Pursuant to Government Code Section 8546.7, Design-Builder shall retain all project-related records for a period of 3 years after final payment on this DBO Contract, which shall be subject to audit or inspection by the Owner or the State Auditor during this period.

14.17 Safety Requirements. The Design-Builder shall promptly and fully comply with and carry out, and shall without separate charge therefore to the Owner, enforce compliance with the safety and first aid requirements prescribed by applicable State and Federal laws and regulations, rules and orders and as may be necessary to ensure that all Construction Work shall be done in a safe manner and that the safety and health of the employees, agents and the people of local communities is safeguarded. Compliance with the provisions of this Section by subcontractors shall be the responsibility of the Design-Builder. All installed, dismantled, and removed material, equipment and facilities, without separate charge therefore to Owner, shall fully conform with all applicable State and Federal safety laws, rules, regulations and orders and it shall be the Design-Builder's responsibility to furnish only such material, equipment and facilities.

14.18 Notice of Third-Party Claims. Pursuant to Public Contract Code section 9201, the Owner will provide Design-Builder with timely notification of the receipt of any third-party claim relating to the Agreement.

14.19 Assignment of Anti-Trust Actions. Pursuant to Public Contract Code section 7103.5 and Government Code sections 4554 and 4553, in entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, Design-Builder, its Design Professionals and Subcontractors offer and agree to assign to the Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. section 15) or under the Cartwright Act (chapter 2 (commencing with section 16700) of part 2 of division 7 of the Business and Professions Code), arising from the purchase of goods, services, or materials pursuant to this Agreement or any Subcontract. This assignment will be made and become effective at

the time the Owner makes final payment to the Design-Builder, without further acknowledgment by the parties.

14.20 Compliance with All Applicable Laws. Design-Builder shall comply with all the applicable requirements of federal, state and local laws, statutes and ordinances relative to the execution of the Work. In the event Design-Builder fails to comply with these requirements, Owner may stop any Work until such noncompliance is remedied. No part of the time lost due to any such cessation of the Work shall be made the subject of a claim for an extension of time or increase in the compensation.

Exhibit 2
BRIDGING DOCUMENTS

Exhibit 2A - Project Description, Schedule, and Budget	<Refer to RFP Appendix A>
Exhibit 2B – Project Design Criteria	<Refer to RFP Appendix B>
Exhibit 2C – Conceptual Site Plan	<Refer to RFP Appendix C>
Exhibit 2D – Geotechnical Report	<Refer to RFP Appendix D>

Exhibit 3
SCOPE OF WORK

<To Be Provided by Design-Builder and Approved by County>

Exhibit 4
PRICE PROPOSAL

<To Be Provided by Design-Builder and Approved by County>

Exhibit 5
PERSONNEL AND EQUIPMENT

<To Be Provided by Design-Builder and Approved by County>

Exhibit 6
SCHEDULE AND SITE LOGISTICS PLAN

<To Be Provided by Design-Builder and Approved by County>

Exhibit 7
SCHEMATIC DESIGN DOCUMENTS

<To Be Provided by Design-Builder and Approved by County>

Exhibit 8
DESIGN-BUILDER'S PROPOSAL

<To Be Provided by Design-Builder and Approved by County>



REQUEST FOR PROPOSAL DESIGN-BUILD SERVICES FOR STONE PINE COVE FARMWORKER HOUSING PROJECT

The County of San Mateo – County Executive’s Office

ADDENDUM 2

January 23, 2024

Owner: County of San Mateo
County Executive Office
400 County Center, 1st Floor
Redwood City, CA 94063

Project Manager: Steven McGuckin
c_smcguckin@smcgov.org

This Addendum has been prepared to clarify, modify, delete, or add to the RFP and revisions to items listed here shall supersede description thereof prior to the above stated date. All conditions not specifically referenced here shall remain the same.

Acknowledge receipt of this addendum by inserting its number and date in the cover letter of the proposal response.

All addenda items refer to the RFP issued December 20, 2023 unless specifically noted otherwise.

PART A - RFP SCHEDULE

2.1 The proposal due date has not changed. Proposals are due Wednesday, January 31, 2024, by 4:00 p.m. and delivered to:

Iliana Rodriguez, Assistant County Executive
Project Development Unit
555 County Center, 2th Floor
Redwood City, CA 94063

PART B - RFP REQUIREMENTS

2.2 Refer to APPENDIX B - Project Design Criteria, Project Description, Summary Table.

Replace Summary Table in its entirety as follows:

Quantity	Home Type	Approx. SF	Max Size
11	1 Bedroom/1 Bath	426 SF	11'10"x 36'0"
2	1 Bedroom/1 Bath ADA Accessible	521 SF	11'10"x 44'0"
20	2 Bedroom/1 Bath	560 SF	11'8"x 48'0"
3	2 Bedroom/1 Bath ADA Accessible	653 SF	11'8"x 56'0"
9	3 Bedroom/2 Bath	803 SF	14'4"x 56'0"
2	3 Bedroom/2 Bath ADA Accessible	860 SF	14'4"x 60'0"

2.3 Refer to APPENDIX C – Conceptual Site Plan.

Replace Conceptual Site Plan in its entirety. Updated plans include civil, grading, utility layout, and locations for ADA accessible homes.

CAD files of the updated plans are available to download at:

<https://www.dropbox.com/scl/fo/x4os7qspfs4h1xzaynda9/h?rlkey=b4klbhso200d213mm1l12lhc1&dl=0>

PART C – PROPOSER QUESTIONS

Refer to Following Proposer's RFI's.

Question #1: Will each lot have its own APN?

Response: No

Question #2: Will each unit need to be permitted with the county or will it be set up in a mobile home park that only needs an HCD permit with a certificate of occupancy?

Response: Units installation will need to be permitted with the City of Half Moon Bay.

Question #3: Will these lots be leased to the homeowner or will they own the lots?

Response: Leased.

List of Attachments

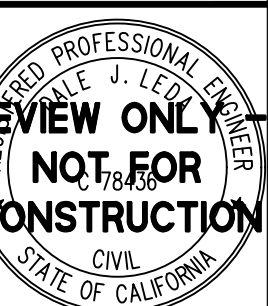
2.4 APPENDIX C – Conceptual Site Plan

Sheet C1.1 Civil Site Plan, C2.0 Overall Grading Plan and C3.0 Overall Utility Plan, dated 1/18/24.
(3 pages)

End of Addendum

CIVIL SITE PLAN
STONE PINE COVE
880 STONE PINE ROAD
SAN MATEO COUNTY

HALF MOON BAY



Scale 1" = 20'					
Design DUP					
Drawn DLG					
Approved DJL					
Job No 20210367-15					

DRAWING NAME:
PLOT DATE:

**SEE SHEETS CO.0
AND CO.1 FOR
NOTES AND
LEGENDS**



C1.1
OF

Date	No.	Revisions
12/20/2023	1	Initial Design
12/20/2023	2	Design Dwg
12/20/2023	3	Drawn Dwg
12/20/2023	4	Approved Dwg
12/20/2023	5	Job No 20231387-15



GRADING NOTES:

- PROVIDE POSITIVE SURFACE DRAINAGE AWAY FROM ALL STRUCTURES BY SLOPING THE FINISHED GROUND SURFACE AT 5% FOR A DISTANCE OF 10', WHERE POSSIBLE, UNLESS OTHERWISE NOTED ON THE PLANS. SLOPE PORCHES, LANDINGS AND TERRACES 2% (1/4" PER FOOT) AWAY FROM STRUCTURES UNLESS OTHERWISE NOTED ON PLANS.
- CONTRACTOR TO VERIFY ALL CONTROLLING DIMENSIONS WITH ARCHITECTURAL PLANS.
- CONTRACTOR SHALL DETERMINE EARTHWORK QUANTITIES BASED ON THE TOPOGRAPHIC SURVEY, THE GEOTECHNICAL INVESTIGATION AND THE PROPOSED SURFACE THICKNESS AND BASE THE BID ACCORDINGLY. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM IF A SEPARATE DEMOLITION CONTRACT HAS BEEN ISSUED TO TAKE THE SITE FROM THE WAY IT IS AT THE TIME OF THE BID TO THE CONDITIONS DESCRIBED IN THESE DOCUMENTS. ANY DIFFERENCES BETWEEN THE STATE IN WHICH THE SITE IS DELIVERED TO THE CONTRACTOR AND THESE DOCUMENTS SHOULD BE NOTED TO THE ENGINEER/ARCHITECT.
- ALL FILL SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT AND THE CONTRACTOR SHALL COORDINATE AND COMPLY WITH THE CLIENT'S GEOTECHNICAL ENGINEER TO TAKE THE APPROPRIATE TESTS TO VERIFY COMPACTION VALUES.
- IMPORT SOILS SHOULD MEET THE REQUIREMENTS OF THE SOILS REPORT AND SPECIFICATIONS.
- COORDINATE THE PLACEMENT OF ALL SLEEVES FOR LANDSCAPE IRRIGATION (WATER AND CONTROL WIRING) AND SITE LIGHTING PRIOR TO THE PLACEMENT OF ANY ASPHALT, BASECOURSE OR CONCRETE SURFACING. SEE LANDSCAPING AND SITE ELECTRICAL DRAWINGS.
- DO NOT ADJUST GRADES ON THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER/ARCHITECT.
- SITE STRIPPINGS THAT CONTAIN ONLY ORGANIC MATERIAL (NO DEBRIS TRASH, BROKEN CONCRETE OR ROCKS GREATER THAN 1" IN DIAMETER) MAY BE USED IN LANDSCAPE AREAS, EXCEPT FOR AREAS IDENTIFIED AS IMPORT TOP SOIL BY THE LANDSCAPE DRAWINGS. EXCESS STRIPPINGS SHALL BE REMOVED FROM SITE.
- ROUGH GRADING TO BE WITHIN 0.1' AND FINISH GRADES ARE TO BE WITHIN 0.05', HOWEVER CONTRACTOR SHALL NOT CONSTRUCT ANY IMPROVEMENTS THAT WILL CAUSE WATER TO POND OR NOT MEET REQUIREMENTS IN GRADING NOTE #1.
- THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. ALL GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITH A TOLERANCE OF ONE-TENTH OF A FOOT. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTORS SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE CLIENT.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THE GROUND ELEVATIONS AND OVERALL TOPOGRAPHY OF THE SITE PRIOR TO THE START OF CONSTRUCTION AS TO THE ACCURACY BETWEEN THE WORK SET FORTH ON THESE PLANS AND THE WORK IN THE FIELD. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND CIVIL ENGINEER IN WRITING PRIOR TO START OF CONSTRUCTION WHICH MAY REQUIRE CHANGES IN DESIGN AND/OR AFFECT THE EARTHWORK QUANTITIES.
- TRENCHES SHALL NOT BE LEFT OPEN OVERNIGHT IN EXISTING PUBLIC STREET AREAS. CONTRACTOR SHALL BACKFILL TRENCHES, OR PLACE STEEL PLATING WITH ADEQUATE OUTBACK TO PREVENT SHIFTING OF STEEL PLATE AND/OR HOT-MIX ASPHALT REQUIRED TO PROTECT OPEN TRENCHES AT THE END OF THE WORKING DAY.
- DISTURBED AREAS OF THE SITE SHOULD BE STABILIZED DURING THE RAINY SEASON USING STRAW MULCH (EC-6) OR WOOD MULCHING (EC-8).
- PERMANENT EROSION CONTROL SHALL BE PROVIDED BY LANDSCAPING SUCH AS SHRUBS, SOD OR MULCH. LANDSCAPE DESIGN MAY BE SUBJECT TO CHANGE.

PAVEMENT/HATCH LEGEND:

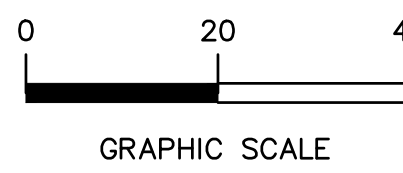
SEE GEOTECHNICAL REPORT FOR EXACT RECOMMENDATION FOR GRADING OPERATIONS AND OVEREXCAVATION ON-SITE.

(E)AC PAVING	3" AC PAVING OVER 8" OF CALTRANS CLASS 2 AGGREGATE BASE.
AC PAVING	DRIVE AISLE - 3" AC PAVING OVER 12" OF CALTRANS CLASS 2 AGGREGATE BASE.
DECOMPOSED GRANITE WALKWAY	PARKING AREAS - 3" AC PAVING OVER 8" OF CALTRANS CLASS 2 AGGREGATE BASE.
CONCRETE PAVING	3" DECOMPOSED GRANITE OVER 6" OF CALTRANS CLASS 2 AGGREGATE BASE.
ENGINEERED WOOD FIBER MULCH	4" CONCRETE OVER 6" OF CALTRANS CLASS 2 AGGREGATE BASE. SEE LANDSCAPE PLANS FOR SCORE JOINTS.
MULTI-USE HARDSCAPE AREA AC SURFACING	SEE LANDSCAPE PLANS FOR SECTION DETAILS.

PAVEMENT NOTES:

- PAVEMENT SECTION TO BE APPROVED BY GEOTECHNICAL ENGINEER.
- COLOR AND FINISH OF CONCRETE TO BE SPECIFIED BY LANDSCAPE ARCHITECT.
- SEE LANDSCAPE PLANS FOR ALL WALKWAY FINISHES AND MATERIALS.

SEE SHEETS C0.0
AND C0.1 FOR
NOTES AND
LEGENDS





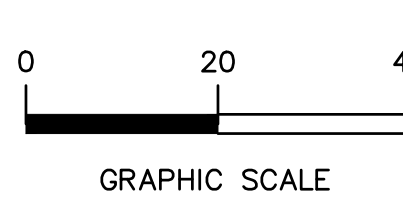
SANITARY SEWER NOTES:

1. ALL SEWER WORK SHALL BE IN CONFORMANCE WITH THE CITY.
2. PRIVATE SANITARY SEWER SERVICE LINE 4-INCH THROUGH 8-INCH SHALL BE POLYVINYL CHLORIDE (PVC) SDR 26 GREEN SEWER PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH GULF JOINTS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45° ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED. PUBLIC SANITARY SEWER LINES AND MAINS SHALL BE PER CITY/TOWN STANDARDS.
3. ALL LATERALS SHALL HAVE A CLEANOUT AT FACE OF BUILDING AND AS SHOWN ON PLANS PER THE CITY STANDARD OR APPROPRIATE SANITARY SEWER DISTRICT.
4. IF (E) SEWER LATERAL IS TO BE USED, CONTRACTOR SHALL PERFORM PRESSURE TEST ON (E) SEWER LATERAL, AND SHALL PERFORM ANY NEEDED REPAIRS. EXTEND (N) OR (E) SEWER LINE AS SHOWN ON THE PLANS SLOPED AT 2% MINIMUM. INSTALL CLEANOUT AT FACE OF BUILDING AND AT PROPERTY LINE.
5. SANITARY SEWER SYSTEMS INCLUDING MAINS, MANHOLES, LATERALS AND SANITARY FORCE MAINS SHALL BE TESTED PER CITY'S STANDARD DESIGN GUIDELINES FOR PUBLIC WORKS CONSTRUCTION 2016.

GENERAL NOTES:

1. WATER LINES ARE SHOWN SCHEMATICALLY, CONTRACTOR SHALL IDENTIFY EACH ANGLE AND/OR BEND THAT MAY BE REQUIRED TO ACCOMPLISH THE INTENDED DESIGN.
2. CONTRACTOR SHALL SIZE AND INSTALL ALL NEW DESIGN BUILD DOMESTIC IRRIGATION AND FIRE WATER LINES IN ACCORDANCE WITH THE LATEST EDITION OF THE UNIFORM/CALIFORNIA PLUMBING AND FIRE CODES.
3. ALL LANDSCAPE IRRIGATION SYSTEMS SHALL BE IN ACCORDANCE WITH THE LANDSCAPE ARCHITECTURAL PLANS AND SPECIFICATIONS AND SHALL BE CONNECTED TO THE EXISTING AND/OR NEW WATER SYSTEM AND METERED ACCORDINGLY.

UTILITY LEGEND:	
4" SD	STORM DRAIN LATL
4" SS	SANITARY SEWER LATL
4" DW	DOMESTIC WATER LATL
4" FW	DUCTILE IRON PIPE
4" FW	FIRE WATER LATL
E	UNDERGROUND ELECTRICAL SERVICE LATL
---	JOINT TRENCH



STORM DRAIN NOTES:

1. PRIVATE STORM DRAIN LINE 4-INCH THROUGH 12-INCH WITH A MINIMUM OF TWO (2) FEET OF COVER IN NON-TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 WHITE PIPE AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 3034-73 WITH GULF JOINTS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
2. PRIVATE STORM DRAIN LINE 6-INCH THROUGH 12-INCH WITH LESS THAN THREE (3) FEET OF COVER IN VEHICULAR TRAFFIC AREAS SHALL BE POLYVINYL CHLORIDE (PVC) C900, RATED FOR 150 PSI CLASS PIPE. PROVIDE AND INSTALL "STORM DRAIN" MARKER TAPE FOR THE ENTIRE LENGTH OF PIPE TRENCH IN ACCORDANCE WITH CITY/TOWN STANDARDS. ALL DIRECTION CHANGES SHALL BE MADE WITH WYE CONNECTIONS, 22.5° ELBOWS OR 45° ELBOWS OR LONG SWEEP ELBOWS, 90° ELBOWS AND TEE'S ARE PROHIBITED.
3. ALL AREA DRAINS AND CATCH BASINS GRATES WITHIN PEDESTRIAN ACCESSIBLE AREAS SHALL MEET ADA REQUIREMENTS.
4. ALL TRENCHES SHALL BE BACK FILLED PER THE SPECIFICATIONS WITH APPROPRIATE TESTS BY THE GEOTECHNICAL ENGINEER TO VERIFY COMPACTION VALUES.
5. FOR GRAVITY FLOW SYSTEMS CONTRACTOR SHALL VERIFY (POTHOLE IF NECESSARY) SIZE, MATERIAL, LOCATION AND DEPTH OF ALL SYSTEMS THAT ARE TO BE CONNECTED TO OR CROSSED PRIOR TO THE TRENCHING OR INSTALLATION OF ANY GRAVITY FLOW SYSTEM.
6. DRAINS SHOWN ON CIVIL PLANS ARE NOT INTENDED TO BE THE FINAL NUMBER AND LOCATION OF ALL DRAINS. PLACEMENT AND NUMBER OF LANDSCAPING DRAINS ARE HIGHLY DEPENDENT ON GROUND COVER TYPE AND PLANT MATERIAL. CONTRACTOR SHALL ADD ADDITIONAL AREA DRAINS AS NEEDED AND AS DIRECTED BY THE LANDSCAPE ARCHITECT OR CIVIL ENGINEER.
7. ALL DOWN SPOUTS SHALL DISCHARGE DIRECTLY ON TO ADJACENT IMPERVIOUS SURFACES OR SPLASH BLOCKS UNLESS OTHERWISE NOTED ON PLANS. SEE ARCHITECTURE PLANS FOR EXACT LOCATION OF THE DOWN SPOUTS.

DOMESTIC WATER SYSTEM NOTES:

1. WATER SYSTEM CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE COASTSIDE COUNTY WATER DISTRICT DOCUMENT TITLED "STANDARD SPECIFICATIONS AND STANDARD DRAWINGS, MAY 2018, LATEST REVISION."
2. INSTALLATION SHALL CONFORM TO THE CWD STANDARD DRAWINGS INCLUDED IN THESE IMPROVEMENT PLANS AND OTHER CWD STANDARD DRAWINGS.
3. WATER METER BOXES SHALL NOT BE LOCATED IN DRIVEWAY AREAS OR WITHIN 3 FEET HORIZONTAL AND 1 FOOT VERTICAL OF OTHER UTILITIES INCLUDING ELECTRICAL, GAS, TELEPHONE, AND CABLE TV.



REQUEST FOR PROPOSAL DESIGN-BUILD SERVICES FOR STONE PINE COVE FARMWORKER HOUSING PROJECT

The County of San Mateo – County Executive’s Office

ADDENDUM 3

January 26, 2024

Owner: County of San Mateo
County Executive Office
400 County Center, 1st Floor
Redwood City, CA 94063

Project Manager: Steven McGuckin
c_smcguckin@smcgov.org

This Addendum has been prepared to clarify, modify, delete, or add to the RFP and revisions to items listed here shall supersede description thereof prior to the above stated date. All conditions not specifically referenced here shall remain the same.

Acknowledge receipt of this addendum by inserting its number and date in the cover letter of the proposal response.

All addenda items refer to the RFP issued December 20, 2023 unless specifically noted otherwise.

PART A - RFP SCHEDULE

3.1 The proposal due date has changed. Proposals are now due **Wednesday, February 7, 2024, by 4:00 p.m.** and delivered to:

Iliana Rodriguez, Assistant County Executive
Project Development Unit
555 County Center, 2th Floor
Redwood City, CA 94063

PART B - RFP REQUIREMENTS

3.2 Refer to ADDENDUM 1, APPENDIX F – Standard Agreement Template, 2.2 Licensing, 1st sentence.

Revise to read as follows:

Design-Builder must possess a valid California state class “B” General Building Contractor license or during the entire term of this Agreement

3.3 Refer to ADDENDUM 2, APPENDIX B - Project Design Criteria, Project Description, Summary Table.

Replace Summary Table with revised quantities in its entirety as follows:

Quantity	Home Type	Approx. SF	Max Size
9	1 Bedroom/1 Bath	426 SF	11’10”x 36’0”
2	1 Bedroom/1 Bath ADA Accessible	521 SF	11’10”x 44’0”
21	2 Bedroom/1 Bath	560 SF	11’8”x 48’0”
3	2 Bedroom/1 Bath ADA Accessible	653 SF	11’8”x 56’0”
10	3 Bedroom/2 Bath	803 SF	14’4”x 56’0”
2	3 Bedroom/2 Bath ADA Accessible	860 SF	14’4”x 60’0”

3.4 Refer to ADDENDUM 2, APPENDIX C – Conceptual Site Plan.

Revise Unit 5 to be a 2 Bedroom/1 Bath home type.

3.5 Refer to RFP Section 2.3 Proposal Content Requirements, paragraph C, item (1)d).

Revise to read as follows:

- d) Summarize Respondent’s design and construction experience as relevant to this Project. Emphasize work on similar Manufactured Housing projects, accounting for the facility type, features, size, contract value, complexity, and schedule of this Project.

3.6 Refer to APPENDIX A – Project Description, Schedule, and Budget, Project Schedule.

Revise dates for Punchlist/Corrective Work/Final Inspections and Ready to Occupy as follows:

Punchlist/Corrective Work/Final Inspections	1/20 to 1/25/25
Ready to Occupy	1/27/25

PART C – PROPOSER QUESTIONS

Refer to Following Proposer’s RFI’s.

Question #1: Is there an allowance for holiday schedule?

Response: Proposal may include any proposed allowance and/or contingencies with detail descriptions (see RFP paragraph 2.3 G (4)).

Question #2: Can we store units and is there a place to store them onsite if needed?

Response: Storage is not available onsite. Site Improvement Work will be complete and ready for site to receive units as indicated in Project Schedule.

Question #3: Will each unit need to be permitted with the county or will it be set up in a mobile home park that only needs an HCD permit with a certificate of occupancy?

Response: Units installation will need to be permitted with the City of Half Moon Bay.

Question #4: Will these lots be leased to the homeowner or will they own the lots?

Response: Leased.

Question #5: Would you allow separate contracts?

Response: No, the County is seeking 1 prime contract for these services.

Question #6: When are insurance and bonds due?

Response: Insurance is due before commencement of work (see Standard Template Agreement 12.1 Insurance) and bonds are due prior to commencement of Construction Phase and within 10-days of Notice to Proceed (see Standard Template Agreement 12.3 Payment and Performance Bonds).

Question #7: If San Mateo County is the purchaser are we exempt from sales tax?

Response: No.

Question #8: Are the lots designated with “ACC” on the Conceptual Site Plan the locations for the ADA homes?

Response: Yes.

Question #9: If Owner signed off on individual order to build manufactured home and Owner terminates the agreement and units are in the process of construction, will SMC consider this as payment for ‘work already completed’ and pay the balance?

Response: Yes, payment will be made for work completed or performed as of the effective date of termination (see Standard Template Agreement 16 Termination, Suspension and Abandonment).

Question #10: Are the lots designated with “ACC” on the Conceptual Site Plan the locations for the ADA homes?

Response: Yes.

List of Attachments

(None)

End of Addendum